



---

# Transportation Corridor Visioning Study



**Southwest Washington  
Regional Transportation Council**

# Transportation Corridor Visioning Study

## Report

Preparation of this report was funded by grants from the Washington State Department of Transportation, U.S. Department of Transportation (Federal Highways Administration and Federal Transit Administration) and local funds from RTC member jurisdictions. The policies, findings, and recommendations contained in this report do not necessarily represent the views of the state and federal agencies identified above and do not obligate those agencies to provide funding to implement the contents of the report as adopted.

The Southwest Washington Regional Transportation Council (RTC) assures that no person shall, on the grounds of race, color, national origin, or sex as provided by Title VI of the Civil Rights Act of 1964 and the Civil Rights Restoration Act of 1987 (P.L. 100.259), be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity.



### **Americans with Disabilities Act (ADA) Information:**

Materials can be provided in alternative formats by contacting the Southwest Washington Regional Transportation Council (RTC) at (360) 397-6067 or [info@rtc.wa.gov](mailto:info@rtc.wa.gov).

## Table of Contents

Executive Summary .....	3
Introduction .....	4
Study Purpose .....	4
Key Findings and Conclusions .....	5
Committee Participation .....	5
RTC and Consultant Staff .....	7
Public Outreach .....	7
Process .....	8
Study Area .....	8
How Corridors Were Identified .....	13
Corridor Definitions .....	13
Connecting the Dots: Identifying a Range of Potential Corridors .....	13
Engineering the Lines and Understanding the Implications: Corridor Assessment .....	18
Corridor Analysis – Clark County Corridors .....	19
Corridor Analysis – New Crossing of the Columbia River .....	24
Corridor Analysis – Environmental Information Map .....	26
Land Use Assessment .....	28
Corridor Preservation Strategies .....	32
History of Corridor Preservation in Clark County .....	32
Corridor Preservation Options .....	32
Potential Issues .....	33
Visioning Study Recommendations and Next Steps .....	34

## List of Exhibits

Exhibit 1. Steering Committee Membership .....	6
Exhibit 2. Study Area and Existing MTP Regional Corridors .....	10
Exhibit 4. Visioning Study Employment Assumptions .....	12
Exhibit 5. Visioning Study Analysis Districts and Regional Network .....	14
Exhibit 6. Clark County Corridors Passing Second Level Screening .....	17
Exhibit 7. Candidate New Regional Corridors on Environmental Information Map .....	27
Exhibit 8. Vision Plan Candidate New Regional Corridors Map .....	35

## Appendices/Supporting Reports

Appendix A: Land Use Assumptions

Appendix B: Travel Forecasting Summary and Volumes

Appendix C: Land Use Think Tank Workshop Presentation

Appendix D: Corridor Definition, Assessment, and Performance Measures

Appendix E: Analysis of New Crossing(s) of the Columbia River

Appendix F: Transportation Think Tank Presentation

Appendix G: Corridor Preservation Memorandum

Appendix H: Steering Committee Meeting Agendas and Notes

Appendix I: Other Background Research and Technical Memos

Appendix J: Public Outreach and Comment

Appendix K: Report Addendum: Land Use Think Tank Workshop #2

Appendix L: Report Addendum: Presentations of the Study Report

## Executive Summary

Clark County's rapid population growth is quickly outpacing the capacity of its transportation infrastructure. The need to provide for transportation mobility between growing, outlying areas of the county and the increasing commute between Oregon and Southwest Washington demonstrate the need to identify and plan for potential new, regional transportation corridors within the county, as well as across the Columbia River.

The Transportation Corridors Visioning Study was the first phase of an effort to identify and assess potential new regional transportation corridors in Clark County and across the Columbia River. The purpose of the Visioning Study was to begin to answer the question: "How would we get around within our own community in the longer-term future if our County reaches one million in population?" The first phase of the study was intended to provide a high-level "50,000-foot level" planning analysis while future phases may assess land use implications and evaluate corridors at a higher level of detail.

This report summarizes the process and outcomes of the first phase of the study, which identified a set of candidate corridors that could provide this regional mobility. Future phases of the Visioning effort may continue to focus on the land use and transportation implications of new corridors, eventually taking action on whether to add one or more corridors to the Metropolitan Transportation Plan.

The Visioning Study resulted in several key findings. The land use assessment indicated that based on existing policies and urban growth areas, Clark County will tend to grow outward with some densification in already-established urban and rural centers, and a continued growth in cross-Columbia River trip-making. Additionally, the travel demand from these growth patterns will show a mix of regional and subregional trip-making, indicating a need for new, subregional corridors to accommodate shorter trips as well as regional corridors. The Visioning Study also examined potential strategies for corridor preservation, most of which require inclusion of new corridors on an adopted local Comprehensive Plan as well as the Metropolitan Transportation Plan.

A Steering Committee comprised of elected and appointed officials from agency members of the Regional Transportation Council provided policy input on the study, with technical assistance from agency staff from those jurisdictions. The Visioning Study project team was comprised of RTC and consultant staff.

The Visioning Study culminated with a map showing several potential regional corridors within Clark County as well as four potential new crossings of the Columbia River.

## **Introduction**

Clark County's rapid population growth is quickly outpacing the capacity of its transportation infrastructure. The Transportation Corridors Visioning Study has been undertaken in order to proactively address this concern. The Southwest Washington Regional Transportation Council Board of Directors acknowledged the need to plan for and evaluate future transportation needs. The Board therefore initiated a long-range, visioning process to study the need for new transportation corridors in Clark County.

Currently adopted land use plans and regional transportation plans include a 20-year growth forecast and transportation needs for the next 20 years but do not look at the longer-term timeframe. Yet, new transportation corridors take a considerable time to plan for and construct. It was felt that now is the time to begin identifying a long-term vision for where future transportation facilities may be needed to serve the growing county.

The purpose of conducting the transportation corridor visioning process is to answer the question: "How would we get around within our own community in the longer-term future if our County reaches one million in population?" The study focused on connecting places and nodes of growth in Clark County as well as analyzing the need for future crossings of the Columbia River. The study is intended to provide a high-level planning analysis and identification of potential new corridors in Clark County and across the Columbia River.

This study opened the discussion to Clark County's transportation and land-use needs in relation to anticipated growth. In doing so, it was the first phase of a multi-phase effort to establish a 50-year transportation vision for the county, and will determine the feasibility of planning for and preserving future, new transportation corridors in Clark County. A Steering Committee comprised of elected and appointed officials provided policy oversight and input to the Study. Agency staff and the Study project team provided technical support to the Study.

## **Study Purpose**

The Transportation Corridors Visioning Study was the first phase of what may be a multi-phased effort to identify and assess potential new regional transportation corridors in Clark County and across the Columbia River. The purpose of the Visioning Study was to begin to answer the question: "How would we get around within our own community in the longer-term future if our County reaches one million in population?" The first phase of the study was intended to provide a high-level "50,000-foot level" planning analysis while future phases may assess land use implications and evaluate corridors at a higher level of detail.

This report is a summary report for the Transportation Corridors Visioning Study. It will present proposed new, candidate corridors and their respective alignments within Clark County along with a summary of the Study's process. The report also includes

recommended next steps in the multi-phase Corridor Visioning process. The appendices to this report contain supporting presentations and technical documentation.

The report is intended to be exploratory and informational. In order to identify potential future transportation needs, the Visioning Study made various assumptions regarding the amount, timing, and location of long-term future growth. To be realized, these assumptions require further policy decisions not yet made and market conditions not yet known. Agency participation in the Visioning Study is not a policy commitment to the particular land use or transportation corridor vision identified as part of this phase of study.

## **Key Findings and Conclusions**

The Visioning Study resulted in several key findings. The land use assessment indicated that based on existing policies and urban growth areas, Clark County will tend to grow outward with some densification in already-established urban and rural centers, and a continued growth in cross-Columbia River trip-making. Additionally, the travel demand from these growth patterns will show a mix of regional and subregional trip-making, indicating a need for new, subregional corridors as well as regional corridors. The Visioning Study also examined potential strategies for corridor preservation, most of which require inclusion of new corridors on an adopted local Comprehensive Plan as well as the Metropolitan Transportation Plan.

## **Committee Participation**

The purpose of the Transportation Corridors Visioning Steering Committee was to guide the policy development for the Transportation Corridors Visioning Study. This group is a working group, responsible for shaping and building consensus on policy recommendations to the full RTC Board. The Steering Committee reviewed land use assumptions, travel demand patterns, the purpose and function of corridors, addressed community outreach and public input and other information. The group recommended a map of candidates for new corridors and transportation connections that are worthy of further consideration and study in the future.

Participants in the Visioning Study included:



## Exhibit 1. Steering Committee Membership

Agency	Steering Committee Member	Technical Staff Support
North County	Commissioner Roy Randel (Port of Ridgefield)	Justin Clary (City of Ridgefield)
Battle Ground/Yacolt	Mayor John Idsinga (City of Battle Ground)	Rob Charles (City of Battle Ground)
Clark County	Commissioner Steve Stuart (Board of County Commissioners)	Pete Capell, David Cusack
C-TRAN	Mayor Jim Irish (La Center, representing C-TRAN Board)	Jeff Hamm, Ed Pickering
WSDOT	Don Wagner	Jack Burkman, Bart Gernhart
City of Vancouver	Councilperson Tim Leavitt	Matt Ransom
Port of Vancouver	Commissioner Arch Miller	Katy Brooks
East County	Councilperson Helen Gerde (City of Camas)	Jim Carothers (City of Camas) Trevor Evers (City of Washougal)

## Steering Committee Meeting Dates

Steering Committee meetings were held on the dates listed below. Summaries of Steering Committee agendas and meeting notes are found in Appendix H.

October 6, 2006  
December 1, 2006  
February 2, 2007  
April 6, 2007  
May 4, 2007  
June 1, 2007  
August 3, 2007  
October 5, 2007  
December 7, 2007  
January 11, 2008



### ***RTC and Consultant Staff***

Dean Lookingbill (RTC), Lynda David (RTC), Chuck Green (PB), Mark Harrington (RTC), Jeanne Lawson (JLA), Shareen Rawlings (JLA), Adrienne Dedona (JLA), Sam Seskin (CH2M HILL)

Additionally, “Think Tank” workshops were held. These sessions included both Steering Committee and technical staff, along with specialized consultant team expertise. The sessions focused on land use patterns that should be factored into the Visioning Study’s forecast, and also on the preliminary list of proposed, candidate corridors for further consideration. The Think Tank meetings were held on July 12, 2007 (land use) and on September 7, 2007 (corridors).

A summary of the Think Tank workshops are found in Appendix C (Land Use) and F (Transportation).

### ***Public Outreach***

There were several opportunities for public outreach and involvement in the study. Public outreach consisted of:

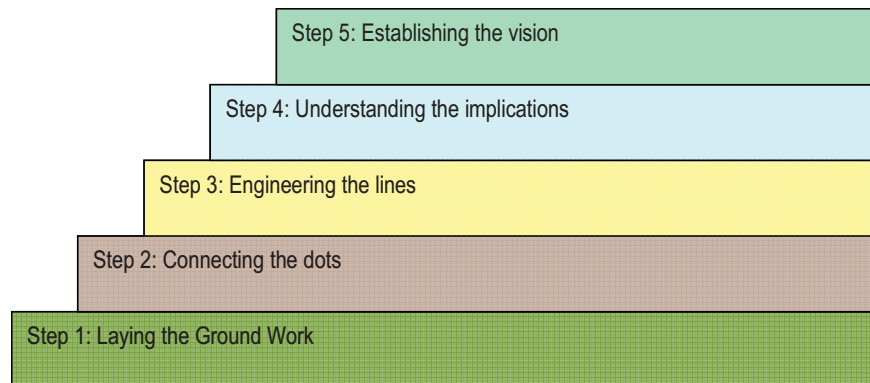
- A “Public Comment” portion of each of the Steering Committee meetings
- RTC Board Presentations, March 7, April 4, May 2, June 6, August 1, and September 5, 2006, August 7 and November 6, 2007
- Bi-State Coordination Committee Presentations, May 18, 2006, February 15, July 19, October 18, and November 15, 2007
- Open House, November 15, 2007
- RTC Website (<http://rtc.wa.gov/studies.htm#vision>)
- The Clark County Fair – August 3-4, 2007
- SR 502 Corridor Project Open House (Battle Ground) – May 9, 2007

All were open to the public and there were citizens present at many of the Steering Committee meetings.

## Process

A five-step process was used to conduct the study:

- Laying the Groundwork: during this step, the Study and its Steering Committee was organized, Study goals and objectives were agreed to, and corridor screening and evaluation criteria were established.
- Connecting the Dots: during this step, a 50-year land use forecast was established and trips were modeled using RTC's regional travel demand model. Two levels of screening were performed to focus on the highest-demand, most promising candidate regional corridors.
- Engineering the Lines: once the "top 10" potential corridor connections were selected, conceptual corridor alignments were developed and evaluated.
- Understanding the Implications: using known environmentally-sensitive areas as well as current and potential future high-density development areas, the corridors were mapped and evaluated. Two Think Tanks were held, one focusing on land use implications of the 50-year vision and potential new corridors, the other focusing on the candidate corridors themselves.
- Establishing the Vision: the map of potential new corridors was approved by the Steering Committee, and a list of corridor preservation strategies and next steps were developed.



## Study Area

The study area for the Transportation Corridors Visioning Study was all of Clark County, and included the extreme southern part of Cowlitz County as well as north Portland and north Multnomah County. The study area included Regional Transportation System corridors already included on the Metropolitan Transportation Plan's 2030 network. The study area and corridors are shown in Exhibit 2.

A land use scenario was developed for this study, based on Clark County having 1 million residents and 500,000 jobs, termed the "50-year Vision" or "Visioning Scenario". Households and employment were distributed around the county based on current and potential future urban growth areas and expansions, as well as constraining employment to below the 400 foot elevation and residential development to the area of the county below 800 feet. Development was not allocated to sensitive land areas,

protected lands, or significant wetlands buffers. Household and employment densities in potential future urban growth areas follow the density assumptions found in Clark County's Comprehensive Growth Plan (2007). Existing urban areas were assumed to experience an average increase of 10% in both housing and employment densities.

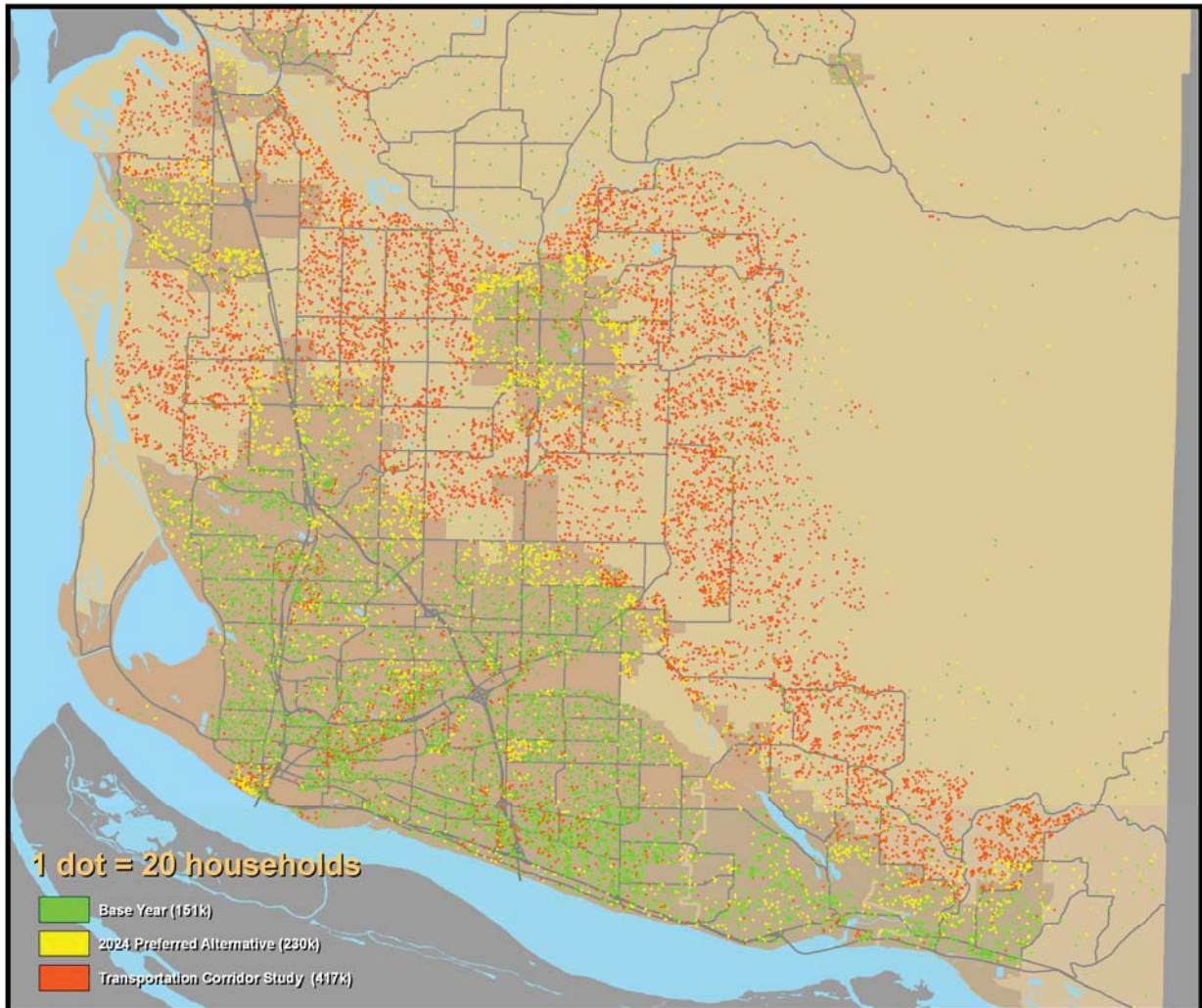
The land use projections for the Visioning Scenario are shown in Exhibit 3 (households) and Exhibit 4 (employment). More detail on the land use and travel projections are found in Appendices A and B.

## Exhibit 2. Study Area and Existing MTP Regional Corridors

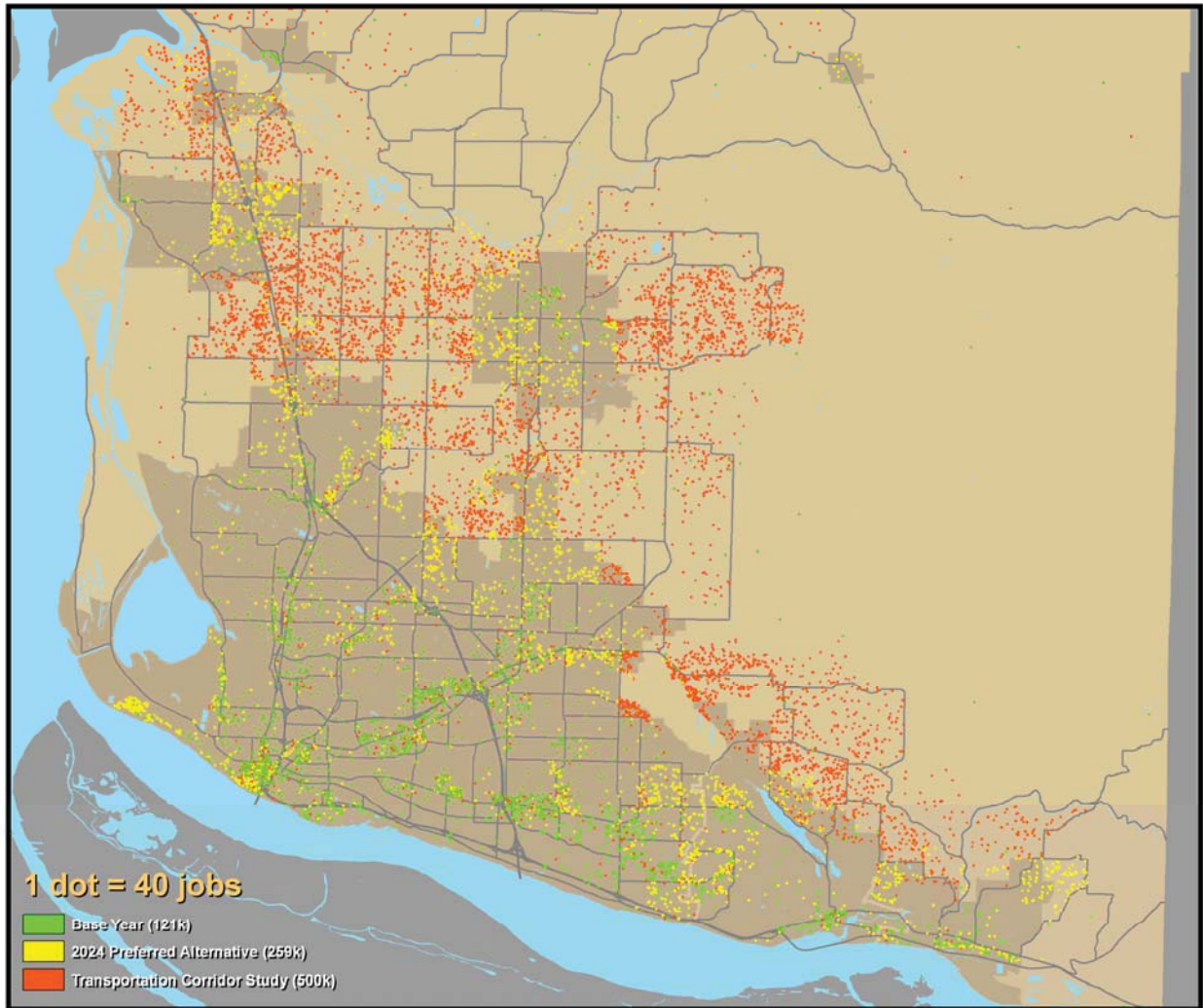




### Exhibit 3. Visioning Study Household Assumptions



## Exhibit 4. Visioning Study Employment Assumptions



## How Corridors Were Identified

The focus of this study was to identify potential *new* regional corridors. In some cases, these may be extensions of existing regional corridors, or upgrades to corridors that are not currently considered regional in nature.

### ***Corridor Definitions***

The Steering Committee adopted the following definitions of Regional and Subregional Corridors:

*Regional Corridors* are those which emulate a state highway in function, appearance and multimodal use. These corridors tend to carry regional highway and transit trips, long-haul or regional truck / freight movement, and regional bicycle / pedestrian trips. They connect two or more non-contiguous urban centers, with at least one inside Clark County, and carry 10,000 or more person-trips per day (in the Visioning Scenario). A Regional Corridor could connect a Port or other major regional facility to the regional system. For the purposes of this Study, a regional trip is defined as a trip that has an average length of at least eight miles.

*Subregional Corridors* are those which emulate a minor or principal arterial in function and appearance, with some multimodal use. They carry an equivalent amount of regional and subregional trips. Subregional corridors connect to the Regional Transportation System from urban areas within the county and carry a mix of regional / subregional transit and highway trips. Truck / freight movement is primarily for intermodal facility or commercial center access, and these routes tend to carry localized and subregional bicycle / pedestrian trips. These could also include facilities which provide access to and circulation within a subarea, and which could parallel and relieve regional corridors.

### ***Connecting the Dots: Identifying a Range of Potential Corridors***

The regional travel demand model was run by loading the Visioning Scenario's trips on the 2030 Metropolitan Transportation Plan network. The model's trip productions and attractions were summarized into districts, and the major district-to-district linkages were identified (those that carried 10,000 or more person trips per day). This formed the initial set of potential corridors.

The corridor screening process used screening and evaluation criteria in narrowing and selecting the list of candidate, new regional corridors for further investigation. These criteria were used to help narrow the focus from a wide pool of candidate corridors to a more manageable number to carry forward in the analysis.

The Visioning Study is aimed at identifying potential new, regional corridors that do not currently exist. There may be needs identified on existing regional



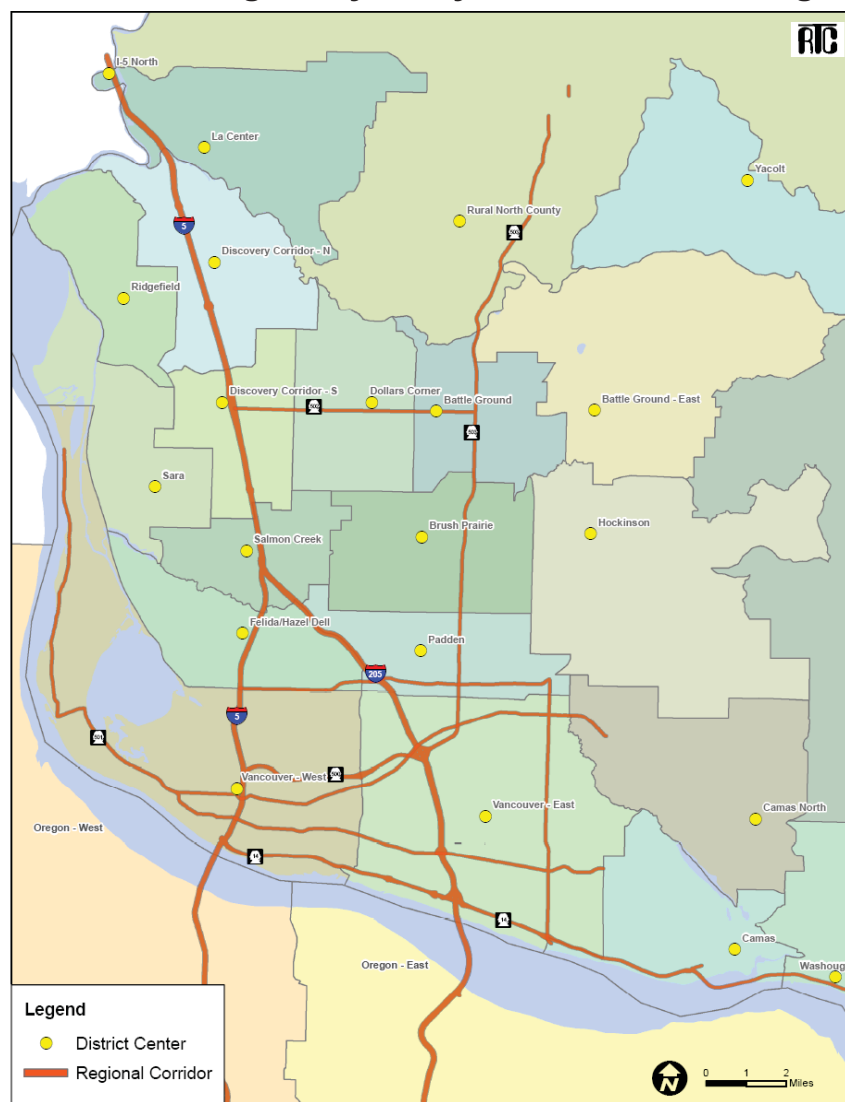
corridors that result from the Visioning Study; however, the criteria summarized here are for identifying new corridors only.

There were three levels of corridor screening in this process, as follows:

1. First level screening: screening out of candidate corridors that are outside the scope of this study.
2. Second level screening: selection of promising regional corridors.
3. Engineering the lines, which came later in the process: connecting community centers along a candidate corridor using conceptual alignment criteria.

Exhibit 5 shows the districts and current Metropolitan Transportation Plan regional corridors that were used for the travel modeling analysis.

### Exhibit 5. Visioning Study Analysis Districts and Regional Network



## **First Level Screening**

The objective of the first level screening was to screen out the initial set of candidate corridors, which numbered over 100, to a focused set of approximately 30 corridors for further screening. Primarily, the first level screening eliminated corridors that were considered outside of the scope of this study, followed existing corridors, or were determined not to primarily serve regional trips.

## **Second Level Screening: Narrowing to Promising Regional Corridors**

The objective of the second level screening process was to narrow the list of candidate corridors to those that show the most promise for potential, future regional corridors. Second level screening criteria included those from the first level screening, along with the following: potential multi-modal benefit, including freight; connects to more than one existing or new center; has the ability to relieve high accident corridors, carries at least 10,000 daily regional person trips; provides relief to existing regional corridors; is compatible with planned land uses; and has political and community support.

Exhibit 6 below summarizes the corridors which passed the first level screening (yellow) and the second level screening (green). Those corridors passing the second level screening were moved forward for further evaluation.

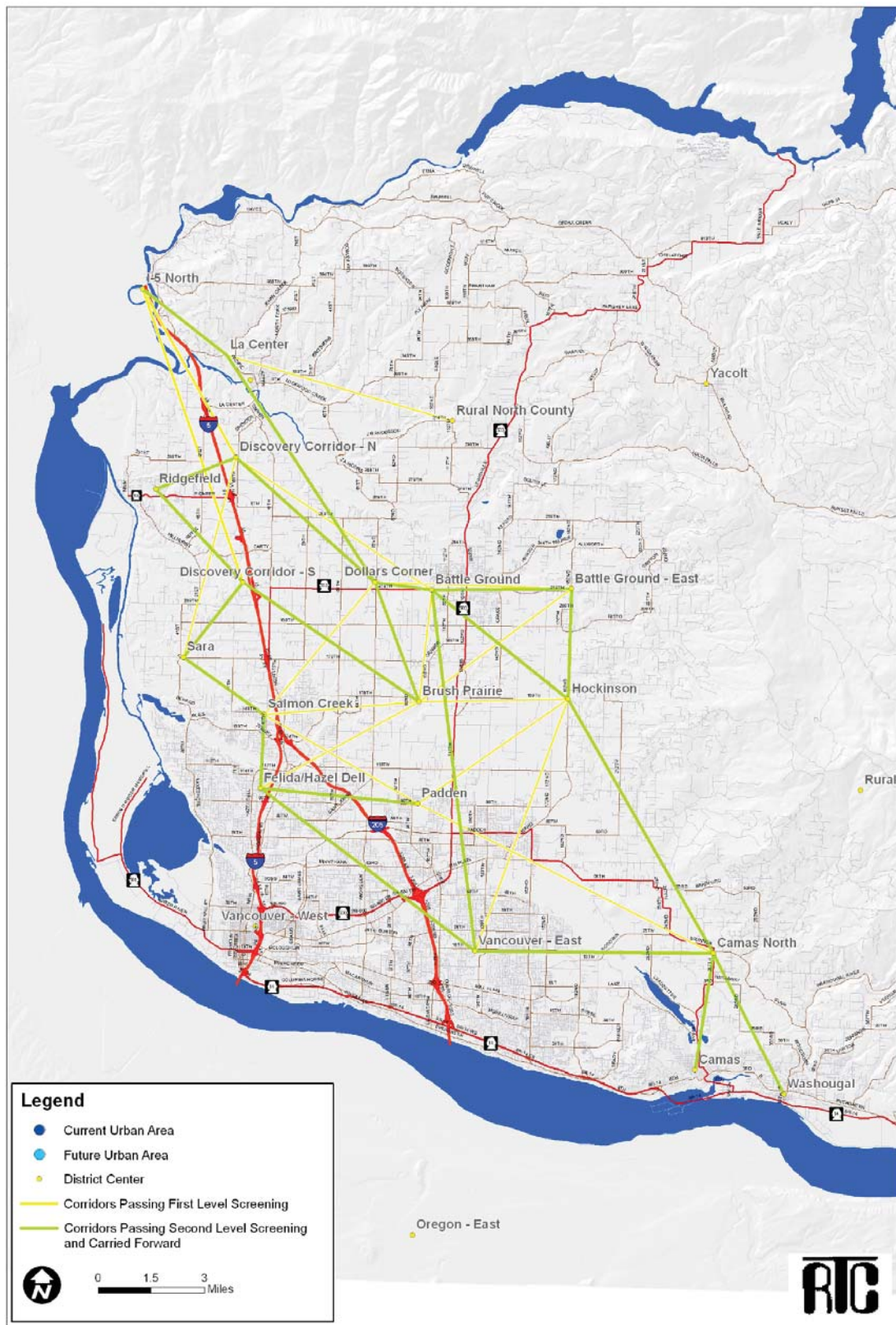
## **Conclusions**

The screening analysis indicated a higher percentage of subregional trips than were originally expected. This finding indicates that, in addition to potential, new regional corridors in Clark County, a consideration for a supporting network of subregional corridors and local arterials that provide for local circulation as well as access to and from regional corridors is recommended. This analysis also indicated that developing or completing a grid system would be needed in some areas of the county: central county between I-5/Discovery Corridor and Battle Ground, and for areas south of Battle Ground to relieve pressure on single corridors to carry both regional and subregional trips.

The travel demand analysis also indicated that many of the existing regional corridors would also experience substantial increases in peak period and daily traffic under the Visioning land use scenario, even with a greater balance of population and employment within Clark County. The higher level of Clark County employment combined with the population increases in Oregon will result in a substantial increase in the “reverse commute” from Oregon to Southwest Washington, which will also impact existing corridors. Although the focus of the Visioning Study was on identifying potential new corridors, one of the evaluation aspects of identifying candidate corridors included whether a new corridor or crossing of the Columbia River could serve to relieve one or more existing corridors.

The objective of the candidate new, regional corridors is that they should be established to be multimodal: providing regional mobility for passenger vehicle, transit, truck/freight, as well as bicycle and pedestrian trips. The land use patterns developed for the Visioning Study and confirmed by the Land Use Think Tank process indicated that under current development patterns and policies, growth would tend to be outward rather than upward, and that existing centers would become larger and denser, but new centers were unlikely. Thus, in order for corridors to provide for multimodal mobility as well as accommodating this land use vision, corridor alignments require a logical and reasonable connection of land use and transportation centers along a corridor. This became the objective for the next phase of the Visioning Study, which assessed and developed alignments for potential corridors within Clark County as well as potential new corridors crossing the Columbia River.

## Exhibit 6. Clark County Corridors Passing Second Level Screening



## **Engineering the Lines and Understanding the Implications: Corridor Assessment**

The second level screening resulted in the following findings that framed the remainder of the Study. Primarily, review of the demand modeling indicated that the highest demand linkages were mostly subregional connections, instead of regional corridors, and that most of the existing major creek / river crossings are well over capacity in the Vision Plan scenario. More detail on the corridor assessment is found in Appendix D.

Passing the second level screening were:

- North-south corridors, including one or two parallel to I-5 from Woodland to Vancouver; a corridor from Battle Ground through Hockinson and Dollars Corner to the south part of county; and corridors extending from Hockinson to Camas, Washougal, and east Vancouver.
- East-west corridors, potentially a grid of corridors in north-central Clark County, including Discovery Corridor to Battle Ground through Dollars Corner, and a corridor connecting the Discovery Corridor to Hockinson and to Brush Prairie.
- Westside corridors connecting Ridgefield, Salmon Creek / Felida / Lakeshore and west and downtown Vancouver.

At this point in the process, preliminary conceptual alignments were established for the corridors. The objectives used and assessed for engineering conceptual alignments were as follows:

- Minimize impacts to known environmentally-sensitive lands including wetlands, unstable slopes, and threatened and endangered species habitat
- Minimize impacts to established neighborhoods and business districts
- Avoid steep grades
- Avoid or minimize impacts to known locations of cultural, historical, or archaeological significance
- Minimize new crossings of important rivers, creeks, and streams
- Provide for efficient transportation – minimize out-of-direction travel
- Emphasize cost effectiveness – utilize existing public rights-of-way or utility corridors, where feasible
- Where possible, develop a conceptual alignment which would relieve traffic congestion, and improve safety, on one or more existing regional corridors
- Enhancing livability by providing a corridor which may divert regional trips away from an established, urban center.



## **Corridor Analysis – Clark County Corridors**

Corridors were analyzed as four-lane, principal arterial-parkway type corridors within Clark County. Examples of what a regional corridor would look like, and how it would function, include the Padden Parkway and SE 192<sup>nd</sup> Avenue, both managed-access, higher-speed facilities carrying regional trips, a high level of truck trips, and potentially regional transit trips, and having regional bicycle and pedestrian facilities adjacent to them.

### **Westside Corridor**

There was extensive discussion at the Steering Committee about how this corridor should function and what its purpose should be. Depending on the options, the corridor could be located west of Vancouver Lake and serve as a truck-oriented regional facility (or an alternative truck route to the existing Fruit Valley Road/Lakeshore Blvd. route) between I-5 at Ridgefield and the areas of central Vancouver near and along the Columbia River waterfront, or an upgrade to the existing Fruit Valley/Lakeshore/NW 36<sup>th</sup> Avenue/Hillhurst corridor recognizing the desire to provide an alternative to I-5. This dichotomy of the corridor's purpose led to several suboptions being developed for the Westside Corridor.

Review of the travel demand model indicated strong, westside interactions between west and central Vancouver, through the Felida/Lakeshore area and to Ridgefield as well as the Discovery Corridor area.

There were two main Westside Corridor options with several suboptions. Option West 1 (with suboptions A, B, and C) utilizes WSDOT right-of-way for SR 501 which is mostly still available. A portion of this option has an alignment parallel to the BNSF Railroad corridor. Option 2 uses the Lakeshore / NW 36<sup>th</sup> Avenue and Fruit Valley corridors. During the Steering Committee meetings discussing these corridors, concern was expressed about upgrading the Option 2 corridor to “Regional Corridor” as it travels through established neighborhoods and community centers. This concern resulted in establishing the Option 1 corridors.



The Westside corridor options have a variety of potential impacts to the natural and built environment, as well as potential impacts to the Ridgefield Wildlife Refuge. A more detailed summary of the impact performance measures is found in Appendix C.

Option West 1 (A through C) could impact the Ridgefield Wildlife Refuge; suboptions 1B and 1C were developed to avoid potential impacts to the Refuge. A case history research was conducted to investigate the case history regarding the construction of roadway corridors through National Wildlife Refuges. This research was used to evaluate the feasibility of planning the SR 501 corridor (Option West 1) through the Ridgefield National Wildlife Refuge. This review indicated that there were no examples of where a new roadway corridor had been built through a Wildlife refuge other than for access to the refuge itself. The review of the federal acts also indicated that any impacts to the Refuge would likely trigger a review under the National Environmental Policy Act.

Option West 1 and its suboptions all would cross Lake River, while Option West 2 does not. Option West 2 would cross the Burnt Bridge Creek basin while the West 1 options do not. All Westside Corridor options would cross the Salmon Creek basin.

The West 1 options would likely experience steep terrain west of NW 31<sup>st</sup> Avenue south of NW 199<sup>th</sup> Street as they make their way west across Lake River. They would also need to span the BNSF mainline railroad tracks.

Further study is needed to determine the impact of Westside Corridor options on the Mill Plain Boulevard corridor tie-in back into I-5 north of the Interstate Bridge and whether potential improvements are needed.

Option West 2 would likely impact established neighborhoods in the Felida, Lakeshore, and Fruit Valley areas; it was these potential impacts that were the catalyst for establishing the West 1 options.

A new Westside Corridor would provide an alternative to I-5 for regional and subregional trips between the Ridgefield/Discovery Corridor area and central Vancouver. The West 1 options would establish a new truck route that could serve as an regional truck route alternative to the current Fruit Valley/Lakeshore route. It should be noted that information received from the Port of Vancouver indicates that much of their freight is transported on Columbia River barges, and that few Port-destined trucks travel north-south into and out of the Port facilities.

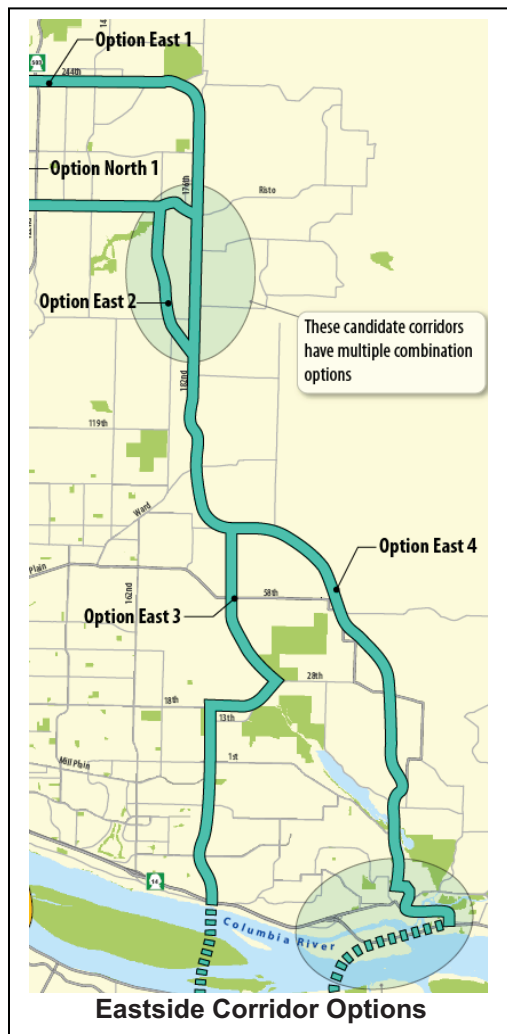
## **Eastside Corridor**

Eastside corridors consist of Options East 1 through 4. Combinations of these options reflect a new Regional Corridor connecting Battle Ground to Camas /



Washougal and also to east Vancouver / Fishers Landing. These corridors could relieve SR 503.

There was general agreement by the Steering Committee that this corridor would serve regional and subregional trips between Battle Ground, Hockinson, and the Lacamas area. From there, the regional corridor could either serve the Fishers Landing/west Camas area, or north/central Camas and Washougal areas. Therefore, options were developed for each travel shed.



There was extensive discussion about how and where the endpoint connections for the Eastside corridor should go, both on the north (around Battle Ground to the north or east, or through the downtown as a “Main Street”) and on the south (along SE 192<sup>nd</sup> Avenue to connect to the developing industrial/commercial areas of Fishers Landing and western Camas and as a potential connection across the Columbia River, or to and through downtown Camas to SR 14).

There are two areas where multiple connection sub-options are possible and further study is needed:

- Near Hockinson, where the corridor could either travel through Hockinson’s center (East 1) or bypass it to the west (East 2), with east-west connections depending on how the North Corridor evolves; and
- In central Camas, where Option East 4 would connect to SR 14 (and potentially a crossing of the Columbia River); this could either be through downtown Camas, roughly

along the SR 500 corridor, or a new route bypassing central Camas, possibly to the west, with a connection to SR 14 on the west side of downtown Camas.

Additionally, further study will be needed along East 3 as it travels along the 192<sup>nd</sup> Avenue alignment. Travel demand modeling indicated a demand for three lanes in each direction, and if a new crossing of the Columbia River is extended to the south, improvements will be needed to the SR 14 interchange.

Eastside Corridor options would all cross a number of creeks and streams, and experience some topographical challenges. Option East 1 may impact China Ditch, but would avoid potential impacts to the Hockinson town center. Option East 2 would likely impact the Hockinson town center.

Option East 3's earlier conceptual alignments would have traversed the Lacamas Basin. Further discussion indicated that the county is considering a land/nature preserve for this area; the alignment for this corridor was changed to cross Lacamas Creek at the existing Goodwin Road bridge and then tie into NE 192<sup>nd</sup> Avenue at NE 18<sup>th</sup> Street.

Option East 4's alignment was routed to the west to avoid potential impacts to Grove Field, an airport operated by the Port of Camas-Washougal.

Benefits of a new Eastside corridor include provision of a new, north-south regional corridor to provide mobility between Battle Ground, Hockinson, east Vancouver, Camas and Washougal, as well as an alternative for the SR 503-to-I-205 connection which is shown as being over capacity in the Visioning scenario travel demand model.

## North Corridor

The idea for a north corridor evolved from extensive discussion at the Think Tank workshop on corridors as to whether there should be a “loop” connecting to both the Westside and Eastside Corridors as well as serving a regional, east-west function between Ridgefield through Dollars Corner and into Battle Ground. The Steering Committee preferred that the North Corridor not travel through the Battle Ground City Center; instead, there were options that would connect to the north side of Battle Ground as well as the south side of Battle Ground.



The north corridors consist of two options: Options North 1, which generally follows the NW 219<sup>th</sup> Street/SR 502 corridor across I-5 and connecting to NE 199<sup>th</sup> Street east of 92<sup>nd</sup> Avenue; and North 2, which would follow the Pioneer Parkway/259<sup>th</sup> Street corridor east of Ridgefield through the Daybreak area and connect to 244<sup>th</sup> Street and SR 503. Either of these corridors could connect to an Eastside Corridor; only North 1 could connect to a Westside Corridor directly.

The North Corridor options were developed to provide a strong, regional east-west connection between SR 503/Battle Ground and I-5/Ridgefield, as well as to a potential Westside Corridor. While travel modeling indicated that establishing a complete grid system north of NE 179<sup>th</sup> Street and improvements to SR 502 already being developed by WSDOT would provide for regional and subregional mobility, the Steering Committee felt that SR 502 could not serve as the sole, east-west regional corridor in central Clark County, that even with WSDOT's improvements more capacity and limited access facilities are needed, and that a second regional corridor was needed connecting Battle Ground with south or central Ridgefield.

Option North 1 would further upgrade SR 502 to a higher-speed, limited access facility more representative of the Padden Parkway. East of 92<sup>nd</sup> Avenue, the corridor would run southeasterly to 199<sup>th</sup> Street, where it would then travel east to NE 182<sup>nd</sup> Avenue. The corridor would follow the proposed NW 219<sup>th</sup> Street west extension west of I-5 and past Hillhurst Road with a potential connection to a Westside Corridor. Thus, the corridor would likely impact existing access and some residences and businesses to be established, as well as traveling through large areas with identified wetlands.

Option North 2 was considered as an alternative to SR 502 and would connect north Battle Ground with central Ridgefield. It would travel south of the East Fork of the Lewis River and experience some challenging terrain and some wetlands areas, but not to the extent of North 1.

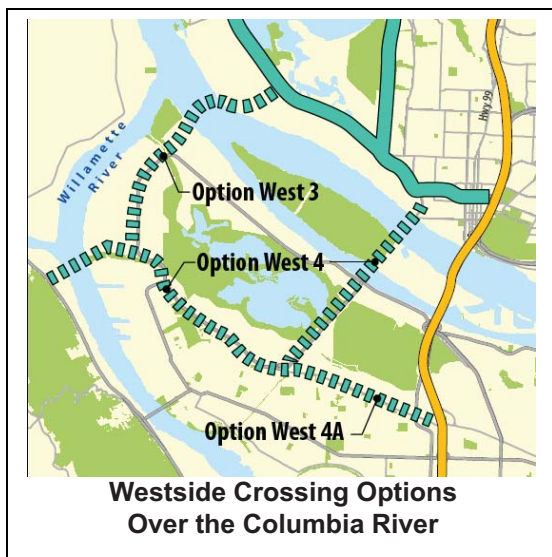
The benefits of either corridor would be to establish a strong, east-west corridor connecting SR 503 with I-5 for regional and subregional trips as well as providing for freight mobility to east and northeast Clark County.

## ***Corridor Analysis – New Crossing of the Columbia River***

A set of potential new crossings of the Columbia River were developed and analyzed: west of I-5, and east of I-205. A new corridor between I-5 and I-205 was not considered due to the constraints for regional travel posed by the Portland International Airport. New crossings of the Columbia River were modeled as “Parkway” type arterials, with 4-6 lanes, and were modeled without tolls. More detail on this analysis is found in Appendix E.

### **Westside Corridor Options for Crossing the Columbia River**

Review of the travel demand model indicated strong, westside interactions between west and central Vancouver, Felida/Lakeshore and Ridgefield with destinations in west Portland, the Port of Portland terminals, St. Johns area, and points northwest and west of Portland along US-30 and Cornelius Pass Road.



A set of corridors, Option 3 and 4, were developed which cross over the Columbia River. Corridors were developed by considering previous analysis for the Columbia River Crossing project on westside arterial crossings alternatives (which were eventually dismissed by the CRC project as they were not consistent with that project’s purpose and need), existing SR 501 right-of-way still owned by

WSDOT (which extends from Vancouver Lake north to the southern portion of the Ridgefield Wildlife Refuge), master plans for the Port of Portland Marine Terminals and the Port of Vancouver Gateway area, as well as examining opportunities and constraints posed by environmental issues, the Burlington Northern Santa Fe railroad “trench” and bridge over the Columbia River, as well as examining travel patterns from the Visioning Study’s travel demand model runs.

Option 3 would skirt the Gateway area of the Port of Vancouver, cross over onto and through Hayden Island to the marine terminals area, and then bypass the St. Johns neighborhood by crossing the Willamette River to the northwest, ending at US 30. This option was added by the Steering Committee during the “Think Tank” corridors workshop as an alternative to serve truck traffic generated west of I-5 as well as the northwest Portland industrial area.

Option 4 would follow the “Bi-State Industrial Corridor” alignment from the Columbia River Crossing EIS. This corridor would connect in Clark County at

approximately Mill Plain at NW 26th Avenue, while in Oregon would follow the Portland Road and railroad “trench” through Hayden Island and the peninsula. The corridor also follows Columbia Boulevard west through St. Johns, crosses the Willamette River and connects to US-30 northwest of Linnton. Connections with I-5 would be via Mill Plain, Marine Drive, Columbia Boulevard, and US-30.

Modeling indicates that the Westside corridor options would carry between 38,000 and 46,000 vehicles per day across the Columbia River (at capacity for a four-lane facility) in the Visioning Study scenario, but that volume would drop off dramatically north of central Vancouver. These crossing corridors serve subregional trips between Ridgefield, Vancouver, and Northwest Portland.

A new Westside Columbia River crossing corridor may provide minor relief to I-5 (about 8% fewer trips). Some I-205 trips backfill onto the I-5 Bridge resulting in minimal relief to I-205 due to this trip shifting, but not significant enough to measurably improve traffic congestion on I-205.

There are land use implications on each side of river (along the corridor). This potential corridor increases cross-river travel about 3-4% due to latent demand. Some Clark County trips shifted off of the I-5 corridor north of the Columbia River. On the Washington side, these corridors exhibit characteristics of both a regional and subregional corridor: half of Clark County trip ends are Ridgefield and north, half are central / west Vancouver area. On the Oregon side, over half of the trip origins / destination are longer distances: central Portland and I-5 south, Cornelius Pass, and northwest along US-30.

#### Eastside Corridor Options for Crossing the Columbia River Crossing

Travel demand modeling indicated a strong interaction between east Vancouver, Fishers Landing, and the Camas/Washougal area to points in east Portland, Gresham, and the Columbia River Gorge along I-84. Thus, crossing options were tested east of I-205 that would have access to I-84 at an existing interchange, as well as connect to a regional corridor in Oregon which had connections to MAX light rail stations for regional transit purposes.

These corridor options included connections in Clark County at approximately SE 192<sup>nd</sup> Avenue at SR 14, and also into downtown Camas. On the Oregon side, one option ended at approximately I-84 at 181<sup>st</sup> Avenue in Gresham and the other option ended at approximately the 238<sup>th</sup> Avenue interchange with I-84 in Wood Village. There were connections assumed with Airport Way and Sandy Boulevard along with other supporting road improvements.

Modeling indicates that the Eastside corridor options would carry between 70,000 and 80,000 vehicles per day across the Columbia River (over capacity for a four-lane facility) in the Visioning Study scenario, with volumes continuing at that level northward to the Battle Ground area. These high volumes between Battle Ground



and northeast Vancouver may indicate lack of a supporting subregional system (in the travel model) which would tend to funnel both regional and subregional trips onto the new corridor rather than spreading them out between facilities.

Further analysis of the candidate Eastside River Crossings found that:

- There is no impact to I-5
- Some relief to I-205 (15-20% fewer trips; subregional trips removed; still over capacity)
- Land use implications on each side of river (along the corridor)
- Increases cross-river travel about 7-10% (latent demand)
- Washington side: exhibits characteristics of a subregional corridor: most Clark County trip ends south of 18<sup>th</sup> Street and east of I-205
- Oregon side: over half of trip origins / destinations are within 2-3 miles of crossing: subregional corridor.

### ***Corridor Analysis – Environmental Information Map***

Exhibit 7 is a map of the candidate corridors superimposed on a GIS map showing sensitive lands, unstable or steep slopes, features such as stream crossings and wetlands, and other features. This map was used to assess and refine corridor conceptual alignments.

## Exhibit 7. Candidate New Regional Corridors on Environmental Information Map

Vision Plan: Engineering the Lines  
Candidate New Regional Corridors





## Land Use Assessment

A Think Tank workshop was held as part of the Study to focus on land use implications of the 50-Year Vision. Participants included Steering Committee members, agency staff, and project team staff from the consultant team and RTC. The Think Tank addressed the following questions:

- How does a region's form change as it grows?
- What is the role of land use policy in influencing urban form?
- What is the role of transportation?

The results of the land use assessment indicate that:

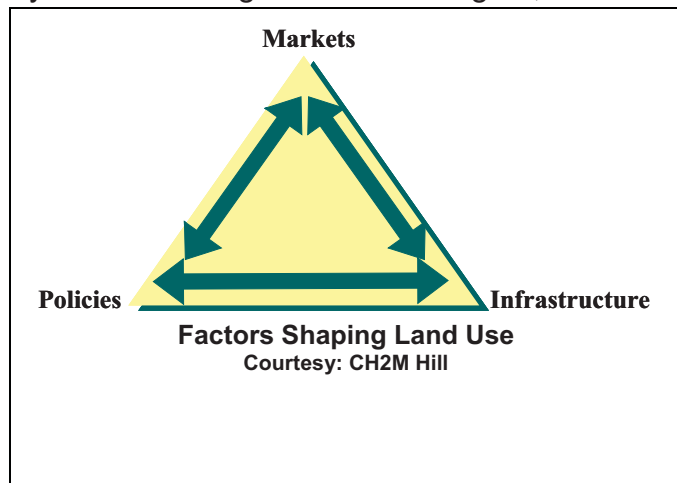
- Urban areas in the county will clearly get bigger and may become contiguous, depending on land use and sustainability policy choices
- Density is at a fairly moderate level in Clark County and will likely remain that way overall, with higher densities in individual urban centers, depending on future policy choices
- Transportation creates accessibility
- The interaction of policy and market determines growth patterns as well, directing economic development
- Clark County has a dominant center (Vancouver CBD) and some other urban centers are planned and emerging, but there are no currently plans for a new, dominant or regional center evolve in the future outside of current urban growth areas.
- Policy is an enabling factor, just as transportation investments can be
- Growth will occur incrementally, in a form more supportive of a subregional, grid network
- There is an over dependence on state routes to carry subregional trips, due to employment locations
- There is a need to connect employment hubs and smaller residential areas and connections between developing communities.

Consideration was given to how regions around the country, and also the Portland / Vancouver region, have grown and as to what form this growth has taken, over extended periods of time. In Clark County, density has also occurred within the urban growth areas (UGAs) while less-dense, suburban-style development has occurred outside of the UGAs.

Land use is shaped by the interaction of the land use and development market, growth and land supply policies, and infrastructure (which includes transportation and utilities). Land supply is driven by government choices of how much land to zone for development and where to locate it.

Transportation and land use are linked: transportation provides accessibility to land, while land development requires transportation access. Both require government action. Local and regional policies affect where land use goes, as well as the form it takes. Tax laws vary between Oregon and Washington, which plays into the land use market decisions and competition for large-scale industrial and commercial development. Availability of reasonably-developable land, as well as what land use policies are in place, also play a role in land use growth.

The historical significance of policy development has helped shape the industrial and business areas within each UGA, and residential development continues to occur both inside and outside. The SR 503 and I-205 corridors have impacted growth, evident by linear, historical growth trends which center on these corridors.

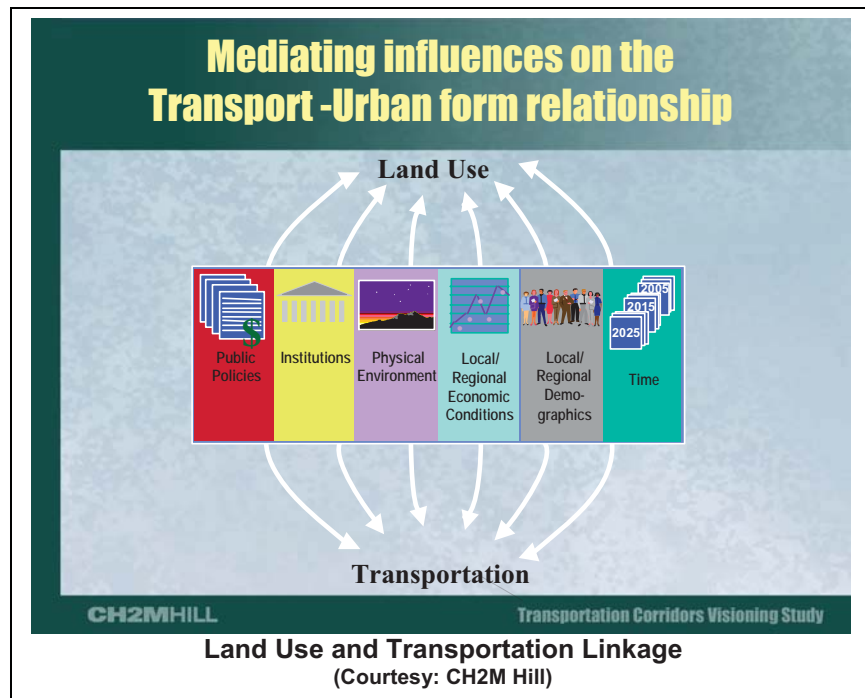


The pattern of population growth is a dimension of the bi-state area and the historical interaction between the two state's land use policies. Development is influenced by changes in accessibility. While there are other influences and decisions that impact growth patterns, these are often very difficult to predict and measure. Public policy and public investment both play a crucial role in the structure of urban form. Transportation moves things around in the region, impacting the redistribution of activities and land values but is not necessarily the only catalyst for growth.

The growth patterns in Clark County have historically been upward (mostly in centers such as downtown Vancouver) and outward (expanding UGAs). The balance between where that growth will occur is based upon a combination of personal preferences and policies. Growth form is based on the interaction between the market, infrastructure, and policies.

Factors directly influencing land use form in Clark County include:

- Clark County policies on land use, urban growth boundaries, and development form
- Land use policies and urban growth boundaries in the Portland metropolitan area
- Topography and environmentally sensitive lands
- Proximity to employment and commercial centers, such as downtown Vancouver, the Vancouver Mall area, Columbia Tech Center, or Fishers Landing.
- The land use market
- Access to major transportation facilities



The rural areas in Clark County are highly parcelized compared to other areas in the Pacific northwest. A high level of parcelization makes it more difficult for any one developer to package land for new urban and suburban centers. Thus, the Visioning land use scenario would not few, if any, large, new centers (similar to Columbia Tech Center in scale and scope) but would instead show continuation of the past development trends, with urban-style land uses being spread around the county, and expansion of existing rural centers.

The value of available land, job creation, tax structure all play a role in the location, and attraction of certain areas for specific types of developments. Tax structure similarly plays a large role in terms of what types of industries are attracted to an area, and where they will be located.

Policies that encourage higher densities have not traditionally moved forward on a large scale in Clark County. There are some current high-density centers, such as downtown Vancouver and Vancouver Mall, and developing centers such as Fishers Landing and downtown Washougal, but Clark County in general seems to have a hard time engaging in this density discussion, and moving these types of policies forward.

There are recent examples of where local governments have made policy decisions to rezone industrial land to commercial and high residential density that will likely have an impact on growth patterns and growth rates. Sustainability policies and the state and local levels will also affect growth patterns.

A new crossing of the Columbia River will likely have land use implications on both sides of the river. However, since all of the candidate crossing locations connect on both the Washington side and the Oregon side to mostly-developed areas, and that the corridors being considered are not Interstate freeway-type corridors but rather regional arterial-like corridors, it is unlikely a large-scale change in the land use form will occur. However, there will likely be localized, node-like changes in land use along the corridor, particularly around centers designated for high transit use.

## **Corridor Preservation Strategies**

### ***History of Corridor Preservation in Clark County***

There are several corridors that were established and preserved well in advance of their construction. The most recent examples are the Padden Parkway and SE 192<sup>nd</sup> Avenue. The Padden Parkway was completely built and open to traffic in 2003. It was first established as a corridor in the 1950s and over the next 20 years, right-of-way was acquired and set aside for its eventual construction. Other corridors that were originally preserved for years in advance of their construction include the I-5 and I-205 corridors, SE 192<sup>nd</sup> Avenue, and subregional corridors such as SE 136<sup>th</sup> Avenue.

Appendix G gives more detail regarding the corridor preservation strategies and assessment.

#### **Padden Parkway**

Corridor preservation for the Padden Parkway started in the 1950s, from Highway 99 eastward to Ward Road. Right-of-way for the corridor was gained through a combination of developer exactions and dedications, county advanced right-of-way purchases, and right-of-way acquired during the corridor's construction (which occurred in phases over a 15-year period). Financing included using the county's designated road funds, traffic impact fees, developer ROW contributions, and state and federal funding. The county sold off the western "third" as corridor west of St. Johns was abandoned in the early 1970s.

#### **192nd Avenue**

The SE 192<sup>nd</sup> Avenue corridor was established during the late 1980s and early 1990s. An environmental study set the alignment and as an outcome, the county commissioners adopted an ordinance setting the centerline alignment and width of the corridor. Right-of-way for the corridor was gained through developer dedications, county ROW purchases, and project ROW acquisition. Financing was through use of county and City of Vancouver road funds, traffic impact fees, state / federal funds, and developer ROW contributions.

### ***Corridor Preservation Options***

During the course of this Study, the consultant team examined not only the historical corridor preservation methods in Clark County, but also looked at several case studies around the United States. Case studies were examined in Florida, Delaware, California, Wisconsin, South Dakota, Illinois, and Oregon.

The most promising corridor preservation options for Clark County agencies desiring to preserve future, regional corridors includes: development exactions or dedications, access management and setback requirements, willing-seller purchase of ROW over time, and land banking or land swaps. There are two

ways federal funds can be used for corridor preservation without having an imminent improvement project: project purchases after a tiered Environmental review (NEPA), or ROW purchases due to hardship, either caused by an inability to sell property due to a corridor alignment being shown on an adopted plan, or the financial hardship of the property owner; or imminent development, which is when a pending development proposal runs a high risk of preempting a corridor from happening due to buildings that may preclude corridor construction.

### ***Potential Issues***

Developer exactions / dedications are becoming legally more difficult without development nexus. Federal funding requires NEPA approval to establish a corridor (and may require local agency ordinance). Designating a corridor as a new state highway corridor requires Washington legislative action. Federal funding available is for “hardship” or “imminent development” cases as described above.

## **Visioning Study Recommendations and Next Steps**

The key findings and conclusions from the Corridor Visioning Study analysis resulted in a final, recommended set of candidate corridors that is shown in Exhibit 8. These are the corridors recommended by the Steering Committee for further consideration in future phases of the Corridor Visioning process. The Steering Committee requested that this map be accompanied by a clear understanding of what the desired objectives and resulting outcomes Phase I of the Visioning Study represent.

This map of recommended candidate corridors is the culmination of the first phase of what may be a multi-phase effort to identify one or more regional corridors that would be added to the Metropolitan Transportation Plan and local Comprehensive Plans. The map represents a set of potential corridors that require further study and analysis. In order to eventually add one or more of these corridors to the Metropolitan Transportation Plan and local Comprehensive Plans, a process will need to be established to guide narrowing and eventual selection of the corridor(s) for adoption. This map should not be mistaken for an adopted plan or alignment of any of these corridors, and until one or more corridors are adopted, right-of-way cannot be preserved for future corridor construction.

The next phase of the Visioning Process should include a review of the impacts of these candidate corridors on future land use patterns within Clark County, and in Oregon with the potential new crossings of the Columbia River. The land use assessment should also include a visioning process of its own to identify desired policies to encourage land use patterns and densities supportive of multimodal corridors. These discussions should also address one of the key conclusions from Phase I, which identified several subregional corridors that would be needed to provide subregional trip mobility and connections to the regional system.

The next phases should also continue and enhance the Bi-state discussion about a new Columbia River crossing. Each crossing option would likely carry with it land use implications on both sides of the Columbia River, as well as needing to identify where multimodal (and, for freight, intermodal) connections can be made in Oregon.

Further study is also needed with regard to existing regional corridors and what improvements they may need in the future, even with one or more new regional corridors being added to the MTP. Additionally, further effort is needed regarding potentially improving the existing major creek and river crossings, all of which were identified in the travel demand model as being over capacity in the Visioning scenario. These included crossings over the East Fork of the Lewis River, Salmon Creek, Lacamas Creek, and Burnt Bridge Creek.



Exhibit 8. Vision Plan Candidate New Regional Corridors Map

