



BEL-RED CORRIDOR PROJECT

TRANSPORTATION ANALYSIS AND ENVIRONMENTAL REVIEW



CH2MHILL

February 1, 2007
Steering Committee Meeting



Presentation Overview

- **Purpose of programmatic EIS**
- **“Reader’s Guide” to the document**
- **Key findings of the EIS:**
 - **Land Use**
 - **Population, Housing, and Economics**
 - **Transportation**
 - **Watershed Processes**
 - **Environmental Hazards**
 - **Other disciplines**



Purpose of the Programmatic EIS

- **This is a programmatic, or “nonproject,” EIS**
- **What this EIS is intended to do:**
 - **Provide a basis for comparing the alternatives (part quantitative, part qualitative)**
 - **Assist City in evaluating and selecting the best alternative for guiding redevelopment in accordance with project objectives**
- **What it’s *not* intended to do:**
 - **Authorize construction of specific building or transportation projects**



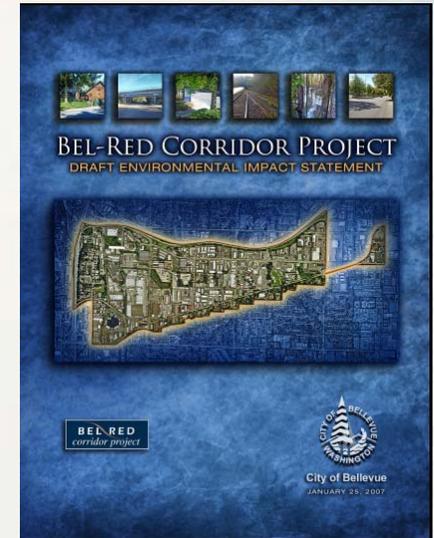
What Does the EIS Evaluate?

- **Adoption of new land use designations and zoning**
 - **Comprehensive Plan**
 - **Bel-Red/Northup Subarea Plan**
 - **Crossroads Subarea Plan**
 - **Wilburton/NE8th Subarea Plan**
 - **Bellevue Land Use Code**
- **Transportation infrastructure projects needed to support redevelopment**
- **Potential measures to mitigate the impacts of growth and/or ensure it's consistent with project principles**



Reader's Guide to the EIS

- **Chapter 1: Introduction and Summary**
 - Project background and purpose
 - Brief description of alternatives
 - Summary matrix (read me first!)
- **Chapter 2: Description of Alternatives**
 - Includes how alternatives were developed
- **Chapters 3-11: Impact Evaluation**
 - Existing conditions, impacts, and mitigation measures
- **Appendices**
 - Background info, including scoping report, market analysis, and environmental constraints memo





What We Evaluated

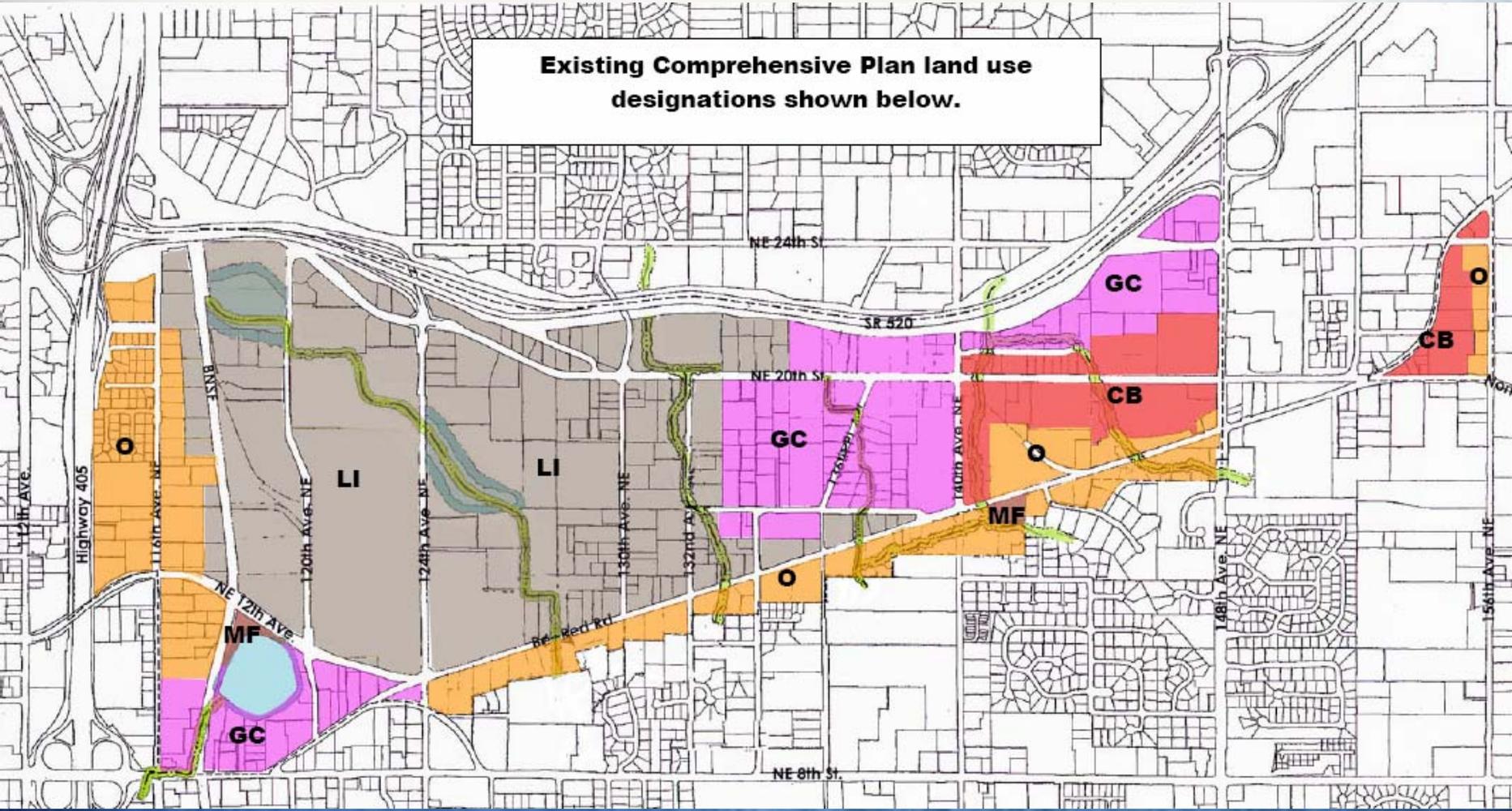
- **No Action Alternative**
 - No major land use changes
- **Alternative 1: Mid-Range Employment and Housing**
 - Development nodes at 122nd and 152nd
- **Alternative 2: Low Employment/High Housing**
 - Development nodes at 116th, 130th, and 148th
- **Alternative 3: High Employment/High Housing**
 - Development nodes at 122nd, 130th, and 152nd



No Action Alternative

1 million sq. ft. commercial/industrial; no new housing units

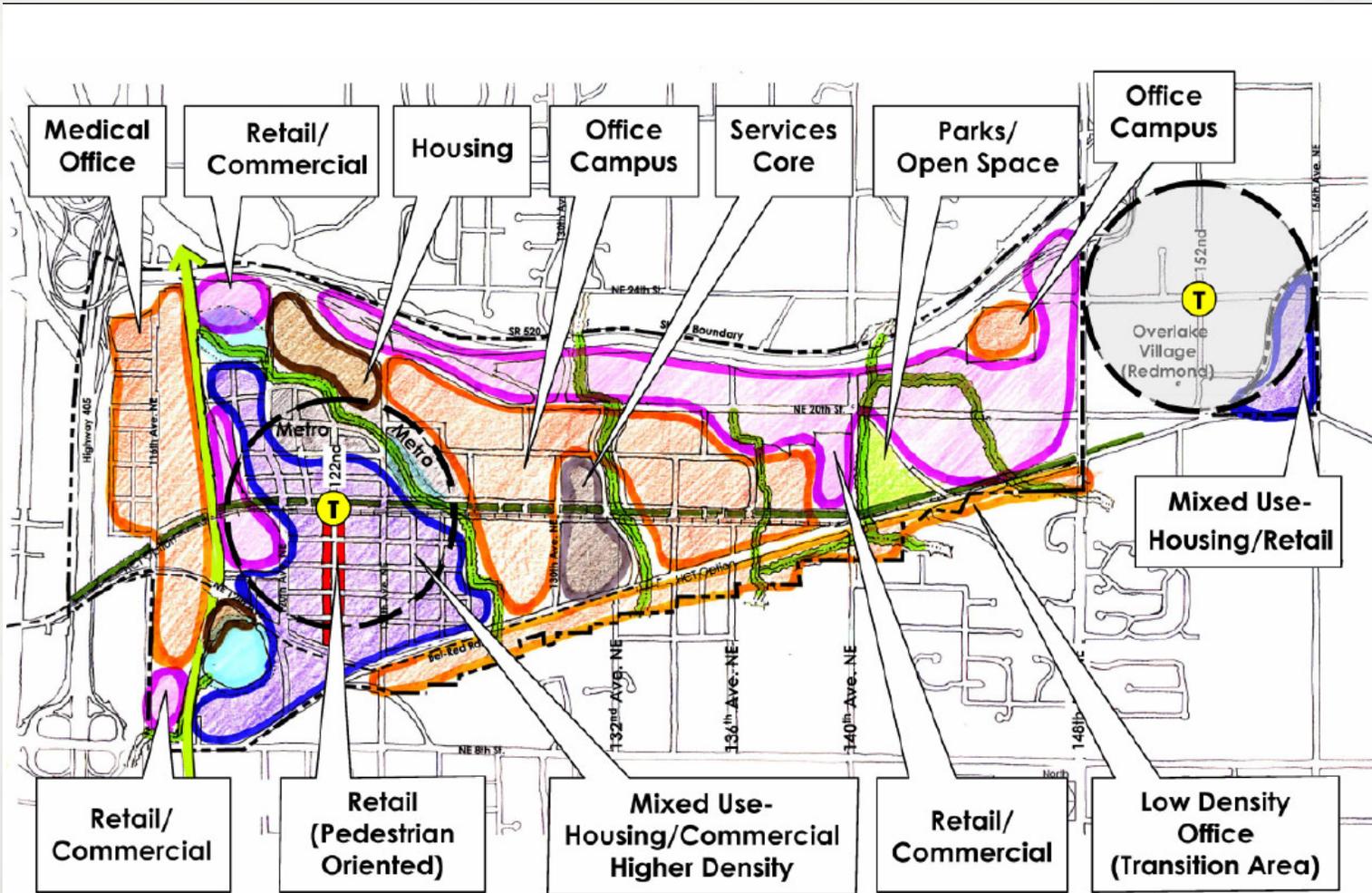
Existing Comprehensive Plan land use designations shown below.





Alt. 1: Mid-Range Employment and Housing

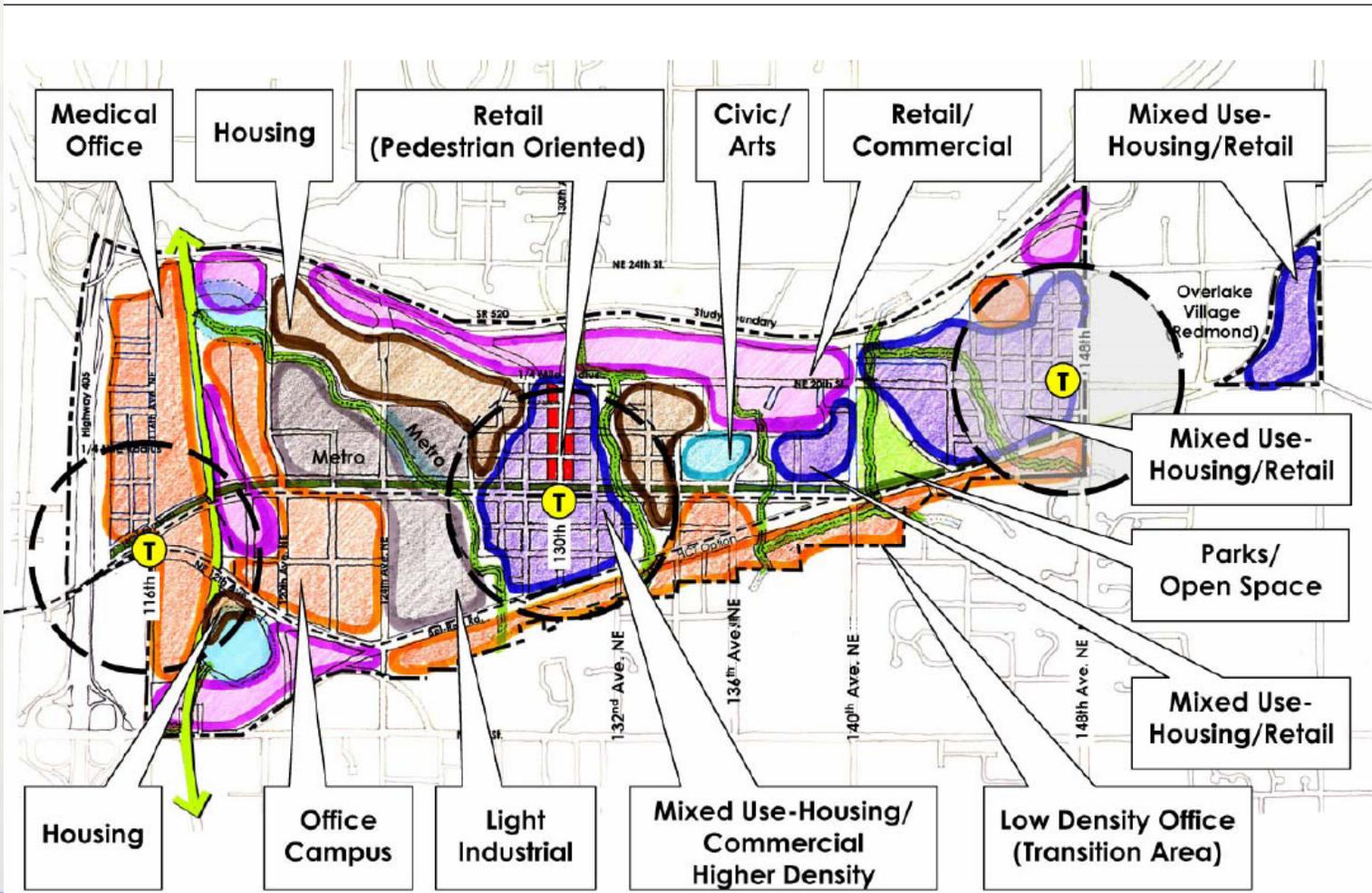
3.5 million sq. ft. commercial; 3,500 new housing units





Alt. 2: Low Employment/High Housing

2.5 million sq. ft. commercial; 5,000 new housing units





Key Findings of the EIS

- **Each alternative is feasible – none fatally flawed**
- **Differentiators between alternatives**
 - Land Use
 - Population/Housing/Economics
 - Transportation
 - Watershed Processes
- **Less differentiating**
 - Air Quality
 - Noise
 - Environmental Hazards
 - Aesthetics
 - Public Services and Utilities



Land Use: What We Evaluated

- **Changes in density and intensity of land use**
- **Changes in land use type**
- **Relationship to nearby land uses**
- **Consistency with land use plans and policies**
- **Potential right-of-way acquisition for transportation projects (based on very conceptual design)**
- **Potential needs for parks and recreation**



Land Use: Changes in Density and Type

- **New land use designations would greatly increase density, especially in mixed-use nodes.**
- **Action alternatives would facilitate transition of light industrial development to other uses.**
 - **Alternative 1: -2.69 million sq. ft. light industrial**
 - **Alternative 2: -1.98 million sq. ft. light industrial**
 - **Alternative 3: -2.49 million sq. ft. light industrial**
 - **Some light industrial remains in all action alternatives**
- **Services Core (Alternative 1) and Light Industrial Sanctuary (Alternative 2) would preserve more existing valued uses.**



Land Use: Compatibility and Consistency

- **All alternatives include “edge” uses and intensities similar to or consistent with existing land uses.**
- **Care is needed to buffer new residential areas from retained industrial uses, especially in Alternative 2.**
- **All action alternatives are generally consistent with policy guidance:**
 - **Provide mixed-use housing; redevelop existing developed land where appropriate.**
 - **Plan and invest in new uses that facilitate economic development.**
 - **Integrate land use and transportation planning; promote use of transit and nonmotorized modes.**



Land Use: Right-of-Way Acquisition

- **Transportation improvements proposed for all action alternatives could displace some existing land uses.**
 - **Widening of 116th Avenue NE: up to 7 commercial buildings and 3 residences**
 - **Widening of 120th Avenue NE: up to 1 industrial and 1 commercial building**
 - **Extension of NE 10th to 124th: up to 2 retail buildings, portions of an auto dealership, and 2 warehouses**
 - **Widening/extension of NE 16th Street: up to 12 commercial buildings and up to 5 warehouses**



Land Use: Parks and Recreation

- **All action alternatives could include opportunity to develop a new 10-20 acre indoor and/or outdoor sports facility.**
- **All action alternatives could develop new NE 16th Street alignment as a “green boulevard.”**
- **All alternatives would create demand for new park facilities to serve residents and employees.**
 - **Alternatives 2 and 3 would create the greatest demand due to the amount of new housing assumed.**



Land Use: Mitigation and Opportunities

- **Work with Sound Transit on station area planning.**
- **Design zoning to encourage dense, transit-supportive, pedestrian-friendly development.**
- **Limit parking requirements in LRT station area development nodes.**
- **Craft incentives for developers to provide transit access, enhance pedestrian facilities and create public open space.**
- **Acquire parks and open space through developer incentives, stream corridor preservation, etc.**

Population, Housing & Economics: What We Evaluated



- **Changes in population by 2030**
- **Changes in employment by 2030**
- **Changes in access and mobility in the corridor**
- **Indirect employment (“ripple effects”)**



Population, Housing & Economics: Impacts

- **All action alternatives would increase population by 2030.**
 - **No Action: 290 residents**
 - **Alternative 1: 6,270 residents**
 - **Alternative 2: 8,675 residents**
 - **Alternative 3: 8,675 residents**
- **All alternatives would increase net employment by 2030.**
 - **No Action: 2,367 net new jobs**
 - **Alternative 1: 6,339 net new jobs**
 - **Alternative 2: 4,740 net new jobs**
 - **Alternative 3: 9,249 net new jobs**



Population, Housing & Economics: Impacts

- **All action alternatives would result in a reduction in existing industrial jobs.**
 - **No Action: +450 industrial jobs**
 - **Alternative 1: -2,985 industrial jobs**
 - **Alternative 2: -1,920 industrial jobs**
 - **Alternative 3: -2,685 industrial jobs**
- **All the action alternatives would improve access and mobility in the corridor and would generate indirect employment in the region.**



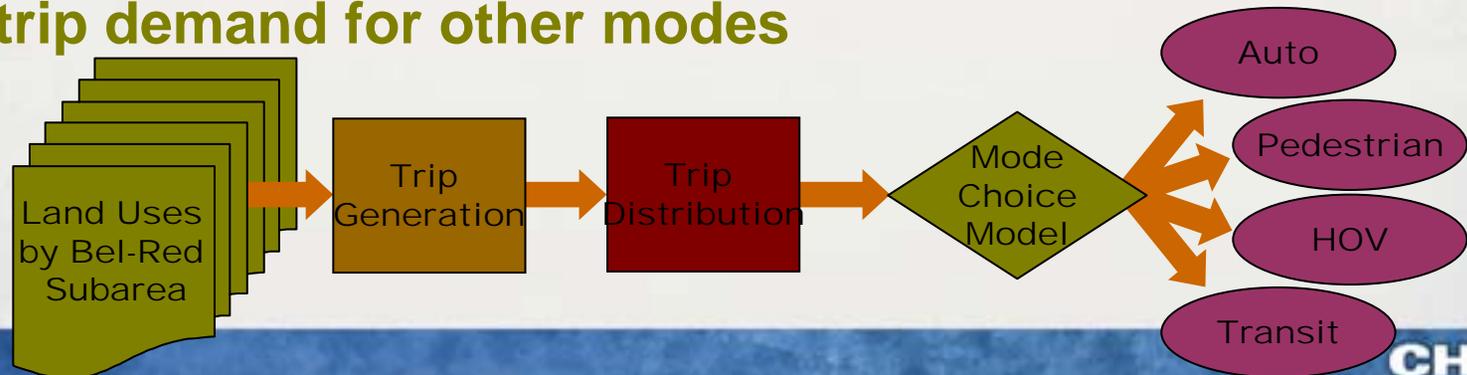
Population, Housing & Economics: Mitigation

- **Maximize use of other light industrial areas to accommodate some displaced businesses and jobs.**
- **Identify locations to concentrate light industrial and/or other valued uses that might otherwise move out.**
- **Include compatible light manufacturing and services in new mixed-use areas.**
- **Develop parks and pedestrian/bicycle facilities to serve the planned increases in housing and employment.**



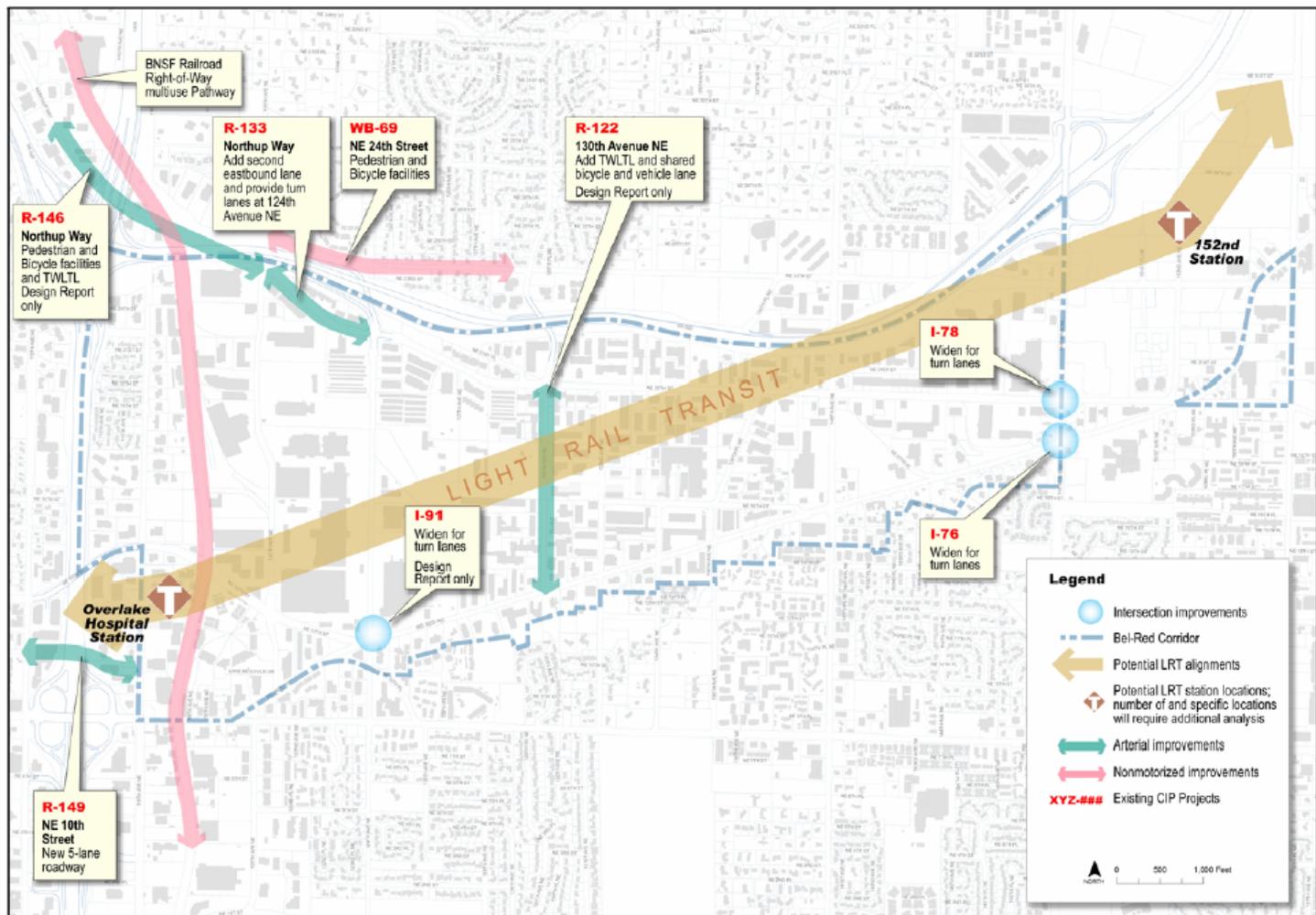
Transportation: Modeling

- **How we linked land use to transportation**
 - Assigned No Action and Action land uses to about 30 subareas of the Bel-Red Corridor
 - Model assigns multimodal trips to each land use
 - Trips are assigned to modes and routes based on travel times, out of pocket costs, and mode attractiveness
 - Integration of land uses helps reduce vehicle trips
 - End result is a prediction of vehicle demand on roads and trip demand for other modes



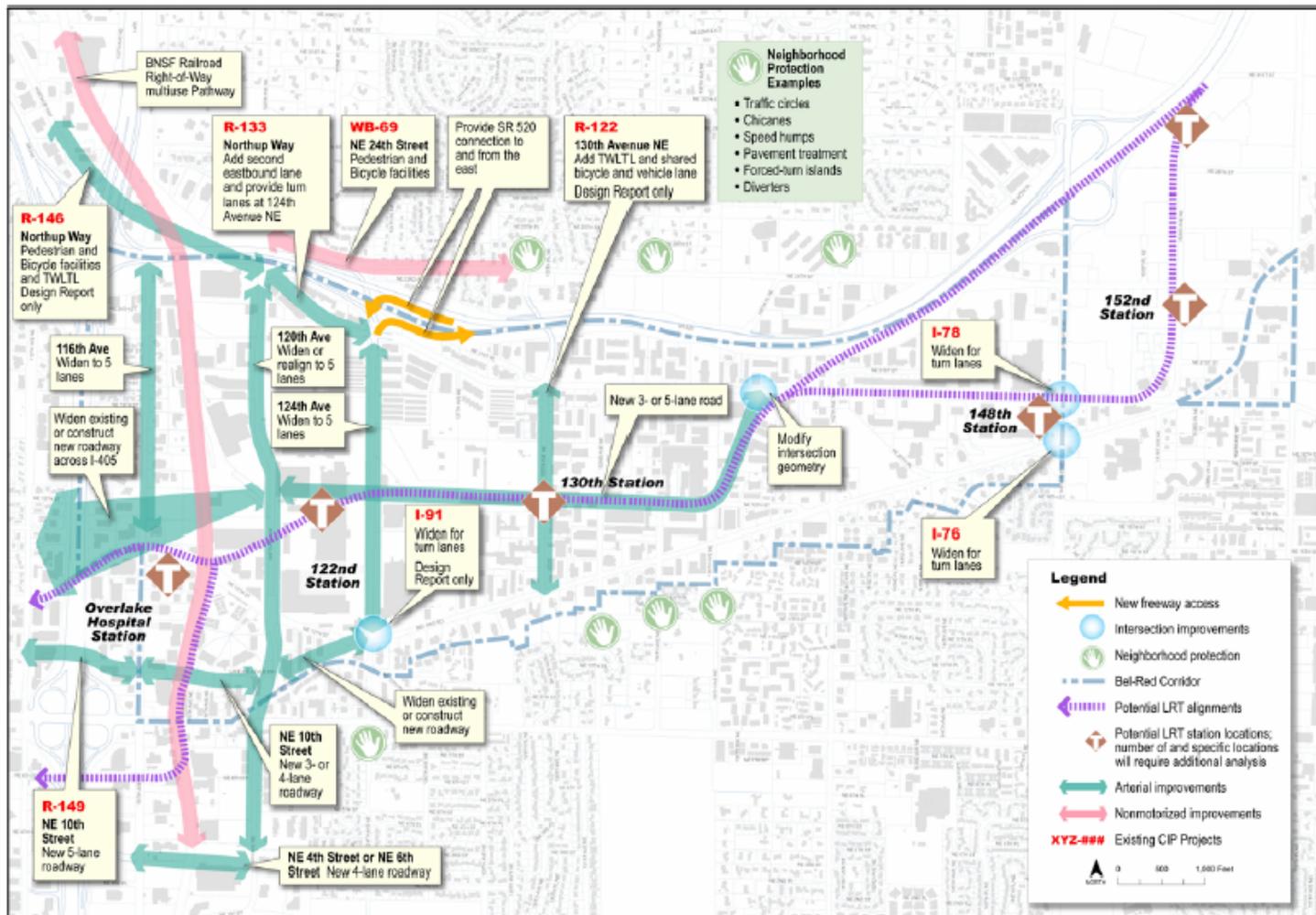


Transportation: No Action Alternative Network





Transportation: Action Alternatives Network





Transportation: Roadway Network

Transportation Improvement	Alternative			
	No-Action	1	2	3
130th Avenue NE, widen to four lanes with turnpockets between NE 16th Street and NE 20th Street	■	■	■	■
NE 16th Street				
Five-lane roadway, linking to Downtown Bellevue via NE 12th Street		■		■
Three-lane roadway, west terminus at 116th Avenue NE			■	
NE 16th Street east end treatment with terminus at NE 20th Street.				
Five-lane to three-lane reduction following along 136th Avenue NE		■	■	■
Continue three-lane section to NE 20th Street along 136th Avenue NE		■	■	■
Two-lane nonarterial connection between 136th Avenue NE and Bel-Red Road		■	■	■
NE 10th Street I-405 overcrossing	■	■	■	■
NE 10th Street extension, 116th to 124th Avenues NE				
Three-lane roadway		■	■	
Four-lane roadway				■



Transportation: Roadway Network

- Up to 16 intersections improved
- Intersection improvements vary amongst the alternatives
- Appendix G lists intersection improvements
- Important consideration

APPENDIX G

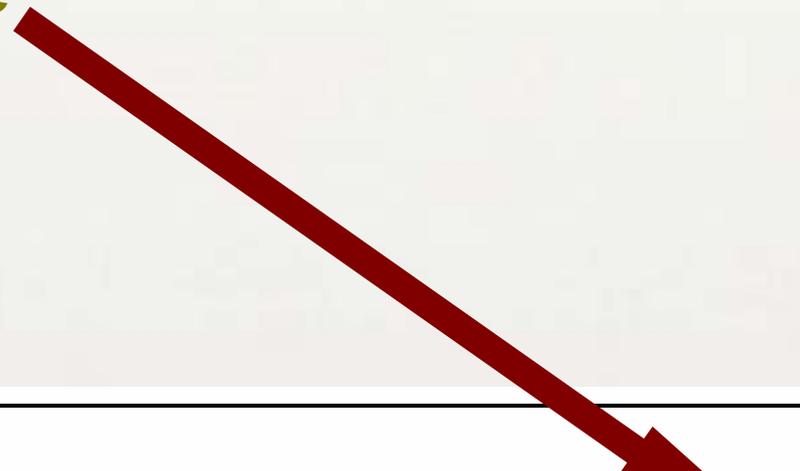
Bel-Red Corridor Intersection Improvements

Intersection No.	Street Names	Intersection Improvements	Alternative			
			No-Action	1	2	3
25	112th Avenue NE NE 12th Street	Double WBL	X	X	X	X
		Separate NBR	X	X	X	X
		Double WBL	X	X	X	
29	116th Avenue NE NE 12th Street	Double EBL	X	X	X	
		Separate EBR				X
		Separate WBR				X
32	120th Avenue NE NE 12th Street	Additional EBT				X
		Additional WBT				X
34	124th Avenue NE Bel-Red Road	Separate EBR			X	X
		Separate WBR			X	X
35	124th Avenue NE NE 8th Street	Double EBL		X	X	
		Double SBL				
		Double EBL	X	X		
39	140th Avenue NE NE 20th Street	Double WBL	X			
		Separate SBR				
		Separate WBR				
		Double WBL			X	X
907	150th Avenue NE NE 16th Street	Double EBL				X
		Double EBL		X		
907	150th Avenue NE NE 16th Street	Double WBL		X		
		Separate NBR				X
907	150th Avenue NE NE 16th Street	Double WBL		X	X	X
		Separate EBR				X
Total Number of Intersection Improvements:			37	54	53	65



Transportation: Roadway Network

- The number of intersections improved does not vary much over the alternatives
- However, the magnitude of improvements does vary by alternative

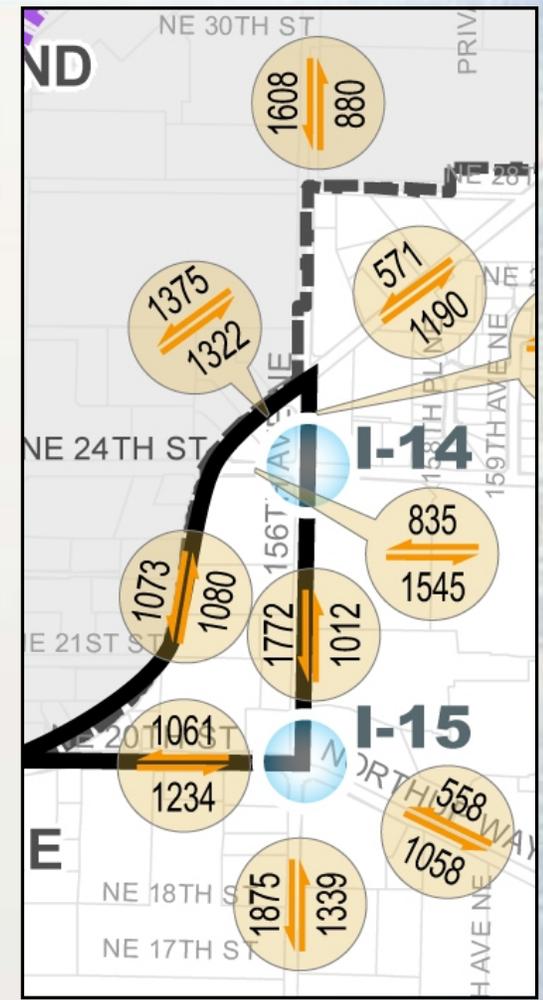


Intersection No.	Street Names	Intersection Improvements	Alternative			
			No-Action	1	2	3
Total Number of Intersection Improvements:			37	54	53	65



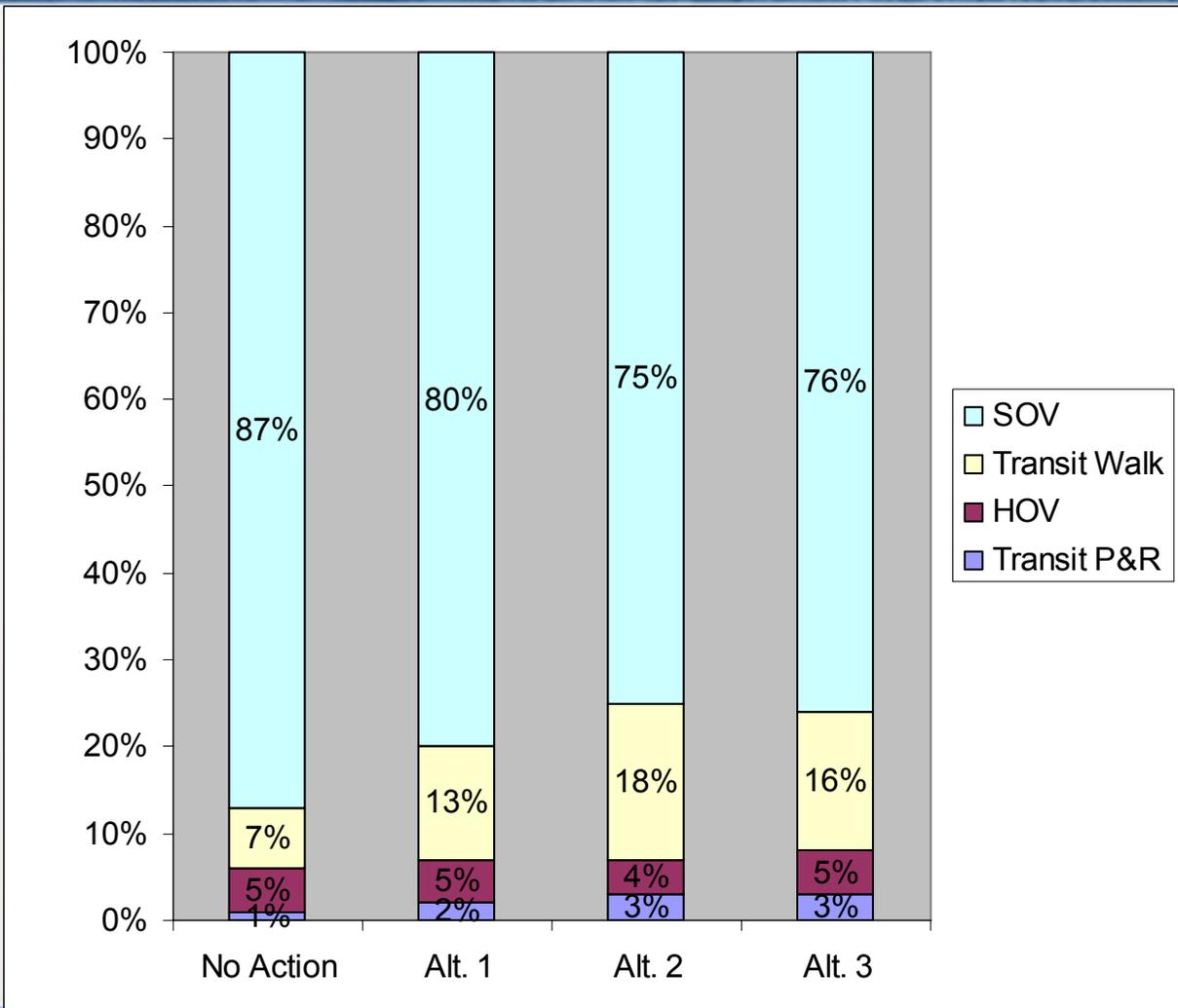
Transportation: 2030 Traffic and Network

- Traffic volumes increase by 10% for Alts. 1 and 2, compared to No Action
- Traffic volumes increase by 12% for Alt. 3, compared to No Action
- Roads with highest increase:
 - 120th Avenue NE, near NE 12th St
 - 136th Avenue NE, south of NE 20th St
 - 130th Avenue NE, near NE 20th St
- Traffic increases unique to alternatives:
 - Alt. 1 – Northup Way
 - Alt. 2 – 124th Avenue NE
 - Alt. 3 – 156th Avenue NE



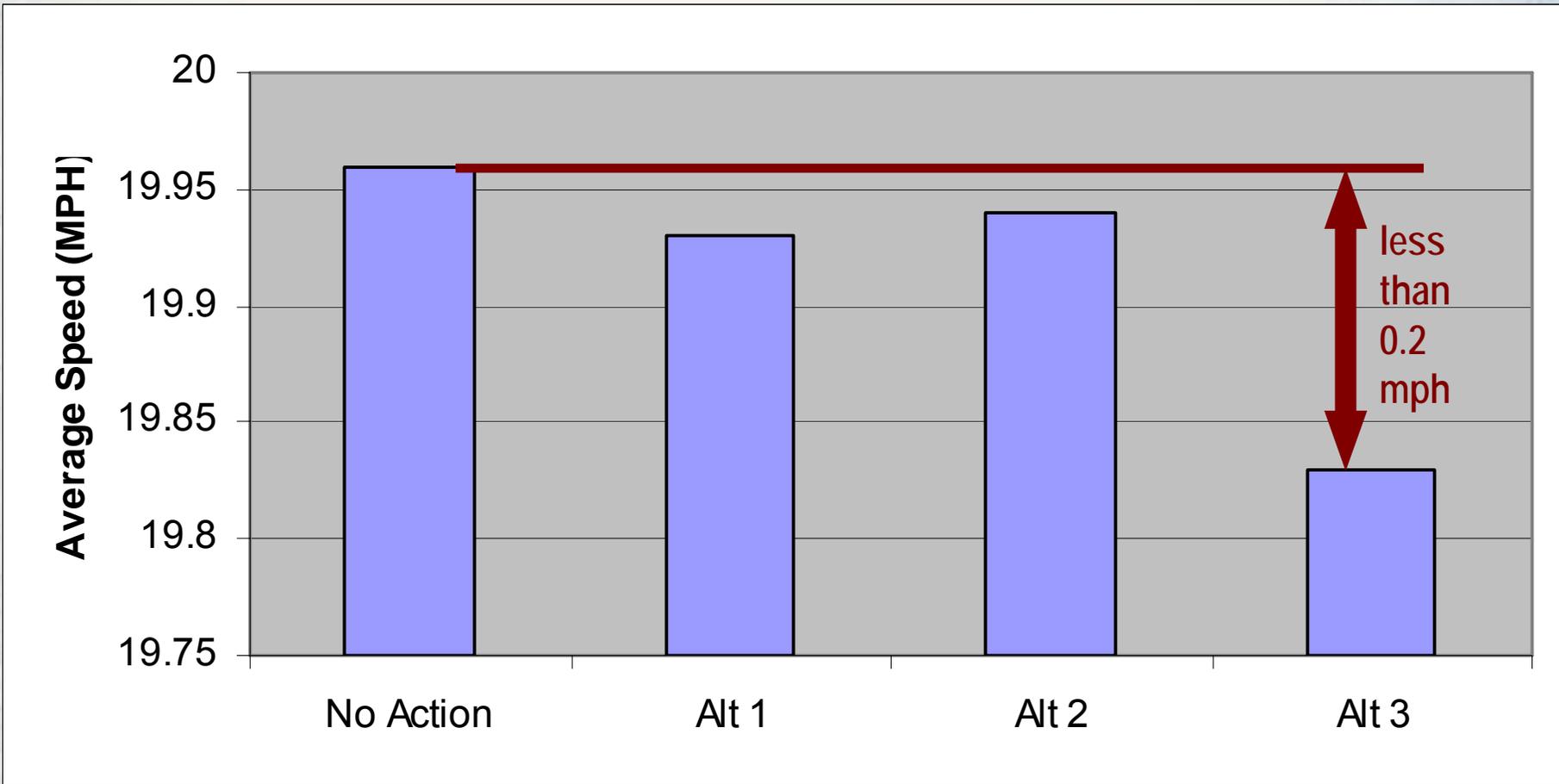


Transportation: Mode Share





Transportation: System Metrics





Transportation: Neighborhood Impacts

- Little to no change in traffic volume east and south of the corridor
- North of Bel-Red corridor, traffic volume could increase between 4 and 8 percent, without any traffic calming devices
- West of Bel-Red corridor, traffic volume could increase between 6 and 12 percent

Screenline Location	Existing Condition (2005) Total Volume	No-Action Alternative Total Volume	Alternative 1		Alternative 2		Alternative 3	
			Total Volume	Change over No-Action Alternative (percent)	Total Volume	Change over No-Action Alternative (percent)	Total Volume	Change over No-Action Alternative (percent)
North of NE 24th Street	8,260	10,500	11,120	6	10,880	4	11,300	8
South of Bel-Red Road	7,600	10,730	10,260	-4	10,770	0	10,450	-3
West of 112th and 116th Avenues NE	4,090	6,860	7,700	12	7,260	6	7,450	9
East of 156th Avenue NE	5,060	7,390	7,560	2	7,410	0	7,600	3



Transportation: LRT Ridership

- All Action alternatives show at least 3 times the daily ridership in the Bel-Red corridor than No Action
- Alt. 2 has lowest LRT ridership
- Alt. 3 has highest LRT ridership

	Alternative			
	No-Action	1	2	3
New households	0	3,500	5,000	5,000
New employment	2,367	6,339	4,740	9,249
Daily boardings in Bel-Red Corridor (from new and preexisting households and employers)	1,939	6,650	6,100	7,800
Daily boardings in Downtown Bellevue	15,900	17,550	16,900	17,500
Daily boardings in Overlake	5,850	4,950	5,700	5,000
Total ridership	23,689	29,150	28,700	30,300

Source: City of Bellevue and BKR forecasting model, 2006.



Transportation: Mitigation

- **Roadways**
 - **Construct transportation system improvements**
 - **Implement traffic monitoring and signal system optimization**
 - **Continue aggressive transportation demand management**
- **Neighborhood Traffic Calming**
 - **Implement traffic-calming or traffic-diverting measures**
 - **Prevent spillover parking with restrictions and enforcement**



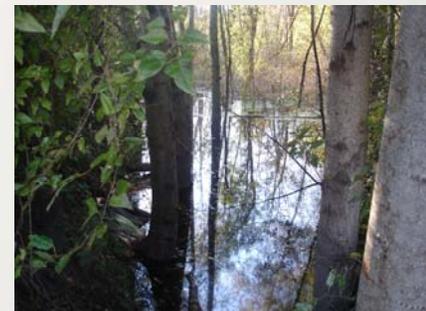
Transportation: Mitigation

- **Transit**
 - Expand and improve local and regional transit service
 - Implement transit improvements prior to LRT service
 - Integrate surface transit improvement with LRT stations
- **Non-motorized Transportation**
 - Create a high-quality pedestrian environment within development nodes
 - Establish multiple connections to BNSF trail
 - Improve overall non-motorized network with links to surrounding system



Watershed Processes: What We Evaluated

- **Level of protection afforded by existing regulations (primarily Critical Areas and stormwater management)**
- **Opportunities for low-impact development (LID) by minimizing impervious surface and infiltrating stormwater through soil**
- **Opportunities to protect/enhance stream corridors to improve habitat and/or improve stormwater management**





Watershed Processes: Existing Conditions

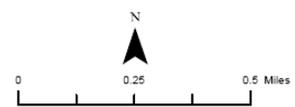
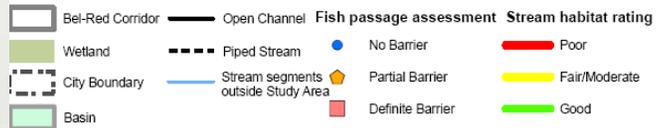
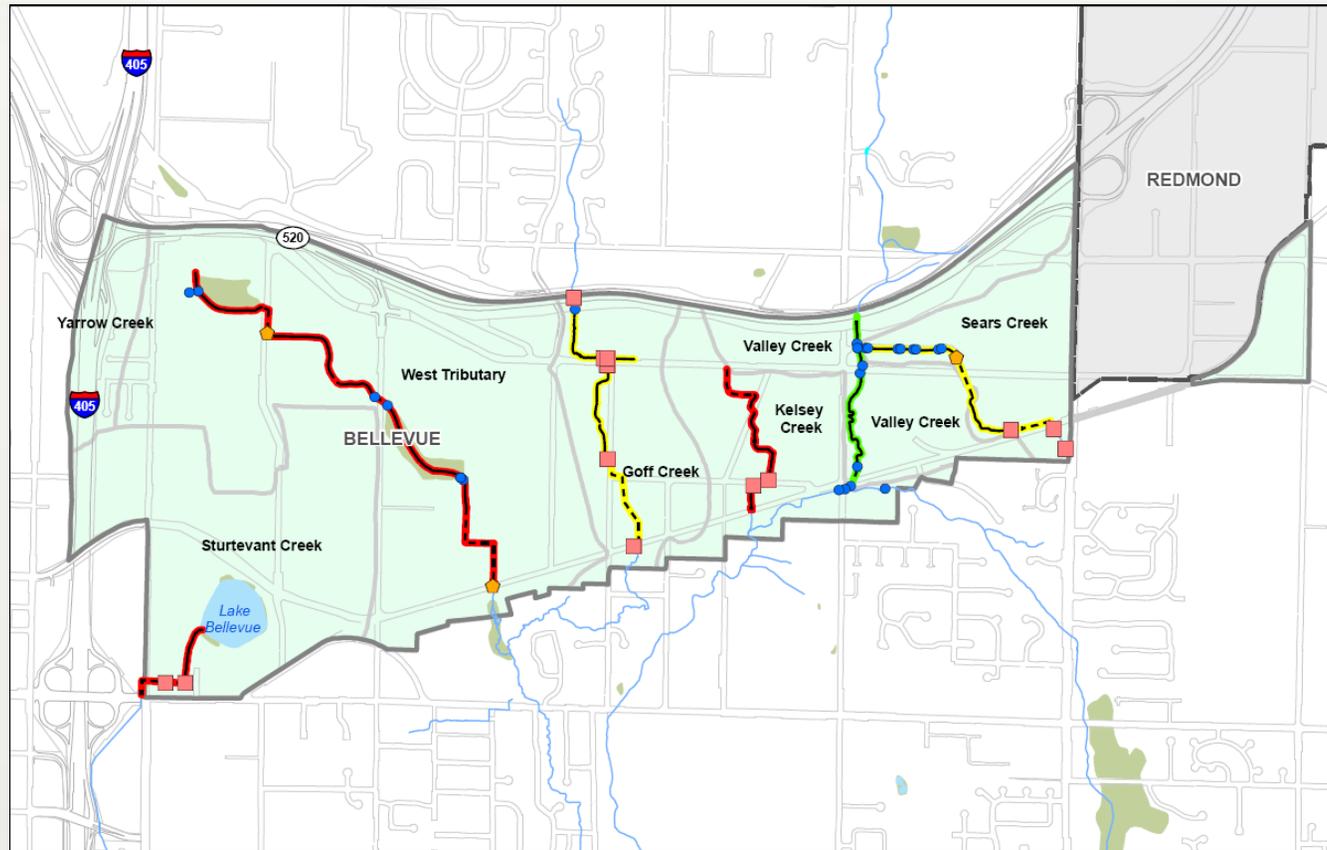
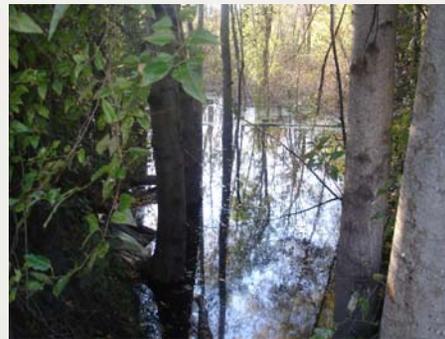


Figure 4-1
**Bel-Red Corridor Basins,
 Streams, Wetlands, and Fish
 Passage Features**
 Bel-Red Corridor Draft EIS



Watershed Processes: Impacts

- **Development would intensify in the vicinity of most Bel-Red stream corridors.**
- **Redevelopment would implement current stormwater management and stream buffer requirements—however, this alone does not yield ecosystem benefits.**





Watershed Processes: Opportunities

- **Increase stream buffers.**
- **Reduce surface parking to minimize impervious surfaces.**
- **Promote LID and “green” infrastructure.**
- **Develop “green streets” standards.**
- **Take advantage of porous soil types for stormwater infiltration**
- **Explore public acquisition and management of key stream segments.**
- **Acquire new park land, create multiple benefits by including habitat areas suitable for enhancement.**



Watershed Processes: Opportunities

- **Reduce impervious surface and/or create habitat:**
 - **Alt 1: West Tributary**
 - **Alt 2: Goff Creek, Unnamed Tributary, Valley Creek, & Sears Creek**
 - **Alt 3: West Tributary, Goff Creek, Unnamed Tributary, & Sears Creek**
- **Provide incentives for environmental enhancements:**
 - **Facilitate transfer of development potential away from streams; cluster development on less sensitive portions.**
 - **Allow increased building height in exchange for reducing impervious site coverage, implementing LID, and/or increasing buffers.**



Environmental Hazards

- **What we evaluated:**
 - **Potentially contaminated sites identified in regulatory databases**
 - **Number of sites in potential development nodes**
- **What we found:**
 - **Many potential sites due to past/present land uses**
 - **Most common contaminants are petroleum hydrocarbons**
 - **Number of sites in development nodes:**
 - **No Action: 2**
 - **Alternative 1: 2**
 - **Alternative 2: 18**
 - **Alternative 3: 11**



Other Key Findings from DEIS

■ Aesthetics

- Views would change substantially due to a more dense, urban character, mitigated by design
- Mitigation measures could include:
 - Design guidance for higher-density nodes and transition areas
 - Standards for roof lines, rooftop treatments, and light shielding to minimize offsite impacts

■ Air Quality

- No alternatives would violate ambient air quality standards



Other Key Findings from DEIS (continued)

■ **Noise**

- **Some future residential areas could exceed City noise standards because of increased traffic; impacts could be reduced by traffic management and/or site design measures.**

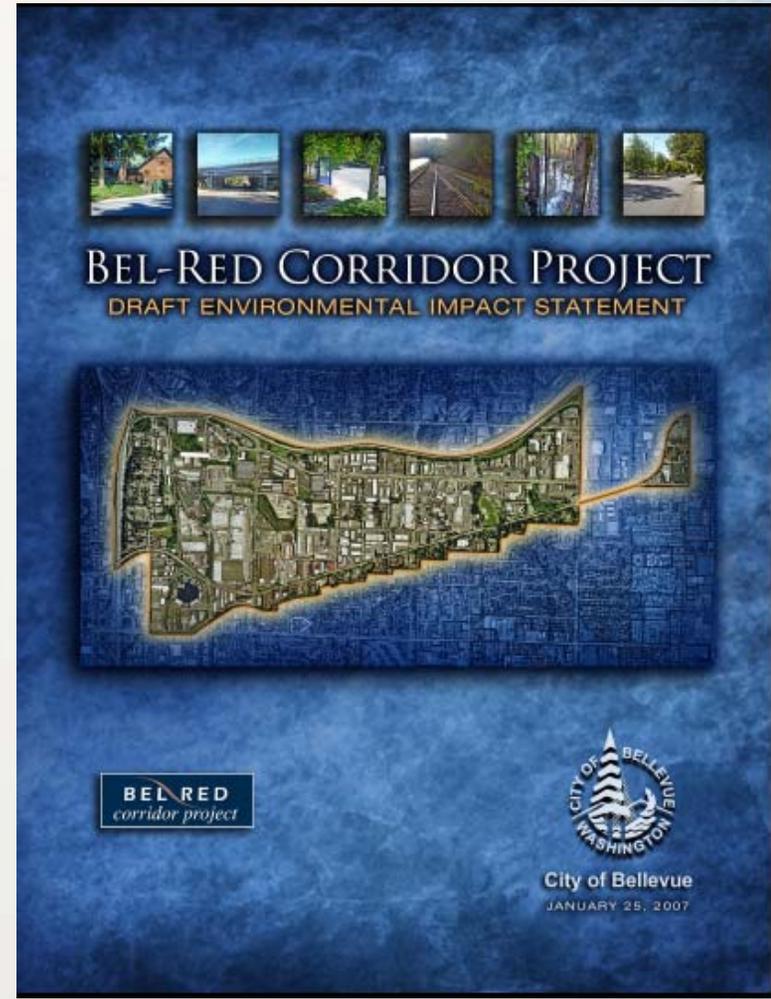
■ **Public Services and Utilities**

- **Demand would increase, but is within the service capacity of providers.**



Next Steps

- Feb. 15 – DEIS Open House/Public Hearing
- March 12 – Close of Public Comment Period
- Mid-March – Steering Committee workshop(s) to develop preliminary preferred alternative
- April 5 – Steering Committee Recommendation on preliminary preferred alternative





Questions, Comments, More Information

Thank you!

Questions and Comments:

For more info:

http://www.bellevuewa.gov/bel-red_intro.htm

The cover of the "BEL-RED CORRIDOR PROJECT DRAFT ENVIRONMENTAL IMPACT STATEMENT" report. It features a blue background with a central map of the corridor. Above the map is a row of six small images showing various scenes: a house, a building, a tree, a road, a forest, and a street. The title "BEL-RED CORRIDOR PROJECT" is in large white letters, with "DRAFT ENVIRONMENTAL IMPACT STATEMENT" in smaller yellow letters below it. At the bottom left is the "BEL RED corridor project" logo, and at the bottom right is the "CITY OF BELLEVUE WASHINGTON" logo with the date "JANUARY 25, 2007".