

5. TRANSPORTATION & CIRCULATION ELEMENT

INTRODUCTION

The Growth Management Act (GMA) requires jurisdictions to demonstrate the availability of transportation facilities needed to accommodate the growth in traffic over the next twenty years. King County countywide planning policies (CPP) related to transportation intend to address three overarching goals: supporting growth by focusing on serving the region with a transportation system that furthers the Regional Growth Strategy; focusing on mobility by addressing the full range of travel modes necessary to move people and goods efficiently within the region and beyond, and; maintaining system operations by encompassing the design, maintenance, and operation of the transportation system to provide for safety, efficiency, and sustainability. Since Medina is landlocked and expects minimal population growth in the foreseeable future, transportation issues are largely concerned with the maintenance and function of the existing street system and the impacts to this system from decisions made by larger land uses within as well as outside of the City.

EXISTING CONDITIONS

Medina's street pattern has developed as an extension of the original City plat, which was laid out as a basic grid. The exception to this pattern is the Medina Heights neighborhood, which has been subdivided such that the streets are more curvilinear and tend to follow the prevailing topography. Nearly all streets in Medina are two lanes with one lane in each direction, with one exception.

Provisions for cyclists and pedestrians are made on some collector streets. Private lanes have also been developed and continue to be maintained through private means and/or civil agreements. Regionally oriented transportation facilities consist of a state highway (SR 520), a Washington State Department of Transportation (WSDOT) bridge maintenance facility, and a Park & Ride lot. SR 520 passes through Medina and connects the eastside communities with Seattle via the Evergreen Point Floating Bridge. There is an eastbound off-ramp exiting SR 520 at the north end of 84th Avenue NE along with a westbound on-ramp. A Park & Ride lot is located on the Evergreen Point Road lid and provides pedestrian access to two public transit stops located in the median of SR 520.

Issues relevant to transportation in Medina primarily concern road surface maintenance, storm drainage, sidewalks, and WSDOT's maintenance of the on-ramp to SR 520 Eastbound adjacent to the Evergreen Point Road lid. Traffic volumes are expected to remain relatively constant considering Medina is fully developed and no substantive population increases are expected. There are no current plans or needs for new road construction.

Regional Transportation Facilities

The SR 520 corridor has recently been reconstructed to address regional increased traffic and transit demand. The updated corridor includes a number of design features intended to minimize and mitigate the significant adverse impacts on the surrounding residential uses, public facilities

(e.g., Fairweather Nature Preserve and the Three Points Elementary School), and the environment. The SR 520 also now provides improved traffic conditions between Seattle and the east side of the County, and provides pedestrian and bicycle regional connectivity that runs through Medina and along the SR 520 bridge.

Street Classification

Streets in Medina are classified on a three-tiered hierarchy developed by the Federal Highway Administration. The hierarchy reflects their functional characteristics (See Figure 8). They are described below in descending order.

Minor Arterial

- Interconnects and augments the Urban Principal Arterial system providing service to trips of moderate length at a somewhat lower level of travel mobility than a Principal Arterial.
- Distributes travel to geographic areas smaller than those identified with the higher level system(s).
- Contains facilities which place more emphasis on land access than the higher level systems(s) and offer a lower level of traffic mobility. Such facilities may carry local bus routes and provide intra-community continuity, but ideally should not penetrate identifiable neighborhoods.
- Provides urban connections to rural collector roads.

The spacing of Minor Arterial streets may vary from 1/8 to 1/2 mile in the central business district and 2 to 3 miles in the suburban fringes. The only street in this category is 84th Avenue NE between NE 12th Street and NE 28th Street. This street is a major pathway for traffic between downtown Bellevue and 520 to and from Seattle.

Collector

- Provides both land access service and traffic circulation within residential neighborhoods, commercial and industrial areas.
- Differs from the arterial system in that facilities on the collector system may penetrate residential neighborhoods, distributing trips from the arterials through the area to the ultimate destination.
- Collects traffic from local streets in residential neighborhoods and channels it into the arterial system.

This category includes the following streets:

- Evergreen Point Road between Overlake Drive West and 78th Place NE,
- Overlake Drive between Evergreen Point Road and Lake Washington Boulevard.
- NE 12th Street between Evergreen Point Road and Lake Washington Boulevard,
- NE 24th Street between Evergreen Point Road and 84th Avenue NE, and
- Lake Washington Boulevard between NE 12th Street and the Medina city limit near 851 Lake Washington Boulevard.

Local Access

- Provides direct access to abutting land and access to higher order systems.
- Offers the lowest level of mobility and usually contains no bus routes.
- Service through traffic movement usually is deliberately discouraged.

This category includes all those City of Medina streets that do not fall into the previous two categories.

Level of Service

Level of service (LOS) is generally defined as the ability of a roadway or intersection to carry the volume of traffic. LOS is typically measured using a six-tiered rating system that can be found in the *Highway Capacity Manual*. This system is used in the 2022 King County Regional Transportation Plan, and its use provides a level of consistency between adjacent communities and the County.

At the high end of the scale is a LOS of 'A,' where motorists experience a high level of freedom of operation and there is seldom more than one vehicle waiting at an intersection. The low end of the scale is an LOS of 'F,' which represents a forced flow of traffic and indicates a failure of the roadway or intersection to accommodate traffic volumes. The LOS ratings between 'A' and 'F' represent increasing degrees of traffic volumes relative to roadway configuration and waiting times at intersections. LOS ratings of 'D' and above indicate that there is reserve capacity on a roadway or at an intersection. For purposes of this Plan, the City adopts an LOS rating of 'C' for its arterials and an LOS rating of 'D' for intersections.

Adjacent cities employ criteria nearly identical to Medina's for LOS standards.

The Puget Sound Regional Council Executive Board has adopted level of service (LOS) standards for regionally significant state highways in the central Puget Sound region. Under these standards, SR 520 is classified as a Teir 1 regionally significant highway. For the purposes of this Plan, the City adopts an LOS rating of 'E/mitigated' for SR 520 meaning that congestion should be mitigated (such as transit) when p.m. peak hour LOS falls below LOS 'E'.

Medina residents currently enjoy relatively little traffic on internal streets due to the City's location, configuration, and land use mix. There are no east-west streets that offer through-routes for regional traffic except for SR 520. Since there is direct connection off of SR 520 to the internal street grid, there are few impacts on neighborhood streets from motorists seeking alternative routes, though Medina residents have experienced increased traffic associated with motorists from other neighboring communities navigating through Medina's internal street grid to access SR 520 and avoid more congested areas to access the highway elsewhere.

The average weekday traffic volumes for the four most traveled streets in Medina are estimated based on the *Institute of Traffic Engineers Trip Generation Tables* since there are no traffic counts on record for internal City streets. They are as follows (Table 7):

Table 7. Average Weekday Traffic Volumes

Average Weekday Traffic Volumes	
Road	Average Vehicles per day
Evergreen Point Road	976-2,466
NE 24th Street	2,402
NE 12th Street	2,402
Lake Washington Boulevard	7,791

Table 7 - Average Weekday Traffic Volumes

Major trip generators in Medina include the Overlake Golf & Country Club, Medina Elementary School, Three Points Elementary School, St. Thomas School, the Wells-Medina Nursery, and traffic related to personal services or special events for, and at, individual residences. Funerals, weddings, and church functions at the St. Thomas Church (located on the corner of NE 12th Street and 84th Avenue NE) affect the area within a radius of about three blocks. These occur during the regular work week and on weekends. Traffic associated with St. Thomas School impacts the functioning of the adjacent intersection as motorists tend to queue up just past the intersection as they access the parking/pick-up area at St. Thomas Church (which serves the St. Thomas School) and then make left turns out of this area to once again pass through the intersection. This contributes to congestion at this intersection during peak travel hours. To mitigate this congestion, recent efforts have been made to queue vehicles accessing St. Thomas on the shoulder of the road along 84th Ave NE.

Many parents transport their children to and from the Medina Elementary and Three Points Elementary Schools and use neighborhood streets for access. Residents of the neighborhood just south of Three Points Elementary School have expressed concern over the number of vehicles that are using neighborhood streets to access the school. With grant funding, the City installed new sidewalks and a load/unload area in front of Medina Elementary to improve safety and reduce congestion.

Other than construction-related trips, Overlake Golf & Country Club accounts for the largest number of trips originating outside of the City. Traffic volumes fluctuate seasonally, between weekdays and weekends, and with Club-sponsored special events. The entrance to the Country Club is at the end of NE 16th Street off of Evergreen Point Road. It has been estimated that the Country Club accounts for 12% to 16% of the average daily traffic on Evergreen Point Road depending on the season.

The traffic along 84th Avenue NE between NE 12th Street and SR 520 is likely to increase during peak hours, special events, or bad weather due to increases in some regional traffic using this route as a connection between SR 520 and downtown Bellevue. This may cause increased delays at the intersections at NE 12th Street, NE 24th Street, and Points Drive (SR 520 access). A traffic study conducted by the City of Medina that looked at the effects of the SR 520 on-ramp at 84th Avenue NE showed no significant change in traffic; the City may wish to fund a new study to understand how traffic trends are evolving in the community.

There have been several “mega-homes” built in Medina over the last 35 years. This has increased traffic both during construction and upon completion. These larger homes tend to require more staff for daily operations, including security teams. Parties, outdoor art displays, and other functions are regular occurrences on these properties which create spikes in traffic flow on Medina’s neighborhood and arterial streets.

Public Transit

There is one King County Metro Transit bus route that provides direct service to City residents via 84th Avenue NE (route 271, which is being replaced by a new route: route 249). Figure 8 shows the location of the transit stops. Route 249 will run north-south along 84th Avenue NE, connecting downtown Bellevue to Bellevue’s Spring District Station through Beaux Arts, Medina, Clyde Hill, and south Kirkland. While route 271 provided direct access from Medina to Seattle, Metro Transit now urges transit riders to use route 249 and transfer to route 270 at the Yarrow Point freeway station, which similarly provides public transit into Seattle’s University District. Recognizing the value that its only regional bus route provides to the community, Medina should work to protect its limited public transportation offering from being removed or reduced in service.

The Evergreen Point Freeway Station at Evergreen Point Road and SR 520 provides direct access to 12 bus routes, including three Sound Transit routes and one Snohomish County Community Transit Route. The state Park & Ride, located on the Evergreen Point lid above SR 520, includes parking for approximately 50 vehicles. Both the eastbound and westbound stops are accessible from the Evergreen Point Road lid by pedestrian pathways.

As part of its Strategic Plan for Public Transportation 2021-2031, King County Metro revised its service guidelines for the regional transit system. These guidelines prioritize the need for transit investments based on crowding, reliability, and growth (in that order). Route 271 (and its replacing route 249), which serves Medina along 84th Avenue NE, and the SR 520 corridor supports the highest level of all-day service. All but the southwestern portions of Medina are located within one-half mile of a transit stop on one of these two corridors, and all residences in the City are within five miles of the Evergreen Point Park & Ride.

Pedestrians and Bicycles

A pedestrian walkway system should be designed to provide residents with safe and convenient access to public facilities, services, and recreational amenities. This includes getting children safely to and from schools and parks and providing good pedestrian access to transit uses at the Evergreen Point Station and along the 84th Avenue NE/NE 12th Street/Lake Washington Boulevard corridor, supporting the potential for enhancing the walkability of Medina.

Since Medina was platted with large lots and developed at a slow, incremental pace, most streets were constructed without curb, gutter or sidewalks. Although residents have embraced the informal, natural setting that these streets provide, key streets have been retrofitted with sidewalks and pathways as more homes have been built and school enrollments have increased.

Sidewalks have been installed along portions of Evergreen Point Road, 77th Avenue NE, 79th Avenue NE, 81st Avenue NE, Overlake Drive West, NE 10th Street, NE 12th Street, NE 16th Street,

NE 21st Street, NE 24th Street, Lake Washington Boulevard, NE 8th Street, 82nd Ave NE, 80th Ave NE, and 84th Avenue NE (see Figure 9). On all other streets, pedestrians must walk in the street or on the street shoulder.

Medina, Clyde Hill, Hunts Point, and Yarrow Point have created a walking path, referred to as the Points Loop Trail. It utilizes the asphalt-paved path that is adjacent to the SR 520 roadway, and meanders through Medina and Clyde Hill (see Figure 9 for route through Medina). This trail has scenic and recreational attributes that, it is hoped, will be enhanced as time goes by. A key link in this route is the Points Loop Trail (formerly called the “Indian Trail”) that occupies the portions of 77th Avenue NE with unimproved right-of-way. Future efforts to enhance connectivity between the Points Loop Trail and other regional trails should be encouraged.

Popular City cycling routes include Lake Washington Boulevard, 84th Avenue NE, Overlake Drives East and West, NE 12th Street, Evergreen Point Road, NE 24th Street, and the SR 520 pathway due to their regional connectivity and scenic qualities. The SR 520 trail features a separate regional trail owned and maintained by WSDOT, which crosses Evergreen Point Road at grade in the city of Medina. Of Medina streets, only 84th Avenue NE features bike lanes. Cyclists share the road with vehicles (and sometimes pedestrians) on Lake Washington Boulevard, Overlake Drives East and West, NE 12th Street, and Evergreen Point Road. The SR 520 floating bridge replacement features a separate bicycle path. The path connects to the Points Loop Trail and facilitates bicycle travel from Medina to Seattle and other regional trails across Lake Washington.

Cyclists share the roadway with vehicles on all other streets. Most of these streets have minimal traffic and low travel speeds, providing conditions that can be appealing to cyclists who choose to ride their bicycles on the street. A noticeable increase in the number of cyclists on the Medina street system is further congesting the use of these streets. The City should encourage the use of human-powered bicycles on designated biking paths. The City should encourage the riders of electric-powered bikes (“e-bikes”) to operate in a safe manner when using City streets.

Nearby Air Facilities

Nearby Seattle-Tacoma International Airport, King County International Airport – Boeing Field, and Seattle Paine Field International Airport provide air transportation for Medina residents.

Puget Sound Air Quality Attainment Zone

The City of Medina is located within the Puget Sound Air Quality Attainment Zone specified in the Washington State Clean Air Conformity Act. This Act is intended to implement the goals and requirements of the Federal Clean Air Act Amendments. Medina is committed to participating in the regional efforts to attain reduction in the criteria pollutants specified in the Act.

TRANSPORTATION AND CIRCULATION PLAN

Consistent with the GMA, Medina’s transportation plan strives for a balanced transportation system coordinated with the land use plan. Since Medina is landlocked and expects minimal population growth in the foreseeable future, the transportation plan largely concerns maintenance

and function of the existing street system. The current Six-Year Capital Improvement Plan (see Appendix B) includes the Transportation Improvement Plan and identifies a list of projects the City will undertake to improve selected roadways. The improvements involve a combination of surface improvements, sidewalks, and storm drainage improvements. Subsequent improvements to Medina's streets should continue to focus on maintenance, storm drainage improvements (see Figure 12), and pedestrian improvements (see Non-Motorized Facilities below and Figure 9 for proposed improvements). All proposed improvements should incorporate recommendations in the Community Design Element. New transportation projects, or improvements or maintenance to existing projects, undertaken by regional transportation agencies should consider and mitigate for all potential impacts to neighboring communities, including air quality, noise, odor, and glare impacts.

Public Transit

The continuation of public transportation by King County Metro Transit is essential to a balanced circulation system for the City. The Evergreen Point Park & Ride is an important transit resource and should be maintained. The City will continue to encourage transit use by prioritizing those improvements that enhance multimodal access to transit facilities. The bus routes should continue to utilize arterial streets. The location of transit stops should be periodically reviewed by the City Engineer and Planner to assure consistency with street design standards.

Non-Motorized Facilities

The City's Six-Year Transportation Improvement Plan includes non-motorized transportation improvements, which is updated every year and submitted to the state. Improvement projects typically focus on ADA accessibility and sidewalk improvements.

Several other sidewalk/trail improvements may be considered to enhance pedestrian access to schools, parks, transit, recreation and fitness, community facilities, and services, creating a more "Walkable Medina."

Where sidewalks or trails are installed, they should be designed and landscaped in accordance with the City's Community Design Element, and public input.

Signage for the Points Loop Trail should be maintained and, where appropriate, enhanced to educate the public and encourage use of the trail.

Financing

The GMA requires that transportation related provisions of the comprehensive plan address the financing of local transportation systems. Since incorporation, the City's built-out nature and stable land uses means only minimal fluctuations in population have occurred, requiring only minor modifications to the City's transportation system. The result is that financing needs for transportation are principally for maintenance of the existing system and adding improvements when new funding opportunities arise.

The City uses Real Estate Excise Tax, Motor Fuel Tax, general revenue taxes and grants to fund maintenance activity. In 2023, the City collected \$1,279,832 in Real Estate Excise Tax and \$57,760 in Motor Fuel Tax to fund \$1,270,113¹² worth of transportation system maintenance and improvement projects. The City does not anticipate a revenue shortfall in the next 20 years to fund maintenance of its road network. In the event revenues in any given year are short, the City has the options of adding new sources of revenue, increasing the amount of revenue from existing sources, or reducing or deferring proposed projects.

The City may explore a requirement for payment of traffic impact fees by new development projects, and may engage a traffic consultant or otherwise participate in a traffic study to inform the applicability and extent of imposing these fees.

GOALS

- T-G1 To maintain existing roadway surfaces.
- T-G2 To enhance and promote equitable pedestrian and bicycle access throughout the City.
- T-G3 To minimize transportation-related impacts of public facilities and uses on adjacent residential uses.
- T-G4 To minimize impacts of regional transportation facilities on adjacent residential uses and the City as a whole.
- T-G5 To maintain and enhance equitable access to public transportation, addressing the needs of and promoting access to all members of the community regardless of socioeconomic status, mobility, or ethnicity.
- T-G6 To maintain and enhance the informal landscaped character of the City's public streets.
- T-G7 To maintain and/or improve local and regional air quality.
- T-G8 To enhance the safety and minimize the impacts of school pickups, drop-offs, and construction traffic on the transportation network.
- T-G9 To increase pedestrian safety and explore traffic calming techniques to improve safety of all community members using the transportation network.

POLICIES

- T-P1 The City should provide street repairs as necessary to maintain safe driving and biking surfaces and should encourage the use of bikes on bike-specific infrastructure rather than on public streets.
- T-P2 The City should prioritize equitable pedestrian improvements that provide safe and convenient network of pedestrian access, accessible to users of all ages and abilities, throughout the City. These improvements should include access to and from schools, parks, transit, and community facilities.

¹² Transportation system maintenance and improvement projects summed here include: street fund labor, operating supplies, professional services (street), storm drain maintenance, street irrigation utilities, replacement of plow truck, street overlays, storm sewer improvements, and sidewalk improvements.

- T-P2.5 Pedestrian and nonmotorized improvements should be designed and prioritized to improve pedestrian and nonmotorized safety, contributing to the state’s goal of zero deaths and serious injuries, and overall encouraging physical activity.
- T-P3 The City should seek to provide pedestrian improvements in conjunction with stormwater drainage improvements, when desirable.
- T-P4 Where sidewalks, trails or pathways are installed, they should be designed and landscaped in accordance with the Community Design Element, and public input in order to maintain the City’s natural and informal character.
- T-P5 The City should seek to maintain and enhance portions of the Points Loop Trail within the City.
- T-P6 The City should implement transportation improvements as needed to maintain adopted levels of service for local streets, and to implement the priorities and policies of VISION 2050 and Medina’s Comprehensive Plan, through the implementation of a Six-Year Transportation Improvement Plan (TIP). The TIP should be periodically updated to reflect the current needs of the community; these needs should reflect those of the entire community, regardless of a person’s socioeconomic status or those members of the community who may have been disproportionately affected by past transportation-related decisions. Prior to implementing major roadway capacity expansion projects that may be recommended in the TIP, the City should determine if capacity needs can be met from investments in transportation system operations and management, pricing programs, transportation demand management, public transportation, and system management activities that improve the efficiency of the current transportation system.
- T-P7 The City should encourage the maintenance of a bicycle/pedestrian path to connect SR 520 and the Evergreen Point Bridge, enhancing key non-motorized routes.
- T-P8 The City should work with WSDOT, city residents and other groups, stakeholders, and agencies to develop mitigation measures that may be implemented as part of any SR 520 improvement/expansion project. The City should seek an overall reduction of impacts, including measures such as:
- Noise reduction measures,
 - Landscaped lids and open space,
 - Landscaped buffers,
 - Protection of Fairweather Nature Preserve and Park,
 - Enhanced motorized and non-motorized local connectivity,
 - Improved safety of at-grade bicycle crossings,
 - Water and air quality improvements, and
 - Overall environmental protection.
- T-P9 The City should continue to be involved in regional transportation discussions and coordination to increase the share of trips made countywide by modes other than driving along through a coordinated approach to regional land use planning and should focus its improvement or siting of transit stations along major corridors to support regional connection. Collaboration with the region should include consideration of freight mobility strategies that strengthen King County’s role as a major regional

freight distribution hub and an international trade gateway.

- T-P10 The overall efficiency of the SR 520 corridor should be increased by emphasizing its use for public transportation and by providing incentives for multiple occupancy in private vehicles, use of electric or alternative fuel vehicles, and, at a minimum, retaining the current number of transit stops. To maintain or improve the SR 520 corridor, the City should pursue and advocate for new, innovative, sustainable funding methods, which could include: user fees, tolls, or other pricing mechanisms.
- T-P11 The City should seek to maintain access to the Park & Ride lot.
- T-P12 The City should continue to work with Puget Sound Partnership, tribal governments, state, regional, and local agencies and jurisdictions, and other related entities to prioritize regional transit services and pedestrian safety in areas where existing densities support transit ridership, which is an inherent component to addressing and mitigating for those transportation issues affecting air quality attainment and light and noise pollution.
- T-P13 The City should promote public education efforts aimed at reducing transportation related activities that increase air pollution, to include educating the community on transportation alternatives to single-occupancy vehicle travel and transportation options that use alternative fuel sources.
- T-P14 The City should consider the air quality implications of new growth and development when making comprehensive plan and regulatory changes. When planning highway, street, and utility line extensions or revisions, the City should consider current state and federal air quality standards and possible increases in emissions as a result of such extensions or revisions and should also consider the need for such improvements to be accessible to all residents of the region regardless of race, social, or economic status. Harmful environmental pollutants and hazards that can result from new growth and development should be prevented, mitigated, or remediated, including light, air, noise, soil, and structural hazards. This is particularly important where these pollutants and hazards have contributed to racialized health or environmental disparities.
- T-P15 The City should integrate transit facilities, services, and active transportation infrastructure with public spaces and private developments to create safe and inviting waiting and transfer environments to encourage transit ridership countywide.
- T-P16 The City should prioritize funding transportation investments that enhance multimodal mobility and safety, equity, and climate change goals.
- T-P17 The City should develop station area plans for mobility hubs based on community engagement. Plans should reflect the unique characteristics, local vision for each station area including transit-supportive land uses, transit rights-of-way, stations and related facilities, multimodal linkages, safety improvements, place-making elements and minimize displacement.
- T-P18 The City should promote the expanded use of alternative fuel and zero emission vehicles by the general public with measures such as converting transit, public, and private fleets; applying incentive programs; and providing for electric vehicle charging stations.

- T-P19 The City should plan and develop a countywide transportation system that supports the connection between land use and transportation, and essential travel that reduces greenhouse gas emissions by advancing strategies that shorten trip length or replace vehicle trips to reduce vehicle miles traveled. Apply technologies, programs, and other strategies (e.g., intelligent transportation systems (ITS), first and last mile connections) to optimize the use of existing infrastructure and support equity; improve mobility; and reduce congestion, vehicle miles traveled, and greenhouse gas emissions.
- T-P20 The City should seek traffic consultation to explore the application of appropriate traffic calming techniques that would improve the safety of Medina residents and visitors using its transportation network and should prioritize implementing recommended techniques.