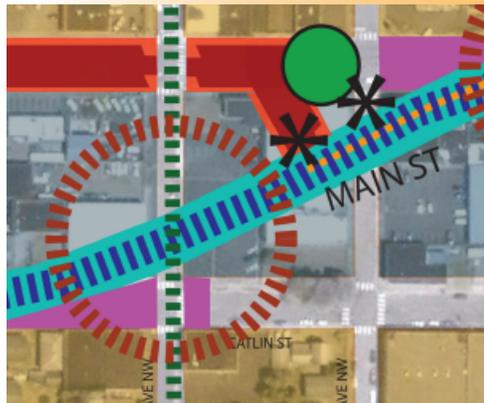


# WEST MAIN STREET REALIGNMENT CORRIDOR

Kelso, Washington

## Volume 1: Conceptual Design Report



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## **Acknowledgements**

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### **Ecological Land Services**

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### **Heritage Research Associates, Inc.**

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### **Universal Field Services**

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## Executive Summary

The West Main Street Realignment project will realign West Main Street between the Allen Street Bridge and Ocean Beach Highway. Goals for the project include stimulating community revitalization in the West Kelso area, reducing congestion between Kelso and Longview in West Kelso, and improving safety and mobility for vehicles, trucks, bicyclists, and pedestrians.

The Conceptual Design Report developed for this project illustrates roadway improvements, access management strategies, community redevelopment and urban design concepts, stormwater management strategies, and improvements phasing options as a starting point for engineering design. This report serves to document the process that established the Preferred Alignment and establishes the design approach for moving ahead to preliminary engineering design.

Elements contributing to the Conceptual Design Report were developed with review and input from City staff, the Stakeholders and Technical Advisory Committee (STAC), public outreach, and City Council. City of Kelso, WSDOT, and Cowlitz-Wahkiakum Council of Governments (CWCOG) staff provided technical oversight and evaluation addressing design standards, environmental permitting, the City's comprehensive plan, land use data, and traffic data. H.W. Lochner provided technical oversight and evaluation addressing project funding strategies and right-of-way acquisition. Based on work completed by Otak, DKS Associates, Ecological Land Services, and Universal Field Services, City staff provided additional input on environmental impacts, water quality treatment and detention requirements, traffic analysis, conceptual access management, land use and community redevelopment, urban design, existing utilities, and construction costs.

The preferred alignment presented herein for the West Main Street Realignment was developed through an alternatives analysis and public involvement program which focused on balancing design criteria, right-of-way impacts, local circulation, safety, and potential community redevelopment opportunities.

The planning, analysis, and policy background for the West Main Street Realignment Conceptual Design Report included the following milestones:

- July 2009:
  - Chartering Meeting held to kick-off the project including staff from City of Kelso, WSDOT, CWCOG, City of Longview, Cowlitz County, and other key stakeholders.
- August 2009:
  - Stakeholders and Technical Advisory Committee (STAC) was formed.
  - Environmental Kickoff Meeting held with WSDOT staff.
- September 2009:
  - Project opportunities and constraints memoranda were prepared in the disciplines of environmental, right-of-way, and stormwater management for the study area.
  - STAC Meeting No. 1 was held.
  - Utility coordination meeting was held.

- October 2009:
  - Traffic analysis were performed and three draft technical memoranda were prepared to document existing conditions, the design year 2030 “no action” conditions, and the 2030 alternatives forecasts.
  - Alternative alignments 1, 2, and 3 were developed including cost estimates and presented to the STAC and the public.
  - STAC Meeting No. 2 was held.
  - Public Open House #1 was held.
- November 2009:
  - Presentation to City Council summarizing alternatives, costs, and public involvement to date.
  - Meeting with WSDOT to review traffic analysis.
  - Preparation of alternative alignments 1A, 2A, and 3A including cost estimates.
  - Preparation of additional street improvements on 1<sup>st</sup> Avenue associated with traffic findings.
- December 2009:
  - Work session with City staff and design team to evaluate alternatives alignments.
  - STAC Meeting No. 3 was held.
- January 2010:
  - Presentation at City Council Workshop to detail evaluation process and scoring.
- February 2010:
  - Presentation at City Council Workshop to present funding options and project details.
  - Public Open House #2 was held.
- March 2, 2010: City Council Meeting – Adoption of Preferred Alignment.

### *Alternatives Analysis*

Six alternative alignments were developed for the corridor balancing design criteria, right-of-way impacts, local circulation, safety, and community redevelopment strategies.

Alternative 1 (West) transitions between 5<sup>th</sup> Avenue and 6<sup>th</sup> Avenue to connect West Main Street to Catlin Street. Alternative 2 (Central) transitions between 3<sup>rd</sup> Avenue and 4<sup>th</sup> Avenue to align West Main Street with Catlin Street. Alternative 3 (East) aligns West Main Street with Catlin Street with a transition between 2<sup>nd</sup> and 3<sup>rd</sup> Avenues. All three alignments hold the south right-of-way line along Catlin Street and impact commercial properties on the north side of Catlin Street.

Alternatives 1A, 2A, and 3A align West Main with Catlin Street along the same alignments as their corresponding Alternatives 1, 2, and 3 with the exception of the widening along Catlin Street is achieved by holding the north right-of-way line and widening to the south, which impacts residential properties on the south side of Catlin Street.

Cost estimates were developed for all six alternatives and range from \$12,250,000 to \$15,700,000.

The design team developed evaluation selection criteria for screening the alternatives which include:

- Safe Access Points.
- Preservation of Current Traffic Volume through Existing Main Street Corridor.
- Bicycle/Pedestrian Safety and Circulation.
- Redevelopment Potential.
- Promotes/Allows Parallel Traffic Circulation.
- Alignment of Major Intersections (1<sup>st</sup>, 3<sup>rd</sup>, 5<sup>th</sup>, Cowlitz Way).
- Parking Impacts.
- Cost.
- Business Property Acquisition (Least).
- Residential Property Acquisition (Least).
- Schedule.

The design team met with City staff on December 1, 2009 to review and score the six alternatives. At that meeting, it was agreed that Alternative 3A scored the highest using the weighted scoring system developed for the evaluation. All six alternative alignments, the scoring process, and results were presented at the STAC meeting on December 9, 2009 and to City Council on January 19, 2010 and February 2, 2010.

#### *Public Outreach*

Public information and involvement is integral in the conceptual design process helping to ensure a community-supported plan consistent with the project's vision and objectives. A public involvement plan (PIP) was prepared and served to guide public involvement activities during the conceptual design process. Mechanisms used to communicate and inform the public about the project include:

- Information posted to the City website with notification when new information was posted via a City-maintained e-mail list.
- Stakeholder and Technical Advisory Committee (STAC) meetings.
- Public Meetings/Open Houses.
- Property owner one-on-one meetings.
- City Council Workshops/Hearings.

The STAC is comprised of representatives from City departments, local and regional planning partners, and service agencies. The STAC serves an advisory role on the project and reviewed project design opportunities and constraints. Three STAC meetings have been held occurring on September 23, 2009, October 29, 2009, and December 9, 2009. The overall feedback received to date from the STAC was a general concurrence with the project goals and methodology for weighting, ranking and scoring the alternatives.

Two public open houses have been held to date, October 29, 2009 and February 25, 2010. Both were well attended with over 50 people attending the first meeting and over 30 people attending the second meeting. The first open house introduced the project and preliminary corridor alternatives. The public had opportunities to provide feedback by speaking directly

with the project design team and City staff, or by filling out comment sheets provided at the meeting. Comments ranged from cost and funding availability to business impacts to land use concerns. At the second open house, attendees had the opportunity to learn more about the project status, view additional alternatives and cost information, and provide feedback.

See Appendix K for copies of meeting materials and minutes.

### *Preferred Alternative*

At the City Council meeting held on March 2, 2010 Council unanimously voting in favor of moving Alternative Alignment 3A ahead to preliminary design.

### *Schedule to Complete the West Main Street Realignment Project*

With completion of the Conceptual Design Report, the West Main Street Realignment project will move into the preliminary design phase. Anticipated project milestones are:

- Complete Preliminary Design – Fall 2010.
- Environmental Approvals – Spring 2011.
- Begin Right-of-Way Acquisition – Spring 2011.
- Final Design Phase 1 – Fall 2011.
- Begin Construction Phase 1 – Spring 2012.

## **Alternatives Analysis**

### *Introduction*

This section summarizes the alternatives analysis for the West Main Street Realignment project from the Allen Street Bridge west to the Cowlitz Way/Catlin Street/ Ocean Beach Highway intersection. The alternatives analysis process included development of design criteria, project constraints, alternative alignments, evaluation criteria, performance scoring, a summary of costs of the various alternatives, and a preferred alternative.

### *Design Criteria*

The design criteria were established based on the City of Kelso Engineering Design Manual (KEDM) and Roadway Classification Map, the WSDOT Local Agency Guidelines (LAG) Manual, and the WSDOT Design Manual (DM), along with input from City staff. The lane configurations are based on the results of the *2030 Alternatives Analysis West Main Street Realignment Study*, prepared by DKS Associates, dated April 2010. The criteria used for the alternatives analysis is as follows:

- Street Classification – Principal Arterial as identified on the City of Kelso Roadway Classification Map which corresponds to a Major Arterial in the KEDM.
- Design Speed – 30 mph.
- Centerline Minimum Curve Radius – 333 ft.
- Left-Turn Storage Lengths – See *2030 Alternatives Analysis West Main Street Realignment Study*, prepared by DKS Associates, dated April 2010. See Appendix E.

- Typical Sections –The KEDM shows a four-lane typical section with bike lanes for major arterial streets. Per KEDM Section 3.03 and Figure 3-2, additional pavement width may be required to allow a center turn lane/median and parking if determined necessary by the City Engineer. The design team developed a typical section for West Main Street based on a 96-ft right-of-way which includes 4 travel lanes, a center turn lane, an 8-ft parking lane on both sides, and 12-ft sidewalks. Four additional typical sections were developed to eliminate parking, add bike lanes, or narrow proposed sidewalk widths as necessary to fit a particular alternative scenario. See Appendix A.

The following table summarizes side and intersecting street geometric data used for design. Right-of-way widths are existing and based on available GIS information (only existing street rights-of-way in place at the time of this report are shown).

Side Street Name	Classification/Right-of-Way Width	Existing Street Width	Existing Curb Return Radii
1 <sup>st</sup> Avenue (SR 411)	Minor Arterial/60 ft	40 ft to 58 ft (typical 45 ft)	10 ft to 35 ft
2 <sup>nd</sup> Avenue	Public Road(Local Access)/50 ft	36 ft N. of Main, 30 ft S. of Main	5 ft to 10 ft
3 <sup>rd</sup> Avenue	Public Road(Local Access)/50 ft	30 ft	10 ft
4 <sup>th</sup> Avenue	Public Road(Local Access)/60 ft	40 ft	10 ft
5 <sup>th</sup> Avenue	Public Road(Local Access)/60 ft	40 ft	10 ft
6 <sup>th</sup> Avenue	Public Road(Local Access)/50 ft	30 ft	5 ft to 10 ft
7 <sup>th</sup> Avenue	Major Collector/50 ft	30 ft N. of Catlin, 34-36 ft S. of Catlin	
Catlin Street	Public Road(Local Access)/60 ft	40 ft	10 ft (typical)
Cowlitz Way	Principal Arterial/approx. 100 ft	80 ft (at Catlin)	13 ft and 25 ft (E. at Catlin)
Washington Way	Principal Arterial/100 ft	78 ft (at Catlin)	-
Ocean Beach Highway (SR 4)	Principal Arterial/ 100 ft	77 ft (at Cowlitz)	15 ft and 190 ft (W. at Cowlitz)

### *Anticipated Deviations*

The following potential deviations have been identified during the alternatives analysis process. As preliminary design progresses, the need for a deviation may be eliminated or others may be identified. All deviations will be reviewed and approved by WSDOT Local Programs and/or City of Kelso staff.

- Design Speed - The KEDM calls for a 35 mph design speed on major arterial streets, alternative alignments were designed to 30 mph. This lower design speed is due to the curvature necessary to align West Main Street with Catlin Street as well as the urban/business district nature of the area. The LAG Manual design standards refer to *AASHTO's A Policy on Geometric Design of Highways and Streets* for design speed which states "Urban arterial streets should be designed and control devices regulated, where practical, to permit running speeds of 20 to 45 mph. Speeds in the lower portion of this range are applicable to local and collector streets through residential areas and to arterial streets through more crowded business areas, while the speeds in the higher portion of the range apply to higher-type arterials in outlying suburban areas."
- Curb Return Radii - The KEDM calls for 25 ft curb return radii at all intersections with major arterials. To avoid building impacts we may consider tightening radii while ensuring design vehicles can negotiate turns.
- Offset Intersections - The WSDOT DM does not allow lane offsets at intersections. The intersection of Catlin Street, Cowlitz Way, and Ocean Beach Highway (SR 4) includes a 6-ft offset in the east-west direction. The existing condition is improved from a 27-ft offset.
- Skewed Intersections - The WSDOT DM allows a minimum 60 degree angle at existing intersections that are to remain. The intersection of Catlin Street, Cowlitz Way, and Ocean Beach Highway (SR 4) includes a 47 degree centerline intersection angle. This existing condition will be maintained.
- Taper Rates - WSDOT DM Exhibit 1310-14a calls for a 30:1 taper rate for a posted speed of 30 mph. Per Note 5, Figure 1310-14a, modified taper rates of 15:1 may be necessary to avoid significant impacts. Also see DM Exhibit 1310-14c.
- Left Turn Lane Lengths - WSDOT DM Exhibit 1310-14a shows a 50 ft length in addition to the required storage length before beginning the taper on a left turn lane. This additional 50 ft may be eliminated to avoid significant impacts.

### *Project Constraints*

Alignment constraints were identified prior to commencement of the alternatives analysis based on project opportunities and constraints memoranda prepared in the disciplines of environmental, right-of-way, and stormwater management, as well as field observations and discussions with City staff. Major constraints include:

- Existing curb location on the south side of the Allen Street bridge.

- Potentially historic buildings on the south side of West Main Street between 1<sup>st</sup> and 2<sup>nd</sup> Avenues, potentially historic homes on the south side of Catlin Street between 6<sup>th</sup> and 7<sup>th</sup> Avenues, and a potentially historic home on the northeast corner of 4<sup>th</sup> Avenue and Catlin Street.
- New building constructed at the northwest corner of 2<sup>nd</sup> Avenue and West Main Street.
- Existing curb locations on Ocean Beach Highway.

### *Alternative Alignment Descriptions*

Two prior transportation studies have been performed for this study area, the *SR 4/SR 411 Urban Area Congestion Management Plan* by the Transpo Group dated November 2000 and the *Review of the SR 4/SR 411 Urban Area Congestion Management Plan* by DKS Associated dated May 2008. Alternative 1 (West) is generally based on the preferred realignment presented in the Transpo Group study. Alternative 2 (Central) is based on Alternative #2 from the DKS study. Both alignment Alternatives 1 (West) and 2 (Central) were refined based on the identified design criteria for the current alternatives analysis. Alternative 3 (East) was developed based on input from City staff.

Alternatives 1A (West/South), 2A (Central/South), and 3A (East/South) were developed from dialog with Kelso City Council. City staff and Council recognized inherent safety challenges with introducing a 5-lane arterial into the Catlin corridor as it pertained to the number of driveways and proximity of homes to the right-of-way. Also, much of West Kelso is zoned Commercial, and the new road will form a divider. A comparative plan was prepared showing how shifting the alignment to the south along Catlin Street would impact residential properties and the alignment of Catlin Street at the intersection of Cowlitz Way and Ocean Beach Highway (SR 4).

The alternatives analysis assumes roadway closures and access management measures to ensure capacity along the corridor. The following assumptions were made for all alternatives:

- 7<sup>th</sup> Avenue restricted to right-in/right-out access along Catlin Street.
- 2<sup>nd</sup> Avenue restricted to right-in/right-out access along Main Street.
- Bike lanes if parallel parking occurs on the new road.
- Main Street closed at Cowlitz Way in the future (likely to remain open or right-in/right-out for this project).

Alternatives 1, 1A, 2, 2A, 3, and 3A as well as conceptual street cross sections are shown in Appendix A.

*Alternative 1 (West):* This alternative preserves much of the existing West Main Street alignment providing the transition to Catlin Street between 5<sup>th</sup> Avenue and 6<sup>th</sup> Avenue. West Main Street would be closed at the west side of 5<sup>th</sup> Avenue to motor vehicles to prevent a five leg intersection. Access to businesses west of 5<sup>th</sup> Avenue on Main Street would be accomplished via 6<sup>th</sup> Avenue. The existing traffic signal at 5<sup>th</sup> Avenue and Main Street would remain and a new traffic signal would be added at 3<sup>rd</sup> Avenue. On-street parking is

prohibited and sidewalk widths are narrowed to 6-feet along West Main between 1<sup>st</sup> Avenue and 4<sup>th</sup> Avenue to avoid significant impacts to right-of-way and buildings.

*Alternative 2 (Central):* This alternative aligns West Main Street with Catlin Street between 3<sup>rd</sup> Avenue and 4<sup>th</sup> Avenue. A right-in/right-out access from the realignment just west of the 3<sup>rd</sup> Avenue intersection would provide access to the existing West Main Street. The existing 5<sup>th</sup> Avenue/West Main traffic signal would be removed and replaced with stop-control. New traffic signals would be added at the 3<sup>rd</sup> Avenue/Main Street and 5<sup>th</sup> Avenue/Catlin Street intersections. A tee intersection is created at 4<sup>th</sup> Avenue, closing the north leg, to encourage use of signalized intersections at 3<sup>rd</sup> Avenue and 5<sup>th</sup> Avenue. On-street parking is eliminated and sidewalk width is reduced to six feet between 1<sup>st</sup> Avenue and 3<sup>rd</sup> Avenue to reduce right-of-way and building impacts.

*Alternative 3 (East):* This alternative transitions between 2<sup>nd</sup> Avenue and 3<sup>rd</sup> Avenue to align West Main Street with Catlin Street. A right-in/right-out access from the realignment just west of the 2<sup>nd</sup> Avenue intersection would provide access to the existing West Main Street. New traffic signals would be added at the 5<sup>th</sup> Avenue/ Catlin Street and 3<sup>rd</sup> Avenue/West Main Street intersections. The existing signal at 5<sup>th</sup> Avenue and West Main Street would be replaced with stop-control. This alignment begins the transition curvature within 100 feet of the 1<sup>st</sup> Avenue intersection. On-street parking is prohibited and sidewalk widths are narrowed to 6-feet between 1<sup>st</sup> Avenue and 2<sup>nd</sup> Avenue to reduce right-of-way and building impacts.

*Alternative 1A (West/South), Alternative 2A (Central/South), Alternative 3A (East/South):* These three alternatives align West Main to Catlin Street along the same alignment as their corresponding Alternatives 1, 2, and 3 with the exception of the widening along Catlin Street is achieved by holding the north right-of-way line and widening to the south, which reduces impacts on commercial properties but requires full acquisitions of multiple residences. Shifting the alignment to the south on Catlin Street also allows a better alignment at the Cowlitz Way/Catlin Street/Ocean Beach Highway intersection (removes the reverse curve that is necessary in Alternatives 1, 2, and 3).

It was identified in the 2030 *Alternatives Analysis West Main Street Realignment Study*, dated April 2010 and prepared by DKS Associates, that double left turn lanes eastbound and westbound are required at both the 1<sup>st</sup> Avenue (SR 411)/West Main Street and Cowlitz Way/Catlin Street/Ocean Beach Highway (SR 4) intersections to meet Level of Service (LOS) requirements. The added lanes require restriping the existing pavement on Ocean Beach Highway (SR 4) and widening 1<sup>st</sup> Avenue (SR 411) to accommodate two northbound receiving lanes. In addition, it was considered to provide a left turn movement from northbound 1<sup>st</sup> Avenue to westbound West Main Street (currently this movement is prohibited). Traffic modeling shows to provide a northbound left turn lane on 1<sup>st</sup> Avenue also requires a southbound right turn lane. While neither the northbound left nor the southbound right turn lanes are required in terms of meeting LOS standards, they do allow better circulation patterns for vehicles wishing to travel to West Main Street if access is not available easily via Catlin Street. All alignment alternatives include the above described

improvements to 1<sup>st</sup> Avenue and Ocean Beach Highway. It will be determined during later design stages whether to proceed with inclusion of this left turn movement.

### *Summary of Evaluation Criteria*

Eleven evaluation categories were developed and each assigned a weight (1-10), 10 being the most important based on the City's goals for the project. The following is a description of each evaluation category.

*Safe Access Points (weight = 10)* – Relative safety based on frequency and orientation of access points; ability to properly manage access, number of driveway and side street access points, skewed intersections, poor sight distance, etc. Less access points equates to higher safety.

*Preservation of Current Traffic Volume through Existing Main Street Corridor (weight = 10)* – This element values existing traffic volume as important to preserving business activity. The higher scoring alignments allow for the most traffic volume to access existing Main Street.

*Bicycle/Pedestrian Safety and Circulation (weight = 10)* – This category evaluates the ability of the project to provide for the safest environment for non-motorized users of the corridor. Evaluation of this element assumes that no immediate improvements occur off-corridor to enhance bicycle routes other than possible added direction signage.

*Redevelopment Potential (weight = 8)* – Evaluates which alternative presents potential for future redevelopment consistent with City goals in the area. This can apply to the remnant parcels of land remaining from the new realignment, or on existing land adjacent to the realignment. Evaluation of this element assumes that portions of the project area will redevelop over time as land values increase and properties turn over.

*Promotes/ Allows Parallel Traffic Circulation (weight = 8)* – This element evaluates the ability of vehicles such as delivery trucks and customers to have alternative access to businesses. This element values local traffic (as opposed to through traffic) easily being able to make local trips in the district.

*Alignment of Major Intersections – 1<sup>st</sup>, 3<sup>rd</sup>, 5<sup>th</sup>, Cowlitx Way (weight = 8)* – This element evaluates how major intersections function. Are intersections skewed causing challenging pedestrian crossings? Is sight distance more favorable under any particular scenario?

*Parking Impacts (weight = 8)* – This element evaluates which alternative has the least overall need to remove public parking.

*Cost (weight = 8)* – This category values which alternative costs the least, including construction and right-of-way costs.

*Business Property Acquisition (weight = 6)* – Which alternative has the least overall need to acquire land and buildings from existing commercial/business properties?

*Residential Property Acquisition (weight = 6)* – Which alternative has the least overall need to acquire land and buildings from existing residential properties?

*Schedule (weight = 3)* – This element evaluates which alternative will likely require the longest time to complete design, permitting, and construction. This category evaluates risks associated with the project affecting schedule and therefore costs, such as impacts requiring elevation of the NEPA documentation from a Documented Categorical Exclusion to an Environmental Assessment; more difficult phasing; more land acquisition that requires more time, etc.

#### *Evaluation Process and Performance Scoring*

A panel made up of City staff and members of the design team participated in a half-day work session on December 1, 2009 to discuss the evaluation criteria and weighting and to score the alternatives. A maximum of six points could be awarded for the most favorable and a minimum of one point for the least favorable in each category. For any particular category the maximum or the minimum did not have to be awarded to any particular alternative and there could be ties. For example, if several alternatives provided equal benefit, they could receive the same value. The total score per alternative was calculated by multiplying the weight by the score and then summing the scores for a total weighted score per alternative.

The evaluation panel discussed advantages and disadvantages of the six alternatives and ranked each of them in the 11 evaluation categories. Some of the criteria lend themselves well to measurement and others are more subjective. The categories were typically discussed until consensus was reached on each. Weighted scoring results of the city staff and design team workshop are as follows:

1. Alternative 3A – Score of 353
2. Alternative 3 – Score of 340
3. Alternative 2 – Score of 319
4. Alternative 2A – Score of 302
5. Alternative 1 – Score of 278
6. Alternative 1A – Score of 247

See Appendix A for a copy of the worksheet used for evaluating the alternatives and minutes from the December 1, 2009 work session.

#### *Preferred Alternative*

The alternatives were reviewed at discussions with City staff, the public, the STAC, and City Council. City Council approved the design team moving ahead to preliminary design with Alternative 3A by unanimous vote at the March 2, 2010 Council meeting.

The objectives of the West Main Street realignment design include increasing safety for all modes of transportation including bicycles and pedestrians, reducing congestion between Kelso and Longview, and stimulating community revitalization. Alternative 3A aligns the

improvements on Catlin so that widening occurs to the south side of the street. While this alignment has a significant impact on existing residential properties, it provides enhanced safety for the future major arterial roadway by eliminating driveways and aligning the intersection of Cowlitz Way/Ocean Beach Highway/Catlin Street which is currently offset 27 feet. The new roadway will provide bike lanes and sidewalks for its length and creates an opportunity for future City projects to make improvements along existing West Main Street by making the transition from West Main to Catlin at the east end of the district.

### *Next Steps*

The alignment for the preferred alternative will be further refined as the preliminary design process continues. The proposed street section will be revised to remove on-street parking at the request of City Council. This corresponds to the City's standard major arterial street section and reduces the overall footprint of the road. Other revisions will be made to the preferred alignment to minimize impacts to property and further increase safety where possible.

### **Cost Estimates**

A concept level comparative budget summary was prepared for the six alternatives (1, 2, 3, 1A, 2A, and 3A). This summary includes design, construction and right-of-way/land acquisition costs for each alternative alignment's mainline. Also included are design, construction and right-of-way/land acquisition costs for improvements to 1<sup>st</sup> Avenue and Ocean Beach Highway. The following are budget ranges for each alternative:

- Alternative 1 (West) - \$12.3 million to \$13.5 million
- Alternative 2 (Central) - \$12.3 million to \$13.5 million
- Alternative 3 (East) - \$13 million to \$14.2 million
- Alternative 1A (West/South) - \$12.8 million to \$14 million
- Alternative 2A (Central/South) - \$13.3 million to \$14.5 million
- Alternative 3A (East/South) - \$14.5 million to \$15.7 million

The concept level comparative budget summary and comparative cost estimates for each alternative are included in Appendix B.

*Construction Costs* – Construction costs were calculated based on unit square footage assumptions for major construction items associated with the project. Major items include sidewalk, curb and gutter, asphalt concrete pavement and base rock, excavation, storm drainage, street lighting, landscaping, signing, and striping, traffic control, and erosion control. All alternatives include an allowance for traffic signals, building demolition, lot restoration and stormwater management facilities based on the recommendations noted in the *West Main Street Realignment – Kelso, WA Stormwater Opportunities and Constraints Memorandum*, dated October 6, 2009 (see Appendix D). The cost estimate is based on 2009 costs and is approximate; therefore, a 30% contingency has been included for unforeseen construction conditions and escalation.

*Engineering/Design Costs* – Estimates for preliminary engineering (25% of total construction costs) and construction engineering (15% of total construction costs) are included.

*Right-of-Way Costs* – Right-of-way costs are calculated based on land acquisition and relocation costs. Land acquisition costs were calculated using \$10 per square foot (based on a review of the County Assessor's data for this area) plus an estimate of compensation for damages for items such as loss of parking spaces, access, and landscape areas. In instances where acquisition included building impacts it was generally assumed the entire parcel would be acquired, otherwise strip takes were calculated. Business relocation costs were estimated based on the type of business. Please see the Right-of-Way section of this document for detailed information.

*Possible Project Enhancement Costs* – Costs were developed for urban design elements that may be considered for project enhancements. An overview of the different types of urban design elements that could be incorporated into this project were presented at the STAC meeting and Open House held on 10/29/09. More information is included in Appendix I). These urban design elements include:

- Parks and Plazas
- Lighting
- Street Furnishings
- Intersection Design Elements
- Intersections, Medians, Sidewalks
- Stormwater
- Gateway/Public Art
- Sidewalk Treatments

Budget ranges for these possible enhancements are shown on the Comparative Budget Summary, but are not included in the budget totals.

## **Utilities**

Franchise utilities known to have facilities within the corridor are:

- Qwest Communications
- Cowlitz PUD
- Comcast Cable Communications
- Cascade Natural Gas

Publicly owned utilities in the project corridor are:

- WSDOT (traffic signals)
- City of Kelso (water, sanitary sewer, storm sewer, street lighting)

A utility coordination meeting was held on September 24, 2009 to update utility representatives on the project's status and schedule, and gather input for the alternatives analysis. Minutes for this meeting can be found in Appendix C.

The following issues within the project study area were identified:

*Qwest*

- Main feeder line runs north-south on 5<sup>th</sup> Avenue.
- Most of their facilities are aerial on Qwest-owned poles; all poles are within the existing right-of-way.

*Cowlitz PUD*

- Main feeder (aerial) running north-south on the east side of 5<sup>th</sup> Avenue.
- Their poles are within the existing right-of-way with the exception of an underground service vault at the SE corner of 1<sup>st</sup> Avenue and Catlin Street which appears to be on private property and is likely in an easement. This vault may be affected depending on the extent of widening on 1<sup>st</sup> Avenue.

*Comcast Cable Communications*

- Most facilities are aerial and Comcast runs their lines on Cowlitz PUD-owned poles.
- It is believed that some underground services are located at 4<sup>th</sup> Avenue and West Main Street.

It was discussed at the utility kickoff meeting that Qwest, Cowlitz PUD, and Comcast consolidate their services on PUD-owned poles as much as possible to reduce the number of utility poles in the study area. It was agreed that service consolidation would be considered as the design progressed; however, representatives from all three utilities reported no plans to underground their utilities in this area due to budget constraints.

*Cascade Natural Gas*

- Cascade has 2-inch yellow plastic pipe lines throughout the project area at an average depth of 30-inches.
- All facilities are reportedly located within existing right-of-way and are in the existing street.
- Cascade Natural has a 12-inch high pressure line running north-south in 1<sup>st</sup> Avenue and east-west on the Allen Street Bridge. The line is approximately 4 to 5 ft deep and is located on the east side of 1<sup>st</sup> Avenue within the right-of-way.

*WSDOT*

- The only WSDOT owned utilities in the study area are associated with traffic signals.

*City of Kelso*

- Illumination at the traffic signals is maintained by WSDOT through an inter-agency agreement.
- Sanitary sewer lines have recently been rehabilitated in Catlin Street. Sanitary lines through the study area have the least cover near the west end of the study area and gets deeper towards 1<sup>st</sup> Avenue.
- Capacity is adequate for existing conditions on both sanitary sewer and storm systems.

- The intersection of 3<sup>rd</sup> Avenue and Catlin Street serves as a major junction of gravity and pressure sanitary sewer lines.

#### Future Projects

- The City does have plans for a sanitary sewer capacity project at the 3<sup>rd</sup> Avenue crossing with Main Street.
- The City has no waterline projects planned for the study area but plans to evaluate replacement of existing waterlines depending on the location of street reconstruction.

## Stormwater Management

The project is located in an urban area that is fully developed; therefore, the project site contains a high percentage of impervious surfaces. A stormwater opportunities and constraints memorandum was prepared for the study area to aid the conceptual design process and alternative analysis (see Appendix D).

Based on review of the regulatory standards, both local and state, and a preliminary downstream analysis of the existing conveyance system, the following conclusions were drawn for the design team's consideration during the alternatives analysis:

- Prioritize limiting the creation of more than 5,000 sf of new impervious surface; exceeding this threshold has impacts to the project including flow control and water treatment facilities.
- Evaluate the possibilities to create new pervious area and weigh those costs against those of traditional detention system (i.e. oversized pipes).
- Include allowances in budget level cost estimates for upsizing existing storm pipes within one block of the existing 4<sup>th</sup> Avenue trunkline.
- Include allowances in budget level cost estimates for incorporating LID measures to the "maximum extent feasible" per Ecology's Minimum Requirement #5.

After further analysis including traffic modeling and street geometry layout, it was determined that dual left turn lanes would be required for the design year 2030 on the west leg of the 1<sup>st</sup> Avenue/West Main Street intersection. To accommodate northbound turning movements 1<sup>st</sup> Avenue, north of West Main Street, would require widening for dual receiving lanes. Also, as a result of input from the STAC and City staff, the addition of a northbound left turn lane on 1<sup>st</sup> Avenue allowing left turns onto West Main from 1<sup>st</sup> Avenue (this movement is currently prohibited) was incorporated into the conceptual design. Traffic modeling showed that to add this northbound left turn lane a southbound right turn lane must also be added on the north leg of the intersection to allow for adequate green time. All of these improvements require widening 1<sup>st</sup> Avenue north and south of West Main Street adding new impervious surface to the project site. It is likely detention and water treatment facilities will be required as a result of the increased impervious surface, but the actual requirements will be determined during the preliminary design phase.

Members of the design team met with City staff to review the stormwater strategy and confirm our understanding of the requirements. Minutes for that meeting and e-mail

correspondence confirming concurrence with the conceptual design approach for stormwater management can be found in Appendix D.

## **Traffic Analysis**

The traffic analysis evaluated existing and future transportation conditions in the project area. The analysis focuses on the area generally bounded by Fishers Lane to the north, the intersection of Cowlitz Way (SR 4)/Ocean Beach Highway (SR 4)/Washington Way/Catlin Street to the west, the Cowlitz River to the east, Washington Street to the south and includes 17 key intersections. A complete description of the study area can be found in *the Existing Transportation Conditions – West Main Street Realignment Study* memorandum (Appendix E).

Three memoranda were prepared by DKS Associates to summarize the results of the traffic analysis; they include the following and can be read in their entirety in Appendix E.

### *Existing Transportation Conditions – West Main Street Realignment Study*

This document summarizes recent transportation system inventory and traffic operations analysis conducted for the study area. It includes a full description of the study area, existing pedestrian and bicycle network and facilities, public transit services, roadway functional classifications and roadway characteristics, speed survey data, existing traffic volumes, study intersection characteristics and operations, corridor traffic operations, collision data and analysis, freight movement, and parking.

### *2030 No Action Conditions – West Main Street Realignment Study*

This document establishes a baseline for future conditions in the year 2030 without improvements to the study area transportation system. It includes traffic volumes, operational analysis, and queuing analysis.

### *2030 Alternatives Analysis – West Main Street Realignment Study*

This memorandum presents the 2030 alternatives analysis and focuses on future operations of six roadway alignment and circulation alternatives from which a preferred alternative was selected. The first three alternatives were developed under a previous study and are presented as CWCOG Alternative 1, 3, and 4. The last three alternatives were developed under the current study and are presented as Kelso Alternative 1, 2, and 3; these are presented throughout the Conceptual Design Report as Alternative Alignments 1, 2, and 3. Because the only difference between these three alignments and Alternative Alignments 1A, 2A, and 3A are shifting the widening on Catlin Street to the south, traffic modeling was performed only for Alignment Alternatives 1, 2, and 3.

This document includes a summary of the West Main Street Realignment Study findings and presents details of the analysis including a description of the alternative roadway networks, the development of the future traffic volume forecasts, future preliminary alternative operations, and future preferred alternative operations.

The key findings of the 2030 preferred alternative analysis (evening peak hour) are summarized below:

- The majority of the through east-west traffic on the corridor would travel on the new roadway alignment. The 2030 traffic volume along Catlin Street would be approximately 2,200 trips in the evening peak hour (22,000 trips daily). The 2030 traffic volume along Main Street west of 2<sup>nd</sup> Avenue would be approximately 300 trips in the evening peak hour (3,000 trips daily) with moderate local redevelopment.
- The preferred alternative would improve overall traffic operations within the study area by providing a direct east-west arterial connection between the Allen Street Bridge and Ocean Beach Highway.
- Vehicle queues along Cowlitz Way between the Main Street and Ocean Beach Highway/Catlin Street traffic signals would be reduced by diverting east-west traffic from Main Street to the new roadway alignment on Catlin Street. The westbound left turning vehicle queues at Main Street/Cowlitz Way would relocate to the westbound through approach at Cowlitz Way/Ocean Beach Highway/Washington Way/Catlin Street. The existing high turn movement volumes on Cowlitz Way at Main Street and Ocean Beach Highway would be significantly reduced.
- A traffic signal would be installed at the Main Street/2<sup>nd</sup> Avenue “crossover” intersection to enhance local circulation. The traffic signal would allow eastbound traffic on Main Street to easily reach the Allen Street Bridge.
- The Cowlitz Way/Ocean Beach Highway/Washington Way/Catlin Street intersection would require the addition of a second eastbound and second westbound left turn lane. Two through lanes in the eastbound and westbound directions would be required. The proposed geometry would allow for eastbound and westbound protected signal phasing to replace the current split signal phasing.
- The 1<sup>st</sup> Avenue/Main Street intersection would require a second eastbound left turn lane. The addition of a second eastbound left turn lane would require the north leg of the intersection to be widened to provide two northbound receiving lanes. The double eastbound left turn lanes would be provided opposite the existing westbound double left turn lanes on the Allen Street Bridge.
- The traffic signal at the “crossover” intersection would be located relatively close (approximately 375 feet) to the existing 1<sup>st</sup> Avenue/Main Street traffic signal. The eastbound double left turn lanes on Main Street at 1<sup>st</sup> Avenue would need to provide a minimum of 200 feet of vehicle storage (each lane) and operate with appropriate traffic signal timing coordination to prevent significant operational issues.
- The southbound lanes at the 1<sup>st</sup> Avenue/Main Street intersection would be widened as part of the preferred alternative. Today, the westbound double left turn lanes on the Allen Street Bridge are not fully utilized because drivers avoid turning left to the narrow outside curb lane on 1<sup>st</sup> Avenue. The 1<sup>st</sup> Avenue southbound lane improvements would allow the westbound double left turn lanes on the Allen Street Bridge to operate with higher capacity and reduce vehicle queue impacts to the westbound through lane.
- All signalized intersections on the preferred alternative alignment would operate at an acceptable LOS D or better with the identified improvements in place.
- All signalized study intersections not located on the preferred alternative alignment would operate at an acceptable LOS D or better. An exception would be the Cowlitz Way/5<sup>th</sup> Avenue/Long Avenue intersection, which would operate at a LOS E without improvements. The intersection currently operates with Grant Street as the

fifth leg of the intersection. Grant Street is restricted to one-way eastbound travel east of 5<sup>th</sup> Avenue. The closure of Grant Street between 4<sup>th</sup> and 5<sup>th</sup> Avenue would allow the northbound approach to operate with an overlap traffic signal phase and would result in intersection operations that meet the performance standard.

- Unsignalized study intersections along the new roadway alignment would operate below standard. The minor street approach would have difficulty finding an acceptable gap onto the uncontrolled major street. This would result in a low volume of vehicles experiencing poor level of service and high vehicle delays. The roadway network within the study area provides a grid system, which would allow vehicles to avoid unsignalized approach delays.

## **Access Management**

Access management strategies can include medians, median openings, auxiliary lanes, channelization, and driveway design. An area which includes appropriate implementation of access management techniques can lower accident rates, relieve congestion which in turn lowers vehicle emissions, and can provide a safe environment for pedestrian and bicyclists.

DKS Associates has prepared an access management plan for the preferred alignment (see Appendix F). This document includes a summary of City of Kelso access management standards, and inventory of the existing intersections and driveways, and recommendations for the preferred alignment. The following summarizes these recommendations as part of Alternative 3A:

- Median locations along the preferred alignment to restrict movement to right-in/right-out on minor street approaches.
- Signalized and unsignalized intersections.
- The modification of one driveway to right-in/right out.
- Closure of 17 existing driveways.

## **Environmental**

The original assumption was that the West Main Street Realignment project would likely require the National Environmental Policy Act (NEPA) review level of Documented Categorical Exclusion (DCE). An environmental kick-off meeting was held with the project team and representatives from WSDOT and FHWA on August 24, 2009 (see Appendix G for meeting minutes) to determine the level of review required. An environmental opportunities and constraints memorandum was prepared for the study area to aid the conceptual design process and alternative analysis (see Appendix G).

Key concerns identified early in the conceptual design process were cultural/historic resources, noise, and environmental justice populations. Heritage Research Associates conducted a field visit of the study area and found several structures that may have NRHP significance. The preferred alignment does impact two of these properties; however, further investigation is necessary and a discipline report will be submitted with the ECS checklist.

Preliminary noise and environmental justice memoranda were also prepared and can be found in Appendix G.

A follow up meeting with Stacie Kelsey of WSDOT was held on January 29, 2010 to discuss the NEPA process and documentation, with specific discussion regarding potential Environmental Justice issues. See Appendix G for meeting minutes. Stacie indicated that the project should proceed at this time based on a DCE, which requires an Environmental Classification Summary (ECS) checklist. However, if circumstances are discovered during the study phase that indicate significant complications or impacts, a higher level of review could be required that includes submitting an Environmental Assessment.

A meeting was held on April 1, 2010 with WSDOT and FHWA. It was agreed that environmental justice and cultural/historic resources are key evaluation issues. The City's goals of safety, mobility, and economic revitalization need to be balanced. All impacts must be required ingredients to meet these goals. The team will move ahead with the historic evaluation immediately and prepare the Purpose and Need Statement for review. Determination of the level of documentation will be made as documents are submitted. See Appendix G for the meeting notes.

## **Community Redevelopment**

One of the stated goals for the West Main Street Realignment project is to stimulate community revitalization in West Kelso. Members of the design team met with City staff on November 12, 2009 (see Appendix H for meeting minutes) to discuss methods of evaluating opportunities for community redevelopment with respect to the concept alternatives and to coordinate with the City on their efforts for updating the City's Comprehensive Plan.

A community redevelopment opportunities and constraints memo was prepared for the West Main Street Realignment concept alternatives (see Appendix H). This document summarizes the existing conditions, including current zoning, land use, and urban character. It also presents a summary of the regulatory environment under which any redevelopment of this area would be governed.

The community redevelopment opportunities and constraints memo presents three redevelopment plans corresponding to conceptual alternative alignments 1, 2, and 3. Included are benefits and drawbacks for each plan. The design team presented these options at the January 19, 2010 City Council workshop and the February 25, 2010 Open House. (See Appendix K).

The City of Kelso is in the process of updating their Comprehensive Plan and a summary of the status is provided in Appendix H.

## Urban Design

The design team prepared a general urban design program for the preferred alignment by evaluating the goals and objectives for the West Main Street Corridor, preparing examples of urban design opportunities, presenting these opportunities to the public and City Council, and then tailoring a program to best balance project budget and the public and Council's preference.

Two memoranda were prepared (see Appendix I) detailing the process. The first memorandum includes a description of the following project goals and objectives:

- Placemaking and Revitalization
- Community Livability and Public Health
- Safety
- Sustainability and Maintainability

Also included are descriptions and graphics for various urban design opportunities including:

- Public Space Opportunities
- Pedestrian Opportunities
- Streetscape Opportunities
- Gateway and Wayfinding Opportunities

At the first project open house held on October 29, 2009, the public was given the chance to review, prioritize, and comment on these urban design elements. See Appendix K for a summary of public comments and copies of comment forms received. Based on this feedback, and feedback from City Council, the design team prepared an urban design program for the initial phase of improvements which is detailed in a memorandum dated March 19, 2010 (see Appendix I) and is summarized below.

### *Public Space Opportunities*

- Use remnant right-of-way triangles for pocket parks, storm facilities, and parking.

### *Pedestrian Opportunities*

- Provide continuous, through walking areas separated from traffic.
- Striped crosswalks, curb ramps, pedestrian actuated and countdown signals.
- Where possible strengthen pedestrian connections to neighborhood destinations.

### *Bicycle Opportunities*

- Bike lanes, signed and marked.
- Pavement marking to direct motorists and bicyclists to share lanes when bike lanes aren't available (side streets).

### *Streetscape Opportunities*

- Street trees in pavement cut outs and limited landscape planters.
- Standard concrete driveway approaches.

Also included in the urban design program is a summary of future urban design opportunities.

## Right-of-Way

The standard right-of-way width for a major arterial/principal arterial is 100 feet per City of Kelso Engineering Design Manual. The original existing right-of-way width for West Main Street is 80 feet. The original existing right-of-way width for Catlin Street is 60 feet. The conceptual street section for the proposed realignment utilizes a 96-ft right-of-way width which is widened at the west and east ends of the corridor to accommodate dual left turn lanes at the 1<sup>st</sup> Avenue/West Main Street intersection and the Catlin Street/Cowlitz Way/Ocean Beach Highway intersection. Right-of-way will need to be acquired along the majority of the alignment, including total property acquisition and building demolition.

The standard right-of-way width for a minor arterial per the Kelso Engineering Design Manual is 80 feet. The original existing right-of-way width for 1<sup>st</sup> Avenue is 60 feet. To accommodate widening on 1<sup>st</sup> Avenue, the right-of-way width will increase to as much as 82 feet. Right-of-way will need to be acquired along the east side of 1<sup>st</sup> Avenue.

It is anticipated that between 1<sup>st</sup> Avenue and 2<sup>nd</sup> Avenue, strip takes will be acquired along the north side impacting three parcels. Along the south side it assumed the parcel at the SE corner of the 2<sup>nd</sup> Avenue/West Main Street intersection will be a full acquisition and will include building demolition.

The city block bordered by West Main Street, Catlin Street, 2<sup>nd</sup> Avenue and 3<sup>rd</sup> Avenue will require the most extensive right-of-way acquisition. The conceptual plan shows the realignment will cross over from West Main Street to Catlin Street between 2<sup>nd</sup> Avenue and 3<sup>rd</sup> Avenue. For planning purposes it is assumed that all parcels within this block will be acquired and all buildings will be demolished.

Properties between 3<sup>rd</sup> Avenue and 4<sup>th</sup> Avenue both north and south of Catlin Street will require right-of-way acquisitions and building demolition.

Only properties on the south side of Catlin Street between 4<sup>th</sup> Avenue and 6<sup>th</sup> Avenue will acquire right-of-way acquisition, this includes demolition of residential structures and relocations.

Between 6<sup>th</sup> Avenue and 7<sup>th</sup> Avenue, four residences will be affected on the south side of the street and will require relocation. On the north side only small strip takes are required.

Three properties between 7<sup>th</sup> Avenue and Cowlitz Way are affected, one on the north side of Catlin Street and two on the south side. It is anticipated that two parcel acquisitions will require building demolition.

Along the east side of 1<sup>st</sup> Avenue, right-of-way acquisition will be required from 14 parcels; three buildings are affected.

In total, the conceptual right-of-way plan shows right-of-way will be acquired from 26 parcels for the realignment of West Main Street and 14 parcels for the widening of 1<sup>st</sup> Avenue. The extent of the impacts was based on horizontal layout only. The study area is

flat and urban and it is not anticipated that significant side slopes would be constructed along the alignment requiring additional easements.

The attached map titled *West Main Street Realignment Right-of-Way Map*, shows properties where right-of-way acquisition is anticipated and includes property details and estimated areas of acquisition in square feet. Right-of-way acquisition areas are approximate, based on the conceptual preferred alignment and City of Kelso GIS data and County Assessor's information.

Right-of-way acquisition costs were calculated for budget level cost estimates. Further refinement of the preferred alternative will determine actual right-of-way acquisition. Property appraisal and negotiations will determine actual right-of-way acquisition costs. Budget level right-of-way acquisition costs were determined based on \$10 per square foot plus applicable estimated damages. Additional costs for building demolition and lot restoration were calculated and added to construction costs.

The following table summarizes the estimated right-of-way acquisition costs per block for the preferred alignment:

	Description/Assumptions	Right-of-Way Costs	Relocation Costs	Total
Block 1 (between 1 <sup>st</sup> and 2 <sup>nd</sup> Avenues)	<ul style="list-style-type: none"> <li>•Strip takes north side</li> <li>•Acquire entire property at NW corner of block</li> </ul>	\$317,000	\$200,000	\$500,000
Block 2 (between 2 <sup>nd</sup> and 3 <sup>rd</sup> Avenues)	<ul style="list-style-type: none"> <li>•Acquire all properties within the block</li> </ul>	\$890,000	\$135,000	\$1,025,000
Block 3 (between 3 <sup>rd</sup> and 4 <sup>th</sup> Avenues)	<ul style="list-style-type: none"> <li>•Acquire entire property at SE corner of block</li> <li>•Strip takes north side of road</li> <li>•Acquisition of two residential properties and one commercial property on south side of the street</li> </ul>	\$652,100	\$120,000	\$772,000
Block 4 (between 4 <sup>th</sup> and 5 <sup>th</sup> Avenues)	<ul style="list-style-type: none"> <li>•Acquisition of two residential properties on south side of the street</li> </ul>	\$350,000	\$30,000	\$380,000
Block 5 (between 5 <sup>th</sup> and 6 <sup>th</sup> Avenues)	<ul style="list-style-type: none"> <li>•Acquisition of two residential properties on south side of the street</li> </ul>	\$350,000	\$30,000	\$380,000
Block 6 (between 6 <sup>th</sup> and 7 <sup>th</sup> Avenues)	<ul style="list-style-type: none"> <li>•Strip takes north side of road</li> <li>•Acquisition of three residential properties on south side of the street</li> </ul>	\$561,250	\$45,000	\$606,250
Block 7 (between 7 <sup>th</sup> Ave and Cowlitz Way)	<ul style="list-style-type: none"> <li>•Acquisition of car lot property</li> <li>•Acquisition of Office Max property</li> </ul>	\$1,600,000	\$200,000	\$1,800,000
<b>Preferred Alignment Subtotals</b>		<b>\$4,721,000</b>	<b>\$760,000</b>	<b>\$5,481,000</b>
North leg of 1 <sup>st</sup> Avenue Widening	<ul style="list-style-type: none"> <li>•Assumes all widening to the east, excludes City-owned property</li> <li>•Impacts two structures</li> </ul>	\$453,870		\$453,870
South leg of 1 <sup>st</sup> Avenue Widening	<ul style="list-style-type: none"> <li>•Assumes all widening to the east, excludes City-owned property</li> <li>•Impacts one small structure</li> </ul>	\$224,500		\$224,500
<b>1<sup>st</sup> Avenue Widening Subtotals</b>		<b>\$678,370</b>		<b>\$678,370</b>

A right-of-way opportunities and constraints memo was prepared early in the conceptual design process to aid the design team the alternatives analysis process, see Appendix J.

## Public Involvement

The following provides a summary of the public involvement activities conducted to-date for the West Main Street Realignment Project. Public information and involvement is integral to the conceptual design process, helping to ensure a community-supported plan consistent with the project's vision and objectives. The consultant team prepared a public involvement plan (PIP) that has been used to guide public involvement activities during the execution of the West Main Street Realignment Project (see Appendix K). The PIP outlines the mechanisms that have been used to communicate and inform the public with open houses, information provided on the City's website, Stakeholder/Technical Advisory Committee (STAC) meetings, property owner one-on-one meetings, and City Council workshops.

### *Open Houses*

The consultant team, in partnership with the City of Kelso, has held two open houses to date: October 29, 2009 and February 25, 2010. Both were held at Kelso City Hall. Prior to each open house, the City sent out a flyer inviting property owners, tenants and business owners in the project study area to attend. The open houses were also advertised in the local newspaper and on the project website ([www.publicworks.kelso.gov](http://www.publicworks.kelso.gov)).

At the October 29<sup>th</sup> open house, approximately 53 people attended, including the general public, City staff, STAC, and City Council members. The purpose of this open house was to introduce the project to the public and discuss the corridor improvements. The project team provided an overview of the following:

- Project Goals, Key Issues and Givens
- Three Realignment Alternatives
- Typical Cross-sections
- Urban Design Opportunities
- Traffic Data
- Project Schedule

The audience was invited to ask questions. Afterwards, the public took the opportunity to visit different information stations, review maps and diagrams, speak one-on-one with the consultant team, ask questions and provide input on the materials. The team received a total of nineteen comment forms. Below is a summary of the concerns and suggestions heard:

### *Concerns:*

- Cost and funding availability
- Method of compensation for acquisition of property
- Emergency service access
- Long term disruptions or uncertainties with phasing impacts
- Impacts to businesses – short and long term
- Land use – is the project consistent with long term land use/zoning objectives?

- The project will not completely resolve congestion resulting from left turns from OBH to Cowlitz Way (traffic heads north on Long Ave.)
- Business Access and parking concerns (on and off streets)
- The need to start construction soon and be completed in a timely manner

*Suggestions:*

- Consider the use of roundabouts
- Value function first, then address aesthetics
- Consider eliminating left turns from OBH to Cowlitz Way

At the February 25, 2010 open house, approximately 33 people attended. Attendees had the opportunity to learn more about the current status of the project, City Council's recent input, and view additional work that has been performed as a result of community and stakeholder input received. The public also had the opportunity to ask questions and provide additional input to the design team.

After the presentation and a "question and answer" session, attendees were invited to review the exhibits and talk with the project team and City staff. Exhibits on display included:

- Realignment Alternatives (1/1A, 2/A, and 3/3A)
- Redevelopment Analysis
- Traffic Projections and Levels of Service map

The project team also provided comment forms as another means for public input. One comment form was submitted at the open house, but a number of the forms were taken home by attendees for further consideration. Additional comments may be submitted via mail or dropped off at the Kelso office. Below is a summary of comments voiced at the open house:

- Cost and funding availability
- Long term disruptions or uncertainties with phasing
- Impacts to businesses (short and long term): do businesses have any recourse if they fail?
- Land use: is the project consistent with long term land use/zoning objectives?
- Concern with parking availability
- Was a "couplet" considered?
- Is this project really needed to resolve traffic issues?
- Concern with convenient access to businesses
- Has the City made a go/no-go decision?
- Great opportunity for West Kelso revitalization
- Focus on area as long term commercial land use
- Need connection from the crossover to Main Street
- Pedestrian safety is very important
- Waiting longer to implement will result in rising costs, making the project potentially more difficult to accomplish in the future

- Support moving ahead on planning and engineering, but hold on construction pending additional funding
- Pursue further analysis of Alternative 3A
- Remove street parking on realignment
- Consider right-in turn from Cowlitz to West Main (pursue this idea with WSDOT)

As the project moves forward into the design phase, the team anticipates additional open houses to inform the public of project design refinements. Please see Appendix K for open house flyers, summaries, comment forms, and sign-in sheets.

#### *Stakeholder/Technical Advisory Committee (STAC)*

The STAC is comprised of representatives from City departments, local and regional planning partners, and service agencies. The STAC has served an advisory role on the project and has been utilized to review project design opportunities and constraints. To date three STAC meetings have been held: September 23, October 29, and December 9, 2009.

Discussions at the STAC meetings were focused on the following key topics:

- Project Overview & Goals
- Decision Making Process and Public Involvement
- Background and Context
- Project “Givens”
- Key Issues
- Evaluation Criteria
- Alternative Alignments and Costs
- Schedule
- Traffic Circulation
- Urban Design Elements
- Scoring

The overall feedback received to date from the STAC was a general concurrence with the methodology for weighting, ranking and scoring the alternatives. The STAC decided that Alternative 3/3A balanced traffic needs with commercial district viability most effectively. Concern was noted regarding potential cost escalation from prolonged phasing. The project team anticipates additional STAC meetings as the Corridor Plan develops, which will provide the foundation for advancing to preliminary and final design. To see the STAC agendas, meeting minutes, handouts, and sign in sheets, please refer to Appendix K.

#### *Property Owner / Stakeholder One-on-Ones*

The City and consultant team have met with several property owners within the project area to discuss individual project objectives, issues, impacts, schedule and other relevant information. Some of these individuals also attended the open house events.

### *City Council Workshops*

The project team has held four workshops/meetings (November 3, 2009 and January 19, February 2, and March 2, 2010) with City Council to inform them of project developments and hear their feedback. The workshops have provided “check-in” opportunities and have allowed the elected officials to be aware of any specific constituent concerns. Below is the summary of questions and comments heard at the Council meetings:

#### *City Council – November 3, 2009*

The project team asked the Council the following key questions:

- How to preserve the existing commercial corridor?
- Location of “crossover”?
- Location of new right-of-way on Catlin (north or south side - magnitude of impact to residential or commercial properties)?
- Inclusion of street parking on realignment?
- Level of urban design investment?

The feedback provided by Council is summarized as follows:

- Need to maintain a through connection from the crossover to the remainder of Main Street (most important on Alternatives 2 and 3)
- Pedestrian safety is very important (discussion about bulb-outs, crossing treatments, driveways)
- If and when a signal might be required at 3<sup>rd</sup> Avenue and the realignment (pedestrian crossing safety and smoothing traffic progression)
- How will realignment alternatives affect the district and potential development in the long term? (focus on area as commercial land uses in the long term)
- What is driving the cost? (land acquisition)
- How is funding being pursued? (City staff is working with Lochner to assemble a funding strategy)
- If possible, would like to reduce the reverse curve approaching Cowlitz on Catlin (this would require homes to be acquired on the south side of Catlin between 6<sup>th</sup> and 7<sup>th</sup> Avenues.)

#### *City Council – January 19, 2010*

At this meeting, the results of the evaluation scoring were presented to the City Council along with the updated alternatives and cost estimates, potential redevelopment scenarios, and a summary of the public involvement efforts completed to date. Below are the evaluation scoring results (number of points calculated from the evaluation):

- Alternative 3A - 353
- Alternative 3 - 340
- Alternative 2A - 302
- Alternative 2 – 319

- Alternative 1A - 247
- Alternative 1 - 278

*City Council Feedback:*

- Great opportunity for West Kelso district revitalization
- Support moving ahead on planning and engineering, but hold on construction pending additional funding
- Waiting longer will result in rising costs, making the project potentially more difficult to accomplish in the future
- Least overall support for Alternative 1/1A
- Need more discussion on impacts to provide detailed direction to Design Team

*City Council – February 2, 2010*

This session was held as a follow-up to the Kelso City Council Workshop of January 19, 2010. The intent was to allow a more thorough discussion and answer questions and concerns from Council regarding the opportunities and constraints presented by potential future redevelopment. It also was intended to obtain feedback from Council providing direction on and further review of a short list of alternative alignments. The following direction was received from the City Council:

- Pursue further analysis of Alternative 3A
- Remove on-street parking on realignment to reduce cost, increase safety, and comply with arterial standard
- Consider right-in turn from Cowlitz to West Main (pursue with WSDOT)
- Hold public meeting and obtain further feedback
- Decide on selected alternative at 3/2/10 Council meeting

*City Council – March 2, 2010*

The project team provided a presentation that summarized the public outreach process to date, feedback, and results of the open house on February 25, 2010. Three issues that were specifically addressed at the most recent open house included couplets, access onto West Main Street (specifically at the west end), and phasing. The Council concluded the meeting by unanimously voting in favor of Alternative 3A as the alignment to be moved ahead into preliminary design.

As the project moves forward, the project team anticipates participating in upcoming City Council workshops. To see the agendas, meeting minutes, handouts, presentations, and sign in sheets provided at the City Council workshops, please refer to Appendix K.

*Further Information for the Public*

At this time the project team has provided the public with an initial project information

sheet that gives an overview of the project, the vision and objectives, and an outline of the public involvement activities for the duration of the project. The intent of the information sheet is to serve a wide audience through distribution to key stakeholders, property owners, community groups, and workshop and open house attendees. The consultant team will update the information sheet at key project milestones.

In addition to the information sheet, the City has also provided a project website ([www.kelso.gov](http://www.kelso.gov)) which is updated throughout the design process. To see the project information sheet and snap shots of the project website, please refer to Appendix K.

## **Improvements Phasing**

Ideally, the West Main Street Realignment project would be constructed in one phase; however, it is likely the lack of available funding will not allow this. The conceptual layout for the preferred alignment was evaluated to determine logical construction phases for the project. It was determined that the project could be constructed in three phases, which are described below.

### *Phase 1*

- Intersection improvements would be constructed at 1<sup>st</sup> Avenue and West Main Street including widening on 1<sup>st</sup> Avenue to accommodate dual receiving lanes on the north leg of the intersection and the northbound left turn and southbound right turn lanes.
- Widening to the north side of West Main to accommodate a second eastbound left turn lane. Traffic analysis shows the second eastbound left turn is not needed until 2025, therefore West Main will be widened to the future width as much as possible, but striped to include only one eastbound left turn lane.
- Right-of-way acquisition will be required for these improvements.
- Signal modification at 1<sup>st</sup> Avenue and West Main.

### *Phase 2*

- Construction of the roadway crossover section between 2<sup>nd</sup> and 3<sup>rd</sup> Avenues, including a newly configured signalized intersection.
- The new sections would be built to the future width standard but striped from 2<sup>nd</sup> Avenue west for three lanes which includes a center left turn lane. This allows a transition from the intersection at 1<sup>st</sup> Avenue and West Main Street to Catlin Street with its existing width.
- On-street parking along Catlin would be removed to allow for re-striping a three lane section. This allows functionality until Phase 3 is constructed.

### *Phase 3*

- Complete the Catlin Street widening to a five lane section (two lanes in each direction and a median/center turn lane) from 3<sup>rd</sup> Avenue to Cowlitz Way.
- Construct intersection improvements at the Catlin Street/Cowlitz Way/Ocean Beach Highway/Washington Way intersection, including the addition of a second eastbound and second westbound left turn lane. Restriping west of Cowlitz Way on Ocean Beach Highway would be required to accommodate proposed intersection channelization; however, it is not anticipated that any street reconstruction would occur on Ocean Beach Highway.
- Install traffic signal at the 5<sup>th</sup> Avenue/Catlin Street intersection.

A traffic analysis was conducted to determine the potential operational impacts of constructing Phases 1 and 2 only. The traffic analysis was based on revised 2030 Kelso Alternative forecast volumes to reflect traffic pattern changes without the construction of Phase 3. The 2030 forecasts estimated that the east-west traffic demand between 1<sup>st</sup> Street and Cowlitz Way would be approximately two-thirds on Catlin Street and one-third on West Main Street. With only Phases 1 and 2 in place in the year 2030, all signalized intersections operate at an acceptable level of service (LOS) D or better with the exception of the Catlin Street/Cowlitz Way/Ocean Beach Highway/Washington Way intersection, which would operate at LOS F (volume-to-capacity ratio of 1.36).

An additional traffic analysis was conducted to determine what year the Catlin Street/Cowlitz Way/Ocean Beach Highway/Washington Way intersection would fail with only Phases 1 and 2 in place. The analysis found the intersection would operate at acceptable levels of service until year 2023 and then would operate below standard until Phase 3 of the project was constructed.

The attached exhibits (Sheets 1 through 4) illustrate construction phasing.

Budget level estimates were prepared for each phase. The following table summarizes these estimates.

Phase	Description	Construction	Right-of-Way	Design/CM/Admin	Total
1	Widening on 1 <sup>st</sup> , improvements at 1 <sup>st</sup> /Main	\$1,000,000	\$700,000	\$300,000	\$2,000,000
2	Cross-over construction, striping and temp. signal improvements along Catlin	\$2,500,000	\$1,750,000	\$1,000,000	\$5,250,000
3	Road Construction 4 <sup>th</sup> to Cowlitz, signal work at 5 <sup>th</sup> and Cowlitz intersections.	\$3,250,000	\$3,750,000	\$1,300,000	\$8,300,000
	<b>Total</b>	<b>\$6,750,000</b>	<b>\$6,200,000</b>	<b>\$2,600,000</b>	<b>\$15,550,000</b>

The following lists assumptions for estimating budget level costs for each phase. All figures are in 2010 dollars.

**Phase 1 – 1<sup>st</sup> Avenue and Main Street widening**

- \$500,000 for roadway work on 1<sup>st</sup> Avenue
- \$50,000 for changes to signal at 1<sup>st</sup>
- Work on West Main between 1<sup>st</sup> and 2<sup>nd</sup> (15,700 sf x \$14/sf = \$220,000)
- Building Demo = \$50,000

Total Construction Phase 1 w/ 30% contingency = \$1,000,000

Right-of-way = \$700,000

Design (25%)/Construction Engineering(15%) = \$300,000

**Phase 2 – Cross over w/ striping and temporary signal work on Catlin**

- Striping Catlin for 3 lanes, temporary signal at 5<sup>th</sup> Avenue, changes to signal at Cowlitz and Main = \$150,000
- New Road construction for cross over (77,300 sf x \$14/sf) = \$1,100,000
- New signal at cross over intersection = \$250,000
- Building Demo/Lot Restoration = \$275,000 (assume building on SE corner of 2<sup>nd</sup> and Main, all buildings in Block 2 (between 2<sup>nd</sup> and 3<sup>rd</sup>, West Main, and Catlin), and the warehouse at the NW corner of Catlin and 3<sup>rd</sup>).

Total Construction Phase 2 w/ 30% contingency = \$2,500,000

Right-of-way = \$1,750,000 (includes strip takes along north side of Main between 1<sup>st</sup> and 2<sup>nd</sup>, assume property/relocation at SE corner of 2<sup>nd</sup> and Main, all property and relocation in

Block 2, property/relocation at NW corner of Catlin and 3<sup>rd</sup>, and strip takes along north side of Catlin.)

Design (25%)/Construction Engineering (15%) = \$1,000,000

**Phase 3 – 4<sup>th</sup> Avenue to Cowlitz on Catlin**

- New Road construction on Catlin from 4<sup>th</sup> to Cowlitz (108,000 sf x \$14/sf) = \$1,500,000
- Striping and median on OBH = \$50,000
- New signal at 5<sup>th</sup> Avenue and signal work at Catlin/OBH/Cowlitz = \$500,000
- Building Demo/Lot Restoration = \$450,000 (residential properties on the south side, and Office Max on south side, car lot building on north side)

Total Construction Phase 3 w/ 30% Contingency = \$3,250,000

Right-of-way = \$3,750,000 property and relocation costs, includes residential properties on south side, Office Max, car lot, and some strip takes on north side in Block 6.

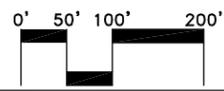
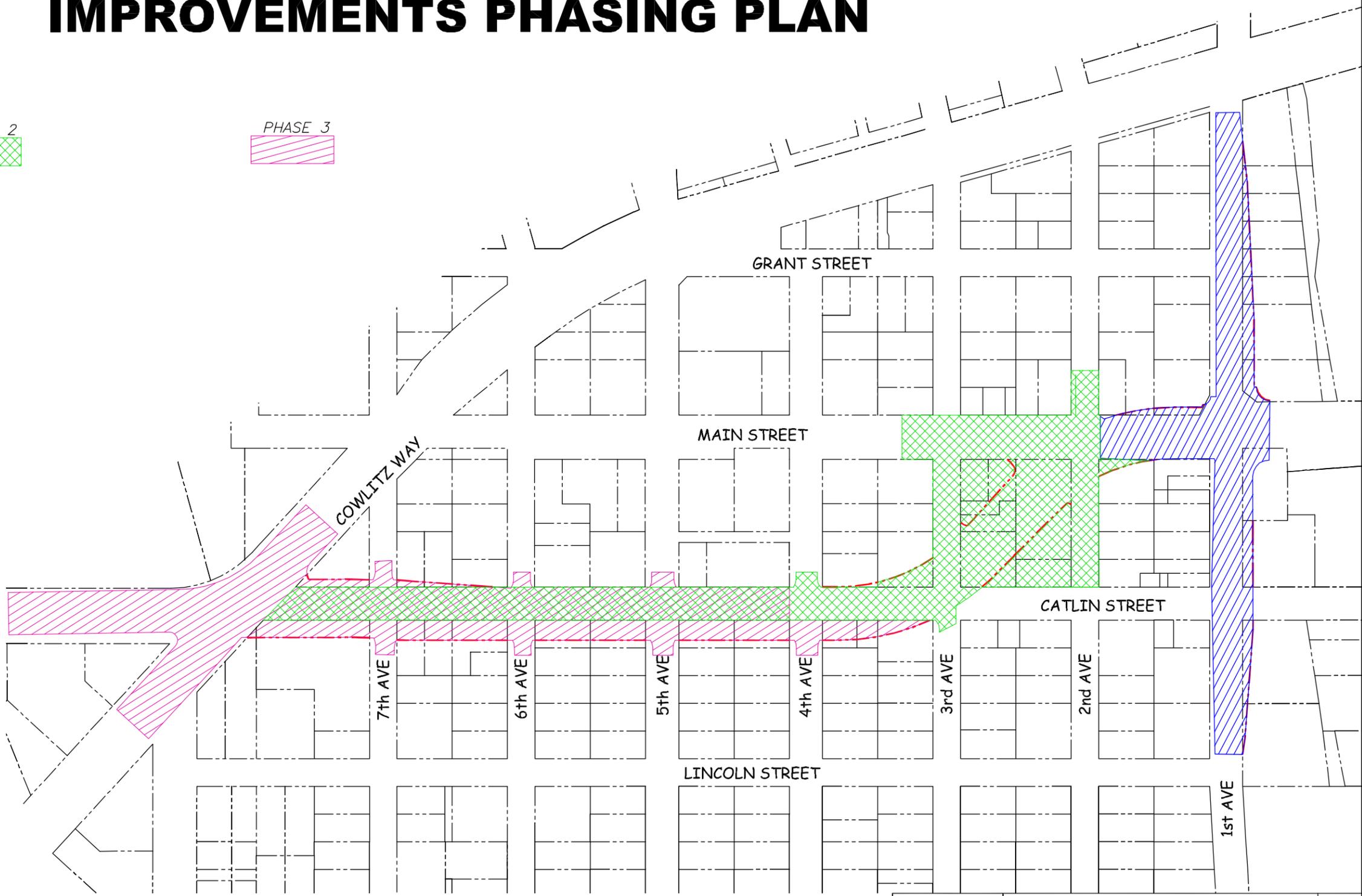
Design (25%)/Construction Engineering (15%) = \$1,300,000

# MAIN STREET REALIGNMENT IMPROVEMENTS PHASING PLAN

PHASE 1  


PHASE 2  


PHASE 3  

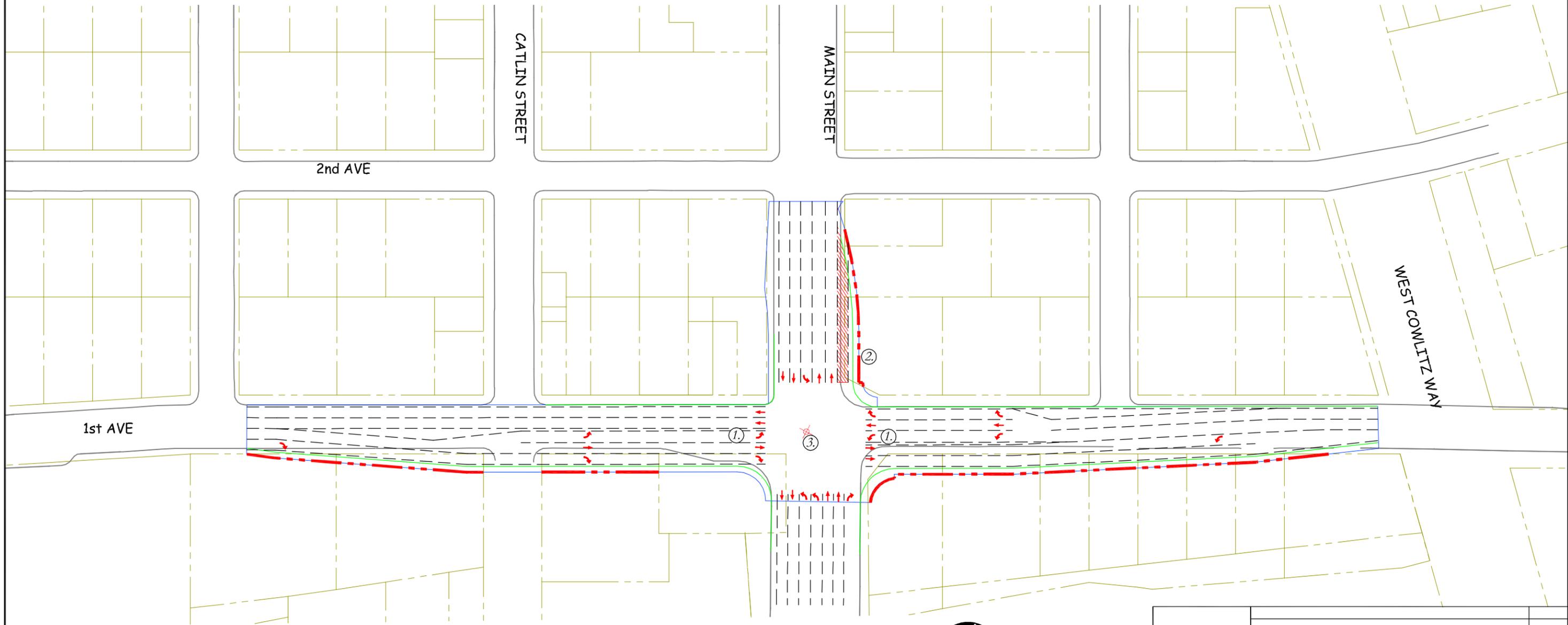
REVISION	DATE	DESCRIPTION	BY
JOB No.	<b>13564A</b>		
Designed By:	<b>SW</b>		
Drawn By:	<b>CK</b>		
Checked By:	<b>TW</b>		
DATE:	<b>03-22-2010</b>		
SCALE:	<b>AS NOTED</b>		
DWG NO.:			

<b>MAIN STREET REALIGNMENT IMPROVEMENTS PHASING PLAN</b>	
 <b>CITY OF KELSO</b> PUBLIC WORKS DEPARTMENT 203 S. PACIFIC AVE. SUITE 205 KELSO, WA 98626	SHEET NUMBER <b>1</b>

PHASE 1

1. widen 1st Avenue to accommodate dual receiving lanes on the north leg of the intersection and the northbound left turn and southbound right turn lanes.
2. Widen to the north side of West Main
3. Signal modification at 1st Avenue and West Main



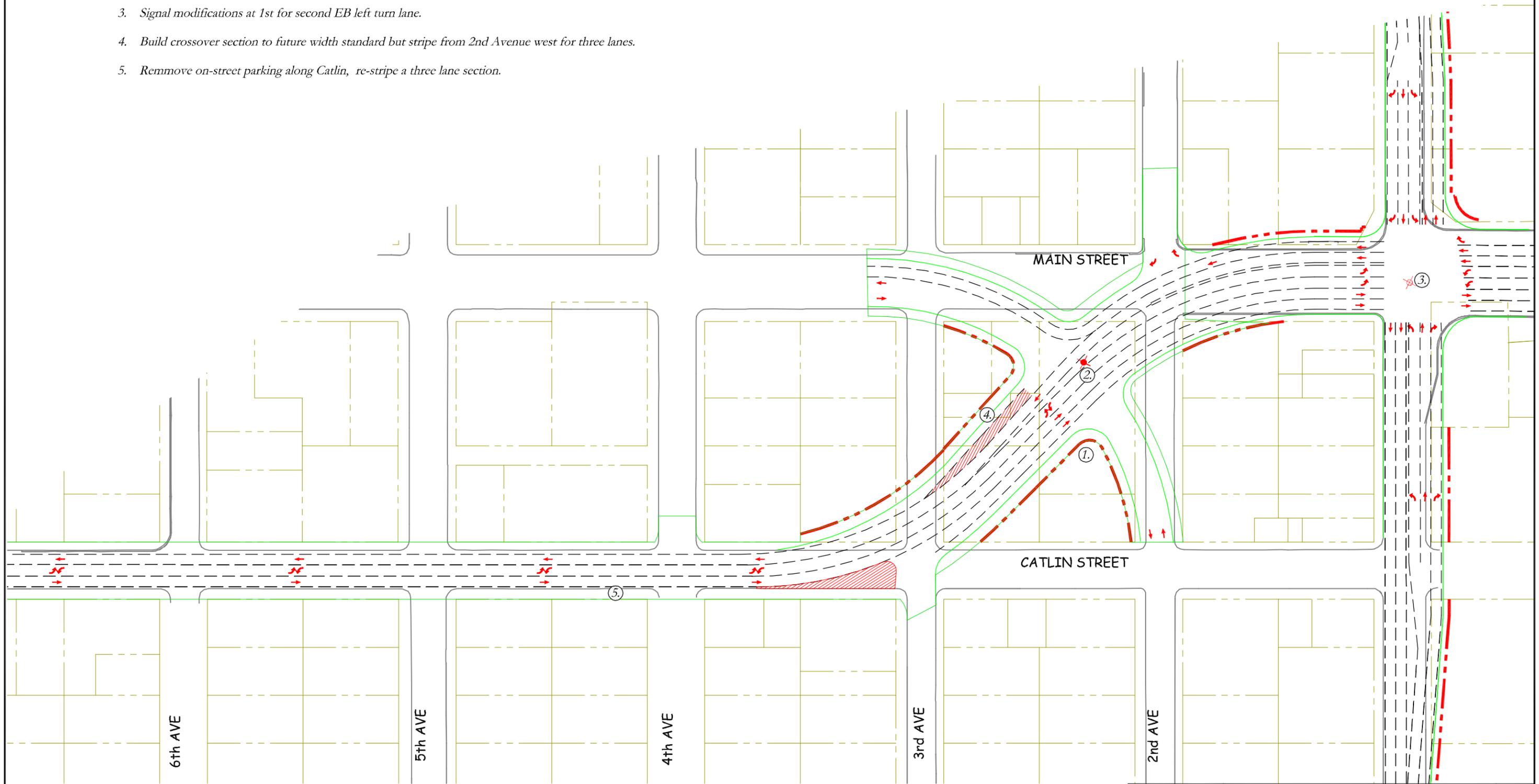
REVISION	DATE	DESCRIPTION	BY
JOB No. <b>13564A</b>			
Designed By: <b>SW</b>			
Drawn By: <b>CK</b>			
Checked By: <b>TW</b>			
DATE: <b>03-22-2010</b>			
SCALE: <b>AS NOTED</b>			
DWG NO.:			

<b>MAIN STREET REALIGNMENT IMPROVEMENTS PHASING PLAN PHASE 1</b>		 <b>CITY OF KELSO</b> PUBLIC WORKS DEPARTMENT 203 S. PACIFIC AVE. SUITE 205 KELSO, WA 98626	SHEET NUMBER <b>2</b>

PHASE 2

1. Construct roadway crossover section between 2nd and 3rd Avenues.
2. Reconfigure and signalize new intersection at cross over.
3. Signal modifications at 1st for second EB left turn lane.
4. Build crossover section to future width standard but stripe from 2nd Avenue west for three lanes.
5. Remove on-street parking along Catlin, re-stripe a three lane section.



REVISION	DATE	DESCRIPTION	BY
JOB No.	13564A		
Designed By:	SW		
Drawn By:	CK		
Checked By:	TW		
DATE:	03-22-2010		
SCALE:	AS NOTED		
DWG NO.:			

**MAIN STREET REALIGNMENT  
IMPROVEMENTS PHASING PLAN  
PHASE 2**

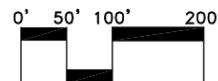
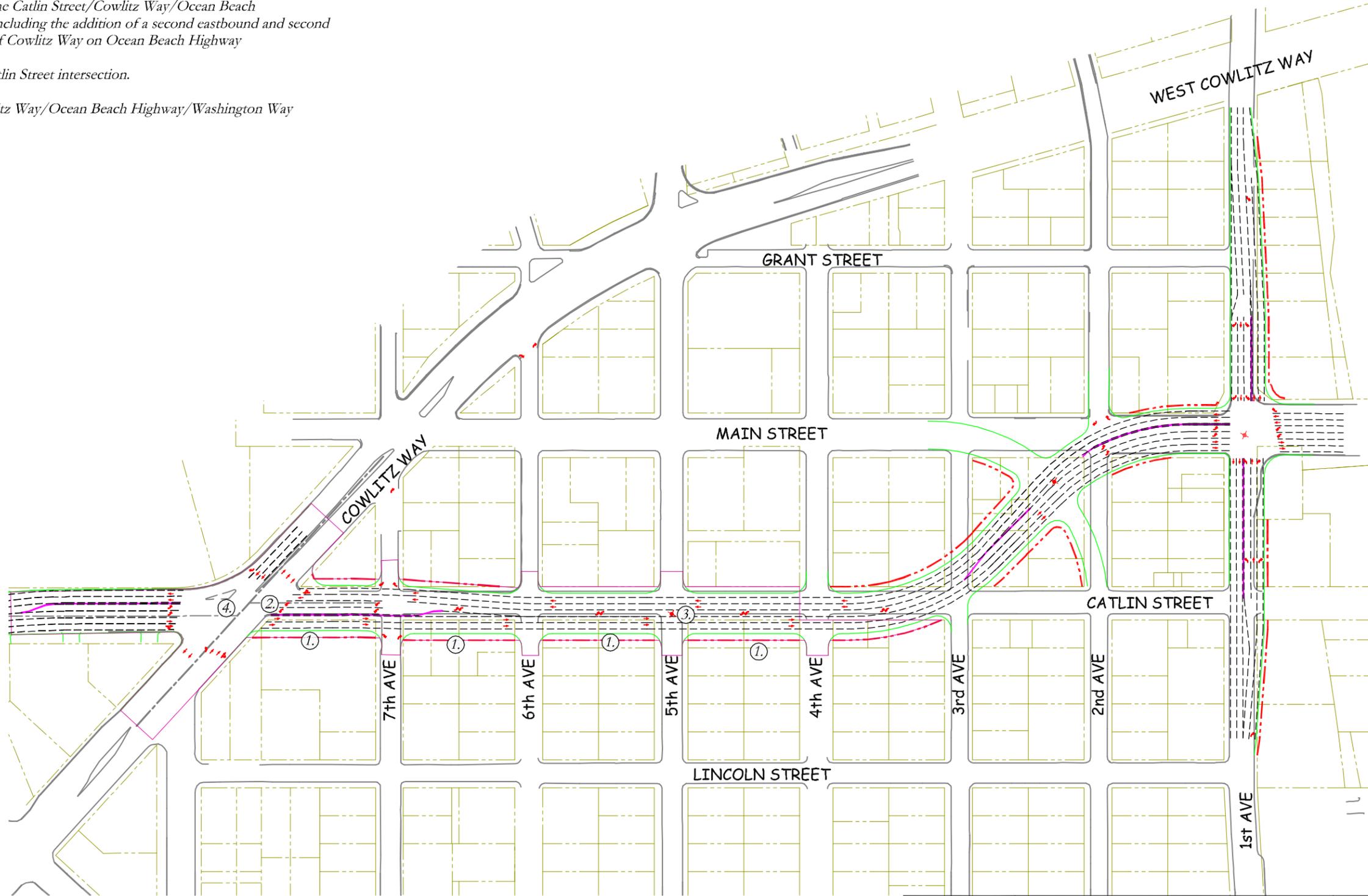
**CITY OF KELSO**  
PUBLIC WORKS DEPARTMENT  
203 S. PACIFIC AVE. SUITE 205  
KELSO, WA 98626

SHEET NUMBER  
**3**



PHASE 3

1. Complete the Catlin Street widening to a five lane section from 3rd Avenue to Cowlitz Way.
2. Construct intersection improvements at the Catlin Street/Cowlitz Way/Ocean Beach Highway/Washington Way intersection, including the addition of a second eastbound and second westbound left turn lane. Re-stripe west of Cowlitz Way on Ocean Beach Highway
3. Install traffic signal at the 5th Avenue/Catlin Street intersection.
4. Signal Modification at Catlin Street/Cowlitz Way/Ocean Beach Highway/Washington Way intersection.



REVISION	DATE	DESCRIPTION	BY
JOB No. <b>13564A</b>			
Designed By: <b>SW</b>			
Drawn By: <b>CK</b>			
Checked By: <b>TW</b>			
DATE: <b>03-22-2010</b>			
SCALE: <b>AS NOTED</b>			
DWG NO.:			

<b>MAIN STREET REALIGNMENT IMPROVEMENTS PHASING PLAN PHASE 3</b>		 <b>CITY OF KELSO</b> PUBLIC WORKS DEPARTMENT 203 S. PACIFIC AVE. SUITE 205 KELSO, WA 98626	SHEET NUMBER <b>4</b>