Growth Management and Transportation

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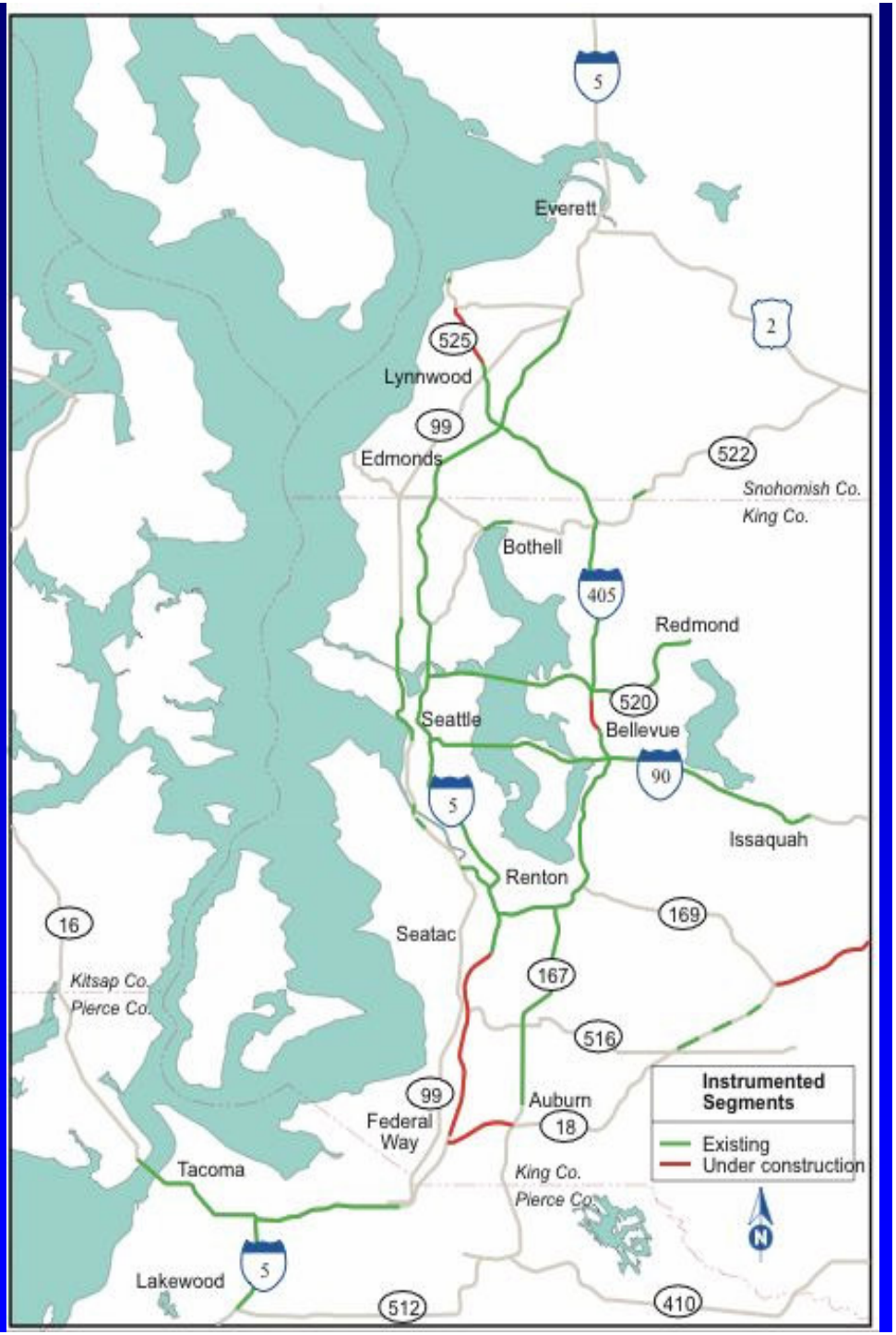
Seattle Transportation



Urban Planning Truism

- Growth is good

Urban Planning Truisms

- There are two bad words in Urban Planning:
  - Sprawl
  - Density

Solution:

Growth Management

Growth Management

- Desire to manage growth to:
  - Limit the timing/costs of impacts
  - Shift the cost distribution of those impacts
  - Maintain quality of life for current residents
  - Still maintain the benefits from growth

Growth Management Laws

- Change the incentives / disincentives for developing and/or developing in specific areas

- Goals:
  - to build where the impacts are lowest
  - To shift the costs of those impacts to newcomers as much as possible/appropriate

Cost Shift

- Problem:
  - Shift too much cost and no development (growth) occurs
  - This is fine if you want no new development
  - This is bad is you want the benefits from development, or still absorb the impacts from development occurring elsewhere

Where to Put Growth?

- Two choices:
  - In existing developed areas (higher density)
  - In undeveloped areas (sprawl)
- Both impact current residents
  - Cost of housing
  - Use of existing transportation system
  - Use of other infrastructure

Use of Transportation System

- Increased density causes:
  - Greater local road use (congestion)
  - Greater opportunity for transit
    - But only if decent access to transit exists
    - And only if transit service is good
  - Greater demand for parking
  - Increased land prices / higher cost to provide parking, roads, and development
  - Local opposition

Use of Transportation System

- Increased sprawl (lower density growth) causes
  - Greater demand for long distance transportation services
    - Regional freeway movements
    - Express bus or other high speed transit services
  - Increased reliance on the automobile
    - Increased congestion on those roads that travel through existing developed areas
  - Opposition?

Nontraditional Street Layout

Suburban-Style Street Layout

So?

- If we are going to grow
  - Transportation system use will increase
  - We will likely need new transportation system facilities / services
- Growth Management should address these needs

Transportation Concurrency

Provision of
"adequate transportation facilities"

concurrent with new development

Concurrency:

The measurement process used to regulate* the inter-relationship between development and transportation facilities and services

*Assumes that at some point transportation services will be provided that allow attainment of growth called for in the comprehensive plan

Concurrency

- State law allows each jurisdiction to define its own concurrency system

So

- “Adequate” facilities change by jurisdiction

Cities

- Design their procedures differently
  - Because city goals differ
  - The politics are different in each city
- Use concurrency to manage/direct their development and/or transportation infrastructure expansion

Concurrency

Is currently almost always defined in terms of roadway congestion

- But you can define it differently if you wish

How Do We Measure Roadway Congestion?

- Level of Service (A- F)
  - Speed, Delay, Density of Traffic
- Cheap mathematical estimation is
  - Volume / capacity (v/c)
  - So for concurrency, cities often use some combination of v/c calculations
- Roadway LOS is a “blunt instrument”

Concurrency As Implemented

- You get what you measure
  - If you only measure road congestion
  - All problems/solutions are associated with cars and roadway capacity
  - Other transportation services are nearly irrelevant

Effectiveness of Existing Concurrency Systems

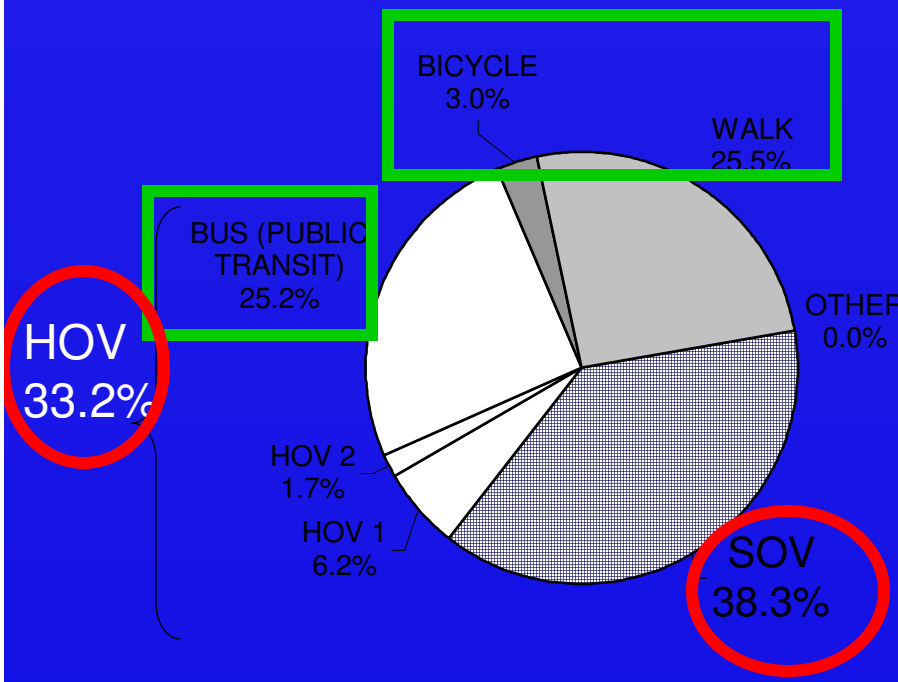
- Roadway performance measurement works for some areas
  - Rural areas
  - Lightly developed ex-urban areas
- Does *not* work well where auto travel provides only a portion of mobility serving an area
  - Especially poor if local plan goals/policies call for expanding alternative modal travel (transit, rideshare, bike, walk)

Centers Support Broader Modal Options

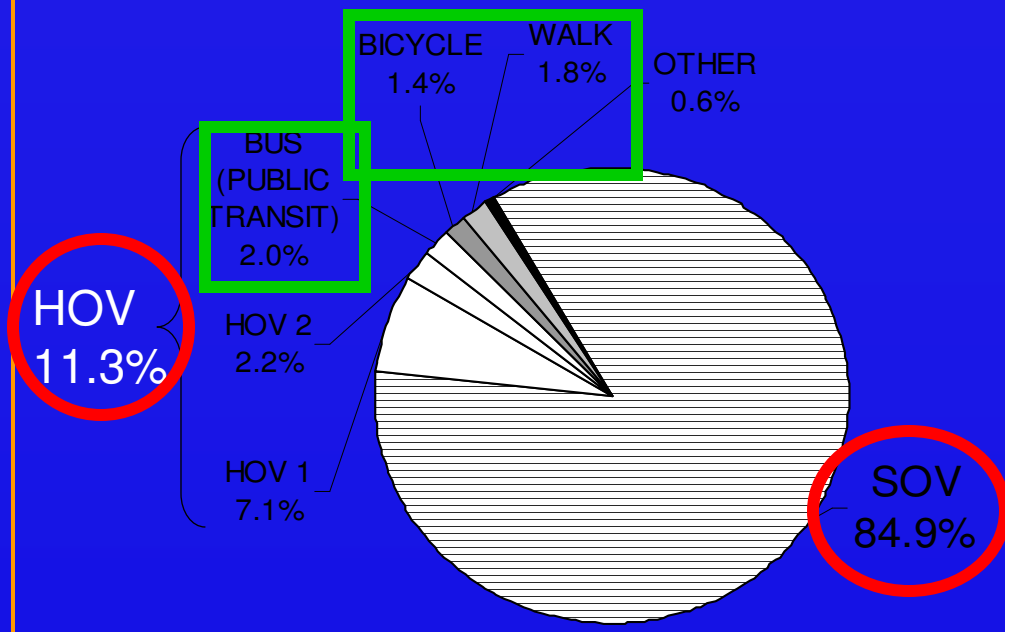
- Travel markets differ in different urban settings
- Regional centers generally support/require
  - Public transit
  - Carpools
  - Vanpools
  - Bikes
  - Pedestrian

WORK TRIPS MODE DISTRIBUTION

By Location of Household and Work Place



Household **INSIDE** Centers
Work **INSIDE** Centers
(4.6% of work trips)



Household **OUTSIDE** Centers
Work **OUTSIDE** Centers
(59.9% of work trips)

WALKING rate =	25.5% INSIDE/INSIDE vs. 1.8% OUTSIDE/OUTSIDE
HOV rate = OUTSIDE/OUTSIDE	33.2% INSIDE/INSIDE vs. 11.3%
BUS (Public Transit) rate =	25.2% INSIDE/INSIDE vs. 2.0% OUTSIDE/OUTSIDE

Other Problems With Existing Concurrency Systems

- Once traffic crosses a border (including onto a state highway), its "not your problem"
  - Congestion that meets my standards but not yours, is not my problem
  - Trips I generate that cause your congestion are not my problem

Effectiveness of Existing Concurrency Systems

- Impacts of development on regional travel are ignored under current locally-focused process
- Local success balancing land use/transportation often overwhelmed by regional traffic impacts

Existing Systems

- Each city controls their own destiny, but not their neighbor's

So

- Our problems/procedures are local,

But

- Many of our problems/causes/solutions are regional

So?

- What has happened?
  - Housing is expensive
    - Lack of land to build on
    - High cost of roadway improvements in existing urban areas
  - People move to where they can afford to live
    - And “pay” in travel time
    - They have “travel budget” but not available dollars

And?

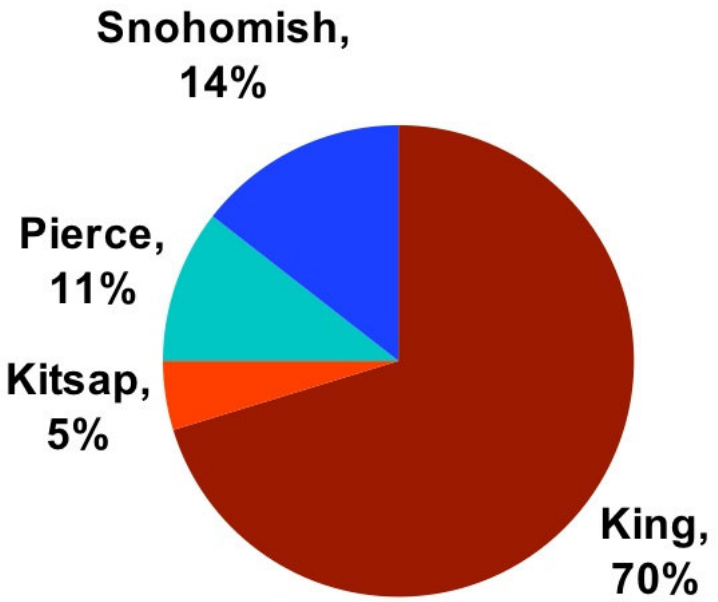
- Build in suburban style developments
  - Because they sell (popular)
  - Because they have many valued attributes
    - In ex-urban areas, they are uncongested

And?

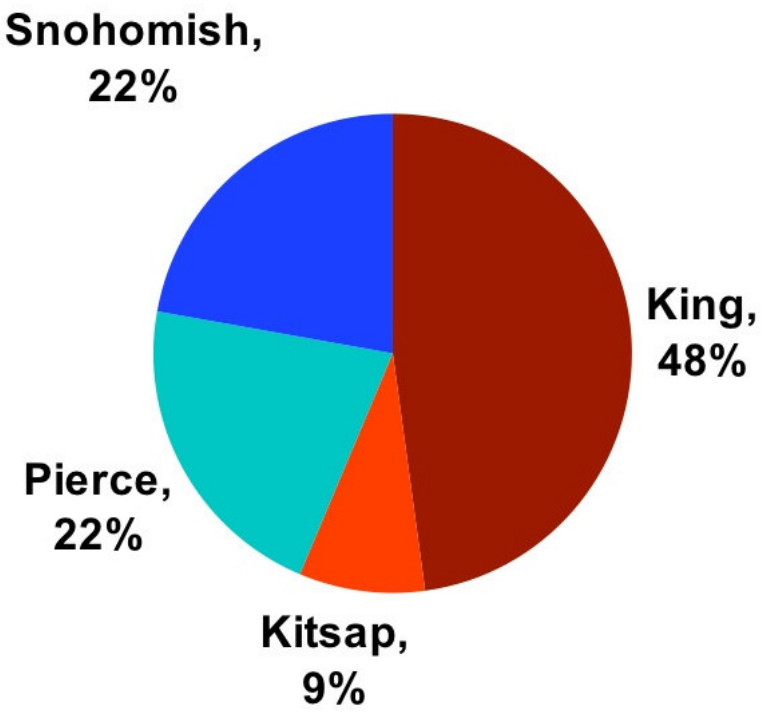
- Complain that the state should fixed the road system
  - Which is not funded by impact fees (state system)
  - Is not part of concurrency
  - Who's expansion inflicts impacts on other people
- While the state lacks the funds to maintain / repair its existing road system

Percent of Regional Jobs and Housing Growth by County

Percent of Regional Job Change, 1970-2000

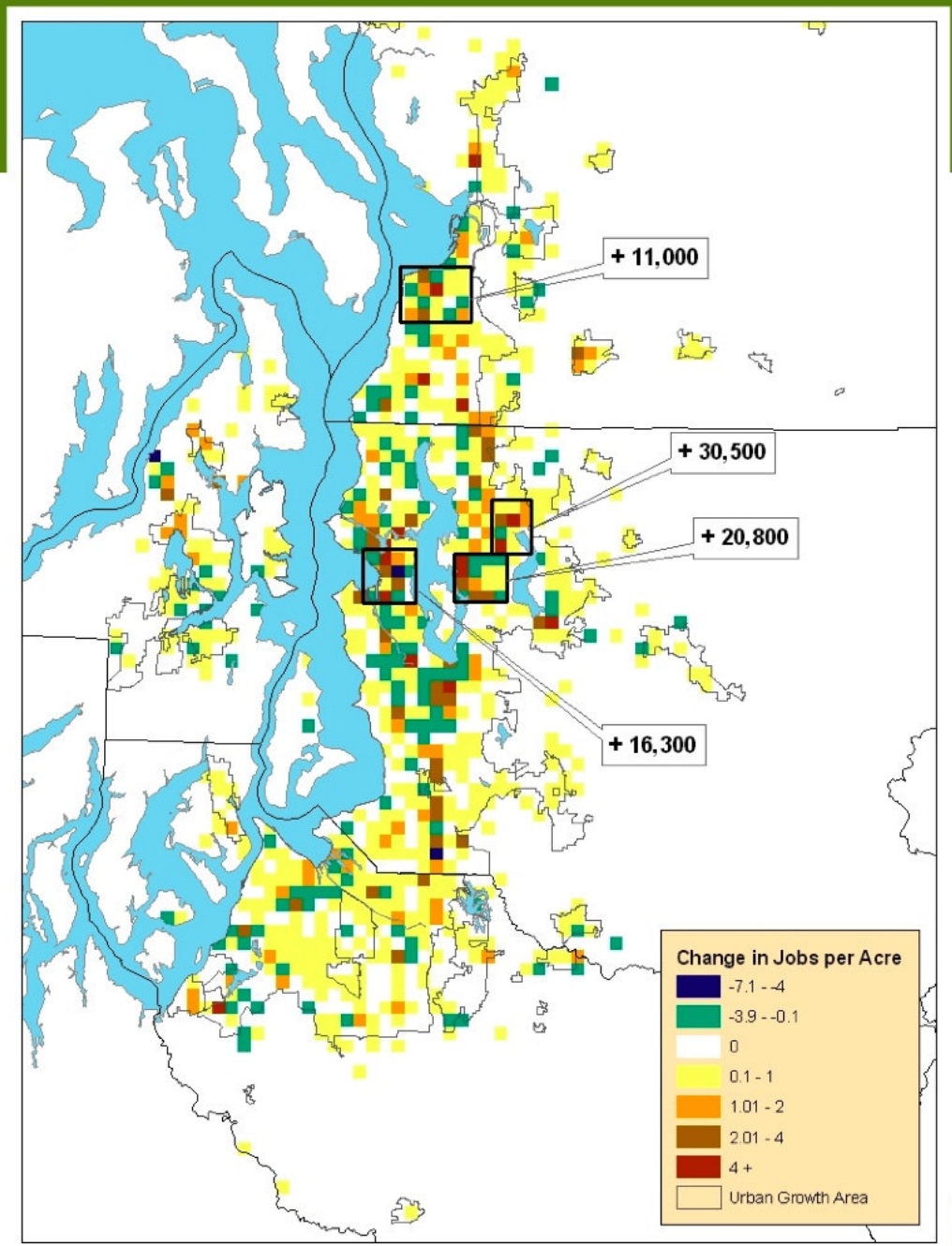


Percent of Regional Housing Change, 1970-2000



Employment Change, 1995-2006

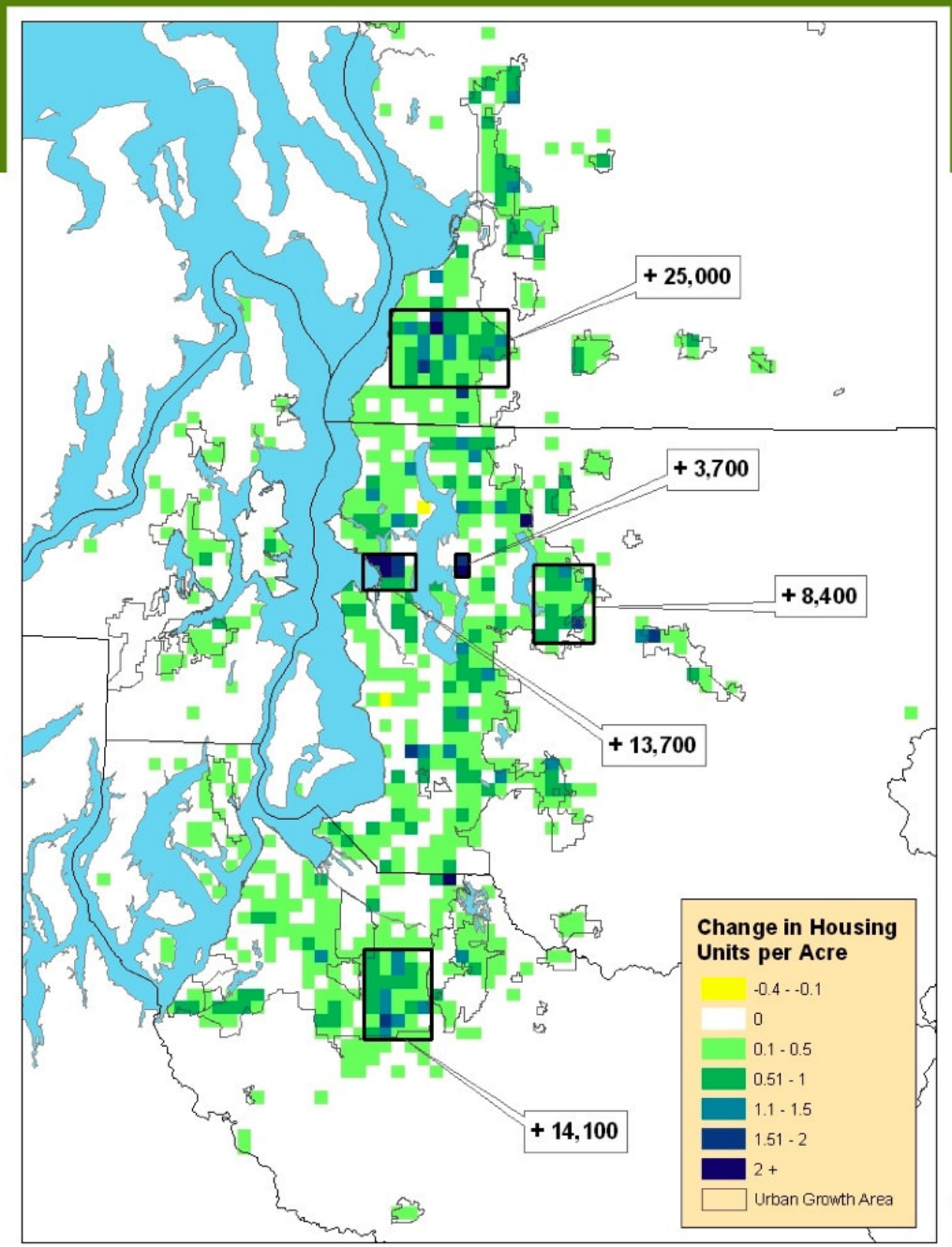
- *Region added roughly 300,000 jobs during this span*
- *An estimated 93 % of the change occurred within the Urban Growth Area*
- *Approximately 15 % of that change occurred in the Regional Growth Centers*



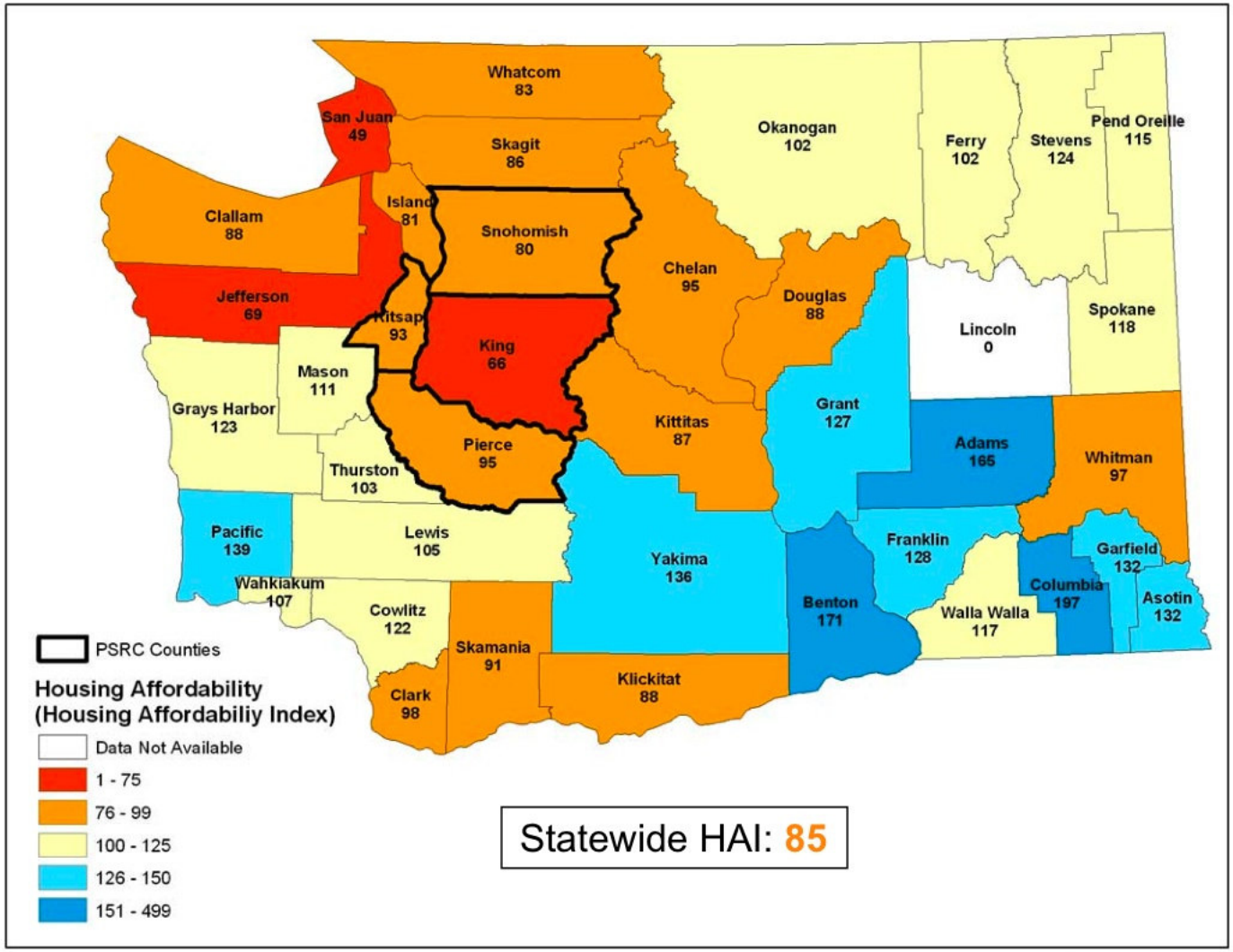
Housing Stock Change,

1995-2006

- *Roughly 245,000 new housing units added*
- *Approximately 82 % were added inside the Urban Growth Area*
- *An estimated 10 % percent of the change occurred in the Regional Growth Centers*



Housing Affordability – how the region's counties compare to the rest of the state



Source: WSU, Washington Center for Real Estate Research, 2007 2nd Quarter Housing Snapshot

So, Concurrency…

- Doesn't quite work the way it was intended
  - Hasn't shifted the traditional finincial incentive to sprawl
- But does provide a measure of local control over growth
  - If used correctly

But…

- We can change concurrency rules whenever we want

GMA and Concurrency Performance

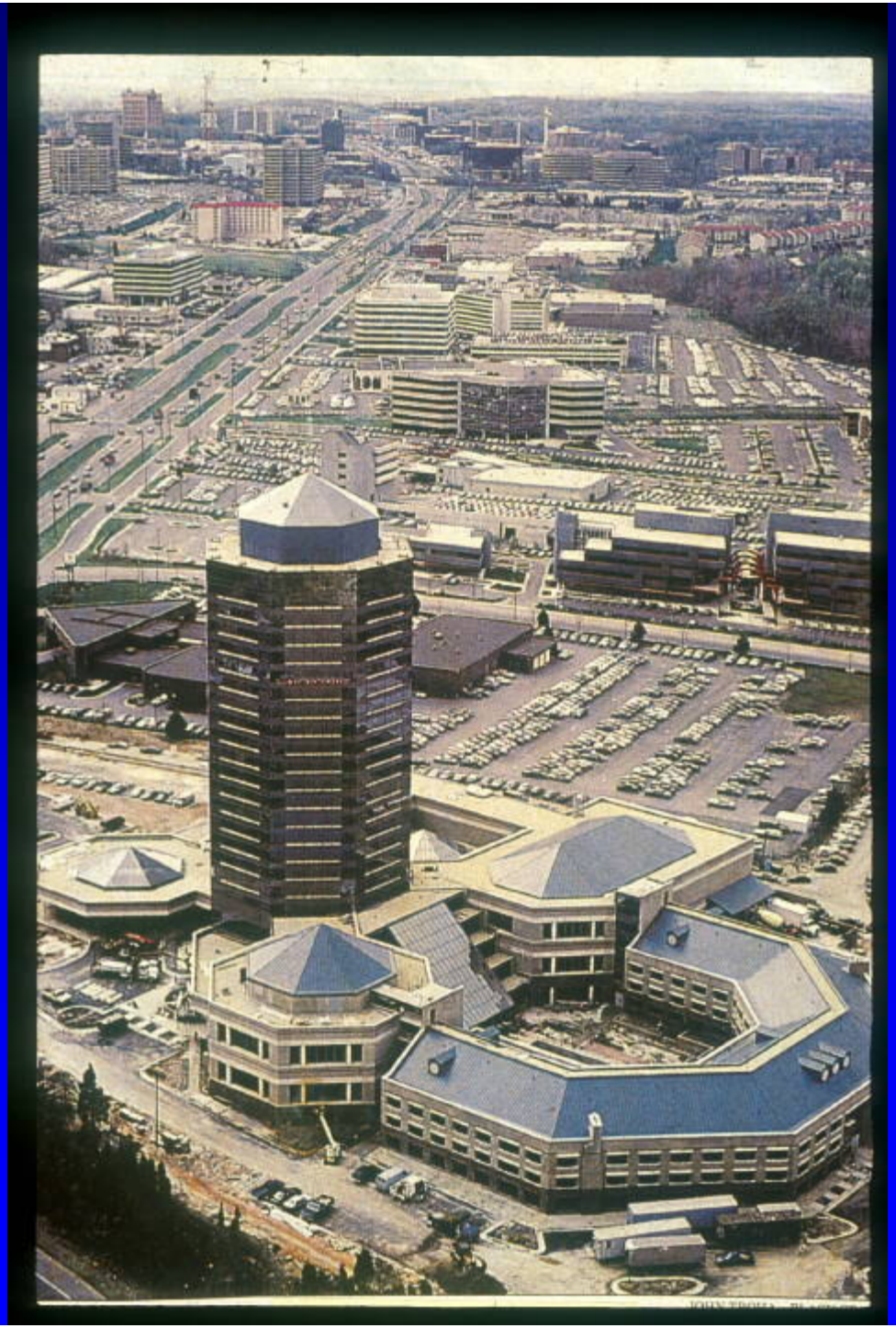
- GMA intended concurrency to be multimodal
- Wants to effectively link transportation and land use through transportation system performance

But…

- Despite what we teach…
  - Land use and transportation planning are not well coordinated
  - Transit planning is almost completely isolated from land use planning

Linking Transit / Land Use

- Is a two edge sword
  - Land use DESIGN and density must support transit use
  - Sufficient transit service must be provided to make that service attractive
    - Goes where you need it
    - When you need it
    - With attractive service frequency



Linking Transit / Land Use

- Who pays for it?
- Which comes first…
  - Transit service?
  - Land development?
  - What if that second service/development does not occur?

Latest Recommendations

- Concurrency requires two tiers
  - Local concurrency
  - Regional concurrency

Recommendations

- Local concurrency
  - Permit / do not permit development
  - Modes included
    - Those selected by local government as being the least cost method for providing the required mobility
    - Mode choice is not pre-ordained

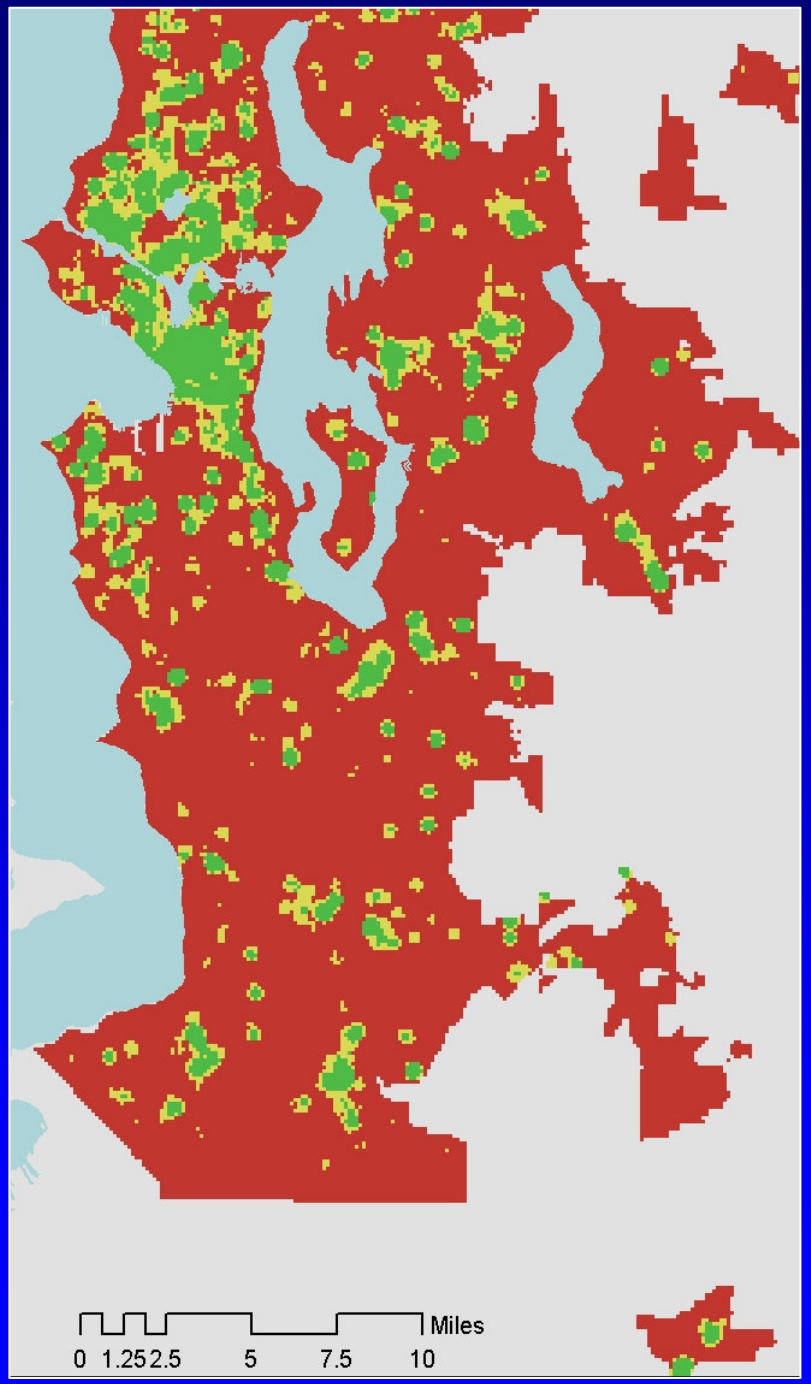
Recommendations

- Regional Concurrency
  - Definition of “regionally concurrent” or “regionally not concurrent” can be technical or political
  - TELUMI
  - Growth and transportation efficiency centers (GTECs)

TELUMI

Transportation
Efficient
Land
Use
Mapping
Index

Sample map of King County showing composite measures indicating degree of transportation efficient areas



Recommendations

- Regional authority must control/influence transportation funding
  - All regional modes must be eligible for funding
    - Roads
    - Transit
  - Can be existing funds or new funds
    - Regional impact fees
    - Oversight of a portion of existing funding (e.g, transit service funding)

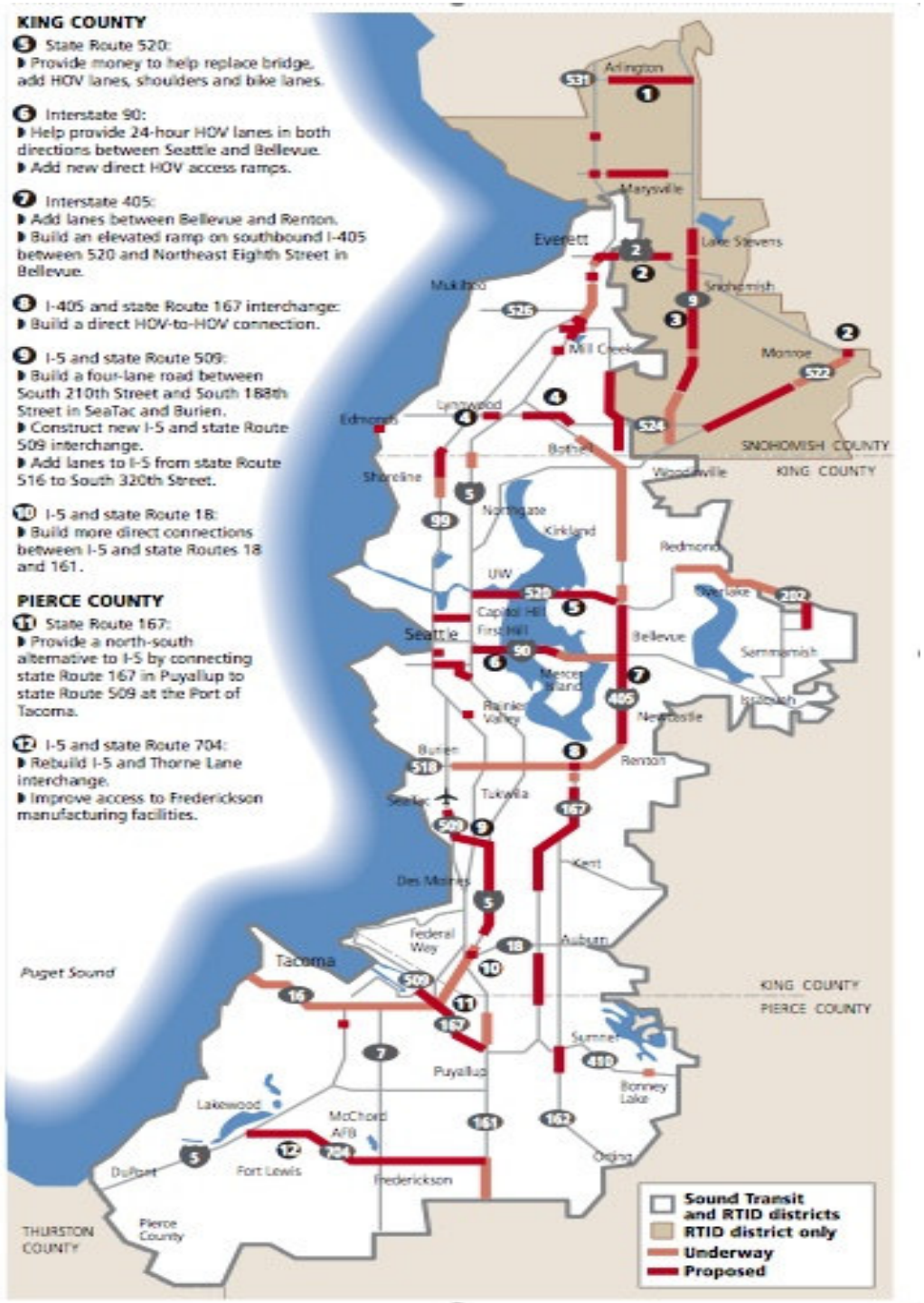
More Information on Concurrency

- http://depts.washington.edu/trac/concurrency/index.html
  - (See "Other concurrency Resources")

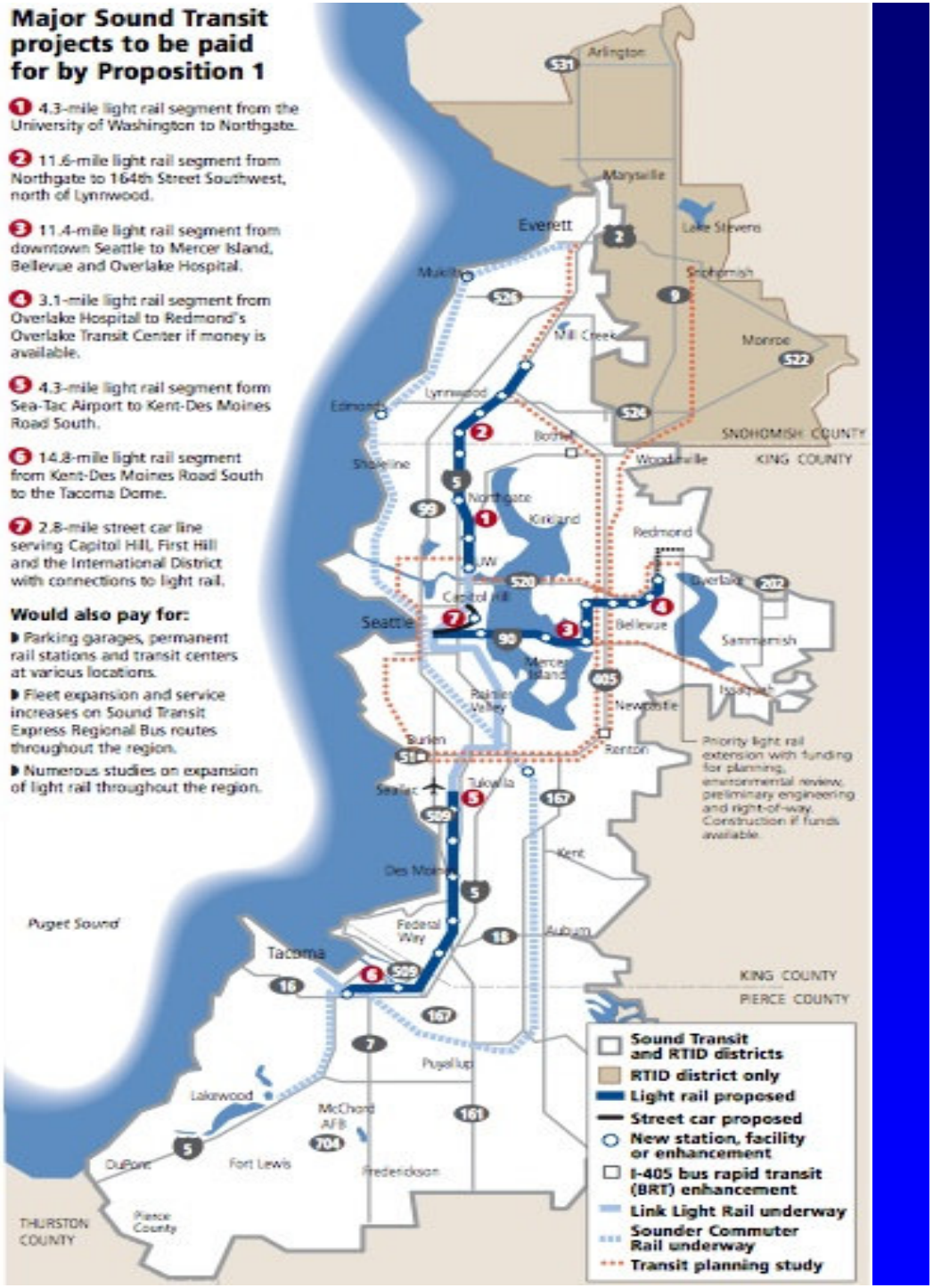
RTID & ST2

- Political Compromise
  - Chose general taxation as funding source
    - Sales tax, Registration tax
  - Everyone pays
  - So everyone must gain
  - Mix of projects
    - Road improvements
    - Transit (mostly rail) expansion

Highways


KING COUNTY
5 State Route 520:
▸ Provide money to help replace bridge, add HOV lanes, shoulders and bike lanes.
6 Interstate 90:
▸ Help provide 24-hour HOV lanes in both directions between Seattle and Bellevue.
▸ Add new direct HOV access ramps.
7 Interstate 405:
▸ Add lanes between Bellevue and Renton.
▸ Build an elevated ramp on southbound I-405 between 520 and Northeast Eighth Street in Bellevue.
8 I-405 and state Route 167 interchange:
▸ Build a direct HOV-to-HOV connection.
9 I-5 and state Route 509:
▸ Build a four-lane road between South 210th Street and South 188th Street in SeaTac and Burien.
▸ Construct new I-5 and state Route 509 interchange.
▸ Add lanes to I-5 from state Route 516 to South 320th Street.
10 I-5 and state Route 18:
▸ Build more direct connections between I-5 and state Routes 18 and 161.
PIERCE COUNTY
11 State Route 167:
▸ Provide a north-south alternative to I-5 by connecting state Route 167 in Puyallup to state Route 509 at the Port of Tacoma.
12 I-5 and state Route 704:
▸ Rebuild I-5 and Thorne Lane interchange.
▸ Improve access to Frederickson manufacturing facilities.
Arlington
Marysville
Everett
Lake Stevens
Snohomish
Monroe
Mill Creek
Edmonds
Lynnwood
Bothell
Woodinville
SNOHOMISH COUNTY
KING COUNTY
Shoreline
Northgate
Kirkland
Redmond
UW
Capitol Hill
First Hill
Seattle
Bellevue
Sammamish
Mercer Island
Renton
Tukwila
Kent
Des Moines
Federal Way
Auburn
Tacoma
Puget Sound
KING COUNTY
PIERCE COUNTY
Puyallup
Sumner
Bonney Lake
Lakewood
McChord AFB
Fort Lewis
DuPont
Frederickson
Orting
THURSTON COUNTY
Pierce County
Sound Transit and RTID districts
RTID district only
Underway
Proposed

Transit


Major Sound Transit projects to be paid for by Proposition 1
1 4.3-mile light rail segment from the University of Washington to Northgate.
2 11.6-mile light rail segment from Northgate to 164th Street Southwest, north of Lynnwood.
3 11.4-mile light rail segment from downtown Seattle to Mercer Island, Bellevue and Overlake Hospital.
4 3.1-mile light rail segment from Overlake Hospital to Redmond's Overlake Transit Center if money is available.
5 4.3-mile light rail segment form Sea-Tac Airport to Kent-Des Moines Road South.
6 14.8-mile light rail segment from Kent-Des Moines Road South to the Tacoma Dome.
7 2.8-mile street car line serving Capitol Hill, First Hill and the International District with connections to light rail.
Would also pay for:
Parking garages, permanent rail stations and transit centers at various locations.
Fleet expansion and service increases on Sound Transit Express Regional Bus routes throughout the region.
Numerous studies on expansion of light rail throughout the region.
Arlington
Marysville
Everett
Lake Stevens
Snohomish
Monroe
Lynnwood
Edmonds
Shoreline
Bothell
Woodinville
SNOHOMISH COUNTY
KING COUNTY
Northgate
Kirkland
Redmond
Overlake
Capitol Hill
Seattle
Bellevue
Sammamish
Mercer Island
Renton
Priority light rail extension with funding for planning, environmental review, preliminary engineering and right-of-way. Construction if funds available.
Tukwila
Kent
Puget Sound
Federal Way
Tacoma
Auburn
KING COUNTY
PIERCE COUNTY
Sound Transit and RTID districts
RTID district only
Light rail proposed
Street car proposed
New station, facility or enhancement
I-405 bus rapid transit (BRT) enhancement
Link Light Rail underway
Sounder Commuter Rail underway
Transit planning study
Puyallup
Lakewood
McChord AFB
DuPont
Fort Lewis
Frederickson
THURSTON COUNTY
Pierce County

Mix of Projects

- NOT the most important or “most congestion relief” projects
  - Because that concentrates “winners” geographically
  - (You pay, I win - or - I pay, you win)
- But closer to “fair” geographically

Mix of Projects

- Why roads and transit?
  - Central areas versus cities
  - Without both voting “yes” measure loses
  - So both are funded
- Why together?
  - If one went first and won, the other would never get funded (voter tax exhaustion)

Is Rail Best?

- Very expensive option
  - Bus Rapid Transit (BRT) would give better service at far less cost to far more people
- But Rail gives land use certainty
  - Build rail line, land use will follow
    - If growth is occurring, and
    - Land use density is permitted

Is Rail Best?

- Do you believe bus service is sufficient to change land use densities?

What happens if it loses?

- Do nothing?
  - Election timing
- Congestion pricing / tolling?
  - Better “economic” funding source
  - Removes need for regional concurrency
  - Generates very large amounts of money
  - Will it pass politically?
  - Has social impacts (can be somewhat mitigated)
    - But only so much money - what do you do with it?
    - Roads (local - regional) / transit / social