Redmond, Washington

- Area: 16.85 sq miles
- Population: 51,500
- Employment: 80,000
  - Microsoft
  - Nintendo of America
  - Genie Industries
  - Honeywell
  - AT&T Wireless
- Urban Centers
  - Downtown
Comprehensive Plan

Goals, Vision & Framework Policies –
Transportation System Characteristics:

- Convenient, safe
- Offers travel choices
- Well designed, energy efficient
- Environmentally sound
- People spend less time traveling; more time where they want to be

Thursday, December 10, 2009
Transportation Master

Balanced transportation system that:

- Supports Urban Centers
- Creates new connections
- Implements Multimodal Corridors
- Prepares for high capacity transit
Comprehensive Plan

Policies—LOS & concurrency must:
- Promote desired land uses
- Expand travel choices
- Maintain community character
- Ensure accountability

Thursday, December 10, 2009
Comprehensive Plan

Transportation Concurrency—Policy TR-3:
Utilize a “plan-based” approach...ensure that programs, facilities & services occur in proportion to the needs of the City & pace of growth...

Transportation LOS—Policy TR-4:
Redmond’s LOS standard is that so long as growth & transportation system development are proportionate, work in parallel and consistent with the Comprehensive Plan, concurrency...
Concurrency Update

- Support City vision and goals
- Implement the 2022 Transportation Facility Plan (TFP)
- Track and regulate growth and implementation of the TFP to ensure that they are roughly proportionate
- Simple and predictable
- Be understandable: “I can explain concurrency to my neighbor”
Concurrency Approaches

Intersection Based

- Automobile focused – based on PM peak hour intersection LOS
- 7 district system – 4 districts currently exceed LOS standard
- Improve LOS by:
  - Expanding intersections
  - More traffic signals
- Complicated and Cumbersome
- Intersection LOS drives

Plan-Based

- Multi-modal – based on PM peak hour person miles traveled (PMT)
- Citywide
- Improve LOS with 2022 TFP projects, programs, and services that add PMT capacity
- Ensure that growth and transportation improvements are proportional
- Simple and predictable
Total Mobility Unit
Total Mobility Unit

Results in Multimodal Transportation System Performance Measures as reported in Transportation Master Plan and monitored in Mobility Report Card.
Total Mobility Unit

Transportation Facility Plan Supplies 70,022 Mobility Units to get the system performance described in the TMP.

Results in Multimodal Transportation System Performance Measures as reported in Transportation Master Plan and monitored in Mobility Report Card.
Total Mobility Unit

Results in Multimodal Transportation System Performance Measures as reported in Transportation Master Plan and monitored in Mobility Report Card.

Percent of Transportation Facility Plan Complete determines Mobility Units supply available.
Mobility Unit Demand Calculation

Vehicle Trip Generation Rate (PM peak hour) × Percent New Trips × Person Trip Conversion (Average Vehicle Occupancy & Mode Split) × Trip Length (miles) = Person Mile Rate per Unit × Units of Development = Person Miles of Travel (Mobility Unit Demand)
## Mobility Unit Demand Calculation

<table>
<thead>
<tr>
<th>Development Type</th>
<th>Land Use (Unit)</th>
<th>Units</th>
<th>Proposed Concurrency</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Mobility Unit Rate</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Mobility Units</td>
</tr>
<tr>
<td></td>
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<tr>
<td>Res. Short Plat.</td>
<td>SF (unit)</td>
<td>4</td>
<td>2.78</td>
</tr>
<tr>
<td></td>
<td>SF (unit)</td>
<td>(1)</td>
<td>2.78</td>
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<tr>
<td></td>
<td>Net Change</td>
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### Development Mobility Unit Calculator

<table>
<thead>
<tr>
<th>Land Uses</th>
<th>Standard of Measure</th>
<th>Mobility Units/Land Use Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Citywide</td>
<td>Urban Centers</td>
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<tr>
<td></td>
<td>Downtown</td>
<td>Overlake</td>
</tr>
<tr>
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<td>2.78</td>
</tr>
<tr>
<td>Multiple Family</td>
<td>dwelling</td>
<td>1.71</td>
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<th>Overlake</th>
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<td></td>
<td></td>
</tr>
<tr>
<td>Single Family</td>
<td>dwelling</td>
<td>Citywide: 2.78, Urban Centers: 2.78, Downtown: 2.78, Overlake: 2.78</td>
</tr>
<tr>
<td>Multiple Family</td>
<td>dwelling</td>
<td>1.71, 1.28, 1.59</td>
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### Mobility Unit Demand Calculation

<table>
<thead>
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<th>Land Use Type</th>
<th>Units</th>
<th>Proposed Concurrency Program</th>
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<td>SF (unit)</td>
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Thursday, December 10, 2009
### Mobility Unit Demand Calculation

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<th>Units</th>
<th>Proposed Concurrency Rate</th>
<th>Mobility Units</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Downtown Mixed-Use</td>
<td>Retail (sq ft)</td>
<td>15,000</td>
<td>3.38</td>
<td>51</td>
<td>New</td>
</tr>
<tr>
<td></td>
<td>MF (units)</td>
<td>150</td>
<td>1.28</td>
<td>192</td>
<td>New</td>
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<tr>
<td></td>
<td>Furniture (sq ft)</td>
<td>(4,450)</td>
<td>0.33</td>
<td>(1)</td>
<td>Existing</td>
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<tr>
<td></td>
<td>Auto (sq ft)</td>
<td>(6,450)</td>
<td>4.26</td>
<td>(27)</td>
<td>Existing</td>
</tr>
<tr>
<td></td>
<td>Spc. Retail (sq ft)</td>
<td>(5,600)</td>
<td>3.38</td>
<td>(19)</td>
<td>Existing</td>
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<tr>
<td></td>
<td>Warehouse/Office (sq ft)</td>
<td>(3,785)</td>
<td>1.50</td>
<td>(6)</td>
<td>Existing</td>
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<td>Net Change</td>
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<td><strong>190</strong></td>
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## Mobility Unit Demand Calculation

<table>
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<tr>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Mobility Unit</td>
<td>Mobility Units</td>
</tr>
<tr>
<td>Overlake Office</td>
<td>Office (sq ft)</td>
<td>550,000</td>
<td>4.66</td>
<td>2,563</td>
</tr>
</tbody>
</table>

Thursday, December 10, 2009
Mobility Unit Demand Reductions

- Transportation Demand Management
  - Development site required to have a Transportation Management Plan that is enforceable, replicable and in perpetuity.
  - Strategies that result in Mobility Unit reductions applied to Mobility Unit rate per unit

- Urban Centers
  - Mobility Unit rate per unit decreases because of shorter trip length due to more diversity, density and design of land

Thursday, December 10, 2009
Testing for Concurrency
Green Light Scenario

Mobility Unit
Supply 4,000 MUₜ
Testing for Concurrency
Green Light Scenario

1. Small Development
   - $4,000 \text{ MU}_s - 8 \text{ MU}_d = 3,992 \text{ MU}_s$

2. Large Development
   - $3,992\text{MU}_s - 2,563 \text{ MU}_d = 1,429 \text{ MU}_s$

3. Medium Development
   - $1,429 \text{ MU}_s - 190 \text{ MU}_d = 1,239 \text{ MU}_s$

4. Remaining Mobility Units
   - Mobility Unit Supply
     - 4,000 \text{ MU}_s

Thursday, December 10, 2009
Testing for Concurrency

Green Light Scenario

1. Small Development
   - $4,000 \text{ MU}_s - 8 \text{ MU}_d = 3,992 \text{ MU}_s$

2. Large Development
   - $3,992 \text{ MU}_s - 2,563 \text{ MU}_d = 1,429 \text{ MU}_s$

3. Medium Development
   - $1,429 \text{ MU}_s - 190 \text{ MU}_d = 1,239 \text{ MU}_s$

4. Remaining Mobility Units
   - $4,000 \text{ MU}_s$

Thursday, December 10, 2009
Testing for Concurrency

Green Light Scenario

1. Small Development
   - $4,000 \text{ MU}_s - 8 \text{ MU}_d = 3,992 \text{ MU}_s$

2. Large Development
   - $3,992\text{MU}_s - 2,563 \text{MU}_d = 1,429 \text{MU}_s$

3. Medium Development
   - $1,429 \text{ MU}_s - 190 \text{ MU}_d = 1,239 \text{ MU}_s$

4. Remaining Mobility Units

Thursday, December 10, 2009
Testing for Concurrency
Green Light Scenario

1. Small Development
   - $4,000 \text{ MU}_s - 8 \text{ MU}_d = 3,992 \text{ MU}_s$

2. Large Development
   - $3,992\text{MU}_s - 2,563 \text{ MU}_d = 1,429 \text{ MU}_s$

3. Medium Development
   - $1,429 \text{ MU}_s - 190 \text{ MU}_d = 1,239 \text{ MU}_s$

4. Remaining Mobility Units
   - Remaining Mobility Unit Supply: $4,000 \text{ MU}_s$

Thursday, December 10, 2009
Testing for Concurrency
Yellow & Red Light Scenario

Mobility Unit
Supply
2,700 MUₚ
1. Large Development
   - $2,700 \text{ MU}_s - 2,563 \text{ MU}_d = 137 \text{ MU}$
   - Use caution – near threshold
Testing for Concurrency
Yellow & Red Light Scenario

1. Large Development
   - $2,700 \text{ MU}_s - 2,563 \text{ MU}_d = 137 \text{ MU}$
   - Use caution – near threshold

2. Medium Development
   - $137 \text{ MU}_s - 190 \text{ MU}_d = (53) \text{ MU}_s$
   - Stop – One of five options...
     1. Supplemental mitigation
        a. Construct project from TFP
        b. Purchase necessary MU$_s$
     3. Reduce development size
     4. Apply TDM measures
     5. Delay development
     6. City or other source funds

Thursday, December 10, 2009
Testing for Concurrency
Yellow & Red Light Scenario

1. Large Development
   - 2,700 MU_s – 2,563 MU_d = 137 MU
   - Use caution – near threshold

2. Medium Development
   - 137 MU_s – 190 MU_d = (53) MU_s
   - Stop – One of five options…

3. Small Development
   - (53) MU_s – 8 MU_d = (61) MU_s
   - Go – Exempt, less than 25 MU_d
Testing for Concurrency
Yellow & Red Light Scenario

1. Large Development
   - $2,700 \text{ MU}_s - 2,563 \text{ MU}_d = 137 \text{ MU}$
   - Use caution – near threshold

2. Medium Development
   - $137 \text{ MU}_s - 190 \text{ MU}_d = (53) \text{ MU}_s$
   - Stop – One of five options…

3. Small Development
   - $(53) \text{ MU}_s - 8 \text{ MU}_d = (61) \text{ MU}_s$
   - Go – Exempt, less than 25 \text{ MU}_d

4. Remaining Mobility Units
   - $(61) \text{ MU}_s$

Mobility Unit Supply
2,700 \text{ MU}_s

Thursday, December 10, 2009
Lessons

- You get what you measure
- Nobody cares about concurrency until you hit the threshold
- Concurrency cannot be the only performance measure
- Develop administrative guidelines
- Including TDM has to be done differently
- Scenario testing is important
Contact Information

- Transportation Master Plan & 2007–2009 Mobility Report Cards:
  [Link](http://www.redmond.gov/connectingredmond/policiesplans/tmpprojectdocs.asp)

- Transportation Concurrency Report:
  [Link](http://www.redmond.gov/connectingredmond/resources/concurrency.asp)

- Transportation Concurrency Requirements:
  [Link](http://www.redmond.gov/insidecityhall/permitting/devapps.asp)

- Contact Information:
  - Joel Pfundt, AICP, Principal Planner
  - City of Redmond
  - 425–556–2750, [jpfundt@redmond.gov](mailto:jpfundt@redmond.gov)
Redmond, Washington Multimodal Plan–Based Transportation

APA Washington Conference

November 12, 2009
How has it been received?

- Initially skeptical of change
- Since there is plenty “room” right now think it is just fine
- Like the simplicity and predictability
Concurrence System
Redmond Comp Plan Goals

- Conserve agricultural and rural areas; protect the natural environment
- Retain and enhance **distinctive character** and high quality of life
- Emphasize **choices** in housing, transportation, stores
- Support vibrant **concentrations** of activity in Downtown and Overlake.
- Maintain a strong economy, and provide a **business climate** that helps retain and attract companies
- Promote a variety of **community gathering places** and diverse cultural opportunities.
- Provide convenient, safe and environmentally friendly **transportation connections**
- Remain a **community of good neighbors**

Thursday, December 10, 2009
Bellingham’s Multimodal Transportation Concurrency

American Planning Association

Washington State Conference

Vancouver, WA

November 12, 2009
Bellingham, WA – “City of Subdued Excitement”

- Bellingham = 77,000 residents
- UGA = 9,000
- Whatcom County = 193,000

- Bellingham & UGA contains 45% of Whatcom County’s population

- Bellingham is seat of County government and has 18 of the Top 25 employers in Whatcom County, including:
  - Western Washington University
  - Whatcom Community College
  - Bellingham Technical College
  - St. Joseph’s Hospital
  - Bellingham School District
  - City of Bellingham
  - Whatcom County
Bellingham is the Regional Center for Employment, Shopping, Entertainment, Education, Medical Services

Employment Centers in Whatcom County
2003 Employment Data
23 “Urban Villages” suggested from 2004 “Growth Forum”

Some not feasible due to zoning, space & height limits, economics, or unacceptable impacts

Tier 1: Downtown, Barkley, Fairhaven

Tier 2: Waterfront, Old Town, Sunset, Lakeway, Northwest, North Samish Way

Tier 3: Bellis Fair, Cordata, Fountain District, Birchwood, Old Fairhaven Parkway, West Maplewood

Additional “Villages” may be possible in recently annexed areas, such as King Mountain
TG-28: Set target goals to increase the mode share of pedestrian, bicycle, and transit trips and reduce automobile trips as a percentage of total trips, as listed below.

<table>
<thead>
<tr>
<th>Mode</th>
<th>2004</th>
<th>2010</th>
<th>2015</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auto</td>
<td>87%</td>
<td>84%</td>
<td>80%</td>
<td>75%</td>
</tr>
<tr>
<td>Transit</td>
<td>2%</td>
<td>3%</td>
<td>4%</td>
<td>6%</td>
</tr>
<tr>
<td>Bike</td>
<td>3%</td>
<td>4%</td>
<td>5%</td>
<td>6%</td>
</tr>
<tr>
<td>Ped</td>
<td>8%</td>
<td>9%</td>
<td>11%</td>
<td>13%</td>
</tr>
</tbody>
</table>

Notes:
1. 2004 raw data from FTA/Social Data Study
2. City/WTA recommendations based on 2004 raw data from FTA/Social Data Study
Bellingham’s Former LOS, Projections, & Problems

- Originally adopted in 1995 Comprehensive Plan; Re-adopted in 2006 (for GMA compliance only)

- Based on roadway segment volume-to-capacity (v/c) ratios

- Measured only vehicle traffic on arterial streets (traffic counts)

- LOS E (v/c 0.901-1.00) Peak hour traffic volumes at 90% to 100% of arterial design capacity.

- LOS F (v/c 1.001 - 1.25) Peak hour traffic volumes over 100% of arterial design capacity. *(Adopted standard for 13 selected arterial facilities)*

- 2007 building MORATORIUM due to LOS violation on Northwest Ave

- Lasted 9 months during peak building cycle due to “once per year Comp Plan LOS amendment”
Illustration of PM Peak Hour (Rush Hour)

P.M. Peak Traffic Volumes
(The Local Evening Rush Hour)

- LOS F (Adopted Standard for SELECT Arterials)
- LOS E (Adopted Standard for Arterials)
- LOS D
- LOS C
- LOS B
- LOS A

Available Unused Arterial Capacity

Used Arterial Capacity

Weekday Work Hours

L.O.S Measured Here
RCW 36.70A.70 Comp Plan – Mandatory elements.

“The plan shall be an internally consistent document and all elements shall be consistent with the future land use map.”

RCW 36.70A.070 (6) requirements: “A transportation element that implements, and is consistent with, the land use element.”

RCW 36.70A.070 (6) (b) “Local jurisdictions must adopt and enforce [transportation concurrency] ordinances which prohibit development approval if the development causes the level of service on a locally owned transportation facility to decline below the standards adopted in the transportation element of the comprehensive plan, unless transportation improvements or strategies to accommodate the impacts of development are made concurrent with the development.”

Therefore, if the land use element calls for infill, then the transportation element, and the transportation concurrency ordinance, must support infill and LOS standards must be adopted accordingly to allow infill.
Transportation Concurrency

WAC 365-195-510 (3) (b) Concurrency: Levels of service should be set to reflect realistic expectations consistent with the achievement of growth aims. Setting such levels too high could, under some regulatory strategies, result in no growth. As a deliberate policy, this would be contrary to the act.

- Transportation Concurrency is NOT a regulation to stop growth, but a performance measure to ensure that adequate transportation facilities are available to serve new development.

For Bellingham:

- “Growth Aims” = Infill, Urban Villages, Multimodal, and Mode Shift
- “Adequate” means Multimodal Transportation Facilities

- GMA does not define LOS standards for local jurisdictions or the methodology used to monitor, maintain, and enforce LOS

- Mitigation only addresses the conditions that are measured
  Auto-centric LOS standards = Auto-centric mitigation

- Bellingham adopted LOS standards and a Transportation Concurrency system tailored to achieving local goals and priorities for urban infill and multimodal transportation
Concurrency is only one of the tools available in the regulatory toolbox;
Bellingham’s Assumptions

- As the regional population grows, there will be more traffic congestion in Bellingham

- No Such Thing As A Free Lunch: Compact, vibrant cities cannot build their way out of increasing traffic congestion.

- Auto-centric LOS standards would not allow Bellingham to achieve infill goals and would not help to complete the multimodal transportation network

Balance & Tradeoffs:

- Opportunity: Mixed use urban infill + multimodal facilities

- Opportunity Cost: Traffic congestion at peak periods of day

- Counter-intuitive Effect: Infill + Multimodal = More opportunities for alternative modes, less auto dependency, less rural sprawl
Bellingham’s MULTIMODAL Transportation Concurrency

WHAT is being measured?

- **15 Concurrency Service Areas (CSA)** [May change to 20 in 2010]
- **Pedestrian & Bicycle** = % completeness of Ped & Bike networks
- **WTA Transit** = seated 2-way capacity and transit ridership counts
- **Vehicles** = pm peak hour 2-way volume-to-capacity (v/c) - HCM

How is measured data used?

- “Policy Dials” = weighting factors applied based on relative importance of mode by land use environment
- Convert above variables to “Person Trips Available by Concurrency Service Area” as the new LOS standard [Effective January 1, 2009]
- Note: Each CSA includes a buffer of 500 person trips to ensure that a CSA does not run out of trips prior to mitigation requirements
Multimodal Transportation Concurrency Service Areas

5 Urban Village (Type 1) Green Concurrency Service Areas
- Downtown-Old Town-Waterfront Districts
- Barkley Village District
- WWU IMP District
- N. Samish Way District
- Fairhaven Village District

4 Transition (Type 2) Yellow Concurrency Service Areas

5 Suburban (Type 3) Red Concurrency Service Areas

Concurrency Service Area boundaries are based on:
- 53 Concurrency reviews done from June 2006 to Nov 2008
- Trans. Analysis Zones (TAZ)
- City/UGA boundaries
- Neighborhood boundaries
- Transportation Barriers (I-5)
- Land use patterns
- Existing zoning
Automobile & Transit Measurement Points

- Measures Auto & Transit Modes

- 135 Total Concurrency Measurement Points
  - 89 Auto Only
  - 32 Transit Only
  - 14 Auto & Transit

- Measurement points assigned to each CSA based on importance of facility to move people and serve new infill development (not all arterials are equal)

- Bike & Ped Measures are “completeness” by CSA, not capacity
<table>
<thead>
<tr>
<th>Mode</th>
<th>Type 1</th>
<th>Type 2</th>
<th>Type 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Motorized</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Auto</td>
<td>0.70</td>
<td>0.80</td>
<td>0.90</td>
</tr>
<tr>
<td>Transit</td>
<td>1.00</td>
<td>1.00</td>
<td>0.80</td>
</tr>
<tr>
<td><strong>Non-Motorized</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pedestrian</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percent threshold for minimum system complete</td>
<td>50%</td>
<td>50%</td>
<td>50%</td>
</tr>
<tr>
<td>Person trip credit for 1% greater than minimum threshold</td>
<td>20</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Mode weight factor</td>
<td>0.60</td>
<td>0.60</td>
<td>0.60</td>
</tr>
<tr>
<td>Bicycle</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percent threshold for minimum system complete</td>
<td>50%</td>
<td>50%</td>
<td>50%</td>
</tr>
<tr>
<td>Percent credit for 1% greater than threshold</td>
<td>20</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Mode weight factor</td>
<td>0.40</td>
<td>0.40</td>
<td>0.40</td>
</tr>
</tbody>
</table>
Calculation of Person Trips Available

Define Concurrency Service Areas, Corridors, & Measurement Points

Motorized Modes (Auto & Transit)
- Collect Demand & Supply Data of Motorized Modes
- Calculate Available Person Trips for Auto & Transit Modes

Non-Motorized Facilities (Bicycle & Sidewalk)
- Collect Data of Existing & Planned Non-Motorized Facilities
- Calculate Credit Person Trips of Non-Motorized Facilities

Calculate Concurrency Service Area Total Person Trips Available

Draw Down Available Person Trips in each Impacted Concurrency Service Area for each Concurrency Application
<table>
<thead>
<tr>
<th>Concurrency Service Area¹</th>
<th>Sidewalk Percent Complete</th>
<th>Ped Credit PTA</th>
<th>Bike Lane Percent Complete</th>
<th>Bike Credit PTA</th>
<th>WTA Transit PTA</th>
<th>Vehicle Capacity PTA</th>
<th>Gross CSA PTA</th>
<th>Pending Pipeline Trips²</th>
<th>Net CSA PTA³</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSA 1</td>
<td>90.1%</td>
<td>480</td>
<td>76.5%</td>
<td>208</td>
<td>607</td>
<td>7,570</td>
<td>8,865</td>
<td>2,674</td>
<td>5,691</td>
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<tr>
<td>CSA 2</td>
<td>46.0%</td>
<td>0</td>
<td>66.3%</td>
<td>128</td>
<td>88</td>
<td>2,780</td>
<td>2,996</td>
<td>900</td>
<td>1,596</td>
</tr>
<tr>
<td>CSA 3</td>
<td>91.3%</td>
<td>492</td>
<td>70.3%</td>
<td>160</td>
<td>1,245</td>
<td>4,809</td>
<td>6,706</td>
<td>497</td>
<td>5,709</td>
</tr>
<tr>
<td>CSA 4</td>
<td>100.0%</td>
<td>600</td>
<td>100.0%</td>
<td>400</td>
<td>317</td>
<td>3,916</td>
<td>5,232</td>
<td>1,115</td>
<td>3,617</td>
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<tr>
<td>CSA 5</td>
<td>96.2%</td>
<td>552</td>
<td>91.3%</td>
<td>328</td>
<td>548</td>
<td>2,042</td>
<td>3,470</td>
<td>0</td>
<td>2,970</td>
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<tr>
<td>CSA 6</td>
<td>95.0%</td>
<td>540</td>
<td>96.7%</td>
<td>376</td>
<td>250</td>
<td>3,598</td>
<td>4,765</td>
<td>43</td>
<td>4,222</td>
</tr>
<tr>
<td>CSA 7</td>
<td>83.3%</td>
<td>396</td>
<td>93.6%</td>
<td>352</td>
<td>170</td>
<td>3,804</td>
<td>4,722</td>
<td>0</td>
<td>4,222</td>
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<tr>
<td>CSA 8</td>
<td>99.6%</td>
<td>600</td>
<td>87.3%</td>
<td>296</td>
<td>1,536</td>
<td>6,581</td>
<td>9,014</td>
<td>530</td>
<td>7,984</td>
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<tr>
<td>CSA 9</td>
<td>100.0%</td>
<td>600</td>
<td>67.0%</td>
<td>136</td>
<td>122</td>
<td>1,480</td>
<td>2,338</td>
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<tr>
<td>CSA 10</td>
<td>82.3%</td>
<td>384</td>
<td>94.9%</td>
<td>360</td>
<td>1,074</td>
<td>307</td>
<td>2,124</td>
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<tr>
<td>CSA 11</td>
<td>53.6%</td>
<td>48</td>
<td>62.6%</td>
<td>104</td>
<td>102</td>
<td>4,126</td>
<td>4,381</td>
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<tr>
<td>CSA 12</td>
<td>83.1%</td>
<td>396</td>
<td>89.4%</td>
<td>312</td>
<td>280</td>
<td>2,093</td>
<td>3,081</td>
<td>1</td>
<td>2,580</td>
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<tr>
<td>CSA 13</td>
<td>69.1%</td>
<td>228</td>
<td>93.9%</td>
<td>352</td>
<td>305</td>
<td>1,476</td>
<td>2,361</td>
<td>0</td>
<td>1,861</td>
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<tr>
<td>CSA 14</td>
<td>51.1%</td>
<td>12</td>
<td>84.7%</td>
<td>280</td>
<td>98</td>
<td>683</td>
<td>1,073</td>
<td>0</td>
<td>573</td>
</tr>
<tr>
<td>CSA 15</td>
<td>25.6%</td>
<td>0</td>
<td>7.3%</td>
<td>0</td>
<td>0</td>
<td>1,099</td>
<td>1,099</td>
<td>0</td>
<td>599</td>
</tr>
<tr>
<td><strong>Citywide</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>Total</strong></td>
<td><strong>PTA</strong> 62,227</td>
<td><strong>5,760</strong></td>
<td><strong>48,967</strong></td>
</tr>
</tbody>
</table>

1. Figure 4. Illustrates Concurrency Service Area boundaries (CSA).
2. Pending pipeline trips represent developments that have been issued a Concurrency Certificate, but have not been constructed and therefore not represented in the field data.
3. 500 PTA have been withheld from each CSA to maintain a minimum buffer of 500 PTA in each CSA.
What is TRAC and Why?

- Transportation Report on Annual Concurrency (TRAC)

- TRAC is Bellingham’s annual demonstration to the public and the State that we are in compliance with the transportation concurrency requirements of the Growth Management Act (RCW 36.70A.070 (6)(b))

- Annual status report on performance of multimodal system

- Helps to inform 6-Year TIP planning process for capital improvements to the transportation network

- Helps with development project review to assess, track, monitor, and where necessary, provide mitigation that now can include bicycle and pedestrian infrastructure

- Helps to implement Land Use and Transportation visions, goals, and policies in Bellingham’s Comprehensive Plan
Concurrency programs must be adaptable to changing circumstances (Annexations, large redevelopments, etc) and must be flexible and nimble enough to be adjusted as needed. Key = Adopt LOS in Comp Plan, but keep methodology in code.

“Right-sizing” Concurrency Service Areas (Mobility Sheds) based on land use environment helps to integrate land use and transportation policies and objectives.

Once adopted, time and implementation experience can reveal program strengths, weaknesses, and adjustments needed.

Data collection, management and administration requires committed staff time and financial resources.

Annual Report (TRAC) allows staff to recommend changes as needed, based on experience with the program, the tracking tools being used, and whether goals are being achieved.
2009 Washington APA/PAW Award for Transportation Planning

Featured in following publications:

- Urban Transportation Monitor (Vol. 22, No. 20., November 14, 2008)
- About Growth, CTED/Commerce quarterly publication (Winter 2009)
- Washington Planner, Washington APA’s monthly publication (February 2009)
- Bicycle and Pedestrian, Institute of Transportation Engineering quarterly bicycle and pedestrian publication (Summer 2009)
- Practicing Planner, American Planning Association Professional Journal for AICP members (Vol. 7, No. 3., Case Study, September 2009)

Statewide Presentations at:

- Planning Association of Washington Annual Conference, Semiahmoo Resort, Blaine, WA; April 9-10, 2009
- Washington Chapter American Planning Association Annual Conference, Vancouver, WA; November 11-13, 2009
2009 TRAC available on City web site at www.cob.org/services/neighborhoods/community-planning/transportation/index.aspx

All questions regarding Bellingham’s Multimodal Transportation Concurrency program should be directed to:

**Chris Comeau**, AICP, Transportation Planner
City of Bellingham Public Works Department
(360) 778-7946; or ccomeau@cob.org
Concurrency Management
In the City of Vancouver

Matt Ransom, AICP
Transportation Planning Manager

Values of Transportation

- Travel Safely and Efficiently
- Ship or receive goods reliably
- Select among modes of travel

Changes Over Time...
- Geography / distance
- Modal choice
- Technologies
Vancouver Comprehensive Plan
Transportation Element
In the Future Vancouver’s Transportation System Will:

- Promote accessibility, not just mobility
- Be efficient
- Create livable streets
- Have good connections throughout

Vancouver Transportation System Plan (2001)

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In the Future Vancouver’s Transportation System Will:

- Support all travel Modes
- Be a truly walkable community
- Promote efficient freight movement
- Support transportation and land-use improvements

Vancouver Transportation System Plan (2001)
Concurrency
Legal Background

Concurrency
Proactive / Reactive Policy?

- RCW 36.70A.020 (12) – GMA Goals
  - Proactive Concept: transportation shall be adequately provided to serve development when development occurs

- WAC 365-195-510 (4) - Concurrency
  - Reactive Concept: possible denial of development approval in areas where transportation facilities are not provided concurrent with development
Concurrency
Policy Framework

- Transportation concurrency can:
  - As a regulatory tool, meter and shape growth
  - Guide timing of infrastructure improvement / resource allocation
  - Exact mitigation to build the transportation system defined in the capital facilities plan

- Transportation concurrency cannot:
  - Stop growth indefinitely
  - Change the land use plan
  - Support unaffordable levels of service

Evolution of Concurrency Policy
Vancouver - 1994 to present
Principles of Concurrency

Maxim #1: You get what you measure
- Because concurrency level of service testing is tied directly to mitigation and system improvements, the elements of the transportation system that are tested for concurrency are typically first in line for improvement.

Maxim #2: Techniques and Methods are Evolutionary
- The state of the art for measuring non-auto transportation system impacts lags somewhat behind the generally accepted practices of measuring automobile capacity impacts of individual developments.

Concurrency Measurement

Common Methods
- Road Segments
- Screen Lines
- Individual Intersections
- Grouped Intersections
Vancouver’s 1st Generation Approach

- Interim Concurrency Ordinance adopted with GMA Comp Plan in 1994.
- Standards based on individual intersection performance
  - Uses Highway Capacity Manual (HCM) methodology: signalized intersection capacity analysis
  - HCM metrics shown as Level-of-Service A-F

Elements of Measurement
Time Period / Intersections

- Weekday Traffic Volume
- Peak Hour Volume
- Peak Period Volume
Vancouver’s 2\textsuperscript{nd} Generation Approach

- The City of Vancouver utilizes a corridor travel-time based concurrency system
  - Instead of testing concurrency at a single intersection, the system tests both traffic progression as single intersections within a defined corridor.
  - Geographic areas called Transportation Management Zones (TMZ) have been established and concurrency is directly managed within those zones.

Concurrency Corridors
25 Corridors Citywide
Vancouver’s Experience

- Single recent experience in Concurrency related moratorium (E. Mill Plain Blvd)
- Shift of thinking in some districts – towards a managed and sustainable oriented policy:
  - Downtown District – zonal based LOS with low standards to foster multi-modal trips to facilitate growth in CBD
  - Major corridor build-out policy; lower LOS
  - Investigating multi-modal LOS

Policy Case Study
SE 192nd Avenue Corridor
192\textsuperscript{nd} Ave Corridor
Section 30 Concept Plan
Riverview Gateway Sub-area

Riverview Gateway
192\textsuperscript{nd} Ave Station

\textit{proposed}
Concurrency Policy – Next Generation
Considerations

Concepts for New Transportation Concurrency Policy?
- Comprehensive Plan based and supportive of urban infill and redevelopment
- Accounts for a variety of transportation modes and demand strategies/programs (multi-modal?)
- Based on accepted transportation planning & engineering principles
- Cost effectively monitors arterial traffic conditions
- Legal Implementation
- Fair
Policy Questions
for Comprehensive Plan Update

- What should we do when concurrency outcomes contradict elements of the comprehensive plan?
  - The comprehensive plan represents a balancing of factors affecting community development and livability, concurrency, by contrast, doesn't balance—its role is to maximize one function in its current form.

- What should we do once a corridor is “built out”?

- Is it time for a third generation concurrency policy?
  - What should it look like?
  - Less administratively burdensome, more predictable for development, fair?
  - Which policies should concurrency emphasize?

Thank You

Matt Ransom, AICP
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