



City of Tualatin

Refinement Areas (Part 2)

Tualatin TSP


Presentation to
Tualatin Transportation Task Force
August 23, 2012

Goal of Tonight's Discussion

- Discuss final refinement areas
 - North-south connectivity
 - Tualatin-Sherwood Road
 - Boones Ferry Road
 - Downtown connectivity
- Recommend what projects move forward for packaging and discussion at Transportation Summit

Last Week's Meeting

- We heard a few things from you
 - Provide more details about our analysis - this helps you weigh the tradeoffs
 - Be creative - think outside the box
 - Be sensitive - to parks, homes/businesses, historic properties



This presents
a challenge...



Your Team's Goals for Tonight

1. Provide as many details as we can
2. Put forward some ideas that address the challenges
3. Be sensitive to the constraints that exist

A Reminder of our Goals and Objectives

No.	Goal	Representative Criteria
1.	Access and Mobility	Provide efficient and quick travel between point A and B, Provide connectivity within the City between popular destinations and residential areas
2.	Safety	Address known safety locations, address geometric deficiencies
3.	Vibrant Community	Support a livable community with family-friendly neighborhoods, maintain a small town feel
4.	Equity	Promote a fair distribution of benefits and burdens, consider access to transit for all users
5.	Economy	Support a vibrant City Center and community, Consider positive and negative effects of alternatives on adjacent residential and business areas
6.	Health/Environment	Provide interconnected networks for bicyclists and pedestrians, protect park land and create an environmentally sustainable community
7.	Ability to be Implemented	Promote fiscal responsibility, strive for broad community and political support

Refinement Area #3: North to South Connectivity





Goal Statement

Improve north-south
connectivity west of I-5

From our July Meeting...

Look at a hybrid option that:

- Constructs a two-lane road connecting from Tualatin Road to Hall Boulevard north of the river
- Widens Boones Ferry Road to five lanes between Martinazzi and Lower Boones Ferry
- Assumes extension of 65th Avenue





SW Celilo St

SW Chinook St

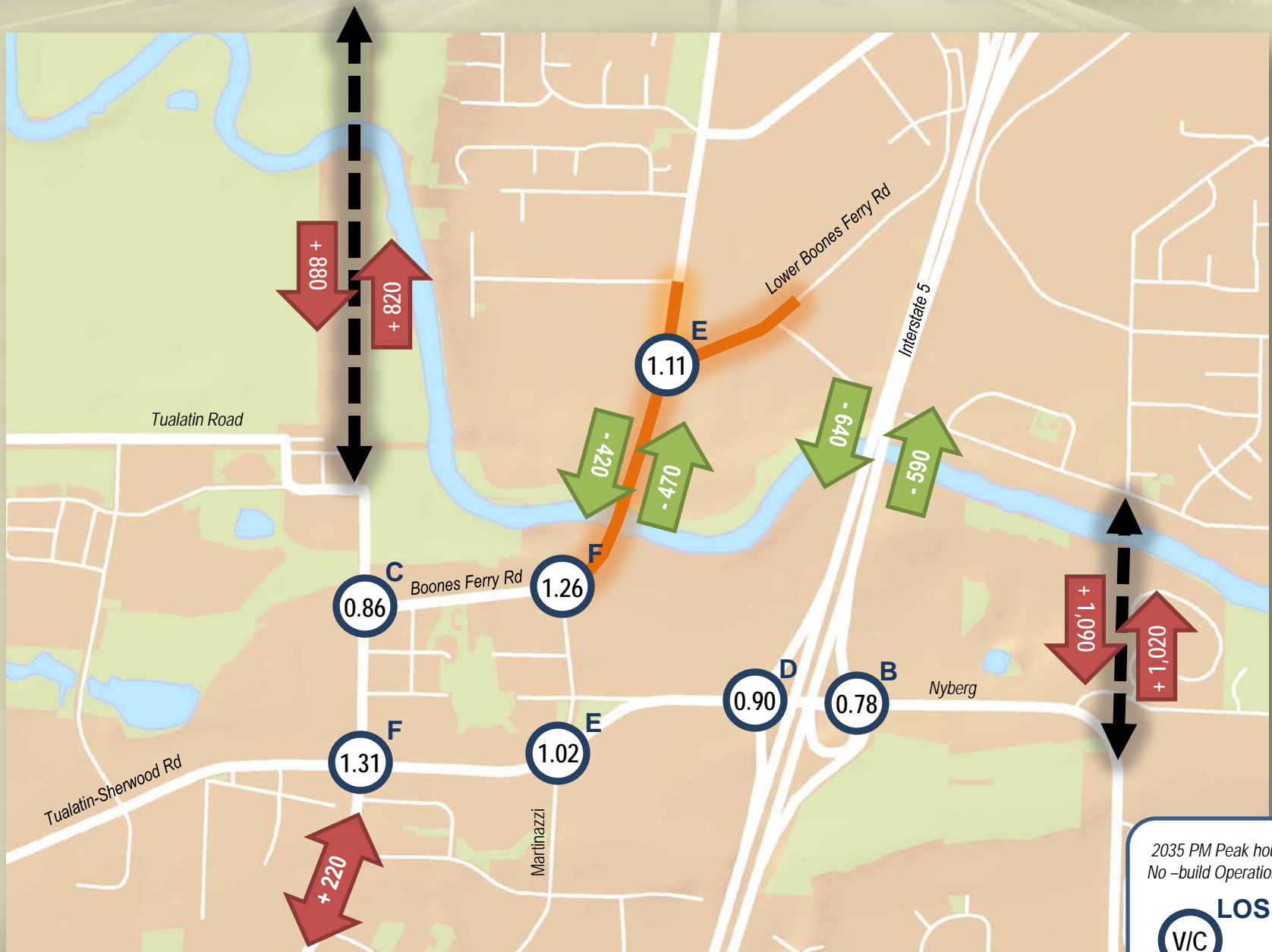
SW 86th Ave

SW Tualatin Rd

© 2012 Google

45°23'12.72" N 122°45'46.68" W elev 127 ft

Imagery Date: 8/20/2011



2035 PM Peak hour
No-build Operations

LOS
V/C

What Does This Do For Tualatin?

Area	Benefits	Impacts
Traffic	<ul style="list-style-type: none">• Decreases traffic on 99W, Boones Ferry Road (east of Tualatin Road), I-5• Decreases traffic on Herman and Tualatin Roads	<ul style="list-style-type: none">• Increases traffic into downtown and onto Tualatin-Sherwood Road
Design	<ul style="list-style-type: none">• Removes one 90 degree turn on Tualatin Road	<ul style="list-style-type: none">• Requires significant right of way• Additional at-grade crossing of RR tracks might be difficult
Environmental / Policy	<ul style="list-style-type: none">• Extension included in Tigard and Washington County TSPs• Does NOT impact Sweek House• If local connection is made at Tualatin Community Park, helps circulation into park	<ul style="list-style-type: none">• Additional environmental analysis would be needed related to river crossing, crossing of trail(s), and noise and air quality assessments



Discussion

Technical Team Does NOT Offer a Recommendation:

Ultimately, this needs to be a Community Decision

Refinement Area #5: Tualatin-Sherwood Road

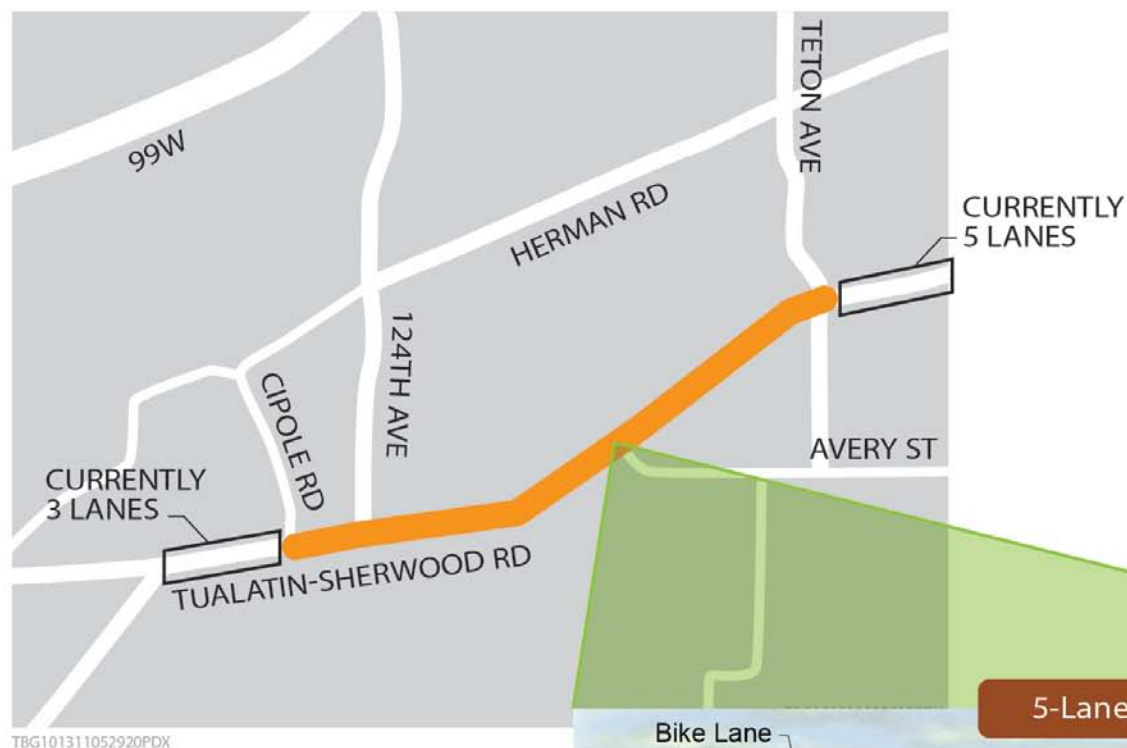




Goal Statement

Relieve congestion and improve
safety for all modes

Option #1: Complete Five Lane Section



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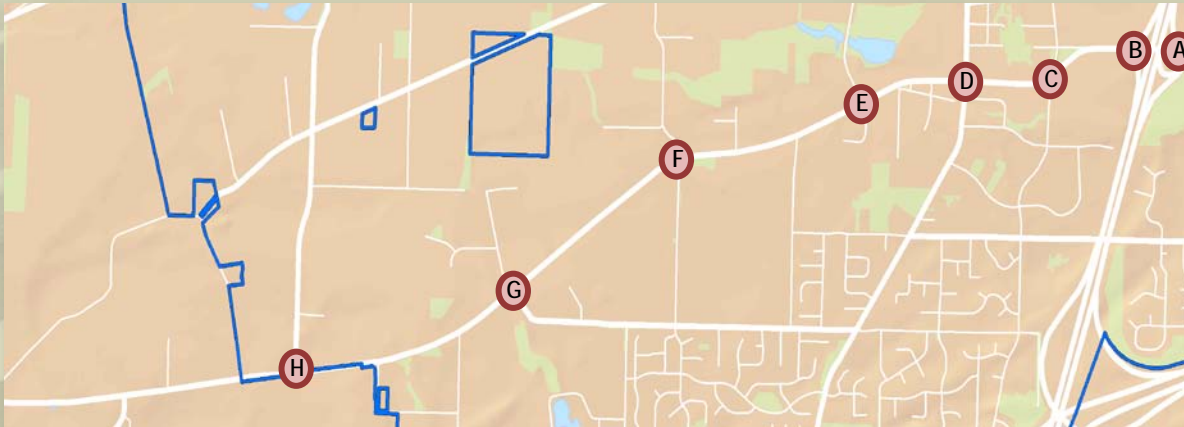
- Widens Tualatin-Sherwood Road to five lanes between Martinazzi and Lower Boones Ferry
- Road is currently five lanes east of Teton



Option #2: Retain Three Lane Section

- One travel lane in each direction
- Center turn lane
- Retains shoulder bicycle lanes and sidewalks
- Coordinated signal timing
- Spot improvements at key intersections

What Do These Options Do For Traffic?



PM Peak Hour Operations

Tualatin-Sherwood Road &	2011 Existing	Retain Three Lane Cross Section	Widen to Full Five-Lane Cross Section
A I-5 Northbound	0.68 (B)	0.78 (B)	0.78 (B)
B I-5 Southbound	0.79 (D)	0.90 (D)	0.90 (D)
C Martinazzi Ave	0.94 (D)	1.02 (E)	1.02 (E)
D Boones Ferry Road	0.93 (D)	1.31 (F)	1.31 (F)
E 90 th Avenue	0.60 (C)	0.78 (C)	0.78 (C)
F Teton Avenue	0.79 (D)	0.95 (E)	0.95 (E)
G Avery St	0.71 (B)	0.99 (E)	0.92 (D)
H 124 th Avenue	0.60 (C)	1.33 (F)	0.92 (C)

V/C ratio (Level-of-Service)

Other Connectivity Options

Option	West of Boones Ferry Rd	East of Boones Ferry Road
65 th Extension	+ 50 vehicles	+180 vehicles
North/South Connection	+ 170 vehicles	-50 vehicles
Hybrid (both 65 th and North/South)	+130 vehicles	+80 vehicles
TSM Option	Negligible	Negligible

What are the Other Benefits to Tualatin?

Area	Five-Lane	Three-Lane
Design Constraints	<ul style="list-style-type: none">• Setbacks appear to allow widening with minor impacts to properties• Some drainage/water quality basins may require relocation	<ul style="list-style-type: none">• None – this largely retains existing cross section. Widening at key intersections could be accommodated with no major design concerns
Environmental / Policy	<ul style="list-style-type: none">• Project is included in Washington County TSP	<ul style="list-style-type: none">• This option is not consistent with the Washington County TSP



Discussion

Technical team
recommendation:

Move five-lane option forward
to summit

Refinement Area #6: Boones Ferry Road





Goal Statement

Reduce congestion and improve safety on
Boones Ferry Road throughout
Tualatin

Three Segments of Boones Ferry Road

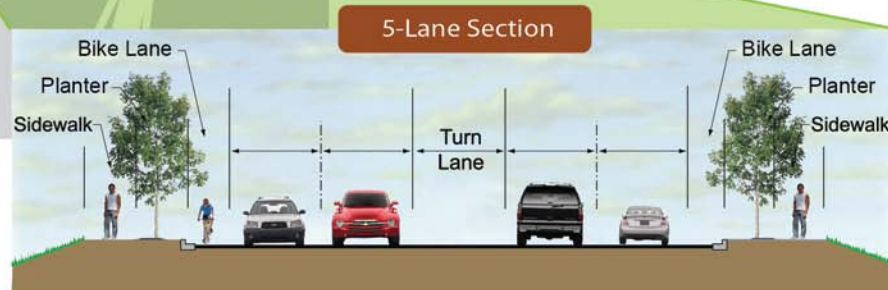


Segment A: North of Martinazzi

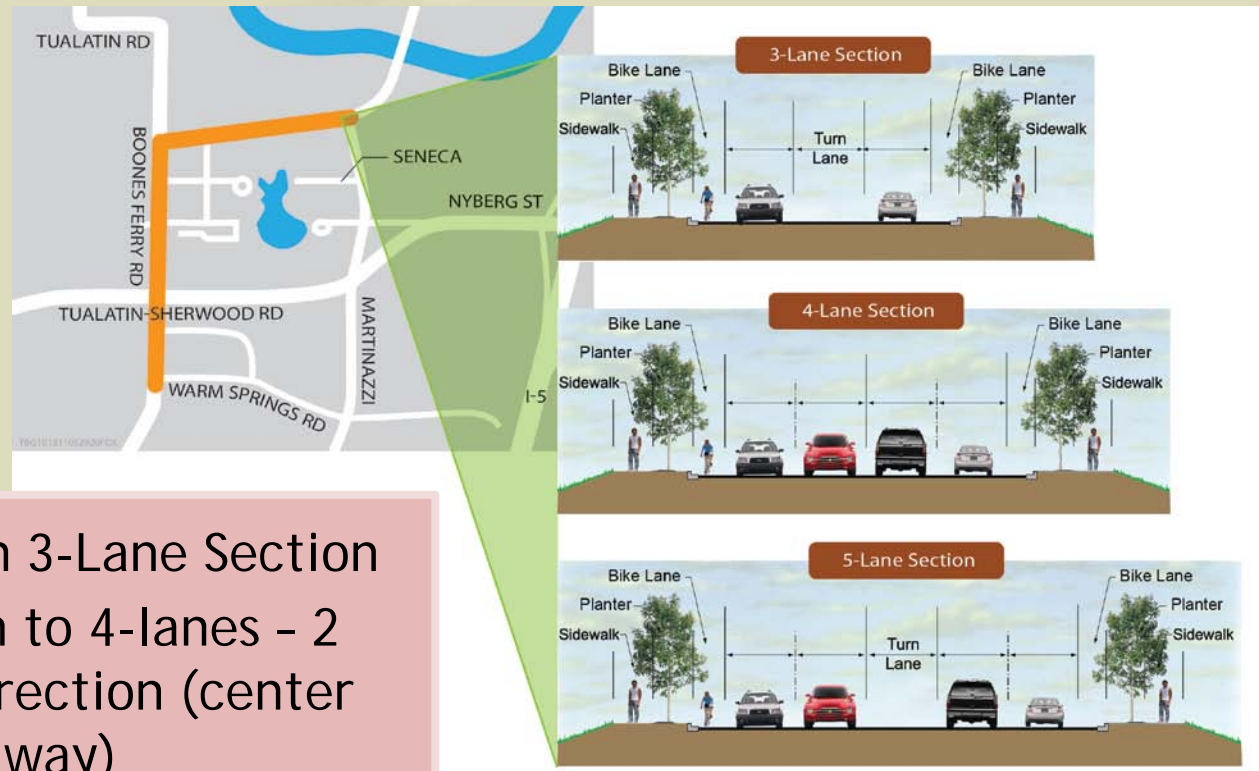
- Widen to five lanes from intersection with Lower Boones Ferry to bridge
- Replace current bridge, widen to four lanes with bike lanes and sidewalks
- Transition to three lanes south of bridge with transition at Martinazzi (left turn lane)



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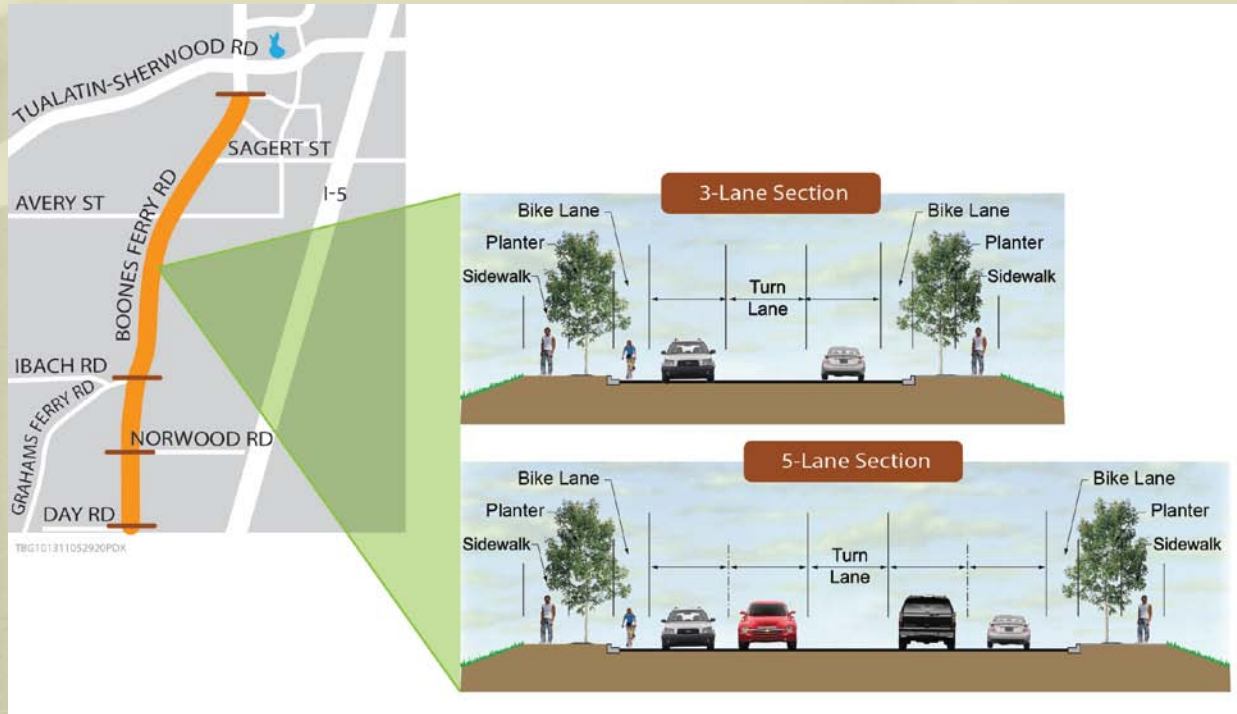


Segment B: Through Downtown



- Option 1: Retain 3-Lane Section
- Option 2: Widen to 4-lanes - 2 lanes in each direction (center turn lane goes away)
- Option 3: Widen to 5-lanes - 2 lanes in each direction with center turn lane

Segment C: South of Warm Springs



- Option 1: 3-lane section with widening at key intersections, coordinated signal timing
- Option 2: 5-lane section (2 travel lanes in each direction with center turn lane)

Boones Ferry Road Traffic: All Options



PM Peak Hour Operations

Boones Ferry Road & A	2011 Existing	2035 No-Build	Widen South of Tualatin-Sherwood Rd to Norw ood	Widen North of Martinazzi to Lower Boones
B Lower Boones Ferry	0.76 (C)	1.11 (E)	1.11 (E)	0.89 (C)
C Martinazzi Ave	0.89 (D)	1.26 (F)	1.26 (F)	1.33 (F)
D Tualatin Road	0.62 (B)	0.86 (C)	0.86 (C)	0.92 (C)
E Tualatin-Sherwood Rd	0.93 (D)	1.31 (F)	1.30 (F)	1.31 (F)
F Sagert St	0.75 (C)	1.11 (E)	0.84 (C)	1.11 (E)
G Avery St	0.87 (C)	1.15 (F)	0.96 (D)	1.15 (F)
Ibach St	0.70 (B)	0.98 (D)	0.88 (C)	0.98 (D)

V/C ratio (Level-of-Service)

Other Connectivity Options

Option	South of Tualatin-Sherwood Rd	TSR to Martinazzi Rd	North of Martinazzi
65 th Extension	- 70 vehicles	-180 vehicles	-440 vehicles
North/South Connection	+ 520 vehicles	-270 vehicles	-570 vehicles
Hybrid (both 65 th and North/South)	+220 vehicles	-500 vehicles	-890 vehicles

What are the Benefits for Tualatin?

Area		Segment A	Segment B	Segment C
Design	3-lane	<ul style="list-style-type: none"> No impacts 	<ul style="list-style-type: none"> No impacts 	<ul style="list-style-type: none"> No impacts
	4-lane	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> Would require ROW Access impacts 	<ul style="list-style-type: none"> N/A
	5-lane	<ul style="list-style-type: none"> Minor impacts Little ROW needed Railroad coordination needed 	<ul style="list-style-type: none"> Would require additional ROW Would require reconstructed accesses 	<ul style="list-style-type: none"> Could improve curves and grade for sight distance improvements Some structures close to ROW line
Environmental/ Policy	3-lane	<ul style="list-style-type: none"> None 	<ul style="list-style-type: none"> None 	<ul style="list-style-type: none"> None
	4-lane	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> Business impacts Difficult turning movements 	<ul style="list-style-type: none"> N/A
	5-lane	<ul style="list-style-type: none"> Some landscaping impacts adjacent to road 	<ul style="list-style-type: none"> Impacts businesses in this segment 	<ul style="list-style-type: none"> Impacts setbacks and landscaping (no houses) Near Woodrose Nature Park



Discussion

Technical team recommendation:

Move forward with

Segment A: Five lanes

Segment B: Three lanes

Segment C: Three lanes

To the summit

Refinement Area #7: Downtown Connectivity



Tualatin-Sherwood Road/Boones Ferry Road Intersection



Notes:

- Signal timing is already optimized at this intersection, but other phasing/timing/coordination alternatives may be tested
- Changing the signal timing to 120 seconds could improve the V/C ratio from 1.30 (F) to 1.22 (F)
- Intersection is well over capacity, even a test of 140 second signal cycle with right turns on every approach yields a V/C of 1.06 (E)

PM Peak Hour Operations

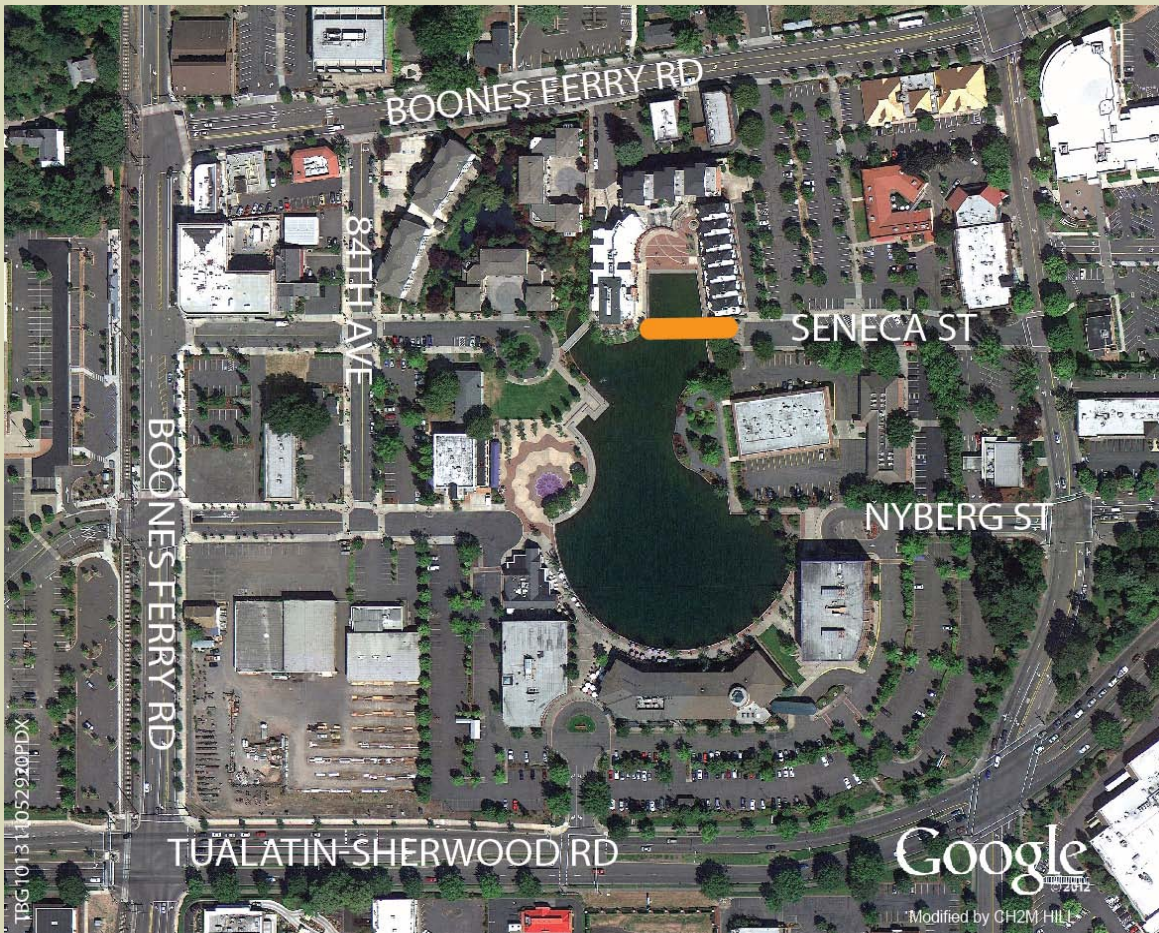
	Tualatin-Sherwood Road/Boones Ferry Road
Existing Conditions	0.93 (D)
2035 No-Build	1.31 (F)
Added Eastbound Right Turn Pocket	1.18 (E)
Added Westbound Right Turn Pocket	1.31 (F)
Added Southbound Right Turn Pocket	1.18 (E)

V/C ratio (Level-of-Service)

Other Connectivity Options

Option	West of Boones Ferry Rd	East of Boones Ferry Road	North of TSR	South of TSR
65 th Extension	+ 50 vehicles ↑	+180 vehicles ↑	-60 vehicles ↓	- 70 vehicles ↓
North/South Connection	+ 170 vehicles ↑	-50 vehicles ↑	+420 vehicles ↑	+ 520 vehicles ↑
Hybrid (both 65 th and North/South)	+130 vehicles ↑	+80 vehicles ↑	+280 vehicles ↑	+220 vehicles ↑
TSM Option	Negligible	Negligible	Negligible	Negligible

Connectivity in the Downtown Core



- Bridge over the lake was screened out
- Tunnel under the lake was screened out
- At least we can improve connectivity for bicyclists and pedestrians

Revisiting Refinement Area #4: Herman Road and Tualatin Road

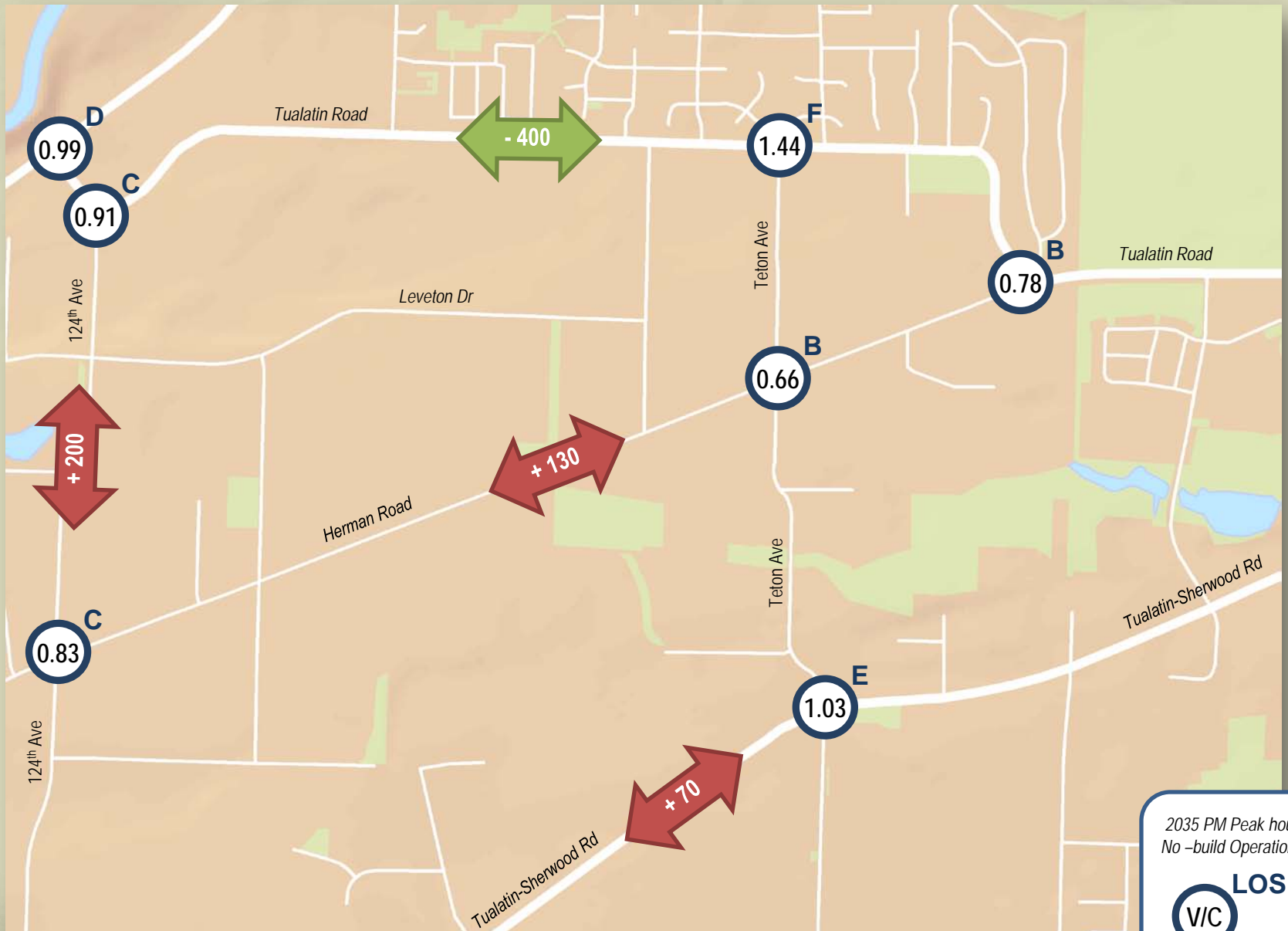


Refined Solution



Add something on teton

- A. Reclassify Herman to a minor arterial
- B. Upgrade section of Herman to 2 lanes
- C. Lower speeds on Tualatin
- D. Eliminate free right turn at Tualatin/Herman intersection, consider roundabout
- E. Add signals at the east and west ends of Tualatin
- F. Remove trees at Tualatin and 108th
- G. Modify channelization of 124th and Tualatin, consider roundabout
- H. Signage to indicate that Tualatin is for local traffic



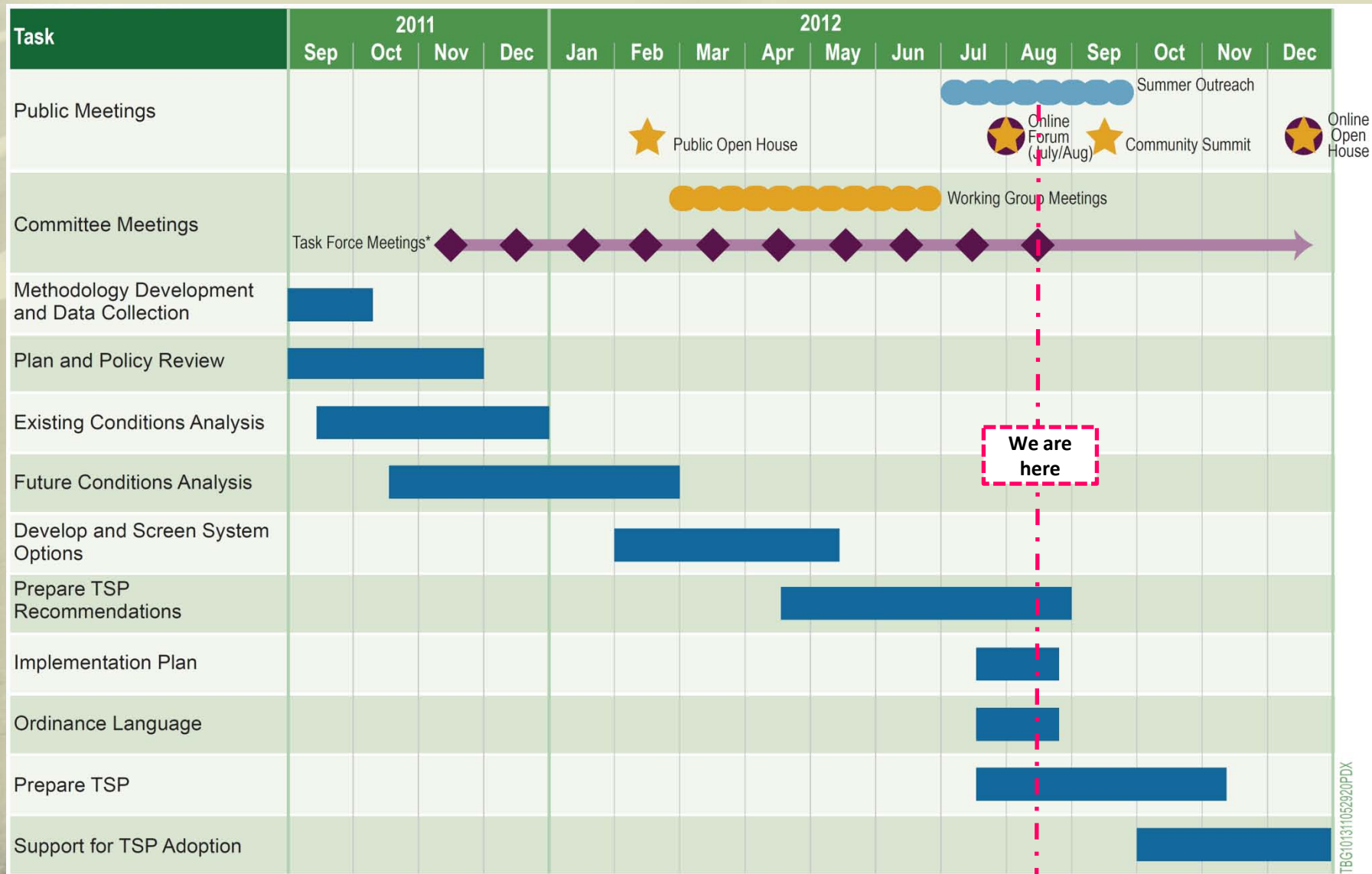
2035 PM Peak hour
No -build Operations

LOS
V/C

Thank You! What Happens Next?

- Package all the recommendations
- Traffic analysis of the system together
 - Does it work?
 - What are we benefits to Tualatin?
 - What are the benefits to the region?
 - What are the costs?
- Transportation Community Summit in September (September 20th)

Transportation System Plan Timeline





Thank you!