Work Session WS

Milwaukie City Council

CITY OF MILWAUKIE

COUNCIL WORK SESSION

City Hall Council Chambers, 10501 SE Main Street
& Zoom Video Conference (www.milwaukieoregon.gov)

AGENDA

MARCH 18, 2025

Council will hold this meeting in-person and by video conference. The public may come to City Hall, join the Zoom webinar, or watch on the city's YouTube channel or Comcast Cable channel 30 in city limits. **For Zoom login** visit https://www.milwaukieoregon.gov/citycouncil/city-council-work-session-4.

Written comments may be delivered to City Hall or emailed to ocr@milwaukieoregon.gov.

Delayed Start. This meeting will begin one hour later than usual at 5:00 p.m. Council will participate in a group photo session before the meeting.

Note: agenda item times are estimates and are subject to change. **Page #**

1. **Transportation System Plan (TSP) Update, Part 1 – Report** (5:00 p.m.) **1**
   Staff: Jennifer Garbely, City Engineer, and
   Laura Weigel, Planning Manager

2. **Adjourn** (6:00 p.m.)

Meeting Accessibility Services and Americans with Disabilities Act (ADA) Notice
The city is committed to providing equal access to public meetings. To request listening and mobility assistance services contact the Office of the City Recorder at least 48 hours before the meeting by email at ocr@milwaukieoregon.gov or phone at 503-786-7502. To request Spanish language translation services email espanol@milwaukieoregon.gov at least 48 hours before the meeting. Staff will do their best to respond in a timely manner and to accommodate requests. Most Council meetings are broadcast live on the city's YouTube channel and Comcast Channel 30 in city limits.

Servicios de Accesibilidad para Reuniones y Aviso de la Ley de Estadounidenses con Discapacidades (ADA)
La ciudad se compromete a proporcionar igualdad de acceso para reuniones públicas. Para solicitar servicios de asistencia auditiva y de movilidad, favor de comunicarse a la Oficina del Registro de la Ciudad con un mínimo de 48 horas antes de la reunión por correo electrónico a ocr@milwaukieoregon.gov o llame al 503-786-7502. Para solicitar servicios de traducción al español, envíe un correo electrónico a espanol@milwaukieoregon.gov al menos 48 horas antes de la reunión. El personal hará todo lo posible para responder de manera oportuna y atender las solicitudes. La mayoría de las reuniones del Consejo de la Ciudad se transmiten en vivo en el canal de YouTube de la ciudad y el Canal 30 de Comcast dentro de los límites de la ciudad.

Executive Sessions
The City Council may meet in executive session pursuant to Oregon Revised Statute (ORS) 192.660(2); all discussions are confidential; news media representatives may attend but may not disclose any information discussed. Final decisions and actions may not be taken in executive sessions.

CITY OF MILWAUKIE

Memorandum

To: City Council
From: Joseph Briglio, Assistant City Manager
CC: Emma Sagor, City Manager
Date: March 18, 2025
Re: Community Development Department Monthly Update

Community Development, Economic Development, & Housing	Planning	Building	Engineering
▪ Economic Development ▪ Affordable Housing	▪ Comprehensive Plan Implementation ▪ Planning Commission ▪ Land Use/ Development Review	▪ February Review	▪ CIP ▪ Traffic/Parking Projects ▪ Right-of-Way Permits ▪ PIP ▪ Document Administration

COMMUNITY DEVELOPMENT/ECONOMIC DEVELOPMENT/HOUSING

Economic Development

- Milwaukie was recently the cover story for the Portland Business Journal - https://www.bizjournals.com/portland/news/2025/02/05/milwaukie-portland-housing-multifamily-pietros.html

- Bobs Red Mill - On February 8, Bob's Red Mill announced that it would be closing its Retail and Café property on International Way on February 17. The company later announced on social media that it would be closing its doors on February 12. The closure only impacts its retail and café operations.
    - The property is listed for sale at $5.95M – See Flyer
    - Staff have reached out to a few businesses and developers to help generate interest.

- The Business of Milwaukie, a city-wide business association, launched on November 1 with its "Meet Milwaukie Event" and subsequent Holiday Shopping/Small Business Saturday campaign called "Sip Shop Support."

Downtown:

- Downtown Alliance Milwaukie (DAM) has started meeting regularly and taken the place of the now defunct Downtown Milwaukie Business Association (DMBA). Multiple city staff members have participated in their meetings and discussions and will continue to partner as much as resources allow. The group approved its 2025 priorities, which are as follows:

    - Hanging flower baskets sponsored by businesses
    - Milwaukie food festival
    - Wayfinding signs/poster adoption and downtown 99E signs.
    - Utilize private parking lots for weekend events.
    - Elk Rock Island Float (Summer)
    - Milwaukie Bay Park Support
    - Oktoberfest
    - Main street holiday lights and decoration contest
- The sale of the Collectors Mall, along with the adjacent store fronts, closed in late summer 2024 and is actively soliciting for new tenants in the vacant spaces: Updated Lease Flyer
    - The property owner submitted an Oregon Main Street grant on March 13, which was supported by the city, to receive funding for restoring the building façade.
- Good Measure, an artisanal grocer at the northwest corner of Main and Jefferson Street, had its grand opening on January 31 and is now open for business.
- SaunaGlo, a Nordic-style spa along SE Jefferson Street, completed its improvements and held their grand opening on December 6.
- Moving Forward Staying Present Yoga Studio is going to be taking over 10560 SE Main Street, the former home of Elk Rock Yoga.
- Historic City Hall: pFriem Beer and Keeper Coffee announced their new locations at Historic City Hall and the press has been very positive - https://www.oregonlive.com/beer/2024/03/pfriem-family-brewers-to-open-first-portland-area-taproom.html
    - The pFriem, Keeper, and Milwaukie flags are flying in front of the building.
    - Henry Point Development has completed most of the interior renovations and now in the process of final touches. The tenants have also started to move in.
    - They are still on track for a Grand Opening on April 7, 2025.
- The Libbie's property is still currently for sale: https://www.loopnet.com/Listing/11056-11070-SE-Main-St-Milwaukie-OR/31458135/
- The former Chase Bank property (10900 SE 21st Ave) has been sold. The new owners submitting a land use application for a 44-unit residential development.
- Sewcial Studies, a retail fabric store that offers sewing classes and workshops, is now open for business. It took over the old Cloud Pine location on Main Street.

- The prominent corner of Jackson/Main, specifically 10801 SE Main Street (Formerly Sunshine Early Learning Center/Dary Care), will have a new tenant. A business registration has been approved for B-Side Records & Vintage. They will likely open in the spring of 2025.

- 1847 Food Park located at 1925 SE Scott St has begun site work, with an anticipated opening in the Summer.

- Staff were recently notified that Ovation will be closing its restaurant and is currently seeking interested parties to take over the space. Staff have been actively soliciting new tenants.

- 11138 SE Main Street (Sapphire) and 11222 SE Main Street (Broken Arrow Archery/USPS) have been for sale and recently under contract. A prospective buyer is doing their due diligence.

- *Milwaukie Station*: All cart spaces are currently occupied.

***Milwaukie Marketplace*:**
- Kimco officially sold the marketplace to Lincoln Property Company (LPC), a Texas based commercial real estate company, in February. Staff is working with LPC on building new partnerships.

- Building permits have been issued to Pietro's Pizza for building renovation plans for the old McGrath's Fish House. It is currently under construction and no opening date is set.

- Shari's Café & Pies has closed. https://www.oregonlive.com/business/2024/10/struggling-sharis-cafe-pies-closes-additional-locations.html

***Enterprise Zone*:**
- Portland Polymers, a plastics recycler, is relocating to Milwaukie's north innovation area and recently received approval to take advantage of the North Clackamas Enterprise Zone tax incentives.

- The Overland Van Project was also approved a few months ago. Alpine Foods is in their final application stages and should receive approval soon. Swagelock has withdrawn its interest for now.

***Urban Renewal Area Economic Development Programs*:**
- The Milwaukie Redevelopment Commission Citizen Advisory Committee (MRCCAC) convened in February to discuss updates on the business improvement grant program. Since launching in August 2024, the program has served 10 businesses with a grand total of $328,455.

- Grant program information can be found here: https://www.milwaukieoregon.gov/economicdevelopment/economic-development-business-improvement-grants

Affordable Housing

Sparrow Site:
- On January 7, the council adopted the following development goals:

    - Affordable Homeownership models that serve households earning up to 80% Area Median Income (AMI)

- Unit Mix. Preference for family-size units.
- Equity in contracting and workforce development.
- Preservation of tree canopy.
- Sustainable design.
- Affirmative outreach.
- Minimize need for city financing.
- Project delivery that is as soon as practicable.

- The City Council to held a public hearing to designate the properties as surplus at its February 18th Regular Session Meeting. Staff are now working on replating the property in order to prepare it for a competitive Request for Proposals (RFP). The RFP will likely occur in June 2025.

Affordable Housing Code Incentive Package:

- Planning and Community Development staff are working on code amendments targeted toward affordable housing. A work session was held on January 7 with the council that included extensive discussion. Staff will return for another work session with a revised package reflecting the discussion. The next discussion is scheduled for March 18.

***Coho Point*:**

- The Developer presented an update to the city council during its February 21, 2023, work session and requested a 12-month extension of the Disposition and Development Agreement (DDA) due diligence period because of extenuating circumstances involving supply chain and subcontractor timing issues related to the COVID-19 pandemic. The due diligence period was officially extended to March 31, 2024.

- Staff were notified on May 10, 2023, that Black Rock had submitted the CLOMR to FEMA. The review process typically takes several months, and FEMA has requested additional information from the applicant in September 2023, January 2024, and March 2024. The applicant has 90 days to address FEMAs comments and resubmit. In order to allow for the completion of the CLOMR/FEMA process, the City agreed to a fifth due diligence extension of December 31, 2024.

- Given that FEMA has expanded the scope of the CLOMR, Black Rock and the city agreed to an additional extension through June 2025.

- Black Rock received CLOMR approval from FEMA earlier this month. They are now discussing the next steps with staff, which include a shared parking agreement and an income-restricted covenant for the affordable units, to name a few.

***Construction Excise Tax (CET) Program*:**

- The CET Program was established by the city council in 2017 and codified within chapter 3.60 (Affordable Housing Construction Excise Tax) of the municipal code. The CET levy's a one percent tax on any development over $100,000 in construction value. In example, a property owner who is building an addition that has an assessed construction value of $100,000 would have to pay $1,000 in CET to the city. As development continues throughout the city, the CET fund increases in proportionality.

- The city released its inaugural competitive bid process for CET funds through a formal Request for Proposals (RFP). This resulted in Hillside Park Phase I being awarded $1.7M (requested $2M) and the Milwaukie Courtyard Housing Project (Now called Milwaukie

Shortstack) with $300K (requested $600K).

- On March 7, 2023, the city council authorized the city manager to execute the necessary grant agreements in the amounts listed above. The grants agreements for both projects have been signed and executed, and initial funding disbursements have occurred. Staff will now work with the applicants to ensure that their projects meet the conditions for funding.

- In recent conversations with staff (February 18, 2025), the Council has directed staff to support the development of the Sparrow site with affordable housing related CET Funds.

PLANNING

Comprehensive Plan Implementation

- Neighborhood Hubs: Following a series of public workshops and an online survey, planning and community development staff moved forward with proposed code amendments and an economic development toolkit for the Neighborhood Hubs project. Council approved the Phase 2 code amendments on August 6. Staff and Council had a discussion about Phase 3 in a work session on November 5. Council provided staff with direction for future work session topics for Phase 3. A work session to discuss Phase 3 has been scheduled for February 18.

Transportation Systems Plan (TSP)

- The TSP kicked off in October 2023. To date, the Technical and Advisory Committees have each met six times, most recently in November to review transportation system needs and gaps. On December 5, twenty-five Milwaukians attended a community open house at the Ledding Library to provide feedback on existing conditions and identified system deficiencies. The Technical and Advisory Committees are scheduled to meet in February to continue discussing gaps in the transportation system. City Council and Planning Commission are receiving updates on the project in February and March.

Planning Commission

- HR-2024-002: A Type III application to allow exterior modifications to the home a 1920 SE Waverly Dr, which is listed as a Significant Historic Resource. The public hearing with the Planning Commission was held on December 10th and was continued until January 28th, 2025, and again until February 11th. The application was approved at the February 11th meeting.

- ZA-2024-002: A Type V code amendment package related to Oregon Senate Bill 1537 (SB1537). Council held a work session on October 15 and provided direction to staff regarding code amendments. At the January 28 public hearing, the Planning Commission unanimously recommended approval of the proposed amendments. The public hearing with the Council was held on February 18 when Council voted to adopt the amendments. The amendments became effective immediately.

- MLP-2025-001: A Type III application to partition the OLCC property at 9201 SE McLoughlin Blvd into two parcels. The property would be divided using the centerline of Johnson Creek. No new development on either parcel is proposed. Natural resources review is required due to the presence of mapped natural resource areas on the property being divided. A variance is requested to allow a restricted development easement on a portion of the property rather than create a separate tract of resource area. Referrals were sent on February 4. A public hearing with the Planning Commission was held on March 11. The Planning Commission voted unanimously to approve the applications. The Notice of Decision was issued on March 12; the appeal period ends on March 27.

Land Use/Development Review[1]

- VR-2025-003: A Type II application for a sign height adjustment to relocate the Pietros's freestanding sign to the new restaurant location at 11050 SE Oak St. No comments were received. A Notice of Decision to approve the application was issued on March 5. The

[1] Only land use applications requiring public notice are listed.

appeal period ends on March 20.

- VR-2025-004: A Type II application to allow a 7-ft tall fence in the rear and side yards at the property located at 11005 SE Linwood Ave. Referrals and notices were sent on March 6; comments are due on March 20.
- MHLD-2025-001 & -002: Type II applications for middle housing land division of detached quadplexes being developed at 5026 & 5036 SE Harrison St, respectively. Referrals and a public notice mailing were sent on March 13; comments are due by March 27.

Other Updates

- Natural Resources code update: Staff are working to finalize the package of proposed amendments to the natural resource code (Milwaukie Municipal Code (MMC) Section 19.402), with a public hearing for the adoption process tentatively scheduled to begin with Planning Commission on April 22, 2025.

BUILDING

Permit data for	February	FY to Date:
New single-family houses:	0	2
New ADU's	0	2
New Solar	8	55
Res. additions/alterations	4	39
Commercial new	0	4
Commercial Alterations	2	80
Demo's	1	10
Cottage Clusters	0	23

Total Number of Permits issued: 1073

(includes fire, electrical, mechanical, plumbing, and other structural)

Total Number of Inspections: 3234

Total Number of active permits: 1061

ENGINEERING

Capital Improvement Projects (CIP):

CIP 2018-A13 Washington Street Area Improvements
Summary: This project combines elements of the SAFE, SSMP, Water, Stormwater, and Wastewater programs. SAFE improvements include upgrading and adding ADA compliant facilities along 27th Ave, Washington St, and Edison St. Street Surface Maintenance Program improvements are planned for Washington Street, 27th Avenue, and Edison Street. The Spring Creek culvert under Washington Street at 27th Avenue will be removed, and a new structure added. The water system along Washington Street will be upsized from a 6" mainline to an 8" mainline. The stormwater system along Washington Street will be upsized from 18" to 24" storm lines. The project is being designed by AKS Engineering and Forestry.

Update: Waterline connections, fire hydrant connections, and water meter relocations happening along Washington Street through this month. A new PRV will be installed on the main waterline at Washington and 29th Street. ADA ramps and sidewalk restorations will start again next week during dry weather.

CIP 2016-Y11 Meek Street Storm Improvements
Summary: Project was identified in the 2014 Stormwater Master Plan to reduce flooding within this water basin. The project was split into a South Phase and a North Phase due to complications in working with UPRR.

Update: Contractor has completed installation of the pipeline between the Murphy Site and the Balfour Pond. The forebay and southern cell of the Balfour Pond have been excavated, and rock buttress installed. The contractor is currently constructing the weir wall on the north side of Balfour Pond as well as the outlet structure. In December, the contractor performed a horizontal boring at Kelvin, for a waterline crossing beneath the railroad.

CIP 2021-T58 Milwaukie Downtown Streets and Curbs
Summary: The project includes SAFE improvements to downtown sidewalks by replacing existing sidewalk with pervious concrete sidewalk. Stormwater improvements include installing 5 storm inlets and 5 manholes. The project will use a specialized product, Silva Cells, to deter sidewalk uplift from tree roots. This project is out to bid and is expected to select a contractor by January 14th.

CIP 2022-W56 Harvey Street Improvements
Summary: The project includes water improvements and stormwater improvements on Harvey Street from 32nd Avenue to the east end, on 42nd Avenue from Harvey Street to Johnson Creek Boulevard, 33rd Avenue north of Harvey Street, 36th Avenue north of Harvey Street, Sherry Street west of 36th Avenue, 41st Street north of Wake Court, and Wake Court. Sanitary sewer work will be done on 40th Avenue between Harvey Street to Drake Street. The project also includes the installation of an ADA compliant sidewalk on Harvey Street from 32nd Avenue to 42nd Avenue and 42nd Avenue from Harvey Street to Howe Street. Roadway paving will be done throughout the project area.

Update: Century West Engineering was contracted for the design in July 2023. The project is currently at 90% design and is estimated to get 100% plans by the end of January. In process to get an easement at 8930 SE 42nd Avenue for a rapid flash beacon. Another open house will be scheduled after completion of design.

CIP 2021-W61 Ardenwald North Improvements
Summary: Project includes street repair on Van Water Street, Roswell Street, Sherrett Street, 28th Avenue, 28th Place, 29th Avenue, 30th Avenue, and 31st Avenue with a shared street design for bicycles, pedestrians, and vehicles. The sidewalk will be replaced on the north side of Roswell Street between 31st and 32nd Avenue. Stormwater catch basins in the project boundary will be upgraded, the water system will be upsized on 29th Avenue, 30th Avenue, 31st Avenue, and Roswell Street, and there will be wastewater improvements on 28th Avenue, 29th Avenue, and 31st Avenue to address multiple bellies and root intrusion to reduce debris buildup.

Update: Answering contractor's RFI's. Sanitary Sewer bursting starting next week along SE 28th Ave.

CIP 2022-A15 King Road Improvements
Summary: King Road (43rd Avenue to city limits near Linwood Avenue) SAFE/SSMP Improvements will replace existing sidewalk and bike lane with a multi-use path, improve stormwater system, replace water pipe, and reconstruct roadway surface.

Update: City received the 90% design plans, and cost estimate. The 90% design is under internal review and updates. The design is being used to prepare and send Permits of Entry (POEs) to the property owners that will have catch basins, pedestrian paths, trees and driveways installed or updated. The intent is to hear from property owners to implement changes to the 100% design.

POEs were sent at the end of December 2024. As January 2025, there have been POEs signed and returned to the City. It is expected to send all comments back to Kittleson for the preparation of the 100% design plans.

The cost estimate is being revised to have a project price ready to prepare the budget and bid documents during the first quarter of 2025.

Waverly Heights Sewer Reconfiguration
Summary: Waverly Heights Wastewater project was identified in the 2010 Wastewater System Master Plan. The project may replace approximately 2,500 feet of existing clay and concrete pipe.

Update: Authorization for the design contract with Stantec was approved by the Council on August 1, 2023. An engineering services agreement was executed with Stantec on Sept. 19, and the design effort was kicked off in early October of 2023. A flow monitoring program was initiated in October, and will continue through the wet season, concurrent with design. A public engagement plan was prepared in Fall of 2023, and a first set of informational material was mailed out to neighbors in the area in November, along with permit of entry forms.
Stantec commenced with early site investigations in December of 2023, and completed 30 percent design in January 2024. In March of 2024, the design team met with select residents on properties that may be more impacted from the project (i.e. properties that might require spot repairs or open trenching). A public open house was held on May 9th, 2024, at City Hall. The City reviewed Stantec's 60 percent design in July of 2024. The design team is currently working through the 90 percent design and preparing for the acquisition of Temporary Construction Easements.

Monroe Street Greenway

Summary: The Monroe Street Greenway will create a nearly four-mile, continuous, low-stress bikeway from downtown Milwaukie to the I-205 multi-use path. Once complete, it will serve as the spine of Milwaukie's active transportation network connecting users to the Max Orange Line, Max Green Line, Trolley Trail, 17th Avenue Bike Path, I-205 path, neighborhoods, schools, and parks. Funding grants through ODOT and Metro will allow the city to complete our 2.2-mile section of the Monroe Greenway from the Trolley Trail to Linwood Ave. The Clackamas County portion of the Greenway, from Linwood Avenue to Fuller Road, has moved to the construction phase.

Segment Update:

East Monroe Greenway (37th to Linwood): Staff have come to an agreement with ODOT and contracted CONSOR for the design. CONSOR has submitted the Design Approval Package to ODOT (approximately 60% design). The Plans, Specifications, and Estimate (PS&E) submittal will be provided to ODOT in March 2025. Final project design is expected in December 2025, and the project is expected to go to construction in Summer 2026. Open-Houses were hosted on February 29th for all of the Monroe Greenway, ODOT's Highway-224 project, the City's TSP, and Kellogg Creek Restoration and Community Enhancement Project, and on September 12 for the East segment of the Monroe Greenway. The City received mixed feedback for moving forward with the project. Feedback from the February and September open houses has been incorporated into the design and city staff prepared an engagement plan to share with the public. City staff presented the status of the East Segment of the Monroe Greenway to the City Council on December 3. Members of the public attended the presentation and participated in the public comments portion of the city council meeting. City staff applied for approximately $1.7 million of additional funding through the Regional Flexible Funds Allocation (RFFA) grant program to mitigate scope reductions due to inflation. Metro has indicated approximately $1.5 million will be awarded, but the award isn't expected to be finalized by the Federal Highway Administration until April 2025. Priorities for the additional funding include a flashing beacon at the 37th Avenue/Washington Street Crossing, and sidewalks on Monroe west of Garrett to complete the Monroe sidewalks from the greenway to 37th Avenue.

Monroe Street & 37th Avenue (34th to 37th): This segment is complete. It was constructed as part of the private development of the 7 Acres Apartments.

Western Monroe Greenway (21st to 34th): The city and ODOT have signed an IGA that will transfer $1.55 M in STIP funding to the city to construct this segment of the Monroe Street Greenway. City staff have contracted with 3J Consulting to negotiate work at the Oak Street and 37th Avenue railroad crossings. A request for qualifications will be posted in March 2025 for the design of the western portion of the greenway, excluding the railroad crossings.

Monroe Street & Highway-224 Intersection: This project has now been combined with a larger project which will mill and overlay Highway-224 from 17th Avenue to Rusk Road in Fiscal Year 2026. An Open-House was hosted on February 29th for all of the Monroe Greenway, ODOT's Highway-224 project, the City's TSP, and Kellogg Creek Restoration and Community Enhancement Project. The City received concerns regarding the development of Highway-224 and Monroe Greenway pushing traffic from Monroe Street onto Penzance Street. ODOT bid opening for the project was January 9, 2025. Bids have not been verified. The apparent low bidder is Westech Construction, Inc. Construction is anticipated in Summer/Fall 2025.

The water main in Monroe Street underlying Highway 224 was replaced by pipe bursting in December 2024.

Downtown Monroe Greenway (Trolley Trail to 21st Avenue): The city is investigating funding to enhance the Monroe Greenway through downtown Milwaukie.

Kellogg Creek Restoration and Community Enhancement Project
Summary: Project to remove the Kellogg Creek dam, replace the McLoughlin Blvd. bridge, improve fish passage, and restore the wetland and riparian area. City of Milwaukie staff are part of the project Leadership Team, Core Technical Team, and the Technical Advisory Committee. The Leadership Team and Core Technical Team both meet monthly. In addition to city staff, these groups include staff from North Clackamas Watershed Council (NCWC), Oregon Department of Transportation (ODOT), and American Rivers. The Technical Advisory Committee (TAC) for the Kellogg Creek Restoration & Community Enhancement Project involves all collaborative partners that include the Confederated Tribes of the Warm Springs Indian Reservation of Oregon, the Confederated Tribes of Grand Ronde, Clackamas Water Environment Services, Metro, North Clackamas Parks and Recreation District, Oregon Department of Environmental Quality, Oregon Department of Fish and Wildlife, Oregon Division of State Lands, the Native Fish Society, and the Natural Resources Office of Governor.

Update: The Summer 2024 Geotechnical and Sediment Sampling/Evaluation Study is complete. On December 12, Metro announced that the project would receive $10M in large scale community visions grant funds. These funds will be utilized as the local match requirement called out in federal grant applications. Additional details and updates are available at the project website: https://www.milwaukieoregon.gov/kellogg/project-status

Traffic / Parking Projects, Issues
None.

Right-Of-Way (ROW) Permits (includes tree, use, construction, encroachment)
Downtown Trees and Sidewalks
Update: Staff have a contract with AKS; working on what type of design works best now and in the future with both the trees and sidewalks & curbs.

Private Development – Public Improvement Projects (PIPS)

1600 Lava
Update: This development on Lava drive will add a new 13-unit multi-family building. Public improvements for this project include a new sidewalk, an ADA ramp, and minor street widening. Building permits have been issued and on-site construction has begun. A Right of Way permit has been issued, and the Contractor is gearing up for sidewalk and roadway improvements.

Hillside
Update: Hillside currently has issued permits for the first building and public improvements to be constructed under phase I. The remaining two buildings and public improvements to be constructed during this phase are still under review. City staff is meeting with the developer on a weekly basis to ensure the project moves smoothly. Public improvements for this development include new roadway alignment, new sidewalk, ADA ramps, and new asphalt paving. Work has started on the first building and associated public improvements.

Seven Acres Apartments (formerly Monroe Apartments) – 234 units
Update: Seven Acres has completed construction and is currently occupied. Public improvements for this development included a new bike path and sidewalk from Oak Street and

Monroe Street to 37th Avenue and Washington Street. Public improvements are currently under warranty and will receive a final inspection after a one-year period before shifting over to the City for ownership.

Henley Place (Kellogg Bowl redevelopment)- 175 units
Update: Construction is complete, and the building is occupied.

Elk Rock Estates – 5 lot subdivision at 19th Ave & Sparrow St.
Update: All public improvements have been completed; the project is in the close out phase and the Engineering Department is currently waiting on as-builts from the developer. The land use entitlements have recently expired, so they will need to go back through the process to build units. The lots are currently for sale.

Shah & Tripp Estates – 8-lot subdivision at Harrison Street and Home Ave.
Update: The Right-of-Way improvements have been completed, and the new street has been opened. Currently the developer and contractor are addressing final punch list items. As-builts have been submitted to the City for review.

Walnut Estates
Update: Walnut estates have completed the majority of their construction and is currently in the final punch-list and cleanup phase. Public improvements for this development include a new sidewalk, storm water facilities, and a new asphalt roadway. Once the final work is completed, this development will enter the one-year warranty period.

Bonaventure Senior Living – 170-units
Update: ROW permits have been issued, and public improvements are currently under construction. Milwaukie staff have completed on-site storm water facility inspections and will inspect asphalt multi-use path up to HWY 224.

Document Administration
Plans
Summary: WSC is preparing the Stormwater System Plan.

CITY OF MILWAUKIE

WS 1. 3/18/25

OCR USE ONLY

COUNCIL STAFF REPORT

To: Mayor and City Council
Emma Sagor, Acting City Manager

Date Written: March 6, 2025

Reviewed: Jospeh Briglio, Assistant City Manager

From: Laura Weigel, Planning Manager,
Jennifer Garbely, City Engineer, and
Ryan Dyar, Associate Planner

Subject: **Transportation System Plan (TSP) Project Update**

ACTION REQUESTED

Council is asked to review and provide feedback on:

- Draft Transportation System Conditions, Needs and Gaps Memo (Attachment 1)
- Draft Multimodal Functional Classification Memo (Attachment 2)
- Draft Project Evaluation Matrix (Attachment 3)

The attached memos are the same memos, except for some updated maps based on feedback, that were presented and discussed with the Transportation System (TSP) Technical Committee (TSPTC) on February 19, 2025, the Advisory Committee (TSPAC) on February 20, 2025, and the Planning Commission on February 25, 2025. Staff will provide a brief update on the suggestions resulting from these three meetings.

Due to the volume of content for discussion the review of the materials will be held in two parts, if necessary. The continued review of the materials is tentatively scheduled for April 15.

HISTORY OF PRIOR ACTIONS AND DISCUSSIONS

February 7, 2023: Council approved the appointment of the TSPAC including a Council representative, Councilor Stavenjord. In the fall of 2024 Councilor Anderson replaced Councilor Stavenjord.

June 20, 2023: Council authorized an intergovernmental agreement (IGA) with the Oregon Department of Transportation (ODOT) to update the city's TSP through an in-kind grant award from the transportation and growth management program. The city also contributed $100,00 to the project.

February 20, 2024: Staff provided Council with a general update on the TSP process, including an overview of the project timeline, the community engagement strategy, community profile, transportation policy landscape, and financial forecast for transportation revenues and expenditures.

August 6, 2024: Staff reviewed the draft Vision, Goals and Policies Memorandum, the Draft Analysis Methodology and Performance Measures Memorandum, and the Draft Livable Streets Analysis and Recommendations Memorandum with Council.

ANALYSIS

Oregon's Transportation Planning Rule (TPR), which implements Oregon's Statewide Planning Goal 12: Transportation and is codified in Oregon Administrative Rule (OAR) Chapter 660, Division 12, establishes requirements for jurisdictions updating or creating a TSP. The Climate Friendly Equitable Communities (CFEC) rulemaking process amended the TPR in 2022, establishing a new model for TSP development aimed at reducing transportation-related greenhouse gas (GHG) emissions and promoting more equitable planning processes and outcomes for underserved populations.

The update to the city's TSP kicked off in the summer of 2023. To review the work prior to this update please refer to the background information in the previous section and/or visit the city's TSP webpage or to find more detailed information visit the TSP Engage Milwaukie page.

The documents included for review in this phase of the project are:

Transportation System Conditions Memo

The existing conditions inventory, needs, and gaps analysis is an assessment of Milwaukie's current transportation system within its city limits.

Multimodal Functional Classification Memo

As part of its needs and gaps analysis, staff and its consultants are recommending a functional classification system be adopted for each mode of transportation considered in the Transportation System Plan, including walking, cycling, public transit, and freight. These networks would not replace but accompany the functional classification used for automobiles. This memo summarizes that need, proposes a classification for each mode, and presents modal maps with draft classification assignments.

Evaluation Framework

OAR 660-012-0155 requires jurisdictions to establish a prioritization framework for decision-making regarding transportation facilities and services. The framework must factor in various criteria such as GHG reduction, equitable outcomes for underserved populations, and economic development, while also integrating local values by adding community-specific evaluation criteria and weighting them to align with the goals and policies expressed in the plan. A draft evaluation framework is included as Attachment 3.

Next Steps

Staff will incorporate the Council's suggestions to the memos/maps. Subsequently, the project team will identify, score, and prioritize multimodal transportation improvement projects to address the needs and gaps for review. The projects will be reviewed by the TSPTC, TSPAC, and Planning Commission and the public.

BUDGET IMPACT

The TSP update project has been identified as part of the planning department work plan for several years and has been budgeted for accordingly.

CLIMATE IMPACT

Roughly 38% of Oregon's GHG pollution comes from the transportation sector. Analysis in the Oregon Statewide Transportation Strategy Monitoring Report (2018) shows that to meet the state's pollution reduction targets, Oregon needs cleaner fuels, improved vehicle efficiency, and a reduction in vehicle miles traveled. The amended TPR aims to curtail transportation-related GHG pollution by requiring local governments to prioritize transportation infrastructure and

land-use regulations that increase the viability of alternative modes of transportation and shorten the distance residents must travel to access goods and services.

Consistent with the new TPR requirements, the Milwaukie TSP focuses on identifying and evaluating projects that are near schools, grocery stores, neighborhood Hubs, transit stops, and senior living/low income/resource centers and within the Milwaukie Town Center to further Milwaukie's commitment to establishing a more climate-friendly transportation system.

EQUITY IMPACT

Equity is one of the eleven identified goals in the Vision, Goals, and Policies document. As described above, the goals and policies adopted through the TSP have been translated into evaluation criteria which will then be used to prioritize transportation projects on the Financially Constrained transportation project improvement list. The projects will also be reviewed through robust community outreach with specific strategies to reach underserved communities.

WORKLOAD IMPACT

As noted above, the performance measures adopted through the TSP will be used in both long-range planning processes and in the local review of development proposals. The four measures recommended by Kittleson were selected based on consideration of the new state requirements, Milwaukie's transportation goals, and city staff's capacity to utilize the measures in the development review process. As such, staff should be able to incorporate new required analyses into existing workflows with minimal impacts to workload.

COORDINATION, CONCURRENCE, OR DISSENT

City staff are coordinating with multiple jurisdictional partners on the TSP update. Coordination is happening through the TSPTC, a group of agency representatives and city staff that are advising on the project. The group consists of representatives from engineering, public works, police, the ODOT, Department of Land Conservation and Development (DLCD), Clackamas County, Metro, TriMet, North Clackamas School District (NCSD), Clackamas Fire District #1 (CFD1), and Portland General Electric (PGE).

ATTACHMENTS

1. Draft Transportation System Conditions, Needs and Gaps Memo
2. Draft Multimodal Functional Classification Memo
3. Draft Project Evaluation Matrix

DRAFT TRANSPORTATION SYSTEM CONDITIONS

Date: March 6, 2025

To: Project Management Team

From: Kittelson & Associates, Inc.

Project: Milwaukie Transportation System Plan

Subject: Transportation System Conditions, Needs, and Gaps

Table of Contents

Introduction

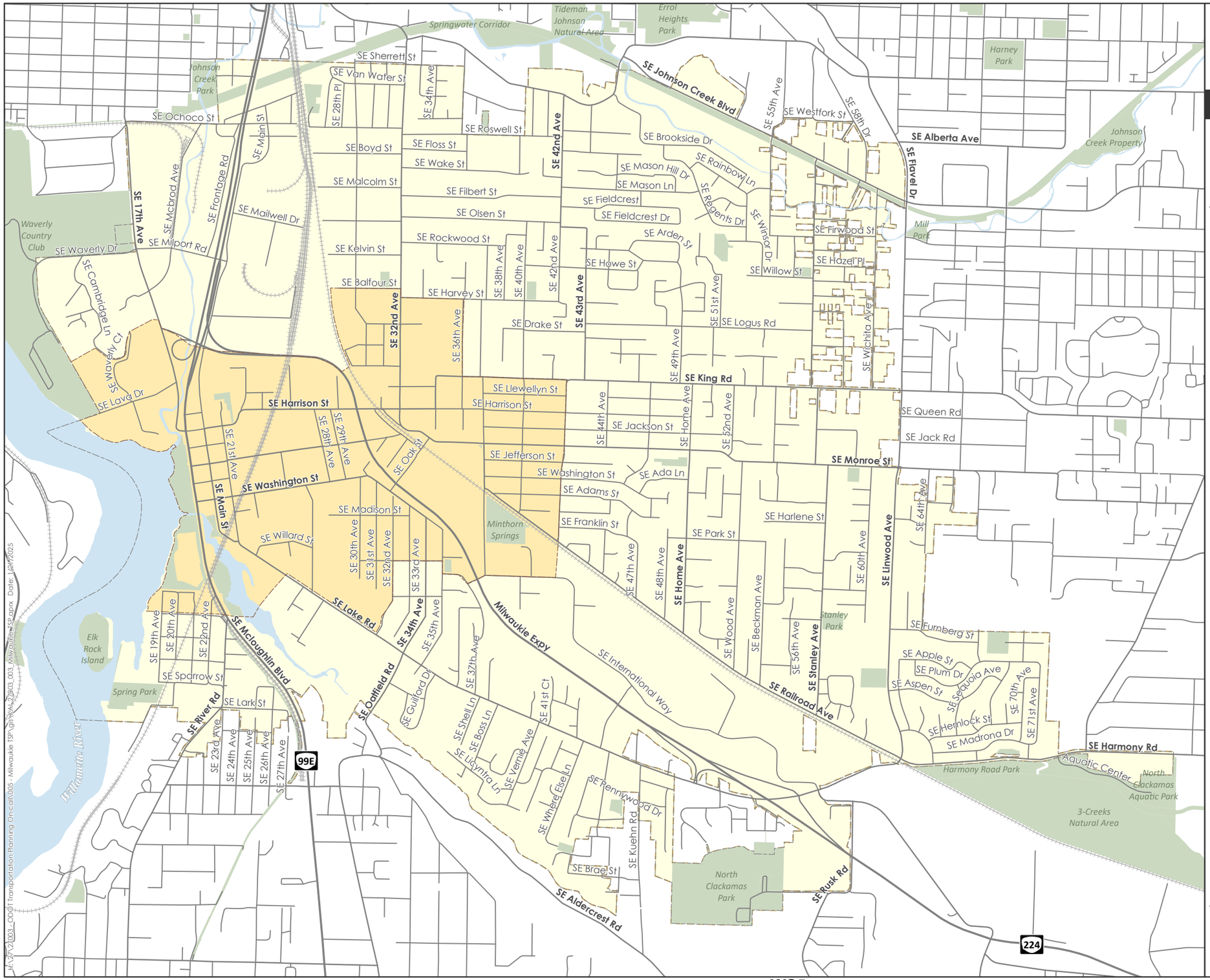
The existing conditions inventory, needs, and gaps analysis is an assessment of Milwaukie's current transportation system within its city limits, as shown in Figure 1.

Information summarized in this memorandum was obtained and assembled using available Geographic Information System (GIS) data, aerial photography, field observations, and historical the Oregon Department of Transportation (ODOT) crash data.

CITY OF **MILWAUKIE**
Transportation System Plan

FIGURE 1

Study Area



Legend

- Milwaukie City Limits
- Milwaukie Town Center
- Parks

Generated On: 1/21/2025

Data Sources: City of Milwaukie, ODOT

0 0.25 0.5 0.75 Miles

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Existing Transportation System Inventory

The existing transportation system inventory evaluates current land uses within the city to understand the types of lands, and natural resources that the transportation system interacts with as well as the demographic cross section of community members relying on it. The inventory also assesses the current characteristics of the multimodal travel ways to understand how it is serving its users today.

Land Use and Population

Land use is a key factor in developing a functional transportation system. The amount of land planned for development, the types of land uses, and how they relate to each other have a direct relationship to the anticipated demands for the transportation system. This section identifies the zoning designations that help define land use within the study area.

Land Use

Figure 2 illustrates the current Comprehensive Plan land use designations. The majority of the land area in the City is designated for moderate density residential uses. The Town Center includes concentrations of high density residential, commercial, public, and mixed-use designations. Industrial uses are primarily concentrated in the North Milwaukie Innovation area along OR 99, the Johnson Creek Industrial Area along Johnson Creek Boulevard, and the International Way Business District along OR 224.

Key Destinations and Activity Centers

Key destinations and activity centers in the City of Milwaukie include schools, grocery stores, Neighborhood Hubs, transit stops, parks, and an assortment of other uses that include medical facilities, adult care facilities, childcare facilities, farmers market, places of worship, and the library. Priority Focus Areas are considered essential destinations for the public to access and are likely to generate multimodal trips. Priority focus areas are schools, Neighborhood Hubs, parks, transit stops, and areas where there are likely higher concentrations of underserved populations (including senior living facilities, low-income housing, and resource centers). The Milwaukie Town Center is also considered a key destination/priority focus area given its concentration of employment, higher-density housing, affordable housing development Hillside Park, commercial uses, and schools. Figure 3 illustrates the location of these facilities. These destinations will be integrated into considerations to improve multimodal access for people living, working, and visiting the City. Creating and maintaining access to these and other similar land uses is important for ensuring a well-connected and high-quality circulation network.

CITY OF **MILWAUKIE**
Transportation System Plan

FIGURE 2

Land Use

Legend

- MD - Moderate Density
- HD - High Density
- C - Commercial
- C/HD - Mixed Use
- I - Industrial
- P - Public
- TC - Town Center
- Milwaukie City Limits
- Milwaukie Town Center

Generated On: 1/21/2025

Data Sources: City of Milwaukie, ODOT

0 0.25 0.5 0.75 Miles

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CITY OF **MILWAUKIE**
Transportation System Plan

FIGURE 3

Key Destinations

Legend

- MAX Station
- Schools
- Grocery Store
- Farmers markets
- Hospital (Providence Milwaukie)
- Library
- Neighborhood Hub
- Church
- Large Adult Care Facility
- Large Childcare Facility
- Housing
- Park
- Multi-Use Path
- Industrial Employment Zone
- Milwaukie City Limits
- Milwaukie Town Center

Generated On: 1/21/2025

Data Sources: City of Milwaukie, ODOT

0 0.25 0.5 0.75 Miles

Population Demographics

The *Milwaukie Community Profile Memorandum* documents and analyzes demographic data for the city of Milwaukie, focusing on underserved populations, as identified in Oregon Administrative Rule (OAR) 660-012-0125. OAR 660-012-0125 specifically identifies the following populations as being underserved regarding transportation and land use planning due to historic and current marginalization.

- Black and African American people
- Indigenous people (including Tribes, American Indian/Alaska Native and Hawaii Native);
- People of Color (including but not limited to Hispanic, Latina/o/x, Asian, Arabic or North African, Middle Eastern, Pacific Islander, and mixed-race or mixed-ethnicity populations);
- Immigrants, including undocumented immigrants and refugees
- People with limited English proficiency
- People with disabilities
- People experiencing homelessness
- Low-income and low-wealth community members
- Low- and moderate-income renters and homeowners
- Single parents
- Lesbian, gay, bisexual, transgender, queer, intersex, asexual, or two-spirit community members; and
- Youth and seniors

As identified in the *Milwaukie Community Profile Memorandum*, disadvantaged populations are dispersed throughout the City[1], so when the TSP considers improving access for disadvantaged groups, there will be general emphasis on providing low-stress multimodal connections within the larger Milwaukie Town Center and priority focus areas.

[1] While it has been found that there is a general dispersal of disadvantaged populations throughout Milwaukie, Hillside Park is an important public housing community located on the west side of SE 32nd Avenue across from the Providence Milwaukie Hospital site. In association with the Housing Authority of Clackamas County (HACC), Hillside Park is currently undergoing a major redevelopment that will replace aging buildings and infrastructure with approximately 500 new affordable rental housing units. Hillside Park is located within the defined Milwaukie Town Center.

Roadway System

Roadways provide infrastructure for motor vehicles, freight, bicycle, pedestrian, and transit facilities. The roadway network establishes links both within the city and outside of its boundaries, connecting surrounding areas and neighboring jurisdictions. The following sections describe and inventory the existing roadway system within the City of Milwaukie, including roadway jurisdictions and functional classifications, freight routes, and key roadway and intersection characteristics.

Roadway Ownership

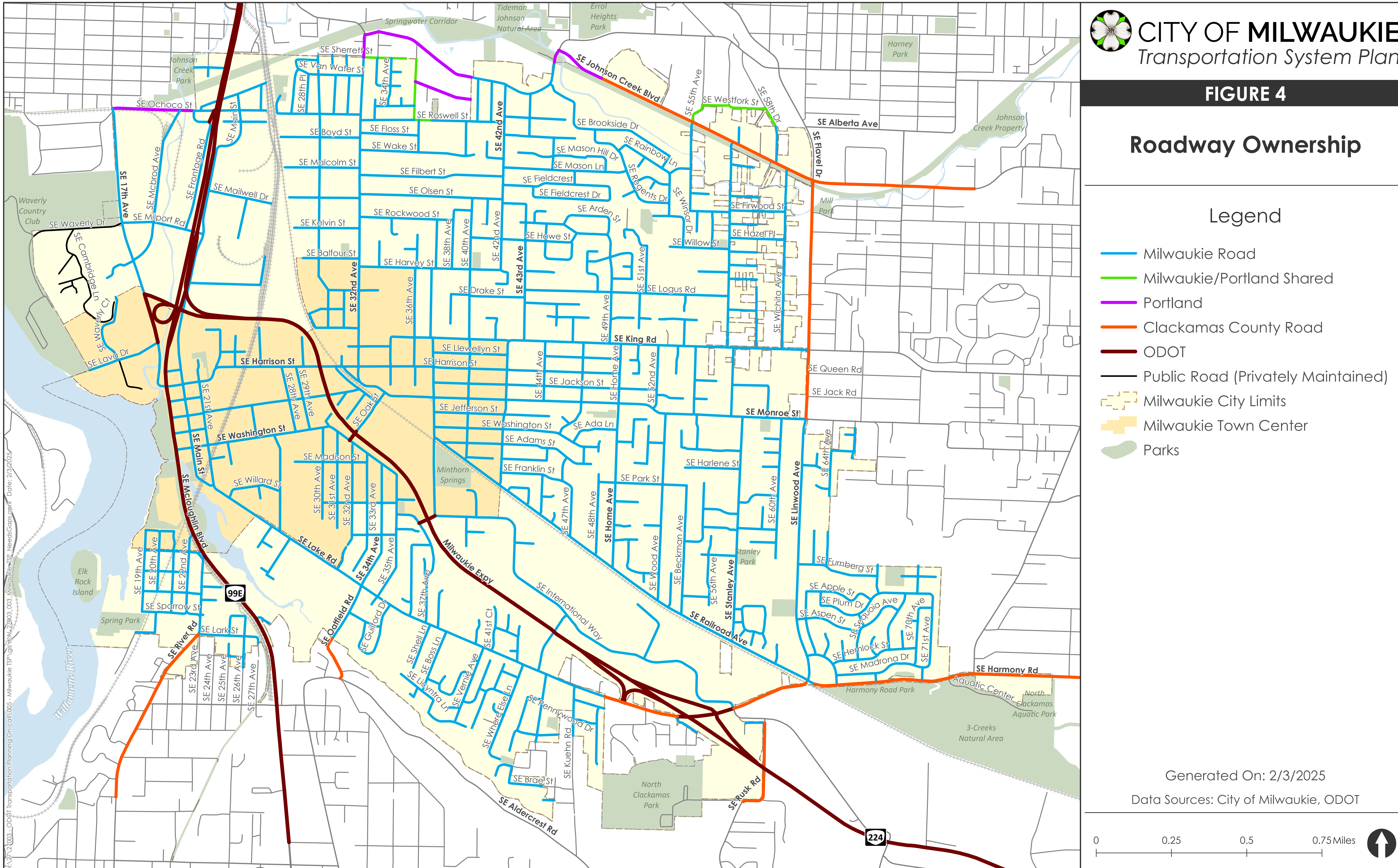
Public roadways within the City of Milwaukie are owned, operated and maintained by three primary jurisdictions: the City of Milwaukie, ODOT, and Clackamas County. These three jurisdictions coordinate planning, operations, maintenance, and improvements of roadway facilities within the urban area and ensure the continued performance and functionality of the transportation system to meet public needs. These jurisdictions are responsible for the following:

- Maintenance and operations;
- Determining the road's functional classification;
- Defining the roadway's design and multimodal features; and approving construction and access permits.

Figure 4 maps roadway facilities by ownership in the City of Milwaukie while Table 1 provides a more detailed breakdown of these roadways. As would be expected, the majority of the roadway corridors in the City are city-owned.

Table 1. Roadway Ownership

	City Owned Roadways	**Joint City/Portland Owned Roadways**	**Clackamas County Owned Roadways**	**ODOT Owned Roadways**
City-Wide	77.9 miles	0.8 miles	2.6 miles	8.1 miles


CITY OF MILWAUKIE
Transportation System Plan
FIGURE 4
Roadway Ownership
Legend
Milwaukie Road
Milwaukie/Portland Shared
Portland
Clackamas County Road
ODOT
Public Road (Privately Maintained)
Milwaukie City Limits
Milwaukie Town Center
Parks
Generated On: 2/3/2025
Data Sources: City of Milwaukie, ODOT
0 0.25 0.5 0.75 Miles

Roadway Functional Classification

Roadway functional classifications organize streets based on their role in the transportation system. The City's functional classifications form a hierarchy of streets ranging from those that are primarily for travel mobility (regional routes and arterials) to those that are primarily for access to property (neighborhood routes and local streets). The functional classification system is developed with the recognition that individual streets do not act independently of each other but form a network of streets that work together to serve travel needs on a local, citywide, and regional level.

The City's functional classification system includes regional routes, arterials, collectors, neighborhood routes, and local streets.

Figure 5 maps the current functional classifications while Table 2 summarizes the breakdown of the classifications in total miles of facilities. The majority of streets in the City are classified as local streets, focusing on providing direct access, with key arterial, collector roadways, and regional routes providing overall mobility.

Table 2. Roadway Functional Classification

	Regional Routes	Arterials	Collectors	Neighborhood Routes	Local Streets	Total
City-Wide	6.0 miles	11.0 miles	13.3 miles	9.3 miles	49.7 miles	**89.3 miles**

Functional Classification Needs/Gaps Assessment

The existing functional classifications were reviewed to ensure there are no gaps or inconsistencies in designations with partnering agencies such as ODOT or Clackamas County or adjacent agencies such as the City of Portland.

Functional Classification Missing Segments

Based on a review of the City's roadway functional classification map, the following roadway segments are not designated in the current Milwaukie TSP roadway functional classification map and would need modification in the new Milwaukie TSP:

- Johnson Creek Boulevard from SE 45th Place to the east city limits as highlighted in Figure 5. Although a Clackamas County owned/maintained roadway, a Milwaukie Arterial designation would ensure inter-agency consistency with the County.
- Harmony Road from SE Linwood Avenue to the east city limits as highlighted in Figure 5. Although a Clackamas County owned/maintained roadway, a Milwaukie Arterial designation would ensure inter-agency consistency with the County.
- SE 17th Avenue from roughly SE Waverly Place to the north city limits as highlighted in Figure 5 . This segment will be updated to an Arterial designation, consistent with the remainder of SE 17th Avenue.

CITY OF **MILWAUKIE**
Transportation System Plan

FIGURE 5

Functional Classification

Legend

- Regional Route
- Arterial
- Collector
- Neighborhood Routes
- Local Street
- Missing Designation
- Milwaukie City Limits
- Milwaukie Town Center
- Parks

Generated On: 1/21/2025

Data Sources: City of Milwaukie, ODOT

0 0.25 0.5 0.75 Miles

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Freight

Freight route classifications are provided at the State, Federal, and local levels. In Oregon, the Oregon Highway Plan (OHP) documents State freight designations on the state highway system. As previously noted, the OR 99E corridor (segment north of OR 224) and the OR 224 corridor are classified by ODOT as Freight Routes. At the Federal level, there are no roadways within Milwaukie that are classified as part of the National Highway System (NHS), and therefore there are no roadways classified as National Highway Freight Routes.

Freight Classification Changes

The City is considering the incorporation of multimodal functional classifications into the new TSP. This will update the terminology used to describe freight routes. See accompanying *DRAFT Multimodal Functional Classification Memorandum for the updated Freight Classifications.*

Freight Needs/Gaps Assessment

The Freight Master Plan element in the current Milwaukie TSP was reviewed to identify projects that are still relevant and needed to address the efficient movement of freight. These projects are summarized in TSP Figure 9-1 and TSP Table 9-1 for freight planning projects that have not yet been completed. All of these projects were reviewed with city planning and engineering staff for inclusion in the new Milwaukie TSP project development and review process. Based on this assessment, all currently planned and unconstructed freight projects in the TSP were identified as having continued relevance. These projects are identified as gaps and mapped in Figure 6.

CITY OF **MILWAUKIE**
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FIGURE 6

Freight Gaps and Needs

OR 99E/Ochoco St:
Turning radii deficiencies for freight movements and signage deficiencies

Omark Dr/Mailwell Dr:
Turning radii deficiencies for freight movements

Main St/Mailwell Dr:
Turning radii deficiencies for freight movements

Harrison St Rail Crossing:
Capacity deficiencies

37th Ave Rail Crossing:
Geometric transition deficiencies with railroad crossing

OR 224 Ramp/17th Ave:
Turning radii deficiencies for freight movements

OR 224 - OR 99E to Lake Rd:
Conduct refinement plan focus on motor and freight mobility

Harmony Rd/Linwood Ave:
Capacity, queuing, and geometric deficiencies

OR 224/International Way/37th Ave:
Turning radii deficiencies for freight movements

Legend

- Milwaukie City Limits
- Milwaukie Town Center
- Parks

Generated On: 2/4/2025

Data Sources: City of Milwaukie, ODOT

0 0.25 0.5 0.75 Miles

Intersection Traffic Control

Intersection traffic control in the City of Milwaukie primarily consists of all-way stop control and signalized intersections. Traffic signals exist mainly along OR 99E, OR 224. Harrison Street, King Road, Lake Road, Linwood Avenue, and Johnson Creek Boulevard. The location of existing traffic signals and all-way stop control intersections are mapped in Figure 7.

Intersection Operations Evaluation

Traffic operations were evaluated at the following five intersections as selected by City engineering staff. Some of these intersections have been formally studied as part of other planning efforts and are known to experience peak hour operational challenges.

- SE Oak Street / SE Railroad Avenue / SE Monroe Street
- SE 32nd Avenue / SE Harrison Street
- SE 42nd Avenue / SE Roswell Street
- SE 32nd Avenue / SE Harvey Street
- SE Railroad Avenue / SE 37th Avenue

When not already available from previous studies, supplemental weekday PM peak hour traffic counts were collected at the key intersections in September 2024 following the start of the school year. The traffic counts included the total number of vehicles, pedestrians, bicyclists, and heavy vehicles that entered the intersections in 15-minute intervals.

Analysis Methodology and Performance Standards

All traffic operations analyses described in this section conform with City standard methodologies and guidelines. The City of Milwaukie's operational standard for city-owned intersections is Level-of-Service "D" or better.

Existing Traffic Conditions

The intersection operations analysis was conducted using Synchro and PTV Vistro 2022, software tools designed to assist with operations analyses in accordance with Highway Capacity Manual (HCM, Reference 5) methodologies. The analysis results include level-of-service (LOS), delay, and volume-to-capacity (v/c) ratios at all intersections. The LOS, delay, and v/c ratios are reported for the overall intersection at signalized intersections and the critical movement at unsignalized intersections in accordance with the methodologies outlined in ODOT's *Analysis Procedures Manual*. Figure *8* summarizes existing lane configurations, traffic control devices, and PM peak hour operations at the study intersections. As shown in Figure 8, all study intersections meet the LOS D standard under the existing PM Peak Hour. *Traffic counts and operations worksheets are included in Appendix A.*

Year 2045 Baseline Traffic Operations

The year 2045 projected traffic conditions analysis identifies how the study area's transportation system will operate in the TSP horizon year 2045. Metro's Travel Demand Model provides base (2020) and future (2045) traffic volume projections that reflect anticipated land use changes and planned transportation improvements within the Metro region. Intersection turning

movement volumes were derived from the traffic volume projections by applying the post-processing methodology identified in the National Cooperative Highway Research Program (NCHRP) Report 765, *Analytical Travel Forecasting Approaches for Project-Level Planning and Design*. The methodology derives forecast traffic volumes based on the existing traffic volumes and base and future year traffic volume projections in the model. *The year 2045 traffic volume development worksheets and travel demand model outputs are provided in Appendix B.*

Figure *8* illustrates the additional study intersection forecast year 2045 traffic volumes and operations. Table 3 summarizes the forecast operations and findings.

Table 3. 2045 Additional Study Intersection Operations Summary

Intersection	2045 Future Conditions		Operational Challenge
	Forecast to Operate within LOS D Standard	**Forecast to Operate Above LOS D Standard**	
SE Roswell Street/ SE 42nd Avenue	x		The critical Roswell Street approach is forecast to operate within acceptable standards during peak travel periods. While the intersection does experience periods of short-term congestion during school release times at nearby Ardenwald Elementary, no capacity-based traffic control improvements are forecast to be needed. However, considering the large number of pedestrians that traverse this intersection due to its proximity to Ardenwald Elementary, pedestrian crossing enhancements such as an RRFB treatments across SE 42nd Avenue should be considered.
SE Harvey Street/ SW 32nd Avenue	x		While the critical Harvey Street approach is forecast to operate within acceptable standards during peak travel periods, enhanced pedestrian and bicycle crossing treatments of SE Harvey Street have been identified as part of other study efforts that should be incorporated as part of the new TSP project development and prioritization efforts.
SE Harrison Street/ SE 32nd Avenue	x		While forecast to have adequate long-term intersection capacity, the split phasing on the north and south approaches can result in long vehicle queues on the southbound through/left-turn lane during peak time periods. This intersection has also been identified as a challenging intersection for pedestrians and bicycles to cross.
SE Oak Street/ SE Railroad Ave/ SE Monroe Street		x	The westbound Monroe Street approach is forecast to operate over capacity in 2045 traffic conditions. This is attributed to growth along the Monroe and Oak Street corridors.

Intersection	2045 Future Conditions		Operational Challenge
	Forecast to Operate within LOS D Standard	Forecast to Operate Above LOS D Standard	
SE Railroad Ave/ SE 37th Avenue		x	The westbound left-turn movement is forecast to operate with high levels of delay resulting in LOS F conditions. This is attributed to forecast growth on the 37th Avenue and SE Railroad Avenue corridors.

Intersection Traffic Control Needs/Gaps Assessment

Based on the analysis above, intersections forecast to exceed the LOS D standard are identified in gaps and illustrated in Figure 9.

Additionally, the Street Network Master Plan element in the current Milwaukie TSP was reviewed to identify projects that are still relevant and needed to address traffic operations, safety, and geometric challenges. These intersection projects are summarized in TSP Figure 8-5 and TSP Table 8-10. The review determined that multiple intersection capacity or geometric improvement projects have been implemented as part of other capital projects such as the Linwood Avenue improvements and various projects along OR 99E. All other remaining projects have yet to be implemented. Based on conversations with City engineering staff, those remaining projects which are notated on Figure 9, are still needed to address various traffic control, safety, or geometric deficiencies. Projects in other planning efforts that have occurred since the last TSP update, such as the study of SE 42nd Avenue & SE Johnson Creek Boulevard, were also incorporated into Figure 9.

CITY OF **MILWAUKIE**
Transportation System Plan

FIGURE 7

Intersection Control

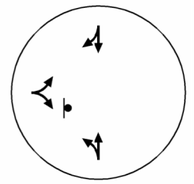
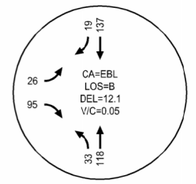
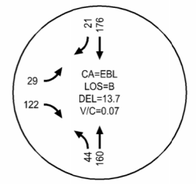
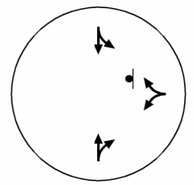
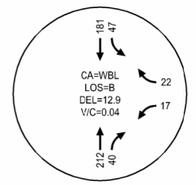
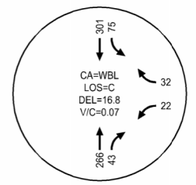
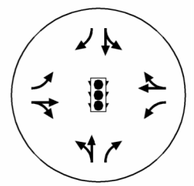
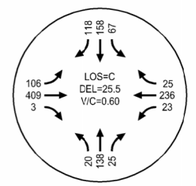
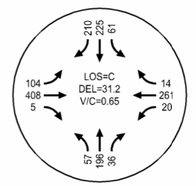
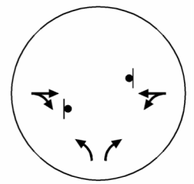
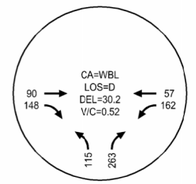
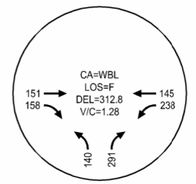
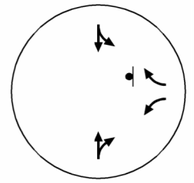
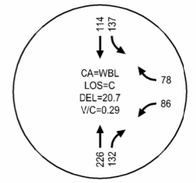
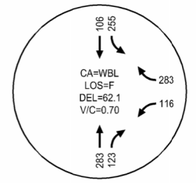
Legend

- All-Way Stop
- Signalized Intersection - City of Milwaukie Owned
- Signalized Intersection - Clackamas County Owned
- Signalized Intersection - ODOT Owned
- Milwaukie City Limits
- Milwaukie Town Center
- Parks

Generated On: 2/3/2025

Data Sources: City of Milwaukie, ODOT

0 0.25 0.5 0.75 Miles

	Existing Lane Configurations	Existing PM Peak Hour Operations	Future Year (2045) PM Peak Hour Operations
1. SE ROSWELL ST / SE 42ND AVE			
2. SE HARVEY ST / SE 32ND AVE			
3. SE HARRISON ST / SE 32ND AVE			
4. SE OAK ST / SE RAILROAD AVE - SE MONROE ST			
5. SE RAILROAD AVE / SE 37TH AVE			

LEGEND

- (#) - STUDY INTERSECTIONS
- CA = CRITICAL APPROACH
- LOS = CRITICAL APPROACH LEVEL OF SERVICE
- DEL* = CRITICAL APPROACH AVERAGE CONTROL DELAY
- V/C* = CRITICAL APPROACH VOLUME-TO-CAPACITY RATIO
- *Critical Movement Delay and V/C Ratio Reported for TWSC Intersections - Overall Delay and V/C Ratio Reported for Signalized Intersection

- LANE SYMBOL
- STOP SIGN
- SIGNAL

Existing Lane Configurations, Traffic Control Devices, and PM Peak Hour Operations
Milwaukie Oregon

Figure 8

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CITY OF **MILWAUKIE**
Transportation System Plan

FIGURE 9

Intersection Control Gaps and Needs

Johnson Creek/42nd Ave
Traffic control needs

42nd Ave/Roswell St
Enhanced pedestrian crossing needs

King Rd/42nd Ave
Intersection traffic control needs

Harrison St/42nd Ave
Intersection traffic control needs

Stanley Ave/Logus Rd
Enhanced pedestrian crossing needs

King Rd/Stanley Ave
Enhanced pedestrian crossing needs

OR 224/Harrison St
Redesign intersection to consolidate movements and extend bike lanes through intersection.

King Rd/Home St
Enhanced pedestrian crossing needs

Harrison St/42nd Ave
Intersection traffic control needs

Stanley Ave/Monroe St
Enhanced pedestrian crossing needs

37th Ave/International Way
Intersection geometry and alignment needs

OR 224/Freeman Way
Improve intersection and modify access.

McLoughlin Blvd/River Rd/Bluebird St
Redesign intersections to consolidate movements, OR, add 2nd NB left turn at River Rd

Linwood Ave/Harmony Road
Intersection geometry and traffic control enhancement needs

Legend

- Milwaukie City Limits
- Milwaukie Town Center
- Parks

Generated On: 2/4/2025

Data Sources: City of Milwaukie, ODOT

0 0.25 0.5 0.75 Miles

Roadway Characteristics

The following sections provide an overview of roadway characteristics within the City, including travel lanes, posted speed limits, intersection traffic control, and other key characteristics.

Travel Lanes

Roadway facilities by travel lanes are mapped in Figure 10. There are no identified projects in the current Milwaukie TSP that would add or substantively change the number of corridor-level travel lanes on existing Milwaukie roadways.

Posted Speeds

Roadway facilities by posted speeds are mapped in Figure 11. Roadways without posted speed limits are subject to statutory speed limits established by the state (ORS 811.11 and ORS 811.105), except for school zones that are posted at 20 MPH.

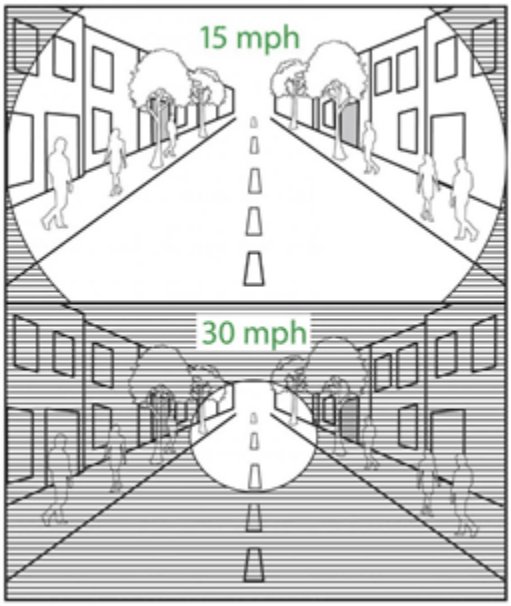
Posted speeds on City facilities are generally 25 to 35 MPH. Posted speeds on ODOT facilities range from 35 to 50 MPH, except for the segment of OR 99E near and through downtown Milwaukie, which is posted at 30 MPH.

Due to recent legislative changes to ORS 810.180, The City of Milwaukie can establish by ordinance a reduction in the speed limit on local residential streets from 25 MPH to 20 MPH. As shown in Exhibit 1and Exhibit 2, reducing speeds decreases the likelihood of fatal injury crashes and makes it easier for drivers to see and react to people in the roadway.

Exhibit 1. Vehicle Speed Comparison to Chance of Pedestrian Injury and Fatality

Source: https://www.ite.org/technical-resources/topics/speed-management-for-safety/speed-as-a-safety-problem/

Exhibit 2. Field of Vision Bases on Speed of Motorist



Source: https://www.ite.org/technical-resources/topics/speed-management-for-safety/speed-as-a-safety-problem/

Roadway Gaps/Needs Assessment

The Street Network Master Plan element in the current Milwaukie TSP was reviewed to identify projects that are still relevant and needed to address corridor and intersection. These intersection projects are summarized in TSP Figure 8-5 and TSP Table 8-10. The review determined that multiple corridor and intersection approach projects have yet to be implemented. Based on conversations with City engineering staff, those remaining projects which are notated on Figure 12, are still needed to address various roadway corridor deficiencies.

The local street network is an important part of Milwaukie's existing transportation network as it provides a fabric of roadways that provide local access and circulation to residential neighborhoods. The local street network in Milwaukie has essentially been built out over time, however it is not well connected in some parts of the city which can inhibit efficient connections to neighborhood schools, parks, and neighborhood hubs. The current Milwaukie TSP recognizes these challenges and has identified opportunities to improve local street connections over time. TSP Figure 8-4, the City's current street connectivity plan, was reviewed and updated based on input from City staff to refine the local street connections. This included updating the location of street extensions based on potential impacts to existing land use and identifying multimodal path connections for pedestrians and bicycles. This updated map is illustrated in Figure 12B.

There is also an opportunity to adopt a formal 20 MPH speed for local streets in Milwaukie. This is consistent with other neighboring jurisdictions such as the City of Portland. No other changes to the posted speeds have been identified at this time.

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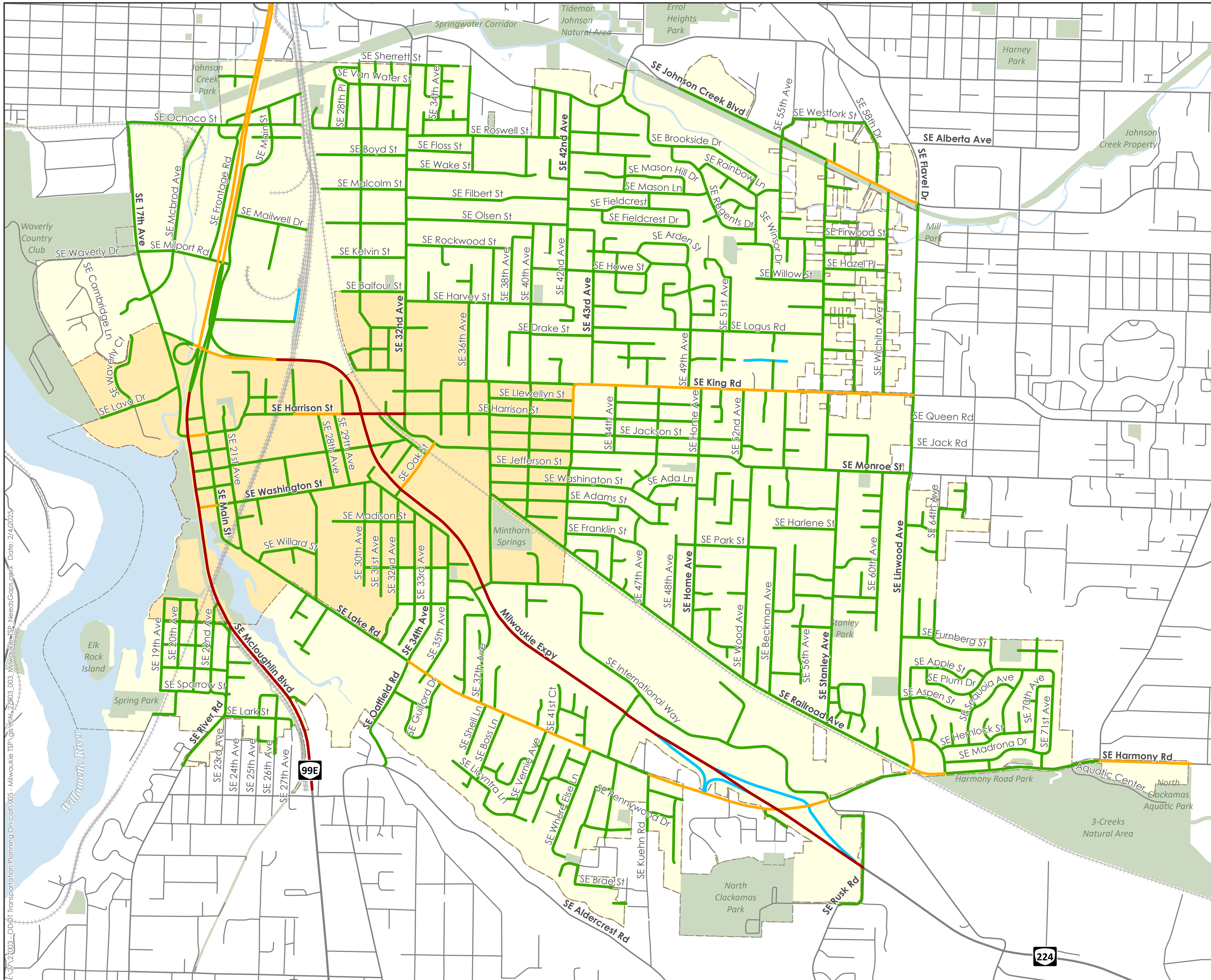
Transportation System Plan

FIGURE 10

Roadway Lanes



Legend

- 1 Lane
- 2 Lanes
- 3 Lanes
- 4+ Lanes
- Milwaukie City Limits
- Milwaukie Town Center
- Parks

Generated On: 2/4/2025

Data Sources: City of Milwaukie, ODOT

0 0.25 0.5 0.75 Miles

CITY OF **MILWAUKIE**
Transportation System Plan

FIGURE 11

Posted Speed

Legend

- 50 MPH
- 45 MPH
- 40 MPH
- 35 MPH
- 30 MPH
- 25 MPH
- 20 MPH
- Milwaukie City Limits
- Milwaukie Town Center
- Parks

Generated On: 2/4/2025

Data Sources: City of Milwaukie, ODOT

0 0.25 0.5 0.75 Miles

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CITY OF **MILWAUKIE**
Transportation System Plan

FIGURE 12

Roadway Gaps and Needs

Upgrade industrial streets and improve connectivity

42nd Ave: King Rd to Harrison Blvd
Enhance access management

Railroad Ave/37th Ave
Add westbound
left-turn storage

OR 99E
Corridor Refinement
Plan

Railroad Ave: 37th Ave to Linwood Ave
Corridor improvements

OR 224
Corridor Refinement Plan

Legend

- Milwaukie City Limits
- Milwaukie Town Center
- Parks

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Data Sources: City of Milwaukie, ODOT

0 0.25 0.5 0.75 Miles

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FIGURE 12B

Multimodal Connectivity Gaps and Needs

Legend

- Milwaukie City Limits
- Milwaukie Town Center
- Parks

- Potential Local Street Extension
- Potential New/Enhanced Bicycle/Pedestrian Connection

Generated On: 2/6/2025

Data Sources: City of Milwaukie, ODOT

0 0.25 0.5 0.75 Miles

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Pedestrian and Bicycle Facilities

Pedestrian and bicycle facilities provide infrastructure for people to walk, bike, roll, or use mobility devices. In the City of Milwaukie, the pedestrian and bicycle accommodations primarily consist of on-street facilities and multi-use trails.

Pedestrian Facilities

Pedestrian facilities refer to infrastructure designed for people walking or using mobility devices and typically include sidewalks, trails, crossings, and curb ramps. A well-connected pedestrian network provides safe and efficient links between pedestrian trip generators like schools, parks, commercial areas, neighborhood hubs, residential neighborhoods, and other pedestrian attractors.

Figure 13 illustrates all pedestrian facilities within the City of Milwaukie. As shown, this consists of sidewalks on one or both sides of select roadways and a collection of trails and on-street multi-use pathways. As tabulated in Table 4, only 16 percent of the city's total potential sidewalk network has sidewalks greater than 5 feet and without barriers.

Table 4. Existing City-Wide Pedestrian Network Completeness by Functional Classification

	Regional Routes	**Arterials**	**Collectors**	**Neighborhood Routes**	**Local Streets**	**Total**
Sidewalks ≥5 feet Percent Complete	18%	26%	21%	13%	8%	16%

Pedestrian Level of Traffic Stress

The ODOT Analysis Procedures Manual (APM) provides a methodology for evaluating pedestrian environments called Pedestrian Level of Traffic Stress (PLTS)[2]. This methodology classifies four levels of traffic stress that a person walking can experience, ranging from PLTS 1 (little traffic stress) to PLTS 4 (high traffic stress). A segment that is rated PLTS 1 has wide sidewalks that are set back from adjacent traffic lanes and is typically suitable for all users, including young children and people using mobility devices. An example of a PLTS 1 facility is illustrated in Exhibit 3. Monroe Street is PLTS 1 because the width of facility is over 6 feet wide and the parking lane provides a comfortable buffer from traffic. A segment that is rated PLTS 4 is generally located along high speed, multilane roadways with narrow or missing sidewalks and would only be utilized by able-bodied adults with limited route choices. An example of a PLTS 4 facility is illustrated in Exhibit 4. Roswell Avenue is PLTS 4 because the sidewalk is curb-tight and there are several barriers reducing the effective width of the sidewalk: people using mobility devices or pushing strollers would not be able to use the sidewalk without significant challenges.

Exhibit 3. PLTS 1 Facility (Monroe Street)

Exhibit 4. PLTS 4 Facility (Roswell Avenue)

[2] The roadway network was estimated by multiplying roadway centerline miles by two, recognizing a complete pedestrian network would achieve PLTS 1 or 2 on both sides of the street.

Per the APM, PLTS 2 is considered a reasonable target for pedestrian facilities due to its acceptability for most adults; however, within a ¼ mile of schools, in downtown cores, and near transit stops, a target of PLTS 1 is recommended. The APM also notes that there should be no PLTS 3 or 4 facilities within ¼ mile of elementary schools because of the associated safety concerns. **The City of Milwaukie should strive to achieve PLTS 1 where feasible, particularly in the vicinity of schools, however given the fact that Milwaukie has few vacant parcels, there are constraints such as the lack of right-of-way available that make a PLTS 1 unfeasible in many situations. Based on the city's constraints the consultant team believes that in Milwaukie PLTS 2 is an acceptable target as it is accessible for most users.**

Figure 14 illustrates the existing PLTS in the planning area. Under existing conditions, approximately 15% of the existing roadway network in Milwaukie has a PLTS 1 or 2 score as tabulated in Table 5. Most of the roadways in the city have a PLTS 3 or 4 score due to the lack sidewalk facilities or they have obstructions that limit the effective sidewalk width to levels that impede walking and rolling.

Table 5. Existing City-Wide PLTS Inventory Network Completeness

	Regional Routes	Arterials	Collectors	Neighborhood Routes	Local Streets	Total
PLTS 1 or 2	0.0 (0% complete)	6.2 (29% complete)	7.2 (28% complete)	2.9 (16% complete)	7.9 (9% complete)	24.2 (15% complete

Pedestrian Classification Changes

The City is incorporating multimodal functional classifications into the TSP. This will update the terminology used to describe pedestrian routes. See accompanying *DRAFT Multimodal Functional Classification Memorandum for the updated Pedestrian Classifications.*

Pedestrian Gaps Inventory

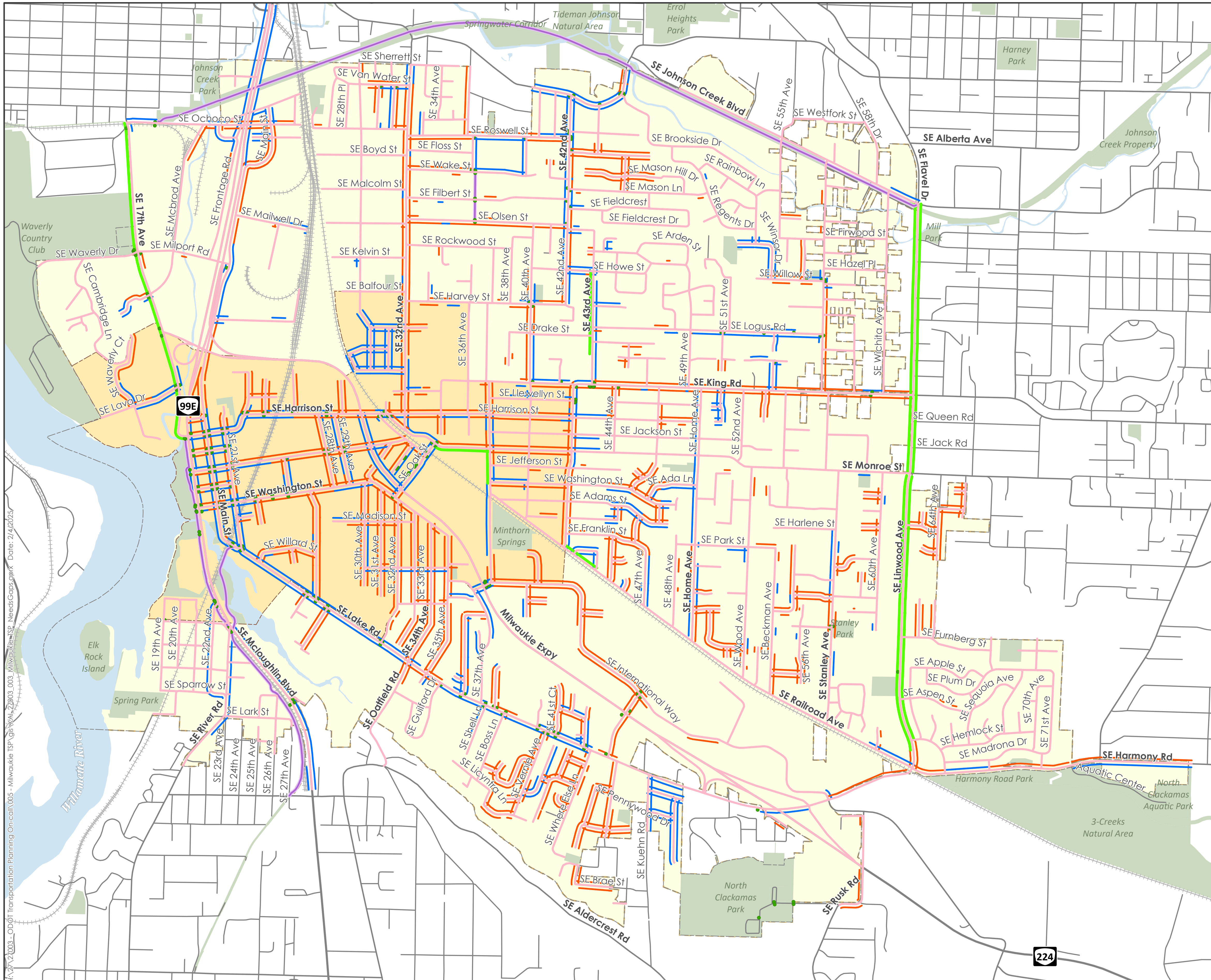
Figure 15A illustrates the citywide pedestrian gaps. Gaps include the following conditions:

- Missing pedestrian facilities
- Segments that are PLTS 3 or PLTS 4
- Locations where there have been reported injuries and deaths of people walking or using a mobility device from the most recent 5 years of available crash data (2018-2022)
- Intersections that are challenging for pedestrians to cross or navigate. These challenges can be attributed to one or more issues such as a lack of pedestrian accommodations, wide intersections with long crossing distances, lack of wayfinding, poor geometrics, and high motor vehicle interactions.

Most roadways in Milwaukie do not meet the preliminarily identified PLTS 2 target. Consistent with the new TPR requirements, the Milwaukie TSP will focus on identifying and evaluating projects that are in the Milwaukie Town Center or that are within a ¼ mile walkshed of schools, grocery stores, neighborhood hubs, transit stops, and senior living/low income/resource centers. Figure

15B illustrates the gaps and needs in those priority focus areas. Figure 15C through Figure 15I provide the individual gaps for each of those respective geographic walksheds.

This map will be used in conjunction with committee input and input from the community to develop a prioritized list of constrained and unconstrained improvement projects.



CITY OF **MILWAUKIE**

Transportation System Plan

FIGURE 13

Pedestrian Facilities

Legend

- ADA Ramp
- Sidewalk ≥5 feet
- <5 feet or has barriers
- On-Street Ped/Bike Pathway
- Multi-Use Path
- Milwaukie Town Center
- Milwaukie City Limits

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Data Sources: City of Milwaukie, ODOT

0 0.25 0.5 0.75 Miles

CITY OF MILWAUKIE
Transportation System Plan

FIGURE 14

Pedestrian Level of Traffic Stress

Legend

- PLTS 1
- PLTS 2
- PLTS 3
- PLTS 4
- No Sidewalk = PLTS 4

Note: Analysis Limited to Roadway Segments

- Schools
- Grocery Store
- Farmers markets
- Hospital (Providence Milwaukie)
- Library
- Neighborhood Hub
- Church
- Large Adult Care Facility
- Large Childcare Facility
- Housing
- MAX Station
- Park
- Milwaukie City Boundary
- Milwaukie Town Center
- Parks

Generated On: 2/4/2025

Data Sources: City of Milwaukie, ODOT

0 0.25 0.5 0.75 Miles

CITY OF **MILWAUKIE**
Transportation System Plan

FIGURE 15A

Pedestrian Gaps and Deficiencies

Citywide

Legend

- Pedestrian Facility Does Not Meet the PLTS 2 Target
- No Sidewalk/Does Not Meet the PLTS 2 Target
- Challenging Intersections for Pedestrians
- Fatal Pedestrian Crash
- Severe Injury Pedestrian Crash
- Milwaukie City Limits
- Milwaukie Town Center
- Parks

Generated On: 3/5/2025

Data Sources: City of Milwaukie, ODOT

0 0.25 0.5 0.75 Miles

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FIGURE 15B

Pedestrian Gaps and Deficiencies

Priority Focus Areas

Legend

- Pedestrian Facility Does Not Meet the PLTS 2 Target
- No Sidewalk/Does Not Meet the PLTS 2 Target

Density of Focus Area Walksheds

- 6 (Walkshed Layers)
- 3 (Walkshed Layers)
- 1 (Walkshed Layer)
- Milwaukie City Limits
- Parks

Generated On: 2/5/2025

Data Sources: City of Milwaukie, ODOT

0 0.25 0.5 0.75 Miles

CITY OF **MILWAUKIE**
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FIGURE 15C

Pedestrian Gaps and Deficiencies

Milwaukie Town Center

Legend

- Pedestrian Facility Does Not Meet the PLTS 2 Target
- No Sidewalk/Does Not Meet the PLTS 2 Target
- Milwaukie City Limits
- Milwaukie Town Center
- Parks

Generated On: 2/5/2025

Data Sources: City of Milwaukie, ODOT

0 0.25 0.5 0.75 Miles

CITY OF **MILWAUKIE**
Transportation System Plan

FIGURE 15D

Pedestrian Gaps and Deficiencies

Primary/Secondary/ Post-Secondary Schools

Legend

- Schools
- Pedestrian Facility Does Not Meet the PLTS 2 Target
- No Sidewalk/Does Not Meet the PLTS 2 Target
- Quarter-Mile Walkshed Area
- Milwaukie City Limits
- Milwaukie Town Center
- Parks

Generated On: 2/5/2025

Data Sources: City of Milwaukie, ODOT

0 0.25 0.5 0.75 Miles

CITY OF **MILWAUKIE**
Transportation System Plan

FIGURE 15E

Pedestrian Gaps and Deficiencies

Grocery Stores

Legend

- Grocery Store
- Pedestrian Facility Does Not Meet the PLTS 2 Target
- No Sidewalk/Does Not Meet the PLTS 2 Target
- Quarter-Mile Walkshed Area
- Milwaukie City Limits
- Milwaukie Town Center
- Parks

Generated On: 2/5/2025

Data Sources: City of Milwaukie, ODOT

0 0.25 0.5 0.75 Miles

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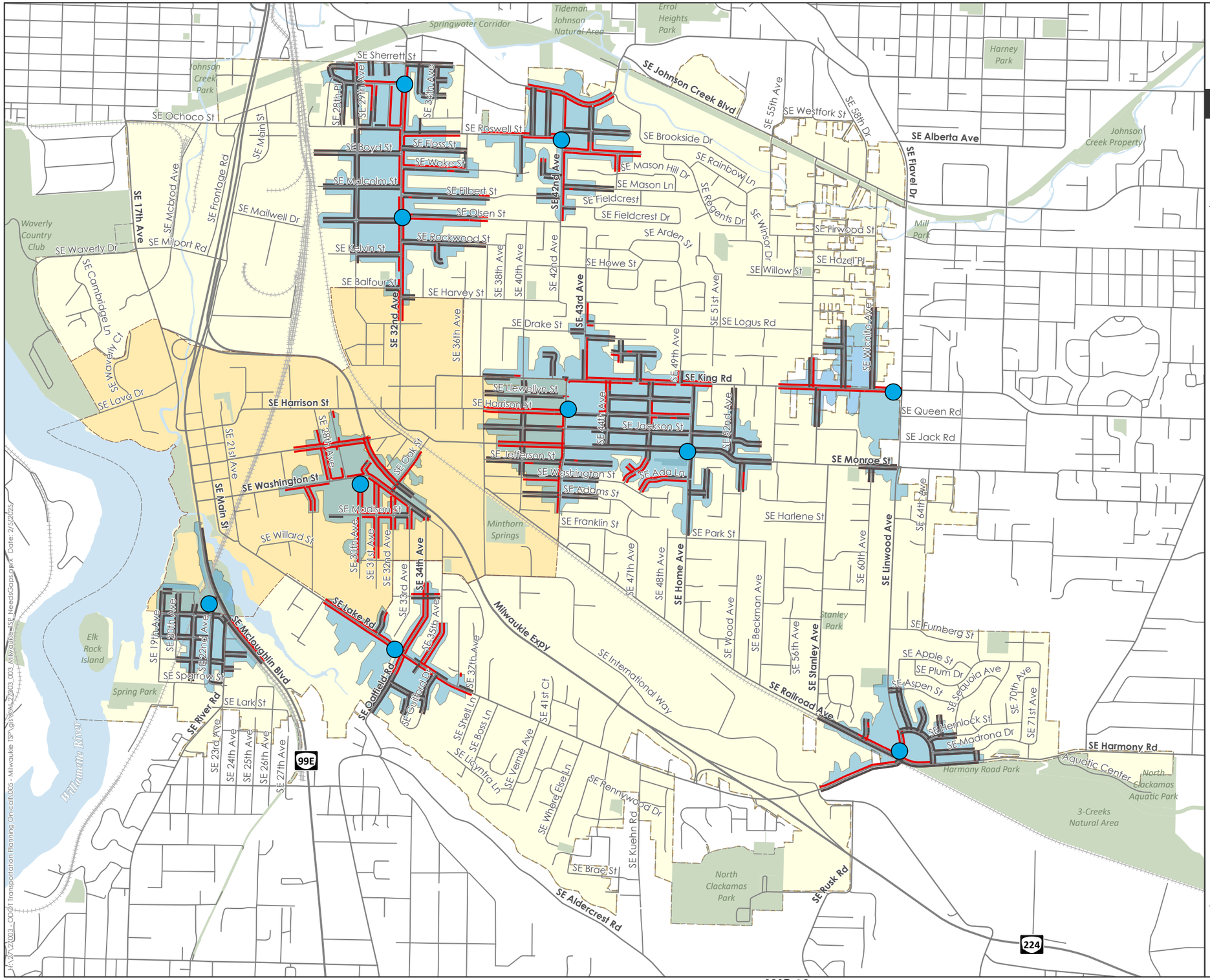
Transportation System Plan

FIGURE 15F

Pedestrian Gaps and Deficiencies

Neighborhood Hubs



Legend

- Neighborhood Hub
- Pedestrian Facility Does Not Meet the PLTS 2 Target
- No Sidewalk/Does Not Meet the PLTS 2 Target
- Quarter-Mile Walkshed Area
- Milwaukie City Limits
- Milwaukie Town Center
- Parks

Generated On: 2/5/2025

Data Sources: City of Milwaukie, ODOT

0 0.25 0.5 0.75 Miles

CITY OF **MILWAUKIE**
Transportation System Plan

FIGURE 15G

Pedestrian Gaps and Deficiencies

Transit Stops

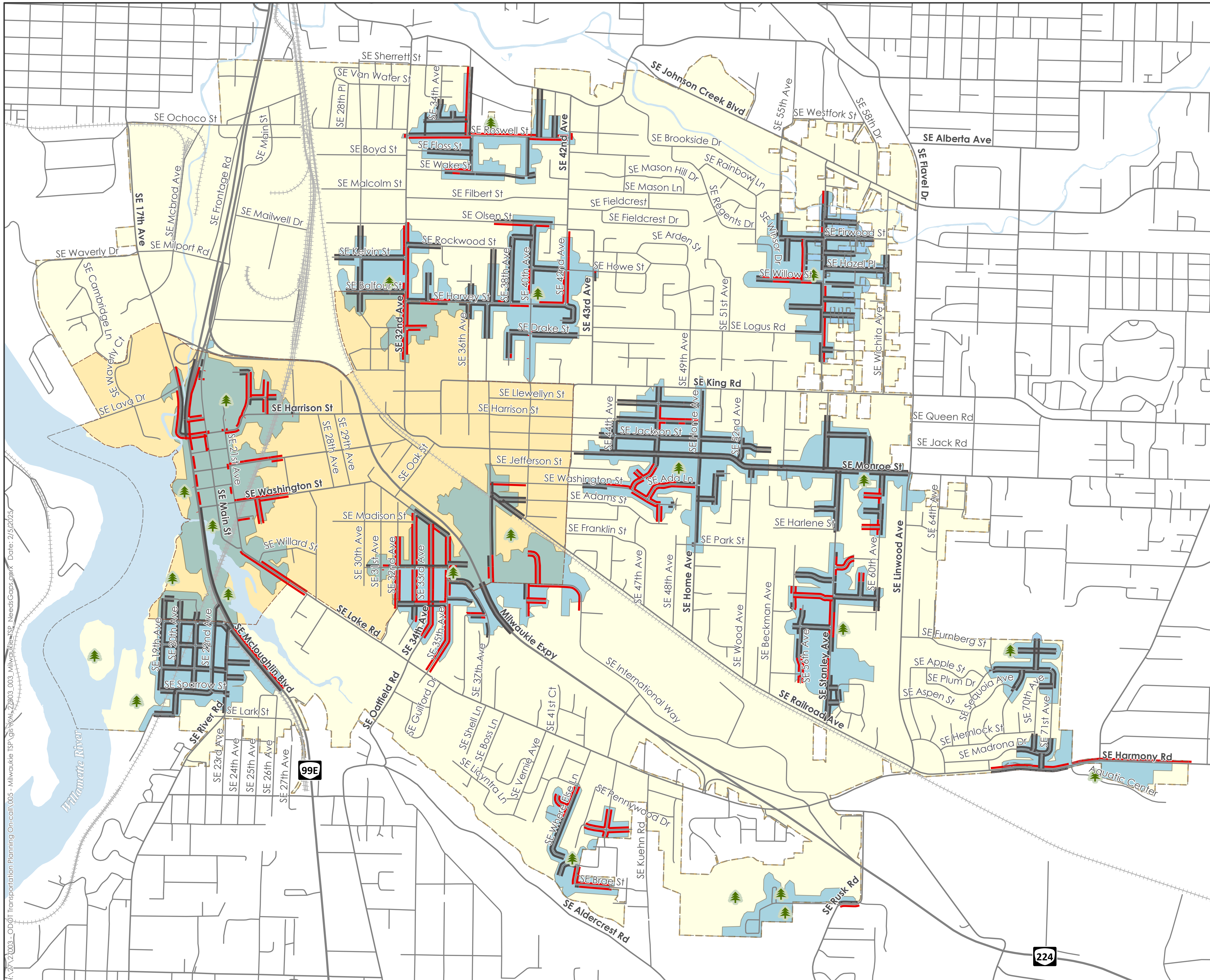
Legend

- Bus Stop
- Pedestrian Facility Does Not Meet the PLTS 2 Target
- No Sidewalk/Does Not Meet the PLTS 2 Target
- Quarter-Mile Walkshed
- Milwaukie City Limits
- Milwaukie Town Center
- Parks

Generated On: 2/5/2025

Data Sources: City of Milwaukie, ODOT

0 0.25 0.5 0.75 Miles



CITY OF MILWAUKIE

Transportation System Plan

FIGURE 15H

Pedestrian Gaps and Deficiencies

Parks

Legend

- Park
- Pedestrian Facility Does Not Meet the PLTS 2 Target
- No Sidewalk/Does Not Meet the PLTS 2 Target
- Quarter-Mile Walkshed
- Milwaukie City Limits
- Milwaukie Town Center

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Data Sources: City of Milwaukie, ODOT

0 0.25 0.5 0.75 Miles

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Transportation System Plan

FIGURE 15I

Pedestrian Gaps and Deficiencies

Senior Living Facilities, Low-Income Housing, and Resource Centers

Legend

- Low-Income Housing
- Resource Center
- Senior Living Facility
- Pedestrian Facility Does Not Meet the PLTS 2 Target
- No Sidewalk/Does Not Meet the PLTS 2 Target
- Quarter-Mile Walkshed
- Milwaukie City Limits
- Milwaukie Town Center

Generated On: 2/5/2025

Data Sources: City of Milwaukie, ODOT

0 0.25 0.5 0.75 Miles

Bicycle Facilities

Bicycle facilities refer to infrastructure designed for people biking, including bike lanes, shared use paths, paved shoulders, and the crossing infrastructure that supports a well-connected bicycle network, such as ramps and rectangular rapid flashing beacons (RRFBs).

Figure 16 maps existing bicycle facilities in the City of Milwaukie. Like pedestrian facilities, bicycle facilities serve a variety of trips, including trips to major attractions such as schools, parks, retail centers, and public facilities; commuter trips; recreational trips; and access to transit. The existing bicycle system in the City of Milwaukie consists of dedicated bicycle lanes, shared use paths/ trails, and paved shoulders. As tabulated in Table 6, only 31% of the city's total potential bicycle network (limited to Regional Routes, Arterials, and Collectors) has bicycle accommodations.

Table 6 Existing City-Wide Bicycle Network Completeness by Functional Classification

	Regional Routes	**Arterials**	**Collectors**	**Total**
Bicycle Network Percent Complete	0%	69%	6%	31%

Bicycle Level of Traffic Stress

The ODOT APM provides a methodology for evaluating bicycle environments called Bicycle Level of Traffic Stress (BLTS)[3]. As applied by ODOT, this methodology classifies four levels of traffic stress that a person biking can experience on the roadway, ranging from BLTS 1 (little traffic stress) to BLTS 4 (high traffic stress). A road segment that is rated BLTS 1 generally has low traffic volumes and travel speeds and/or enhanced bicycle facilities and is typically suitable for all users, including children. Exhibit 5 illustrates an example of a BLTS 1 facility that is BLTS 1 due to the low traffic volumes and travel speeds. A road segment that is rated BLTS 4 generally has high traffic volumes and travel speeds and is perceived as unsafe by most adults. Exhibit 6 illustrates an example of a BLTS 4 facility, which is BLTS 4 due the higher traffic speeds and volumes and lack of buffer for the bicycle facility.

[3] This methodology was completed using assumptions to fill in some missing data including precise bike lane widths, precise average daily traffic volumes on some streets, and roadway grades.

Exhibit 5. BLTS 1 Facility (Logus Road)

Exhibit 6. BLTS 4 Facility (OR 99E)

Per the ODOT APM, BLTS 2 is considered a reasonable target for bicycle facilities due to its acceptability for most adults; however, within a ¼ mile of schools, a target of BLTS 1 is recommended. **The City should strive to achieve BLTS 1 where feasible, particularly in the vicinity of schools and along priority bicycle routes.**

Figure 17 illustrates the existing BLTS in the planning area. Under existing conditions, approximately 70% of all existing roadways in Milwaukie are BLTS 1. Most roadways in Milwaukie are low-stress, local streets. However, of the Arterials and Collectors, there is a much lower level of BLTS 1 facilities.

Table 7 Existing City-Wide BLTS Inventory Network Completeness

	Regional Routes	Arterials	Collectors	Neighborhood Routes	Local Streets	Total
BLTS 1	0.0 (0% complete)	4.4 (40% complete)	0.9 (7% complete)	9.3 (100% complete)	48.2 (100% complete)	62.8 (70% complete)

Bicycle Classification Changes

The City is incorporating multimodal functional classifications into the TSP. This will update the terminology used to describe bicycle routes. See accompanying *DRAFT Multimodal Functional Classification Memorandum for the updated Bike Classifications.*

Bicycle Gaps Inventory

Figure 18A illustrates the citywide bicycle gaps. Gaps include the following conditions:

- Missing bicycle facilities on arterials or collectors[4]
- Segments that are BLTS 2, BLTS 3, or BLTS 4
- Locations where there have been reported severe injuries and deaths of people biking from the most recent 5 years of available crash data (2018-2022)
- Intersections that are challenging for bicyclists to cross or navigate. These challenges can be attributed to one or more issues such as a lack of bicycle infrastructure, lack of wayfinding, poor geometrics, and high motor vehicle interactions.

Consistent with the new TPR requirements, the TSP will focus on identifying and evaluating projects that are in the Town Center or that are within ¼ mile bikeshed[5] of schools, grocery stores, neighborhood hubs, transit stops, and senior living/low income/resource centers. Figure 18B illustrates the gaps and needs in those priority focus areas. Figure 18C through Figure 18H provide the individual gaps for each of those respective bikesheds.

This map will be used in conjunction with committee input and input from the community to develop a prioritized list of constrained and unconstrained improvement projects.

[4] Due to the low volume and speed nature of local streets, designated bicycle facilities are not required on local streets.

[5] Quarter-mile bikesheds are defined as the roadway segments that could be accessed by biking a quarter linear mile to a destination.

CITY OF **MILWAUKIE**
Transportation System Plan

FIGURE 16

Bicycle Facilities

Legend

- Bicycle Lanes
- Shared Roads
- On-Street Ped/Bike Pathway
- Multi-Use Path
- Greenway (Overlay Designation)
- Milwaukie City Limits
- Milwaukie Town Center
- Parks

Generated On: 2/5/2025

Data Sources: City of Milwaukie, ODOT

0 0.25 0.5 0.75 Miles

CITY OF MILWAUKIE
Transportation System Plan

FIGURE 17

Bicycle Level of Traffic Stress

Legend

- BLTS 1
- BLTS 2
- BLTS 3
- BLTS 4

Note: Analysis Limited to Roadway Segments

- Schools
- Grocery Store
- Farmers markets
- Hospital (Providence Milwaukie)
- Library
- Neighborhood Hub
- Church
- Large Adult Care Facility
- Large Childcare Facility
- Housing
- MAX Station
- Park
- Milwaukie City Boundary
- Milwaukie Town Center
- Parks

Generated On: 3/5/2025

Data Sources: City of Milwaukie, ODOT

0 0.25 0.5 0.75 Miles

CITY OF **MILWAUKIE**
Transportation System Plan

FIGURE 18A

Bicycle Gaps and Deficiencies

Citywide

Legend

- Bicycle Facility Does Not Meet the BLTS 1 Target
- No Bicycle Facility/Does No Meet the BLTS 1 Target
- Challenging Intersections for Bicycles
- Severe Injury
- Milwaukie City Limits
- Milwaukie Town Center
- Parks

Generated On: 3/6/2025

Data Sources: City of Milwaukie, ODOT

0 0.25 0.5 0.75 Miles

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CITY OF **MILWAUKIE**
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FIGURE 18B

Bicycle Gaps and Deficiencies

Priority Focus Areas

Legend

- Bicycle Facility Does Not Meet the BLTS 1 Target
- No Bicycle Facility/Does Not Meet the PLTS 2 Target

Density of Focus Area Bikesheds

- 6 (Bikeshed Layers)
- 3 (Bikeshed Layers)
- 1 (Bikeshed Layer)

- Milwaukie City Limits
- Parks

Generated On: 3/6/2025

Data Sources: City of Milwaukie, ODOT

0 0.25 0.5 0.75 Miles

CITY OF **MILWAUKIE**
Transportation System Plan

FIGURE 18C

Bicycle Gaps and Deficiencies

Milwaukie Town Center

Legend

- Bicycle Facility Does Not Meet the BLTS 1 Target
- No Bicycle Facility/Does No Meet the BLTS 1 Target
- Milwaukie City Limits
- Milwaukie Town Center
- Parks

Generated On: 3/6/2025

Data Sources: City of Milwaukie, ODOT

0 0.25 0.5 0.75 Miles

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CITY OF **MILWAUKIE**
Transportation System Plan

FIGURE 18D

Bicycle Gaps and Deficiencies

Primary/Secondary/ Post-Secondary Schools

Legend

- Schools
- Bicycle Facility Does Not Meet the BLTS 1 Target
- Quarter-Mile Bikeshed Area
- Milwaukie City Limits
- Milwaukie Town Center
- Parks

Generated On: 3/6/2025

Data Sources: City of Milwaukie, ODOT

0 0.25 0.5 0.75 Miles

CITY OF **MILWAUKIE**
Transportation System Plan

FIGURE 18E

Bicycle Gaps and Deficiencies

Grocery Stores

Legend

- Grocery Store
- Bicycle Facility Does Not Meet the BLTS 1 Target
- Quarter-Mile Bikeshed Area
- Milwaukie City Limits
- Milwaukie Town Center
- Parks

Generated On: 2/5/2025

Data Sources: City of Milwaukie, ODOT

0 0.25 0.5 0.75 Miles

CITY OF **MILWAUKIE**
Transportation System Plan

FIGURE 18F

Bicycle Gaps and Deficiencies

Neighborhood Hubs

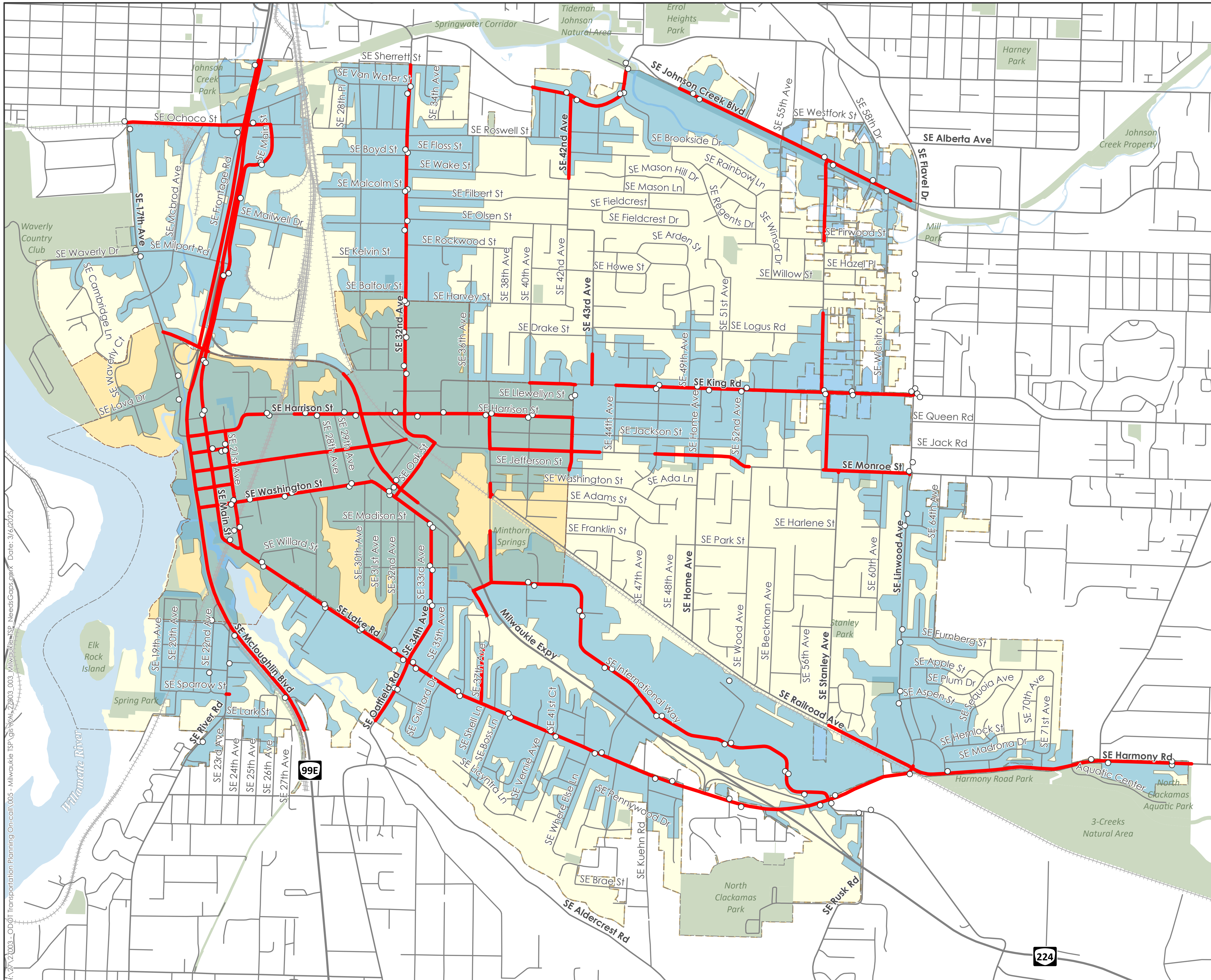
Legend

- Neighborhood Hub
- Bicycle Facility Does Not Meet the BLTS 1 Target
- Quarter-Mile Bikeshed Area
- Milwaukie City Limits
- Milwaukie Town Center
- Parks

Generated On: 3/6/2025

Data Sources: City of Milwaukie, ODOT

0 0.25 0.5 0.75 Miles



CITY OF MILWAUKIE
Transportation System Plan

FIGURE 18G
Bicycle Gaps and Deficiencies
Transit Stops

Legend

- Bus Stop
- Bicycle Facility Does Not Meet the BLTS 1 Target
- Quarter-Mile Bikeshed
- Milwaukie City Limits
- Milwaukie Town Center
- Parks

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Data Sources: City of Milwaukie, ODOT

CITY OF **MILWAUKIE**
Transportation System Plan

FIGURE 18H

Bicycle Gaps and Deficiencies

Parks

Legend

- Park
- Bicycle Facility Does Not Meet the BLTS 1 Target
- Quarter-Mile Bikeshed
- Milwaukie City Limits
- Milwaukie Town Center
- Parks

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Data Sources: City of Milwaukie, ODOT

0 0.25 0.5 0.75 Miles

CITY OF **MILWAUKIE**
Transportation System Plan

FIGURE 18I

Bicycle Gaps and Deficiencies

Senior Living Facilities, Low-Income Housing, and Resource Centers

Legend

- Low-Income Housing
- Resource Center
- Senior Living Facility
- Bicycle Facility Does Not Meet the BLTS 1 Target
- Quarter-Mile Bikeshed
- Milwaukie City Limits
- Milwaukie Town Center

Generated On: 3/6/2025

Data Sources: City of Milwaukie, ODOT

0 0.25 0.5 0.75 Miles

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Transit System

Public transit enhances climate-friendly and equitable outcomes by supporting accessibility for people who cannot drive and reducing reliance on single-occupancy vehicles. Public transit in Milwaukie includes the MAX Orange Line, TriMet Frequent Service Routes, TriMet Standard Service Routes, and paratransit service.

- The MAX Orange Line travels between Milwaukie, PSU, Pioneer Square, and Union Station. The stop at Pioneer Square provides connection to the MAX Blue, Red, Yellow, and Green Lines, connecting Milwaukie to the broader Metro region.
- Frequent Service Route 33-McLoughlin/King Road runs between Clackamas Community College and Clackamas Town Center and connects to Downtown Milwaukie and the Oregon City Transit Center.
- Frequent Service Route 75-Cesar Chavez/Lombard runs between Milwaukie City Center and St. Johns, connecting Milwaukie to jobs and services in east Portland.
- There are several additional Standard Service Routes, including 32-Oatfield, 34-Linwood/River Rd, and 152-Milwaukie providing additional connections within Milwaukie and to the broader Metro region.
- TriMet provides LIFT Paratransit service to people who are not able to use fixed-route transit services due to a disabling health condition throughout Milwaukie.

As illustrated in Figure 19, the majority of Milwaukie is located within a half-mile walkshed from an existing transit stop.

Transit Classification Changes

The City is incorporating multimodal functional classifications into the TSP. This will update the terminology used to describe transit routes. See accompanying *DRAFT Multimodal Functional Classification Memorandum for the updated Transit Classifications.*

Transit Needs/Gaps Assessment

The Public Transit Master Plan element in the current Milwaukie TSP was reviewed to identify projects that are still relevant and needed to address public transit needs. These projects are summarized in TSP Figure 7-3 and TSP Table 7-1. All of these projects were reviewed with city planning, engineering, and TriMet staff for inclusion in the new Milwaukie TSP project development and review process. Based on this assessment, all relevant projects have been identified as gaps and mapped in Figure19B.

CITY OF **MILWAUKIE**
Transportation System Plan

FIGURE 19

Transit System

Legend

- Bus Stops
- Frequent Bus Routes
- Bus Routes
- Light Rail
- Quarter-Mile Walkshed from Bus Stops
- Half-Mile Walkshed from Bus Stops
- Milwaukie City Limits
- Milwaukie Town Center

Generated On: 2/5/2025

Data Sources: City of Milwaukie, ODOT, TriMet

0 0.25 0.5 0.75 Miles

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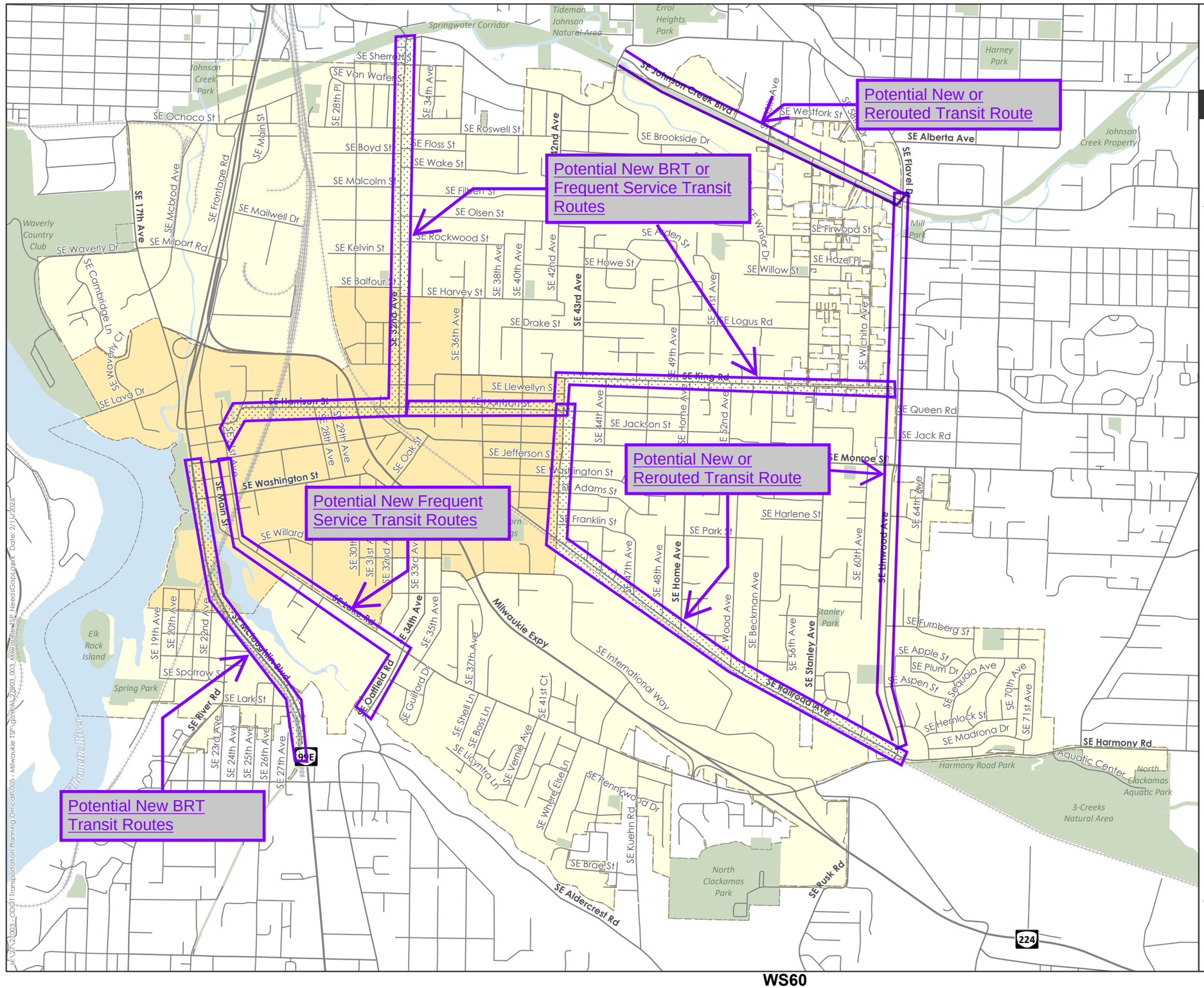
Transportation System Plan

FIGURE 19B

Transit Gaps and Needs



Legend

- Milwaukie City Limits
- Milwaukie Town Center
- Parks

Generated On: 2/11/2025

Data Sources: City of Milwaukie, ODOT

0 0.25 0.5 0.75 Miles

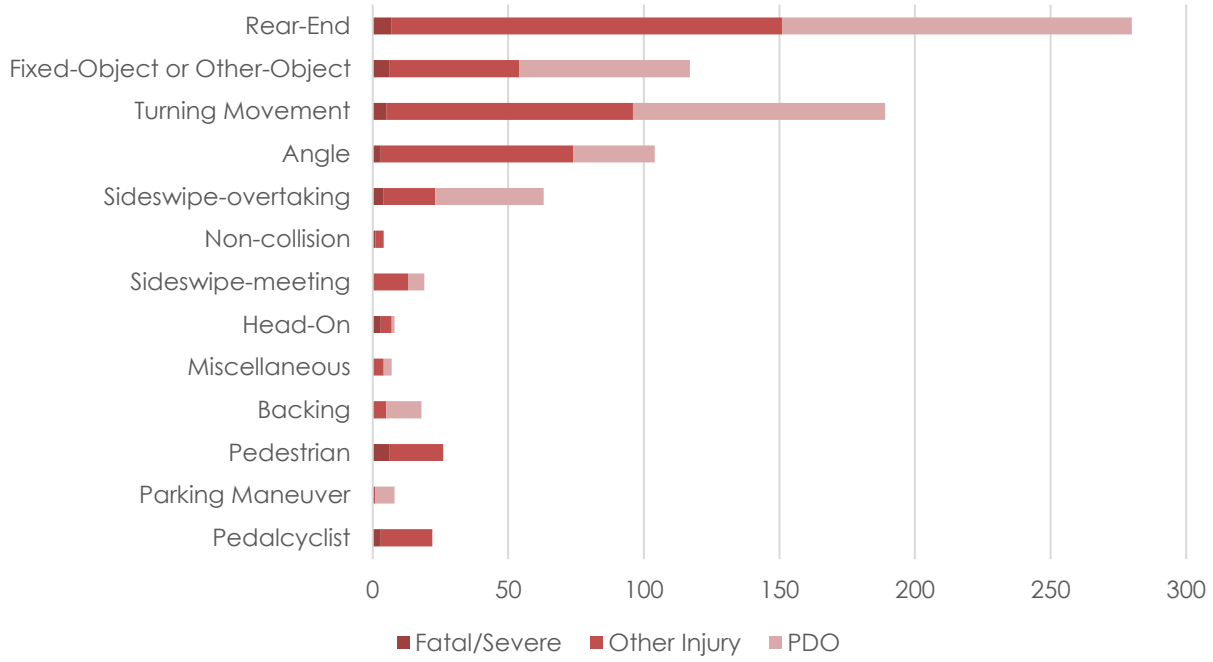
Safety

The most recent available crash data (January 1, 2018 to December 31, 2022) was downloaded from ODOT's crash data portal. This data was used to map the following:

- Total number of crashes by severity (Figure 20)
- Fatal and serious injury crashes, included as a focus area, consistent with the Vision Zero aspect of the Safe System Approach (Figure 21)
- Pedestrian involved crashes, included as a mapped component due to the vulnerability of this user group (Figure 22)
- Bicycle involved crashes, included as a mapped component due to the vulnerability of this user group (Figure 23)
- The 2022 ODOT Safety Priority Index System (SPIS) sites (Figure 24)

Chart 1 summarizes crash history by severity and type. Pedestrian and bicyclist-involved crashes are more likely to result in fatal and serious injuries than other crash types. Rear-end crashes are the most common crash type in the City.

Chart 1. Crash Severity by Type (January 1, 2018 to December 31, 2022)



CITY OF **MILWAUKIE**
Transportation System Plan

FIGURE 20

Crashes by Severity

January 1, 2018 to December 31, 2022

Legend

- Fatal
- Severe Injury
- Moderate Injury
- Minor Injury
- PDO
- Milwaukie City Limits
- Milwaukie Town Center
- Parks

Generated On: 2/5/2025

Data Sources: City of Milwaukie, ODOT

0 0.25 0.5 0.75 Miles

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CITY OF **MILWAUKIE**
Transportation System Plan

FIGURE 21

Fatal and Serious injury Crashes

January 1, 2018 to December 31, 2022

Legend

- Angle
- Fixed-Object or Other-Object
- Head-On
- Non-collision
- Pedalcyclist
- Pedestrian
- Rear-End
- Sideswipe-overtaking
- Turning Movement
- Milwaukie City Limits
- Milwaukie Town Center
- Parks

Generated On: 2/5/2025

Data Sources: City of Milwaukie, ODOT

0 0.25 0.5 0.75 Miles

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Transportation System Plan

FIGURE 22

Pedestrian Involved Crashes

January 1, 2018 to December 31, 2022

Legend

- Fatal
- Severe Injury
- Moderate Injury
- Minor Injury
- Milwaukie City Limits
- Milwaukie Town Center
- Parks

Generated On: 2/5/2025

Data Sources: City of Milwaukie, ODOT

0 0.25 0.5 0.75 Miles

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CITY OF **MILWAUKIE**
Transportation System Plan

FIGURE 23

Bicycle Involved Crashes

January 1, 2018 to December 31, 2022

Legend

- Severe Injury
- Moderate Injury
- Minor Injury
- Milwaukie City Limits
- Milwaukie Town Center
- Parks

Generated On: 2/5/2025

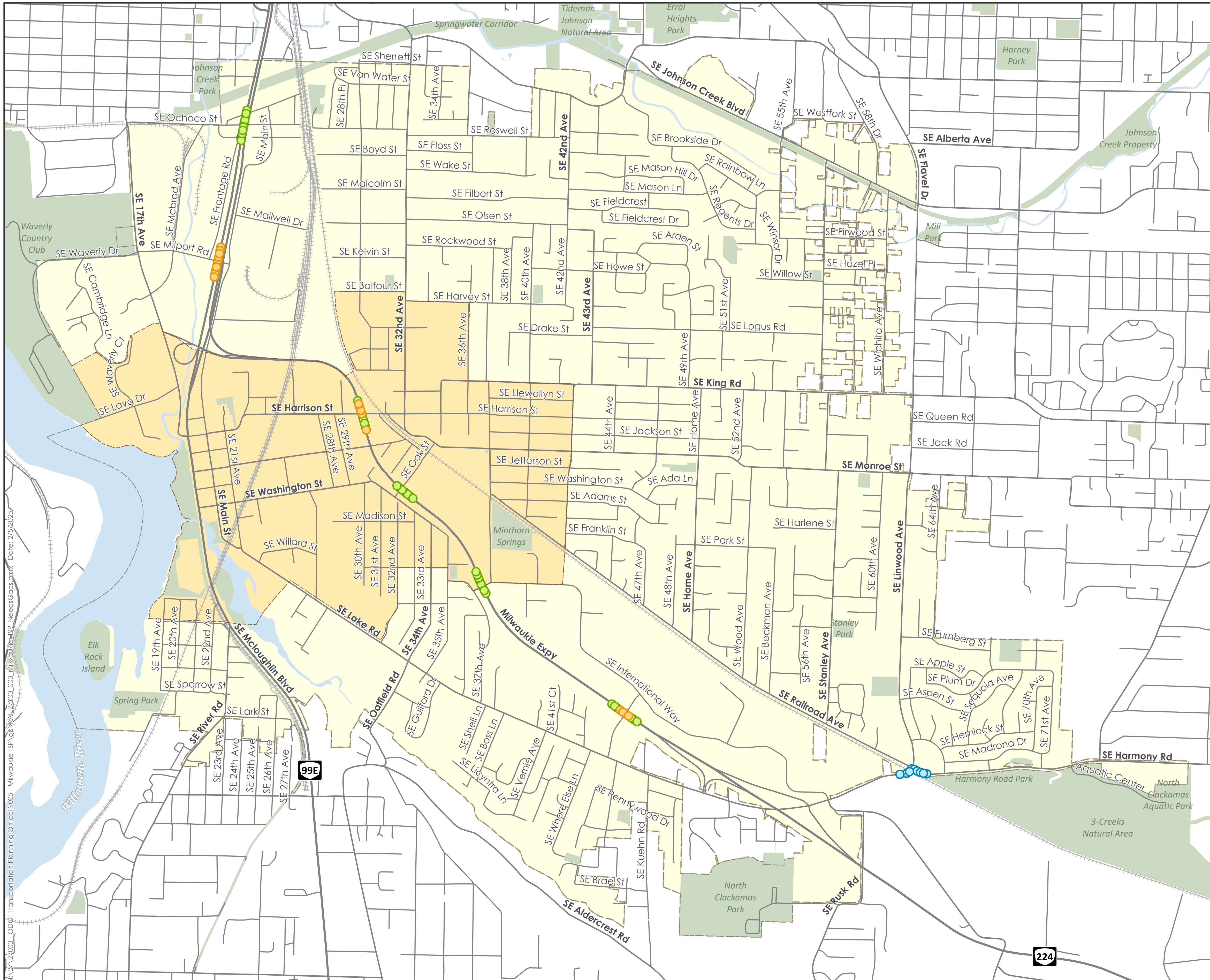
Data Sources: City of Milwaukie, ODOT

0 0.25 0.5 0.75 Miles

CITY OF MILWAUKIE
Transportation System Plan

FIGURE 24

ODOT Safety Priority Index System (SPIS) Sites



Legend

- 85% - 89.99%
- 90% - 94.99%
- 95% - 100%
- Milwaukie City Limits
- Milwaukie Town Center
- Parks

Generated On: 2/5/2025

Data Sources: City of Milwaukie, ODOT

0 | 0.25 | 0.5 | 0.75 Miles

Safety Gaps Inventory

The locations of fatal and serious injury crashes involving people walking and biking are mapped in the pedestrian and bicycle gaps inventory in Figure 22 and Figure 23. As illustrated in Figure 20, most of the severe injury crashes are centered along the Harrison Street corridor or involve crossings of the OR 224 (Milwaukie Expressway) corridor (Harrison Street and Oak Street). As illustrated in Figure 21, there were several sever injury crashes at the OR 99E/SE Milport Road, SE 17th Avenue/Milport Road, and SE Linwood Avenue/SE Railroad Avenue/SE Harmony Road intersections. The Future Conditions and Solutions Memo will identify potential projects to reduce pedestrian and bicycle exposure and/or vehicular speeds at these locations. As noted in the current Milwaukie TSP, these corridors have identified projects that call for future corridor refinement plans, justifying the continued need for these projects in the new Milwaukie TSP.

The ODOT SPIS identifies sites along State highways where crash history may warrant further investigation. It identifies locations by considering crash frequency, crash rate, and crash severity. Sites identified within the top 5% are investigated by ODOT staff and reported to the Federal Highway Administration (FHWA). The SPIS locations shown in Figure 24 indicate potential locations for safety-focused projects to reduce crash risk and will be advanced as needs to include in the Future Conditions and Solutions Memo accordingly.

Vehicle Miles Traveled

If a city includes in its TSP that is subject to "enhanced review"[6] under OAR 660-012-0830(1), then OAR 660-012-0160 stipulates that the TSP can only be adopted *"if the projected vehicle miles traveled per capita at the horizon year using the financially constrained project list is lower than estimated vehicle miles traveled per capita in the base year scenario."* As noted in *Analysis Methodology and Performance Measures Memorandum*, none of the projects in Milwaukie's currently adopted TSP were determined to be subject to "enhanced review". While it is unlikely that the new Milwaukie TSP will include a financially constrained project that requires "enhanced review", having an account of the City's current and future vehicle miles traveled (VMT) is still relevant for the following reasons:

- Under OAR 660-012-0155, cities and state agencies shall prioritize transportation facilities and services based on meeting greenhouse gas reduction targets and reducing vehicle miles traveled per capita:
- Under OAR 660-012-0179, the prioritization of unconstrained TSP projects shall be based on the project's ability to help reduce vehicle miles traveled.
- Under OAR 660-012-0180, the selection of projects on the financially constrained TSP project list shall reduce vehicle miles traveled as provided in OAR 660-013-0160.

Given the complexities of calculating VMT in a large urban setting, a travel demand model is typically required. While Milwaukie does not own or operate its own travel demand model, it is located within Metro which runs the Portland Metro Regional Travel Demand Model (RTDM) for the entire Portland metropolitan area.

The noted requirements to assess VMT, and more specifically VMT per capita, are relatively recent. As such, there was no established precedent or procedure for testing the RDTM's ability to localize VMT calculations for a smaller defined area within the larger model boundary. To address this, ODOT commissioned a consultant team to work with Metro modeling staff to test and refine the necessary modeling procedures[7]. While intended as a demonstration project with the stipulation that the results are not to be used to make technical findings, the modeling results from this effort have been included in this memorandum as it represents the only readily available estimate of VMT specific to Milwaukie.

These results from this analysis are presented in Table 8 and show Milwaukie's current household VMT to be 717,145 miles with a VMT/capita of 35. Additional details that went into the calculation process are available in the 2024 Milwaukie Climate Friendly Area Modeling Case Study report.

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[6] Enhanced review is a multi-step process that "prompts local agencies to develop and evaluate alternatives to roadway projects to determine if they could substantially meet the identified need without the implementation of the roadway projects." It is triggered by projects increasing roadway vehicular capacity by adding through lanes or auxiliary lanes above capital cost of $5 million. More details on the enhanced review process is available on ODOT's TSP Guidelines website.

[7] *Milwaukie DRAFT Climate Friendly Area Modeling Case Study*. April 2024. DKS Associates.

Table 8. Milwaukie VMT Per Capita Evaluation Results

Scenario	Milwaukie Population	Estimated VMT	VMT/Capita
2015	20,505	717,145	35

Note: Results based on 2018 RTP Model Financially Constrained Network as the modeling for the 2023 RTP was still underway at the time the case study was prepared.

Next Steps

This memorandum will be reviewed by the Transportation System Technical and Advisory Committees to confirm the existing conditions and noted gaps/needs. Next, the project team will identify, score, and prioritize multimodal transportation improvement projects to address the needs and gaps.

EXHIBIT A. MULTIMODAL FUNCTIONAL CLASSIFICATION MEMORANDUM & DESIGN BEST PRACTICES

Date:	March 6, 2025
To:	Transportation System Plan Advisory Committee (TSPAC)
From:	Project Management Team (PMT)
Project:	Milwaukie Transportation System Plan
Subject:	Functional Classification

Table of Contents

Introduction

The vehicular functional classification system originated in the early 20th century. As transportation networks expanded and became more complex, engineers and planners needed a systematic way to manage traffic. Functional classification systems attempt to impose order by categorizing roads and streets based on their intended function within a larger network. Milwaukie's current roadway functional classification divides roads into the following hierarchy: arterials, collectors, neighborhood collectors, and local streets. Each classification serves a different role in facilitating mobility and access.

As part of its needs and gaps analysis, the city and its consultants are recommending that a functional classification system be adopted for each mode of transportation considered in the Transportation System Plan, including walking, cycling, public transit, and freight. These networks would not replace but accompany the functional classification used for automobiles. This memo summarizes that need, proposes a classification for each mode, and presents modal maps with draft classification assignments.

Expanding the Functional Classification System

Why expand the functional classification system to other modes?

The city's current roadway functional classification system—arterial, collector, etc.—is fundamentally rooted in the efficient movement of vehicular traffic. While the system does consider and allow for the allocation of space for other modes of transportation, such as bicycles and pedestrians, these modes remain secondary to the focus on vehicular flow. This inherent bias towards motorized vehicles within the framework suggests that adopting a separate, distinct, functional classification for other modes is warranted. Such a classification would better reflect the unique needs of each mode and ensure that their infrastructure is considered with the same level of intentionality and priority as vehicular infrastructure. For example, cyclists and pedestrians can and do leverage different facilities, such as off-street trails, pathways, and plazas; additionally, they are generally considered to be more sensitive to out-of-direction travel, grade changes, and the surrounding land-use and transportation context.

How will the expanded classification system be used?

The expanded functional classification system will be used for the new Milwaukie Transportation System Plan (TSP) and for future updates of the TSP. In this context, it will primarily inform network analysis, guide the development of policy recommendations related to facility design, traffic management strategies, and land-use planning. Additionally, it will help with TSP project prioritization, ensuring that limited resources are directed toward the most critical facilities.

The functional classification system will also be used to implement the TSP through the city's development review process and associated land-use planning projects, such as area plans, corridor plans, and zoning amendments. Classification designations won't specify specific treatments or designs but will signal to staff what role the facility is intended to play within the modal network. Consequently, staff should be better able to avoid potential modal conflicts, consider the impact that new development might have on the network, and determine appropriate dedications and public improvement requirements.

Functional classifications versus facility types and treatments

As noted, the functional classification system does not prescribe a specific facility type (e.g., bicycle lane, multi-use pathway) or treatment (e.g., curb-extensions, Rectangular Rapid Flashing Beacons) for each road segment. While classifications indicate the role of a facility within the larger modal network, the exact facility type, or treatment needed will depend on several factors. These factors include the surrounding land-use, transportation context, and other practical constraints, such as limited right-of-way and available funding.

Example: Monroe Greenway

The Monroe Greenway Project provides a clear example of how facility needs and treatments can vary along a single route when considering factors like traffic volumes and adjacent land uses.

While the entire project (from McLoughlin Boulevard to Linwood Avenue) has been discussed as a greenway, the specific multimodal treatments will differ depending on the adjacent land uses and transportation context. For instance, the eastern segment, which runs through low-density residential development and has an average daily traffic count less than 1000, will be improved with neighborhood greenway type treatments such as curb extensions, speed cushions, street markings, and signage. In contrast, the central segment crosses major roads like Highway 224 and serves busy commercial destinations such as Milwaukie Marketplace. In this area, an on-street multi-use pathway was installed near the 7 Acres Apartment complex to provide a separated walking and biking environment. At the crossing of Highway 224, features like bicycle/pedestrian-only diverters and limitations on turning movements for automobiles are being planned to improve multimodal travel in a busy vehicle environment. While the entire route would be classified as a Major City Bikeway under the proposed system, the applied treatments would respond to the adjacent land use and travel conditions.

Speaking of...what's happening to neighborhood greenways?

In short, nothing will change— we're just giving them a new name in the TSP. All greenway-style treatments are still part of the city's toolkit to improve comfort and safety for people walking and rolling in Milwaukie.

The neighborhood greenway designation in the 2007 TSP can be thought of as the city's first attempt to establish a functional classification or network plan for cycling. From a vision perspective, the streets designated as neighborhood greenways in the 2007 TSP are still essential parts of the city's bicycle network. These routes largely remain low-speed, low-volume, and attractive for cyclists. As such, the treatments considered for these facilities will continue to come from the "neighborhood greenway" toolkit, which focuses on calming traffic, prioritizing bicycle movement, and signaling bicycle priority.

Except for Monroe Street, which is proposed to be designated as a Major City Bikeway, all other greenways will be reclassified as City Bikeways under the new system. As discussed below, both Major City Bikeways and City Bikeways are designed to offer direct, convenient bicycle access to key destinations and accommodate larger volumes of cyclists. The design guidance (see the Improvements subsection for these classifications) includes a variety of treatments aimed at maximizing cyclist comfort. While the best treatment approach will vary depending on factors like available right-of-way, funding, land use, and traffic volumes, in many cases, treatments will still involve interventions to calm traffic and maintain lower vehicular volumes along these routes.

Neighborhood greenway is a useful term that we'll probably keep using

The National Association of City Transportation Officials (NACTO) refers to low-traffic, low-speed streets that prioritize cycling as "bicycle boulevards." NACTO's Bicycle Urban Design Guide points out that communities across the country have used different terms, like "neighborhood greenway," to brand these routes. The City of Milwaukie will likely continue to use the term "neighborhood greenway" for improvement projects, as it's widely understood in the region to refer to low-traffic, low-speed streets. However, for the purposes of the TSP, these facilities will be classified under the new functional system.

Functional classifications and level of traffic stress

As the Transportation System Plan Advisory Committee (TSPAC) is aware, the updated Transportation Planning Rule (TPR) requires the city to adopt new performance standards for non-vehicular modes of transportation. The City's consultant recommended, and the committee agreed, that Pedestrian Level of Traffic Stress (PLTS) and Bicycle Level of Traffic Stress (BLTS) are useful companions to more traditional, vehicular-based measures, such as Level of Service (LOS). These measures move beyond a simple focus on infrastructure presence (i.e., is there a bike lane); instead, they ask the city to consider and track how the type and quality of infrastructure, combined with adjacent environmental factors (traffic speeds, traffic volumes, and land-use), alters the sense of safety and comfort for cyclists and pedestrians.

While the city initially considered adopting single citywide mode-specific level of traffic stress (PLTS and BLTS) targets, the introduction of a functional classification system clarifies which routes are most critical for bicycle and pedestrian travel, allowing the city to assign different stress targets based on classification. Below you'll see that new PLTS targets have been proposed for Major City Walkways (adjusting from a citywide target of PLTS 2 to PLTS 1 for these facilities). For its bicycle network, the city has retained the BLTS 1 target for all facilities.

Proposed Street Classifications

Pedestrian Classification Hierarchy and Descriptions

Major City Walkway: Major City Walkways provide safe, convenient, and attractive pedestrian accommodations along major streets and trails with the highest level of pedestrian activity supported by current and planned land uses. These include streets in Milwaukie's 2040 Town Center, streets with frequent-transit lines, and high-demand off-street trails like the Trolley Trail. Major City Walkways can also be routes providing continuous pedestrian connections across the city.

- **Level of Traffic Stress Target:** PLTS 1
- **Land Use:** Major City Walkways generally serve areas in Milwaukie's Region 2040 Town Center, where land is zoned for high density residential, commercial, and mixed-use development, but also run along major streets through predominantly low-density residential areas. Where auto-oriented land uses are allowed on Major City Walkways, site development standards should address the needs of pedestrians for access.
- **Improvements:** Major City Walkways should have regularly spaced marked crossings (with closer spacing in the Region 2040 Town Center and in other commercial and mixed-use areas, such as Milwaukie Marketplace). Major City Walkways should have wide sidewalks, and a pedestrian realm that can accommodate higher volumes of pedestrian activity.
- **Milwaukie Example:** 32nd Avenue is an example of a proposed Major City Walkway. It is a street with a frequent transit route (Route 75), has planned high-density residential uses (Hillside Manor), community service uses (Providence Hospital), and provides access to multiple commercial businesses (Milwaukie Café). It also serves as one of the few continuous north/south connections in the city, connecting Harrison Street to Johnson Creek Boulevard.

City Walkway: City Walkways provide safe, convenient, and attractive pedestrian access along major streets with moderate levels of pedestrian activity supported by current and planned land uses. These include streets with non-frequent transit lines, and streets that provide direct connections between Major City Walkways, and key destinations.

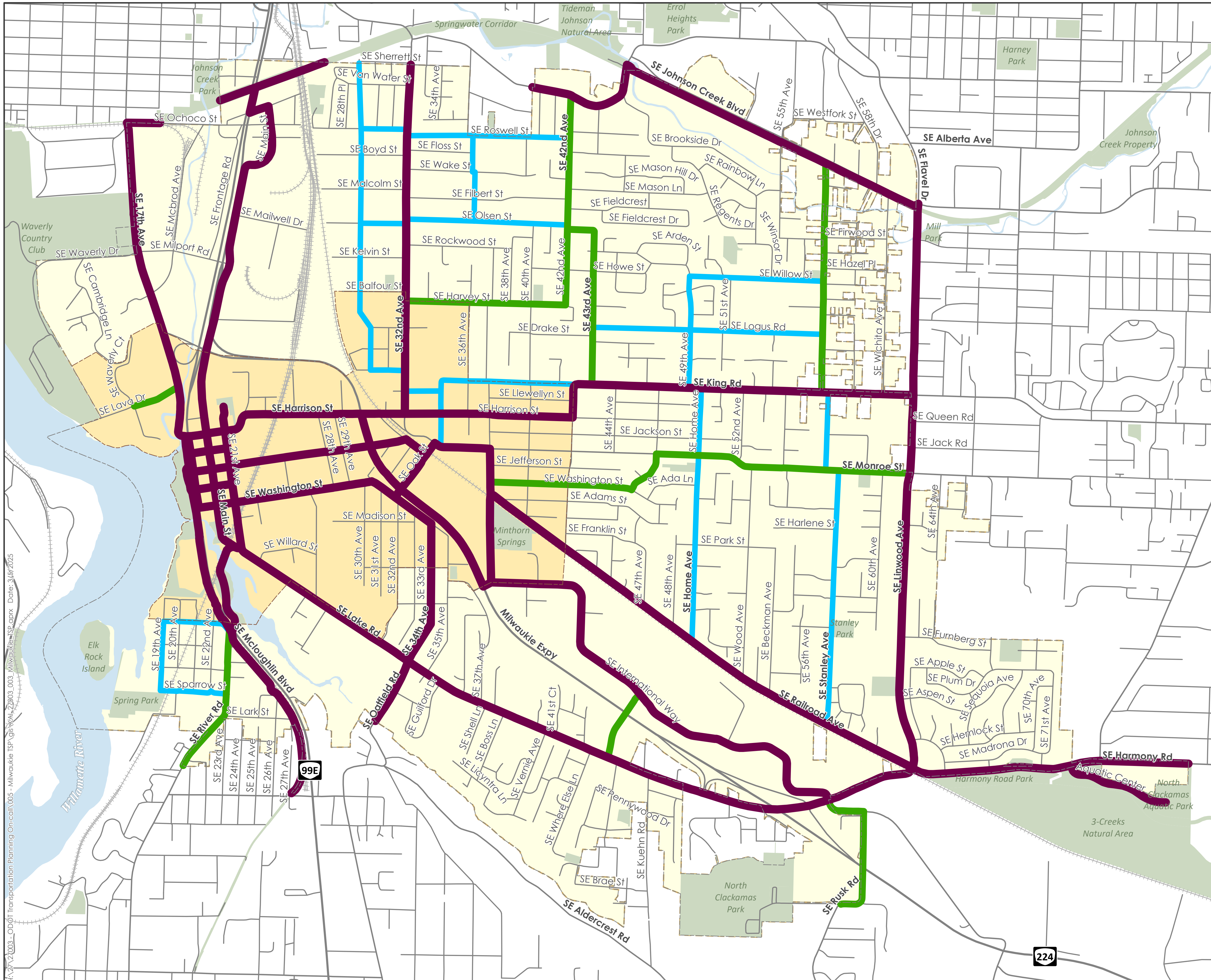
- **Level of Traffic Stress Target:** PLTS 2
- **Land Use:** City Walkways provide access along major streets, connecting residential neighborhoods with low and moderate density development to Major City Walkways, Neighborhood Hubs, schools, and other local key destinations.
- **Improvements:** City Walkways should have regularly spaced marked crossings (with closer spacing in commercial and mixed-use areas), sidewalks, and a pedestrian realm that can accommodate moderate levels of pedestrian activity.
- **Milwaukie Example:** International Way is an example of a proposed City Walkway. It provides access to various businesses, connects two proposed Major City Walkways (37th Avenue and Lake Road) and is a street with an infrequent transit line (Route 152). International Way runs through exclusively commercial and industrial land uses and sees moderate pedestrian activity (likely due to the auto-oriented nature of development).

Neighborhood Walkway: Neighborhood Walkways provide safe and convenient connections from residential neighborhoods to Major City Walkways, City Walkways, and nearby key destinations such as schools, parks, and Neighborhood Hubs. Neighborhood Walkways are primarily routes that have low levels of motor vehicle traffic or do not allow motor vehicle traffic.

- **Level of Traffic Stress Target:** PLTS 2
- **Land Use:** Neighborhood Walkways are usually located in residential or natural areas on low-volume streets or connections that do not allow motor vehicles.
- **Improvements:** Neighborhood Walkways should be designed to provide a safe and comfortable walking environment but may take many forms depending on the context. Design types may include sidewalks, shoulders, shared streets, woonerfs, pedestrian-only paths, multi-use paths, soft-surface trails, and ramps/stairs.
- **Milwaukie Example:** Roswell Street is an example of a proposed Neighborhood Walkway. It is primarily serving neighborhood residents, acts as a critical connector to a school (Ardenwald Elementary).

Local Service Walkway: Local
Service Walkways provide the local circulation needs for pedestrians and provide safe and convenient access to local destinations.

- **Level of Traffic Stress Target:** PLTS 2
- **Land Use:** Local Service Walkways support all land uses by providing direct access to properties.
- **Improvements:** Local Service Walkways should be designed to provide a safe and comfortable walking environment but may take many forms depending on the context. Design types may include sidewalks, shoulders, shared streets, woonerfs, pedestrian-only paths, multi-use paths, soft-surface trails, and ramps/stairs.
- **Milwaukie Example:** Local service walkways are any street/route not designated as a Major City Walkway, City Walkway, or Neighborhood Walkway.



CITY OF MILWAUKIE

Transportation System Plan

FIGURE 1

Proposed Pedestrian Classifications

Legend

- Major City Walkway
- City Walkway
- Neighborhood Walkway
- Local Service Walkway
- Milwaukie City Limits
- Milwaukie Town Center
- Parks

Generated On: 3/5/2025

Data Sources: City of Milwaukie, ODOT

0 0.25 0.5 0.75 Miles

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Bicycle Classification Hierarchy and Descriptions

Major City Bikeway: Major City Bikeways are the foundation of Milwaukie's bicycle network, accommodate higher volumes of bicycle traffic, and generally provide continuous routes through the city for cyclists traveling longer distances. Major City Bikeways connect cyclists to City Bikeways, Neighborhood Bikeways, and generally connect to regional bicycle facilities.

- **Level of Traffic Stress Target:** BLTS 1
- **Land Use:** Major City Bikeways support a variety of land-use types. Where appropriate, development standards should preserve the functionality of the facility to maintain safe and comfortable conditions for high volumes of cyclists.
- **Improvements:** Major City Bikeways should be designed to accommodate larger numbers of cyclists, maximize their comfort, and minimize delays. Motor vehicle lanes and possibly on-street parking may be removed on Major City Bikeways to provide added width for separated in-roadway facilities where compatible with adjacent land uses. Where improvements to the bicycling environment are needed but the ability to reallocate road space is limited, consider alternative approaches that include property acquisition, or dedication, parallel routes and/or less desirable facilities.
- **Milwaukie Example:** Linwood's Avenue multiuse pathways are an example of a proposed Major City Bikeway. It serves as a continuous comfortable connection through the city and connects Portland, Milwaukie, and Clackamas. Moreover, the two separated pathways, each over 10 ft wide, are designed to accommodate many cyclists and to maximize their comfort (the pathways are raised, separated from automobile traffic by a curb and landscape strip).

City Bikeway: City Bikeways establish direct and convenient bicycle access between key destinations within Milwaukie and between Major City Bikeways. City Bikeways accommodate higher volumes of cyclists and connect cyclists across longer distances than neighborhood bikeways.

- **Level of Traffic Stress Target: B**LTS 1
- **Land Use**: City Bikeways support a variety of land-use types. Where appropriate, development standards should preserve the functionality of the facility to maintain safe and comfortable conditions for high volumes of cyclists
- **Improvements**: City Bikeways should also be designed to accommodate large numbers of cyclists, to maximize their comfort and to minimize delays. Motor vehicle lanes and possibly on-street parking may be removed from City Bikeways to provide needed width for separated-in-roadway facilities where compatible with adjacent land uses and only after taking into consideration the essential movement of all modes. Where improvements to the bicycling environment are needed but the ability to reallocate road space is limited, consider alternative approaches that include property acquisition, or dedication, parallel routes and/or less desirable facilities. City Bikeways developed as shared roadways use all appropriate tools to achieve BLTS 1.
- **Milwaukie Example**: 29th Avenue is an example of a proposed City Bikeway. It serves as a direct and comfortable connection between a Major City Bikeways (Springwater Corridor Trail) and a significant residential development (Hillside Manor).

Neighborhood Bikeway: Neighborhood Bikeways provide connections from residential neighborhoods to Major City Bikeways, City Bikeways, and nearby destinations such as schools, parks, transit stops, and commercial areas.

- **Level of Traffic Stress Target: B**LTS 1
- **Land Use**: Neighborhood Bikeways are usually supported by low and moderate density residential development.
- **Improvements**: Neighborhood Bikeways should be designed to provide a safe and comfortable cycling environment but may take many forms depending on the context. Design types may include minimal treatments, signage and markings, or may be a shared road environment that utilizes significant traffic calming and operation management strategies. Separated facilities are generally not provided on Neighborhood Bikeways.
- **Milwaukie Example**: Logus Road is an example of a proposed Neighborhood Bikeway. It connects two City Bikeways (43rd Avenue and Stanley Avenue) and connects nearby properties to a school (Lewelling Elementary).

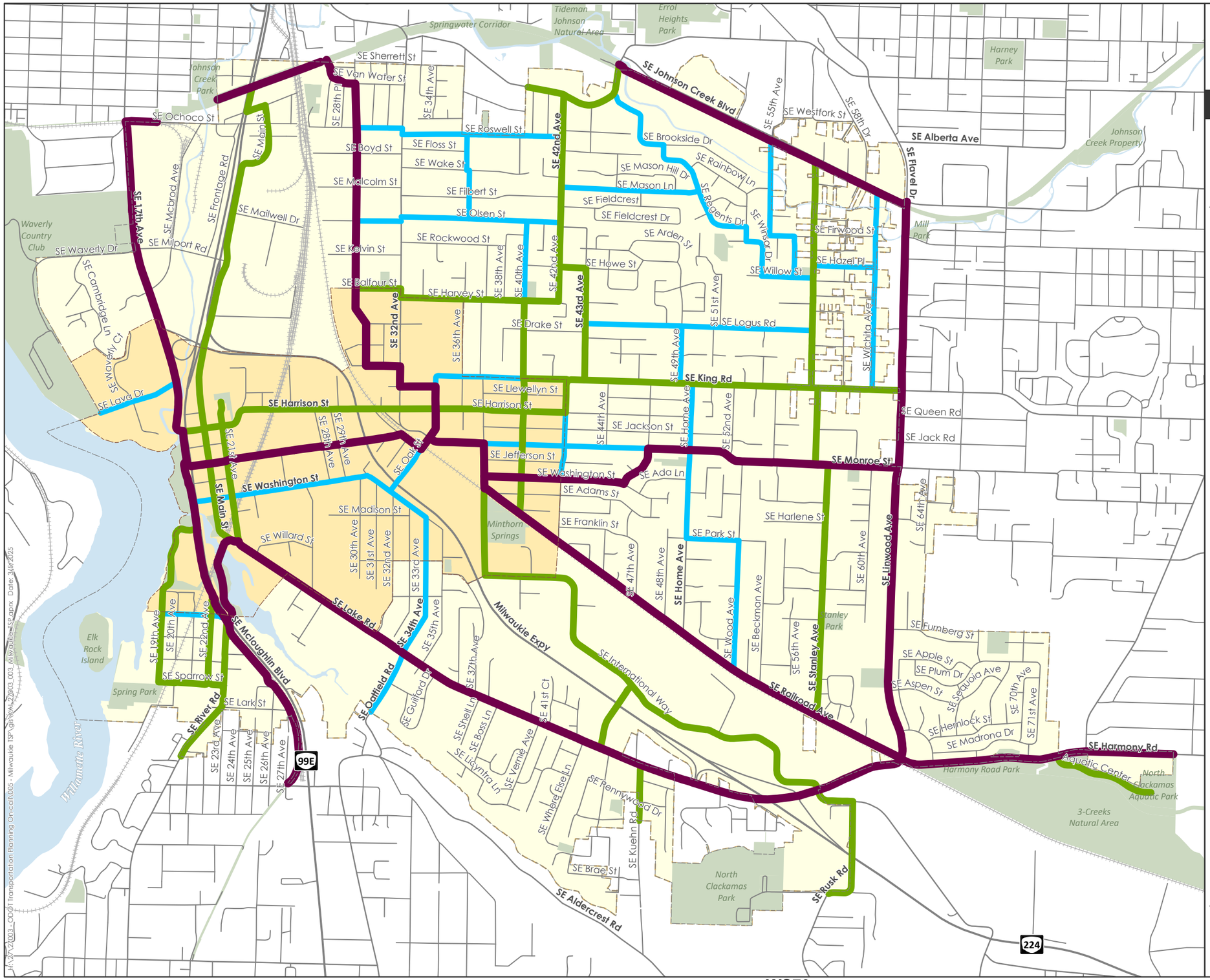
Local Service Bikeway: Local Service Bikeways serve local circulation needs for bicyclists and provide access to adjacent properties. Streets that are not classified as Major City Bikeways, Neighborhood Bikeways, or City Bikeways are classified as a Local Service Bikeway.

- **Level of Traffic Stress Target: B**LTS 1.
- **Land Use:** Local Service Bikeways support all land uses by providing direct access to properties.
- **Improvements:** Consider the following design treatments for Local Service Bikeways: shared roadways, traffic calming, bicycle lanes, and extra-wide curb lanes. Crossings of Local Service Bikeways with other rights-of-way should minimize conflicts. On-street parking on Local Service Bikeways should not be removed to provide bicycle lanes.
- **Milwaukie Example:** As noted, local service bikeways are any street/route not designated as a Major City Bikeways, City Bikeways, or Neighborhood Bikeways.

CITY OF **MILWAUKIE**
Transportation System Plan

FIGURE 2

Proposed Bike Classifications



Legend

- Major City Bikeway
- City Bikeway
- Neighborhood Bikeway
- Local Service Bikeway
- Milwaukie City Limits
- Milwaukie Town Center
- Parks

Generated On: 3/5/2025

Data Sources: City of Milwaukie, ODOT

0 — 0.25 — 0.5 — 0.75 Miles

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Transit Classification Hierarchy and Descriptions

Regional Transitway: Regional Transitways facilitate regional transit trips with fast and reliable service over long distances, operating in right-of-way that is either reserved exclusively for transit use or enhanced for high-capacity transit accommodations.

- **Land Use:** Land near Regional Transitways is typically zoned for major regional attractions, high-density residential and mixed-use development. Auto-oriented development is discouraged at or near Regional Transitway stops.
- **Improvements:** Use transit-preferential treatments to facilitate fast and reliable transit operations. Provide signal preemption or transit signal priority at major intersections, prioritize transit stations or transit lanes over on-street parking, and provide enough lane width to accommodate standard transit vehicles.
- **Milwaukie Example:** The MAX Light Rail Orange Line is currently the only example of a transit facility that would be classified as a Regional Transitway in Milwaukie. However, Metro's High Capacity Transit Strategy identifies two routes through the city that would possibly warrant reclassifying those facilities as Regional Transitways.

Major Transit Priority Street: Major Transit Priority Streets facilitate the frequent and reliable movement of transit vehicles that connect the Milwaukie Town Center to adjacent communities and other key destinations. Major Transit Priority Streets have frequent service or are expected to receive that level of service in the future to support envisioned growth.

- **Land Use:** Transit-oriented land uses are encouraged along Major Transit Priority Streets, particularly in the Milwaukie Town Center. Auto-oriented development is typically discouraged from locating on a Major Transit Priority Street.
- **Improvements:** Use transit-preferential treatments such as signal preemption or transit signal priority at major intersections, prioritize transit stops or transit lanes over on-street parking, and provide enough lane width to accommodate standard transit vehicles.
- **Milwaukie Example:** King Road and Harrison Streets are examples of a Major Transit Priority Street. Both accommodate Frequent Bus Routes (service offered every 15 minutes) that connect the Milwaukie Town Center to regional destinations.

Transit Access Street: Transit Access Streets facilitate the movement of transit vehicles connecting Downtown Milwaukie with neighborhoods, industrial and employment areas with other destinations and other transit service.

- **Land Use:** Pedestrian-oriented development and accommodations are encouraged in commercial, institutional, mixed-use, and industrial areas along Transit Access Street.
- **Improvements:** Provide transit signal priority as needed at major intersections and prioritize transit stops over on-street parking. Provide sufficient lane width to accommodate standard transit vehicles where appropriate, taking into account other street classifications.
- **Milwaukie Example:** Lake Road and International Way are examples of Transit Access Streets. These routes have infrequent transit service that provides a connection between Downtown Milwaukie, employment, and residential areas.

Local Service Transit Street: Local Service Transit Streets primarily facilitate movement of smaller transit vehicles, including paratransit and community/jobs connector shuttles. Local Service Transit Streets seldom have regular transit service except for short street segments and do not typically include transit specific street design elements such as bus stops.

- **Land Use:** Transit operations on Local Service Transit Streets should give preference to access for individual properties and to the specific needs of property owners and residents along the street.
- **Improvements:** There typically are no special design treatments for transit vehicles.
- **Milwaukie Example:** Local Service Transit Streets is any street not classified as a Regional Transitways, Major Transit Priority Streets, or Transit Access Streets.

CITY OF **MILWAUKIE**
Transportation System Plan

FIGURE 3

Proposed Transit Classifications

Legend

- Regional Transitway
- Major Transit Priority Street
- Transit Access Street
- Local Service Transit Street
- Milwaukie City Limits
- Milwaukie Town Center
- Parks

Generated On: 3/6/2025

Data Sources: City of Milwaukie, ODOT

0 0.25 0.5 0.75 Miles

Freight Classification Hierarchy and Descriptions

Regional Truckway: Regional Truckways accommodate the continuous and regional flow of truck freight through the city.

- **Land Use:** Serve regional freight needs along major highway corridors.
- **Improvements:** Regional Truckways are limited access facilities designed to accommodate the movement of all types and sizes of trucks.
- **Milwaukie Example:** Highway 224 is an example of a proposed Regional Truckway. It is a major vehicular oriented highway corridor with limited access that provides a continuous high-capacity freight route through Milwaukie.

Priority Truck Street: Priority Truck Streets serve as the primary travel routes for local truck freight, connecting freight-generating land uses to Regional Truckways.

- **Land Use:** Support industrial and employment uses that generate high truck activity on corridors served by Priority Truck Streets.
- **Improvements:** Priority Truck Streets are designed to accommodate most truck classes. Buffer adjacent residential uses from noise impacts, where warranted.
- **Milwaukie Example:** SE 17th Avenue is an example of a Priority Truck Street. It is a key roadway that connects freight-generating land uses to Regional Truckways.

Truck Access Street: Truck Access Streets serve as the primary local access corridors for industrial and other freight-generating land uses.

- **Land Use:** Support industrial and commercial land uses that generate moderate to high volumes of truck trips.
- **Improvements:** Priority Truck Streets are designed to accommodate most truck classes in balance with other modal needs.
- **Milwaukie Example:** SE International Way is an example of a Truck Access Street. It is a key roadway that directly serves a variety of industrial and commercial uses.

Local Service Truck Street: Local Service Truck Streets serve local truck circulation and access.

- **Land Use:** Local Service Truck Streets provide for goods and service delivery to individual commercial, employment, and residential land uses outside of industrial area.
- **Improvements:** Local Service Truck Streets should give preference to accessing individual properties and the specific needs of property owners and residents along the street.

Milwaukie Example: Local Service Truck Streets are any street/route not designated as a Regional Truckway, Priority Truck Street, or Truck Access Street

CITY OF **MILWAUKIE**
Transportation System Plan

FIGURE 4

Proposed Freight Classifications

Legend

- Regional Truckway
- Priority Truck Street
- Weight Restricted Truck Priority Street
- Truck Access Street
- Local Service Truck Street
- Milwaukie City Limits
- Milwaukie Town Center
- Parks

Generated On: 2/25/2025

Data Sources: City of Milwaukie, ODOT

0 0.25 0.5 0.75 Miles

WS84

Bicycle and Pedestrian Facility Design Guidance

The active transportation sections of Milwaukie's current TSP include a list of potential facility types and roadway treatments designed to make streets safer and more comfortable for people walking and rolling. This is a standard feature in TSPs and active transportation plans. Over the past two decades, however, cities across the U.S. and internationally have gained valuable insights into best practices for managing active transportation systems, including facility designs, roadway markings, operations, and signage. As a result, the range of possible interventions has grown significantly, making it impractical to list all of them in the document.

Instead, we propose that the TSP refer to a selection of authoritative sources that represent the professional consensus on best practices. These include:

- NACTO's *Urban Bikeway Design Guide*
- NACTO's *Urban Street Design Guide*
- NACTO's *Transit Street Design Guide*
- Metro's *Designing Livable Streets and Trails Guide*
- Oregon Department of Transportation's *Blueprint for Urban Design*

This approach will help streamline the document while ensuring alignment with the latest standards and practices as they evolve over the lifespan of the TSP.

EXHIBIT C. MILWAUKIE TSP PROJECT EVALUATION MATRIX

Project #1 – SE Roswell Street Sidewalk Reconstruction. Reconstruct the sidewalk on the south side of the street to provide an obstruction free six-foot sidewalk from SE 32nd Avenue to SE 42nd Avenue."

Goal Statement	Evaluation Criteria	Scoring Key		Score	Evaluation Comments
Safe System - Improve the safety and comfort of the multimodal transportation network	Improve safety on Milwaukie's roadway network	+2	The project is expected to have a positive vehicular safety impact and is at a location with a history of serious vehicle-related injury crashes and fatalities.	0	Reconstruction of the south sidewalk is not expected to have an impact on vehicular safety.
		+1	The project is expected to have a positive vehicular safety impact.		
		0	The project is expected to have no measurable safety benefit.		
	Improve safety for Milwaukie's vulnerable system users, including pedestrians, bicyclists, transit users, and rollers	+2	The project is expected to have a positive multimodal safety impact and is at a location with a history of serious injury crashes and fatalities.	+1	A barrier-free sidewalk can be expected to have a positive multimodal safety impact. There is no recent history of multimodal crashes on this segment of SE Roswell Avenue.
		+1	The project is expected to have a positive multimodal safety impact.		
		0	The project is expected to have no measurable safety benefit.		
Mobility, Accessibility, and Connectivity – Provide an efficient and well-connected multimodal transportation system that works to connect the community to key destinations	Fill existing infrastructure gaps in Milwaukie's multimodal network	+2	The project will fill/partially fill an existing multimodal network gap and is either located in the Milwaukie Town Center or serves one or more priority focus areas.	0	SE Roswell Street already has a continuous sidewalk on the south side.
		+1	The project will fill/partially fill an existing multimodal network gap.		
		0	The project does not address an existing multimodal network gap.		
	Improve the quality of the connections to/from Milwaukie's neighborhoods, schools, parks, transit stops, employment centers, Neighborhood Hubs, and other key destinations	+2	The project will improve the facility to its target LTS score and is either located in the Milwaukie Town Center or serves one or more priority focus areas.	+2	The project would remove sidewalk barriers on a primary walking route to Ardenwald Elementary and improve the corridor from its current PLTS 4 score to a PLTS 2 score.
		+1	The project will improve the facility to its target LTS score.		
		0	The project does not involve or impact multimodal connections.		
Active, Healthy, Transportation Choices - Establish and/or complete a network of multimodal facilities that make walking, biking, and rolling an attractive, comfortable, healthy, and convenient choice for people of all ages and abilities.	Promote new walking, biking, or rolling on Milwaukie's transportation system	+2	The project will stimulate travel for all levels of pedestrians, bicyclists, or rollers and is either located in the Milwaukie Town Center or serves one or more priority focus areas.	+2	The project would remove sidewalk barriers on a primary walking route to Ardenwald Elementary, thereby making the walking route ADA accessible and free of rolling obstructions.
		+1	The project will stimulate travel for most levels of pedestrians, bicyclists.		
		0	The project does not involve or impact travel conditions for pedestrians, bicyclists, or rollers.		
Equitable Transportation - New investments in Milwaukie's transportation system are distributed fairly to reduce or	Improve multimodal access and connections to/from Milwaukie's underserved population groups,	+2	The project improves multimodal access and connections to/from underserved population groups and is either located in the Milwaukie Town Center or serves one or more priority focus areas.	+2	The project improves multimodal access for Adenwald Elementary school kids

Goal Statement	Evaluation Criteria	Scoring Key		Score	Evaluation Comments
eliminate transportation-related barriers and disparities, especially those experienced by marginalized or underserved populations.	lower-income neighborhoods, and/or transportation disadvantaged groups.	+1	The project improves multimodal access and connections to/from underserved population groups;		and those walking/rolling with a mobility device.
		0	The project does not impact underserved population groups.		
Public Transportation - Improve public transit service to, from, and within Milwaukie.	Improve Milwaukie's access to transit service	+2	The project measurably improves access to transit service and is either located in the Milwaukie Town Center or serves one or more priority focus areas.	+2	The project would add sidewalks within a quarter-mile radius of a frequent bus route with bus stops. The project serves Ardenwald Elementary.
		+1	The project measurably improves access to transit service.		
		0	The project does not involve or impact access to transit service.		
	Improve the quality of Milwaukie's transit service	+2	The project improves the quality of transit service to/from and within Milwaukie and is either located in the Milwaukie Town Center or serves one or more priority focus areas.	0	N/A
		+1	The project improves the quality of transit service to/from and within Milwaukie.		
		0	The project does not involve transit service.		
Climate Mitigation and Adaptation – Create a transportation system that reduces greenhouse gas pollution and is responsive to a changing climate.	Preserve the natural environment through reduced vehicle miles traveled (VMT) and greenhouse gas emissions	+2	The project can be expected to lead to a reduction in VMT and greenhouse gas emissions and is either located within the Milwaukie Town Center or one or more priority focus areas.	+2	The project can be expected to increase walking opportunities to/from Ardenwald Elementary, replacing car trips.
		+1	The project can be expected to lead to a reduction in VMT and greenhouse gas emissions.		
		0	The project can be expected to have no measurable impact on VMT and greenhouse gas emissions.		
		-1	The project can be expected to result in an increase in VMT and greenhouse gas emissions.		
Healthy Environment - Create a transportation system that does not further degrade, and when possible, enhances the community's natural resources, such as clean air, clean water, and wildlife habitat.	Preserve Milwaukie's natural resources such as trees, streams, wetlands, wildlife corridors, and endangered species	+2	The project can be expected to have a positive impact on natural resources; and is located near environmentally sensitive areas.	0	The project is not expected to impact natural resources.
		+1	The project can be expected to have a positive impact on natural resources.		
		0	The project has no measurable positive or negative impact on natural resources.		
		-1	The project can be expected to a negative impact on natural resources.		
Emergency Preparedness - Develop a multimodal transportation system that provides travel options during normal conditions, natural disasters, or emergencies.	Improve the redundancy and resiliency of Milwaukie's multimodal travel network	+2	The project increases or improves multimodal travel choices during normal or atypical conditions and serves key destinations or one or more priority focus areas.	+2	The project improves pedestrian travel choices for all pedestrians and rollers by removing existing barriers in the sidewalk

Goal Statement	Evaluation Criteria	Scoring Key		Score	Evaluation Comments
		+1	The project increases or improves multimodal travel choices during normal or atypical conditions.		environment. It also serves a school which is a key destination.
		0	The project has no positive or negative impact on system resiliency and redundancy.		
Economic Vitality - Develop a transportation system that supports and facilitates economic activity through the efficient movement of people, goods, and services.	Improve the transportation network to ensure the safe and efficient movement of freight to/from and within Milwaukie	+2	The project can be expected to measurably improve the safe and efficient movement of freight and is either located in an industrial area or accesses a key freight route.	0	The project is not expected to improve freight movement nor is it located in an industrial area / along a key freight route.
		+1	The project can be expected to measurably improve the safe and efficient movement of freight.		
		0	The project has no positive or negative impact on the movement of freight.		
Fiscal Stewardship and System Management - Make the most of transportation resources by leveraging available funding opportunities, preserve existing infrastructure, and reduce system maintenance costs.	Preserve the transportation network and system maintenance costs	+1	Project is expected to have minimal impacts on system maintenance costs.	0	This Project is expected to have no measurable increase in maintenance costs compared to existing conditions.
		0	Project is expected to have no impact on system preservation and maintenance costs.		
		-1	Project can be expected to significantly increase system maintenance costs.		
Coordination with Local, Regional, and State Partners - Foster and maintain relationships with public and private partners in the common interest of enhancing the city's transportation network.	Coordinate transportation improvements with partnering agencies	+1	Project is consistent with existing or planned transportation projects or is consistent with regional mobility policies.	+1	The project is a planned transportation project in the existing Milwaukie TSP.
		-1	Project is not consistent with existing or planned transportation projects or is inconsistent with regional mobility policies.		
			Total Score	**14**	

WS 1. 3/18/25
Presentation

Milwaukie TSP

City Council Work Session

03/18/2025

City of Milwaukie
Oregon Department of transportation

Agenda

1. Review of Updated Existing Conditions Inventory & Maps
2. Performance Measure Selection
3. Ped/Bike Needs & Gaps Analysis
4. Roadway/Transit/Freight Needs & Gaps Analysis
5. Multimodal Functional Classification
6. Next Steps

1. Review of Updated Existing Conditions

Bicycle

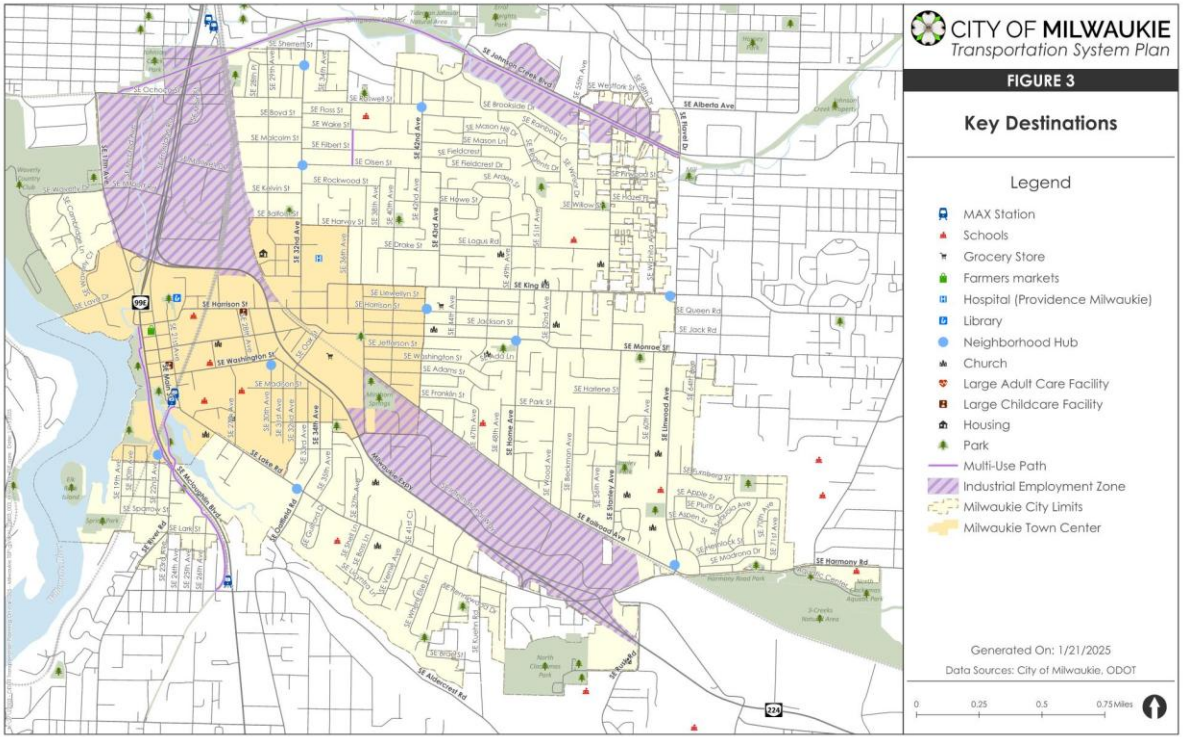
Pedestrian

Transit

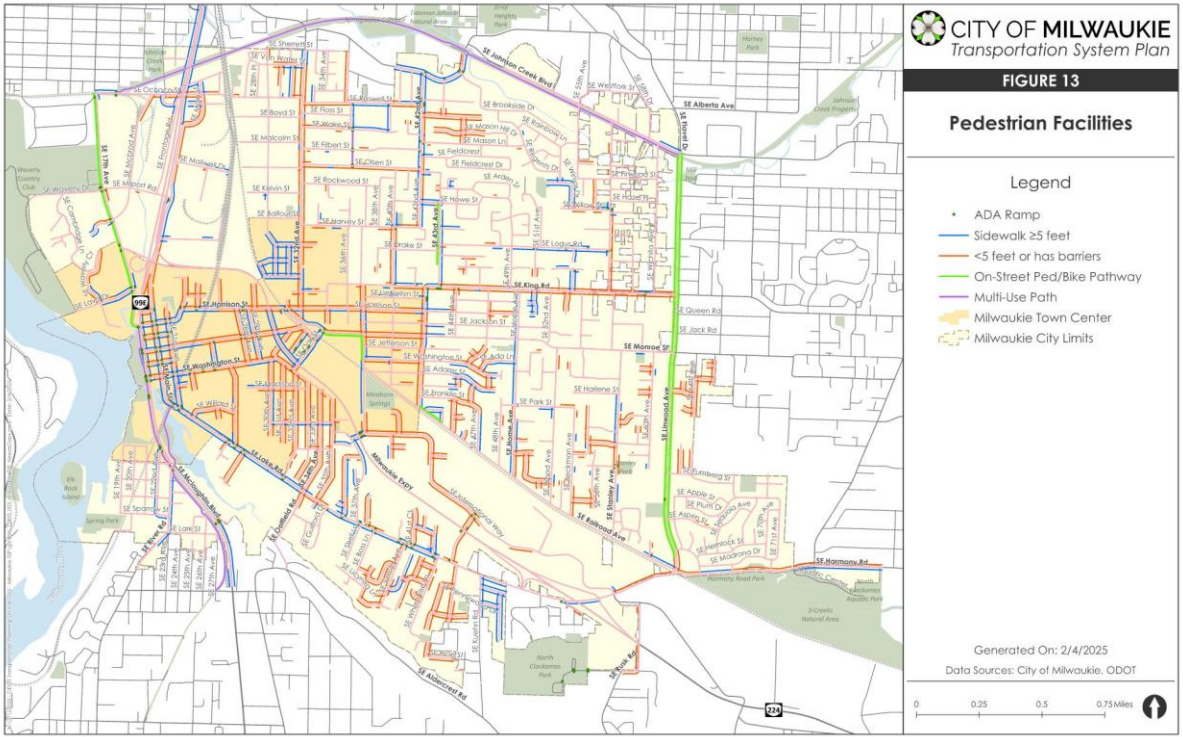
Roadway

Freight

Key Destinations



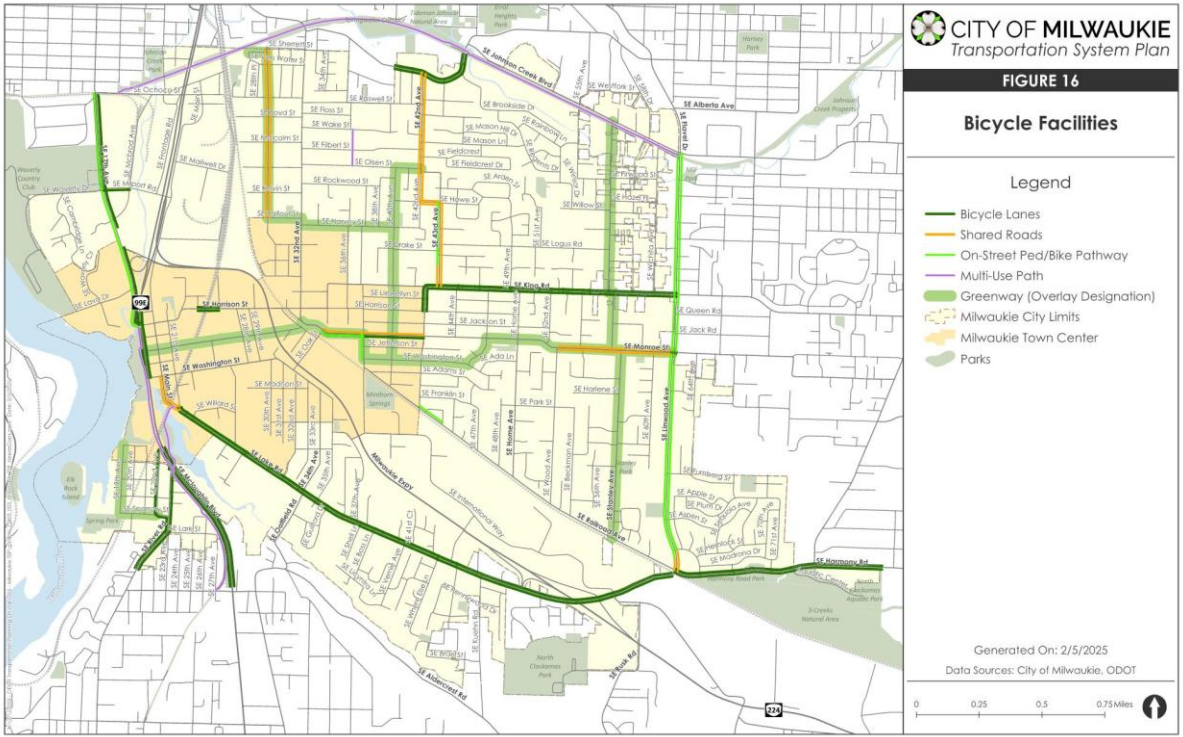
Pedestrian Facilities



Pedestrian System Completeness

	Percent Complete					
	Regional Routes	Arterials	Collectors	Neighborhood Routes	Local Streets	Total
Sidewalks ≥5 feet and has no barriers	18%	26%	21%	13%	8%	16%

Bicycle Facilities



Bicycle System Completeness

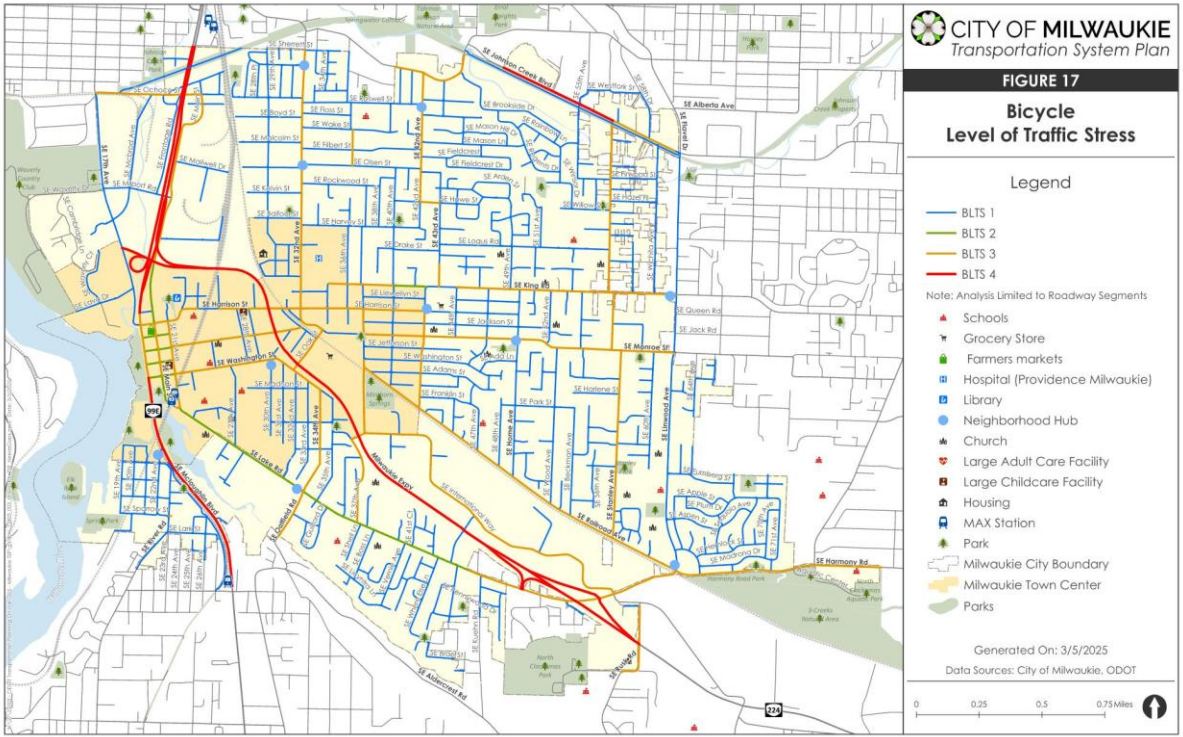
	Regional Routes	Arterials	Collectors	Total
Bicycle Network	0%	69%	6%	31%

2. Performance Measures

What are PLTS and BLTS, and Why are we Focusing on Them??

- Previously Discussed Performance Standards Supporting Accessibility and Multimodal Access
  - System Completeness
  - Bicycle Level of Traffic Stress
  - Pedestrian Level of Traffic Stress
  - Accessibility to Transit

BLTS Results on Existing Network



How did we calculate BLTS?

Exhibit 14-6 Criteria for Urban/Suburban Mixed Traffic Segment – 30 mph or less

Number of Lanes	ADT (vpd)[1]	Functional Class	Posted or Prevailing Speed (mph)		
			≤20	25	30
Unmarked Centerline	≤750	Local	BLTS 1	BLTS 1	BLTS 2
	750 - ≤1,500	Local /Collector	BLTS 1	BLTS 1	BLTS 2
	1,500 - ≤3,000	Collector	BLTS 2	BLTS 2	BLTS 2
	>3,000	Arterial	BLTS 2	BLTS 3	BLTS 3
1 through lane per direction	≤750	Local	BLTS 1	BLTS 1	BLTS 2
	750 - ≤1,500	Local /Collector	BLTS 2	BLTS 2	BLTS 2
	1,500 - ≤3,000	Collector	BLTS 2	BLTS 3	BLTS 3
	>3,000	Arterial	BLTS 3	BLTS 3	BLTS 3
2 through lanes per direction	≤8,000	Arterial	BLTS 3	BLTS 3	BLTS 3
	>8,000	Arterial	BLTS 3	BLTS 3	BLTS 4
3+ though lanes per direction	Any ADT	Arterial	BLTS 3	BLTS 3	BLTS 4

[1]ADT is both directions for two-way streets. For one-way streets use 1.5*ADT.

- Milwaukie BLTS Target = BLTS 1

Exhibit 14-5 BLTS Criteria for Segment with Bike Lane, no Adjacent Parking Lane

Prevailing or Posted Speed	1 Lane per direction				≥2 lanes per direction	
	≥ 7' (Buffered bike lane)	5.5' – 7' Bike lane	≤ 5.5' Bike lane	Frequent bike lane blockage[1]	≥ 7' (Buffered bike lane)	<7' bike lane or frequent blockage[1]
≤30 mph	BLTS 1	BLTS 1	BLTS 2	BLTS 3	BLTS 1	BLTS 3
35 mph	BLTS 2	BLTS 3	BLTS 3	BLTS 3	BLTS 2	BLTS 3
≥40 mph	BLTS 3	BLTS 4	BLTS 4	BLTS 4	BLTS 3	BLTS 4

[1]Typically occurs in urban areas (i.e. delivery trucks, parking maneuvers, stopped buses).

What Does it Take to Get to BLTS 1?

- Low volumes and speeds
  - Most of the city is BLTS 1, because it's mostly made up of low-volume, low-speed streets.
- Most Collectors and Arterials are BLTS 3 or higher.

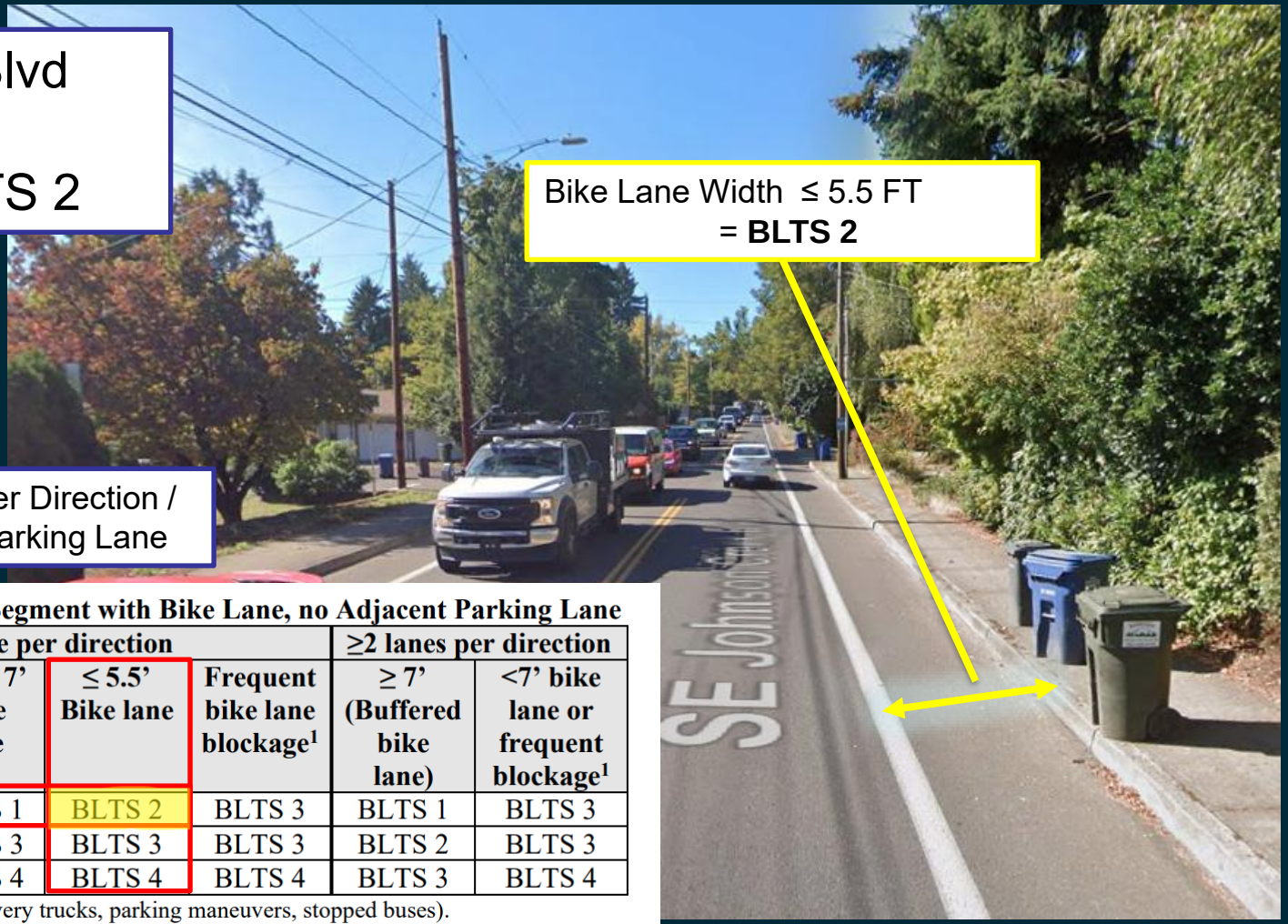
Logus Rd – BLTS 1

25 MPH / Mixed Travel Segment
/Unmarked Centerline ≤ 1,000 ADT

Exhibit 14-6 Criteria for Urban/Suburban Mixed Traffic Segment – 30 mph or less

Number of Lanes	ADT (vpd)[1]	Functional Class	Posted or Prevailing Speed (mph)		
			≤20	25	30
Unmarked Centerline	≤750	Local	BLTS 1	BLTS 1	BLTS 2
	750 - ≤1,500	Local /Collector	BLTS 1	BLTS 1	BLTS 2
	1,500 - ≤3,000	Collector	BLTS 2	BLTS 2	BLTS 2
	>3,000	Arterial	BLTS 2	BLTS 3	BLTS 3
1 through lane per direction	≤750	Local	BLTS 1	BLTS 1	BLTS 2
	750 - ≤1,500	Local /Collector	BLTS 2	BLTS 2	BLTS 2
	1,500 - ≤3,000	Collector	BLTS 2	BLTS 3	BLTS 3
	>3,000	Arterial	BLTS 3	BLTS 3	BLTS 3
2 through lanes per direction	≤8,000	Arterial	BLTS 3	BLTS 3	BLTS 3
	>8,000	Arterial	BLTS 3	BLTS 3	BLTS 4
3+ though lanes per direction	Any ADT	Arterial	BLTS 3	BLTS 3	BLTS 4

Johnson Creek Blvd Ground truthing verification = BLTS 2



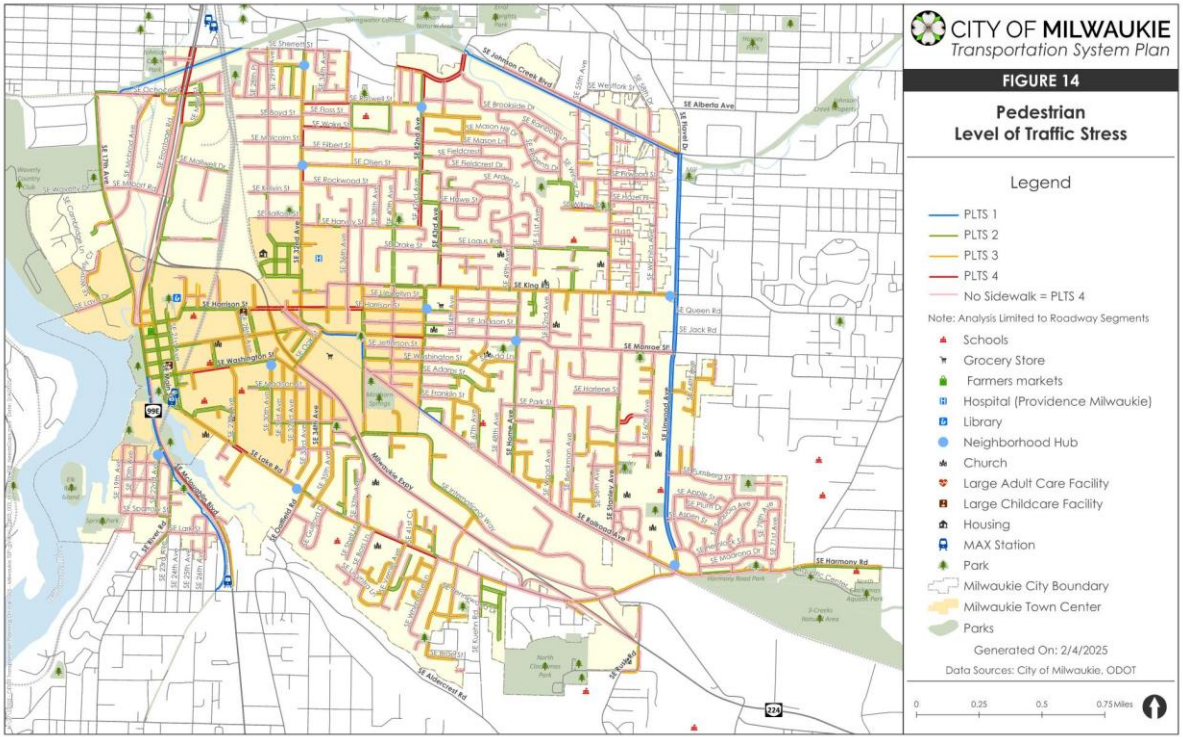
25 MPH / 1 Travel Lane Per Direction / Bike Lane / No Adjacent Parking Lane

Exhibit 14-5 BLTS Criteria for Segment with Bike Lane, no Adjacent Parking Lane

Prevailing or Posted Speed	1 Lane per direction				≥2 lanes per direction	
	≥ 7' (Buffered bike lane)	5.5' – 7' Bike lane	≤ 5.5' Bike lane	Frequent bike lane blockage[1]	≥ 7' (Buffered bike lane)	<7' bike lane or frequent blockage[1]
≤30 mph	BLTS 1	BLTS 1	BLTS 2	BLTS 3	BLTS 1	BLTS 3
35 mph	BLTS 2	BLTS 3	BLTS 3	BLTS 3	BLTS 2	BLTS 3
≥40 mph	BLTS 3	BLTS 4	BLTS 4	BLTS 4	BLTS 3	BLTS 4

[1]Typically occurs in urban areas (i.e. delivery trucks, parking maneuvers, stopped buses).

PLTS Results on Existing Network



How did we calculate PLTS

Exhibit 14-21 PLTS based on Sidewalk Conditions [1,3]

Actual/Effective Sidewalk Width (ft)[2]		Sidewalk Condition				
		Good	Fair	Poor	Very Poor	No Sidewalk
Actual	<4	PLTS 4	PLTS 4	PLTS 4	PLTS 4	PLTS 4
	≥4 to <5	PLTS 3	PLTS 3	PLTS 3	PLTS 4	PLTS 4
	≥5	PLTS 2	PLTS 2	PLTS 3	PLTS 4	PLTS 4
Effective	≥6[4]	PLTS 1	PLTS 1	PLTS 2	PLTS 3	PLTS 4

Exhibit 14-22 PLTS based on Physical Buffer Type

Physical Buffer Type				
Buffer Type[1]	Prevailing or Posted Speed			
	≤25 MPH	30 MPH	35 MPH	≥40 MPH
No Buffer (curb tight)	PLTS 2	PLTS 3	PLTS 3	PLTS 4
Solid surface	PLTS 2[2]	PLTS 2	PLTS 2	PLTS 2
Landscaped	PLTS 1	PLTS 2	PLTS 2	PLTS 2
Landscaped with trees	PLTS 1	PLTS 1	PLTS 1	PLTS 2
Vertical				

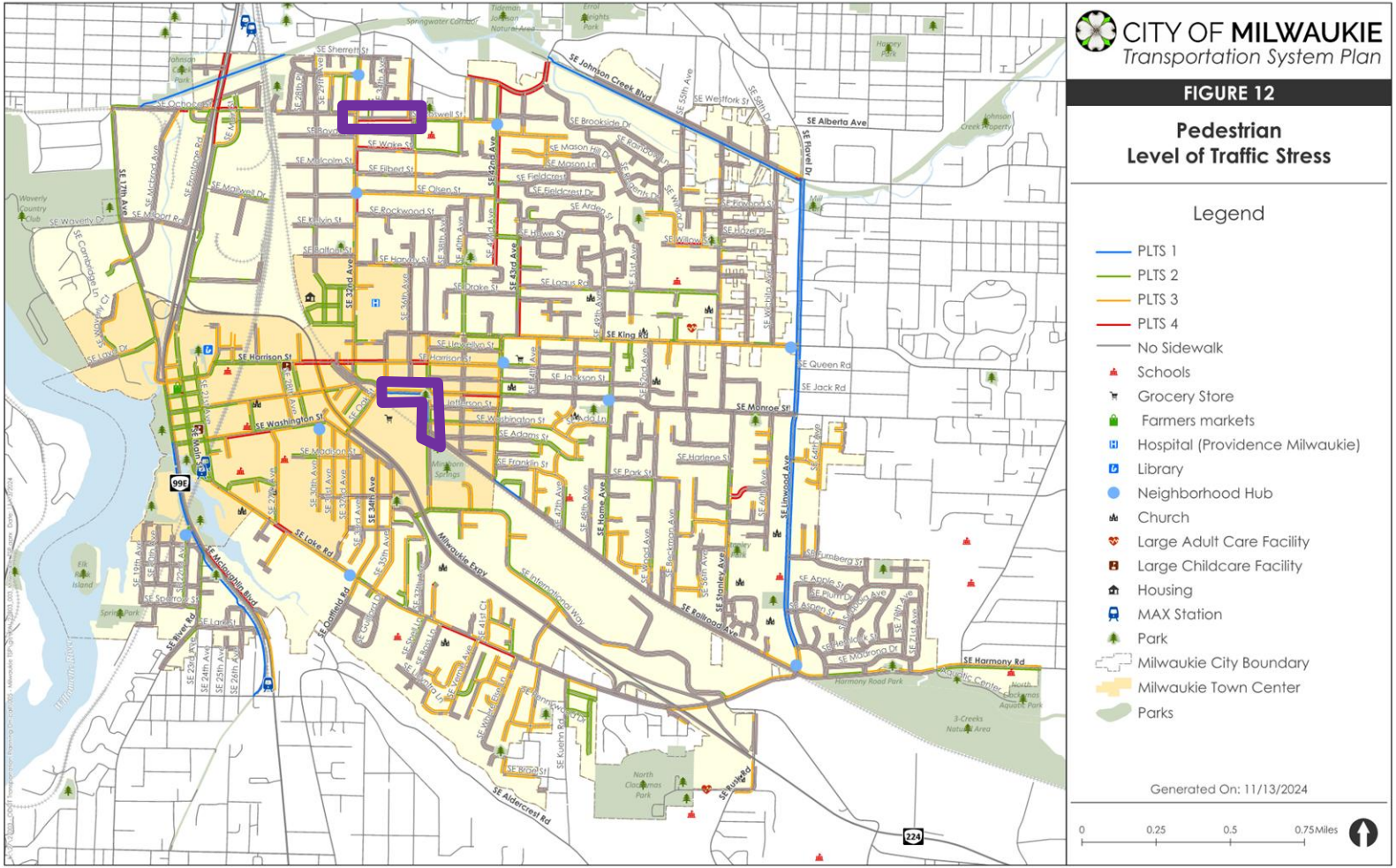
[1]Combined buffers: If two or more of the buffer conditions apply, use the most appropriate, typically the lower stress level.
[2]If street furniture, street trees, lighting, planters, surface change, etc. are present then the PLTS can be lowered to PLTS 1.

Milwaukie PLTS Target = PLTS 2

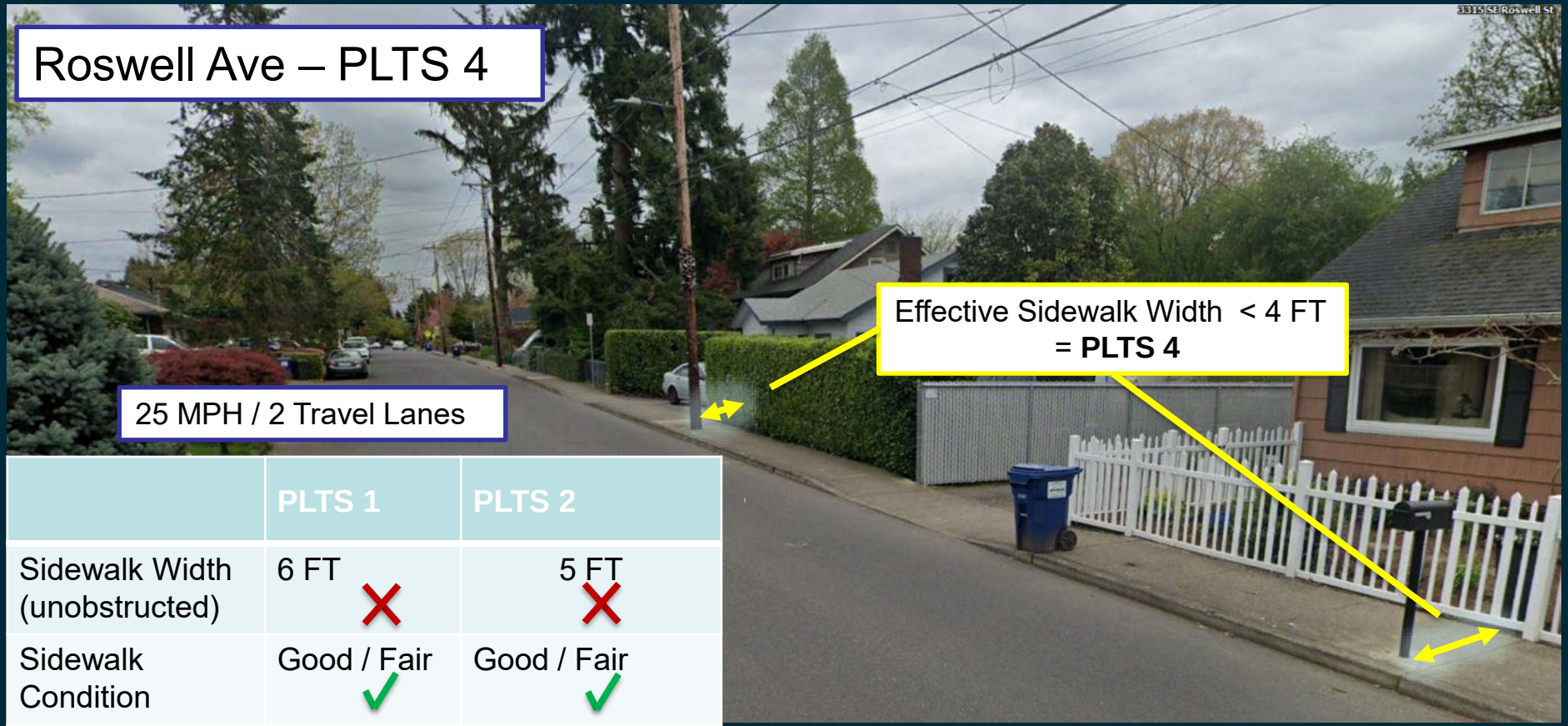
Exhibit 14-23 PLTS based on Total Buffering Width

Total Number of Travel Lanes (both directions)	Total Buffering Width (ft)[1]				
	<5	≥5 to <10	≥10 to <15	≥15 to <25	≥25
2	PLTS 2	PLTS 2	PLTS 1	PLTS 1	PLTS 1
3	PLTS 3	PLTS 2	PLTS 2	PLTS 1	PLTS 1
4 - 5	PLTS 4[2]	PLTS 3	PLTS 2	PLTS 1	PLTS 1
6	PLTS 4[2]	PLTS 4[2]	PLTS 3	PLTS 2	PLTS 2

[1]Total Buffering Width is the summation of the width of buffer, width of parking, width of shoulder and width of the bike lane on the side same side of the roadway as the pedestrian facility being evaluated.
[2]Sections with a substantial physical barrier/tall railing between the travel lanes and the walkway (like might be found on a bridge) can be lowered to PLTS 3.

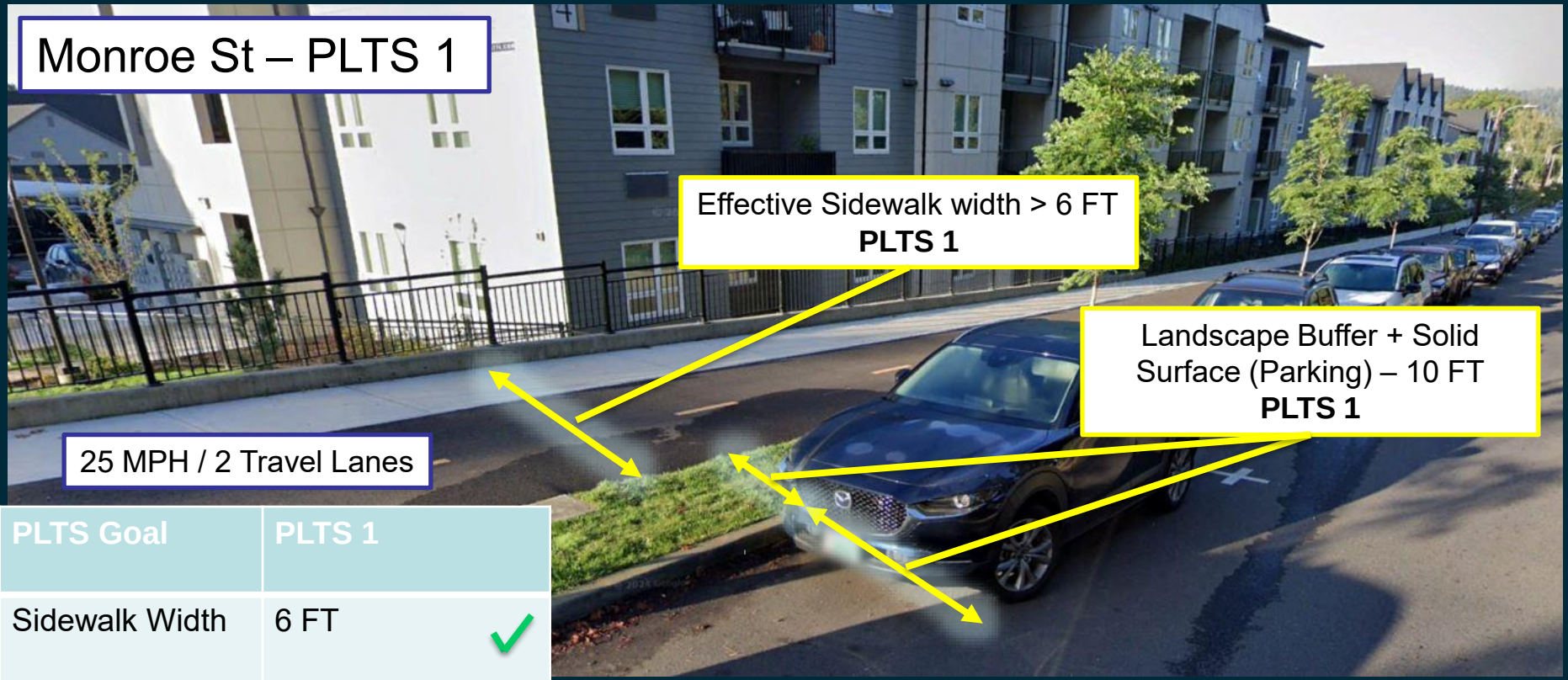

CITY OF MILWAUKIE
Transportation System Plan
FIGURE 12
Pedestrian
Level of Traffic Stress
Legend
PLTS 1
PLTS 2
PLTS 3
PLTS 4
No Sidewalk
Schools
Grocery Store
Farmers markets
Hospital (Providence Milwaukie)
Library
Neighborhood Hub
Church
Large Adult Care Facility
Large Childcare Facility
Housing
MAX Station
Park
Milwaukie City Boundary
Milwaukie Town Center
Parks
Generated On: 11/13/2024
0
0.25
0.5
0.75 Miles

Roswell Ave – PLTS 4



	PLTS 1	PLTS 2
Sidewalk Width (unobstructed)	6 FT ✗	5 FT ✗
Sidewalk Condition	Good / Fair ✓	Good / Fair ✓
Buffer Type / Width	Landscaped / 10 FT ✗	Curb Tight / 0 Ft ✓

Monroe St – PLTS 1

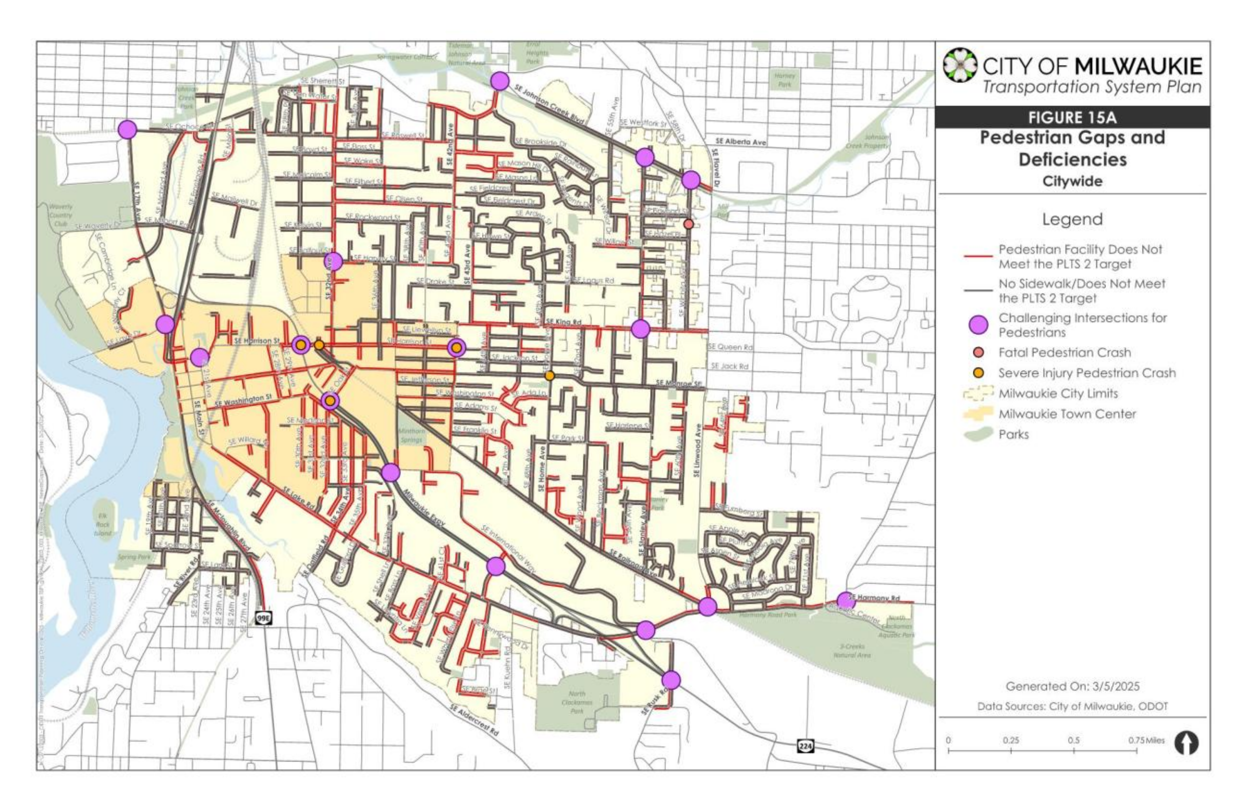


PLTS Goal	PLTS 1
Sidewalk Width	6 FT ✓
Sidewalk Condition	Good / Fair ✓
Buffer Type & Width	Landscaped w/ Trees / 10 Ft ✓

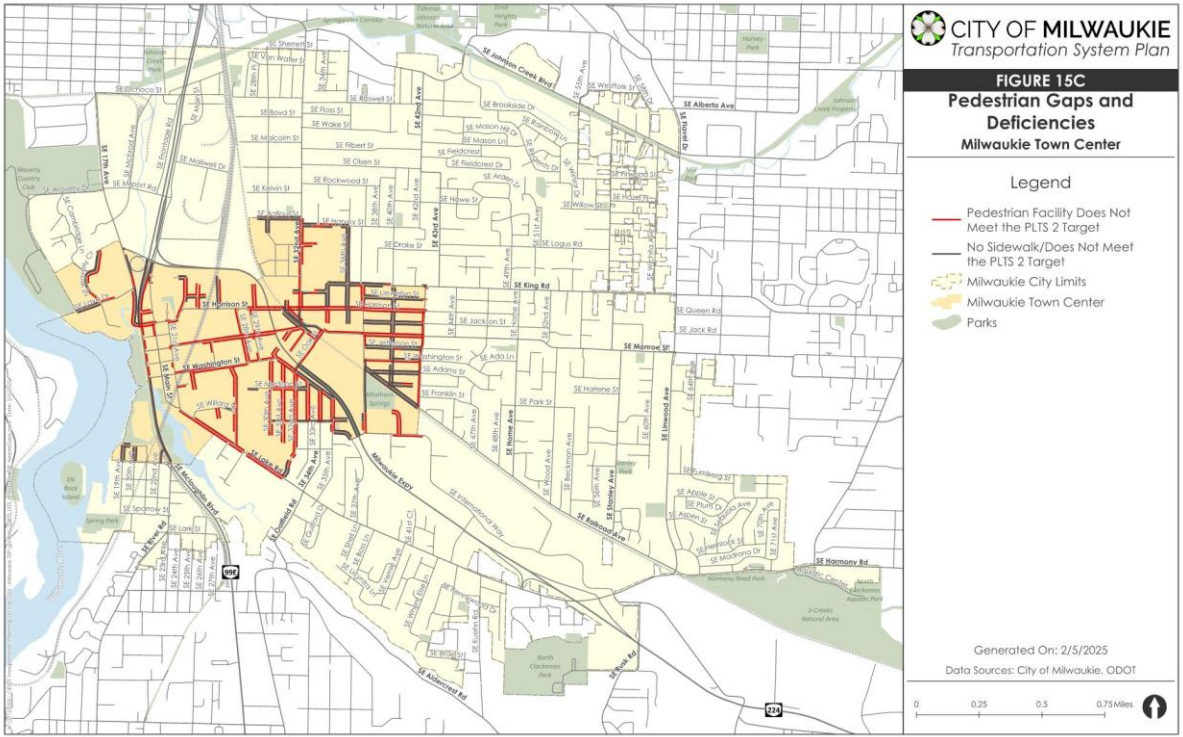
3. Ped/Bike Needs & Gaps Analysis

- How Did We Identify Needs and Gaps?
  - Developed Priority Focus Areas
    - Milwaukie Town Center
    - Schools
    - Transit Stops
    - Parks
    - Grocery/Retail
    - Transit Stops
    - Underserved Land Uses
  - Mapped BLTS and PLTS Thresholds

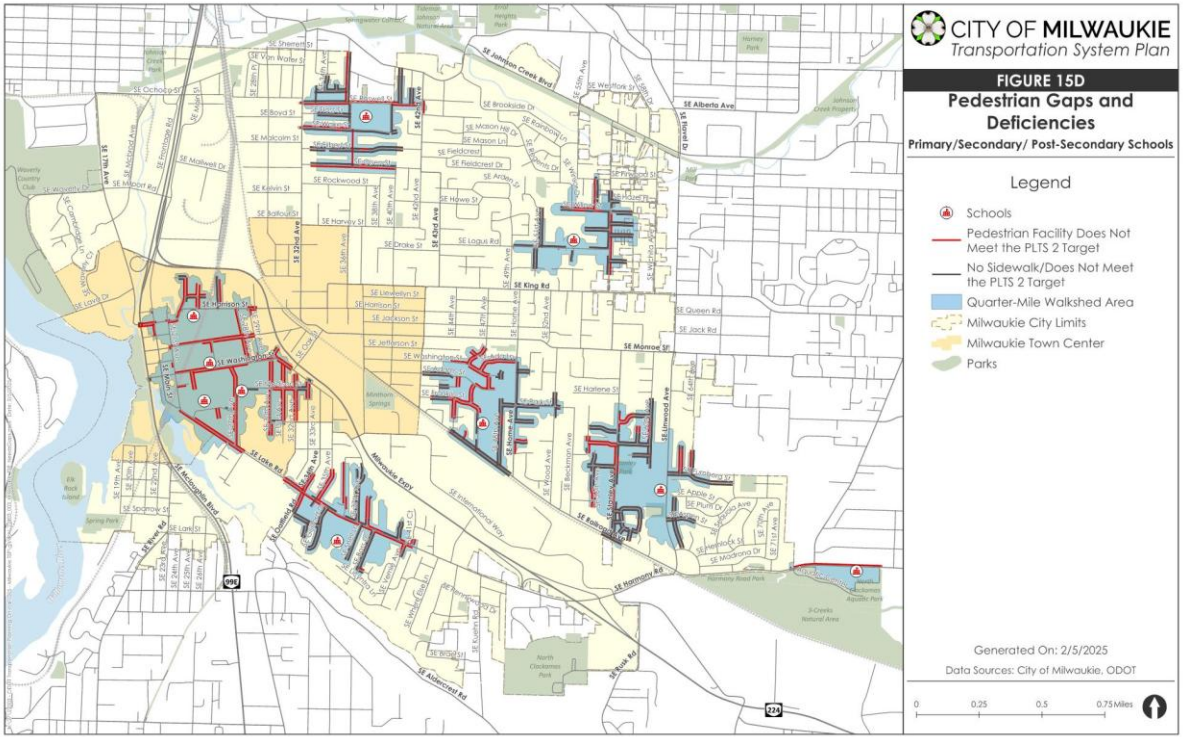
Ped Need/Gaps - Citywide



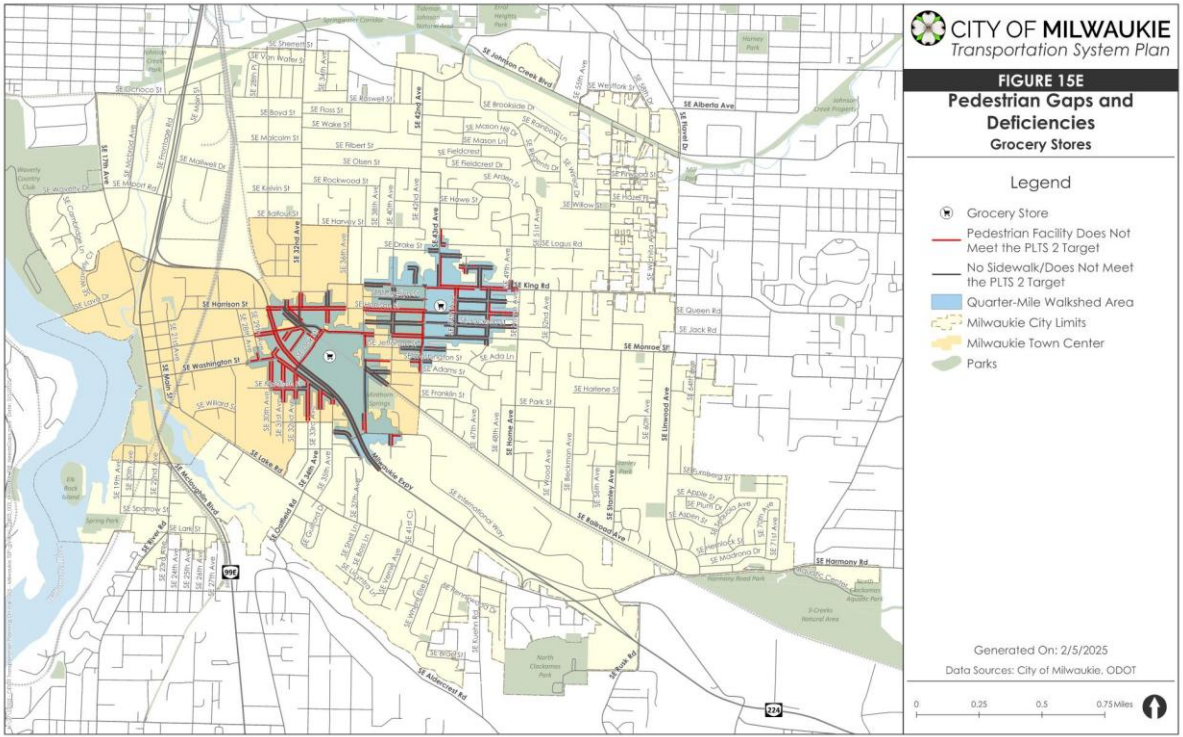
Ped Need/Gaps – Milwaukie Town Center



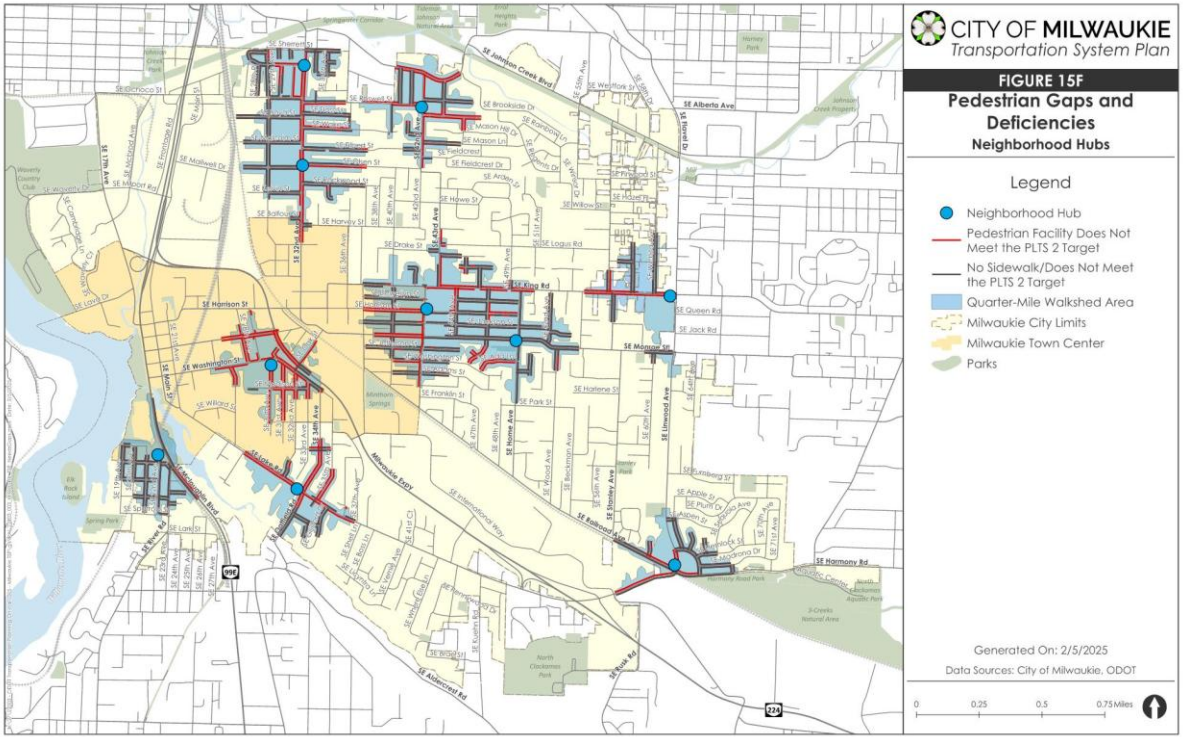
Ped Need/Gaps - Schools



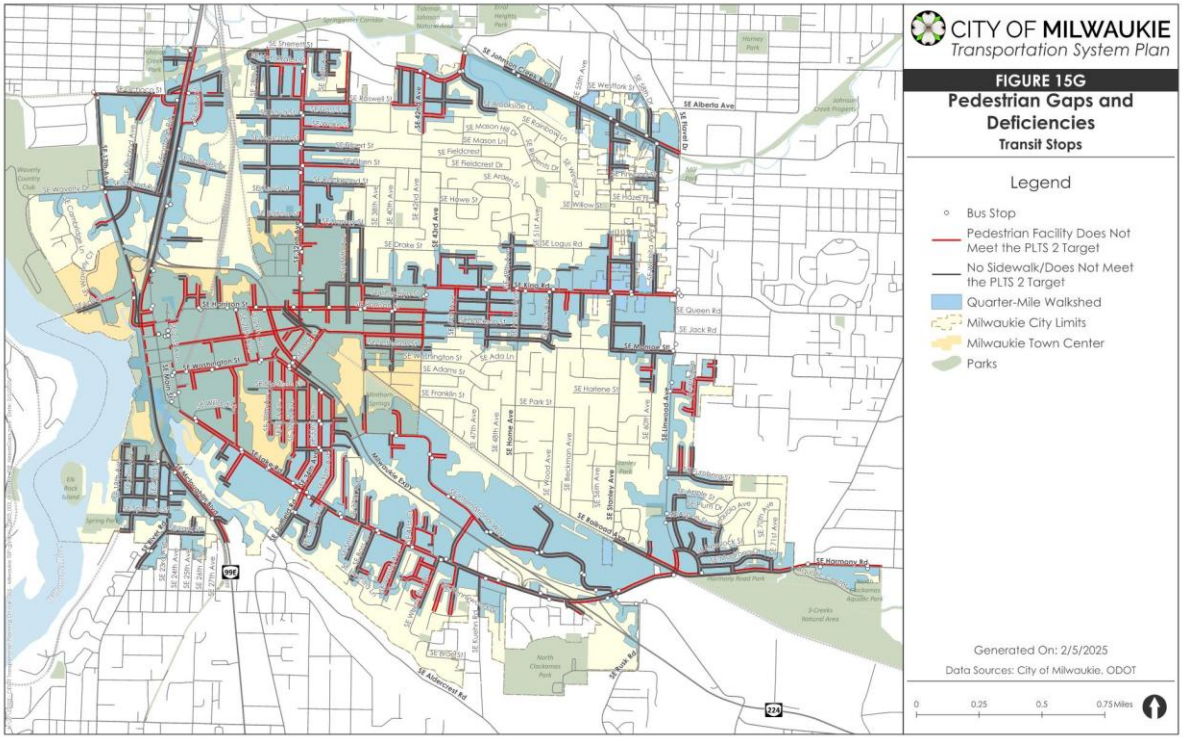
Ped Need/Gaps = Grocery Stores



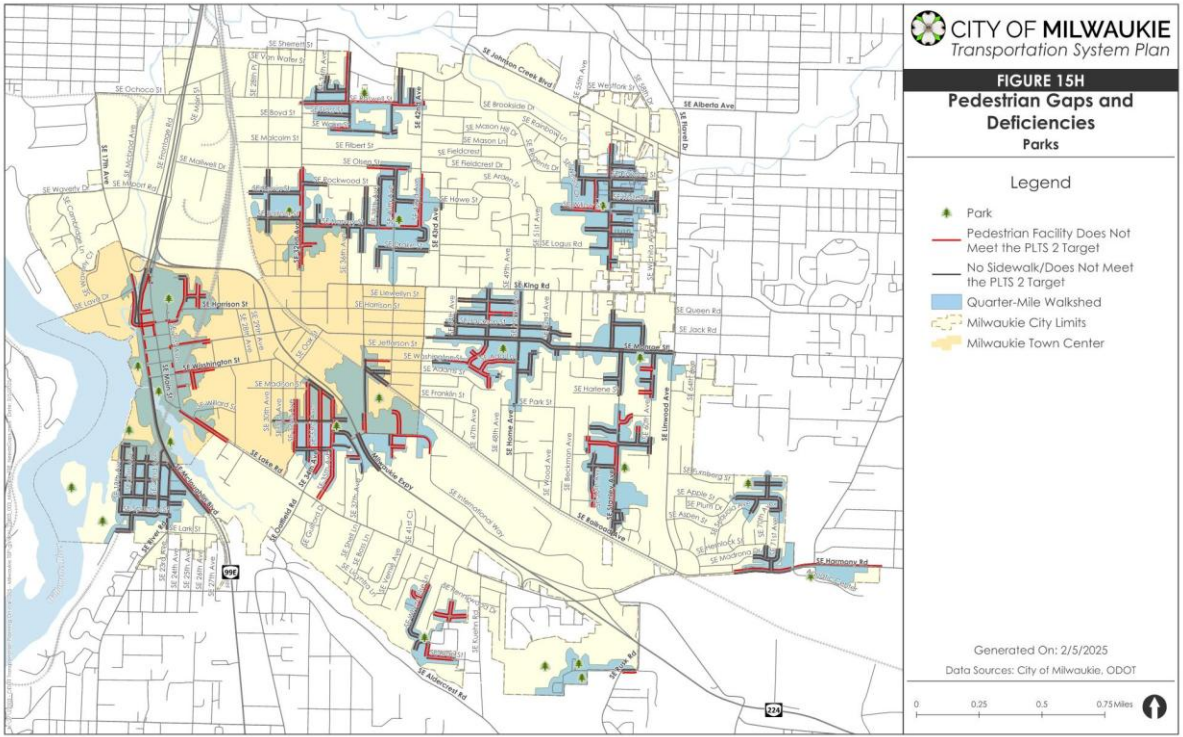
Ped Need/Gaps – Neighborhood Hubs



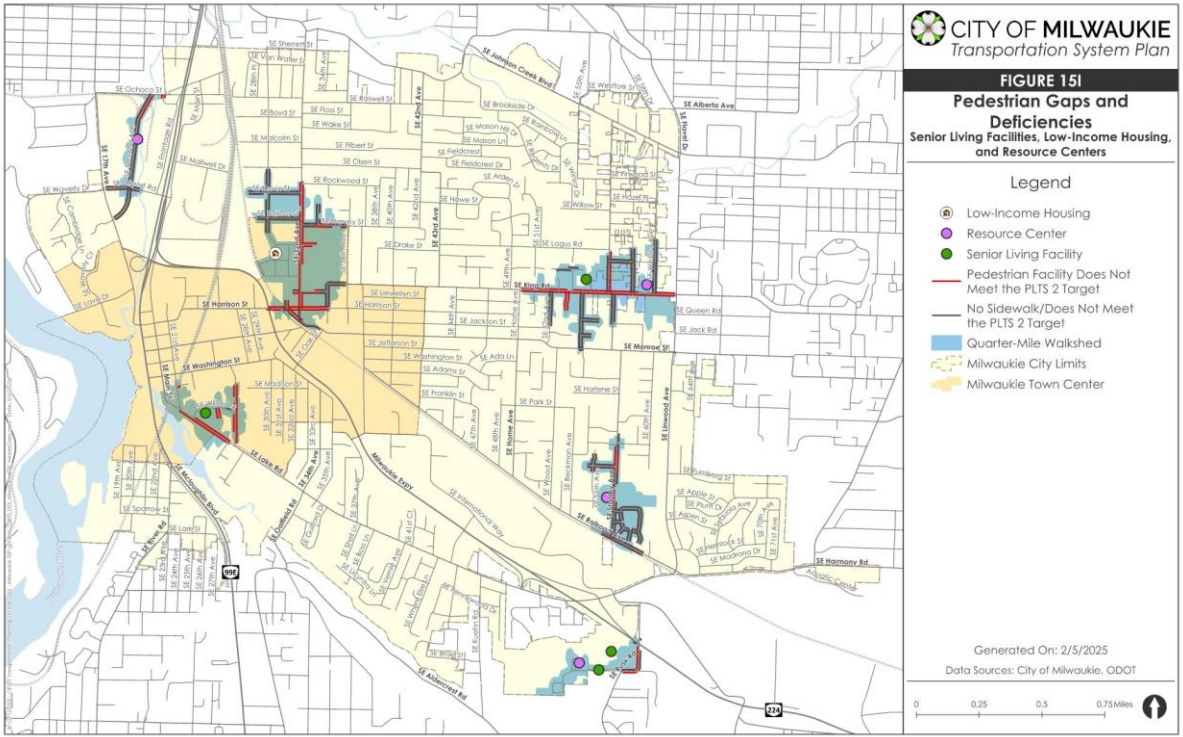
Ped Need/Gaps – Transit Stops



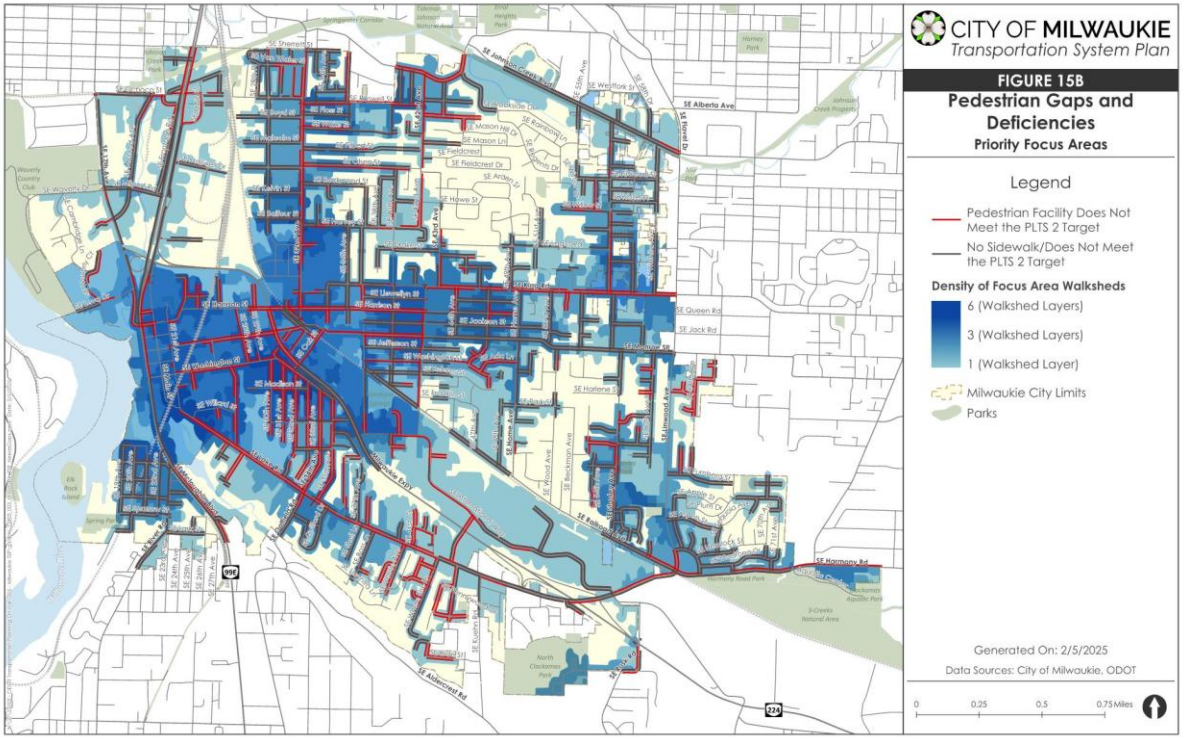
Ped Need/Gaps – Parks



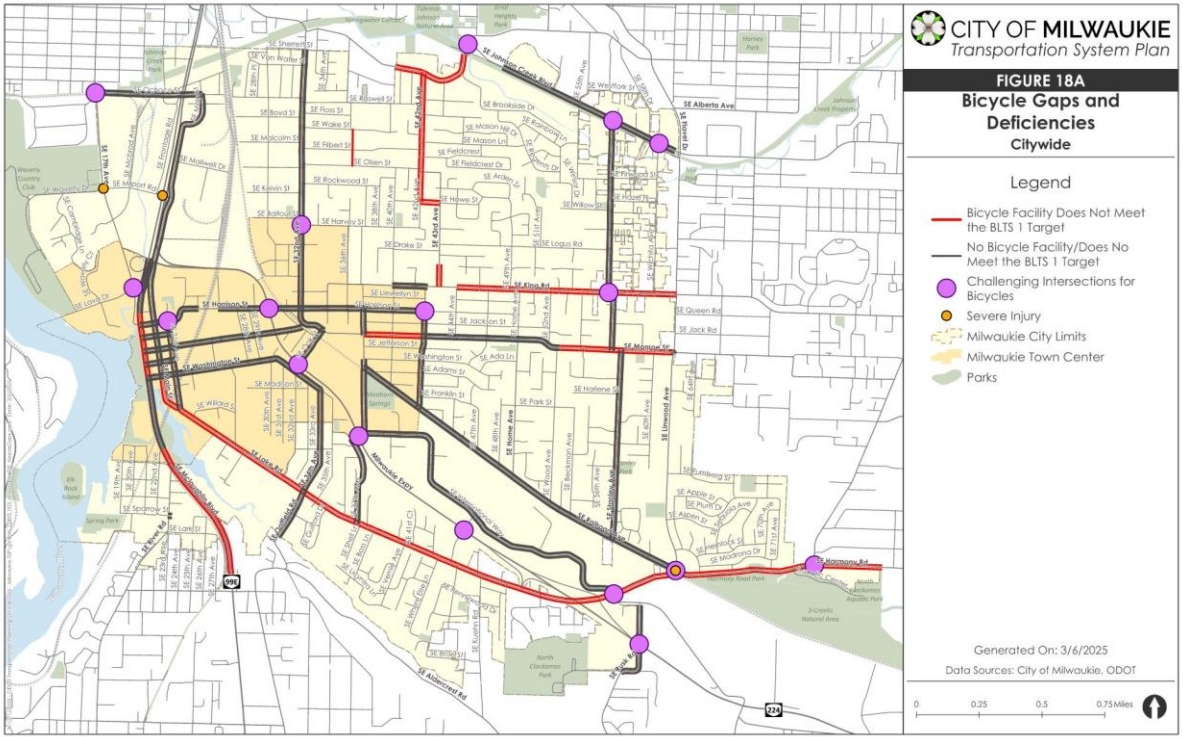
Ped Need/Gaps – Underserved Groups



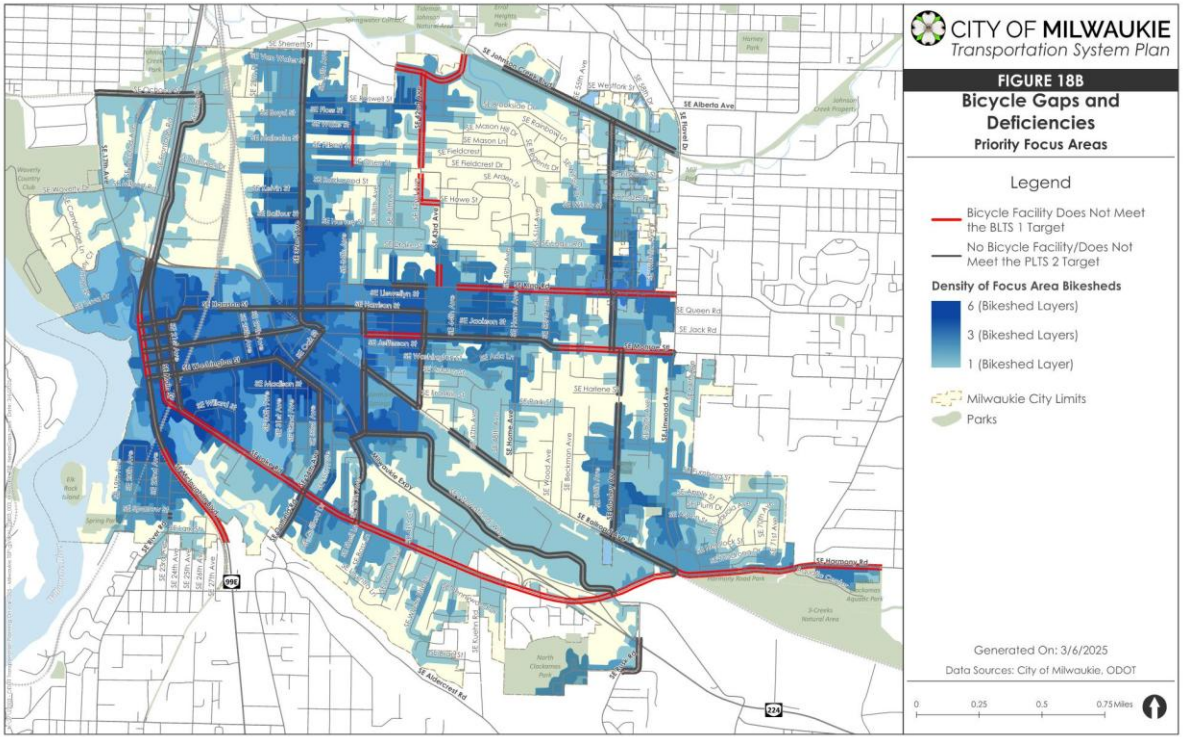
Ped Need/Gaps – Overlaid on Priority Focus Areas



Bike Need/Gaps – Citywide



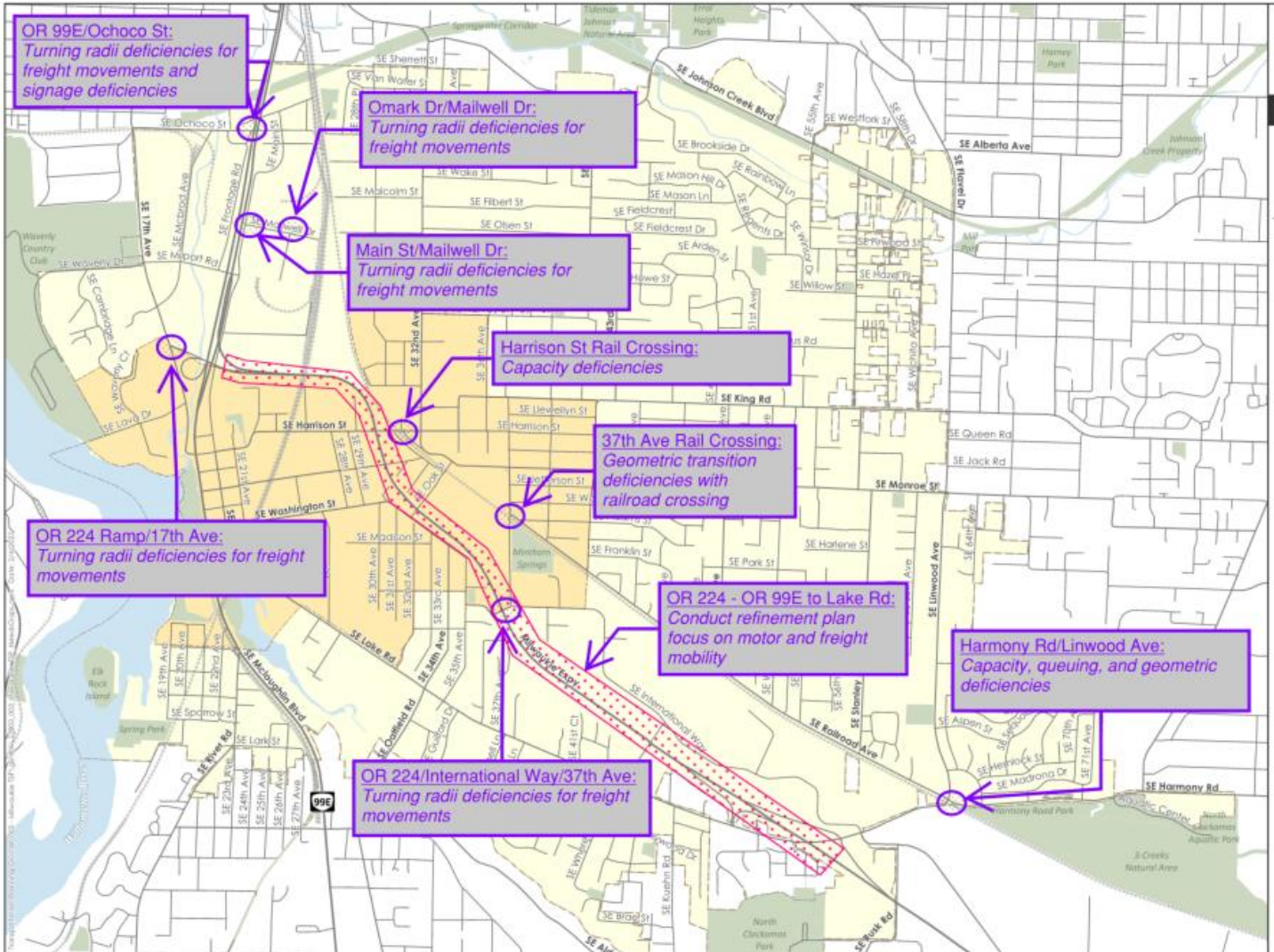
Bike Need/Gaps – Priority Focus Areas



4. Vehicular/Freight Needs & Gaps

- How did we identify vehicular/freight gaps?

Evaluated Five Intersections	Reviewed other Planning Efforts	Gathered feedback from City staff



CITY OF **MILWAUKIE**
Transportation System Plan

FIGURE 6

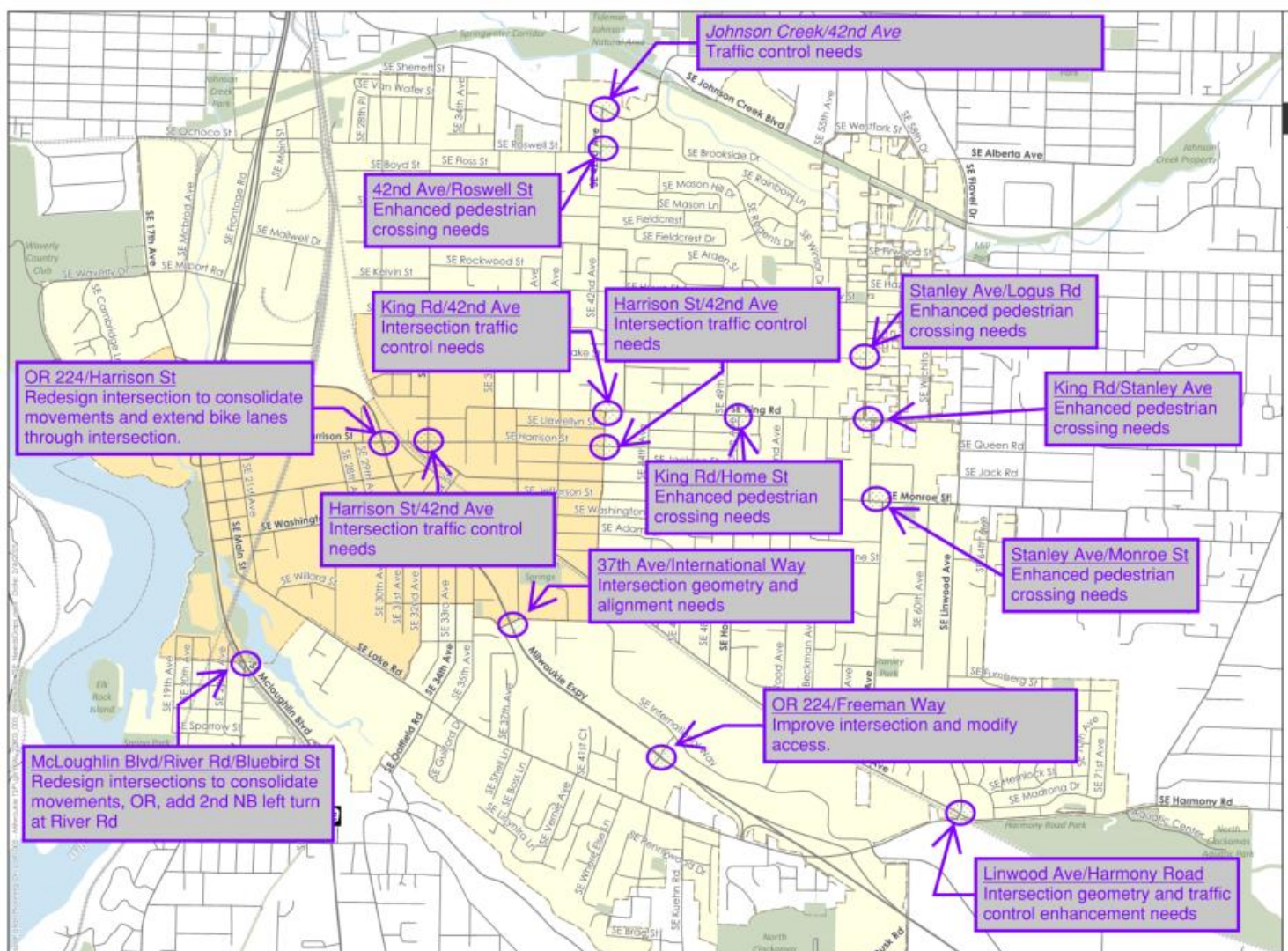
Freight Gaps and Needs

Legend

- Milwaukie City Limits
- Milwaukie Town Center
- Parks

Generated On: 2/4/2025

Data Sources: City of Milwaukie, ODOT



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Transportation System Plan

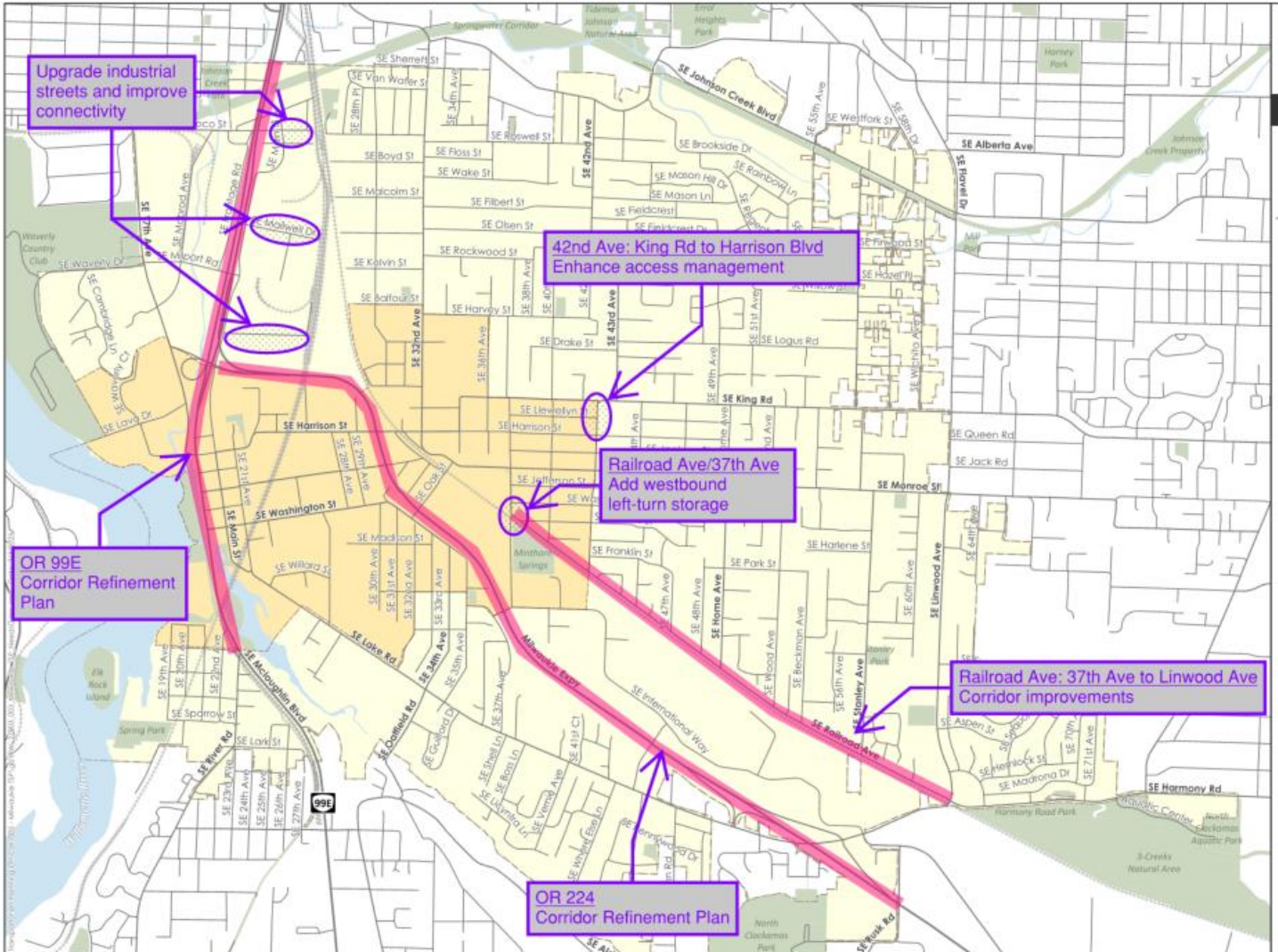
FIGURE 9

Intersection Control Gaps and Needs

Legend

- Milwaukie City Limits
- Milwaukie Town Center
- Parks

Generated On: 2/4/2025



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Transportation System Plan

FIGURE 12

Roadway Gaps and Needs

Legend

- Milwaukie City Limits
- Milwaukie Town Center
- Parks

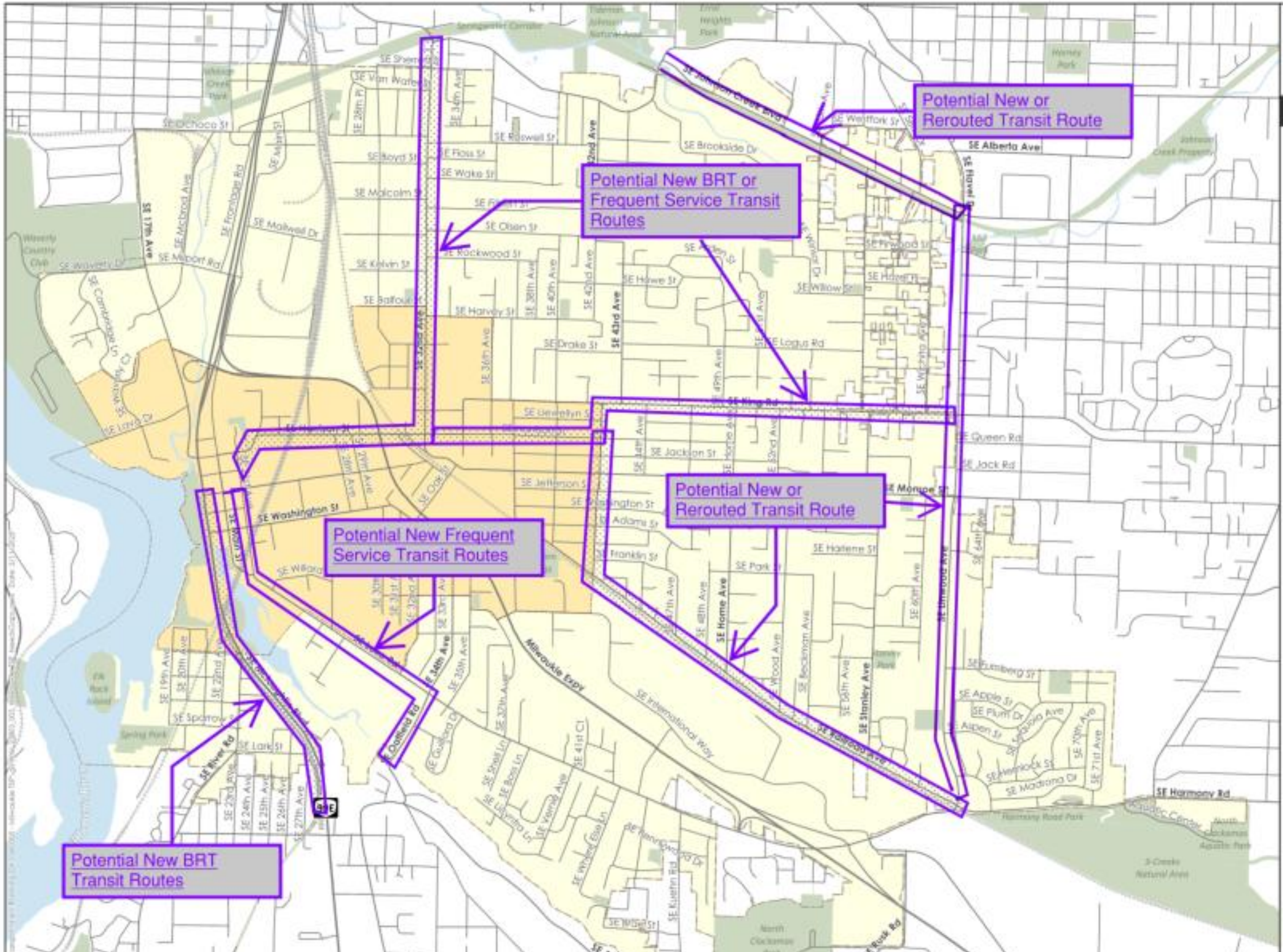
Generated On: 2/4/2025

Data Sources: City of Milwaukie, ODOT

CITY OF MILWAUKIE
Transportation System Plan

FIGURE 19B

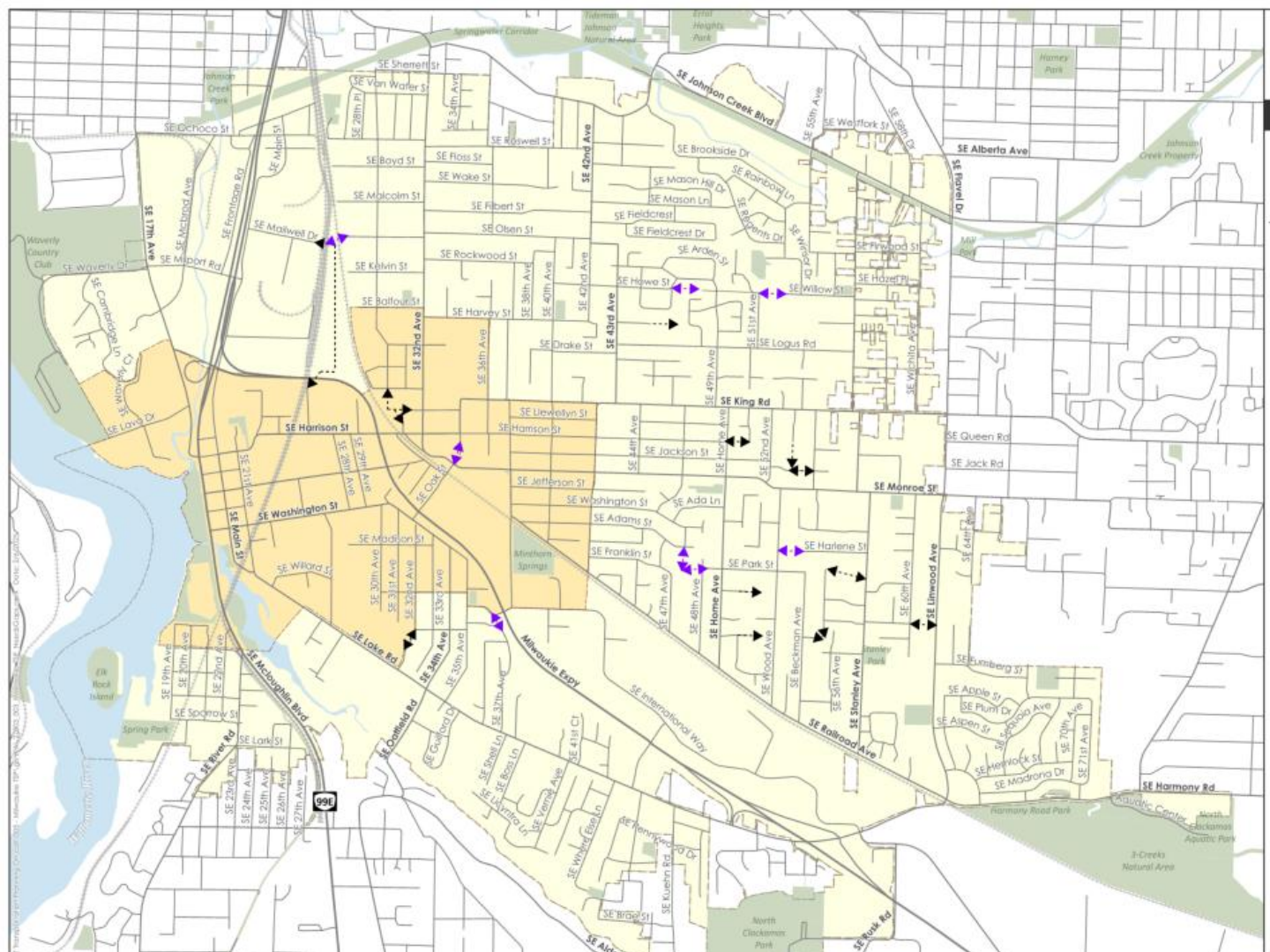
Transit Gaps and Needs



Legend
Milwaukie City Limits
Milwaukie Town Center
Parks

Generated On: 2/11/2025

Data Sources: City of Milwaukie, ODOT



CITY OF **MILWAUKIE**
Transportation System Plan

FIGURE 12B

Multimodal Connectivity Gaps and Needs

Legend

- Milwaukie City Limits
- Milwaukie Town Center
- Parks
- Potential Local Street Extension
- Potential New/Enhanced Bicycle/Pedestrian Connection

Generated On: 2/6/2025

Data Sources: City of Milwaukie, ODOT

5. Multimodal Functional Classification

Bicycle

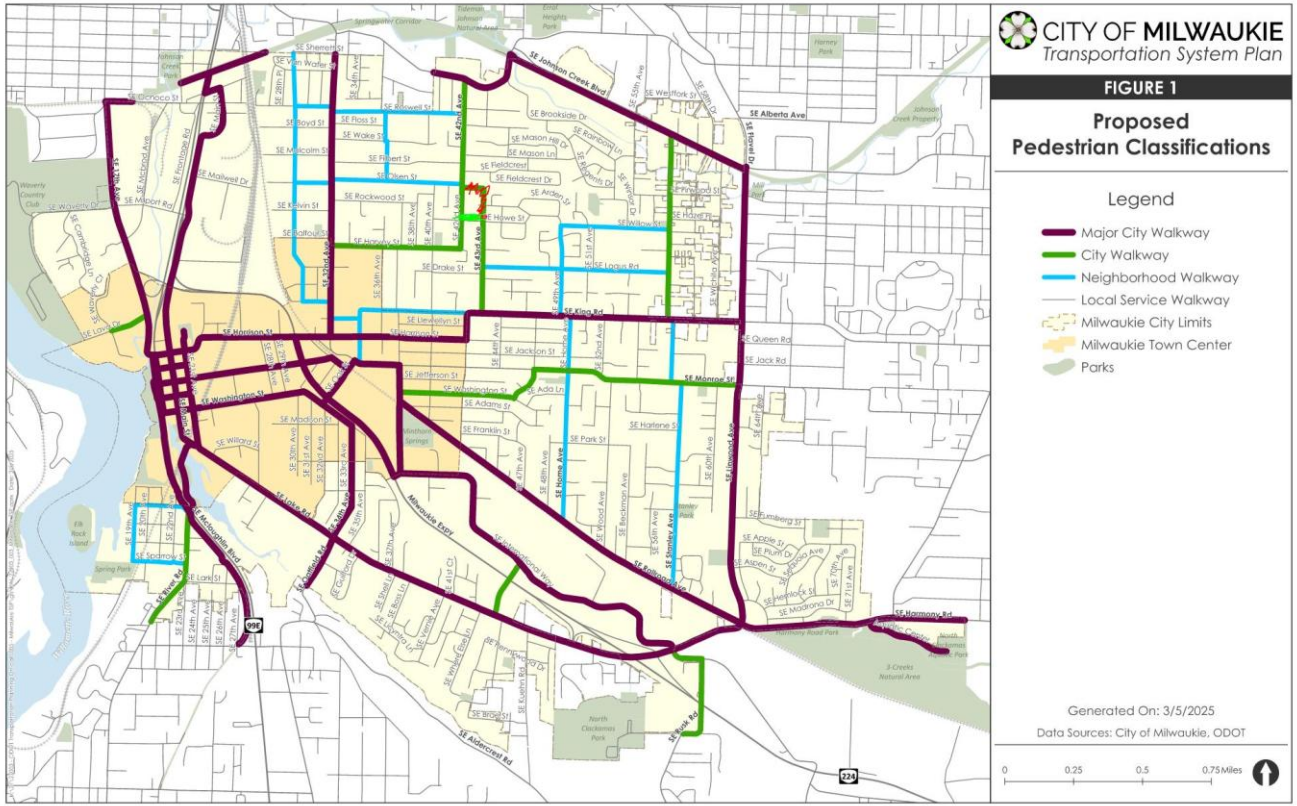
Pedestrian

Transit

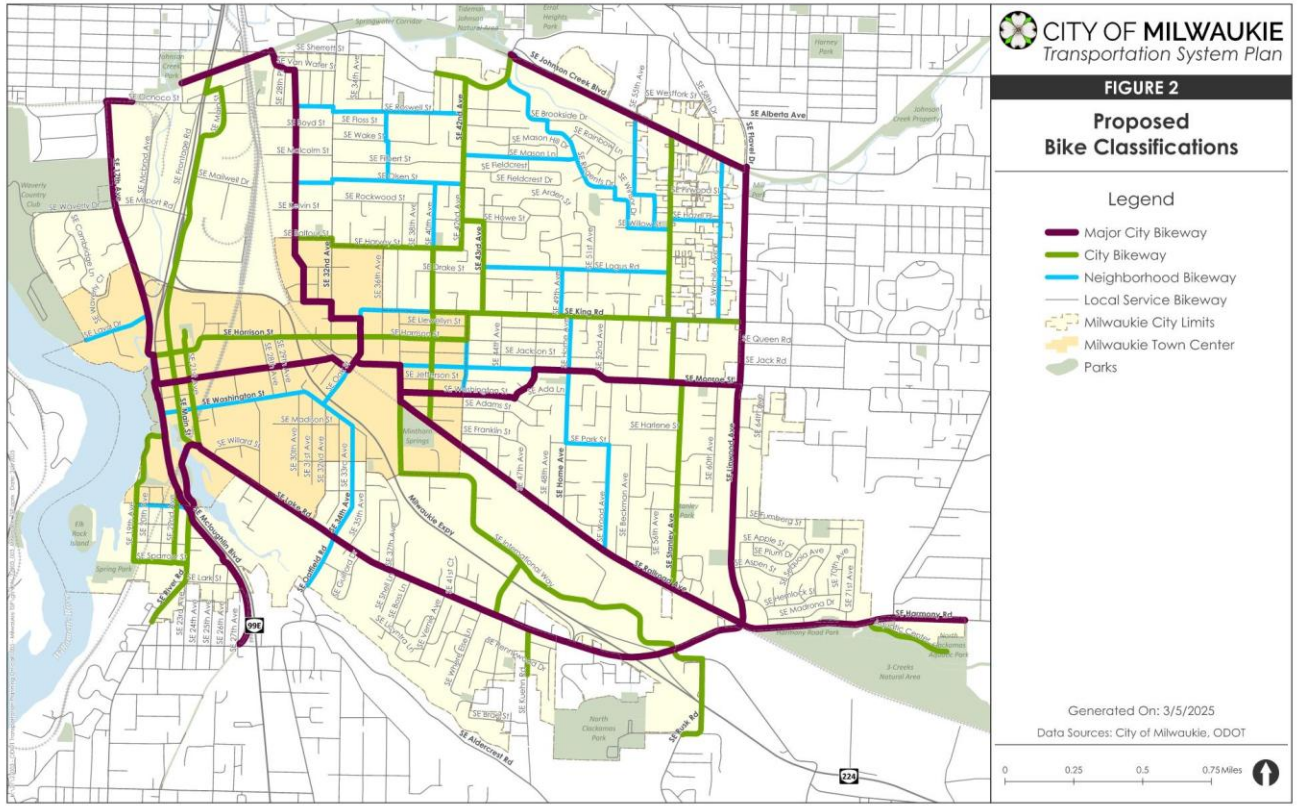
Roadway

Freight

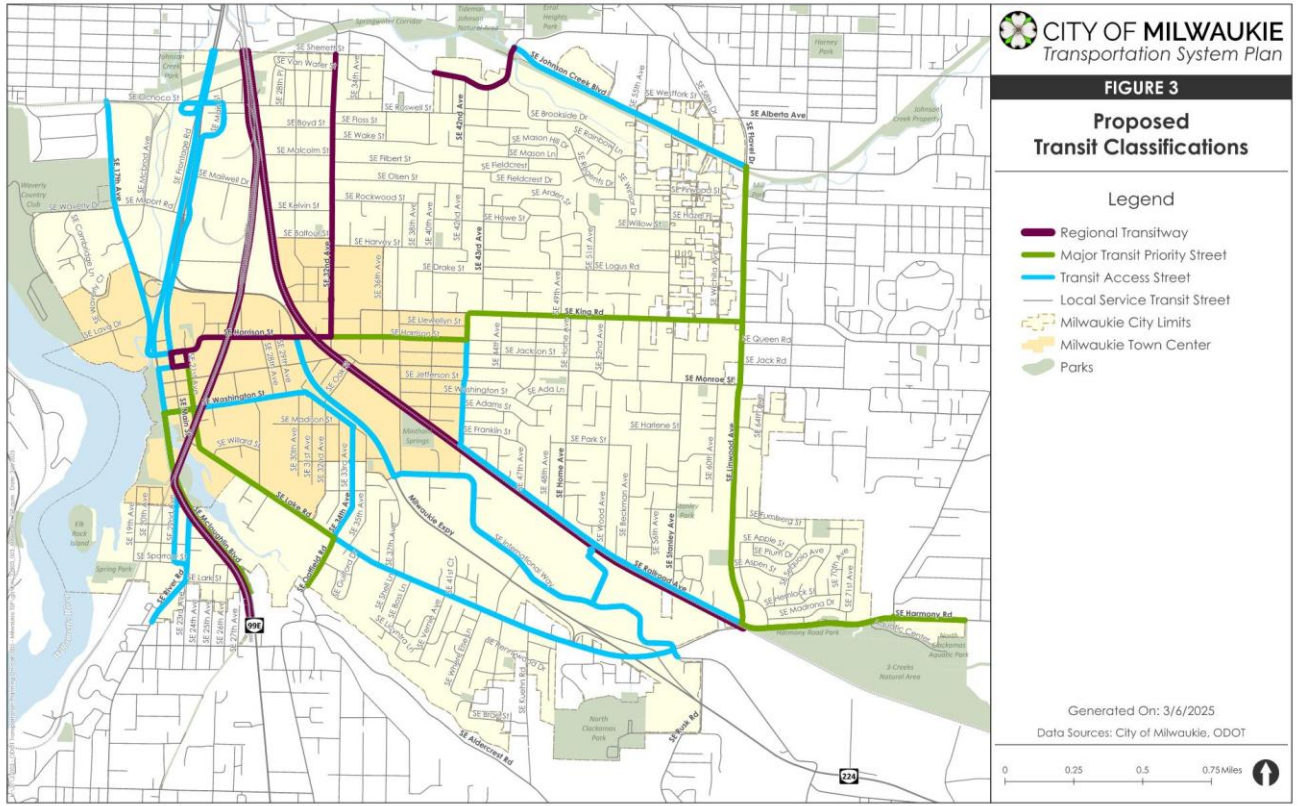
Pedestrian Classifications



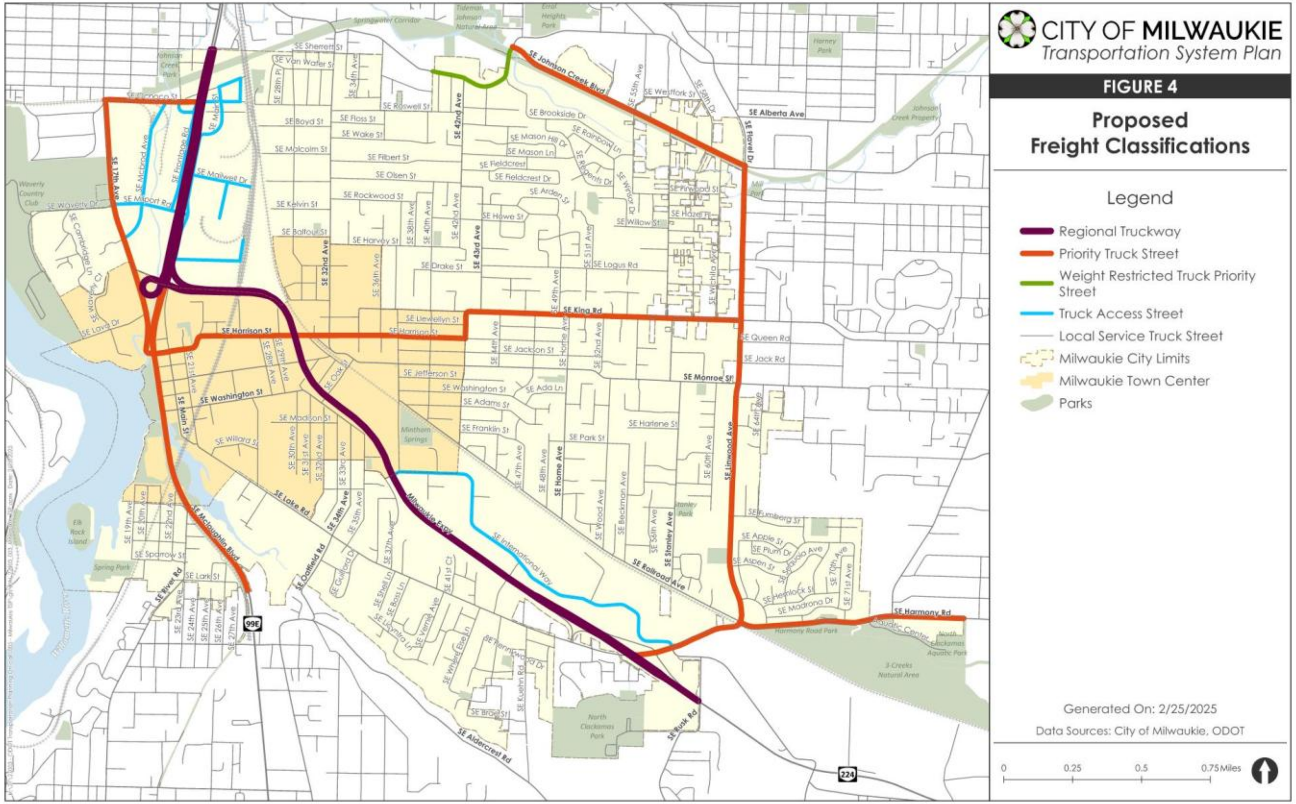
Bicycle Classifications



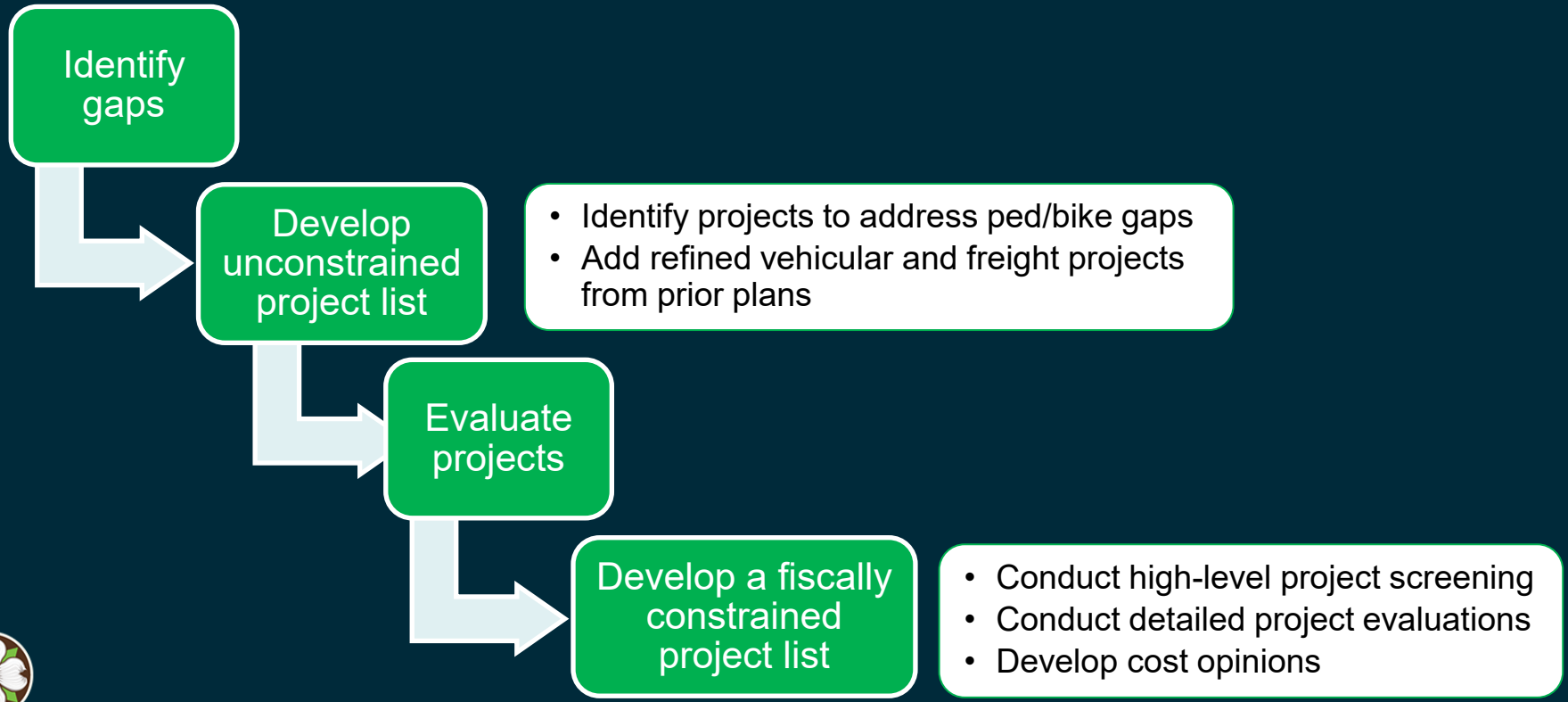
Transit Classifications



FREIGHT CLASSIFICATIONS



How Does This All Fit Together?

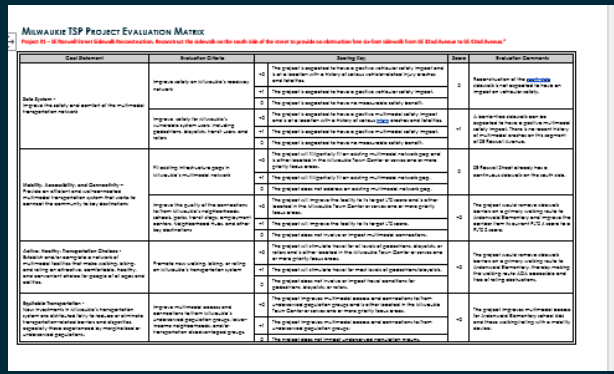


Evaluation Criteria

- Safe System
- Mobility, Accessibility, and Connectivity
- Active, Healthy, Transportation Choices
- Equitable Transportation
- Public Transportation
- Climate Mitigation and Adaptation
- Healthy Environment
- Emergency Preparedness
- Economic Vitality
- Fiscal Stewardship and System Management
- Coordination with Local, Regional, and State Partners

Evaluation Table

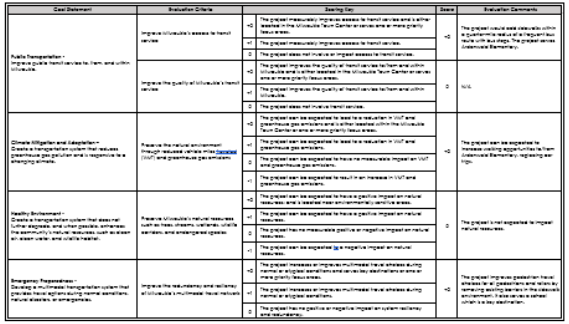
- 11 Goal Statements
- 14 Evaluation Criteria



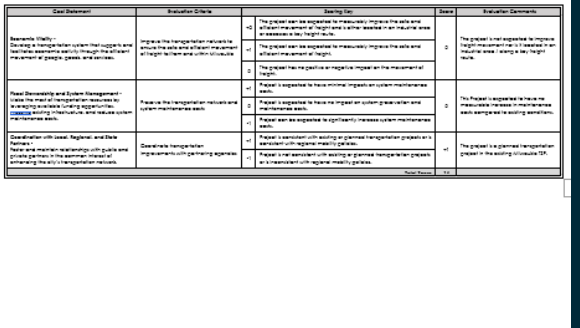
Milwaukie TSP Project Evaluation Matrix

Project #1 - W Harvard Street Sidewalk Reconstruction. Reconstruct the sidewalk on the south side of the street to provide an obstruction-free six-foot sidewalk from SE 42nd Avenue to SE 43rd Avenue.*

Goal Statement	Evaluation Criteria	Scoring Key	Score	Evaluation Comments
Safe System – Improve the safety and comfort of the multimodal transportation network	Improve safety on Milwaukie's roadway network	+2 The project is expected to have a positive vehicular safety impact and is a location with a history of serious Town Center crashes injury crashes and fatalities. +1 The project is expected to have a positive vehicular safety impact. 0 The project is expected to have no measurable safety benefit.	0	Reconstruction of the sidewalk corridor is not expected to have an impact on vehicular safety.
	Improve safety for Milwaukie's multimodal system users, including pedestrians, bicyclists, transit users, and riders	+2 The project is expected to have a positive multimodal safety impact and is at a location with a history of serious injury crashes and fatalities. +1 The project is expected to have a positive multimodal safety impact. 0 The project is expected to have no measurable safety benefit.	+1	1 bicycle/ped crash is reported in the vicinity of the project. The project is expected to have a positive multimodal safety impact. There is no recent history of multimodal crashes on this segment of SE Harvard Avenue.
Mobility, Accessibility, and Connectivity – Provide an efficient and user-oriented multimodal transportation system that caters to and meet the community's daily destinations.	Fill existing infrastructure gaps in Milwaukie's multimodal network	+2 The project will fill partially fill an existing multimodal network gap and is either located in the Milwaukie Town Center or serves an in more gravity-focus areas. +1 The project will fill partially fill an existing multimodal network gap. 0 The project does not address an existing multimodal network gap.	0	28 Transit Street already has a sidewalk/curb on the south side.
	Improve the quality of the connections to/from Milwaukie's neighborhoods, parks, transit stops, employment centers, neighborhood hubs, and other key destinations.	+2 The project will improve the facility for its target (?) users and is either located in the Milwaukie Town Center or serves an in more gravity-focus areas. +1 The project will improve the facility for its target (?) users. 0 The project does not invest in or impact multimodal connections.	+2	The project could remove sidewalk barriers on a primary walking route to Ardenwald Elementary and improve the connection to/from 42nd Ave to 43rd Ave.
Active, Healthy, Transportation Choices – Provide safe, convenient, and inviting multimodal facilities that make walking, biking, and rolling an enjoyable, comfortable, healthy, and convenient choice for people of all ages and abilities.	Promote new walking, biking, or rolling in Milwaukie's transportation system	+2 The project will create/ improve/ fill in/ meet a level of gaps/barriers/ bicyclists, or riders and is either located in the Milwaukie Town Center or serves an in more gravity-focus areas. +1 The project will create/ improve/ fill in/ meet a level of gaps/barriers/bicyclists. 0 The project does not invest in or impact transit connections for gaps/barriers, bicyclists, or riders.	+2	The project could remove sidewalk barriers on a primary walking route to Ardenwald Elementary, thereby making the walking route ADA accessible and free of rolling obstructions.
Equitable Transportation – Direct investments in Milwaukie's transportation system are distributed fairly. It reduces or eliminates transportation-related barriers and disparities, especially those experienced by marginalized or underserved populations.	Improve multimodal access and safety for Milwaukie's underserved population groups, low-income neighborhoods, and/or transportation disadvantaged groups	+2 The project improves multimodal access and safe/comfort to/from underserved population groups and is either located in the Milwaukie Town Center or serves an in more gravity-focus areas. +1 The project improves multimodal access and safe/comfort to/from underserved population groups. 0 The project does not impact underserved population groups.	+2	The project improves multimodal access for Ardenwald Elementary (where bus and these walking/rolling with a mobility device.



Goal Statement	Evaluation Criteria	Scoring Key	Score	Evaluation Comments
Public Transportation – Improve public transit services to, from, and within Milwaukie.	Improve Milwaukie's access to transit services	+2 The project measurably improves access to transit services and is either located in the Milwaukie Town Center or serves an in more gravity-focus areas. +1 The project measurably improves access to transit services. 0 The project does not involve or impact access to transit services.	+2	The project could add sidewalks within a quarter-mile radius of Ardenwald Elementary.
	Improve the quality of Milwaukie's transit services	+2 The project improves the quality of transit services to/from and within Milwaukie and is either located in the Milwaukie Town Center or serves an in more gravity-focus areas. +1 The project improves the quality of transit services to/from and within Milwaukie. 0 The project does not involve transit services.	0	N/A
Climate Mitigation and Adaptation – Create a transportation system that reduces greenhouse gas pollution and is responsive to a changing climate.	Preserve the natural environment through reduced vehicle miles traveled (VMT) and greenhouse gas emissions	+2 The project even be expected to lead to a reduction in VMT and greenhouse gas emissions and is either located within the Milwaukie Town Center or serves an more gravity-focus areas. +1 The project even be expected to lead to a reduction in VMT and greenhouse gas emissions. 0 The project even be expected to have no measurable impact on VMT and greenhouse gas emissions. -1 The project even be expected to result in an increase in VMT and greenhouse gas emissions.	+2	The project even be expected to increase cooling opportunities to/from Ardenwald Elementary, neighboring earlings.
Healthy Environment – Create a transportation system that does not further degrade and often protects, enhances the community's natural resources, such as ocean and ocean water, and wildlife habitat.	Preserve Milwaukie's natural resources such as trees, streams, wetlands, wildlife corridors, and environmental species	+2 The project even be expected to have a positive impact on natural resources, and is located near environmentally sensitive areas. +1 The project even be expected to have a positive impact on natural resources. 0 The project has no measurable positive or negative impact on natural resources. -1 The project even be expected to a negative impact on natural resources. -2 The project even be expected to a negative impact on natural resources.	0	The project is not expected to impact natural resources.
Emergency Preparedness – Develop a multimodal transportation system that provides travel alignments during normal operations, natural disasters, or emergencies.	Improve the responsiveness and resiliency of Milwaukie's multimodal travel network	+2 The project increases or improves multimodal travel wheels during normal or singular event/item and serves key destinations on one or more gravity-focus areas. +1 The project increases or improves multimodal travel wheels during normal or singular event/item. 0 The project has no positive or negative impact on system resiliency and responsiveness.	+2	The project improves pedestrian travel wheels to/ pedestrians and riders by removing existing barriers in the sidewalk environment. It also serves a school which is a key destination.



Goal Statement	Evaluation Criteria	Scoring Key	Score	Evaluation Comments
Reasonable Vitality – Develop a transportation system that suggests and facilitates reasonable mobility through the efficient movement of people, goods, and services.	Improve the transportation network to ensure the safe and efficient movement of freight to/from and within Milwaukie	+2 The project even be expected to measurably improve the safe and efficient movement of freight and is either located in an industrial area or assesses a key freight route. +1 The project even be expected to measurably improve the safe and efficient movement of freight. 0 The project has no positive or negative impact on the movement of freight.	0	The project is not expected to improve freight movement nor is it located in an industrial area / along a key freight route.
Fiscal Stewardship and System Management – Utilize the most cost-effective resources to do ongoing sustainable funding opportunities. Maximize existing infrastructure and reduce system maintenance costs.	Preserve the transportation network and system maintenance costs	+1 Project is expected to have minimal impact on system maintenance costs. 0 Project is expected to have no impact on system preservation and maintenance costs. -1 Project can be expected to significantly increase system maintenance costs.	0	This Project is expected to have no measurable increase in maintenance costs compared to existing conditions.
Coordination with Local, Regional, and State Partners – Foster and maintain relationships with public and private partners in the common interest of enhancing the city's transportation network.	Coordinate transportation improvements with partnering agencies	+1 Project is consistent with existing or planned transportation projects on a consistent with regional mobility policies. -1 Project is not consistent with existing or planned transportation projects on a inconsistent with regional mobility policies.	+1	The project is a planned transportation project in the existing Milwaukie TSP.
		Total Scores:	3.0	


Thank you!

Exhibit 14-8 Right Turn Lane Types

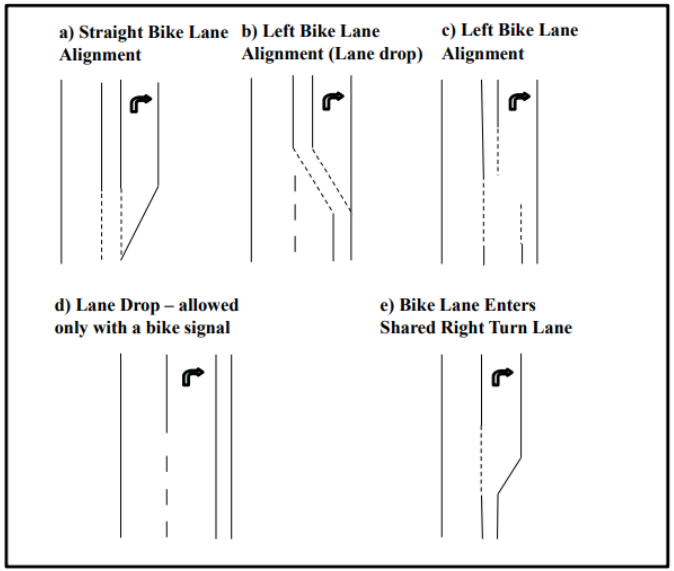


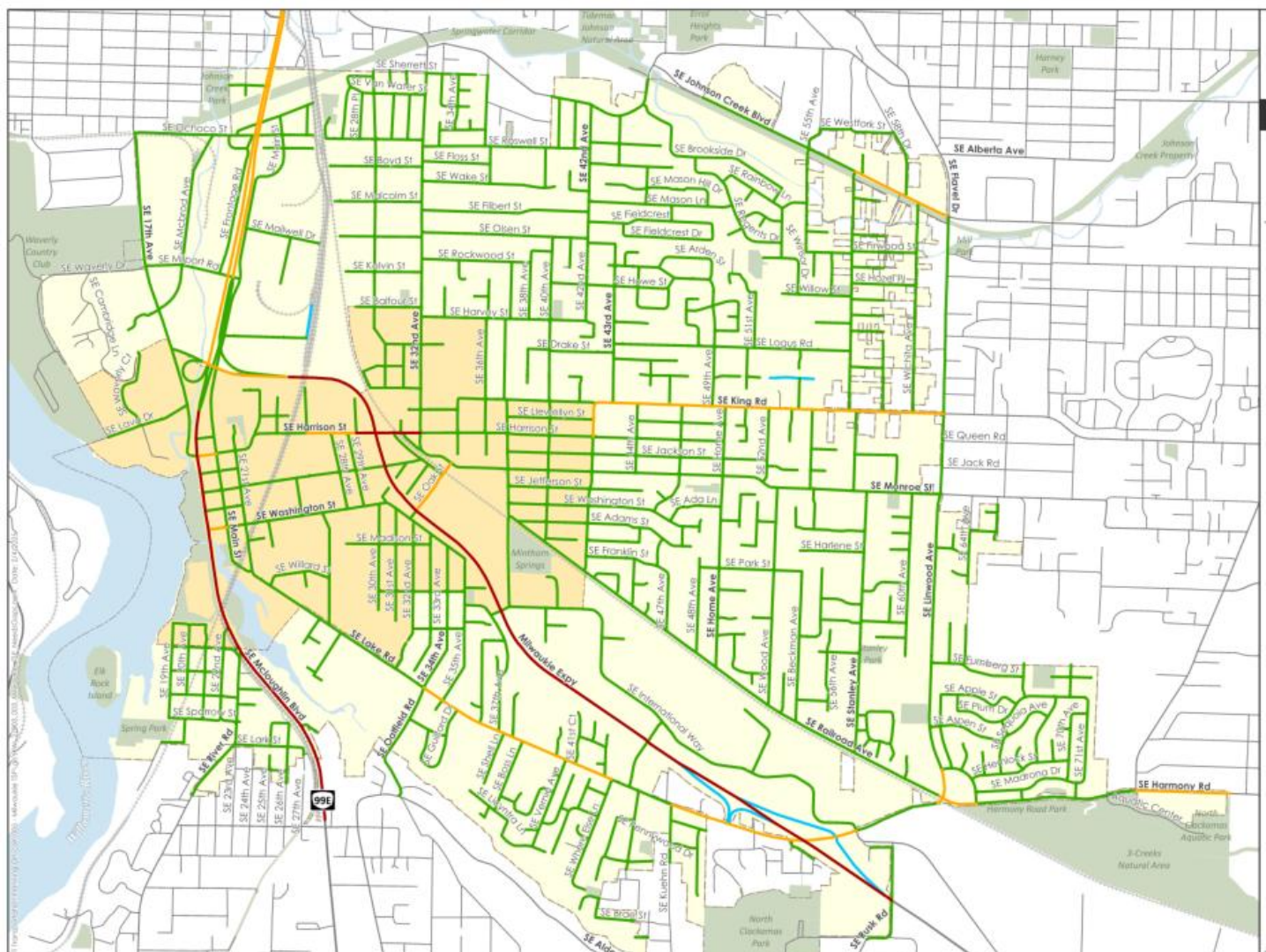
Exhibit 14-9 BLTS Right Turn Lane Criteria[1]

Right-turn lane configuration	Right-turn lane length[2] (ft)	Bike Lane Approach Alignment	Vehicle Turning Speed (mph)[3]	BLTS
Exhibit 14-7a	≤ 150	Straight	≤ 15	BLTS 2
Exhibit 14-7a	>150 to 500' maximum	Straight	≤ 20	BLTS 3
Exhibit 14-7b or c	<150	Shift to Left	≤ 15	BLTS 3
Exhibit 14-7d	N/A	N/A	N/A	BLTS 1
Exhibit 14-7e	≤ 75	Straight	≤ 15	BLTS 2
Exhibit 14-7e	>75' to 150' maximum	Straight	≤ 15	BLTS 3

Exhibit 14-10 BLTS Left Turn Lane Criteria[1]

Prevailing Speed or Speed Limit (mph)	No lane crossed[2]	1 lane crossed	2+ lanes crossed
≤25	BLTS 2	BLTS 3	BLTS 4
30	BLTS 3	BLTS 4	BLTS 4
≥ 35	BLTS 4	BLTS 4	BLTS 4

[1]Use BLTS 4 for any shared/exclusive dual left turn lane configuration.
[2]For shared through left lanes or where mixed traffic conditions occur (no bike lanes present)



CITY OF MILWAUKIE
Transportation System Plan

FIGURE 10

Roadway Lanes

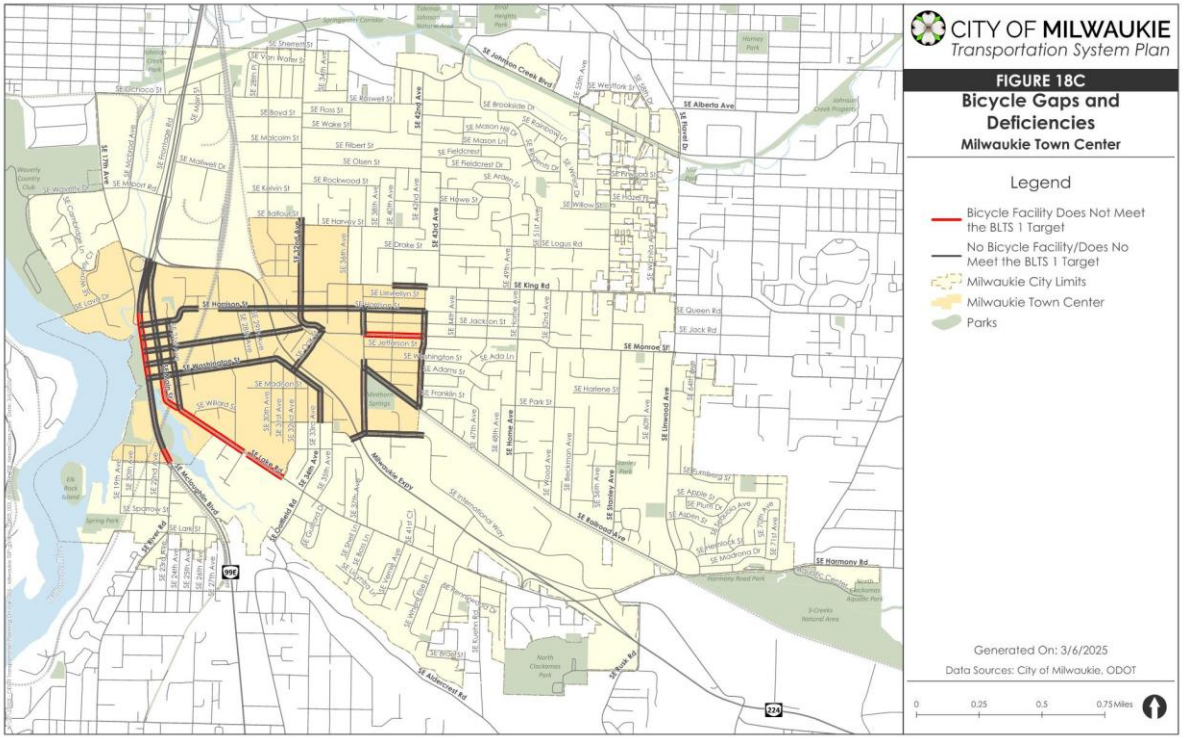
Legend

- 1 Lane
- 2 Lanes
- 3 Lanes
- 4+ Lanes
- Milwaukie City Limits
- Milwaukie Town Center
- Parks

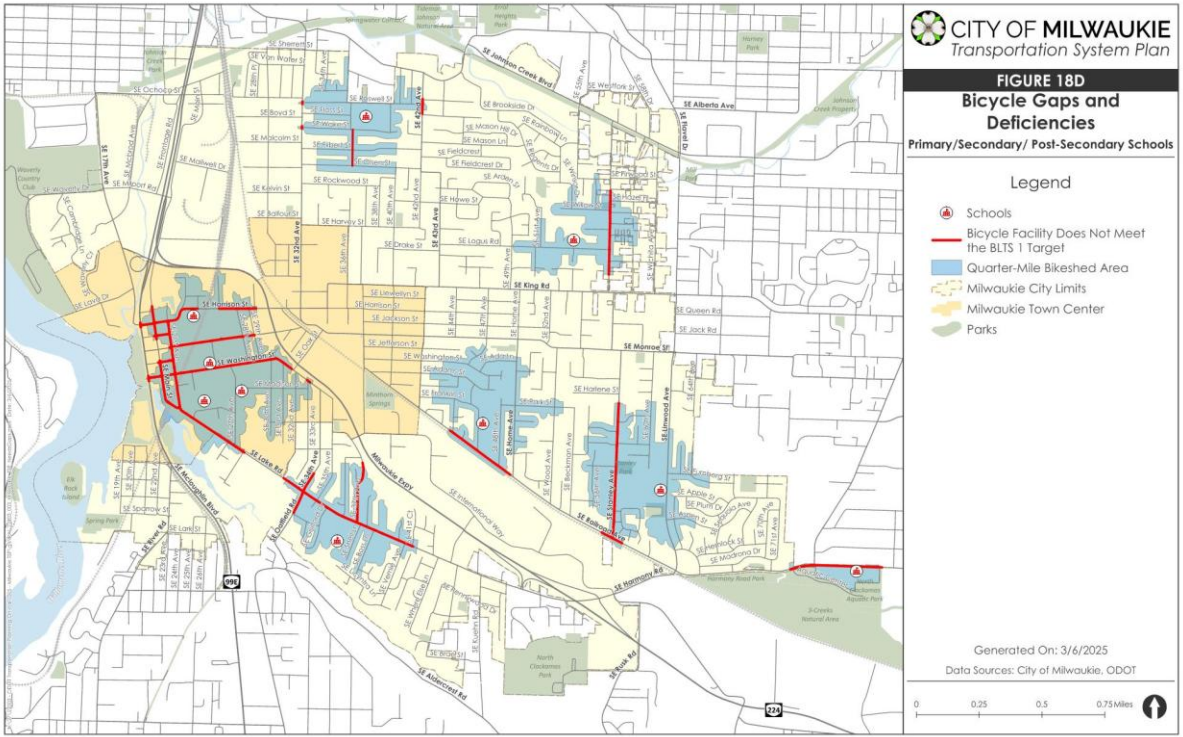
Generated On: 2/4/2025

Data Sources: City of Milwaukie, ODOT

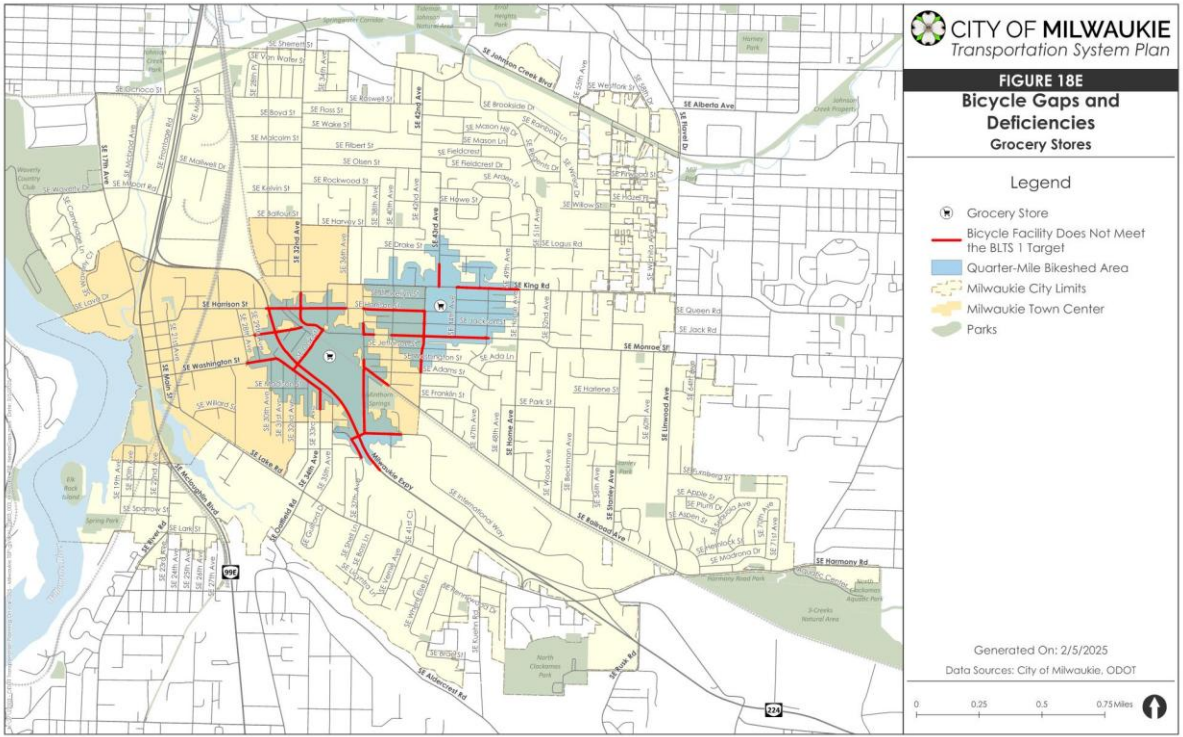
Bike Needs/Gaps – Milwaukie Town Center



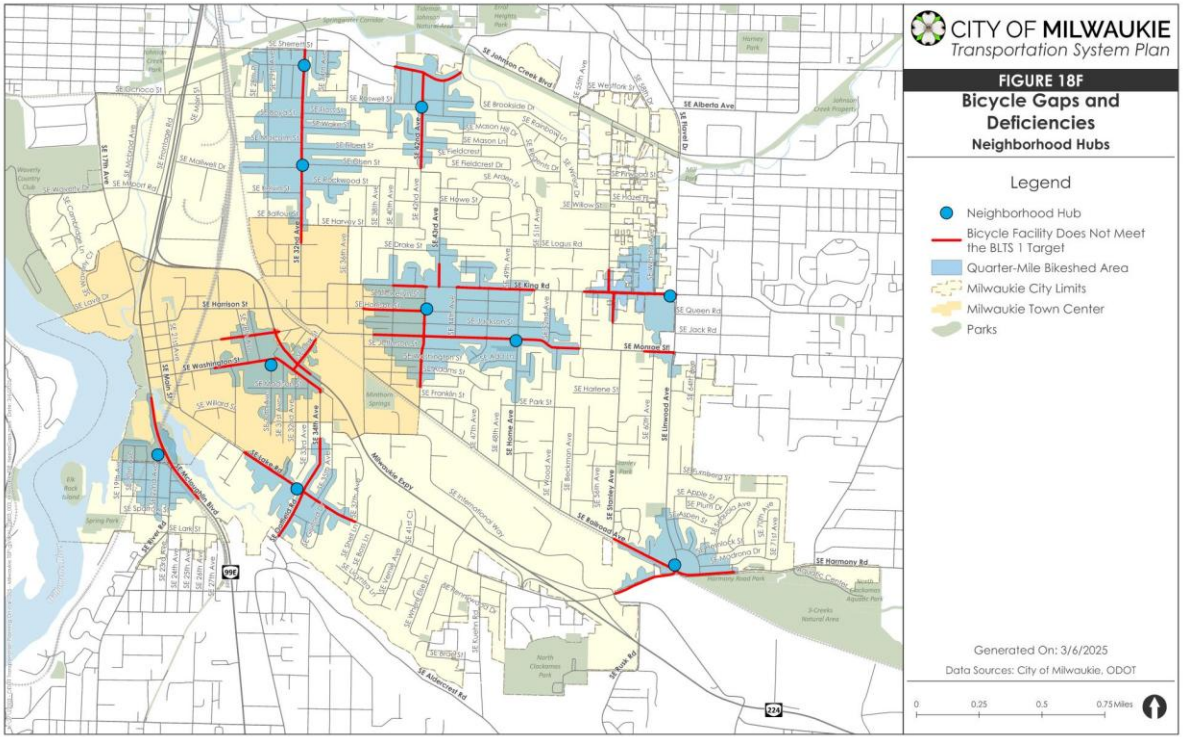
Bike Needs/Gaps - Schools



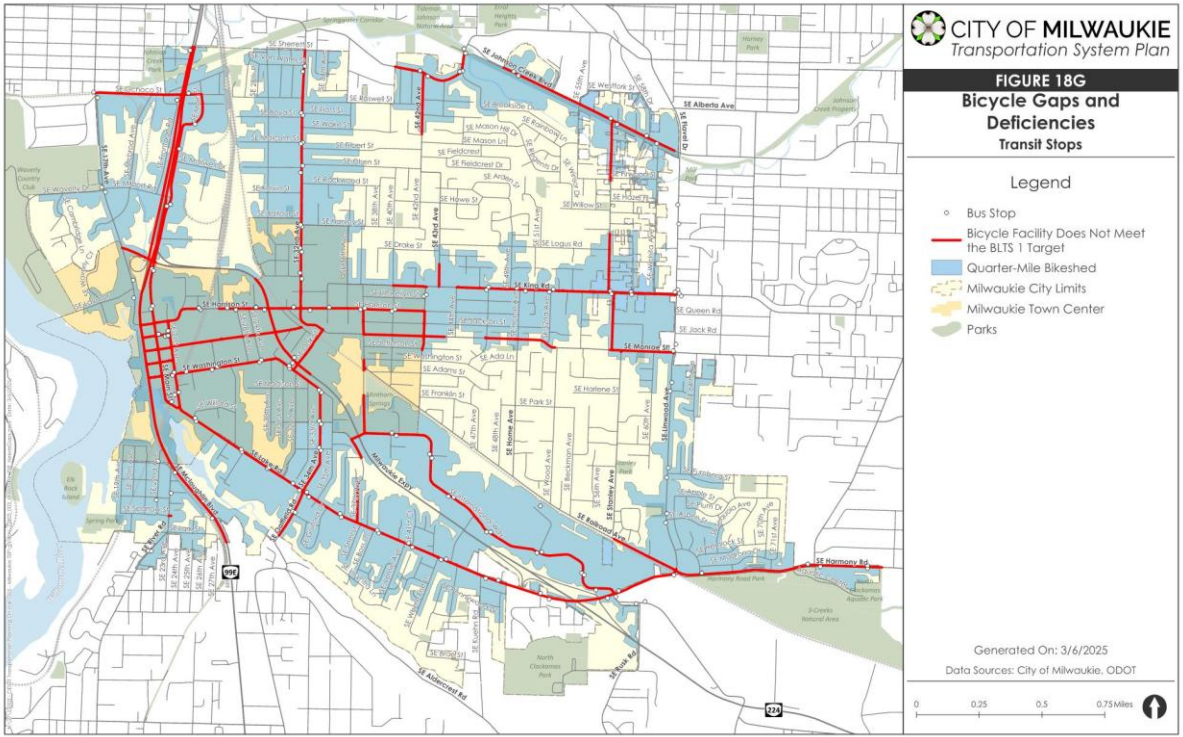
Bike Needs/Gaps – Grocery Stores



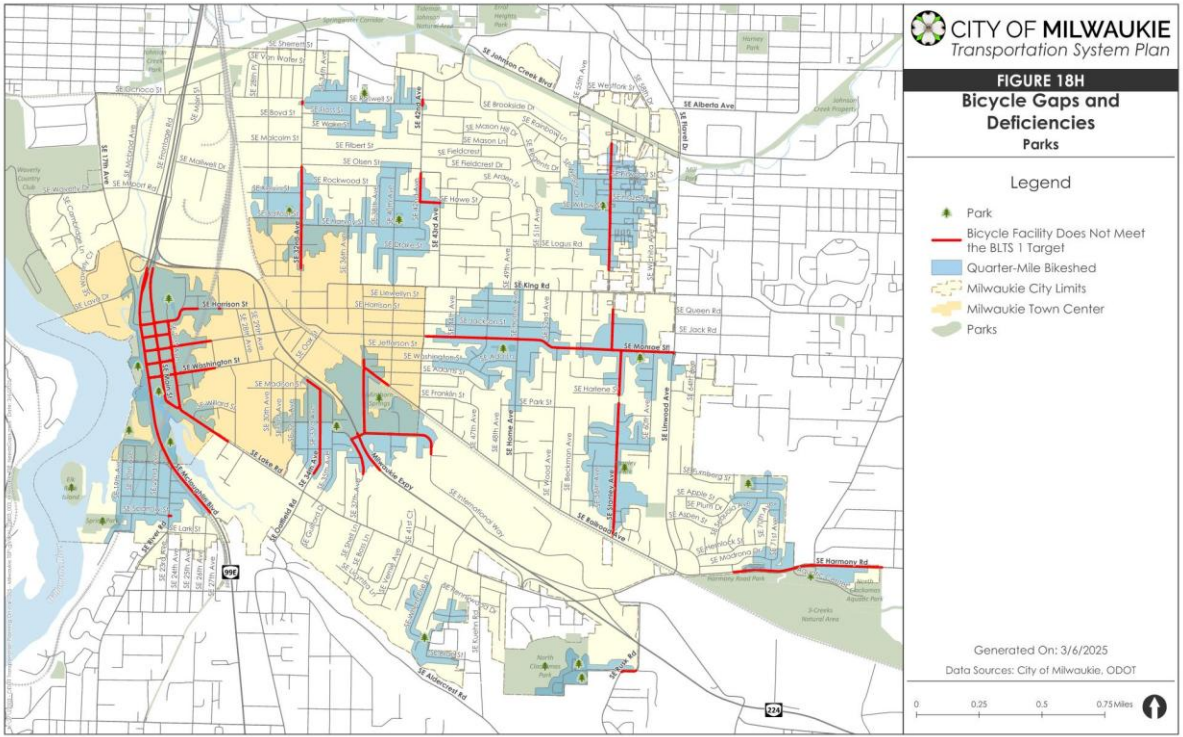
Bike Needs/Gaps – Neighborhood Hubs



Bike Needs/Gaps – Transit Stops



Bike Needs/Gaps – Parks



Bike Needs/Gaps – Underserved Groups