Wheelchair Accessible Vehicle Study – December Meeting

Date: December 18, 2025
Time: 10:00 AM – 12:00 PM
Minutes prepared by: Mya Hillerud
Location: Hybrid (MnDOT Central Office, Conference Rooms 13 & 14 / Microsoft Teams Meeting)
Topic: Policy Models from Other States/Cities

Overview of Study & Legislative Language

- The Minnesota Department of Transportation (MnDOT) is conducting a study on issues pertaining to the supply and demand of wheelchair accessible vehicles (WAVs) and transportation services.
- The goal of this legislative study is to "identify effective strategies to increase the availability of WAVs, improve service quality, and provide cost-effective transportation solutions tailored to the needs of riders with disabilities to enjoy greater freedom and convenience in their daily journeys."
- The full language is available here: MN Laws - Chapter 8, Sec. 119
- Study website: Wheelchair Accessible Vehicle Study | Let's Talk Transportation - MnDOT

Agenda

- Welcome and Introductions
- **PAVE Presentation on Automated Vehicles and Wheelchair Accessibility (p. 2)**
    - Katelyn Magney-Miller, Partners for Automated Vehicle Education (PAVE)
- **City of Minneapolis Presentation on TNC Surcharges (p. 5)**
    - Amy Lingo, City of Minneapolis
- **Policy Models from Other States/Cities (p. 7)**
    - Sam Richie, MnDOT
- Closing & Adjournment

Welcome and Introductions

Sam Richie called the meeting to order at 10:03 AM.

The meeting will start with presentations from the Partners for Automated Vehicle Education (PAVE) and the City of Minneapolis. The study group then explored various policy models from other states and cities across the country.

Automated Vehicles and Wheelchair Accessibility | Katelyn Magney-Miller, Partners for Automated Vehicle Education (PAVE)

Katelyn Magney-Miller, Communications Director for Partners for Automated Vehicle Education (PAVE), presented on automated vehicles (AVs) and wheelchair accessibility.

About PAVE

PAVE is a 501(c)(3) nonprofit coalition that launched in 2019. Their primary goal is to educate the public on AV technology and its potential benefits. They have two advisory councils, one academic and one for the public sector, and about 85 member organizations across the United States.

Key Beliefs

PAVE has two key beliefs that drive their work:

1. AVs have the potential to significantly improve our transportation ecosystem.
2. Public acceptance is essential for AVs to achieve their full potential.

They found that more knowledge and exposure to AV technology can have a positive impact on public attitudes. In a poll they commissioned, 48% of respondents said they would never get in a robotaxi, but that 60% said they would trust AVs more if they understood the technology.

PAVE's Outreach

PAVE utilizes the following channels to increase awareness of AVs and AV technology:

- Media and Messaging
    - Educational webinars, podcast, digital/social media campaigns, public service announcements
- Events and Demonstrations
    - Ride/drive and static demonstrations, exhibits at public events, K-12 engagement
- Public Sector Engagement
    - Educational workshops, lunch briefings, town halls, listening sessions

Automated Vehicles

An automated vehicle (AV) is a vehicle that can drive itself without human input. AVs use sensors, artificial intelligence, and mapping systems to perceive and navigate their environments. Through this technology, they can sense their surroundings, understand signs, detect other vehicles and pedestrians, and make real-time decisions like a human.

Most AVs today are built and designed as part of a fleet; there are no AVs that an individual can buy as their personal vehicle at this time.

Automation Levels

The Society of Automotive Engineers (SAE International) has established six levels to categorize the degree of driving automation:

- Level 0 – No automation
- Level 1 – Driver Assistance
- Level 2 – Partial Automation
- Level 3 – Conditional Automation
- Level 4 – High Automation
- Level 5 – Full Automation

Level 0 has no automation, not even cruise control. Katelyn Magney-Miller said that most of the cars we drive today are around Level 2, with advanced driver assistance system (ADAS) features like adaptive cruise control, lane assist, or adaptive braking. Every vehicle available for consumer purchase in the United States today falls below Level 4 and requires an attentive driver.

Advanced Driver Assistance Systems (ADAS) vs. Automated Vehicles (AVs)

Advanced Driver Assistance Systems (ADAS) use sensors and other technology similar to AVs to support human drivers with things like lane keeping. However, ADAS requires humans to be attentive at the wheel, while AVs do not require human intervention.

Current Trends

Opportunities

- Robotaxi expansion
- Global competition
- Autonomous freight gaining momentum

Roadblocks

- A patchwork of regulations
- Public trust remains low
- Level 3 systems on the horizon

Waymo is coming to Minnesota, and Lyft is expanding as well. Autonomous freight (automated semitrucks and driverless platoons) is gaining momentum in the South/Southwest part of the country and areas in the Midwest.

However, there is currently no federal framework for AVs. Instead, legislation is created on a state-by-state basis, which leads to a patchwork of regulations. PAVE and the industry have expressed that they would like to see some consistent federal guidelines around AVs. With Level 3 systems on the horizon, there will need to be policy discussions as those systems become more available to customers.

Public trust for AVs remains relatively low, but PAVE believes those numbers will improve as people get more exposure to the technology.

Accessibility Opportunities

Katelyn Magney-Miller said that WAVs generally remain in short supply in the for-hire vehicle ecosystem (taxis, TNCs, and microtransit service). However, with AVs, there is an opportunity to bake accessibility in from the beginning, rather than retrofitting vehicles to make them accessible. Wheelchair accessible AVs offer the promise of more reliable transportation and independence for users that rely on WAVs.

Challenges and Gaps

- Physical design challenges – lack of industry-wide standards for wheelchair securement in AVs
- Operational barriers – on-board assistance, independent securement, and emergency evacuation
- (Minnesota) winters – ramp freezing, ground clearance, traction, and sensor cleaning

Industry Efforts

- May Mobility has retrofitted some of their autonomous shuttles with ADA-compliant wheelchair ramps and securement systems.
- Before going out of business, Cruise had introduced Origin, a fully WAV version of their robotaxi.
- While a leader in the AV industry, Waymo's retrofitted vehicles do not offer wheelchair accessibility.
- Amazon's Zoox is creating a purpose-built vehicle, but it is not explicitly wheelchair accessible.

Wheelchair accessibility is becoming common for most AV shuttle and microtransit providers, but many of them are still in the pilot phase. Examples include programs like Karsan, HOLON, Navya, and goMARTI.

Takeaways

- Wheelchair accessible AVs (automated WAVs) could bring about a new frontier of reliable transit and independence for wheelchair users.
- Purpose-built AVs offer the best chance to design new vehicles with accessibility in mind instead of retrofitting solutions.
- While leading robotaxi companies (Waymo, Zoox, etc.) do not currently offer WAV service, many shuttle and microtransit providers have introduced WAVs into their fleets.
- Operational and design challenges still remain.

Q&A

Sam Richie (MnDOT): You mentioned May Mobility. Do you know where those vehicles are being used/piloted?

- Katelyn Magney-Miller (PAVE): goMARTI is an active deployment in Grand Rapids, Minnesota. That's a good example of WAV service that utilizes AVs.

Elliott McFadden (MnDOT): I realize the regulatory environment is still pretty new, but do you have any examples in the U.S. or globally where wheelchair accessibility is part of the regulatory environment for operators?

- Katelyn Magney-Miller (PAVE): I don't know off the top of my head, but I can follow up offline.

TNC and Taxi Wheelchair Surcharge | Amy Lingo, City of Minneapolis

Amy Lingo presented on the City of Minneapolis' wheelchair accessibility incentive program for taxis and transportation network companies (TNCs). Her office of Licenses and Consumer Services handles licensing for both taxis and TNCs.

Policy

The City of Minneapolis charges a wheelchair surcharge of $10,615 annually to TNCs, in addition to their regular $12,500 licensing fee.

Taxicab service companies with six or more WAVs that operate 24/7 dispatch service qualify for the following incentives:

- 24-hour dispatch services – $1,100 annually
- Medical transport license fee waiver – $1,050 annually
- For each WAV – $998 annually
- Taxicab wheelchair surcharge waiver – $21 per vehicle annually

For taxicab service companies with one or more WAV and staffed 24-hour dispatch services, the owner of the vehicle may qualify for a $499 per WAV incentive.

Currently, revenue from this program is only used to offset licensing costs.

Breakdown of TNCs and Taxi Companies in Minneapolis

There are seven TNC companies licensed in the City of Minneapolis, and six of those seven pay the wheelchair surcharge. One of these TNCs meets the criteria for wheelchair service vehicles, so they do not have to pay the surcharge/fee.

There are also seven taxi companies licensed in Minneapolis, with a total of 15 licensed vehicles and 10 drivers.

Lingo said there are fewer taxicab companies now, as many of them have changed their protocol and now do medical transportation or operate out of state. She said the Minneapolis taxi code needs to be amended, and that is one of her goals for 2026.

Q&A

Elliott McFadden (MnDOT): Do you feel the system is meeting the demand? The need from the community?

- Amy Lingo (City of Minneapolis): Probably not, if I'm being honest. With the decimation of the taxi industry, I think those people are trying to find other ways to get around, like Metro Mobility or relying on others. It could be much better than it is. We haven't received a lot of complaints, but that doesn't mean it's ideal. I would like to revamp the program to try and get more taxi companies to come and take advantage of it.

- Elliott McFadden (MnDOT): What changes would you like to make to the program?
- Amy Lingo (City of Minneapolis): The program itself is fine, but some things need to be updated. Like, does a taxi company still need to have at least five vehicles? Maybe we could have a different protocol to make it easier to own a taxi company, be a one-person show, use more technology. That's probably the best way to grow it outside of larger TNCs coming into the state and deciding they want to take advantage of the program.

Thomas Johnson-Kaiser (MnDOT): Do you provide any connections or guidance to TNCs or taxi companies that are not able to provide the WAVs? Do you help direct them to a licensed provider of WAV service? Is there a list or is that something they have to do on their own?

- Amy Lingo (City of Minneapolis): We haven't had people ask about that in a while, but we are more than happy to make that connection. If someone from Uber called and couldn't make the connection, I could call and make it.

Mya Hillerud (MnDOT): You mentioned that six of the seven TNCs pay the wheelchair surcharge. Which one meets the criteria and doesn't have to pay the fee?

- Amy Lingo (City of Minneapolis): I believe it's MOOV.

Joel Carlson (Uber): That accessibility fee was forward-thinking. You were the first city in the country that put it in back in 2014. How was that deployed? The fee has been pretty much the same since the inception of the program, but how does the money get put back out into the system?

- Amy Lingo (City of Minneapolis): It's collected and then it is put back by paying the licensing fees for companies that meet the criteria.
- Joel Carlson (Uber): So, it just offsets the revenue you would have otherwise collected? A driver doesn't get reimbursed for doing, say, five WAV rides?
- Amy Lingo (City of Minneapolis): No, it just covers the license fees.

Christopher Ludgate (MnDOT): I oversee Special Transportation Services (STS). On one of your slides, you showed the criteria for a WAV. You have the rear door entry set at 56 inches, but side door at only 54 inches. Where did you get those measurements? Is that from a different city or state? I've never seen the 54-inch measurement before.

- Amy Lingo (City of Minneapolis): That was back in 2014, before my time in this office, but I figured that had been pulled from the state. I would have to do some digging. We'd probably meet mostly with people from your office, actually.
- Christopher Ludgate (MnDOT): Typically, we adhere to a 56-inch opening, regardless of whether it's a side or rear door, so that's why I was curious.

Models from Other States/Cities | Sam Richie, MnDOT

Sam Richie presented on various policy models from other states and cities across the country.

California's Access for All Program

California's Access for All (AFA) Program was signed into law in September 2018 and went into effect in 2019. The program's primary goal is to increase the availability of on-demand transportation for disabled people, with a specific focus on WAV service.

How it Works

A person books a ride through a TNC. For each ride originating in California, there is a 10-cent AFA program fee. Those fees are collected and placed into a fund at the state level, which can be distributed to the local levels. The revenue is used to provide wheelchair accessible transportation. TNCs can submit for reimbursement if they meet certain metrics. For example, WAV rides would get the reimbursement.

Each quarter, TNCs must provide their AFA statement, fee statements, and payments into the fund. Then, they indicate whether they provided WAV service during that time, in which counties, and what they are seeking offsets for.

Offset Criteria

In their quarterly requests, TNCs must provide the following supporting documents to qualify for an offset:

- Presence and availability of on-demand and pre-scheduled WAVs
    - Completed rides, operating hours, etc.
- Improved level of service
    - Benchmarks set by the state (minimum percentage of trip requests completed, etc.)
- Efforts to publicize and promote available WAV service
    - List of partners from disability communities and how they are promoting the services
- Full accounting of funds expended
- Training and inspections
    - Vehicles inspected and approved for use; drivers trained within the past three years
- Reporting complaints

Program Successes

- The program has supported growth in on-demand WAV coverage in California, increasing from 14 to 22 funded counties.
- Response times have improved in most counties at the 50th percentile, with significant reductions in wait times in some areas.
- The number of completed trips more than doubled from Q3 2023 to Q2 2024; this increase was largely driven by the increase in the number of trips completed by Uber.

Reception

Customer feedback highlighted the invaluable nature of WAV services for independence, access to healthcare, employment, and social engagement. The program was seen as a good alternative to public transit and/or owning a personal WAV.

Opportunities and Next Steps

California has identified the following as possible next steps for the program:

- Increase local AFA participation.
- Reducing the burden on administrators and providers to increase participation.
- Increase funding stability and sustainability.
- Evolve WAV service requirements to reflect technology changes (beyond TNCs).

King County and Seattle, Washington's Wheelchair Accessible Services Fund

The Wheelchair Accessible Services (WAS) Fund was created to support the continued viability of wheelchair accessible for-hire transportation services for passengers throughout Seattle and King County. While California's AFA Program was at the state level, this program is at the local/county level.

How it Works

Much like California's program, there is a 10-cent surcharge on every ride (taxi, for-hire, TNC) that originates in Seattle or King County. Revenue from the surcharge goes toward offsetting the higher operational costs of providing WAV service for owners and drivers.

Owners and drivers may be eligible for reimbursements for the following:

- Trips provided to passengers in wheelchairs
- Shifts operated in a WAV
- Additional WAV-specific training
- Costs associated with acquiring and maintaining a WAV

A 2024 report from Seattle's Department of Finance and Administrative Services outlines the various reimbursement categories and rates/amounts. Rates vary depending on where the ride originates and terminates; more funding is available for rural areas where rides are less frequently requested. A total of $1,552,291.61 in reimbursements was paid out to WAV drivers and service providers in 2024.

Massachusetts' Community Transit Grant Program

The Community Transit Grant Program provides funding to purchase fully accessible (WAV) vans and minivans to enhance mobility for older adults and people with disabilities.

How it Works

Grants are available to purchase WAVs. In fiscal year 2025, the program enabled 30 organizations to purchase a total of 115 vehicles. The program prioritized the replacement of older and high-mileage vehicles to maintain a state of good repair within fleets.

Boston, Massachusetts' RIDE Flex Program

Also in Massachusetts, the RIDE Flex Program grew out of a 2019 pilot to offer on-demand WAV rides for users of RIDE, the Massachusetts Bay Transit Authority (MBTA)'s paratransit service, similar to Metro Mobility.

How it Works

RIDE Flex customers can schedule trips at any time, directly with a TNC or through RIDE's access center. These trips may be shifted from a RIDE vehicle to an Uber or Lyft vehicle based on availability.

Riders pay a lower fee for the ride. For on-demand rides, the customer pays a $3 base co-pay and anything over $40. If the ride is scheduled through RIDE's access center, they pay the regular RIDE rate. The remainder of the cost is paid to the TNCs by MBTA.

New York City

A 2017 rule would have required 25% all trips in for-hire vehicles to take place in WAVs by mid-2023 with a phase in period.

However, this rule was challenged in court by TNCs, which resulted in a settlement. If the 25% mandate could not be met, companies could opt to meet a wait-time requirement instead. The current wait-time requirement is that 90% of all WAV requests are to be met within 10 minutes.

Q&A

Amanda Tempel (MN resident): Is the required documentation available in languages other than English?

- Sam Richie (MnDOT): Could you clarify which specific documentation you're referring to? If it's California's AFA program, I can look into that.

Elliott McFadden (MnDOT): On the California slides, you had the impact of the policy – expansion in service and improved wait times. Do we have any sense of the impact of the other policies? Obviously, we can see that people are using the funds for the King County and Seattle one, but have we seen an improvement in service as a result of that policy?

- Sam Richie (MnDOT): I can look into that and see if they have any metrics. The California one was part of a larger study, which is how we have that information.

- Elliott McFadden (MnDOT): Different communities are trying different things. I think we'd want to be sure something is successful or impactful if we plan to replicate it.
- Joel Carlson (Uber): I think that's a great point. One of the goals is expanding the supply of WAVs. That's something we should keep in mind.

Rob Wudlick (Optimal Mobility): If we go down the route of funds from the state as a payout, I'd like it to go through the dealers that offer rideshare programs, to help offset the cost of a modification.

Wrap-Up Discussion

Sam Richie (MnDOT): Last meeting we talked about expanding upon what already exists in the Metro area to include the rest of the state – things like utilizing STS drivers and companies and expanding the Metro Mobility Premium On-Demand Program. Now that we've had time to think about it, I wanted to open it up to any further discussion about that.

Arielle Maffei (Lyft): Thank you so much for the amazing presentations. I wanted to introduce Ariel Abir, who works on our WAV team at Lyft.

- Ariel Abir (Lyft): That last presentation was a great segue into what I was going to talk about: which models we've found to be the most successful. The King County approach, where there's a fee charged for TNC rides and that's used to fund accessible rides, is one we've found worked well for us. The other two we especially liked were the Massachusetts and California approaches. Those are both helping TNCs like Lyft significantly offset the higher cost of providing WAV rides on our platform. Usually, we end up partnering with third parties in the area, but that's very costly to scale, so both of those approaches have been very helpful with offsetting those costs and they've allowed us to provide more WAV service. For Lyft, the flagship approach is MBTA's RIDE Flex Program; they're helping cover some of the additional cost by subsidizing each driver hour we have people logging onto the WAV Lyft platform and providing those rides. We find partners that we pay per hour to log onto the Lyft platform, and they dedicate their time solely to accepting WAV rides. Having the subsidy to help cover those hourly costs has been very helpful for us.
- Sam Richie (MnDOT): Thank you; it's very helpful to hear from that perspective.

Joan Willshire (Willshire Consulting): As we know, Waymo has come into Minnesota. As far as I know, none of their vehicles are accessible. I really feel like we should have some kind of state statute for all transportation services coming into Minnesota that their vehicles need to be accessible. We shouldn't allow just anyone to come into the state and neglect an entire portion of the population. We could suggest that a certain percentage of transportation services coming into the state are accessible. We talked about licensing of vehicles, but we are forgetting about another issue: drivers. There's a shortage of drivers out there. We need to have some kind of incentive for them to provide this service.

Rob Wudlick (Optimal Mobility): I'm a powerchair user myself, and I'm pretty involved in disability advocacy in the state. A number of non-profit organizations are interested in getting involved and supporting legislation and working with all partners on this.

Arielle Maffei (Lyft): I wanted to mention one more idea. This would probably be in addition to something like the Boston model (which would be our recommendation). I'm in Chicago, and what I've seen in some of the fleet contracts with TNCs is a per-ride subsidy, but we think an hourly model is better.

Joel Carlson (Uber): I appreciate the discussion and dialogue. There's been a historical underinvestment in this. When we talk about recommendations, we really need to think about how we can innovate and use technology in this service model. I think it's been at least talked about with Metro Mobility and other resources across the state, but how can we get the most bang for our buck? We're never going to get there on a 10-cent fee. If we do that, and only that, it'll never be enough; we just don't have enough rides in this state (compared to California) to make a meaningful dent in the service that way. And regarding the California AFA program, it's cumbersome to get that money in and out of the door. From Uber's perspective, they're very committed to forming local partnerships in and across the state.

David Fenley (MCD): It seems like we're wrapping up. I'd like to thank you for another robust meeting and discussion. The cost argument for not including folks with disabilities is quite old. I'm curious if there are any examples across the country that have been mandated by government. I know you mentioned Boston.

- Ariel Abir (Lyft): Boston is a great example. That's not through a government mandate, just a partnership with the MBTA. Partnerships like that are really the dream situation for us.

Sam Richie (MnDOT): If there are any more ideas that come up in the next few weeks, please feel free to email me about any thoughts you have or follow-up on something that was mentioned today.

Next Meeting

Date: January 15, 2026
Time: 10:00 AM – 12:00 PM
Location: Hybrid (MnDOT Central Office, Conference Rooms 13 & 14 / Microsoft Teams Meeting)
Topic: Final Report

The goal for January will be to have a draft of recommendations to discuss and for the group to potentially rank.

Sam Richie adjourned the meeting at 11:13 AM.

Attendance

- Ariel Abir (Lyft)
- Scott Andrews (Rollx Vans)
- Justina Blatterman (Minnesota resident)
- Guthrie Byard (City of Minneapolis)
- Charles Carlson (Metropolitan Council)
- Joel Carlson (Uber)
- Thomas Dunn Jr. (M Health Fairview EMS)
- David Fenley (MCD)
- Neko Gerlach (Neko's Classic Transportation)
- Briana Gilmore (Uber)
- Sarah Gustafson (Rise)
- Mya Hillerud (MnDOT)
- Steven Huser (City of Minneapolis)
- Scott Isaacson (Lifts Transportation)
- Thomas Johnson-Kaiser (MnDOT)
- Micaela Kranz (MnDOT)
- Amy Lingo (City of Minneapolis)
- Christopher Ludgate (MnDOT)
- Arielle Maffei (Lyft)
- Elliott McFadden (MnDOT)
- Shafii Mohamud (Lakebound Transport)
- Tara Olds (MnDOT)
- Steve Pint (Transportation Plus)
- Sam Richie (MnDOT)
- Michele Severson (MCD)
- Amanda Tempel (Minnesota resident)
- Joan Willshire (Willshire Consulting)
- Hannah Wind (Lyft/Cozen O'Connor Public Strategies)
- Rob Wudlick (Optimal Mobility)
- Jennifer (Minnesota resident)
- Riders Transportation

Acronyms

- ADA — Americans with Disabilities Act
- ADAS — Advanced Driver Assistance System
- AFA — (California's) Access for All (Program)
- AV — Automated Vehicle
- EMS — Emergency Medical Services
- goMARTI — Minnesota's Autonomous Rural Transportation Initiative
- MBTA — Massachusetts Bay Transit Authority
- MCD — Minnesota Council on Disability
- MnDOT — Minnesota Department of Transportation
- PAVE — Partners for Automated Vehicle Education
- SAE — Society of Automotive Engineers
- STS — Special Transportation Services
- TNC — Transportation Network Company
- WAV — Wheelchair Accessible Vehicle