

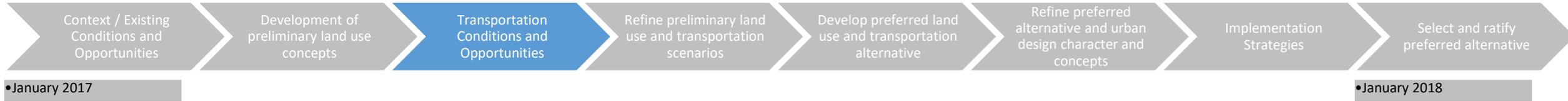
Wilburton Commercial Area CAC

Meeting #6

June 1st, 2016



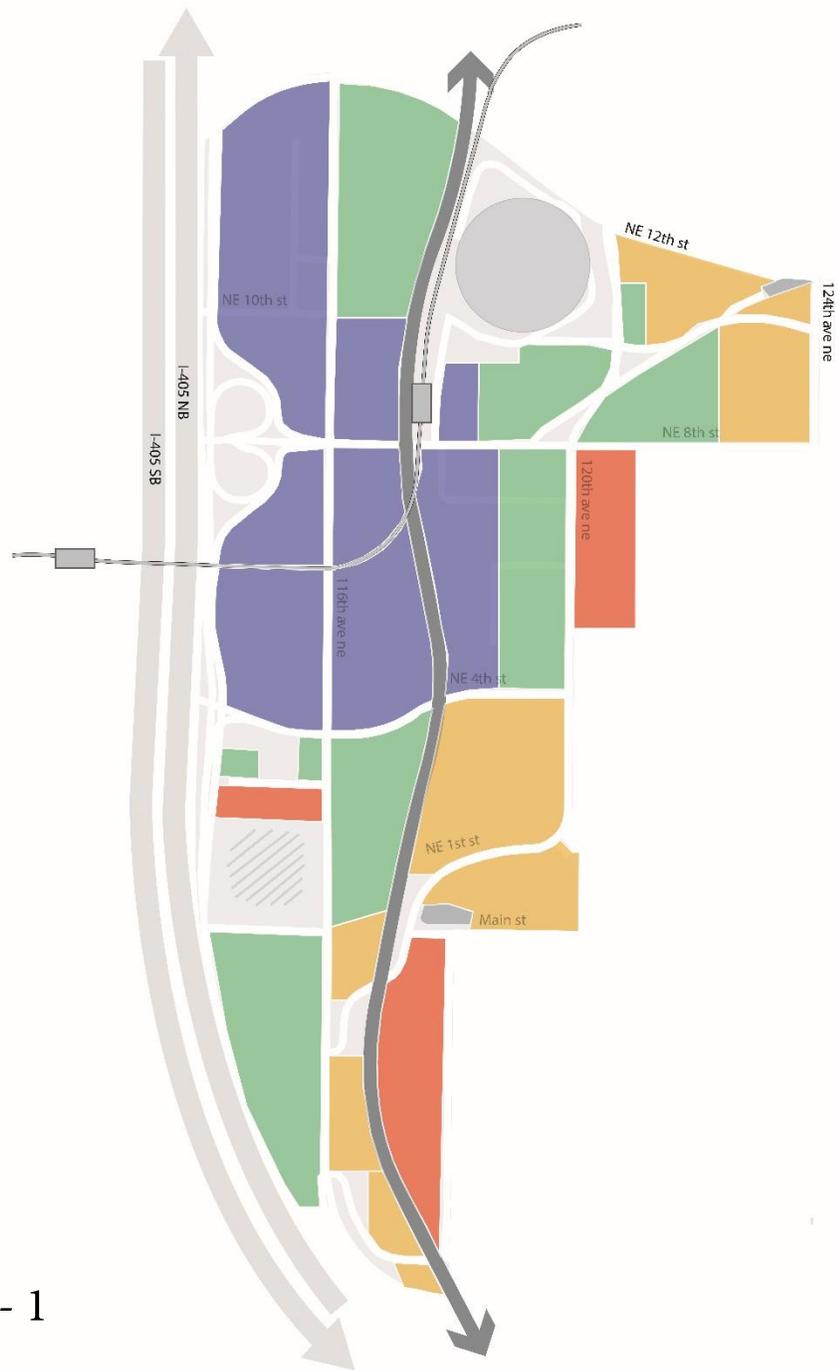
Where We Are



Tonight's Topics

- **Height and Density Refinement**
- **Multi-Modal Level of Service**
- **Transportation Conditions and Precedents**
- **Exercises**
 - **116th Avenue NE**
 - **Internal network**

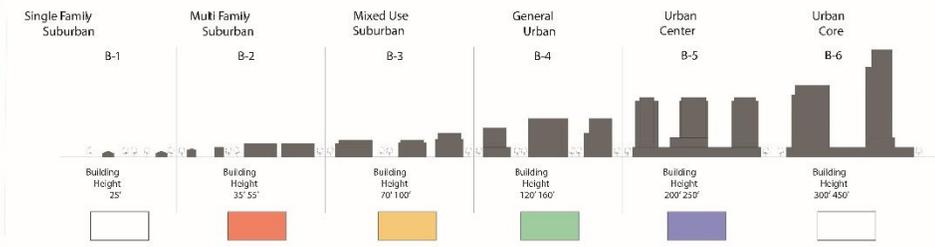




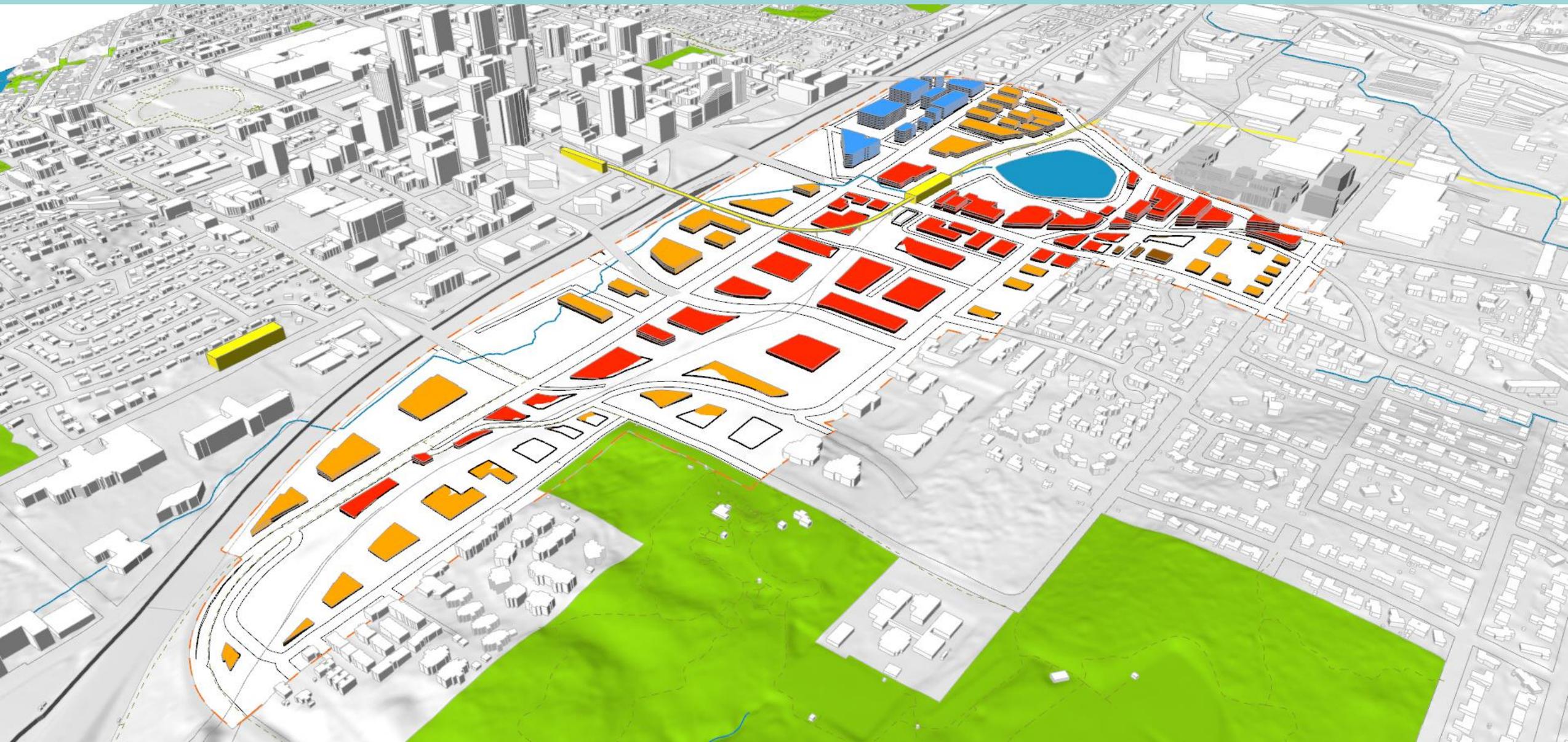
CAC - 1



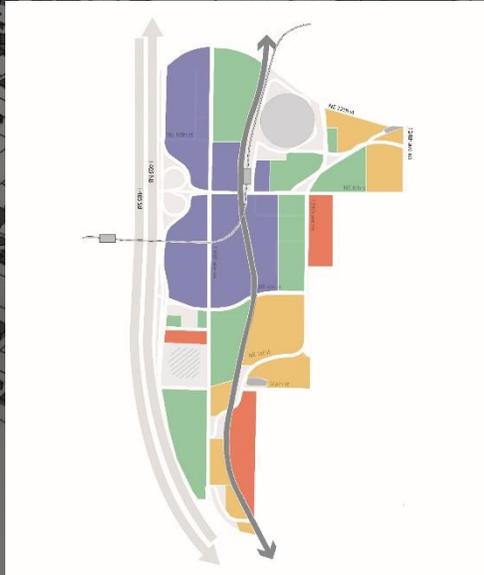
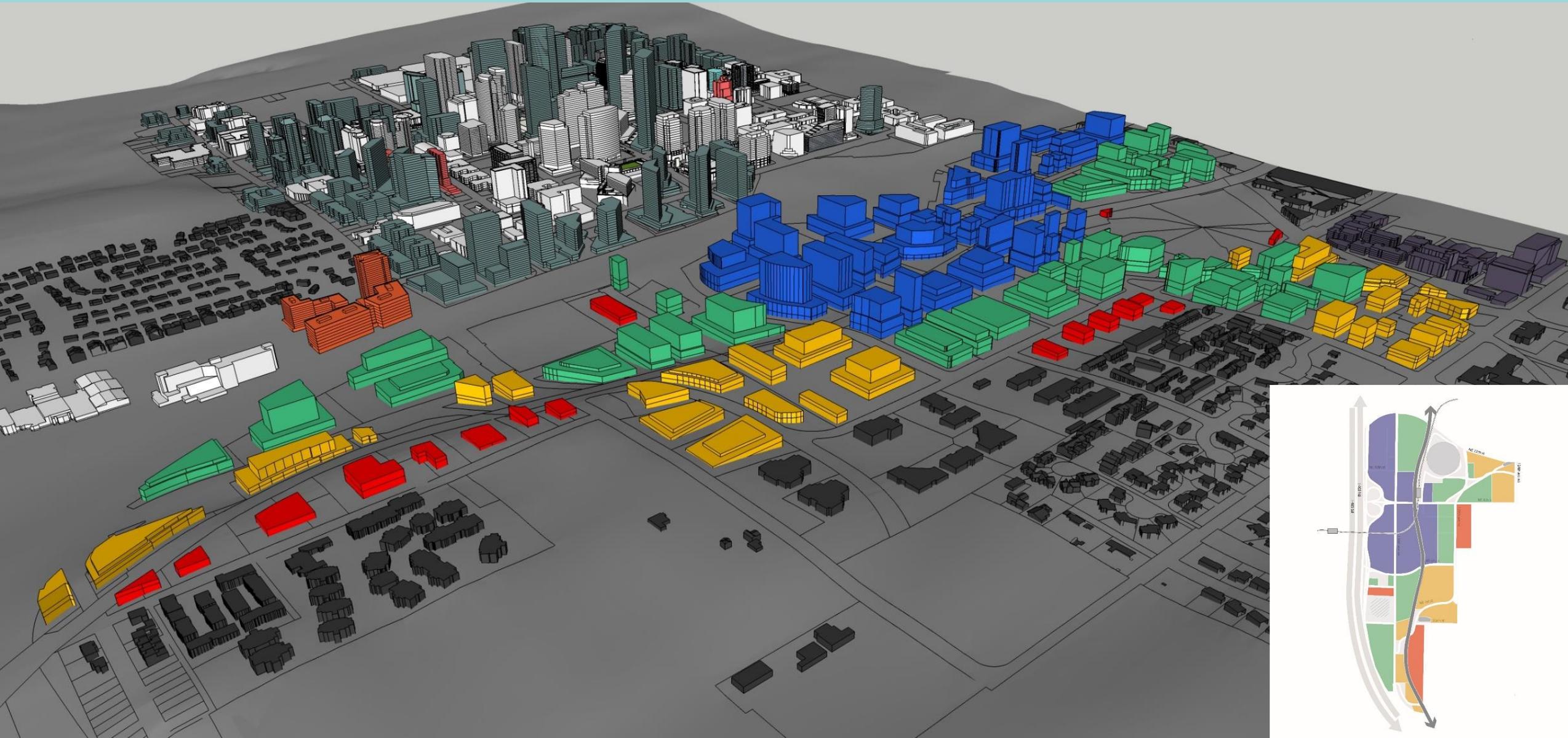
CAC - 2



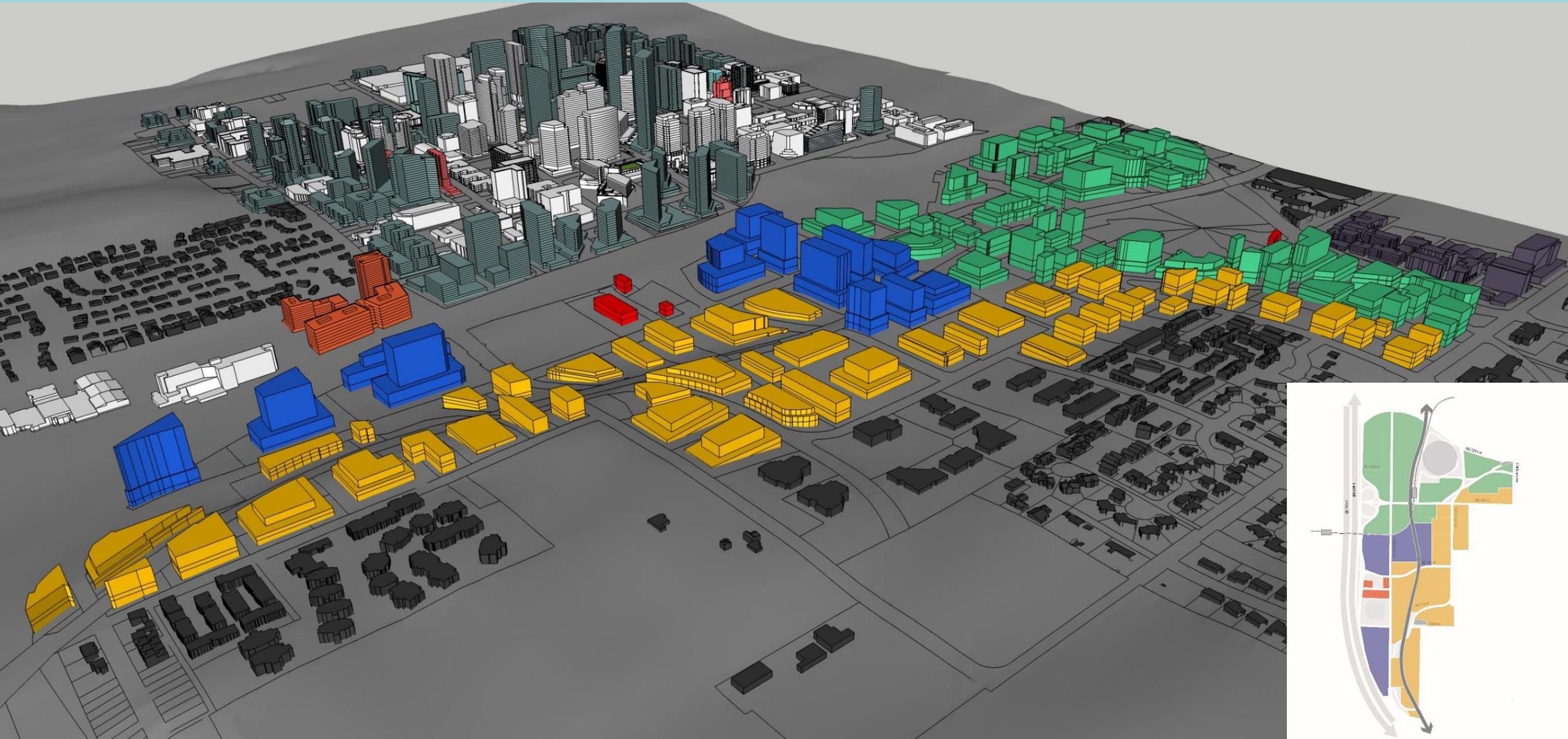
CAC – No Action



CAC – Concept 1



CAC – Concept 2

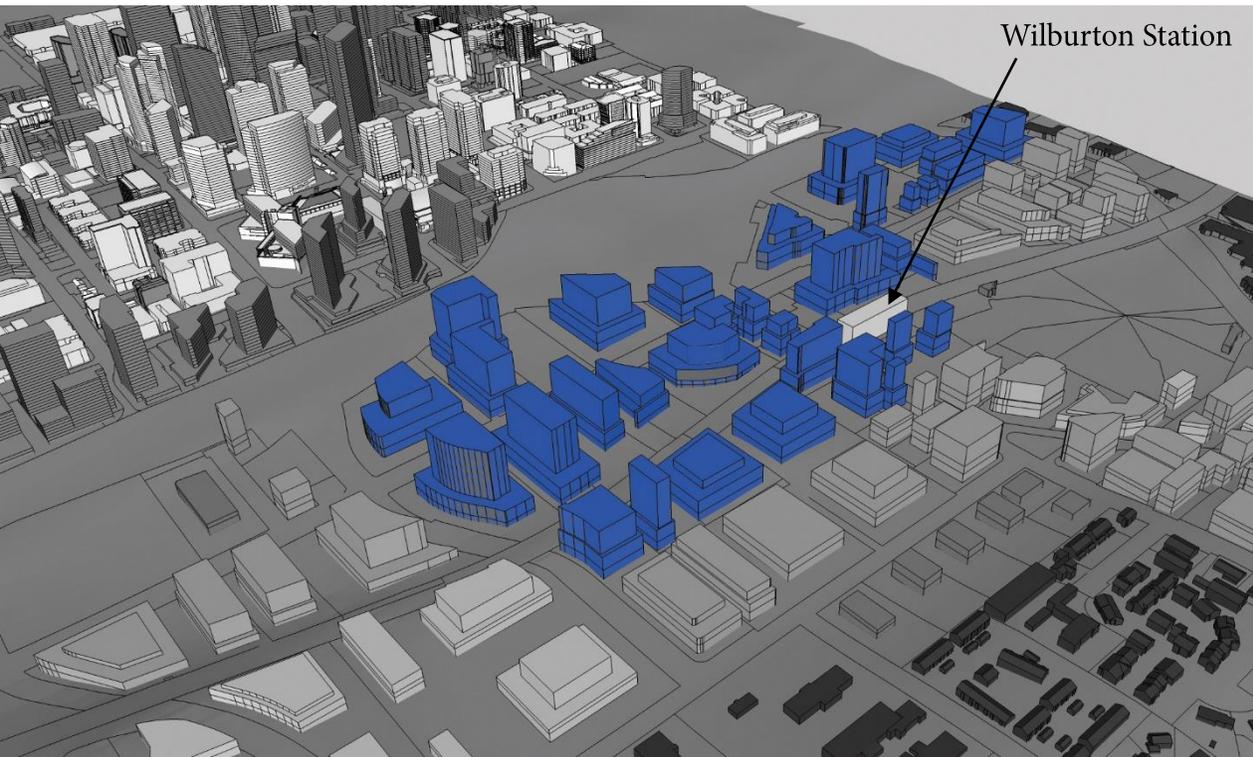


Urban Center

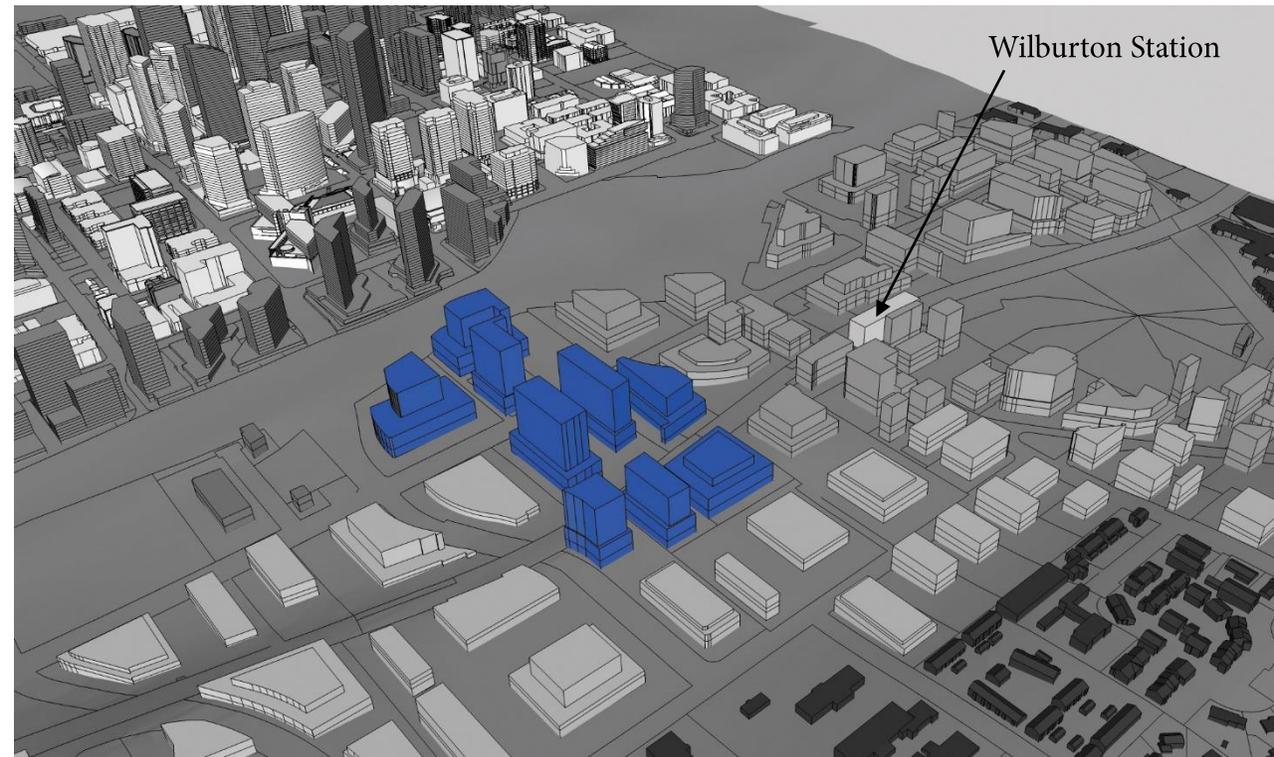
- **Key Questions**

- Preference for one or two?
- Based on the preference should the center (blue) be expanded or reduced?
- Should there be a greater intensity core? (purple – not shown)

Group One



Group Two

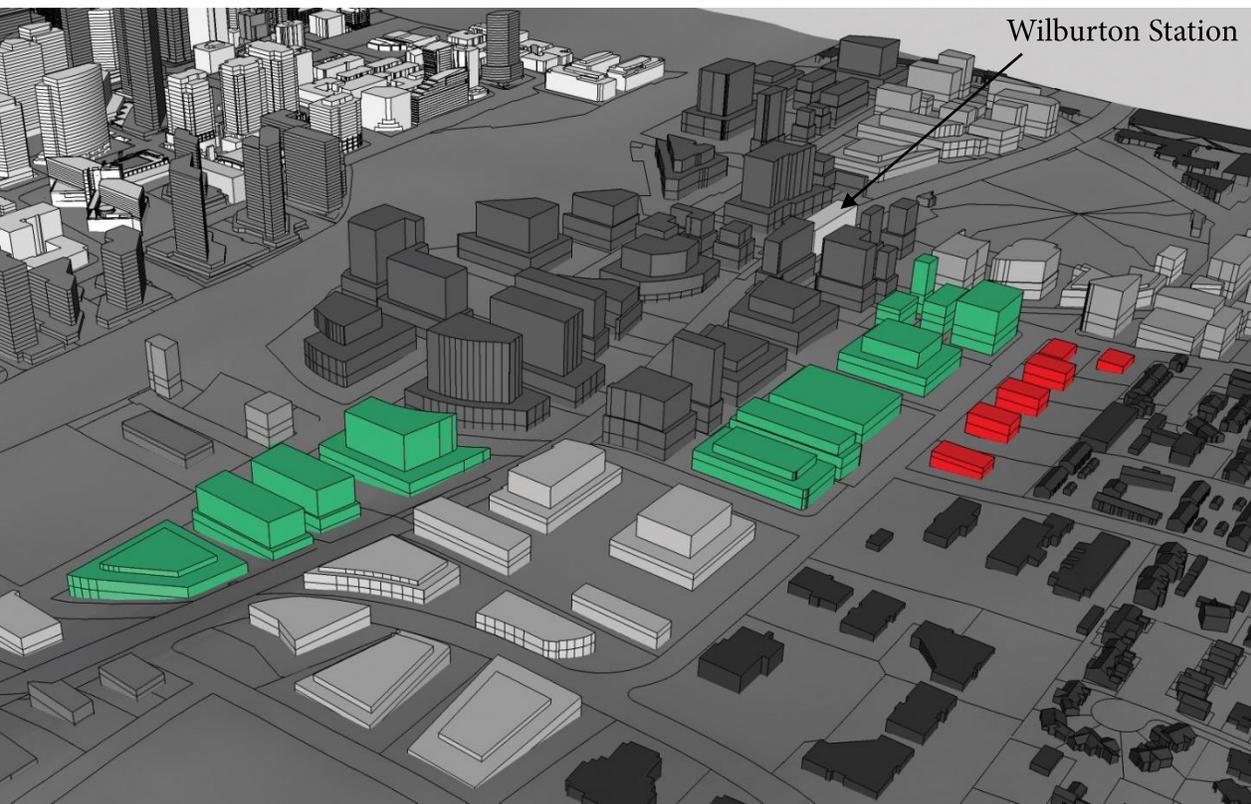


Core Transition Areas

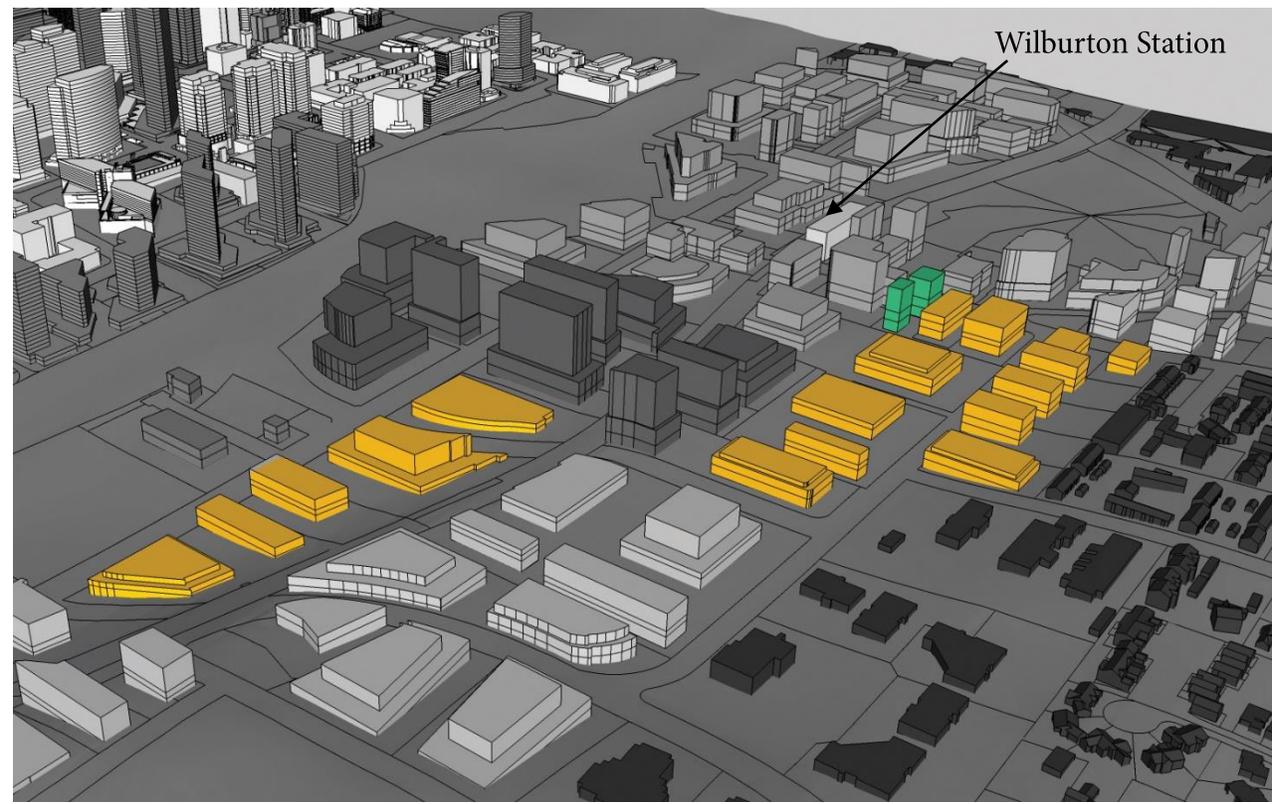
- **Key Questions**

- Level of step down from the core and relationship to the ERC? (east and south)
- Properties on 120th abutting the Wilburton Hill neighborhood?

Group One



Group Two

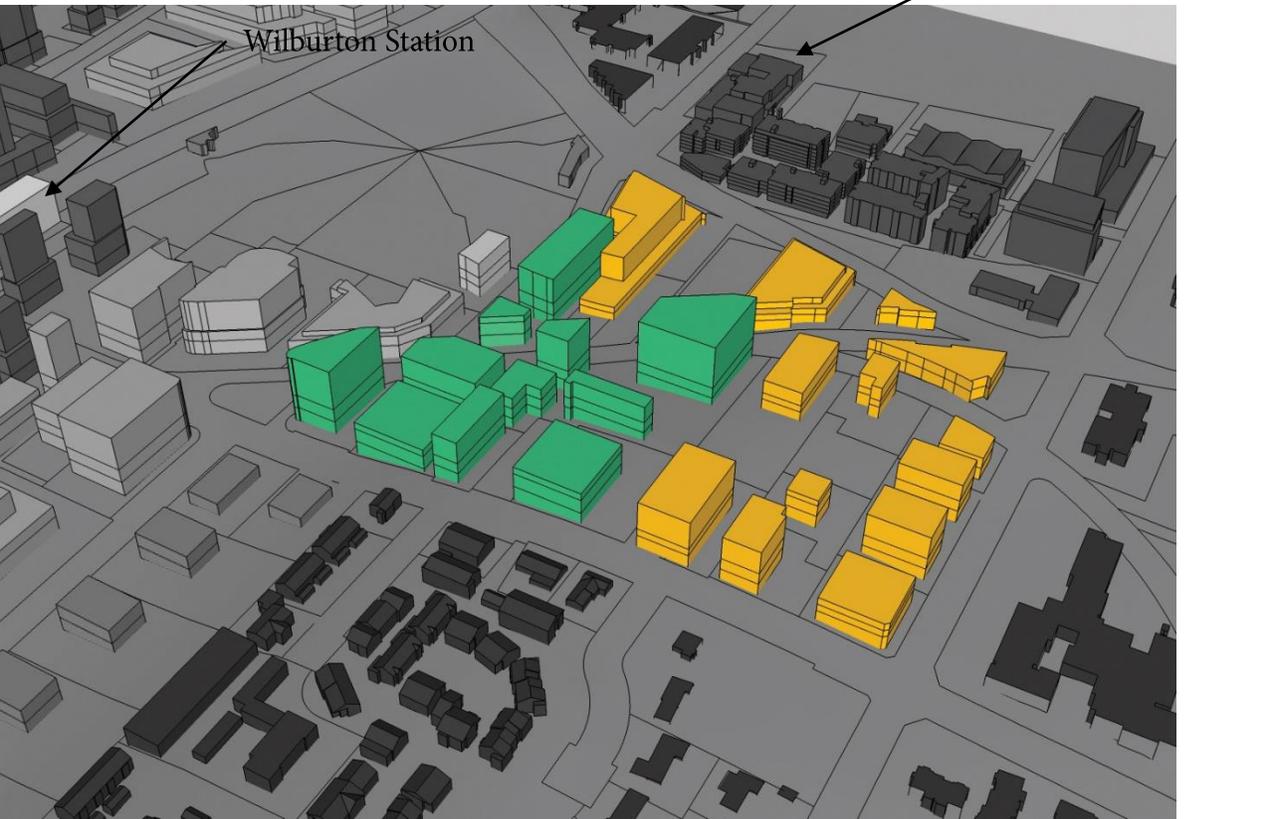


Spring District Transition Area

- **Key Questions**

- Relationship to Spring District and proximity to 2 light rail stations?
- Relationship to the increase in grade to the east?

Group One



Group Two

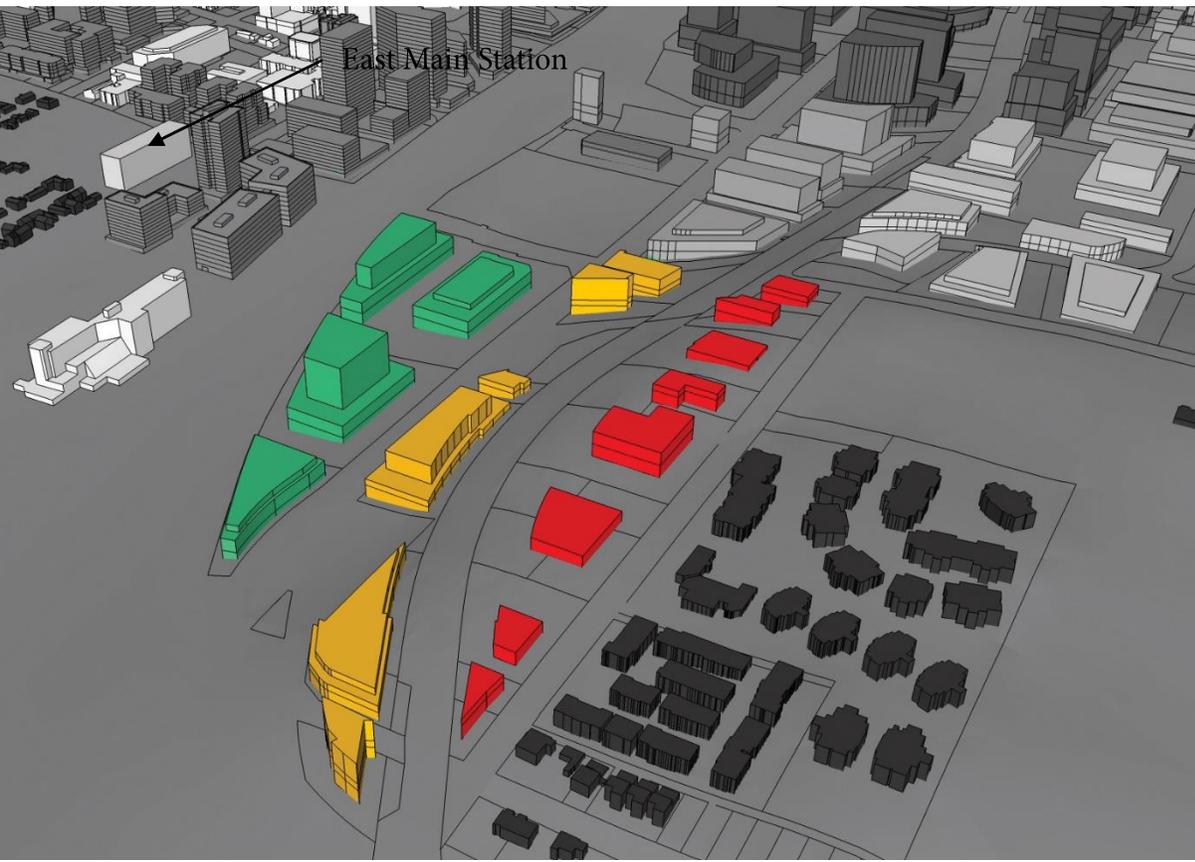


Spring District Transition Area

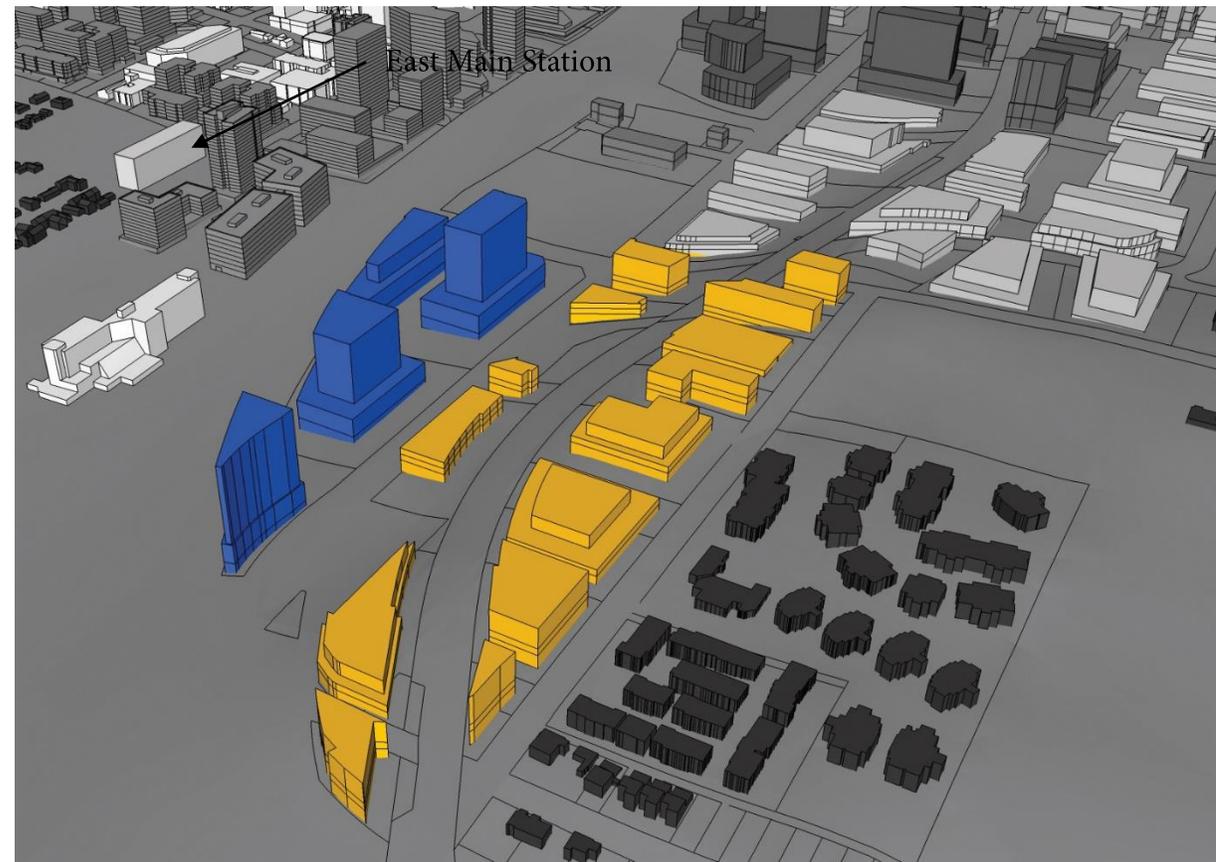
- **Key Questions**

- Relationship to East Main TOD?
- Relationship to ERC and change in grade?

Group One



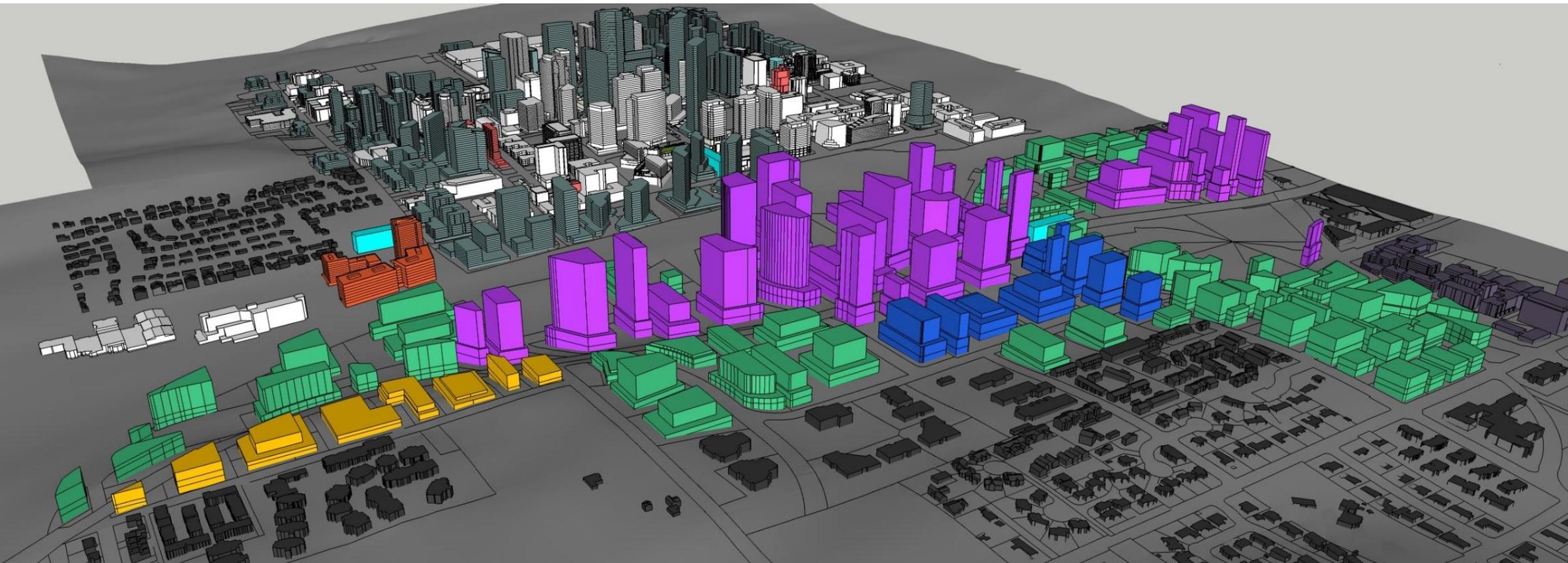
Group Two



Property Owners

- **Key Questions**

- Should the core be this scale?
- Should the core “jump” NE 8th north of Whole Foods?



Level of Service (MMLOS)

Toward a Multimodal Approach to Mobility

Kevin McDonald, AICP – City of Bellevue



Bellevue MMLoS Topics

- **Bellevue Policy Evolution**
- **Vehicle Level of Service**
- **Pedestrian Level of Service**
- **Bicycle Level of Service**
- **Transit Level of Service**
- **Next Steps**



Level-of-Service in Bellevue

Toward a Multimodal Approach to Mobility

WHAT IS MULTIMODAL MOBILITY?

A multimodal mobility strategy is designed to address more than one “mode” (or method) of transportation for people to get to/from and within Bellevue. The city’s multimodal mobility strategy incorporates policies for all mobility options, including walking, bicycling, riding transit, and driving.

Multimodal planning considers the modes of transportation and the context as inputs to design and investment decisions.

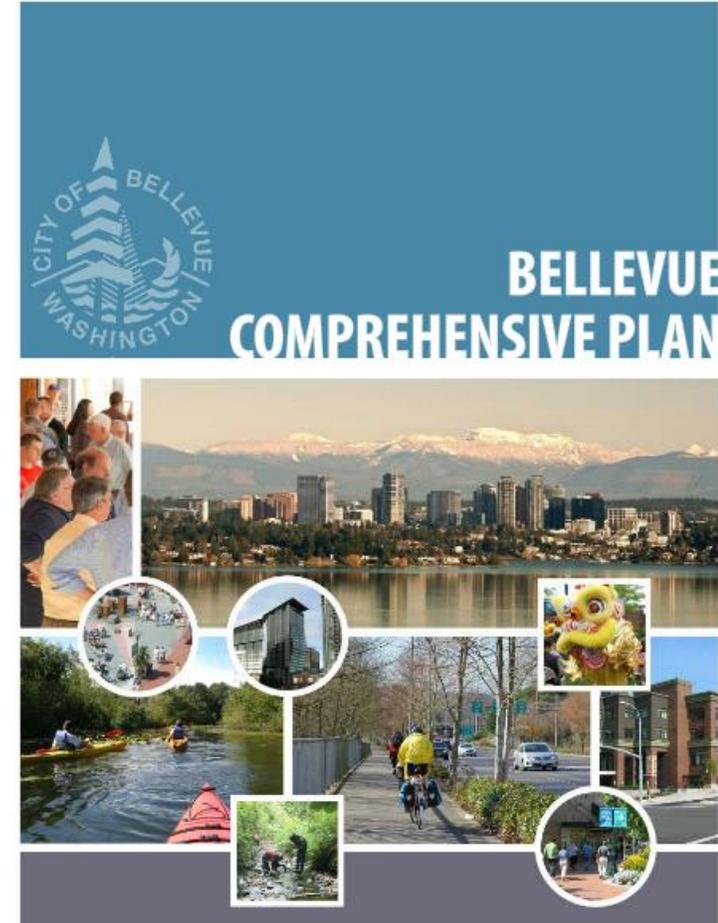
MMLOS Policy

- **Comprehensive Plan 1989**
 - Traveling on arterials should not be too inconvenient, time consuming, or unsafe
- **Comprehensive Plan 1993**
 - Establish (vehicle) LOS standards in each area of the city in light of growth management objectives
- **Comprehensive Plan 2015**
 - Establish MMLOS measures, standards and targets
 - Staff and consultant team working with Transportation Commission to define what that policy means
 - Research best practices, test ideas



Level-of-Service in Bellevue

Toward a Multimodal Approach to Mobility



MMLOS Summary

Transportation Commission Approved April 13, 2017

Mode	LOS Metric	LOS Standard	LOS Guideline
Vehicle	Volume/Capacity at Intersections	LOS C-E+, Varies by land use context	
	Typical Urban Travel Time on Arterials		Percent of posted speed limit , LOS varies by neighborhood context
Pedestrian	Sidewalk Width	12-20 feet, Varies by land use context	
	Pedestrian Comfort, Access and Safety at Intersections		Design varies by land use context
Bicycle	Level of Traffic Stress on Corridors		Design to achieve LTS varies by roadway traffic speed and volume
	Level of Traffic Stress at Intersections		Maintain corridor LTS at intersections. Design components vary by context
Transit	Passenger Comfort, Access and Safety		Varies by transit stop/station typology
	Transit Travel Speed on Corridors		14 mph on Frequent Transit Network corridors between activity centers



Vehicle LOS

- Intersections
- Corridors



Level-of-Service in Bellevue

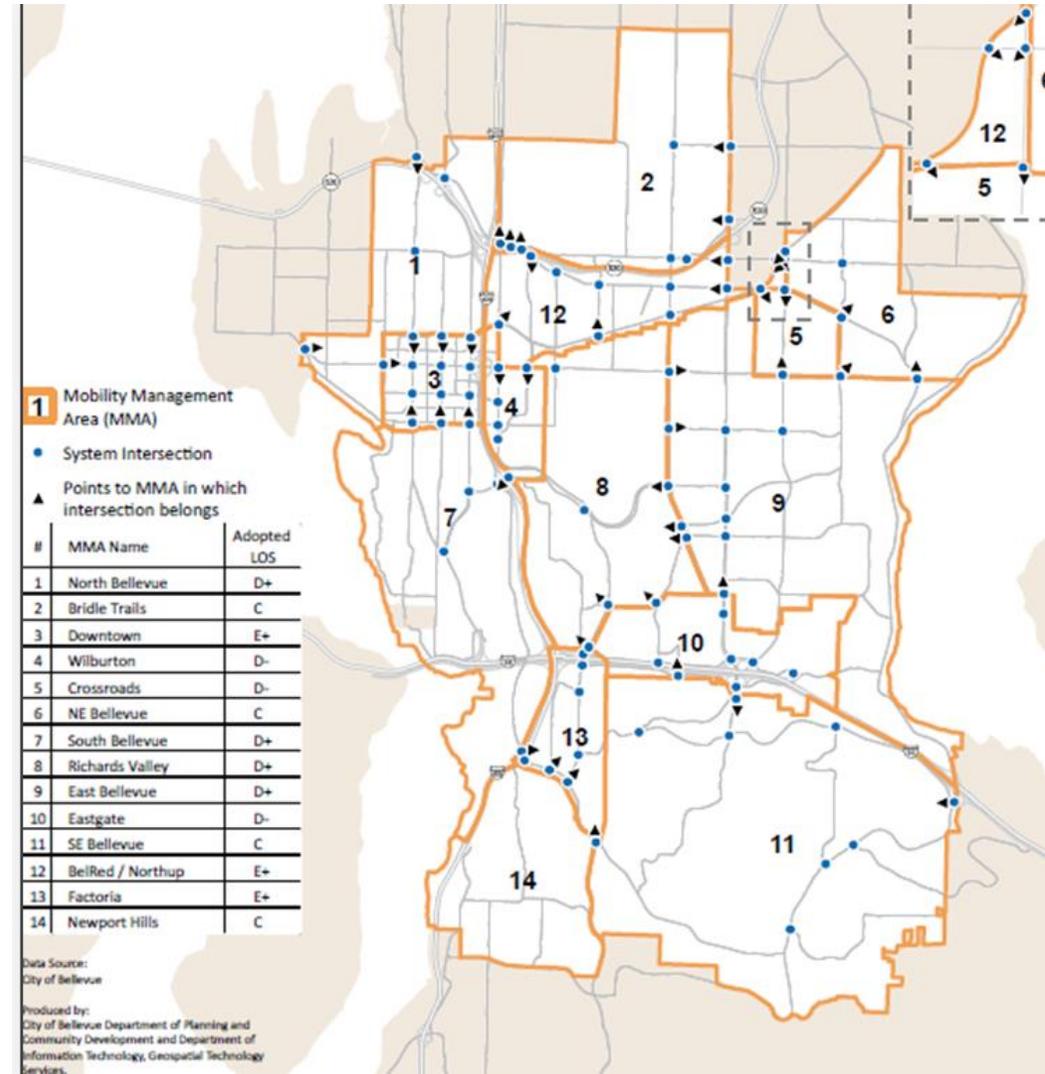
Toward a Multimodal Approach to Mobility

Vehicle LOS Intersections

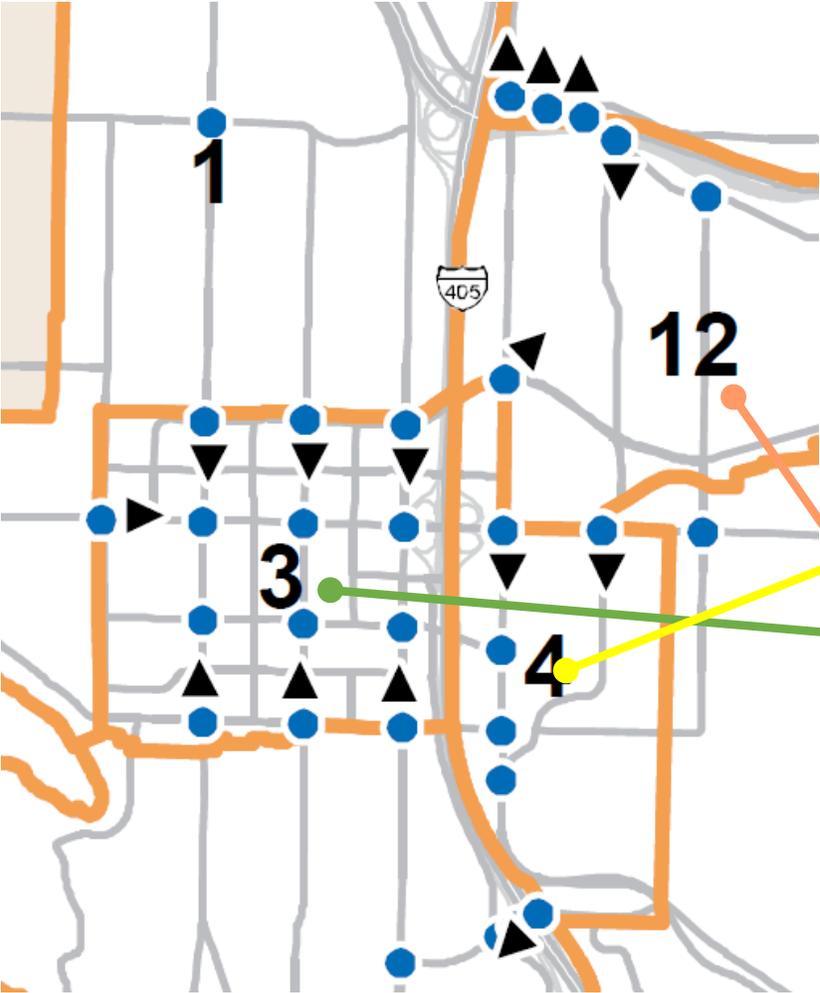
- Average Volume/Capacity Ratio at System Intersections in Mobility Management Areas (MMAs)
- LOS Standards in Bellevue C – E+
- Varies by land use context and mobility options



Level-of-Service in Bellevue
 Toward a Multimodal Approach to Mobility



Vehicle LOS MMAs



Category	Average Vehicular Volume-to-Capacity Ratio	Description (Subjective Impression of Driver)
LOS A	≤ 0.600	Highest driver comfort. Little delay. Free flow.
LOS B	0.601 - 0.700	High degree of driver comfort. Little delay.
LOS C	0.701 - 0.800	Some delays. Acceptable level of driver comfort. Efficient traffic operation.
LOS D LOS D+ (High D)	0.801 - 0.850	Some driver frustration. Efficient traffic operation.
LOS D- (Low D)	0.851 - 0.900	Increased driver frustration. Long cycle length.
LOS E LOS E+ (High E)	0.901 - 0.950	Near capacity. Notable delays. Low driver comfort. Difficulty of signal progression.
LOS E- (Low E)	0.951 - 1.000	At capacity. High level of congestion. High level of driver frustration.
LOS F	≥ 1.001	Breakdown flow. Excessive delays.



Vehicle LOS Corridors

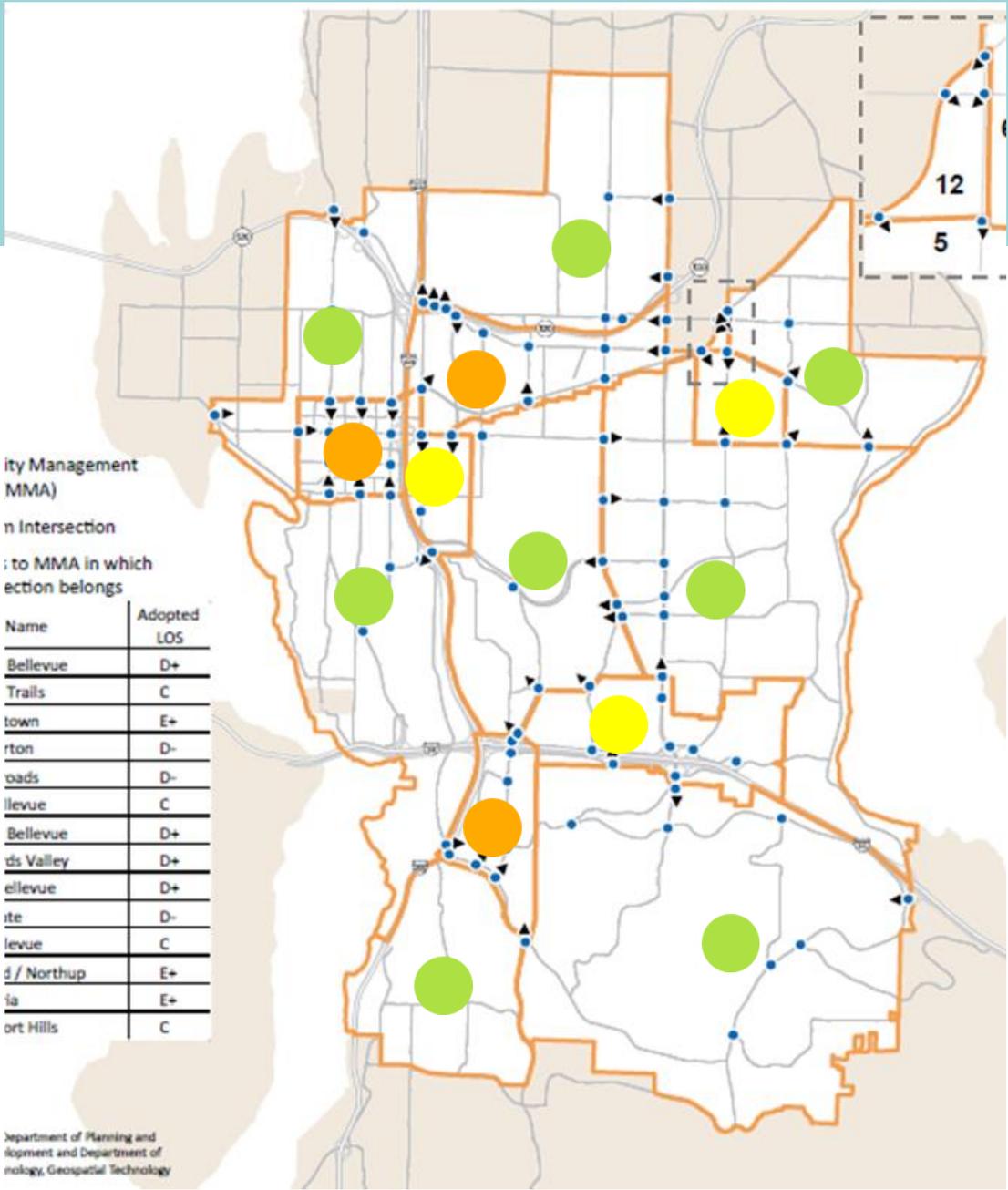
LOS	Percent of Typical Urban Travel Time Based on Posted Speed Limit*
●	Less than 90% of typical urban travel time
●	90-110% of typical urban travel time
●	110-155% of typical urban travel time
●	155-200% of typical urban travel time
●	More than 200% of typical urban travel time

- **Metric:** Travel time expressed as percent of posted speed limit
- **Apply:** Arterials to evaluate existing or projected traffic flow
- **Tool:** Assist in project identification and prioritization



Vehicle LOS Corridors

LOS	As applied to Mobility Management Areas
	Bridle Trails, East Bellevue, NE Bellevue, Newport Hills, North Bellevue, SE Bellevue, South Bellevue, Richards Valley
	Crossroads, Eastgate, Wilburton
	BelRed/Northrup, Downtown, Factoria



Level-of-Service in Bellevue

Toward a Multimodal Approach to Mobility

Vehicle LOS Corridors *(Hypothetical)*

116th Avenue NE Corridor

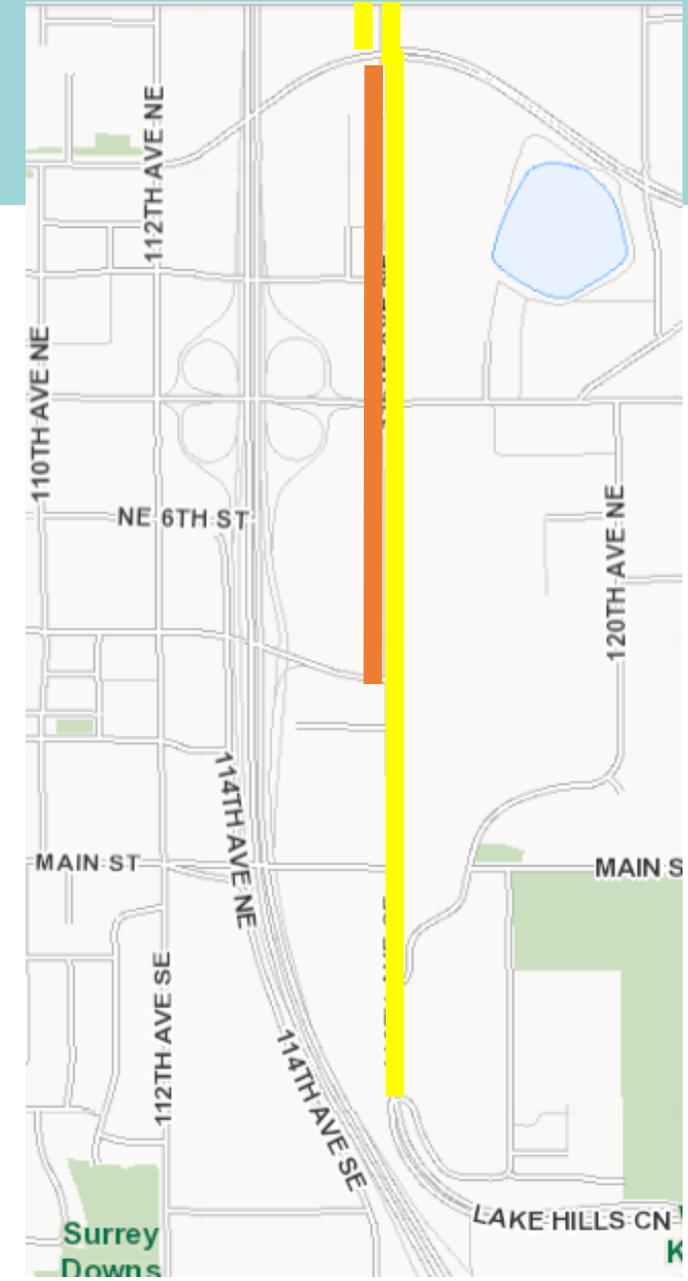
- **Posted Speed:** 30 mph
- **Typical Urban Travel Time:** 12 mph or 5 minutes per mile
- **Northbound:** 6 minutes per mile  OK
- **Southbound:** 9 minutes per mile  Not OK

Take a look!

Potential remedies?

Compare to other locations.

What are the MMLOS tradeoffs?

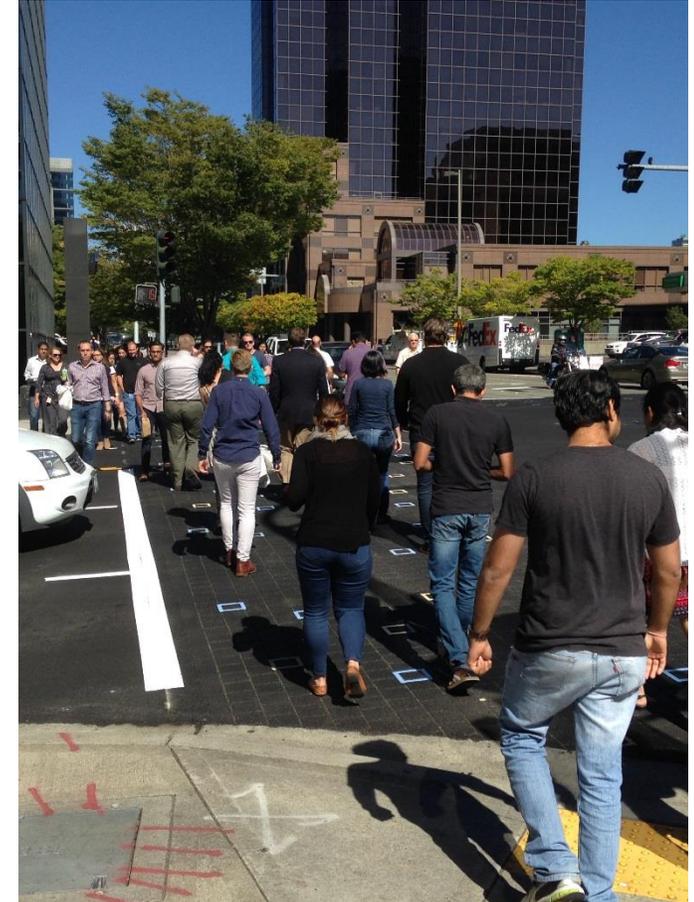


Level-of-Service in Bellevue

Toward a Multimodal Approach to Mobility

Pedestrian LOS

- Sidewalks
- Intersections



Level-of-Service in Bellevue

Toward a Multimodal Approach to Mobility

Pedestrian LOS

Context:	Downtown	Activity Center	Neighborhood Shopping Center	Pedestrian Destination	Elsewhere
Component					
Sidewalk Width Landscape Buffer	Downtown Land Use Code	16 feet	13 feet	13 feet	Transportation Design Manual
Signalized Intersection Design	Downtown Transportation Plan	Downtown Transportation Plan "Enhanced"	Transportation Design Manual	Transportation Design Manual	Transportation Design Manual
Arterial Crossing Frequency	Downtown Transportation Plan	600- 800 feet	600 feet	300-600	N/A

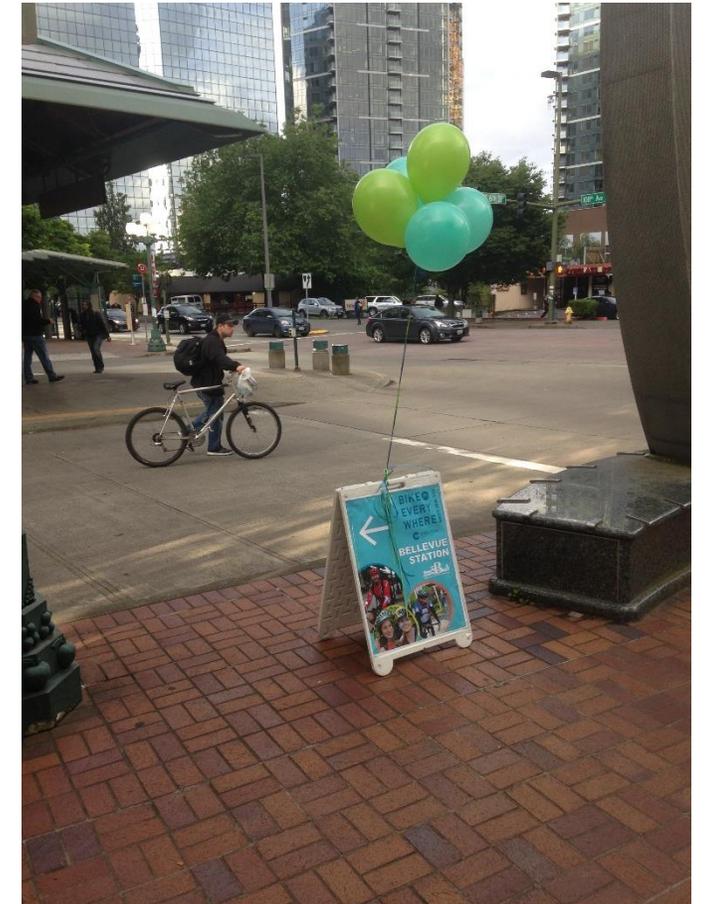


Level-of-Service in Bellevue

Toward a Multimodal Approach to Mobility

Bicycle LOS

- Corridors
- Intersections



Level-of-Service in Bellevue

Toward a Multimodal Approach to Mobility

Bicycle Rider – Level of Traffic Stress (LTS)

LTS 1

Interested but
Concerned –
Children and
Older Adults

LTS 2

Interested but
Concerned –
Adults

LTS 3

Enthused and
Confident

LTS 4

Strong and
Fearless



Level-of-Service in Bellevue

Toward a Multimodal Approach to Mobility

Bicycle Rider – LTS/LOS

Roadway Characteristics		Bicycle Facility Components					
		Guidelines to Achieve Intended Level of Service/Level of Traffic Stress					
Speed Limit (mph)	Arterial Traffic Volume*	No Marking	Sharrow Lane Marking	Striped Bike Lane	Buffered Bike Lane (Horizontal)	Protected Bike Lane (Vertical)	Physically Separated Bikeway
≤25	<3k	1	1	1	1	1	1
	3-7k	3	2	2	2	1	1
	≥7k	3	3	2	2	1	1
30	<15k	4	3	2	2	1	1
	15-25k	4	4	3	3	3	1
	≥25k	4	4	3	3	3	1
35	<25k	4	4	3	3	3	1
	≥25k	4	4	4	3	3	1
40	Any	4	4	4	4	3	1



Level-of-Service in Bellevue

Toward a Multimodal Approach to Mobility

Bicycle LOS Intersection Components

Intersection Treatment	Bike Signal	Street Crossing	Approach to Intersection	Approach to Intersection with Right Turn Lane
Bike LOS				
1	Bike signal	Green solid or skip stripe	Green bike box	Curb ramp to wide sidewalk
2	Bike signal	Skip stripe	Bike box	Green bike lane to left
3	Green cycle length	Sharrows	Signal actuation	Bike lane to left
Trail or Mid-Block Crossing	Full signal or HAWK or RRFB	Green solid or skip stripe	N/A	N/A



Transit LOS

- Passenger Amenities
- Speed on Frequent Transit Network



Level-of-Service in Bellevue

Toward a Multimodal Approach to Mobility

Transit Passenger LOS Components

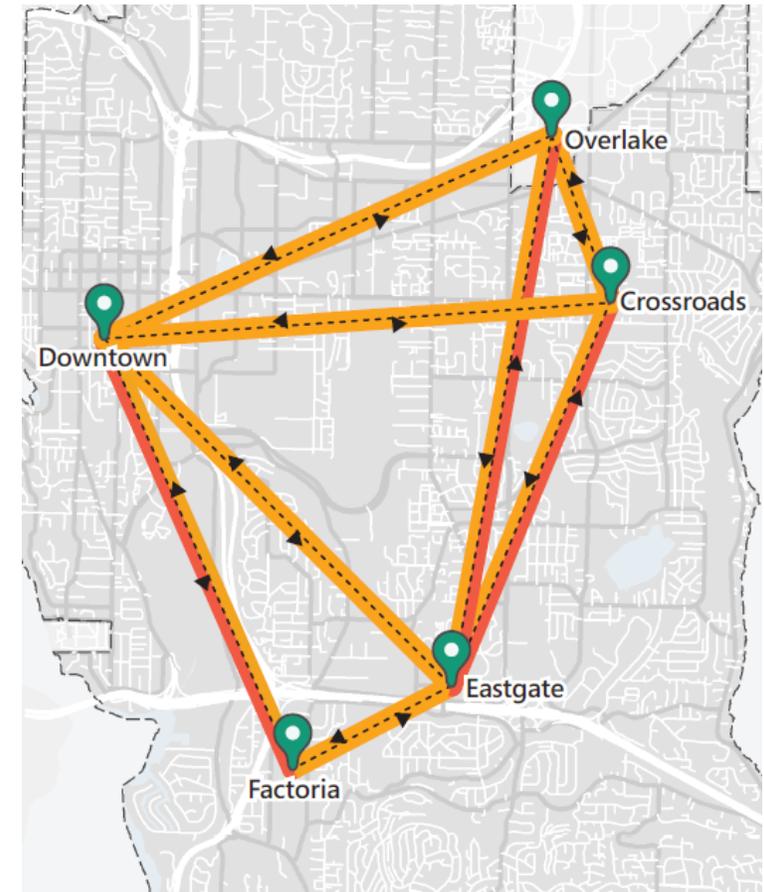
Context			
<u>Component</u>	Local Stop	Primary Stop	Frequent Transit Network Stop
Weather Protection	Yes	Yes	Yes
Seating	Yes	Yes	Yes
Paved Bus Door Passenger Zone	15-30'	40'	60'
Wayfinding	Optional	Yes	Yes



Transit LOS Speed

- Frequent Transit Network (FTN) Corridors between Activity Centers
- Target FTN speed in Bellevue Transit Master Plan (14 mph)
- Transit LOS Guidance: 14 mph on FTN connections

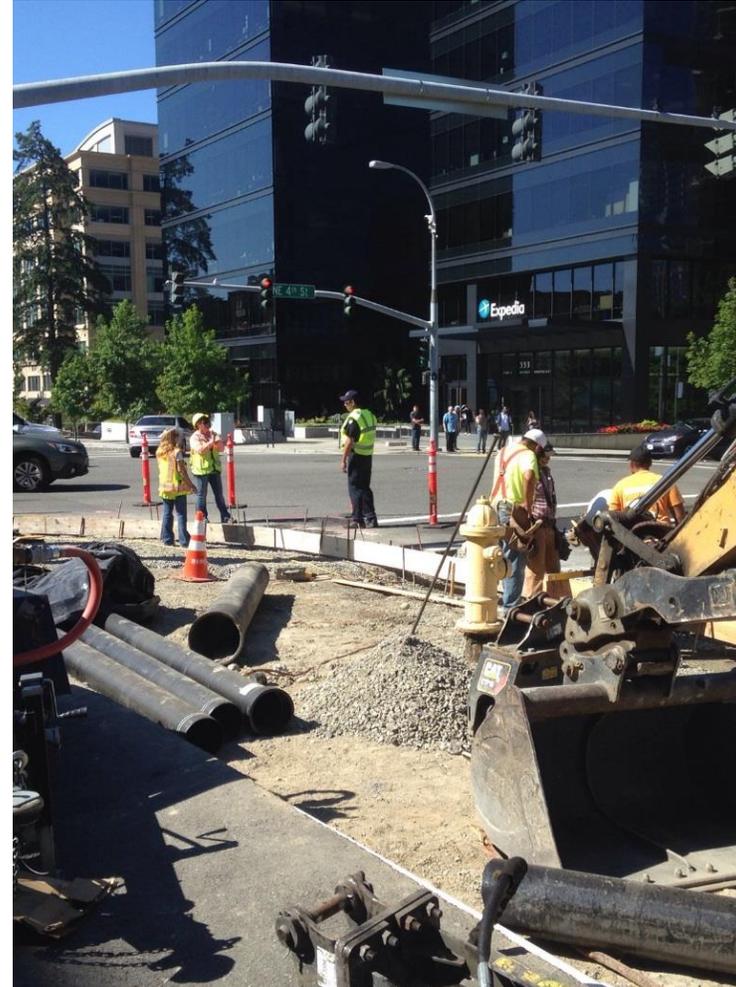
LOS Rating	Transit Speed Target
	<10 mph
	10-14 mph
	>14 mph



Level-of-Service in Bellevue
Toward a Multimodal Approach to Mobility

Next Steps – MMLoS Implementation

- **Project Identification**
 - What to build
 - Why build it
 - What benefit/to whom
- **Project Prioritization**
 - When to build it
- **Project Implementation**
 - With what resources
 - Capital Improvement Program
 - Development Review
 - Impact Fees

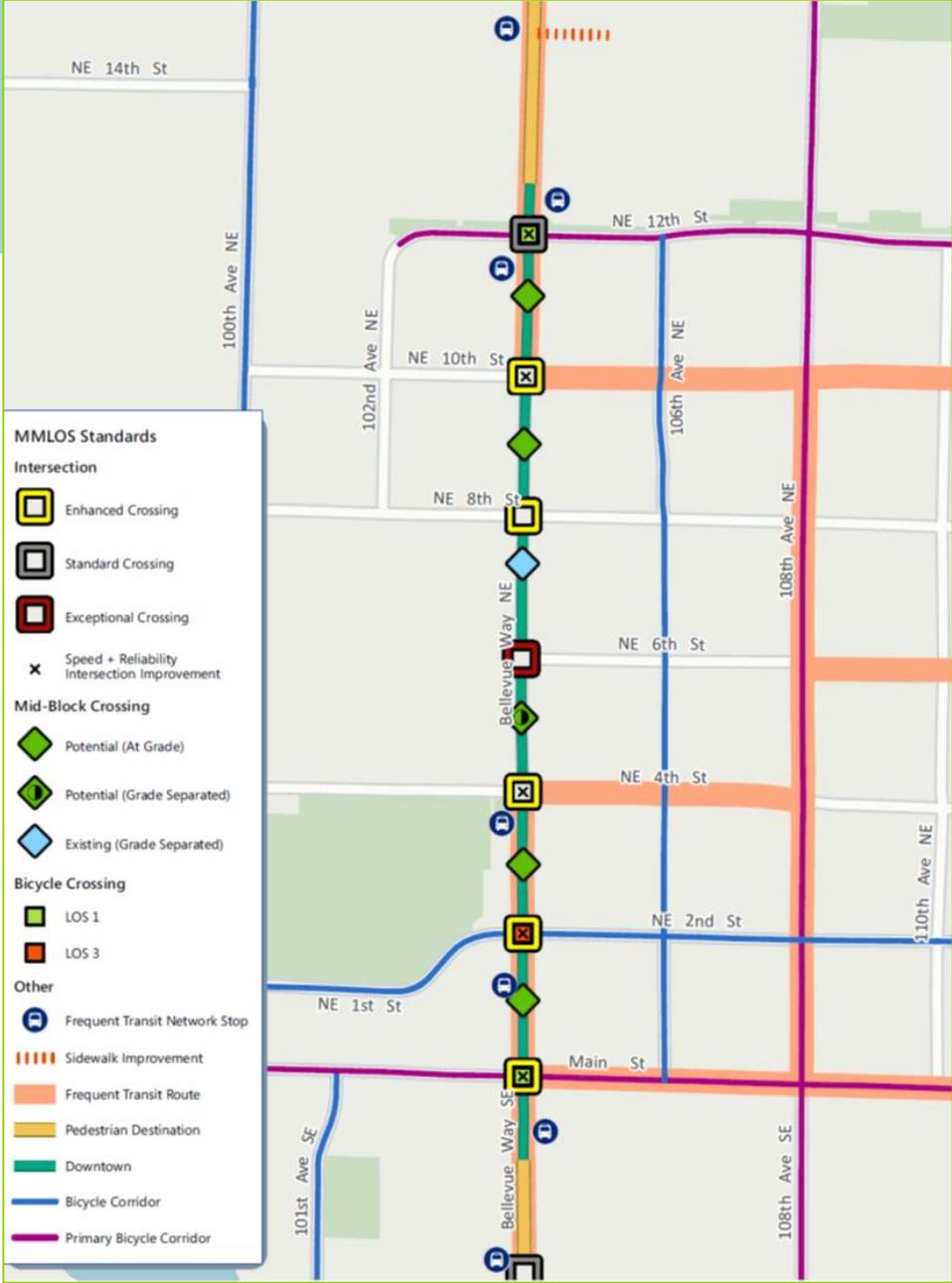


Level-of-Service in Bellevue

Toward a Multimodal Approach to Mobility

MMLOS Implementation

- Putting it all together on Bellevue Way in Downtown Bellevue



Level-of-Service in Bellevue

Toward a Multimodal Approach to Mobility

Transportation Agenda

Existing Conditions

Critical Decisions

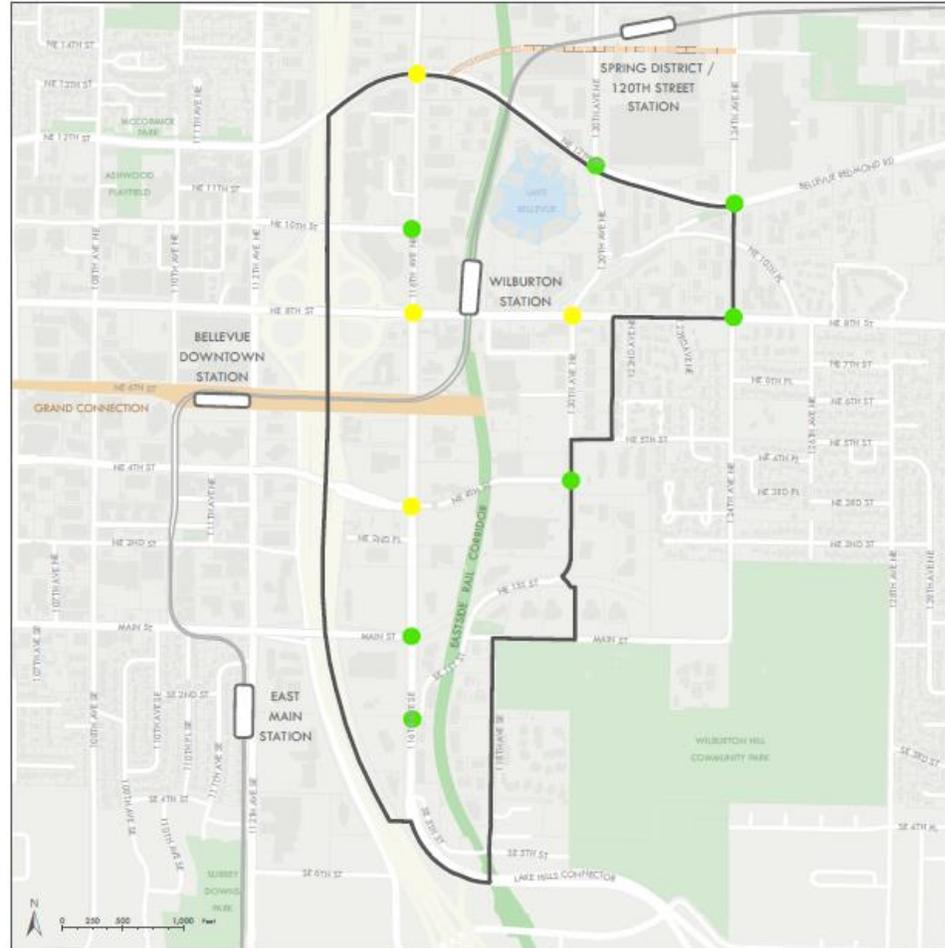
Transportation Precedents

Group Exercises



Existing Conditions – Roadway Network

- Large blocks
- Topography
- Vehicle LOS C and D
- Highly dependent on I-405 conditions



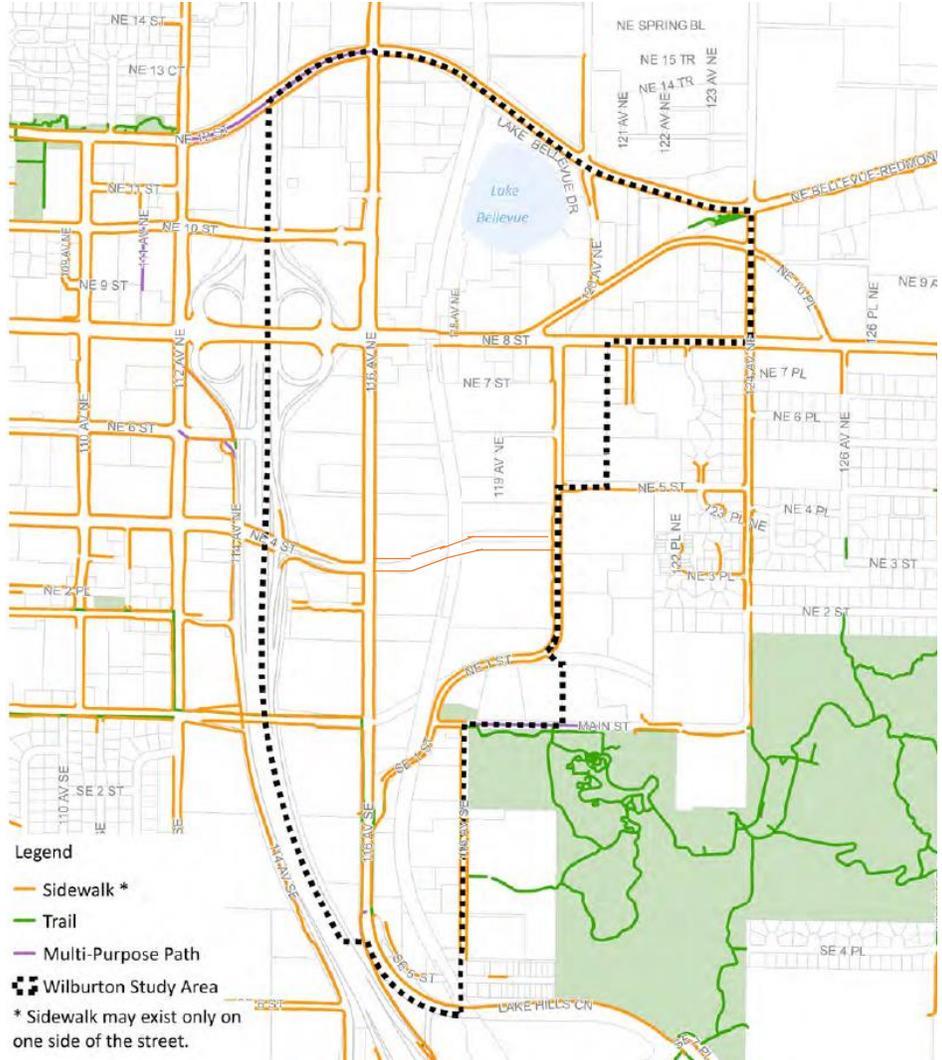
LEGEND

- LOS A-C
- LOS D

Existing Conditions - Vehicle



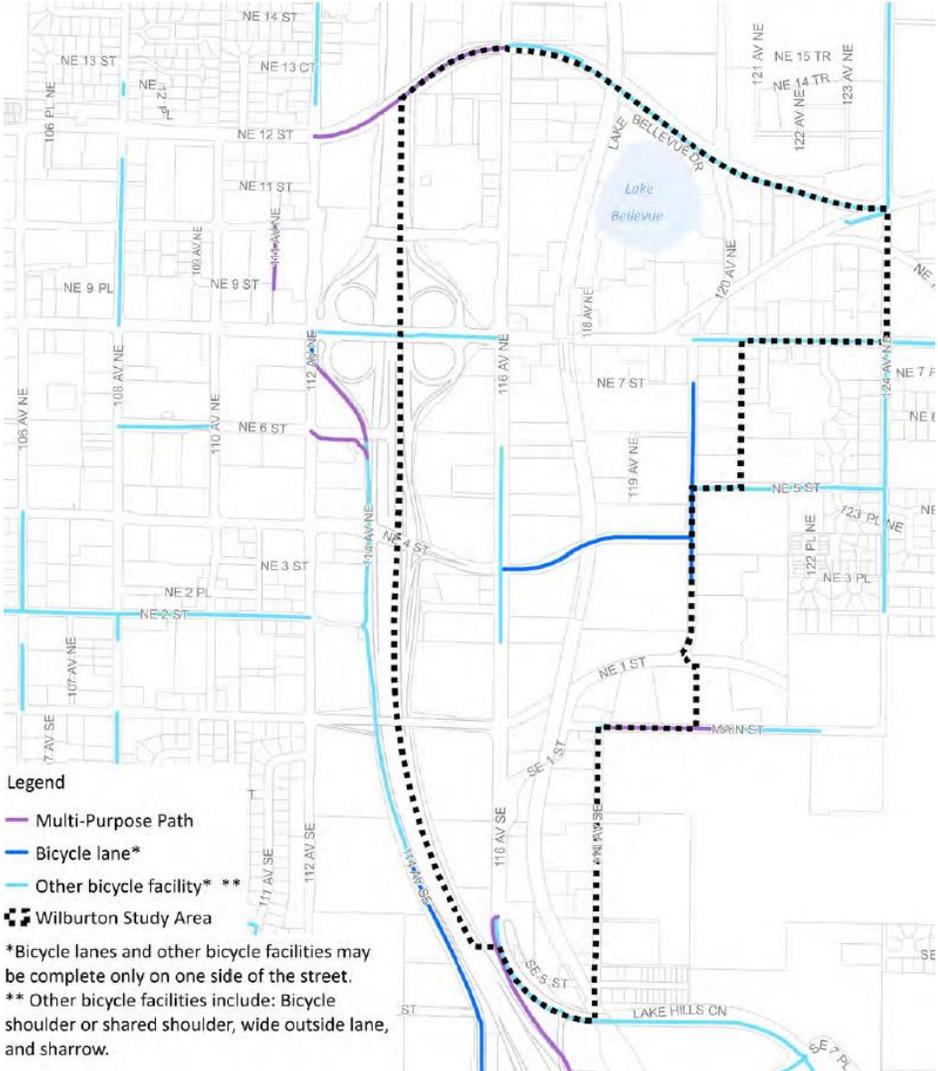
Existing Conditions - Pedestrian



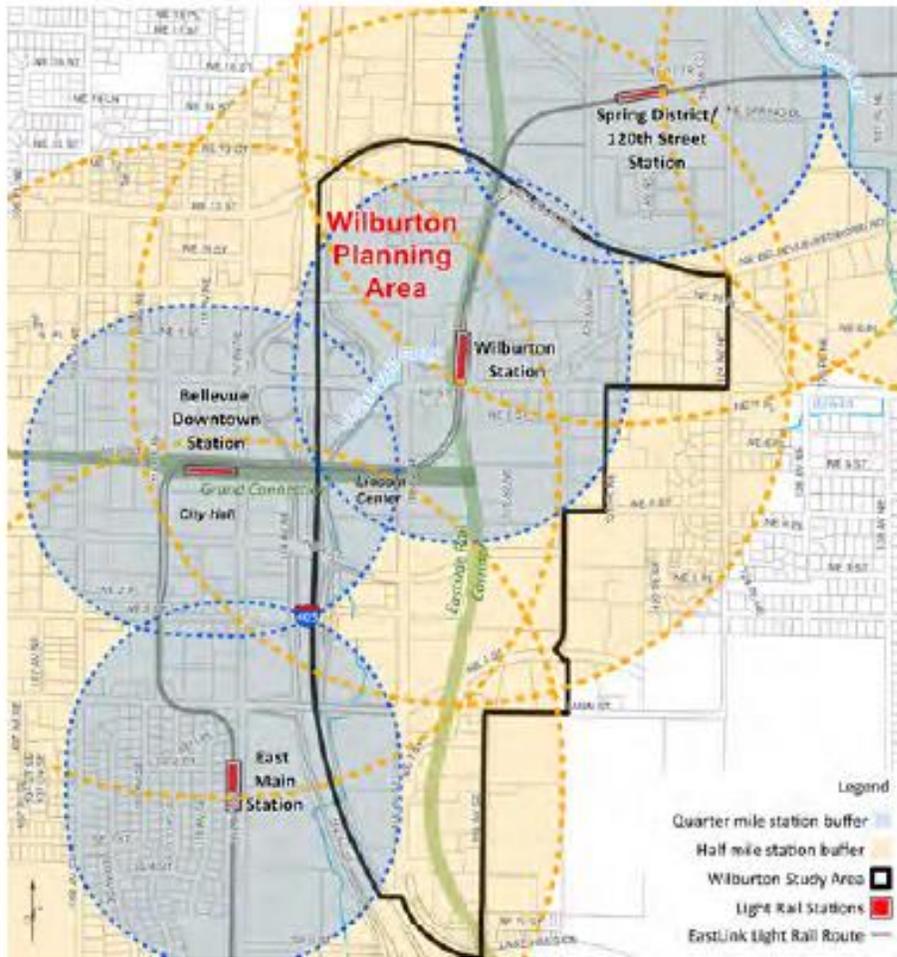
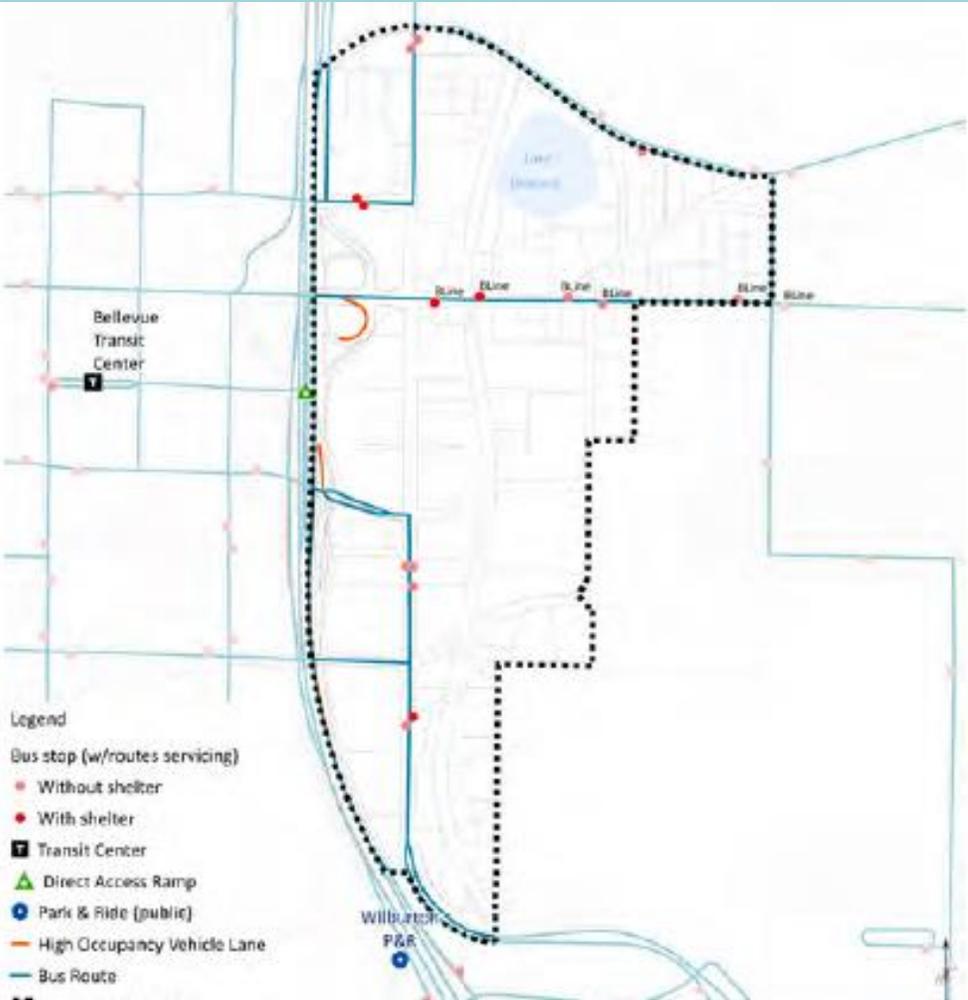
Existing Conditions - Pedestrian



Existing Conditions - Bicycle



Existing Conditions - Transit



What changes are coming to Wilburton?

Near Term

East Link

Eastside Rail Corridor

Other Projects

Grand Connection

NE 6th Street Extension



Transportation Precedents

Permeability of Network
and Streetscape

Accessibility to
Transit Stations

Accessibility to Trails

Improved Streetscape on
Major Arterials



Permeability of Network & Streetscape



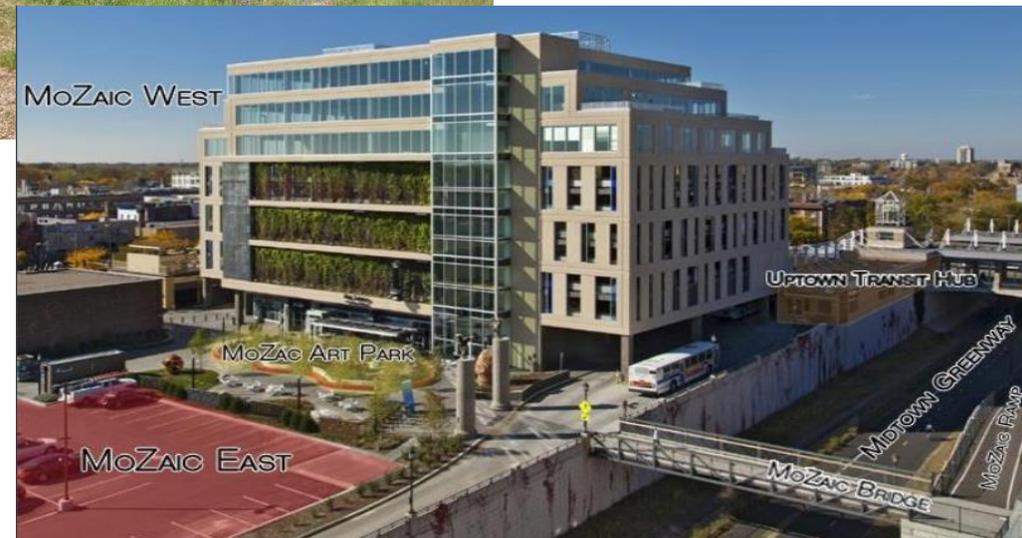
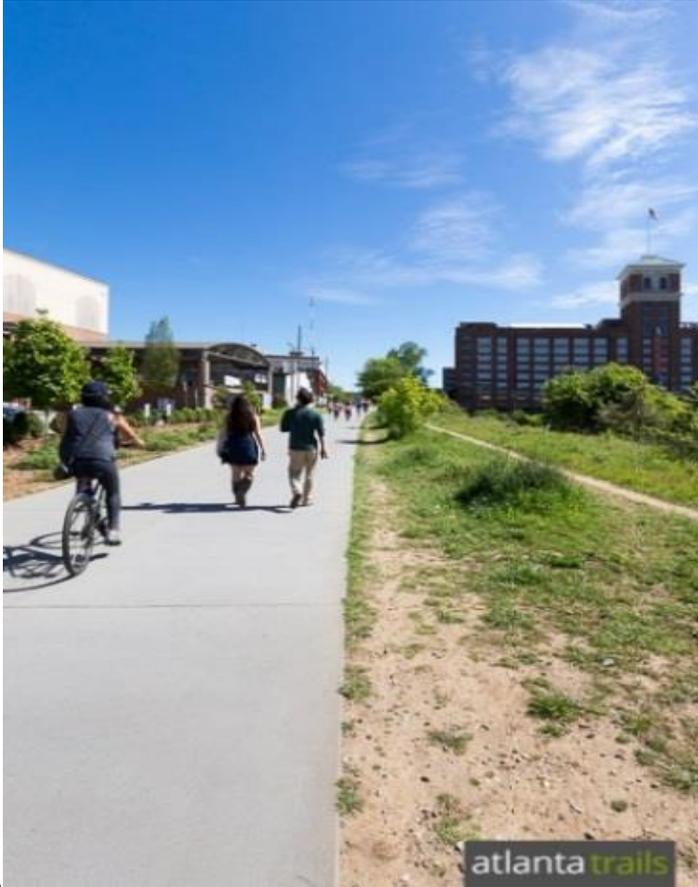
Permeability of Network & Streetscape



Permeability of Network & Streetscape



Accessibility to Trails



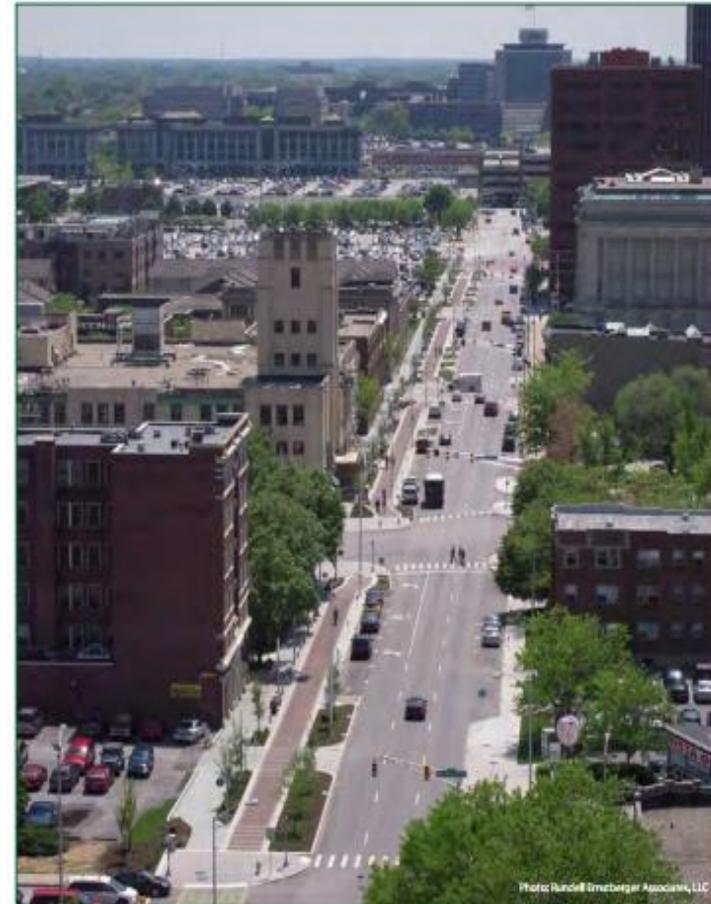
Accessibility to Trails



Accessibility to Transit Stations



Improved Streetscape on Major Arterials



Alabama Street



Improved Streetscape on Major Arterials



Critical Decisions

Determining the range of options to be studied in the EIS

116th Ave NE

ERC/NE 8th St

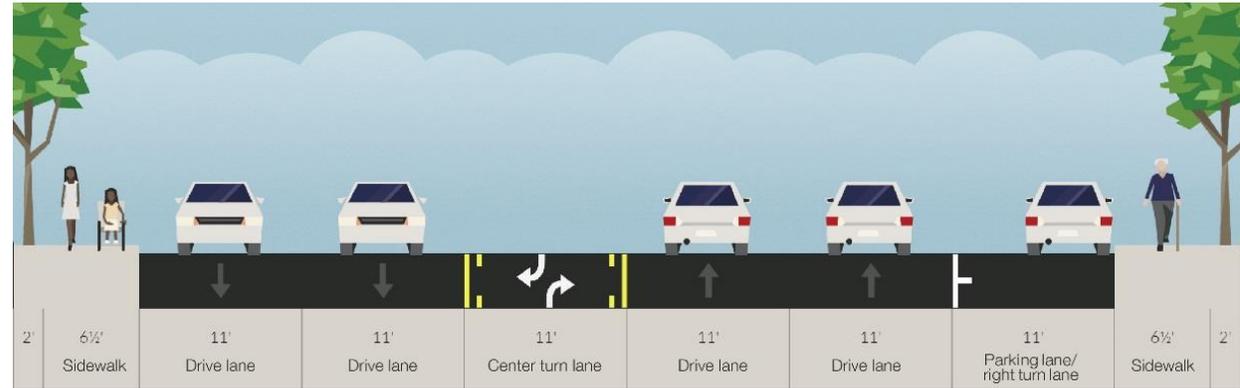
NE 6th St Extension

ERC/NE 4th St



116th Avenue NE Cross-Section

Option	CAC Score
Current cross-section (No Action)	127
Boulevard with shared pedestrian & bicycle area behind curb	192
Boulevard with bike lanes	170



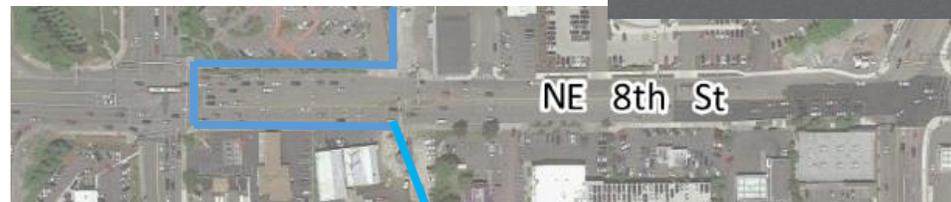
NE 6th Street Extension - Options

Option	CAC Score
Extension to 120 th Ave NE (No Action)	180
Extension to 116 th Ave NE	204
No extension	108



ERC/NE 8th Street Crossing

Option	CAC Score
ERC bridge over NE 8th St (No Action)	166
At grade crossing with full signal	193
Utilize existing crossing at 116th Ave NE	112



ERC/NE 4th Street Crossing

Option	CAC Score
At grade crossing with full signal (No Action)	176
ERC bridge over NE 4th St	183



Group Exercises

Two breakout groups

STREETSCAPE:
116th Ave NE Cross-section

ACCESSIBILITY:
Study Area Grid Network



Alternatives for EIS

The Environmental Impact Statement (EIS) will study three alternatives.

No Action Alternative 1

- Future Baseline under Current Plans

Action Alternative 2

Action Alternative 3



An alternative describes a different means of achieving a proposal. Proposal is to develop plan, zoning, and code changes that help City achieve vision:

"The Wilburton Commercial Area is Bellevue's next urban mixed-use community that enhances livability, promotes healthy living, supports economic vitality, and serves the needs of a diverse population. As Bellevue's cultural and innovative hub, it serves as a regional and international destination that connects people and fosters community by leveraging its existing assets to define a unique sense of place and character."



Guidance for Alternatives

- Combine land use, transportation, and other elements
 - e.g., most intense land use with most intense transportation infrastructure
- Make them distinct
 - Show clear differences in growth levels, land use mix, or infrastructure
- Growth range
 - Test an upper bookend of growth – capture public input and test limits
 - Test mid-range to consider phasing of mitigation/infrastructure
- Draft EIS Alternatives will be evaluated to help City develop a preferred alternative, evaluated in the Final EIS



Potential Features of Alternatives

FEATURE	NO ACTION ALTERNATIVE 1	ACTION ALTERNATIVE 2	ACTION ALTERNATIVE 3
Growth: Market Level	Moderate	High	Very High
Form/Floor Area Ratio	Low	Moderate	High
Transportation	Planned Network	To Be Determined	To Be Determined
Public Realm / Open Space	Current Plans	Test Compatibility of Different Open Space Concepts with Land Use and Transportation Elements	



Evaluation of Alternatives

- EIS Topics
 - geology and soils
 - water resources
 - air quality/greenhouse gas
 - ecosystems
 - land use and economic activity
 - neighborhoods and population
 - aesthetics
 - transportation
 - noise
 - energy
 - environmental health
 - public services and utilities

- Transportation & Environmental Performance Measures
 - See Attachment D of CAC memo/packet

DRAFT Matrix Evaluation Framework

Performance Measure	Alternative 1 No Action	Alternative 2	Alternative 3
Measure X			
Measure Y			



Strong emphasis

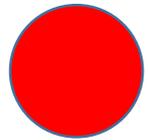


Moderate emphasis

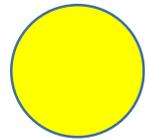


Weak emphasis

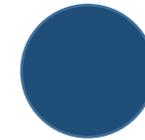
Dot Exercise



Retail / Restaurant



Residential



Office

