



City of Bellevue  
Transportation Department  
Modeling and Analysis Group

*Concurrency Update Report*  
*Performance Snapshot*  
*December 31, 2019*

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*Prepared August 2020*

## Executive Summary

Model analysis indicates that the 2019-2025 Capital Investment Program (CIP) plus Neighborhood Congestion Reduction Program vehicle capacity projects accommodate the increased travel demand associated with new development approved through December 31, 2019. 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

MMA		Concurrency Standard		2019 Existing Condition				2020 Concurrency Platform			
		V/C Ratio	Congestion Allowance	V/C Ratio Test		Congestion Allowance Test		V/C Ratio Test		Congestion Allowance Test	
				V/C Ratio	Standard Met?	No of Intersections Below the Standard	Standard Met?	V/C Ratio	Standard Met?	No of Intersections Below the Standard	Standard Met?
1	North Bellevue	0.85	3	0.64	Yes	0	Yes	0.66	Yes	0	Yes
2	Bridle Trails	0.80	4	0.69	Yes	3	Yes	0.71	Yes	3	Yes
3	Downtown	0.95	9	0.72	Yes	2	Yes	0.82	Yes	3	Yes
4	Wilburton	0.90	3	0.75	Yes	1	Yes	0.81	Yes	1	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	0.70	Yes	0	Yes
7	South Bellevue	0.85	4	0.76	Yes	1	Yes	0.76	Yes	2	Yes
8	Richards Valley	0.85	5	0.70	Yes	1	Yes	0.73	Yes	1	Yes
9	East Bellevue	0.85	5	0.83	Yes	5	Yes	0.80	Yes	4	Yes
10	Eastgate	0.90	4	0.72	Yes	1	Yes	0.73	Yes	2	Yes
11	S-E Bellevue	0.80	3	0.71	Yes	2	Yes	0.73	Yes	1	Yes
12	Bel-Red/Northrup	0.95	7	0.73	Yes	1	Yes	0.74	Yes	2	Yes
13	Factoria	0.95	5	0.79	Yes	0	Yes	0.80	Yes	0	Yes
14	Newport Hills*	-	-	-	-	-	-	-	-	-	-

\* There are no system intersections in MMA 14 and, therefore, no standards

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.

The following conclusions can be drawn from this Concurrency Update:

- Of all the MMAs, East Bellevue has the smallest cushions, both in terms of calculated V/C ratio and congestion allowance, to accommodate traffic growth. This MMA should be closely monitored in future development reviews.

- Since the majority of the East Bellevue MMA's system intersections are on 148<sup>th</sup> Ave which is a major arterial that serves Bellevue and connects to Redmond's rapidly redeveloping areas of Overlake Village and the Microsoft campus, close coordination with Redmond to identify and implement transportation system strategies in northeast Bellevue is essential to ensuring continued mobility.
- As the BelRed area continues to grow and new roadway projects are completed and open for service, it will be necessary to update the Comprehensive Plan and the Traffic Standards Code to identify additional system intersections to ensure the area is appropriately and accurately represented in future concurrency analyses.

Following the release of this Concurrency Update Report, the 2020 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 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 a typical auto reliant suburban bedroom community to a major regional employment center supported by an increasingly multimodal transportation system. The autofocused performance measure at pre-defined 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 are not a sustainable nor viable approach to meeting the city's long-term mobility needs.

As the City continues to grow, there is a need to modernize the City's Traffic Standards Code to include performance measures of all travel modes. The updated traffic standards code should serve as a new guide to a multimodal approach to concurrency to accommodate growth in a manner that is sustainable, equitable, and consistent with the goals and policies of the Comprehensive Plan.

## 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:

**2019 Existing Condition** represents the observed 2019 or latest traffic counts and existing roadway and intersection geometries and signal phasing and level of service.

**2020 Concurrency Platform (CP)** includes existing land use plus approved development with the City’s six-year Capital Investment Program (CIP) plan. It 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, 2019;
- 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, 2019; and
- 2019 existing roadway network, plus fully funded vehicle capacity improvement projects in the 2019-2025 CIP and with projects sponsored by WSDOT, City of Redmond and Sound Transit that are expected to be completed by 2025.

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. System intersections are arterial street intersections controlled by existing and likely future traffic signals. 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**

MMA		Concurrency Standard	
		V/C Ratio	Congestion 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*	-	-

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

## Methodology

The concurrency methodology for the City of Bellevue consists of both program level analysis and project specific analyses. This report is a program level analysis. At the program level, all analysis is performed using the City's EMME travel demand model in conjunction with a customized capacity analysis program based on the latest Highway Capacity Manual. The manual provides procedures to analyze intersection operating conditions. Assumptions include:

- 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 and the number of congested intersections in the area does not exceed the congestion allowance as established in the Traffic Standards Code.

Prior to this year, concurrency analyses were performed using the four-step, vehicle trip-based model in developing traffic forecasts for the concurrency platform.

This is the first year BKRCast, the new, state-of-art activity-based travel demand forecast model is used in the concurrency update. Compared to the “old” BKR model, BKRCast has many advantages. It has many more traffic analysis zones, job categories and travel modes. Pedestrian travel is fully accounted for and bike travel is explicitly represented in the model. These advantages support City efforts to develop and implement multimodal level-of-service (MMLOS) measures and standards and performance analyses.

Additionally, BKRCast is designed to be more sensitive to land use densities and mixed uses than the current model. For parking pricing, the new model looks at not only the parking charges at the destination, but also the parking availability and pricing at nearby facilities within walking distance. Additionally, because the new model simulates individual travel activities, it is more robust in forecasting travel behavior in response to real world travel conditions that affect how individuals budget their time for activities and travel throughout the day.

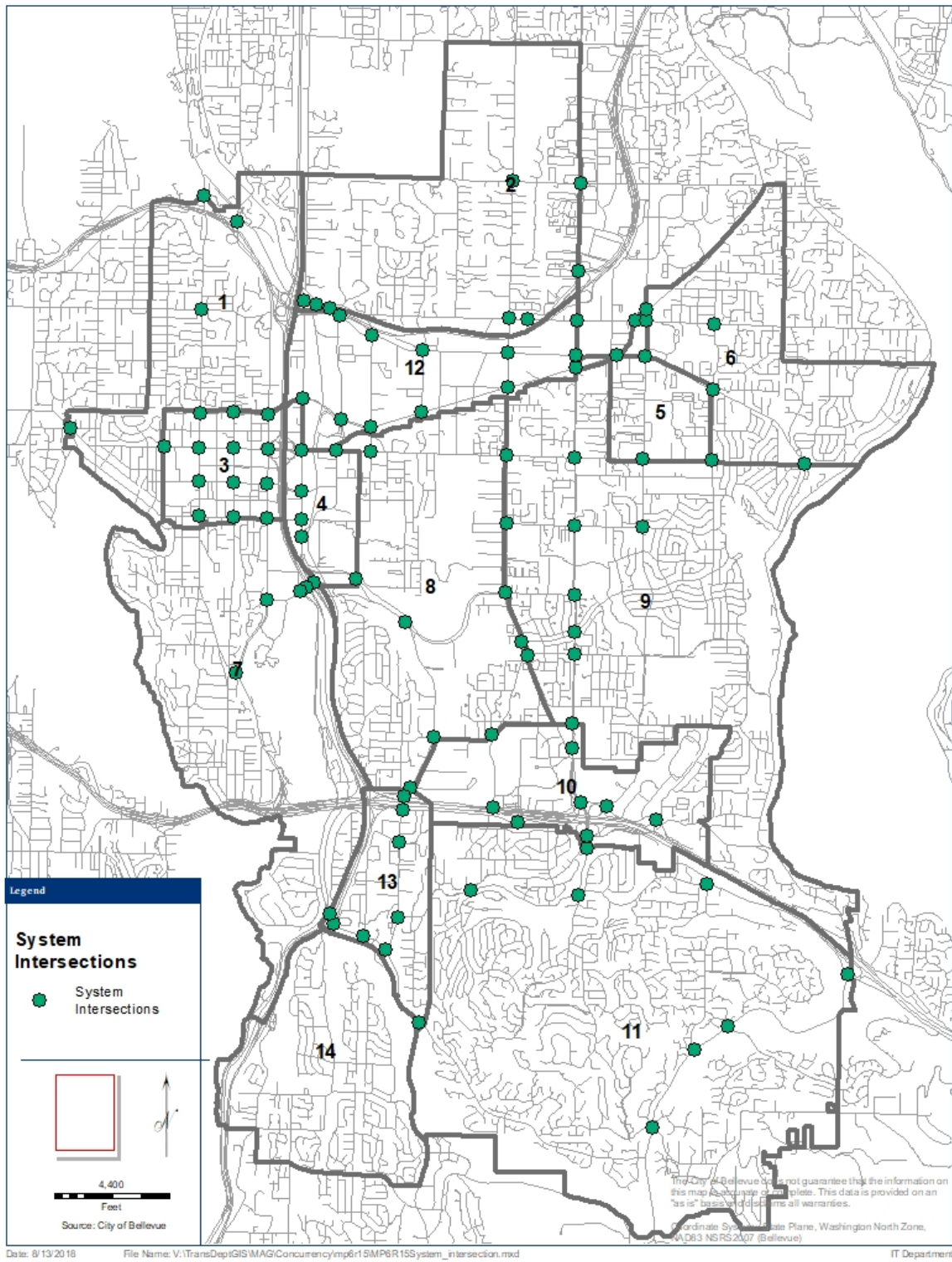
In conjunction with using a brand-new model, in early 2019, staff developed an Excel spreadsheet tool that incorporates the latest Highway Capacity Manual methodology, along with the refinements listed above. The post-processing and balancing procedures were also incorporated. This spreadsheet tool streamlines and increases the transparency of the analysis process. The results presented in this report are the product of these new tools.

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 2019. The existing land use information was extracted from the King County Tax Assessor's file as of December 31, 2019. Table 2 provides an MMA-level summary of the existing 2019 land use. Compared to the corresponding 2018 data, there was a slight drop in square footage in the "other commercial land use category". This is mainly due to demolitions that occurred last year, which are reflected in the King County Assessor data. These demolitions are in preparation for new developments that have not yet been constructed and occupied. The land use permit tracking system (AMANDA) is the source of information on new development approved by the City. Table 3 lists major development approved as of the end of 2019.

Table 3 lists major developments with valid permits as of the end 2019. Table 4 lists the approved development aggregated by MMA. This includes nearly 2,500 new dwelling units, over 4,500,000 gross square feet (GSF) of commercial space. Most of the approved development/demolition is in three MMAs: Downtown Bellevue (MMA 3), Wilburton (MMA 4), and BelRed/Northup (MMA 12). Table 5 contains existing plus approved land use totals by category for the 14 MMAs.

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

**Table 2 2019 Existing Land Use Summary**

MMA	Name	Commercial Square Feet				Residential Units		
		Office	Retail	Others	Total	SF Units	MF Units	Tot Units
1	North Bellevue	1,074,138	56,961	1,012,898	<b>2,143,997</b>	2,451	1,963	<b>4,414</b>
2	Bridle Trails	536,778	147,219	1,031,874	<b>1,715,871</b>	1,958	2,986	<b>4,944</b>
3	Downtown	8,796,630	3,378,137	5,092,870	<b>17,267,637</b>	79	9,884	<b>9,963</b>
4	Wilburton	672,448	496,391	1,716,030	<b>2,884,869</b>	194	518	<b>712</b>
5	Crossroads	106,601	478,950	560,832	<b>1,146,383</b>	525	3,623	<b>4,148</b>
6	Northeast Bellevue	354,810	-	742,169	<b>1,096,979</b>	3,332	163	<b>3,495</b>
7	South Bellevue	957,598	59,594	1,700,443	<b>2,717,635</b>	2,773	1,842	<b>4,615</b>
8	Richards Valley	201,454	21,778	555,324	<b>778,556</b>	2,719	3,315	<b>6,034</b>
9	East Bellevue	333,175	304,714	1,782,975	<b>2,420,864</b>	7,180	1,963	<b>9,143</b>
10	Eastgate	3,275,870	287,368	3,426,977	<b>6,990,215</b>	538	391	<b>929</b>
11	Southeast Bellevue	70,553	49,588	828,416	<b>948,557</b>	8,812	584	<b>9,396</b>
12	Bel-Red Northup	1,468,268	1,672,706	4,394,490	<b>7,535,464</b>	98	1,738	<b>1,836</b>
13	Factoria	1,131,886	759,788	912,958	<b>2,804,632</b>	576	1,009	<b>1,585</b>
14	Newport Hills	1,075	89,083	184,426	<b>274,584</b>	2,846	312	<b>3,158</b>
<b>Total</b>		<b>18,981,286</b>	<b>7,802,277</b>	<b>23,942,680</b>	<b>50,726,243</b>	<b>34,081</b>	<b>30,291</b>	<b>64,372</b>

Source: King County Tax Assessor's Office as of December 2019, City of Bellevue Community Development Department



**Table 3 Approved Major Developments/Demolitions as of December 31, 2019**

Developments	MMA	TAZ	Office (sqf)	Retail (sqf)	Others (sqf)	TOTAL (sqf)	Dwelling Units
The Little School	2	188	4,546	-	12,483	17,029	
PRO Sports Club, 2016 east expansion	2	191	53,765	-	-	53,765	
Brio Apartments	3	3	4,850	21,930	30,025	56,805	260
1001 Office Towers	3	6	670,687	-	16,001	686,688	
MIRA II	3	7	3,100	4,180	5,770	13,050	150
NE 10TH BELLEVUE PROJECT	3	8	-	-	2,110	2,110	102
Avenue Bellevue	3	10	16,523	55,000	134,359	205,882	327
Bellevue Parkside - GARAGE / PODIUM	3	14	-	2,127	2,943	5,070	150
One88 Bellevue Way NE - Below Grade	3	18	3,895	12,001	7,678	23,574	143
Main Street Apartments	3	19	-	-	-	-	125
Holden of Bellevue	3	22	2,491	-	22,256	24,747	136
Summit III	3	26	377,076	3,625	12,783	393,484	
Four 106	3	27	-	-	-	-	270
555 108th Ave NE Office Tower Phase 1	3	31	930,520	-	-	930,520	
E335 Downtown Bellevue Station	3	33	5,748	-	21,475	27,223	
888 Bellevue Tower	3	41	8,808	937	-	9,745	157
Bellevue South	4	222	45,953	129,115	45,190	220,258	
NET-2 - GARAGE / FOUNDATION	4	225	69,996	-	143,952	213,948	
Crossroads Village - Bldg 22	5	87	-	-	-	-	12
ST E320 South Bellevue Station	7	126	2,124	-	11,218	13,342	
Holiday Inn Express Hotel Guest Tower	7	132	-	-	89,667	89,667	
E335 E Main Station	7	134	-	-	12,378	12,378	
Sunset Hills Funeral Home	8	111	-	-	16,705	16,705	
Holmberg Company Headquarters	8	113	19,260	-	8,342	27,602	
Highland Village Apartments Ph II	9	96	883	-	-	883	12
Silverado - Bellevue	9	125	-	-	-	-	42
Highland Middle School	9	207	-	-	186,646	186,646	
Bellevue Memory Care	9	648	-	-	27,836	27,836	
E335 Wilburton Station	12	71	2,394	-	9,155	11,549	
AEGIS AT OVERLAKE: PHASE I	12	196	24,916	-	68,413	93,329	258
Bellevue DOL Townhomes	12	200	-	-	-	-	31
Lario Townhomes Building A	12	200	-	-	-	-	46
Cadillac of Bellevue	12	202	13,035	-	-	13,035	
Chevrolet, Buick, GMC of Bellevue	12	202	14,657	-	-	14,657	
E340 130th Station Building Permit	12	202	-	-	8,244	8,244	
Spring District - Building 16, 24, RES, REI	12	323	846,225	46,581	10,753	903,559	204
E335 120th/Spring District Station	12	449	3,290	-	10,075	13,365	
AutoNation BMW Dealership	12	450	24,953	-	-	24,953	
M200 OMFE - **SHARED PLANS**	12	450	26,260	-	123,934	150,194	

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

**Table 4 Approved Development Aggregated by MMA (As of December 31, 2019)**

MMA	Name	Commercial Square Feet				Residential Units		
		Office	Retail	Others	Total	SF Units	MF Units	Tot. Units
1	North Bellevue	-	-	1,647	<b>1,647</b>	-	-	-
2	Bridle Trails	58,311	-	12,483	<b>70,794</b>	4	-	<b>4</b>
3	Downtown	2,023,698	116,941	238,259	<b>2,378,898</b>	-	1,820	<b>1,820</b>
4	Wilburton	115,949	174,305	143,952	<b>434,206</b>	-	-	-
5	Crossroads	-	-	-	-	11	-	<b>11</b>
6	Northeast Bellevue	-	-	-	-	9	-	<b>9</b>
7	South Bellevue	10,739	-	113,263	<b>124,002</b>	13	-	<b>13</b>
8	Richards Valley	19,260	-	25,047	<b>44,307</b>	2	-	<b>2</b>
9	East Bellevue	883	-	219,367	<b>220,250</b>	4	54	<b>58</b>
10	Eastgate	-	-	-	-	1	-	<b>1</b>
11	Southeast Bellevue	-	-	-	-	18	-	<b>18</b>
12	Bel-Red Northup	955,730	83,114	194,041	<b>1,232,885</b>	46	493	<b>539</b>
13	Factoria	-	-	-	-	4	-	<b>4</b>
14	Newport Hills	-	-	-	-	13	-	<b>13</b>
<b>Total</b>		<b>3,184,570</b>	<b>374,360</b>	<b>948,059</b>	<b>4,506,989</b>	<b>125</b>	<b>2,367</b>	<b>2,492</b>

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

**Table 5 Existing Plus Approved Development for 2020 Concurrency Platform**

MMA	Name	Commercial Square Feet				Residential Units		
		Office	Retail	Others	Total	SF Units	MF Units	Tot. Units
1	North Bellevue	1,074,138	56,961	1,014,545	<b>2,145,644</b>	2,451	1,963	<b>4,414</b>
2	Bridle Trails	595,089	147,219	1,044,357	<b>1,786,665</b>	1,962	2,986	<b>4,948</b>
3	Downtown	10,820,328	3,495,078	5,331,129	<b>19,646,535</b>	79	11,704	<b>11,783</b>
4	Wilburton	788,397	670,696	1,859,982	<b>3,319,075</b>	194	518	<b>712</b>
5	Crossroads	106,601	478,950	560,832	<b>1,146,383</b>	536	3,623	<b>4,159</b>
6	Northeast Bellevue	354,810	-	742,169	<b>1,096,979</b>	3,341	163	<b>3,504</b>
7	South Bellevue	968,337	59,594	1,813,706	<b>2,841,637</b>	2,786	1,842	<b>4,628</b>
8	Richards Valley	220,714	21,778	580,371	<b>822,863</b>	2,721	3,315	<b>6,036</b>
9	East Bellevue	334,058	304,714	2,002,342	<b>2,641,114</b>	7,184	2,017	<b>9,201</b>
10	Eastgate	3,275,870	287,368	3,426,977	<b>6,990,215</b>	539	391	<b>930</b>
11	Southeast Bellevue	70,553	49,588	828,416	<b>948,557</b>	8,830	584	<b>9,414</b>
12	Bel-Red Northup	2,423,998	1,755,820	4,588,531	<b>8,768,349</b>	144	2,231	<b>2,375</b>
13	Factoria	1,131,886	759,788	912,958	<b>2,804,632</b>	580	1,009	<b>1,589</b>
14	Newport Hills	1,075	89,083	184,426	<b>274,584</b>	2,859	312	<b>3,171</b>
<b>Total</b>		<b>22,165,856</b>	<b>8,176,637</b>	<b>24,890,739</b>	<b>55,233,232</b>	<b>34,206</b>	<b>32,658</b>	<b>66,864</b>

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

### ***Transportation Network***

The adopted 2019-2025 CIP is the basis for identifying transportation projects to be included in this analysis. The concurrency model network includes all fully funded projects that would be completed and in operation by 2025. These capacity projects include roadway widenings, intersection signalization and channelization, and access improvements. These capacity projects are described in Table 6 and shown in Figure 2.

Major capacity projects funded by WSDOT and Sound Transit that are expected to be completed by 2025, namely the I-90 auxiliary lanes between Eastgate and Issaquah and the East Link Light Rail Extension. Improvements at the two intersections on the city boundary – Bel-Red Road/NE 24th Street and 156th Avenue NE/Bel-Red Road – were funded and will be constructed by the City of Redmond. The improvements add exclusive southbound right turn lanes at those intersections.

### ***Traffic Counts***

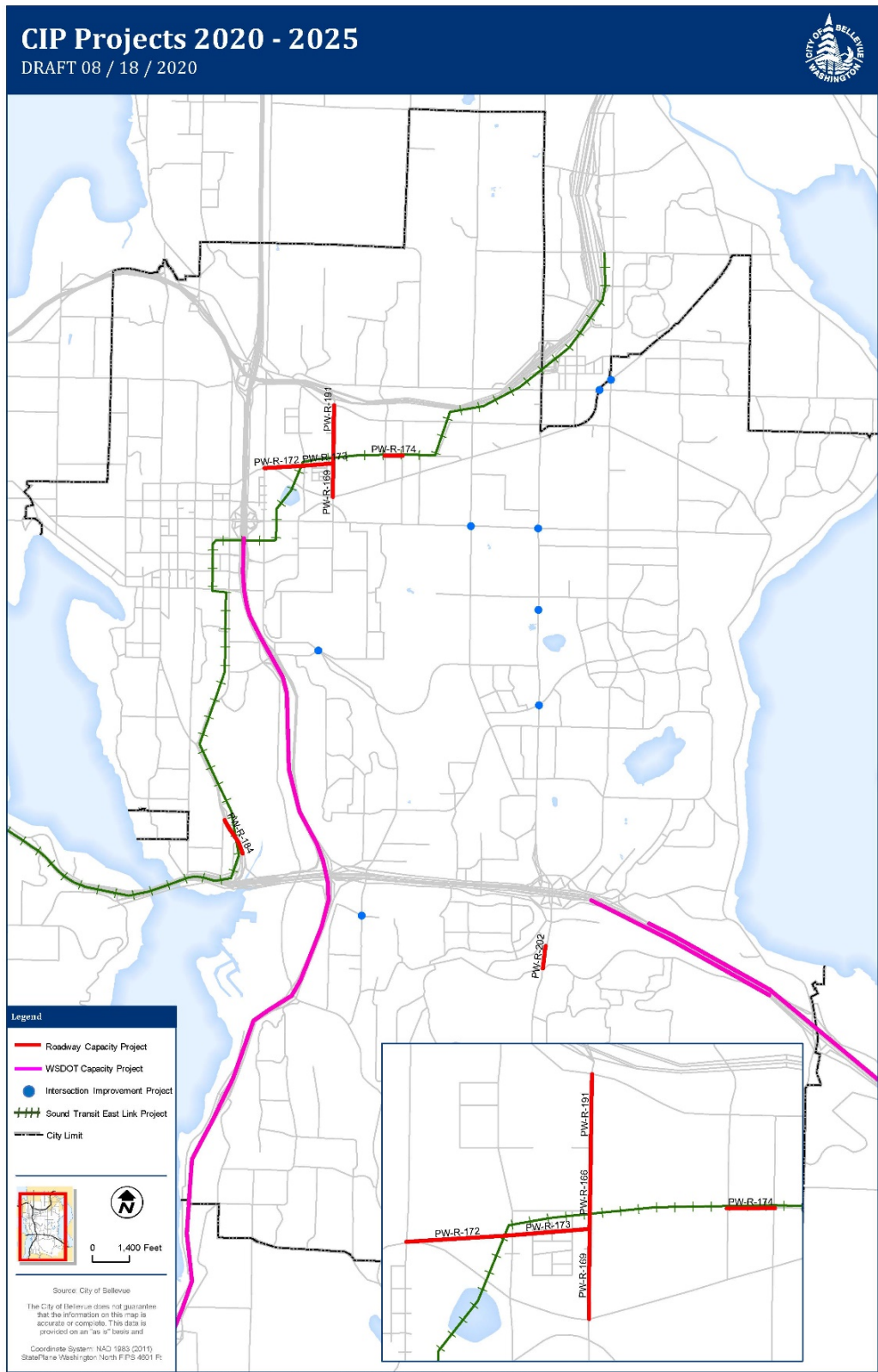
The latest PM peak, two-hour average vehicle and pedestrian counts were used along with the 2019 existing intersection geometry and signal timing plans to calculate intersection V/C ratios for the existing condition. These counts were also used to adjust the outputs from the 2020 Concurrency Platform to account for model validation differences.

**Table 6 Capacity Projects Included in the 2019 Concurrency Platform Analysis**

<b>CIP# or Sponsor</b>	<b>Project Name</b>	<b>Description</b>
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-169	124th Avenue NE - NE 12th Street to NE Spring Boulevard	Widen 124th 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-170	130th Avenue NE/NE 20th to NE BelRed Road	The roadway cross-section will include one through lane in each direction, and an additional center turn lane between NE Spring Blvd and BelRed Road.
R-172	NE Spring Boulevard (Zone 1) - 116th 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 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-174	NE Spring Boulevard - 130th Avenue 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-185	Newport Way/150th Ave Intersection	Add southbound turn lanes from 150 Ave SE to SE Newport Way.
R-190	124th Avenue NE/NE 8th to NE 12th Streets	This project involves taking a NB lane to make room for the construction of a separated multipurpose pathway on both side son 124th Avenue NE between NE 8th and NE 12th Streets.
R-191	124th Avenue NE/Ichigo Way (NE 18th St) to Northup Way	Widen 124th Avenue NE to five lanes, including 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.
Bellevue*	148th Avenue SE/Lake Hills Boulevard 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*	NE 8th St/148 Ave NE	Add second left-turn-lane on all four approaches.
Bellevue*	NE 8th St/140 Ave NE	Add second southbound thru lane.
Bellevue*	148th Avenue SE/Kelsey Creek Shopping Center	Intersection operation improvement: add signalized intersection.
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.
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.

\* Congestion Levy Funded Project

Figure 2 Capacity Projects Included in the 2020 Concurrency Platform Analysis



## Concurrency Analysis Findings

The V/C ratios for the 2019 Existing Condition and the 2020 Concurrency Platform are compared to the city's concurrency standard as depicted in Table 7.

**Table 7 Concurrency Analysis Results by MMA**

MMA		Concurrency Standard		2019 Existing Condition				2020 Concurrency Platform			
		V/C Ratio	Congestion Allowance	V/C Ratio	Remaining Capacity (V/C Ratio)	Congestion Allowance Consumed	Remaining Congestion Allowance	V/C Ratio	Remaining Capacity (V/C Ratio)	Congestion Allowance Consumed	Remaining Congestion Allowance
1	North Bellevue	0.85	3	0.64	0.21	0	3	0.66	0.19	0	3
2	Bridle Trails	0.80	4	0.69	0.11	3	1	0.71	0.09	3	1
3	Downtown	0.95	9	0.72	0.23	2	7	0.82	0.13	3	6
4	Wilburton	0.90	3	0.75	0.15	1	2	0.81	0.09	1	2
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	0.70	0.10	0	2
7	South Bellevue	0.85	4	0.76	0.09	1	3	0.76	0.09	2	2
8	Richards Valley	0.85	5	0.70	0.15	1	4	0.73	0.12	1	4
9	East Bellevue	0.85	5	0.83	0.02	5	0	0.80	0.05	4	1
10	Eastgate	0.90	4	0.72	0.18	1	3	0.73	0.17	2	2
11	Southeast Bellevue	0.80	3	0.71	0.09	2	1	0.73	0.07	1	2
12	BelRed/Northup	0.95	7	0.73	0.22	1	6	0.74	0.21	2	5
13	Factoria	0.95	5	0.79	0.16	0	5	0.80	0.15	0	5
14	Newport Hills	-	-	-	-	-	-	-	-	-	-

\* There are no system intersections in MMA 14 and, therefore, is not included in the analysis.

### 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). Remaining 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 2020 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 0.05, thanks to the three planned intersection improvement projects funded by the Neighborhood Congestion Relief Levy.

### Intersection Congestion Analysis by MMA

The V/C ratio analysis for individual system intersections by MMA for the two scenarios are shown in Table 8. 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 but within 0.05 of the standard*

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

**Table 8 Intersection Congestion Analysis by MMA**

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

Intersection			2019 Existing		2020 CP	
ID#	Cross Streets		V/C	Standard Met?	V/C	Standard Met?
69	Bellevue Way NE	NE 24th Street	0.67	Yes	0.68	Yes
74	Bellevue Way NE	Northup Way NE	0.60	Yes	0.61	Yes
78	108th Ave NE	Northup Way NE	0.66	Yes	0.67	Yes
93	Lk Washington B	NE 1st/NE 10 St.	0.64	Yes	0.68	Yes
<b>Areawide</b>			<b>0.64</b>	<b>Yes</b>	<b>0.66</b>	<b>Yes</b>

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

Intersection			2019 Existing		2020 CP	
ID#	Cross Streets		V/C	Standard Met?	V/C	Standard Met?
64	140th Ave NE	NE 24th Street	0.84	No	0.86	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	0.94	No
118	Northup Way	NE 24th Street	0.49	Yes	0.54	Yes
123	140th Ave NE	NE 40th Street	-	-	-	-
188	148th Ave NE	NE 29th Place	0.83	No	0.86	No
189	NE 29th Place	NE 24th Street	0.35	Yes	0.35	Yes
<b>Areawide</b>			<b>0.69</b>	<b>Yes</b>	<b>0.71</b>	<b>Yes</b>

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

Intersection			2019 Existing		2020 CP	
ID#	Cross Streets		V/C	Standard Met?	V/C	Standard Met?
3	100th Ave NE	NE 8th Street	0.80	Yes	0.87	Yes
5	Bellevue Way NE	NE 12th Street	0.71	Yes	0.76	Yes
7	Bellevue Way NE	NE 8th Street	0.66	Yes	0.73	Yes
8	Bellevue Way NE	NE 4th Street	0.59	Yes	0.68	Yes
9	Bellevue Way	Main Street	0.93	Barely	0.91	Barely
20	108th Ave NE	NE 12th Street	0.51	Yes	0.61	Yes
21	108th Ave NE	NE 8th Street	0.66	Yes	0.80	Yes
22	108th Ave NE	NE 4th Street	0.79	Yes	0.98	No
24	108th Ave	Main Street	0.36	Yes	0.38	Yes
25	112th Ave NE	NE 12th Street	0.77	Yes	0.87	Yes
26	112th Ave NE	NE 8th Street	1.00	No	1.13	No
36	112th Ave	Main Street	0.98	No	1.12	No
72	112th Ave NE	NE 4th Street	0.67	Yes	0.84	Yes
<b>Areawide</b>			<b>0.72</b>	<b>Yes</b>	<b>0.82</b>	<b>Yes</b>

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

**Table 8 Intersection Analysis by MMA, Cont'd**

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

Intersection			2019 Existing		2020 CP	
ID#	Cross Streets		V/C	Standard Met?	V/C	Standard Met?
30	116th Ave NE	NE 8th Street	0.73	Yes	0.73	Yes
73	116th Ave	Main Street	0.65	Yes	0.71	Yes
131	116th Ave SE	SE 1st Street	0.85	Barely	0.89	Barely
139	116th Ave NE	NE 4th Street	0.92	No	1.07	No
233	120th Ave NE	NE 8th Street	0.62	Yes	0.63	Yes
Areawide			0.75	Yes	0.81	Yes

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

Intersection			2019 Existing		2020 CP	
ID#	Cross Streets		V/C	Standard Met?	V/C	Standard Met?
58	Bel-Red Rd	NE 20th Street	0.54	Yes	0.53	Yes
62	156th Ave NE	Northup Way	0.85	Barely	0.82	Yes
63	156th Ave NE	NE 8th Street	0.75	Yes	0.76	Yes
Areawide			0.71	Yes	0.70	Yes

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

Intersection			2019 Existing		2020 CP	
ID#	Cross Streets		V/C	Standard Met?	V/C	Standard Met?
75	164th Ave NE	NE 24th Street	0.69	Yes	0.69	Yes
76	164th Ave NE	Northup Way	0.74	Yes	0.72	Yes
87	164th Ave NE	NE 8th Street	0.68	Yes	0.70	Yes
111	Northup Way	NE 8th Street	-	-	-	-
Areawide			0.70	Yes	0.70	Yes

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

Intersection			2019 Existing		2020 CP	
ID#	Cross Streets		V/C	Standard Met?	V/C	Standard Met?
14	112th Ave SE	Bellevue Way SE	0.77	Yes	0.86	No
89	112th Ave SE	SE 8th Street	0.64	Yes	0.53	Yes
102	118th Ave SE	SE 8th Street	1.02	No	0.90	No
219	I-405 NB Ramps	SE 8th Street	0.71	Yes	0.77	Yes
226	I-405 SB Ramps	SE 8th Street	0.66	Yes	0.78	Yes
Areawide			0.76	Yes	0.76	Yes

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



**Table 8 Intersection Analysis by MMA, Cont'd**

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

Intersection			2019 Existing		2020 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	0.83	Barely
44	145th Place SE	Lake Hills Blvd	0.60	Yes	0.61	Yes
45	145th Place SE	SE 16th Street	0.67	Yes	0.69	Yes
71	Lk Hills Connector	SE 8th St	1.03	No	1.03	No
82	Richards Rd	Kamber Rd	0.81	Barely	0.82	Barely
85	Richards Rd	SE 32nd Street	0.61	Yes	0.68	Yes
134	Richards Rd	Lk Hills Connector	0.66	Yes	0.71	Yes
280	139th Ave SE	Kamber Road	0.62	Yes	0.62	Yes
<b>Areawide</b>			<b>0.70</b>	<b>Yes</b>	<b>0.73</b>	<b>Yes</b>

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

Intersection			2019 Existing		2020 CP	
ID#	Cross Streets		V/C	Standard Met?	V/C	Standard Met?
41	140th Ave NE	NE 8th Street	0.79	Yes	0.78	Yes
42	140th Ave	Main Street	0.60	Yes	0.60	Yes
49	148th Ave NE	NE 8th Street	0.99	No	0.89	No
50	148th Ave	Main Street	0.95	No	0.92	No
51	148th Ave SE	Lake Hills Blvd	0.97	No	0.85	Barely
52	148th Ave SE	SE 16th Street	0.88	No	0.89	No
55	148th Ave SE	SE 24th Street	0.87	No	0.86	No
65	148th Ave SE	SE 8th Street	0.79	Yes	0.77	Yes
83	156th Ave	Main Street	0.69	Yes	0.70	Yes
<b>Areawide</b>			<b>0.83</b>	<b>Yes</b>	<b>0.80</b>	<b>Yes</b>

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

Intersection			2019 Existing		2020 CP	
ID#	Cross Streets		V/C	Standard Met?	V/C	Standard Met?
56	148th Ave SE	SE 27th Street	0.64	Yes	0.64	Yes
86	156th Ave SE	SE Eastgate Way	0.58	Yes	0.61	Yes
92	161st Ave SE	SE Eastgate Way	0.56	Yes	0.54	Yes
101	150th Ave SE	SE Eastgate Way	1.01	No	0.97	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	0.88	Barely
272	139th Ave SE	SE Eastgate Way	0.52	Yes	0.51	Yes
<b>Areawide</b>			<b>0.72</b>	<b>Yes</b>	<b>0.73</b>	<b>Yes</b>

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

**Table 8 Intersection Analysis by MMA, Cont'd**

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

Intersection			2019 Existing		2020 CP	
ID#	Cross Streets		V/C	Standard Met?	V/C	Standard Met?
99	Somerset Blvd	SE Newport Way	0.63	Yes	0.68	Yes
133	150th Ave SE	SE Newport Way	0.89	No	0.76	Barely
174	150th Ave SE	SE 38th Street	0.80	Barely	0.77	Barely
218	Lakemont Blvd	SE 63rd St	0.66	Yes	0.66	Yes
228	Lakemont Blvd	SE Newport Way	0.89	No	1.03	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	0.55	Yes
<b>Areawide</b>			<b>0.71</b>	<b>Yes</b>	<b>0.73</b>	<b>Yes</b>

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

Intersection			2019 Existing		2020 CP	
ID#	Cross Streets		V/C	Standard Met?	V/C	Standard Met?
29	116th Ave NE	NE 12th Street	0.80	Yes	0.96	No
32	120th Ave NE	NE 12th Street	0.57	Yes	0.57	Yes
34	124th Ave NE	Bel-Red Rd	0.82	Yes	0.79	Yes
37	130th Ave NE	Bel-Red Rd	0.57	Yes	0.56	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	0.95	Barely	0.94	Barely
48	148th Ave NE	Bel-Red Rd	0.98	No	1.00	No
59	Bel-Red Rd	NE 24th Street	0.62	Yes	0.53	Yes
60	156th Ave NE	Bel-Red Rd	0.79	Yes	0.68	Yes
61	156th Ave NE	NE 24th Street	0.83	Yes	0.83	Yes
68	130th Ave NE	NE 20th Street	0.60	Yes	0.63	Yes
81	148th Ave NE	NE 24th Street	0.93	Barely	0.93	Barely
88	124th Ave NE	Northup Way NE	0.67	Yes	0.75	Yes
117	120th Ave NE	NE 20th Street	0.31	Yes	0.43	Yes
<b>Areawide</b>			<b>0.73</b>	<b>Yes</b>	<b>0.74</b>	<b>Yes</b>

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

Intersection			2019 Existing		2020 CP	
ID#	Cross Streets		V/C	Standard Met?	V/C	Standard Met?
98	Coal Creek Pkwy	Forest Drive	0.86	Yes	0.83	Yes
105	Richards Rd	SE Eastgate Way	0.79	Yes	0.79	Yes
202	Factoria Blvd.	SE Newport Way	0.77	Yes	0.82	Yes
203	Factoria Blvd.	Coal Creek Pkwy	0.73	Yes	0.79	Yes
204	Factoria Blvd.	SE 36th Street	0.88	Yes	0.82	Yes
220	I-405 NB Ramps	Coal Creek Pkwy	0.71	Yes	0.84	Yes
221	I-405 SB Ramps	Coal Creek Pkwy	0.81	Yes	0.76	Yes
222	Factoria Blvd.	SE 38th Place	0.85	Yes	0.80	Yes
284	124th Ave SE	Coal Creek Pkwy	0.74	Yes	0.77	Yes
<b>Areawide</b>			<b>0.79</b>	<b>Yes</b>	<b>0.80</b>	<b>Yes</b>

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

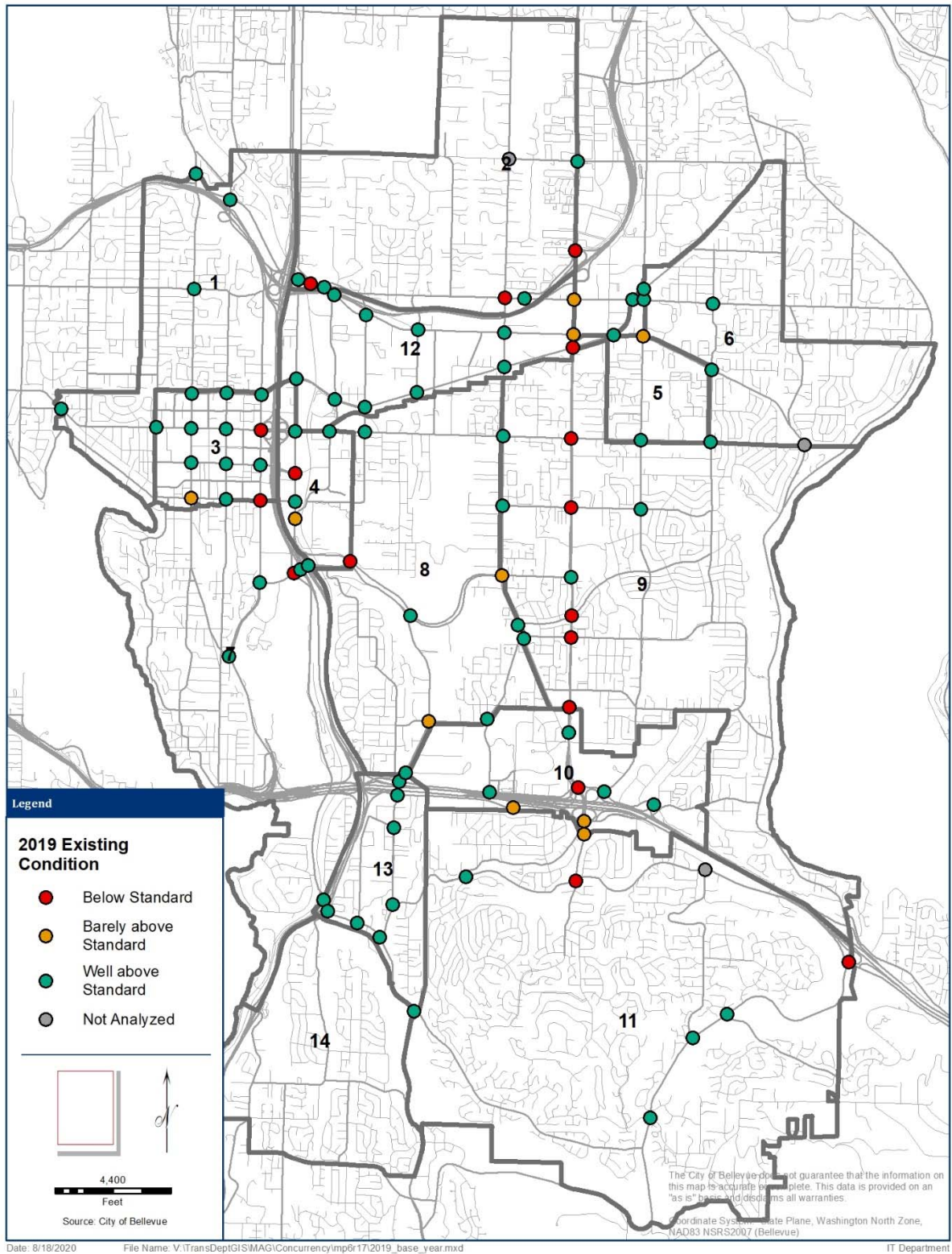
Under 2019 existing conditions, the total number of intersections that do not meet the MMA V/C standard is 17, compared to the total of 56 allowed for all MMAs. Under the 2020 CP, with the CIP and other funded projects completed and approved development in place, all MMAs meet their respective congestion allowance standards. The number of intersections that do not meet the standard is expected to increase to 19; the number of intersections approaching the V/C standards increased from 10 to 11. Results for each MMA are as follows:

- North Bellevue (MMA 1): Under both the 2019 existing condition and 2020 CP, all four system intersections met the standard.
- Bridle Trails (MMA 2): In 2019, three intersections did not meet the V/C standard. Under the 2020 CP, the number of intersections exceeding the standard is expected to remain the same, while the intersection at 116<sup>th</sup> Ave NE and Northup Way NE changes from 0.73 under the 2019 existing condition to 0.75 (barely met standard) in 2020 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 2020 CP, within the nine allowed. The intersection at Bellevue Way and Main Street barely passed under both conditions.
- Wilburton (MMA 4): In 2019, one intersection did not meet the V/C standard. Under the 2020 CP, the number of intersections exceeding the standard is expected to remain at one, within the three allowed. The intersection at 116<sup>th</sup> Ave SE and SE 1<sup>st</sup> St barely passed under both conditions.
- Crossroads (MMA 5) and North-East Bellevue (MMA 6): All system intersections met the standard under the existing condition; little change is expected under the 2020 CP.
- North-East Bellevue (MMA 6): Under both the 2019 existing condition and 2020 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 2020 CP, still within the four allowed.
- Richards Valley (MMA 8): Under the existing condition, one of the nine system intersections did not meet the standard, within the five allowed. No major change is expected under 2020 CP. The number of intersections that barely pass is expected to remain at two.
- 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 2020 CP, with the help of three Neighborhood Congestion Relief projects, the number of intersections exceeding the standard is expected to reduce by one; the areawide V/C ratio is expected to drop to 0.80.

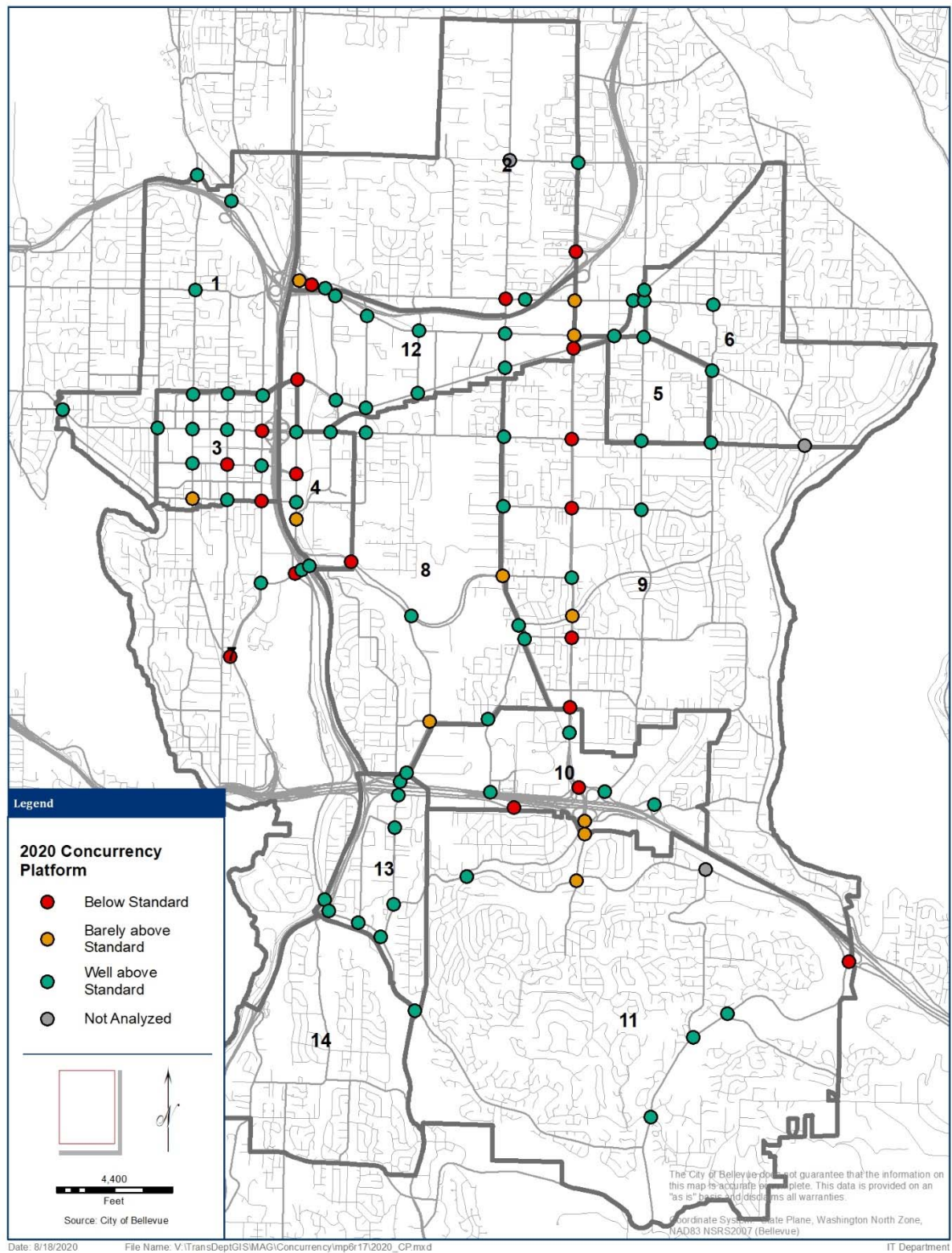
- Eastgate (MMA 10): Under the existing condition, the number of intersections exceeding the V/C standard is one with two barely passing. Under the 2020 CP, one of the two intersections that barely passed in 2019 is expected to exceed the standard, increasing the total number of intersections not meeting 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 2020 CP, helped by the expected completion of the I-90 Auxiliary Lane Project, only one intersection exceeds the V/C standard. One of the two intersections that did not pass in 2019 improved to meeting the standard under 2020 CP, although just barely.
- Bel-Red/Northup (MMA 12): Under the 2019 existing condition, one of the system intersections exceeded the standard. Under the 2020 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. This is expected to be little changed under the 2020 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 2020 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.

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



**Figure 4 2020 Concurrency Platform (PM Peak) System Intersection Assessment**





## Conclusion

CIP and Neighborhood Congestion Levy funded transportation projects that increase vehicle capacity will accommodate the increased demand associated with new development permitted through December 31, 2019. All MMAs meet their congestion allowance and all MMAs are within the average V/C ratios allowed by the concurrency standards.

Of all the MMAs, East Bellevue has the smallest cushion, both in terms of calculated V/C ratio and congestion allowance, to accommodate traffic growth.

Since the majority of East Bellevue MMA's System intersections are on 148<sup>th</sup> Ave and since 148<sup>th</sup> Ave is a major arterial that serves Bellevue and connects to Redmond's rapidly redeveloping areas of Overlake Village and the Microsoft campus, close coordination with Redmond to identify and implement transportation system strategies in this area of Bellevue is essential to ensuring continued vehicle mobility.

It should be noted that the concurrency findings presented in this update reflect the impact of approved developments through the end of 2019. 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 autofocused performance measure at pre-defined 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.

As the city continues to grow, there is a need to update the City's Traffic Standards Code to include performance measures for all travel modes. The Council has already taken the first steps in this direction through adoption of the following policies:

- 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.

The updated Traffic Standards Code should 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 2020 Concurrency Platform will be used as the background condition for project-level development review modeling until a new concurrency update is completed or the existing Traffic Standards Code is updated, whichever comes first.



## 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.

**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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