SNOHOMISH COUNTY
Public Works

ENGINEER'S REPORT

35th Avenue SE Ultimate Capacity Designation

INTRODUCTION

The 35th Avenue SE corridor serves one of the fastest growing areas of Snohomish County. This arterial provides an important commuter connection to State Routes 524 and 527, as well as to the cities of Mill Creek and Bothell.

Snohomish County has invested nearly $33M in state and federal grants, developer mitigation fees, and local tax dollars over the past ten years to increase capacity, reduce intersection delays, and build out the bicycle and pedestrian network on the 35th Avenue SE corridor as identified in the Transportation Element (TE) in the Comprehensive Plan. Phase 1 of the county's 35th Avenue SE widening project was completed in the year 2019. With the completion of Phase 2 in the year 2022, the full length of the 35th Avenue SE corridor will have been widened to the county's three-lane urban standard. In addition, the 43rd Avenue SE improvement project, which, after connecting to Sunset Road, will complete a parallel alternative to 35th Avenue SE and enhance access and traffic circulation in the area between SR 524 and 156th Street SE, as shown in Exhibit 1 below, is anticipated to begin construction in the next few years, pending available funding.

The Growth Management Act (GMA) requires local jurisdictions to adopt level of service standards and concurrency for transportation. These are adopted in the Transportation Element of the Comprehensive Plan and development regulations. The adopted level of service (LOS) standard for 35th Avenue SE is LOS E. Land development projects cannot be approved if they will impact an arterial unit where delay will exceed the adopted level of service standard, unless improvements are programmed that will remedy the LOS deficiency within six years. Larger developments, those generating over 50 peak hour trips (approximately 50 homes), are evaluated based on a projected future level of service that considers other approved development projects.

To monitor arterials, each arterial is assigned an arterial unit number for identification and tracking. An arterial unit is a road, or portion of a road or a system of roads, used for measuring LOS and making concurrency determinations. The Department of Public Works (DPW) defines the limits of each arterial unit according to code and DPW rules. Many roadway corridors are several miles long and if they weren't broken up into smaller units for determining concurrency, then a development on one end of a long corridor could cause the entire corridor to be determined to be non-concurrent, even though the trips added to the roadway by the development only affect a shorter portion of the corridor.

The 35th Avenue SE arterial consists of arterial units 204, 207/336, and 337/420 as shown in Exhibit 2 below, Public Works has measured the existing LOS and projected future LOS on these arterial units. All these units (separately or combined into one corridor) will fail the adopted LOS E standard after completion of the Phase 2 widening project in 2022, and when traffic volumes exceed pre-Covid levels and the corridor no longer meets concurrency standards, it will fall into arrears and stop development.

As a growth management tool, ultimate capacity is an appropriate and recommended mechanism for continuing to advance regional growth priorities contained in the GMA Land Use Plan, even though an arterial exceeds the adopted LOS standard, while retaining the flexibility necessary to address the area's evolving multimodal transportation needs through transportation alternatives.

Chapter 30.66B.110 of Snohomish County Code provides that a determination by the county council of ultimate capacity will be initiated by an engineer's report and recommendation from the Public Works Director. The council, then, by motion following a public hearing, may designate the road as ultimate capacity.

SCC 30.66B.110(1)(a) CRITERIA

1. **Capacity Improvements to Date**

   Phases 1 and 2 of the county's 35th Avenue SE improvements, discussed above, are identified in the adopted 2015 TE of the Comprehensive Plan as necessary to support growth and development based on future land use. The TE of the 1995 comprehensive plan specified the corridor to be built to urban three lane standards with curb, gutter, sidewalk, planter strips, and bike lanes and the project was carried forward to the 2015 plan. Most of the curb, gutter and sidewalk along the corridor has been constructed by developers according to the county's frontage improvement standards, establishing the pavement width, right of way (ROW) line and building setbacks. Phase 1 of the county's improvements was completed in 2019 and Phase 2, currently under construction, will be completed in 2022.

   In the last 10 years, the county has invested nearly $33M in state and federal grants, developer mitigation fees, and local tax dollars to fill in the gaps in the sidewalk and widen the road to add turn lanes and intersection improvements to implement the improvements for the corridor identified in the TE. To widen the road from three to five lanes to add even more capacity, would mean undoing decades of work to build out the corridor, cost more than $100M, require the demolition of dozens of homes, and encroach on several critical areas.

   Instead of widening the road to add general purpose lanes, additional mobility for the travelling public can be gained through access management, additional road improvements in the surrounding area, better transportation system management techniques and technologies, travel demand management, and safety improvements.

2. **Access Management Plan & Improvements**

   The corridor was planned - and development implemented - such that developments take access to the corridor via public or private roads and so there are only approximately 30 individual access point driveways on either side of the road along the entire 3.4-mile corridor from SR 524 to Seattle Hill Road. Most of the individual driveways taking direct access from 35th Avenue SE are associated with homes that were built many decades ago along the west side of the south portion of the corridor between SR 524 and the North Creek High School. The county studied and implemented access management around the high school and around York Rd/SR 524 and at other locations as part of the Phase 1 and Phase 2 corridor improvements. As redevelopment occurs there will be opportunities to combine individual driveways along 35th Avenue SE and further reduce the number of direct access points.

   The continuous two-way left-turn lane along the corridor facilitates access to and from the private and public roads and driveways along the corridor and will support the addition of future growth on land not fully developed. There isn't much more the county can do to improve or manage access other than continue to implement county access standards as the remaining development occurs and combine individual driveways as opportunities arise.

3. **Additional Road Improvements**

   Because it would be excessively expensive and disruptive to existing homeowners to widen the 35th Avenue SE corridor to five lanes to meet projected traffic demands, the county has identified additional system improvements in the TE that would improve mobility in the 35th Avenue SE vicinity, as shown in Exhibit 1 below. A travel alternative and some additional north-south capacity in the 35th Avenue SE area will come from completion of the parallel 43rd Avenue SE corridor, which is programmed for design, ROW acquisition and construction in the county's Transportation Improvement Program (TIP)

pending the identification of construction funding. Additional capacity on 180th Street SE and 228th Street SE complement the improvements on 35th Avenue SE and 43rd Avenue SE. Possible future projects shown in the Snohomish County Comprehensive Plan Arterial Circulation Map include 51st Avenue SE, which could create another parallel corridor to support growth, and an extension of 43rd Avenue SE south past SR 524 to connect with 45th Avenue SE, which would improve the attractiveness of the corridor as a travel alternative to 35th.

4. **Transportation System Management**

Increases in transportation capacity can be gained from means other than road widening and the addition of travel lanes. For example, the addition of turn lanes at existing signals could increase capacity.

Capacity can also be increased through implementation of signal optimization, coordination, timing improvements and signal system improvements such as the adaptive signal systems the county has installed and is testing on 164th Street SW/SE and 128th Street SW/Airport Road. The county will conduct a preliminary study within the next two years after completion of roadway capacity improvements on 35th Avenue SE to determine if an adaptive signal system would be appropriate for the south portion of the corridor between 180th Street SE and SR 524.

Further increases in capacity can be gained through careful coordination with WSDOT for those signals owned and operated by the state as well as through coordination with other local jurisdictions who own and operate signals that influence traffic along the corridor.

The county will continue to monitor and improve capacity through transportation system management improvements as opportunities arise. Signal timing and coordination with WSDOT and other jurisdictions are ongoing efforts and will continue on an annual basis with signal timing updates when appropriate.

5. **Travel Demand Management (TDM)**

Although 35th Avenue SE is not currently in Community Transit's service area, Community Transit has long term plans to add high frequency transit service to the corridor. The county is committed to continuing to collaborate and explore with Community Transit innovative non-transit options (vanpool, micro-transit, etc.), to serve the needs of the community in the future.

The 35th Avenue SE Phase 1 and Phase 2 projects provide non-motorized facilities which would support transit service expansion in the area. Development frontage improvements along with these county projects have created a sidewalk network that is 99% complete within ¼ of a mile on either side of 35th Avenue SE between SR 524 and Seattle Hill Road. This distance is the maximum most people are willing to walk to catch a bus. When transit is introduced to the corridor the non-motorized infrastructure will be in place to support access to the transit system.

6. **Safety Issues**

The 35th Avenue SE corridor is included in the countywide Road Safety Plan and shows up on the High Injury Network (HIN) list, which is a list of the 7% of corridors in urban areas that experience 57% of all serious injury or fatal collisions on the county's network based on historic frequency. The list serves as an important tool in project prioritization, education, and enforcement efforts.

The access management, signal, and non-motorized improvements that have been implemented with Phase 1 and Phase 2 of construction will reduce many of the collisions, but it will take at least three years after construction to reveal any new trends. Although the Road Safety Plan was completed after the design of Phase 1 and Phase 2 was completed, and before the corridor was completely widened,

the county will continue to monitor and implement safety improvements as issues are identified, to reduce serious injury and fatal collisions on the corridor.

Implementation of the Safety Plan includes coordination with other stakeholders and organizations like local school districts and law enforcement to coordinate and implement non-engineering solutions such as education and enforcement to complement the engineering solutions to reduce serious injuries and fatalities. The county will also work with the fire stations along and adjacent to the corridor to address access management concerns that may arise.

SCC 30.66B.110(1)(d) GMA OBJECTIVES

The designation of ultimate capacity on 35th Avenue SE will help the county meet critical Growth Management Act (GMA) goals contained in RCW 36.70A.020. The applicable goals area listed below, with the state code citation, and an explanation of how ultimate capacity will help the county meet those goals.

RCW 36.70A.020 (1) Urban growth. Encourage development in urban areas where adequate public facilities and services exist or can be provided in an efficient manner.

The designation of 35th Avenue SE as at ultimate capacity will help the county meet the requirements of the Regional Growth Strategy (RGS) contained in Vision 2050, the Puget Sound Regional Council's (PSRC) recently adopted plan for regional growth. The RGS categorizes the area of the Snohomish County adjacent to 35th Avenue SE as a High-Capacity Transit (HCT) Community. HCT Communities are areas that are connected to the current or planned regional high-capacity transit system. The RGS states that 50% of new population growth, 210,000 individuals, need to be accommodated within these HCT Communities.

Additionally, the 35th Avenue SE corridor has been designated as a transit emphasis corridor by Community Transit in their long-range plan and by Snohomish County in the Comprehensive Plan. A transit emphasis corridor is an arterial road or highway where high levels of transit service already exist or is likely to exist in the future that are intended to serve as a framework for developing a transit market through the encouragement of transit supportive levels of residential and employment development.

Without a designation of ultimate capacity on this arterial, the adopted LOS standards and concurrency requirements will prevent some of the land development projects over a wide area bounded by SR 96, SR 527, SR 9, and SR 524 that will be necessary to fully implement this regional growth strategy and realize growth patterns needed to develop a transit market.

RCW 36.70A.020 (2) Reduce sprawl. Reduce the conversion of undeveloped land into sprawling, low-density development.

A designation of ultimate capacity on 35th Avenue SE will help the county meet the RGS goals of locating 50% of new growth within HCT Communities and reduce sprawl. PSRC's Vision 2050 designated HCT communities to encourage new development in areas that can be served by high quality transit. The long-term plan for this community is that it will eventually be served by bus rapid transit (BRT) and other forms of frequent transit. The area served by this arterial include transit supportive land use designations such as urban village and urban medium density residential. Without a designation of ultimate capacity on this arterial, concurrency requirements will likely prevent the full development of future transit-supportive land uses, possibly forcing growth into lower density areas where there is no planned transit or even outside the urban growth area.

RCW 36.70A.020 (3) Transportation. Encourage efficient multimodal transportation systems that are based on regional priorities and coordinated with county and city comprehensive plans.

Snohomish County designed and constructed the improvements to 35th Avenue SE with sidewalks and bicycle lanes along the entirety of the roadway. PSRC has designated this area an HCT community because of future plans for BRT and other high-quality transit. In addition, Community Transit has designated the corridor as a transit emphasis corridor, which includes planning for future high-quality transit service along the corridor and working with communities to develop transit markets after the inclusion of this corridor in the Community Transit service area.

RCW 36.70A.020 (4) Housing. Encourage the availability of affordable housing to all economic segments of the population of this state, promote a variety of residential densities and housing types, and encourage preservation of existing housing stock.

Designation of 35th Avenue SE as at ultimate capacity will allow land development containing a variety of housing types to continue, providing the densities necessary to support high-capacity transit. The future land uses identified for the area served by this arterial include urban village and urban medium density residential. These designations allow for a variety of housing types and densities including the "missing middle" types of development. An example of this is the Cathcart West Urban Village located toward the north end of this corridor, which will accommodate a significant number of units and will allow for a wide variety of housing types.

RCW 36.70A.020 (7) Permits. Applications for both state and local government permits should be processed in a timely and fair manner to ensure predictability.

The determination of ultimate capacity for this arterial will streamline concurrency determinations for developments adding new trips to the arterial. Land development projects that will generate new traffic on 35th Avenue SE will be allowed to proceed, and through the permitting process will pay transportation impact fees to fund parallel alternatives such as 43rd Avenue SE and connecting roads such as 180th Street SE.

RCW 36.70A.020 (12) Public facilities and services. Ensure that those public facilities and services necessary to support development shall be adequate to serve the development at the time the development is available for occupancy and use without decreasing current service levels below locally established minimum standards.

With an ultimate capacity designation all developments impacting 35th Avenue SE would still be subject to concurrency and would still be required to meet locally established service levels consistent with Goal 12 of GMA. The Growth Management Act requires local jurisdictions to adopt LOS standards and concurrency for transportation. Without an ultimate capacity designation, the adopted LOS standard for 35th Avenue SE is LOS E using travel speed during the afternoon (PM) peak period of travel as part of the measurement. The designation of ultimate capacity provides for an alternate LOS that recognizes the challenges and opportunities of the 35th Avenue SE corridor by considering travel on the corridor during the entire day instead of only in the afternoon.

SCC 30.66B.110(2) and DPW Rule 4224.110(2) CRITERIA

Chapter 30.66B.110(2) of county code states that a recommendation of ultimate capacity by public works and a designation by the county council of ultimate capacity may be appropriate if one or more specified conditions are met for the arterial units. Those conditions are enumerated in the DPW Rule 4224.110(2) through a series of directed questions, listed (a) through (k), for which DPW will provide answers supported by specific details and analysis.

Notably, arterial units that satisfy conditions (a) through (d) are eligible for an ultimate capacity designation and the remaining criteria are not applicable. Attached to this report for reference is a flow chart contained in DPW Rule 4224.110, as illustrated in Exhibit 3 below.

(a) Would additional improvements to the specified arterial unit require unwarranted public expenditures and/or would they cause severe environmental or community impacts?

Yes. The 35th Avenue SE corridor will be fully widened to three lane urban standards by the summer of 2022. Additional corridor widening is estimated to exceed $100 million dollars, require the demolition of dozens of homes, and encroach on several critical areas.

See "1. Capacity Improvements to Date" under section "SCC 30.66B.110(1)(a) CRITERIA" above for additional details.

(b) Would determination of ultimate capacity advance one or more specific growth management goals or objectives?

Yes. Designating 35th Avenue SE as ultimate capacity will help the county meet several critical GMA goals such as transportation, urban growth, reduced sprawl, and housing.

See section "SCC 30.66B.110(1)(d) GMA OBJECTIVES" above for additional details.

(c) Is the arterial unit identified in the Transportation Element as having a Critical Arterial System Improvement?

Yes. The term Critical Arterial System Improvement (CASI) was used in comprehensive plans prior to the 2015 update. The 35th Avenue SE projects were originally identified as CASIs in the 1995 TE and the projects were carried into the 2015 TE. While the term CASI is no longer used, the 2015 TE projects are, by definition, critical arterial system improvements.

See "1. Capacity Improvements to Date" under section "SCC 30.66B.110(1)(a) CRITERIA" above.

(d) Two-part question: One, are the number of lanes and other improvements consistent with the adopted Transportation Element and two, do they meet the EDDS? (Note, "meeting EDDS" includes any formally approved deviations or improvements consistent with DPW design plans approved by the County Engineer.)

Yes, to both questions. SCC 30.66B.110(1)(c) defines an arterial unit as "the existing facility plus any improvements which are fully funded and programmed for construction within six years." The 35th Avenue SE Phase 1 project is complete, and the completion of Phase 2 in the summer of 2022 will provide the number of lanes and other improvements consistent with the TE. All corridor improvements have been approved by the County Engineer to meet EDDS requirements.

By meetings the conditions outlined above, all five arterial units on the 35th Avenue SE corridor, as shown in Exhibit 2 below, are eligible for an ultimate capacity designation.

RECOMMENDATIONS

The Department of Public Works has determined that the 35th Avenue SE arterial meets the adopted criteria for ultimate capacity.

Under Vision 2050, growth and development will continue in the Southwest Urban Growth Area (SWUGA) and in the neighboring cities. Without a designation of ultimate capacity for this arterial, concurrency requirements will prevent the increased densities of development necessary to fully achieve these regional growth targets, as land development placing three or more peak hour trips on 35th Avenue SE will not be able to proceed.

A determination of ultimate capacity for 35th Avenue SE will streamline concurrency review for developments adding new traffic trips to the arterial. All developments impacting 35th Avenue SE would still be subject to concurrency, but the determination of ultimate capacity would establish a higher average daily trip (ADT) threshold.

Upon designation of 35th Avenue SE as ultimate capacity, DPW will implement the strategies, programs and plans outlined above to provide additional mobility alternatives to support continued growth. Additionally, DPW will work with all new development that adds trips to this arterial to provide transportation demand management (TDM) measures through site design, programmatic measures, and/or TDM payments for the purpose of improving efficiency, preserving roadway capacity, providing transportation alternatives, and improving operations.

Public Works recommends that arterial units 204, 207/336, and 337/420 on the 35th Avenue SE corridor be designated as being at ultimate capacity.

Recommended by:

Snyder, Kelly — Digitally signed by Snyder, Kelly Date: 2022.06.02 08:52:25 -07'00'

Kelly A. Snyder, MPA
Public Works Director

6/2/2022
Date

Approved by:

Douglas W McCormick — Digitally signed by Douglas W McCormick Date: 2022.06.01 16:33:26 -07'00'

Douglas W. McCormick P.E.
Deputy Director/County Engineer

6/1/2022
Date

Prepared By:

Mohammad Uddin, P.E. — Digitally signed by Mohammad Uddin, P.E. Date: 2022.06.01 15:07:32 -07'00'

Mohammad Uddin, P.E., PTOE
County Traffic Engineer

6/1/2022
Date

Exhibit 1 – System Improvements to Improve Mobility in the Vicinity of the 35th Avenue SE Corridor

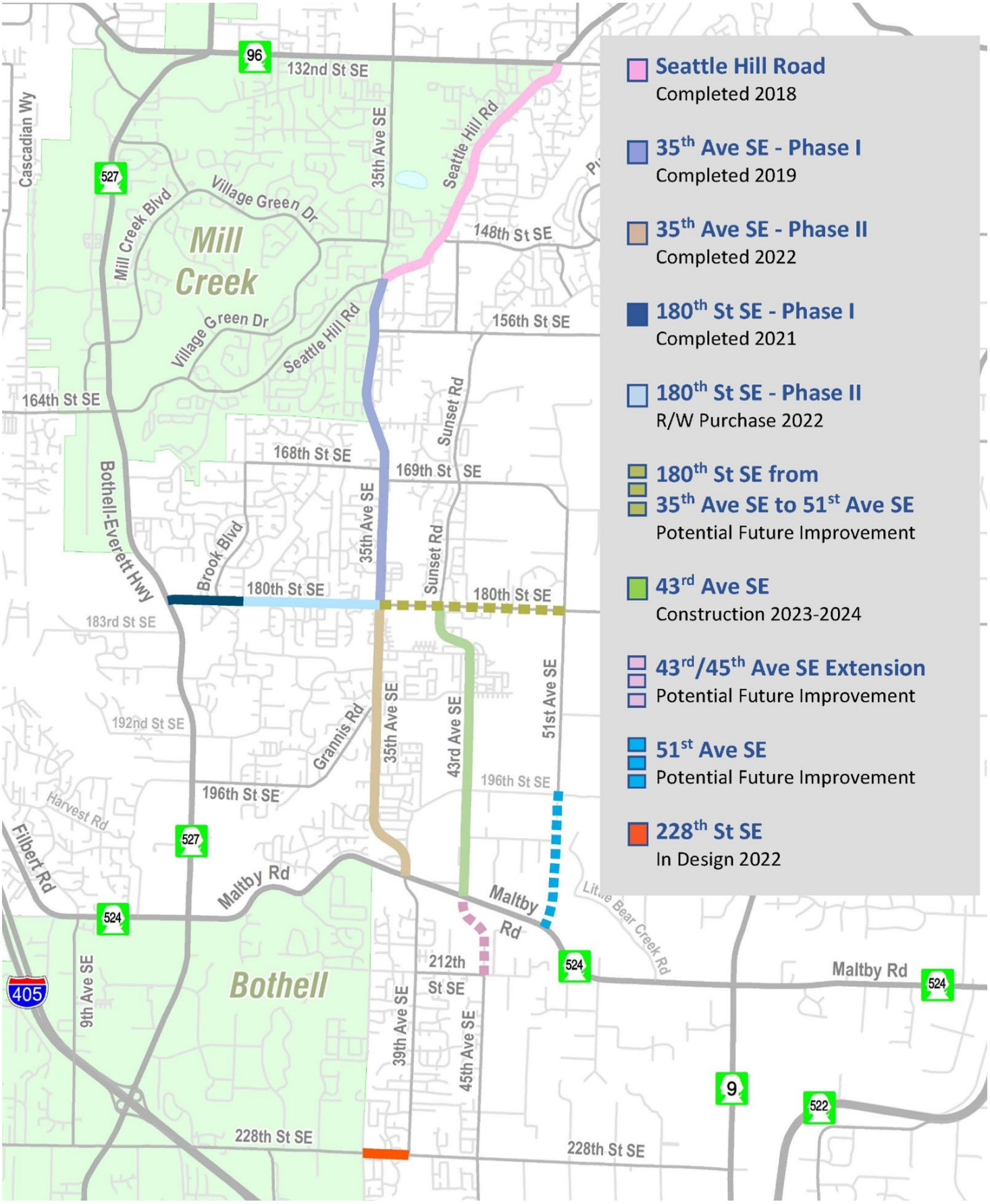

Exhibit 2– 35th Avenue SE Arterial Unit Numbers

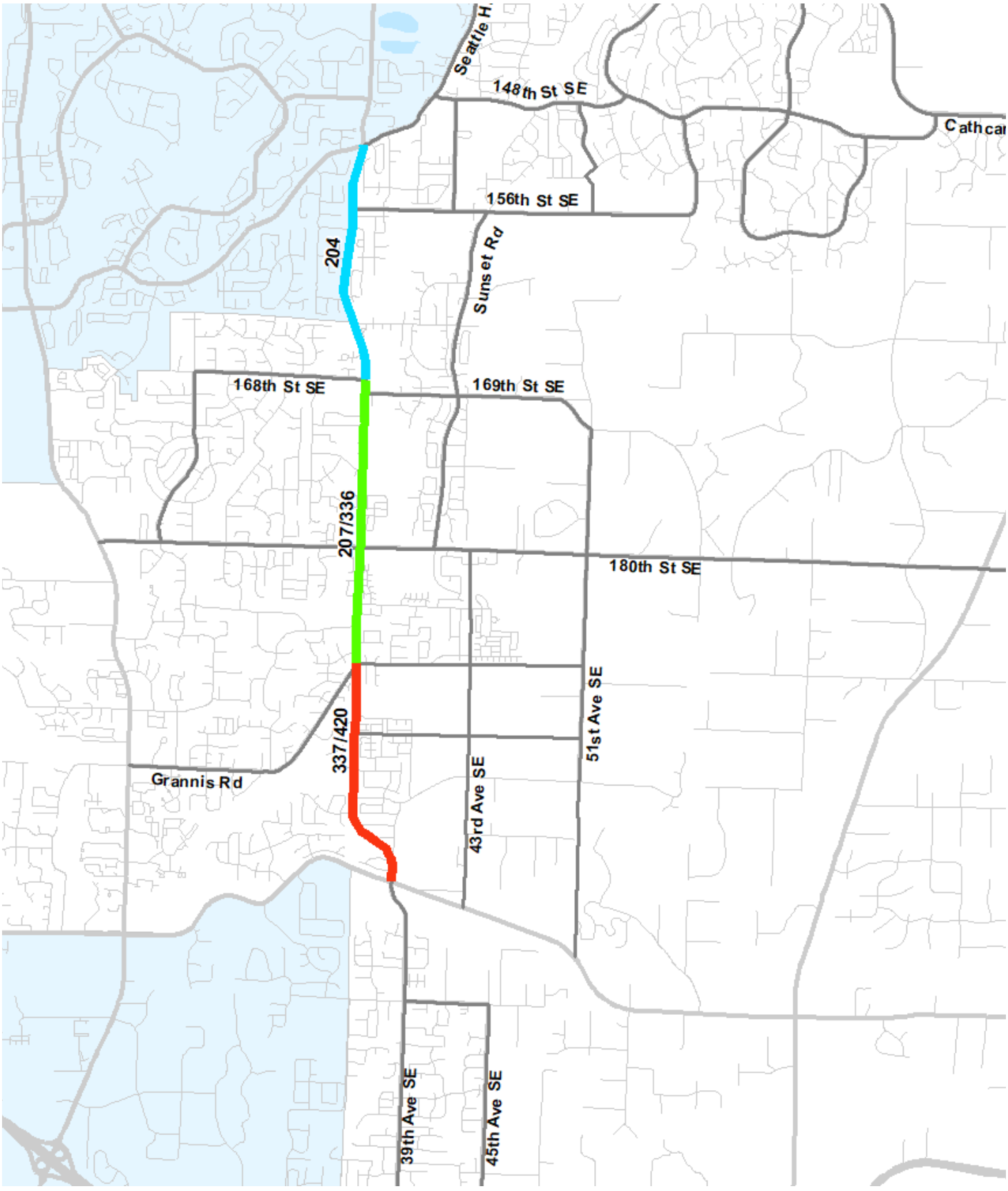

Exhibit 3 – Ultimate Capacity Designation Flow Chart