

RESOLUTION NO. 2313

A RESOLUTION OF THE CITY OF WILSONVILLE SELECTING A PREFERRED ALIGNMENT FOR A FUTURE KINSMAN ROAD EXTENSION FROM BARBER STREET TO BOECKMAN ROAD AND DIRECTING STAFF TO PROCEED WITH RIGHT OF WAY ACQUISITION AND FINAL DESIGN FOR THE BARBER STREET AND KINSMAN ROAD PROJECTS

WHEREAS, the City Council of the City of Wilsonville through Resolutions 2168 and 2238 previously authorized the performance of preliminary engineering work and alternatives evaluations for the KINSMAN ROAD EXTENSION (BARBER STREET TO BOECKMAN ROAD) AND THE BARBER STREET EXTENSION (KINSMAN ROAD TO COFFEE LAKE DRIVE) Projects, and

WHEREAS, preliminary engineering and alternative analyses are now complete, and staff has recommended a 6-span, 410' bridge as the preferred alternative for the Barber Street extension, and an eastern alignment, known as Alternative #2, as the preferred alternative for the Kinsman Road alignment, and

WHEREAS, Staff solicited public input on the proposed preferred alternatives, through newspaper articles, individual mailings, and a public open house held July 13, 2011, and

WHEREAS, no specific written or verbal opposition or objections to the preferred alternatives were received from the general public or individual property owners, and

WHEREAS, the City Council of the City of Wilsonville finds it to be in the best interests of the citizens of the City to continue these projects forward and proceed with Right of Way Acquisition and Final Design of the preferred Alternatives.

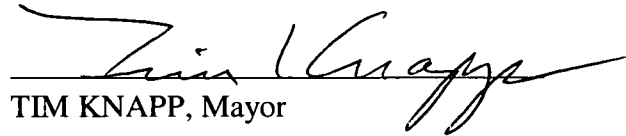
NOW, THEREFORE, THE CITY OF WILSONVILLE RESOLVES AS FOLLOWS:

1. City Council affirms the staff recommendation of a 6-span, 410' bridge as the preferred alternative for the Barber Street extension, and an eastern alignment, known as Alternative #2, as the preferred alternative for the Kinsman Road extension.
2. City Council authorizes staff to proceed with property owner contact and negotiations pertaining to property acquisitions necessary to design and construct the preferred alternatives.

3. City Council authorizes staff to proceed with contract negotiations between the City, ODOT and the pre-qualified consultant, OBEC Inc., for completion of Final Design services, including the necessary environmental permitting activities.

4. This resolution is effective upon adoption.

ADOPTED by the City of Wilsonville at a regular meeting thereof this 15th day of August, 2011 and filed with the Wilsonville City Recorder this date.


TIM KNAPP, Mayor

ATTEST:


Sandra C. King, City Recorder, MMC

SUMMARY OF VOTES:

Mayor Knapp	YES
Council President Núñez	YES
Councilor Hurst	YES
Councilor Goddard	YES
Councilor Starr	EXCUSED



CITY COUNCIL MEETING STAFF REPORT OR REQUEST FOR ACTION

Barber Street and Kinsman Road Extensions

Meeting Date: August 15, 2011
Report Date: August 01, 2011
Source of Item: Engineering

Contact: Eric Mende, Deputy City Engineer
Contact Telephone Number: 503-570-1538
Contact E-Mail: mende@ci.wilsonville.or.us

ISSUE STATEMENT

Staff is requesting approval of Resolution 2313 affirming preferred alternatives for the future extensions of Barber Street and Kinsman Road. Council action is necessary to move the projects forward into the right of way acquisition and final design phases.

BACKGROUND

Extension of Barber Street westward into the Villebois development, and extension of Kinsman Road from Barber Street northward to Boeckman Avenue have been part of the Wilsonville Transportation System Plan (TSP) since 2002. Wilsonville successfully petitioned for, and partial funding for the projects was earmarked in the Statewide Transportation Improvement Program (STIP) in 2006. The scoping report was completed in 2007. Local Agency Agreements for the two projects were signed with ODOT in 2009. A contract between ODOT and OBEC Consulting Engineers for Preliminary Engineering (30% level) encompassing both road projects, as well as two water line projects and one sewer project, were signed in June 2010. Funding for Right of Way acquisition and Final Design are in place from a combination of federal grants and local (Street SDC) sources. A funding source for construction has not been identified yet.

Identifying a preferred alignment is necessary to guide acquisition of Right of Way for the planned improvements. Final Design and creation of a set of construction plans is in turn dependent on the right of way acquired. The Alternative Evaluations and Preliminary (30%) Engineering Tasks leading to preferred alignment selection are now complete. The staff recommended "preferred" alignments for both road extensions are:

- a) a six span, 410' bridge for the Barber Street extension that minimizes environmental (wetland) impacts and avoids weak and compressible soils within floodplain areas of Coffee Lake Creek. A longer bridge section was selected to provide the best opportunity to avoid a repeat of settlement issues similar to Boeckman Road, and the six span alternative is the least expensive of the bridge alternatives that were evaluated.
- b) the "eastern" Kinsman Road alignment (Alternative #2). This alternative minimizes wetland impacts and avoids most of the weak compressible soils discovered in the area. Alternative #2 is approximately \$800,000 less than the competing western alignment (Alternative #1).

Public outreach and public input processes are complete, with no significant opposition to the proposed preferred alignments. Public outreach activities included articles in the Wilsonville Spokesman and Boone's Ferry Messenger, approximately 30 individual mailing to affected property owners and nearby residents, one-on-one conversations with selected property owners, and a public open house held on July 13, 2011.

RELATED POLICIES/BUDGET CONSIDERATIONS

The two projects (capital projects 4004 and 4116) were budgeted at \$1.44M in 2010/2011 for preliminary engineering, permitting and engineering administration, of which \$1.12M was federal money (FHWA) and \$320K were SDC funds. Estimated 2010/2011 expenses will be well under budget at approximately \$850K, however, permitting activities were not completed in the 2010/2011 fiscal year and will now occur in fiscal year 2011/2012.

The current 2011/2012 budget for these projects is \$120K, all from SDC's. Unspent 2010/2011 funding totals approximately \$596K (including FHWA dollars) which can be rolled forward to 2011/2012. Staff is also working with the ODOT liaison (to FHWA) to re-program approximately \$2.9M of federal dollars currently obligated to Barber Street construction and re-obligate these funds to final design and ROW acquisition tasks. Re-programming these dollars cannot occur until a final alignment is chosen and a more refined estimate of ROW acquisition costs is prepared.

The combined available funding of approximately \$3.6M should be more than adequate to complete all final engineering, permitting, and ROW acquisition tasks. A supplemental budget appropriation will be brought back to Council for approval once a final design contract is negotiated and a better estimate of ROW acquisition cost is determined. No construction dollars are identified for either project as of yet.

COUNCIL OPTIONS

1. Approve the Resolution as written
2. Modify the Resolution and approve as modified
3. Postpone consideration pending more information
4. Not approve the Resolution

STAFF'S RECOMMENDATION

Staff recommends approval of Resolution 2313 affirming preferred alternatives and authorizing continuation of right of way acquisition and final design tasks for the Barber Street and Kinsman Road extensions.

SUGGESTED MOTION

Honorable Mayor, I move we approve Resolution 2313 as written.

ATTACHMENTS

- A. Alternative Analysis Comparison Tables
- B. Open House Summary
- C. Alignment Alternative Figures

Kinsman Road Alternative Analysis Comparison Table

Alternate	Estimated Cost (in Millions)	Advantages	Disadvantages
1	\$8.15	<ul style="list-style-type: none"> • More equal division of right-of-way impacts between tax lots 800, 500, and 401. • Slight decrease in trees impacted (10 to 12 total). 	<ul style="list-style-type: none"> • Encroaches significantly more into the floodplain boundary. • Poor soils underlie a longer stretch of this alignment compared to Alternate 2. • Bisects existing wetland, creating less opportunity for mitigation/reconstruction of wetlands. • Less room for channel realignment and wetland mitigation in southwest corner of tax lot 700. • Longer connections required to the Old Castle and Commuter Rail properties. • Substantially more roadway fill because of raised vertical alignment for drainage requirements.
2	\$7.3	<ul style="list-style-type: none"> • Fewer impacts to the floodplain. • Most of the alignment is in areas with good soils, resulting in less cost to mitigate settlement. • Creates more room for channel realignment and wetland mitigation in the southwest corner of tax lot 700. • Shorter connections required to the Old Castle and Commuter Rail properties. • Less roadway fill because of raised vertical alignment for drainage requirements. • Least expensive of the two alternatives studied. 	<ul style="list-style-type: none"> • Creates more impacts to tax lots 500 and 401.

Note: Costs shown are based on a preliminary-level design and are meant for comparison purposes only.

Based on the results of the Kinsman Road analysis, Alternate 2 is clearly the preferred alternative. The design team will move forward in developing a preliminary design for this alignment to be included in the Design Acceptance Package (DAP).

Pavement Design

The recommended pavement section for this project is based on a preliminary analysis performed by Shannon & Wilson. The pavement analysis included both a 20-year and a 30-year design life pavement section. Depending on the location of the roadway, additional geotechnical treatments mentioned previously may need to be constructed along with the following pavement sections to mitigate the poor soils. A cost comparison between the 20-year and 30-year pavement section is shown below. The project cost estimates for Barber Street and Kinsman Road include the 20-year pavement section.

side will vary from 2'-8" to 3'-8". The overall depth of the superstructure will be approximately 3'-6".

Bridge Alternate 2, Six-Span Precast Prestressed Concrete Box Girders

This bridge alternative consists of eight lines of 33-inch-deep precast prestressed box girders placed in pairs at a pair spacing of 12 feet with an 8-inch-thick cast-in-place concrete deck. The sidewalk overhang on each side will vary from 3'-2" to 4'-2". The overall depth of the superstructure will be approximately 3'-6".

Bridge Alternate 3, Four-Span Steel Plate Girder

The steel plate girder bridge alternative is comprised of five lines of weathering steel girders with a spacing of 10'-6", a constant deck overhang of 4'-8" on each side, and a 9-inch cast-in-place HPC deck. The plate girders will be constructed to follow the curved roadway alignment with a total depth of approximately 4'-6". The steel girder bridge will be designed using the "Simple for Dead Load and Continuous for Live Load" methodology.

Bridge Alternate 4, Four-Span Concrete PT Box

The PT box alternative will be comprised of five stems (four cells) with a stem spacing of 10'-6", a constant deck overhang of 4'-8", and a 9-inch cast-in-place HPC deck. The box girders will be constructed to follow the curved roadway alignment with a total depth of approximately 4'-9". The 18-inch-diameter water line will be attached under the deck/sidewalk overhang since the box girder cells are too small to accommodate a utility of this size.

The following table summarizes the estimated cost, advantages, and disadvantages of each bridge alternative. The preliminary cost estimate shown in the table is based on average unit deck area cost taken from ODOT Cost Data for the past five years and could vary due to the fluctuations in commodity prices, the bid environment, and the uncertainty of foundation conditions. A more complete itemized cost estimate will be provided in the draft and final DAPs.

Barber Street Bridge Alternative Analysis Comparison Table

Alternate	Estimated Cost (in Millions)	Advantages	Disadvantages
1 Six-Span Precast Bulb- T Girder Bridge	\$3.0 (\$140/SF)	<ul style="list-style-type: none"> No falsework required since girders can be erected directly on permanent bents, minimizing costs and area of construction impact. Shortest on-site construction duration compared to other alternatives since no deck forming is required except sidewalk overhang forming. Yields the least encroachment (around 8 inches) into the preferred 5-foot floodway freeboard envelope compared to four-span alternatives. 	<ul style="list-style-type: none"> The edge of deck will follow the chorded layout of the precast girders, which may not be aesthetically desirable. The appearance of the chorded deck will be mitigated, however, by the curved layout of the overhanging sidewalk. Two extra bents will cause greater permanent wetland and floodplain impacts compared to four-span alternatives.

Alternate	Estimated Cost (in Millions)	Advantages	Disadvantages
2 Six-Span Precast Box Girder Bridge	\$3.2 (\$150/SF)	<ul style="list-style-type: none"> No falsework required since girders can be erected directly on permanent bents, minimizing costs and area of construction impact. Rapid on-site construction with limited deck forming compared to other alternatives. Yields the least encroachment (around 8 inches) into the preferred 5-foot floodway freeboard envelope compared to four-span alternatives. 	<ul style="list-style-type: none"> The edge of deck will follow the chorded layout of the precast girders, which may not be aesthetically desirable. The appearance of the chorded deck will be mitigated, however, by the curved layout of the overhanging sidewalk. Two extra bents will cause greater permanent wetland and floodplain impacts compared to four-span alternatives. Heaviest superstructure weight of all alternatives, which can be expected to yield heavier, more costly foundations to meet seismic performance requirements.
3 Four-Span Steel Plate Girder Bridge	\$3.4 (\$160/SF)	<ul style="list-style-type: none"> No falsework required since girder can be erected directly on permanent bents, eliminating a cost element typically found in steel girder construction. Constant deck overhang width provides a uniform appearance. Contrast of brown weathering steel girder and gray concrete deck and rail provides a pleasing appearance. Relatively light weight of the steel superstructure minimizes foundation loads and improves seismic performance, which can be expected to reduce foundation costs. 	<ul style="list-style-type: none"> Encroaches 1'-6" into the preferred 5-foot floodway freeboard envelope. Permanent bents can become stained over time by the weathering steel if not properly detailed or protected during construction. Flexible steel superstructure will exhibit more deflection under live load than concrete alternatives. However, bouncing can be mitigated by following AASHTO design provisions to achieve acceptable performance. Historically, steel commodity prices fluctuate more than Portland cement concrete, yielding greater uncertainty in final bid price compared to concrete alternatives.
4 Four-Span CIP P/T Box Girder Bridge	\$3.6 (\$170/SF)	<ul style="list-style-type: none"> Stiffest superstructure, both torsionally and laterally, of all alternatives yielding most durable performance and most uniform distribution of seismic loads to foundations. Constant deck overhang width provides a uniform appearance. 	<ul style="list-style-type: none"> Encroaches 1'-9" into the preferred 5-foot floodway freeboard envelope. Construction of extensive temporary falsework is required through the entire bridge, including within the floodway. Longest duration of on-site construction compared to other alternatives. New water line must be mounted outside the concrete box girder to maintain access. This will require construction of costly curtain walls below the sidewalk overhangs to conceal the new pipe.

Barber Street Extension and Kinsman Road Extension Open House

July 13, 2011

Open House Summary

The City of Wilsonville held the first public open house for the Barber Street/Kinsman Road Extensions project on July 13, 2011 from 6:00 to 7:30 p.m. at Wilsonville City Hall, located at 29799 SW Town Center Loop E. Approximately twelve people were in attendance in addition to staff from the City and the consultant team. The majority of attendees were from the Planning Commission, which held their regular meeting during the same time as the open house. The purpose of the event was to explain the two alternatives currently being considered, and to generate public input related to these alternatives.

Participants were invited to ask questions and provide comments on the proposed alternatives by filling out a comment form or by talking with members of the project team.

Open House Format

The open house was a drop-in style event which included two information stations with identical displays of the two alternatives as well as design schematics of the roadways and bridge. A handout was also provided that covered the project purpose, background and an overview of each of the proposed alternatives. Staff from the City of Wilsonville, OBEC Consulting Engineers, PHS and JLA Public Involvement were on hand to help direct people, answer questions and collect comments.

Outreach

Citizens were invited to attend the Barber Street/Kinsman Road Extensions open house through a number of outreach campaigns, which included:

- Letters mailed to affected property owners and nearby area residents.
- An article in the Boones Ferry Messenger circulated in July.
- Paid display ads in the local newspaper of record (Wilsonville Spokesman).
- Listserve Emails to other residents of the Villebois Community

Comment Form Responses

The following is a summary of the responses collected from two (2) comment forms that were completed at the open house.

- From looking at both alternatives, I support Alternate 2 (eastern alignment). I also think we (the City) should apply the lessons learned from Boeckman Road extension problems.
- Projects appear to be well considered and are conducive to adding to the enjoyment of living in Wilsonville.

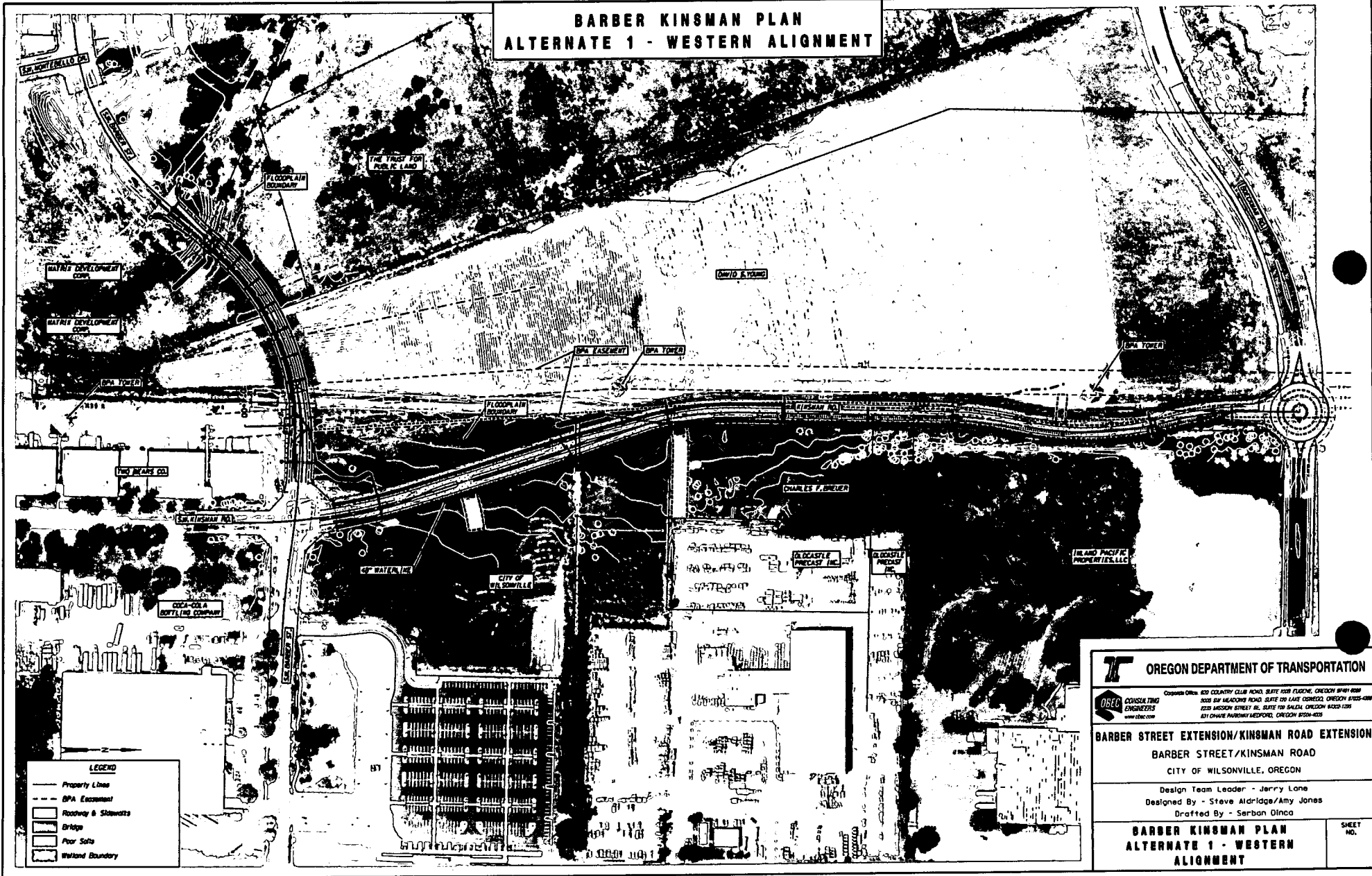
Discussion Summary

The Open House was lightly attended, although those that did come appeared relatively well informed on the general scope of the projects. Project team staff heard a number of

comments and/or questions from participants about the project, and for the most part heard support for the preferred alternative – Alternative 2. The following represents a summary of the discussion between the project team and attendees.

- *Will there be bike paths and sidewalks?* Yes, 6 foot bike lanes and sidewalks are included in the plans for both roadway extensions.
- *Will the new roadways be out of (above) the floodplain?* Both projects will avoid the floodplain as much as possible, however there will be wetland impacts since both roadways impact Coffee Creek wetlands. Wetland impacts will be mitigated by purchasing mitigation bank credits and constructing on-site wetland mitigation.
- *Why is the bridge so long?* The bridge has been designed to be 410 feet long in order to span the Coffee Creek wetland areas and to avoid soils that might cause settling.
- *Why is Alternative 2 preferred over Alternative 1?* Alternative 2 is preferred because it is significantly less expensive than Alternate 1, has fewer impacts to the floodplain and provides more opportunities for wetland mitigation.
- *When will the project be built? What is the schedule for construction?* The current schedule calls for Barber Street to be constructed in 2013/2014 and Kinsman Road is slated to be constructed in 2017/2018.
- *How much right of way will be needed? What right of way width will be used?* The right of way will be up to 77'. There is approximately 3.1 acres of right way that will need to be purchased to construct Barber Street and Kinsman Road.
- *What is the purpose of the project?* To provide access and interconnectivity to the Villebois area, as well as improve general traffic circulation and provide an alternate truck route via Kinsman Road.
- *What will be done to keep the road from settling? Is the project being designed to avoid a settlement situation like Boeckman?* Yes, the project will be designed to avoid settlement similar to what happened with Boeckman Road.
- *What is the overall costs of the alternatives?* The preliminary engineering package identifies the estimated construction costs of the preferred alternatives for Barber and Kinsman as \$6.5M and \$4.5M respectively, however, these costs do not include Right of Way acquisition, design costs, or other administrative/project management costs. The City of Wilsonville budget document identifies the estimated total project costs as \$10.1M and \$17.3M respectively.
- *How is the project being paid for? Is money available for construction?* The project is funded by a combination of City Street SDC's (System Development Charges) and federal funding administered through the Statewide Transportation Improvement Program (STIP). Federal funding is available for design, right of way acquisition and as well as partial funding for Barber Street construction. No federal money is currently allocated for the construction of Kinsman Road.
- *Are we using consultants instead of doing design in-house?* Yes, the City does not have the bridge design, geotechnical or permitting technical expertise in-house.

**BARBER KINSMAN PLAN
ALTERNATE 1 - WESTERN ALIGNMENT**



LEGEND

- Property Lines
- - - BPA Easement
- ▭ Roadway & Sloewatts
- ▭ Bridge
- ▭ Pier S&S
- ▭ Wetland Boundary

OREGON DEPARTMENT OF TRANSPORTATION

OSBE CONSULTING ENGINEERS

OSBE Office: 850 COUNTRY CLUB ROAD, SUITE 100B EUGENE, OREGON 97401-4000
2020 SW HAWTHORN ROAD, SUITE 100 SALEM, OREGON 97301-4200
2220 WASHINGTON STREET, SUITE 100 SALEM, OREGON 97301-1200
851 ORANGE PARKWAY MEDFORD, OREGON 97504-4000

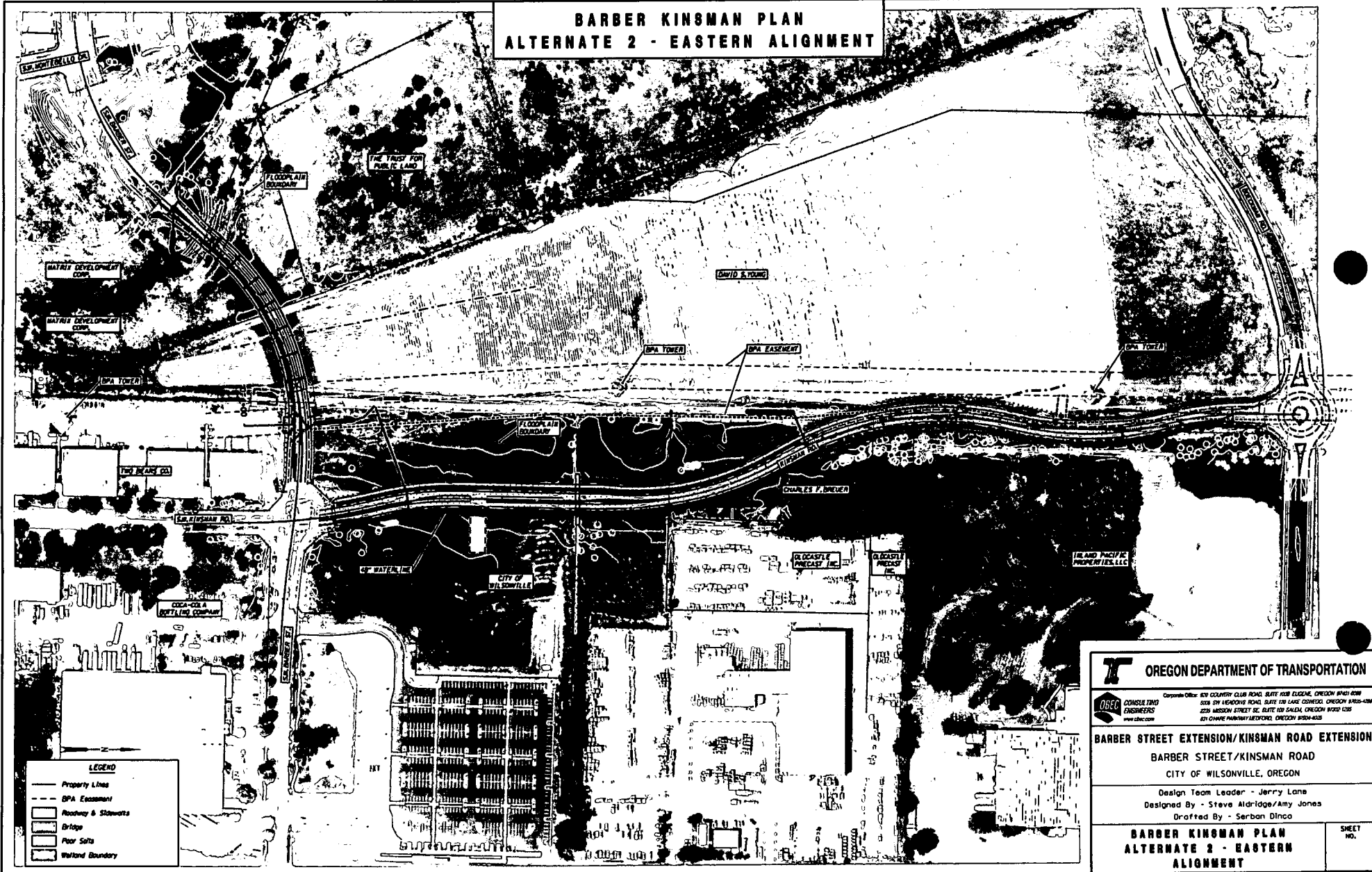
BARBER STREET EXTENSION/KINSMAN ROAD EXTENSION
BARBER STREET/KINSMAN ROAD
CITY OF WILSONVILLE, OREGON

Design Team Leader - Jerry Lane
Designed By - Steve Aldridge/Amy Jones
Drafted By - Serban Olina

**BARBER KINSMAN PLAN
ALTERNATE 1 - WESTERN
ALIGNMENT**

SHEET NO.

**BARBER KINSMAN PLAN
ALTERNATE 2 - EASTERN ALIGNMENT**



	OREGON DEPARTMENT OF TRANSPORTATION <small>Corporate Office: 850 COUNTRY CLUB ROAD, SUITE 100B EUGENE, OREGON 97401-6008 508 584 4800/508 584 4801 FAX 225 MADISON STREET SE, SUITE 100 GALLATIN, OREGON 97030-1202 503 678 4200</small>
	BARBER STREET EXTENSION/KINSMAN ROAD EXTENSION BARBER STREET/KINSMAN ROAD CITY OF WILSONVILLE, OREGON Design Team Leader - Jerry Lane Designed By - Steve Aldridge/Amy Jones Drafted By - Serban Dinca
BARBER KINSMAN PLAN ALTERNATE 2 - EASTERN ALIGNMENT	
	SHEET NO.