

# City of Bellevue Transportation Department Modeling and Analysis Group

# **Concurrency Update Report**

Performance Snapshot December 31, 2020



Prepared September 2021

## **Executive Summary**

Model analysis indicates that the 2021-2027 Capital Investment Program (CIP) plus Neighborhood Congestion Reduction Program (NCRP) vehicle capacity projects accommodate the increased vehicle travel demand associated with new development approved through December 31, 2020. All Mobility Management Areas (MMAs) meet the adopted congestion allowance, and all MMAs meet the adopted average volume to capacity (V/C) level of service standard for intersections.

#### **Concurrency Summary by MMA**

|    |                 |           | irrency<br>idard        | 2019 Existing Condition |                  |   |                  | 2021 Concurrency Platform |                  |   |                  |
|----|-----------------|-----------|-------------------------|-------------------------|------------------|---|------------------|---------------------------|------------------|---|------------------|
|    | мма             |           | Congestion<br>Allowance | V/C Ra                  | tio Test         | Congestion<br>Allowance Test                    |                  | V/C Ratio Test            |                  | Congestion<br>Allowance Test                    |                  |
|    |                 | V/C Ratio |                         | V/C<br>Ratio            | Standard<br>Met? | No of<br>Intersections<br>Below the<br>Standard | Standard<br>Met? | V/C<br>Ratio              | Standard<br>Met? | No of<br>Intersections<br>Below the<br>Standard | Standard<br>Met? |
| 1  | North Bellevue  | 0.85      | 3                       | 0.64                    | Yes              | 0   | Yes              | 0.67                      | Yes              | 0   | Yes              |
| 2  | Bridle Trails   | 0.80      | 4                       | 0.69                    | Yes              | 3   | Yes              | 0.72                      | Yes              | 3   | Yes              |
| 3  | Downtown        | 0.95      | 9                       | 0.72                    | Yes              | 2   | Yes              | 0.83                      | Yes              | 3   | Yes              |
| 4  | Wilburton       | 0.90      | 3                       | 0.75                    | Yes              | 1   | Yes              | 0.82                      | Yes              | 2   | Yes              |
| 5  | Crossroads      | 0.90      | 2                       | 0.71                    | Yes              | 0   | Yes              | 0.70                      | Yes              | 0   | Yes              |
| 6  | N-E Bellevue    | 0.80      | 2                       | 0.70                    | Yes              | 0   | Yes              | 0.73                      | Yes              | 0   | Yes              |
| 7  | South Bellevue  | 0.85      | 4                       | 0.76                    | Yes              | 1   | Yes              | 0.78                      | Yes              | 2   | Yes              |
| 8  | Richards Valley | 0.85      | 5                       | 0.70                    | Yes              | 1   | Yes              | 0.74                      | Yes              | 2   | Yes              |
| 9  | East Bellevue   | 0.85      | 5                       | 0.83                    | Yes              | 5   | Yes              | 0.81                      | Yes              | 3   | Yes              |
| 10 | Eastgate        | 0.90      | 4                       | 0.72                    | Yes              | 1   | Yes              | 0.71                      | Yes              | 2   | Yes              |
| 11 | S-E Bellevue    | 0.80      | 3                       | 0.71                    | Yes              | 2   | Yes              | 0.72                      | Yes              | 1   | Yes              |
| 12 | Bel-Red/Northup | 0.95      | 7                       | 0.72                    | Yes              | 1   | Yes              | 0.76                      | Yes              | 2   | Yes              |
| 13 | Factoria        | 0.95      | 5                       | 0.79                    | Yes              | 0   | Yes              | 0.80                      | Yes              | 0   | Yes              |
| 14 | Newport Hills*  | -         | -                       | -                       | -                | -   | -                | -                         | -                | -   | -                |

<sup>\*</sup> There are no system intersections in MMA 14

These analysis results represent a snapshot of average traffic conditions over a two-hour period from 4 PM to 6 PM on a typical weekday. Because traffic conditions change constantly and the two-hour average is what is reported, drivers will sometimes experience worse or less traffic congestion than reported herein.

Following the release of this Concurrency Update Report, the 2021 Concurrency Platform will be used as the background condition for project-level development review modeling until a new concurrency update is completed.

It should be noted that Bellevue's existing approach to concurrency measures only the vehicle demand and capacity at "system" intersections, so aside from increasing capacity of these intersections, there are limited options to meeting the concurrency standard. This approach

was well grounded at its inception 30 years ago when the private vehicle was a predominant travel mode. As the city grew from a typical suburban bedroom community to a major employment center within the Puget Sound region, other travel modes such as transit, bike and walk have taken increased share of overall travel. As such, focusing only on measuring and providing vehicle capacity at the 'system" intersections to meet future travel demand is no longer adequate nor sustainable fiscally and environmentally. Nor is it consistent with City policy and funding practices that are multimodal in nature.

At the City Council's direction, staff have been working with the Transportation Commission, stakeholders, and general public on developing multimodal performance metrics and targets for all major travel modes including transit, bike, pedestrian, as well as vehicles. The new methodology and multimodal concurrency standards, assuming adoption by the Council, will be used in the future concurrency updates.

#### Introduction

The Washington State Growth Management Act (GMA) of 1990 requires that local jurisdictions adopt ordinances to establish *concurrency* metrics and standards to determine the ability of the transportation system to support new development. The City of Bellevue's adopted Traffic Standards Code (Bellevue City Code Chapter 14.10) establishes the City's transportation concurrency standards and methodologies, and compliance determination process. The Director's Rule of 2017 further defines the specifications of this procedure.

An assessment of transportation concurrency is prepared periodically – typically annually – by the Bellevue Transportation Department to update information on land use development and transportation conditions within the City. The primary objective is to provide a snapshot of the latest transportation system performance findings related to vehicle capacity to inform land use and transportation decision-making. In addition, the concurrency report is used to identify problem areas so that traffic mitigation options can be explored and identified to effectively accommodate changing conditions.

This report summarizes concurrency analysis results for two scenarios:

<u>Existing Condition</u> includes the existing transportation networks as of the end of 2020. Due to the Covid-19 pandemic impact on travel, observed 2020 traffic counts do not represent typical traffic conditions. For this reason, the latest traffic counts collected through 2019 were used to represent the existing conditions.

**2021 Concurrency Platform (CP)** includes existing plus approved developments as of the end of 2020 with the City's six-year Capital Investment Program (CIP) plan. This forms the basis for conducting future project level concurrency analyses. The Platform includes:

- existing land use information extracted from the King County Tax Assessor's Office as of December 31, 2020;
- approved development that received either design review approvals or building permits issued by the City of Bellevue Development Services Department (DSD) as of December 31, 2020; and
- 2020 existing roadway network plus fully funded capacity improvement projects in the 2021-2027 CIP and with projects sponsored by WSDOT, City of Redmond and Sound Transit that are expected to be completed by 2026.

The concurrency snapshot reflects short-range projections of average traffic conditions within the city during the two-hour PM peak period. The conditions described represent computed volume-to-capacity (V/C) ratios for designated "system" intersections within the 14 Mobility Management Areas (MMAs) as defined in the City's Traffic Standards Code. MMAs are geographic sub-areas of the City, designated for transportation concurrency analysis and reporting purposes.

## **Concurrency Standards**

The City's concurrency standard consists of two metrics for each of the MMAs: the permitted maximum average system intersection V/C ratio and the maximum number of system intersections allowed to exceed the V/C ratio for each MMA (congestion allowance). The standards vary according to the land use vision for each area, the availability and level of service of alternative modes of travel, and community input. Table 1 shows the concurrency standard for each MMA.

**Table 1 Concurrency Standards for Mobility Management Areas** 

|    |                    | Concurre  | ncy Standard            |
|----|--------------------|-----------|-------------------------|
|    | MMA                | V/C Ratio | Congestion<br>Allowance |
| 1  | North Bellevue     | 0.85      | 3                       |
| 2  | Bridle Trails      | 0.80      | 4                       |
| 3  | Downtown           | 0.95      | 9                       |
| 4  | Wilburton          | 0.90      | 3                       |
| 5  | Crossroads         | 0.90      | 2                       |
| 6  | Northeast Bellevue | 0.80      | 2                       |
| 7  | South Bellevue     | 0.85      | 4                       |
| 8  | Richards Valley    | 0.85      | 5                       |
| 9  | East Bellevue      | 0.85      | 5                       |
| 10 | Eastgate           | 0.90      | 4                       |
| 11 | Southeast Bellevue | 0.80      | 3                       |
| 12 | BelRed/Northup     | 0.95      | 7                       |
| 13 | Factoria           | 0.95      | 5                       |
| 14 | Newport Hills*     | -         | -                       |

<sup>\*</sup>There are no system intersections in MMA 14 and, therefore, no standards Source: Bellevue City Code 14.10.030

# Methodology

The concurrency analysis was carried out using three major tools:

- The BKRCast, a state-of-art activity-based travel demand forecast model, is used to forecast vehicle travel demand. The model takes parcel land use information and transportation networks including roadway, transit, and bike facilities as inputs.
- A vehicle volume post-processing tool is used to adjust raw model output volumes by accounting for discrepancies between modeled base year traffic volumes and observed traffic counts; and
- A customized intersection capacity analysis program based on the planning analysis methodology contained in the latest Highway Capacity Manual. The manual provides procedures to analyze intersection operating conditions. Per the City's Traffic Standards Code (Chapter 14.10), traffic volumes are averaged over a two-hour period from 4 PM to 6 PM, which generally represents the most congested traffic conditions.

- V/C ratios are calculated at each system intersection. The average V/C ratio for all system intersections within each MMA is then calculated and compared to the adopted standard for the respective MMA.
- An MMA is considered to meet the traffic standard if the resulting area-wide average V/C ratio does not exceed the V/C ratio standard and the number of congested intersections in the area does not exceed the congestion allowance as established in the Traffic Standards Code.

Because the analysis results represent average traffic conditions over a two-hour period from 4 PM to 6 PM, drivers will sometimes experience worse or less traffic congestion than reported herein.

#### **MMA Boundaries**

Per the City's Traffic Standards Code, the city is divided into 14 MMAs. Within each MMA, there are designated system intersections. The MMA boundaries and system intersections are shown in Figure 1.

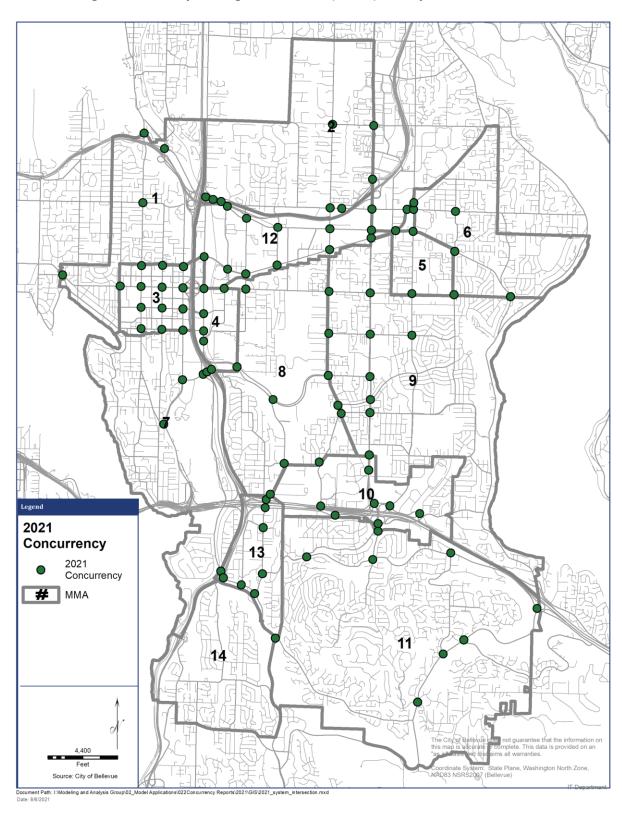


Figure 1 Mobility Management Areas (MMA) and System Intersections

### **Input Data**

#### Land Use

The land use data includes existing plus new development approved by the City of Bellevue through the end of 2020. As noted above, due to Covid-19 pandemic impact on travel, 2019 pre-pandemic traffic counts were used as the base year for this concurrency analysis. The 2020 existing land use information was extracted from the King County Tax Assessor's file as of December 31, 2020. Table 2 provides an MMA-level summary of the existing 2020 land use. Compared to the corresponding 2019 data, there was an increase in square footage in every commercial land use category. Office land use increased by about 8.7 %, while the retail and other categories have 2.9% and 5.5 % increases respectively.

Table 2 2020 Existing Land Use Summary

| D4D4A | Name               |            | Commercia | Square Feet |            | Re       | sidential U | Inits     |
|-------|--------------------|------------|-----------|-------------|------------|----------|-------------|-----------|
| MMA   | Name               | Office     | Retail    | Others      | Total      | SF Units | MF Units    | Tot Units |
| 1     | North Bellevue     | 1,074,137  | 56,961    | 1,021,886   | 2,152,984  | 2,452    | 1,970       | 4,422     |
| 2     | Bridle Trails      | 539,018    | 147,219   | 1,064,269   | 1,750,506  | 1,961    | 2,986       | 4,947     |
| 3     | Downtown           | 9,648,856  | 3,388,716 | 5,394,526   | 18,432,098 | 66       | 10,718      | 10,784    |
| 4     | Wilburton          | 677,113    | 632,233   | 1,892,282   | 3,201,628  | 143      | 488         | 631       |
| 5     | Crossroads         | 106,601    | 478,950   | 560,834     | 1,146,385  | 287      | 3,714       | 4,001     |
| 6     | Northeast Bellevue | 354,810    | 4,752     | 745,378     | 1,104,940  | 3,347    | 157         | 3,504     |
| 7     | South Bellevue     | 962,240    | 59,594    | 1,825,993   | 2,847,827  | 2,733    | 1,887       | 4,620     |
| 8     | Richards Valley    | 167,050    | 21,778    | 530,014     | 718,842    | 2,765    | 3,336       | 6,101     |
| 9     | East Bellevue      | 376,538    | 304,714   | 1,963,060   | 2,644,312  | 7,229    | 2,135       | 9,364     |
| 10    | Eastgate           | 3,334,268  | 287,816   | 3,547,478   | 7,169,562  | 487      | 397         | 884       |
| 11    | Southeast Bellevue | 72,970     | 54,883    | 779,733     | 907,586    | 8,888    | 742         | 9,630     |
| 12    | Bel-Red Northup    | 2,177,421  | 1,746,142 | 4,846,087   | 8,769,650  | 38       | 1,988       | 2,026     |
| 13    | Factoria           | 1,131,885  | 757,744   | 912,960     | 2,802,589  | 497      | 992         | 1,489     |
| 14    | Newport Hills      | 1,075      | 89,083    | 184,426     | 274,584    | 2,857    | 312         | 3,169     |
|       | Total              | 20,623,982 | 8,030,585 | 25,268,926  | 53,923,493 | 33,750   | 31,822      | 65,572    |

Source: King County Tax Assessor's Office as of December 2020, City of Bellevue Community Development Department

Table 3 lists major developments with valid permits or design approvals as of the end 2020. Table 4 contains existing plus approved land use totals by category for the 14 MMAs. This includes nearly 69,000 dwelling units and over 58,000,000 gross square feet (GSF) of commercial space in total. Demolitions to enable new developments were also accounted for. The land use permit tracking system (AMANDA) is the source of information on new development approved by the City. Most of the land use growth from the approved developments is in three MMAs: Downtown Bellevue (MMA 3), South Bellevue (MMA 7), and BelRed/Northup (MMA 12).

Table 3 Approved Major Developments as of December 31, 2020

| Developments  | мма | TAZ | Office<br>(sqf) | Retail<br>(sqf) | Others<br>(sqf) | TOTAL<br>(sqf) | SF<br>(units) | MF<br>(units) | Dwelling<br>Units |
|---|-----|-----|-----------------|-----------------|-----------------|----------------|---------------|---------------|-------------------|
| Bellevue 118th Ave                                    | 7   | 455 | 780             | -               | 275,440         | 276,220        | -             | -             | -                 |
| Retail and Bike Pavilion                              | 12  | 174 | 320,081         | 18,459          | 5,514           | 344,054        | -             | -             | -                 |
| Washington Square MDP                                 | 3   | 43  | 434,334         | 13,634          | -               | 447,968        | -             | -             | -                 |
| Pine Forest Properties Transit-Oriented Redevelopment | 12  | 177 | 324,426         | 6,000           | -               | 330,426        | -             | 435           | 435               |
| Talon 90N Connector                                   | 10  | 327 | 6,322           | -               | -               | 6,322          | -             | -             | -                 |
| GIS Plaza   | 3   | 44  | 1,828           | 535             | 5,806           | 8,169          | -             | 16            | 16                |
| 555 108th Ave NE Office Tower phase 2                 | 3   | 34  | 969,119         | 21,848          | 116,523         | 1,107,490      | -             | -             | -                 |
| Bellevue Plaza Phase 1 Garage 1                       | 3   | 26  | 966,542         | 32,757          | 74,566          | 1,073,865      | -             | -             | -                 |
| NE8 - Below Grade                                     | 3   | 43  | 523,000         | 12,650          | -               | 535,650        | -             | 1             | 1                 |
| Basel Newport Townhomes - Bldg 1                      | 14  | 592 | -               | -               | -               | -              | -             | 58            | 58                |
| NE 10th Bellevue Project                              | 3   | 8   | -               | -               | 2,110           | 2,110          | -             | 102           | 102               |
| The Marketplace Apartments at Factoria                | 13  | 514 | -               | 113,111         | -               | 113,111        | -             | 630           | 630               |
| Highland Middle School                                | 9   | 216 | -               | -               | 186,646         | 186,646        | -             | -             | -                 |
| The Flats at 15th Place Building C2                   | 5   | 222 | -               | -               | -               | -              | -             | 22            | 22                |
| Bellevue Memory Care                                  | 9   | 209 | -               | -               | 27,836          | 27,836         | -             | -             | -                 |
| Summerhill Bel-Red Apartments                         | 12  | 153 | -               | -               | -               | -              | -             | 250           | 250               |
| Chevrolet, Buick, GMC of Bellevue                     | 12  | 151 | 14,657          | -               | 21,503          | 36,160         | -             | -             | -                 |
| Northup Way Mixed Use                                 | 12  | 162 | -               | -               | -               | -              | -             | 407           | 407               |
| 90 Degrees Townhomes - Building E                     | 12  | 196 | -               | -               | -               | -              | -             | 31            | 31                |
| Bellevue Senior Housing - Bldg B                      | 12  | 180 | 5,340           | 12,920          | 9,367           | 27,627         | -             | 140           | 140               |
| Operations and Maintenance Facility, East             | 12  | 178 | 465,142         | 17,000          | -               | 482,142        | -             | 501           | 501               |
| Big 1   | 12  | 156 | 2,650           | 8,802           | 10,520          | 21,972         | -             | 346           | 346               |
| Lario Townhomes Building D                            | 12  | 192 | -               | -               | -               | -              | -             | 7             | 7                 |
| 1001 Office Towers- West Garage                       | 3   | 6   | 643,643         | 7,354           | 26,178          | 677,175        | -             | -             | -                 |
| Pinnacle Bellevue Developement LLC                    | 3   | 8   | -               | -               | -               | -              | -             | 104           | 104               |
| Main Street Apartments                                | 3   | 19  | -               | -               | -               | -              | -             | 125           | 125               |
| ICOE - Islamic Center of Eastside                     | 9   | 369 | -               | -               | 4,885           | 4,885          | -             | -             | -                 |
| Puesta del Sol Elementary School                      | 9   | 283 | -               | -               | 104,162         | 104,162        | -             | -             | -                 |
| Mira II - Below Grade                                 | 3   | 7   | -               | 6,550           | 3,400           | 9,950          | -             | 138           | 138               |
| Avenue Bellevue                                       | 3   | 10  | 33,480          | 58,250          | 44,154          | 135,884        | -             | 327           | 327               |
| Holden of Bellevue                                    | 3   | 23  | 2,491           | 8,327           | 18,586          | 29,404         | -             | 136           | 136               |
| Block 24 - Below Grade                                | 12  | 176 | 217,475         | 10,377          | -               | 227,852        | -             | -             | -                 |
| Sambica Activities Building                           | 9   | 336 | -               | -               | 6,045           | 6,045          | -             | -             | -                 |
| Summit III  | 3   | 29  | 377,076         | 3,625           | 12,783          | 393,484        | -             | -             | -                 |
| 10845 Main Street - New Office Building               | 7   | 435 | 5,804           | -               | -               | 5,804          | -             | -             | -                 |
| Sunset Hills Funeral Home                             | 8   | 380 | 9,915           | -               | 3,181           | 13,096         | -             | -             | -                 |
| Aegis at Lake Hills                                   | 9   | 357 | -               | -               | -               | -              | -             | 21            | 21                |
| Holiday Inn Express Hotel - Garage/Main Level         | 7   | 455 | -               | -               | 89,667          | 89,667         | -             | 135           | 135               |
| Holmberg Company Headquarters                         | 8   | 409 | 19,260          | -               | 8,342           | 27,602         | -             | -             | -                 |

Source: City of Bellevue Community Development Department and Development Services Department

 $Note: The \ square \ footage \ is \ for \ new \ developments, \ demolition \ of \ existing \ buildings \ was \ accounted \ in \ modeling.$ 

Vacancy rates are assumed citywide for the modeling of existing and concurrency land use snapshots. A vacancy rate of 10% was assumed for non-residential uses except for government and education for which no vacancy was assumed. Actual vacancy rates may differ, but the assumed rates are consistent with average observed vacancy rates over time.

Table 4 Existing Plus Approved Development for 2021 Concurrency Platform

| D 4 D 4 A | Nome               |            | Commercial | Square Feet |            | Re       | sidential Uni | ts         |
|-----------|--------------------|------------|------------|-------------|------------|----------|---------------|------------|
| MMA       | Name               | Office     | Retail     | Others      | Total      | SF Units | MF Units      | Tot. Units |
| 1         | North Bellevue     | 1,074,137  | 56,961     | 1,021,886   | 2,152,984  | 2,452    | 1,970         | 4,422      |
| 2         | Bridle Trails      | 539,018    | 147,219    | 1,064,269   | 1,750,506  | 1,961    | 2,986         | 4,947      |
| 3         | Downtown           | 12,741,522 | 3,507,537  | 5,363,915   | 21,612,974 | 66       | 11,542        | 11,608     |
| 4         | Wilburton          | 677,113    | 632,233    | 1,892,282   | 3,201,628  | 143      | 488           | 631        |
| 5         | Crossroads         | 106,601    | 478,950    | 560,834     | 1,146,385  | 287      | 3,736         | 4,023      |
| 6         | Northeast Bellevue | 354,810    | 4,752      | 745,378     | 1,104,940  | 3,347    | 157           | 3,504      |
| 7         | South Bellevue     | 966,083    | 59,594     | 2,054,953   | 3,080,630  | 2,732    | 2,026         | 4,758      |
| 8         | Richards Valley    | 196,225    | 21,778     | 541,537     | 759,540    | 2,765    | 3,336         | 6,101      |
| 9         | East Bellevue      | 376,538    | 304,714    | 2,064,448   | 2,745,700  | 7,229    | 2,156         | 9,385      |
| 10        | Eastgate           | 3,340,590  | 287,816    | 3,547,478   | 7,175,884  | 487      | 397           | 884        |
| 11        | Southeast Bellevue | 72,970     | 54,883     | 779,733     | 907,586    | 8,882    | 742           | 9,624      |
| 12        | Bel-Red Northup    | 3,520,995  | 1,802,221  | 4,627,291   | 9,950,507  | 38       | 3,670         | 3,708      |
| 13        | Factoria           | 1,131,885  | 569,648    | 912,960     | 2,614,493  | 497      | 1,622         | 2,119      |
| 14        | Newport Hills      | 1,075      | 89,083     | 184,426     | 274,584    | 2,856    | 370           | 3,226      |
|           | Total              | 25,099,562 | 8,017,389  | 25,361,390  | 58,478,341 | 33,742   | 35,198        | 68,940     |

Source: King County Tax Assessor's Office, City of Bellevue Community Development Department and Development Services Department

### **Transportation Network**

The adopted 2021-2027 CIP is the basis for identifying transportation projects to be included in this analysis. These capacity projects include roadway widenings, intersection signalization and channelization, and nonmotorized trail projects. The concurrency model network includes all fully funded projects that would be completed and in operation by 2026 as described in Table 5 and shown in Figure 2.

In addition to city funded projects, major capacity projects funded by other jurisdictions that are expected to be completed by 2026 are also included. These projects include

- WSDOT's I-90 auxiliary lanes between Eastgate and Issaquah, I-405 ETL from Renton to Bellevue, SR 520 Overlake Access Ramp,
- Sound Transit's SB HOV lane on Bellevue Way from the South Bellevue Park & Ride to I-90, and the East Link Light Rail Extension.
- Redmond's two projects near the city boundary, one at the Bel-Red Road/NE 24th Street Intersection (completed) and the other at 156th Avenue NE/Bel-Red Road Intersection.

## **Traffic Counts**

Although this update's base year is 2020, due to the Covid-19 pandemic impact on travel, prepandemic 2019 traffic counts were used to represent the existing condition as well as the basis for postprocessing the 2026 concurrency year forecast volumes. To be consistent with 2019 traffic counts, 2019 intersection geometry and signal timing plans were used to calculate intersection V/C ratios for the existing condition.

# **Table 5 Capacity Projects Included in the 2021 Concurrency Platform Analysis**

| CIP# or<br>Sponsor | Project Name   | Description   |
|--------------------|--|---|
| R-169              | 124th Avenue NE - NE 12th Street to NE Spring Boulevard              | Widen124th Avenue NE to five lanes, including two travel lanes in each direction with turn pockets or a center turn lane; curb, gutter and separated multi-use path on both sides.  |
| R-174              | NE Spring Boulevard - 130th Avenue<br>NE to 132nd Avenue NE          | Construct a new arterial roadway connection to include a single travel lane in each direction and traffic signals at the 130th Avenue NE and 132nd Avenue NE intersections.   |
| R-190              | 124th Avenue NE/NE 8th to NE 12th<br>Streets                         | The project will add sidewalk on the westside of the road from NE 8th Street to NE 10th Place and provide mid-block crossing for pedestrians south of NE 10th Place.  |
| R-191              | 124th Avenue NE/Ichigo Way (NE<br>18th St) to Northup Way            | Widen 124th Avenue NE to five lanes, incuding two travel lanes in each direction with turn pockets or a center turn lane; curb, gutter and sidewalks on both sides. A new signal at Ichigo Way.   |
| R-207              | 114th Avenue SE and SE 8th Street                                    | Change SB from left/shared L-T-R to dual left and one shared thru-right.  |
| Bellevue*          | 148th Avenue SE/Lake Hills<br>Boulevard Intersection                 | Intersection operation improvement: minor widening to add a second westbound left turn lane.  |
| Bellevue*          | Factoria Boulevard SE/ SE 38th<br>Street Intersection                | Intersection operation improvement: minor widening to add a second westbound left turn lane.  |
| Bellevue*          | Lake Hills Connector/SE 8th St Intersection                          | Intersection operation improvement: minor widening to add a northbound dual left turn lane.   |
| Bellevue*          | 148th Avenue SE/Kelsey Creek<br>Shopping Center                      | Intersection operation improvement: add signalized intersection.  |
| Bellevue*          | NE 8th St/148 Ave NE   | Add second left-turn-lane on all four approaches.   |
| Bellevue           | NE 8th St/140 Ave NE   | Modify SB right to SB shared thru-right.  |
| CD-30              | Main St shared use path  | Build a 12- to 14-ft wide multipurpose path on the south side from 108th Ave to 112th Ave. Modify turn channels to accommodate bike lane.   |
| PW-W/B-83          | Mountains to Sound Greenway Trail - Factoria Crossing                | Project will construct the first phase of the Mountains to Sound Greenway Trail from I-405 to 132nd Avenue SE. This project also includes a widening of the I-90 EB off-ramp to include a second lane   |
| PW-W/B-84          | Mountains to Sound Greenway Trail - 132nd Ave SE to 142nd PI SE      | This project will construct the second phase of the Mountains to Sound Greenway Trail from 132nd Avenue SE to 142nd Place SE.   |
| Redmond            | 156th Avenue NE/NE 24th Street                                       | Add a SB right turn lane.   |
| WSDOT              | I-90 Auxiliary Lanes   | Adds an auxiliary lane each direction to I-90, eastbound from 150th Ave SE to Lakemont Blvd, westbound from SR 900 to Eastgate.   |
| WSDOT              | SR 520 - Overlake Access Ramp  | Adds a new eastbound SR 520 ramp to southbound 148th Avenue NE and extends the existing eastbound ramp underneath 148th into the planned Overlake Village area.   |
| WSDOT              | I-405 - Renton to Bellevue Widening and Express Toll Lanes           | Adds new capacity to create a two-lane express toll lane system between SR 167 in Renton and NE 6th St in Bellevue.   |
| King County        | Eastrail - Renton to SR 520  | Construct off-street non-motorized trail from Renton to SR 520 with a gap from Coal Creek Parkway to SE 32nd Street.  |
| Sound Transit      | Bellevue Way/South Bellevue Park & Ride to I-90                      | Construct southbound HOV lane from South Bellevue Park & Ride to I-90 (funded by Sound Transit as part of the East Link project).   |
| Sound Transit      | East Link Light Rail   | Construction of the East Link light rail project from Seattle to the Overlake Station in Redmond.   |
| Projects Comp      | pleted Since 2019  |   |
| R-166              | 124th Avenue NE - Spring Boulevard to Ichigo Way (NE 18th Street)    | Widen 124th Avenue NE to five lanes, including two travel lanes in each direction with turn pockets or a center turn lane, install curb, gutter and sidewalk on east side and sidewalk on west side from NE Spring Boulevard to NE 16th Street. |
| R-172              | NE Spring Boulevard (Zone 1) - 116th<br>Avenue NE to 120th Avenue NE | Construct missing link and improve the corridor to include two travel lanes in each direction with turn pockets, along with new traffic signals at the NE 12th Street and at 120th Avenue NE intersections.                                     |
| R-173              | NE Spring Boulevard (Zone 2)- 120th<br>Avenue NE to 124th Avenue NE  | Construct a new arterial street to include two travel lanes in each direction with bicycle facilities, turn pockets or center medians, curb, gutter, and sidewalks on both sides., new signals at 120th, 121st, 123rd, and 124th Avenues NE.    |
| R-202              | Newport Way/150th Ave Intersection                                   | Add southbound turn lane from 150 Ave SE to SE Newport Way.   |
| Bellevue*          | Eastgate Way/150th Ave intersection                                  | Reconfigure EB approach.  |
| Redmond            | Bel-Red Road/NE 24th Street  | Add a SB right turn lane.   |

<sup>\*</sup> Congestion Levy Funded Project

CIP Projects 2020 - 2026 DRAFT 09 / 23 / 2021 

Figure 2 Capacity Projects Included in the 2021 Concurrency Platform Analysis

## **Concurrency Analysis Findings**

The V/C ratios for the 2019 Existing Condition and the 2021 Concurrency Platform are compared to the city's concurrency standards as depicted in Table 6.

**Table 6 Concurrency Analysis Results by MMA** 

|    |                    |      | currency<br>andard      |              | 2019 Exi                             | sting Condit                        | ion                                  | 2021 Concurrency Platform |                                      |                                     |                                      |
|----|--------------------|------|-------------------------|--------------|--------------------------------------|-------------------------------------|--------------------------------------|---------------------------|--------------------------------------|-------------------------------------|--------------------------------------|
|    | ММА                |      | Congestion<br>Allowance | V/C<br>Ratio | Remaining<br>Capacity<br>(V/C Ratio) | Congestion<br>Allowance<br>Consumed | Remaining<br>Congestion<br>Allowance | V/C<br>Ratio              | Remaining<br>Capacity<br>(V/C Ratio) | Congestion<br>Allowance<br>Consumed | Remaining<br>Congestion<br>Allowance |
| 1  | North Bellevue     | 0.85 | 3                       | 0.64         | 0.21                                 | 0                                   | 3                                    | 0.67                      | 0.18                                 | 0                                   | 3                                    |
| 2  | Bridle Trails      | 0.80 | 4                       | 0.69         | 0.11                                 | 3                                   | 1                                    | 0.72                      | 0.08                                 | 3                                   | 1                                    |
| 3  | Downtown           | 0.95 | 9                       | 0.72         | 0.23                                 | 2                                   | 7                                    | 0.83                      | 0.12                                 | 3                                   | 6                                    |
| 4  | Wilburton          | 0.90 | 3                       | 0.75         | 0.15                                 | 1                                   | 2                                    | 0.82                      | 0.08                                 | 2                                   | 1                                    |
| 5  | Crossroads         | 0.90 | 2                       | 0.71         | 0.19                                 | 0                                   | 2                                    | 0.70                      | 0.20                                 | 0                                   | 2                                    |
| 6  | Northeast Bellevue | 0.80 | 2                       | 0.70         | 0.10                                 | 0                                   | 2                                    | 0.73                      | 0.07                                 | 0                                   | 2                                    |
| 7  | South Bellevue     | 0.85 | 4                       | 0.76         | 0.09                                 | 1                                   | 3                                    | 0.78                      | 0.07                                 | 2                                   | 2                                    |
| 8  | Richards Valley    | 0.85 | 5                       | 0.70         | 0.15                                 | 1                                   | 4                                    | 0.74                      | 0.11                                 | 2                                   | 3                                    |
| 9  | East Bellevue      | 0.85 | 5                       | 0.83         | 0.02                                 | 5                                   | 0                                    | 0.81                      | 0.04                                 | 3                                   | 2                                    |
| 10 | Eastgate           | 0.90 | 4                       | 0.72         | 0.18                                 | 1                                   | 3                                    | 0.71                      | 0.19                                 | 2                                   | 2                                    |
| 11 | Southeast Bellevue | 0.80 | 3                       | 0.71         | 0.09                                 | 2                                   | 1                                    | 0.72                      | 0.08                                 | 1                                   | 2                                    |
| 12 | BelRed/Northup     | 0.95 | 7                       | 0.72         | 0.23                                 | 1                                   | 6                                    | 0.76                      | 0.19                                 | 2                                   | 5                                    |
| 13 | Factoria           | 0.95 | 5                       | 0.79         | 0.16                                 | 0                                   | 5                                    | 0.80                      | 0.15                                 | 0                                   | 5                                    |
| 14 | Newport Hills*     | -    | -                       | -            | -                                    | -                                   | -                                    | -                         | -                                    | -                                   | -                                    |

<sup>\*</sup> There are no system intersections in MMA 14.

## Average V/C Ratios Analysis by MMA

Under 2019 existing conditions, the V/C ratios for individual MMAs ranged from 0.64 (MMA 1 – North Bellevue) to 0.83 (MMA 9 – East Bellevue). The average remaining capacity ranged from 0.02 (MMA 9 – East Bellevue) to 0.23 (MMA 3 – Downtown and MMA 12 – Bel-Red/Northup). Remaining capacity is the capacity available to accommodate future development without exceeding the concurrency standard; it is the difference between calculated V/C ratio and V/C ratio standard. Under the 2021 Concurrency Platform, with the funded capacity projects completed and approved development in place, the analysis indicates that all MMAs meet their respective V/C ratio standard; the remaining capacities for East Bellevue increased from existing 0.02 to 0.04, due to the planned intersection improvement projects funded by the NCRP.

#### Intersection Congestion Analysis by MMA

The V/C ratio analysis for individual system intersections by MMA for the two scenarios are shown in Table 7. Based on the analysis results, each intersection is then subjected to the test of "does it meet the standard?" The answers are "yes", "barely", or "no", defined as follows:

Yes: Intersection with a V/C ratio of at least 0.05 from exceeding the standard Barely: Intersection with a V/C ratio lower than or equal to but within 0.05 of the standards

No: Intersection with a V/C ratio that exceeds the standard

# **Table 7 Intersection Congestion Analysis by MMA**

MMA 1: North Bellevue, V/C Standard: 0.85, Congestion Allowance: 3

|     | Intersect       | ion              | 2019 | Existing      | 2021 CP |               |  |
|-----|-----------------|------------------|------|---------------|---------|---------------|--|
| ID# | Cross           | Streets          | V/C  | Standard Met? | V/C     | Standard Met? |  |
| 69  | Bellevue Way NE | NE 24th Street   | 0.67 | Yes           | 0.69    | Yes           |  |
| 74  | Bellevue Way NE | Northup Way NE   | 0.60 | Yes           | 0.63    | Yes           |  |
| 78  | 108th Ave NE    | Northup Way NE   | 0.66 | Yes           | 0.64    | Yes           |  |
| 93  | Lk Washington B | NE 1st/NE 10 St. | 0.64 | Yes           | 0.72    | Yes           |  |
|     | Areawio         | le               | 0.64 | Yes           | 0.67    | Yes           |  |

MMA 2: Bridle Trails, V/C Standard: 0.80, Congestion Allowance: 4

|     | Intersec       | tion           | 2019 | Existing      | 2021 CP |               |  |
|-----|----------------|----------------|------|---------------|---------|---------------|--|
| ID# | Cross          | Streets        | V/C  | Standard Met? | V/C     | Standard Met? |  |
| 64  | 140th Ave NE   | NE 24th Street | 0.84 | No            | 0.87    | No            |  |
| 79  | 148th Ave NE   | NE 40th Street | 0.65 | Yes           | 0.68    | Yes           |  |
| 114 | 116th Ave NE   | Northup Way NE | 0.73 | Yes           | 0.75    | Barely        |  |
| 116 | 115th Place NE | Northup Way    | 0.95 | No            | 0.98    | No            |  |
| 118 | Northup Way    | NE 24th Street | 0.49 | Yes           | 0.56    | Yes           |  |
| 123 | 140th Ave NE   | NE 40th Street | -    | -             | -       | -             |  |
| 188 | 148th Ave NE   | NE 29th Place  | 0.83 | No            | 0.89    | No            |  |
| 189 | NE 29th Place  | NE 24th Street | 0.35 | Yes           | 0.35    | Yes           |  |
|     | Areawi         | de             | 0.69 | Yes           | 0.72    | Yes           |  |

MMA 3: Downtown, V/C Standard: 0.95, Congestion Allowance: 9

|     | Intersec                      | tion           | 2019 | Existing      | 2021 CP |               |  |
|-----|-------------------------------|----------------|------|---------------|---------|---------------|--|
| ID# | Cross                         | Streets        | V/C  | Standard Met? | V/C     | Standard Met? |  |
| 3   | 100th Ave NE                  | NE 8th Street  | 0.80 | Yes           | 0.86    | Yes           |  |
| 5   | Bellevue Way NE               | NE 12th Street | 0.71 | Yes           | 0.82    | Yes           |  |
| 7   | Bellevue Way NE               | NE 8th Street  | 0.66 | Yes           | 0.70    | Yes           |  |
| 8   | Bellevue Way NE               | NE 4th Street  | 0.59 | Yes           | 0.64    | Yes           |  |
| 9   | Bellevue Way                  | Main Street    | 0.93 | Barely        | 0.89    | Yes           |  |
| 20  | 108th Ave NE                  | NE 12th Street | 0.51 | Yes           | 0.64    | Yes           |  |
| 21  | 108th Ave NE                  | NE 8th Street  | 0.66 | Yes           | 0.82    | Yes           |  |
| 22  | 108th Ave NE                  | NE 4th Street  | 0.79 | Yes           | 1.05    | No            |  |
| 24  | 108th Ave                     | Main Street    | 0.36 | Yes           | 0.51    | Yes           |  |
| 25  | 112th Ave NE                  | NE 12th Street | 0.75 | Yes           | 0.86    | Yes           |  |
| 26  | 112th Ave NE                  | NE 8th Street  | 1.00 | No            | 1.20    | No            |  |
| 36  | 112th Ave                     | Main Street    | 0.98 | No            | 1.09    | No            |  |
| 72  | 72 112th Ave NE NE 4th Street |                |      | Yes           | 0.82    | Yes           |  |
|     | Areawi                        | de             | 0.72 | Yes           | 0.83    | Yes           |  |

Note: Dash indicates an unsignalized intersection, which is not included in the calculations.

MMA 4: Wilburton, V/C Standard: 0.90, Congestion Allowance: 3

|     | , , ,        |               |      |               |         |               |  |  |  |  |
|-----|--------------|---------------|------|---------------|---------|---------------|--|--|--|--|
|     | Intersect    | ion           | 2019 | Existing      | 2021 CP |               |  |  |  |  |
| ID# | Cross        | Streets       | V/C  | Standard Met? | V/C     | Standard Met? |  |  |  |  |
| 30  | 116th Ave NE | NE 8th Street | 0.73 | Yes           | 0.75    | Yes           |  |  |  |  |
| 73  | 116th Ave    | Main Street   | 0.65 | Yes           | 0.74    | Yes           |  |  |  |  |
| 131 | 116th Ave SE | SE 1st Street | 0.85 | Barely        | 0.92    | No            |  |  |  |  |
| 139 | 116th Ave NE | NE 4th Street | 0.92 | No            | 1.02    | No            |  |  |  |  |
| 33  | 120th Ave NE | NE 8th Street | 0.62 | Yes           | 0.66    | Yes           |  |  |  |  |
|     | Areawid      | e             | 0.75 | Yes           | 0.82    | Yes           |  |  |  |  |

MMA 5: Crossroads, V/C Standard: 0.90, Congestion Allowance: 2

|     | Intersect                     | ion            | 2019 | Existing      | 2021 CP |               |  |
|-----|-------------------------------|----------------|------|---------------|---------|---------------|--|
| ID# | ID# Cross Streets             |                |      | Standard Met? | V/C     | Standard Met? |  |
| 58  | Bel-Red Rd                    | NE 20th Street | 0.54 | Yes           | 0.52    | Yes           |  |
| 62  | 156th Ave NE                  | Northup Way    | 0.85 | Yes           | 0.83    | Yes           |  |
| 63  | 63 156th Ave NE NE 8th Street |                |      | Yes           | 0.76    | Yes           |  |
|     | Areawid                       | e              | 0.71 | Yes           | 0.70    | Yes           |  |

MMA 6: North-East Bellevue, V/C Standard: 0.80, Congestion Allowance: 2

| Intersection                  |               |                | 2019 | Existing      | sting 2021 CP |               |
|-------------------------------|---------------|----------------|------|---------------|---------------|---------------|
| ID#                           | Cross Streets |                | V/C  | Standard Met? | V/C           | Standard Met? |
| 75                            | 164th Ave NE  | NE 24th Street | 0.69 | Yes           | 0.71          | Yes           |
| 76                            | 164th Ave NE  | Northup Way    | 0.74 | Yes           | 0.75          | Yes           |
| 87                            | 164th Ave NE  | NE 8th Street  | 0.68 | Yes           | 0.72          | Yes           |
| 111 Northup Way NE 8th Street |               |                | -    | -             | -             | -             |
| Areawide                      |               |                | 0.70 | Yes           | 0.73          | Yes           |

MMA 7: South Bellevue, V/C Standard: 0.85, Congestion Allowance: 4

| Intersection                     |                |                 | 2019 | Existing 2021 CP |      | 21 CP         |
|----------------------------------|----------------|-----------------|------|------------------|------|---------------|
| ID#                              | Cross Streets  |                 | V/C  | Standard Met?    | V/C  | Standard Met? |
| 14                               | 112th Ave SE   | Bellevue Way SE | 0.77 | Yes              | 0.85 | No            |
| 89                               | 112th Ave SE   | SE 8th Street   | 0.64 | Yes              | 0.52 | Yes           |
| 102                              | 118th Ave SE   | SE 8th Street   | 1.02 | No               | 1.00 | No            |
| 219                              | I-405 NB Ramps | SE 8th Street   | 0.71 | Yes              | 0.81 | Barely        |
| 226 I-405 SB Ramps SE 8th Street |                | 0.66            | Yes  | 0.75             | Yes  |               |
| Areawide                         |                |                 | 0.76 | Yes              | 0.78 | Yes           |

 $Note: Dash\ indicates\ an\ unsignalized\ intersection,\ which\ is\ not\ included\ in\ the\ calculations.$ 

MMA 8: Richards Valley, V/C Standard: 0.85, Congestion Allowance: 5

| Intersection |                    |                    | 2019 | Existing      | 2021 CP |               |
|--------------|--------------------|--------------------|------|---------------|---------|---------------|
| ID#          | Cross Streets      |                    | V/C  | Standard Met? | V/C     | Standard Met? |
| 35           | 124th Ave NE       | NE 8th Street      | 0.53 | Yes           | 0.58    | Yes           |
| 43           | 140th Ave SE       | SE 8th Street      | 0.82 | Barely        | 0.88    | No            |
| 44           | 145th Place SE     | Lake Hills Blvd    | 0.60 | Yes           | 0.63    | Yes           |
| 45           | 145th Place SE     | SE 16th Street     | 0.67 | Yes           | 0.73    | Yes           |
| 71           | Lk Hills Connector | SE 8th St          | 1.03 | No            | 1.07    | No            |
| 82           | Richards Rd        | Kamber Rd          | 0.81 | Barely        | 0.82    | Barely        |
| 85           | Richards Rd        | SE 32nd Street     | 0.61 | Yes           | 0.66    | Yes           |
| 134          | Richards Rd        | Lk Hills Connector | 0.66 | Yes           | 0.69    | Yes           |
| 280          | 139th Ave SE       | Kamber Road        | 0.62 | Yes           | 0.64    | Yes           |
| Areawide     |                    |                    | 0.70 | Yes           | 0.74    | Yes           |

MMA 9: East Bellevue, V/C Standard: 0.85, Congestion Allowance: 5

| Intersection |               | 2019            | <b>2019 Existing 2021 CP</b> |               | 21 CP |               |
|--------------|---------------|-----------------|------------------------------|---------------|-------|---------------|
| ID#          | Cross Streets |                 | V/C                          | Standard Met? | V/C   | Standard Met? |
| 41           | 140th Ave NE  | NE 8th Street   | 0.79                         | Yes           | 0.79  | Yes           |
| 42           | 140th Ave     | Main Street     | 0.60                         | Yes           | 0.60  | Yes           |
| 49           | 148th Ave NE  | NE 8th Street   | 0.99                         | No            | 0.91  | No            |
| 50           | 148th Ave     | Main Street     | 0.95                         | No            | 0.96  | No            |
| 51           | 148th Ave SE  | Lake Hills Blvd | 0.97                         | No            | 0.83  | Barely        |
| 52           | 148th Ave SE  | SE 16th Street  | 0.88                         | No            | 0.88  | No            |
| 55           | 148th Ave SE  | SE 24th Street  | 0.87                         | No            | 0.84  | Barely        |
| 65           | 148th Ave SE  | SE 8th Street   | 0.79                         | Yes           | 0.76  | Yes           |
| 83           | 156th Ave     | Main Street     | 0.69                         | Yes           | 0.70  | Yes           |
|              | Areawide      |                 |                              | Yes           | 0.81  | Yes           |

MMA 10: Eastgate, V/C Standard: 0.90, Congestion Allowance: 4

| Intersection |                                  |                  | 2019 | Existing 2021 CP |      | 21 CP         |
|--------------|----------------------------------|------------------|------|------------------|------|---------------|
| ID#          | Cross Streets                    |                  | V/C  | Standard Met?    | V/C  | Standard Met? |
| 56           | 148th Ave SE                     | SE 27th Street   | 0.64 | Yes              | 0.63 | Yes           |
| 86           | 156th Ave SE                     | SE Eastgate Way  | 0.58 | Yes              | 0.58 | Yes           |
| 92           | 161st Ave SE                     | SE Eastgate Way  | 0.56 | Yes              | 0.53 | Yes           |
| 101          | 150th Ave SE                     | SE Eastgate Way  | 1.01 | No               | 0.94 | No            |
| 171          | 142nd Ave SE                     | SE 36th Street   | 0.89 | Barely           | 0.95 | No            |
| 227          | 150th Ave SE                     | I-90 EB Off-Ramp | 0.87 | Barely           | 0.87 | Barely        |
| 272          | 272 139th Ave SE SE Eastgate Way |                  | 0.52 | Yes              | 0.48 | Yes           |
| Areawide     |                                  |                  | 0.72 | Yes              | 0.71 | Yes           |

MMA 11: Southeast Bellevue, V/C Standard: 0.80, Congestion Allowance: 3

| Intersection |                 |                | 2019 | 2019 Existing |      | 2021 CP       |  |
|--------------|-----------------|----------------|------|---------------|------|---------------|--|
| ID#          | Cross Streets   |                | V/C  | Standard Met? | V/C  | Standard Met? |  |
| 313          | Somerset Blvd   | SE Newport Way | 0.63 | Yes           | 0.68 | Yes           |  |
| 133          | 150th Ave SE    | SE Newport Way | 0.89 | No            | 0.75 | Yes           |  |
| 174          | 150th Ave SE    | SE 38th Street | 0.80 | Barely        | 0.78 | Barely        |  |
| 218          | Lakemont Blvd   | SE 63rd St     | 0.66 | Yes           | 0.62 | Yes           |  |
| 228          | Lakemont Blvd   | SE Newport Way | 0.89 | No            | 1.04 | No            |  |
| 242          | 164th Ave SE    | Lakemont Blvd  | 0.62 | Yes           | 0.64 | Yes           |  |
| 257          | 164th Ave SE    | SE Newport Way | •    | -             | -    | -             |  |
| 274          | Village Park Dr | Lakemont Blvd  | 0.52 | Yes           | 0.53 | Yes           |  |
| Areawide     |                 |                | 0.71 | Yes           | 0.72 | Yes           |  |

MMA 12: Bel-Red/Northup, V/C Standard: 0.95, Congestion Allowance: 7

| Intersection |               |                | 2019 | Existing 2021 CP |      | 21 CP         |
|--------------|---------------|----------------|------|------------------|------|---------------|
| ID#          | Cross Streets |                | V/C  | Standard Met?    | V/C  | Standard Met? |
| 29           | 116th Ave NE  | NE 12th Street | 0.80 | Yes              | 0.99 | No            |
| 32           | 120th Ave NE  | NE 12th Street | 0.57 | Yes              | 0.54 | Yes           |
| 34           | 124th Ave NE  | Bel-Red Rd     | 0.82 | Yes              | 0.85 | Yes           |
| 37           | 130th Ave NE  | Bel-Red Rd     | 0.57 | Yes              | 0.59 | Yes           |
| 39           | 140th Ave NE  | NE 20th Street | 0.71 | Yes              | 0.72 | Yes           |
| 40           | 140th Ave NE  | Bel-Red Rd     | 0.79 | Yes              | 0.83 | Yes           |
| 47           | 148th Ave NE  | NE 20th Street | 0.93 | Barely           | 0.94 | Barely        |
| 48           | 148th Ave NE  | Bel-Red Rd     | 0.98 | No               | 1.02 | No            |
| 59           | Bel-Red Rd    | NE 24th Street | 0.64 | Yes              | 0.56 | Yes           |
| 60           | 156th Ave NE  | Bel-Red Rd     | 0.75 | Yes              | 0.66 | Yes           |
| 61           | 156th Ave NE  | NE 24th Street | 0.83 | Yes              | 0.85 | Yes           |
| 68           | 130th Ave NE  | NE 20th Street | 0.60 | Yes              | 0.74 | Yes           |
| 81           | 148th Ave NE  | NE 24th Street | 0.92 | Barely           | 0.95 | Barely        |
| 88           | 124th Ave NE  | Northup Way NE | 0.67 | Yes              | 0.84 | Yes           |
| 117          | 120th Ave NE  | NE 20th Street | 0.31 | Yes              | 0.41 | Yes           |
|              | Areawio       | le             | 0.72 | Yes              | 0.76 | Yes           |

Note: Dash indicates an unsignalized intersection, which is not included in the calculations.

MMA 13: Factoria, V/C Standard: 0.95, Congestion Allowance: 5

| Intersection |                 |                 | 2019 | 2019 Existing |      | 21 CP         |
|--------------|-----------------|-----------------|------|---------------|------|---------------|
| ID#          | Cross Streets   |                 | V/C  | Standard Met? | V/C  | Standard Met? |
| 98           | Coal Creek Pkwy | Forest Drive    | 0.86 | Yes           | 0.82 | Yes           |
| 105          | Richards Rd     | SE Eastgate Way | 0.79 | Yes           | 0.76 | Yes           |
| 202          | Factoria Blvd.  | SE Newport Way  | 0.77 | Yes           | 0.80 | Yes           |
| 203          | Factoria Blvd.  | Coal Creek Pkwy | 0.73 | Yes           | 0.76 | Yes           |
| 204          | Factoria Blvd.  | SE 36th Street  | 0.88 | Yes           | 0.90 | Barely        |
| 220          | I-405 NB Ramps  | Coal Creek Pkwy | 0.71 | Yes           | 0.82 | Yes           |
| 221          | I-405 SB Ramps  | Coal Creek Pkwy | 0.81 | Yes           | 0.75 | Yes           |
| 222          | Factoria Blvd.  | SE 38th Place   | 0.85 | Yes           | 0.82 | Yes           |
| 284          | 124th Ave SE    | Coal Creek Pkwy | 0.74 | Yes           | 0.75 | Yes           |
| Areawide     |                 |                 | 0.79 | Yes           | 0.80 | Yes           |

Under 2019 existing conditions, the total number of intersections that do not meet the MMA V/C standard is 17, compared to the total of 56 allowed for all MMAs. Under the 2021 CP, with the CIP and other funded projects completed and approved development in place, all MMAs meet their respective congestion allowance standards. The number of intersections that do not meet the standard is expected to increase to 20. Results for each MMA are as follows:

- North Bellevue (MMA 1): Under both the 2019 existing condition and 2021 CP, all four system intersections met the standard.
- Bridle Trails (MMA 2): In 2019, three intersections did not meet the V/C standard. This is expected to remain unchanged under the 2021 CP.
- Downtown Bellevue (MMA 3): Under the 2019 existing condition, two of the 13 system intersections did not meet the V/C standard. This number is expected to increase to three under the 2021 CP, within the nine allowed.
- Wilburton (MMA 4): In 2019, one intersection did not meet the V/C standard. Under the 2021 CP, the number of intersections exceeding the standard is expected to increase to two, within the three allowed. The intersection at 116th Ave SE and SE 1st St barely passed in 2019 and is likely to exceed the standard under the 2021 CP.
- Crossroads (MMA 5): All system intersections met the standard under the existing condition; little change is expected under the 2021 CP.
- North-East Bellevue (MMA 6): Under both the 2019 existing condition and the 2021 CP, all system intersections met the standard.
- South Bellevue (MMA 7): In 2019, one intersection did not meet the V/C standard. This
  number is expected to increase to two under the 2021 CP with one additional
  intersection barely meeting the stardard.
- Richards Valley (MMA 8): Under the existing condition, one of the nine system intersections did not meet the standard, within the five allowed. The number is expected to increase to two under the 2021 CP. The intersection of 140<sup>th</sup> Avenue SE and SE 8<sup>th</sup> Street is expected to change the status from barely pass to exceed the standard.

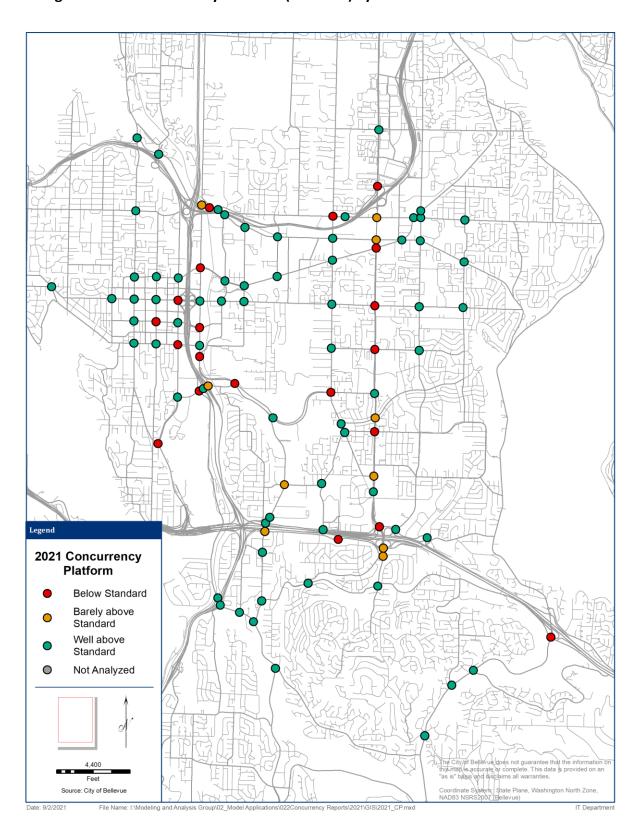
- East Bellevue (MMA 9): This MMA has the smallest cushion between the calculated V/C and the standard. Under existing conditions, the MMA's average V/C ratio is 0.83 compared to the standard of 0.85; the number of intersections exceeding the standard is five, the maximum allowed. Under the 2021 CP, with the help of three Neighborhood Congestion Relief projects, the number of intersections exceeding the standard is expected to reduce to three; the areawide V/C ratio is expected to drop to 0.81.
- Eastgate (MMA 10): Under the existing condition, the number of intersections
  exceeding the V/C standard is one with two barely passing. Under the 2021 CP, one of
  the two intersections that barely passed in 2019 is expected to exceed the standard,
  increasing the total number of intersections not meeting the standard to two, but still
  within the four allowed.
- Southeast Bellevue (MMA 11): Under the 2019 existing condition, the analysis revealed that two system intersections exceeded the V/C standard, and one barely passed.
   Under the 2021 CP, helped by the Neighborhood Congestion Relief project, the intersection of 150th Avenue SE and SE Newport Way is expected to change from not meeting the standard to meeting the standard. Both the numbers of the intersections exceeding the standard and barely passing the standard are expected to be one.
- Bel-Red/Northup (MMA 12): Under the 2019 existing condition, one of the system intersections exceeded the standard. Under the 2021 CP, the number of intersections exceeding the standard is expected to increase to two, within the seven allowed. Two intersections barely met the standard under both scenarios.
- Factoria (MMA 13): Under the 2019 existing condition, all intersections met the standard. Little change is expected under the 2021 CP. However, the intersection at Factoria Boulevard and SE 36th Street is approaching the standard under the 2021 CP.
- Newport Hills (MMA 14): this MMA has no designated system intersections.

Figures 3 and 4 depict the system intersection analysis results for the 2019 existing condition and the 2021 Concurrency Platform. Intersections operating below the concurrency standard (with V/C ratios exceeding the respective MMA V/C standard) are shown in red. Intersections that barely meet the concurrency standard (with calculated V/C ratios lower than but within 0.05 of the V/C standard) are shown in orange. The remaining system intersections are shown in green, indicating they are within their respective MMA's concurrency standard.

5 8 Legend 2019 Existing Condition Below Standard Barely above Standard Well above Standard Not Analyzed Source: City of Bellevue

Figure 3 2019 Existing Condition (PM Peak) System Intersection Assessment

Figure 4 2021 Concurrency Platform (PM Peak) System Intersection Assessment



#### Conclusion

CIP and NCRP funded transportation projects that increase vehicle capacity will accommodate the increased demand associated with new development permitted and approved through December 31, 2020. All MMAs meet their congestion allowance and all MMAs are within the average V/C ratios allowed by the concurrency standards.

It should be noted that the concurrency findings presented in this update reflect the impact of approved developments through the end of 2020. Looking ahead, there are several large developments in Downtown and BelRed areas currently undergoing development review, but not yet approved. The cumulative impact of these developments is expected to have effects citywide.

The existing transportation concurrency methodology was developed 30 years ago. Although some minor revisions have been made since then, the performance of the vehicle mode has remained the central focus of the methodology. Meanwhile, the city has evolved from an auto reliant suburban community to a major regional employment center supported by an increasingly multimodal transportation system. An auto-focused performance measure at predefined system intersections is no longer the best single indicator to represent the full picture of the city's multimodal transportation system. Furthermore, mitigation measures that only consider intersection improvements to stay concurrent are not a sustainable nor viable approach to meeting the city's long-term mobility needs.

The Council has adopted important policy changes to reflect the city's multimodal transportation system more fully. These policy changes, when implemented, will change the way concurrency analysis will be performed in the future:

- TR-30. Establish multimodal level-of-service and concurrency standards and other mobility measures and targets for transportation corridors and in each area of the city in consideration of planned development patterns and mobility options.
- TR-34. Monitor the level-of-service for all modes and adjust programs and resources as necessary to achieve mobility targets and objectives.

Implementation of these policy changes will require updating the current Traffic Standard Code used to guide the concurrency analysis. The updated Traffic Standards Code will serve as a new guide to a multimodal approach to mobility in order to accommodate growth in a manner that is sustainable, equitable, and consistent with the goals and policies of the Comprehensive Plan.

Following the release of this Concurrency Update Report, the 2021 Concurrency Platform BKR1-20-C26 will be used as the background condition for project-level development review modeling until a new concurrency update is completed using the new multimodal concurrency standards and Performance Targets that are currently under development.

## **Appendix A: Glossary of Terms**

**Approved development** is a new proposed development that has either received building permit or design approval from the city.

**Capital Investment Program (CIP)** plan is the list of fully funded six-year vehicle capacity improvement projects as adopted every two years by the Bellevue City Council.

**Concurrency** is a requirement of the Washington State Growth Management Act (RCW 36.70A.070 (6), now or as hereafter amended) that the city must adopt level of service standard and enforce an ordinance precluding approval of a proposed development if that development would cause the level of service of a transportation facility to fall below the city's adopted standard, unless a financial commitment is in place to complete mitigating transportation improvements or strategies within six years.

**Concurrency standard** is a standard adopted in the city of Bellevue Traffic Standards Code (BCC Chapter 14.10) to meet GMA requirements. It establishes the City's transportation concurrency requirements, methodologies, and compliance determination process. It consists of two indicators: Congestion Allowance and maximum average system intersection V/C ratio by individual Mobility Management Area.

**Congestion allowance** means the number of signalized system intersections in a Mobility Management Area that are allowed to exceed the V/C standard adopted for that area as defined in the City's Traffic Standards Code.

**Highway Capacity Manual** is a traffic operation analysis procedural manual published by the Transportation Research Board. It is used by engineers and planners to assess the traffic and environmental effects of highway and arterial projects.

**Mobility Management Area (MMA)** is a geographic area, as defined in the City's Traffic Standards Code, for concurrency analysis and reporting purposes. There are 14 MMAs in the city. The MMA boundaries have evolved slightly over time to include newly annexed lands and to better align with existing land use characteristics, corridor travel patterns, and anticipated future development patterns.

**Model Platform MP6-R16** is the given model platform name and version where 6 represents a 6-year forecasting period and R16 indicates release number 16. It is the City's adopted model platform for concurrency review until the next version is available.

**Neighborhood Congestion Reduction Program (NCRP)** is a program developed to ease traffic congestion within, near and between neighborhoods. It is funded by the Neighborhood Safety, Connectivity and Congestion levy funds. On Nov. 8, 2016, Bellevue voters endorsed a 20-year transportation-focused Neighborhood Safety, Connectivity and Congestion levy (Proposition 2). The measure was approved by 54.13 percent of voters (31,407).

**Remaining capacity** refers to the capacity available in an MMA for additional vehicles before the V/C standard is exceeded. It is calculated by subtracting the modeled V/C ratio from the MMA concurrency standard.

**System intersections** are intersections that contribute to the system function within each mobility management area. System intersections within the mobility management areas are listed and mapped in BCC 14.10.060.

**Travel demand model** refers to a computerized program designed to develop travel demand forecasts, using transportation networks and land use information as inputs. The City of Bellevue uses EMME software developed by INRO Inc. from Montreal, Canada.

**Traffic Standards Code** is Chapter 14 of the Bellevue City Code. It sets forth specific standards providing for city compliance with the concurrency requirements of the state Growth Management Act (GMA) and for consistency between city and countywide planning policies under the GMA. The GMA requires that transportation improvements or strategies to accommodate the traffic impacts of development be provided concurrently with development to handle the increased traffic projected to result from growth and development in the city and region.

**V/C ratio** is an indication of congestion at intersections and the ability of the intersection to accommodate transportation demand. Intersection V/C ratio is the sum of the approaching "critical" lane volumes divided by the available corresponding capacity for those lanes. Critical lane volume is the number of vehicles/hour that use the same travel space to get to their destination during the two-hour PM peak analysis period.

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