



WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

)	DOCKET NO. TR- 140038-P
)	
City of Moxee)	
_____)	PETITION TO CONSTRUCT A
Petitioner,)	HIGHWAY-RAIL GRADE
)	CROSSING
vs.)	
)	
BNSF Railway;)	
Central Washington Railroad)	
_____)	
Respondent)	

Prior to submitting a Petition to Construct a Highway-Rail Grade Crossing to the Washington Utilities and Transportation Commission (UTC), State Environmental Protection Act (SEPA) requirements must be met. Washington Administrative Code (WAC) 197-11-865 (2) requires:

All actions of the utilities and transportation commission under statutes administered as of December 12, 1975, are exempted, except the following:


(2) Authorization of the openings or closing of any highway/railroad grade crossing, or the direction of physical connection of the line of one railroad with that of another;

Please attach sufficient documentation to demonstrate that the SEPA requirement has been fulfilled. For additional information on SEPA requirements contact the Department of Ecology.

The Petitioner asks the Washington Utilities and Transportation Commission to approve construction of a highway-rail grade crossing.

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UTIL. AND TRANSP.
COMMISSION

Section 1 – Petitioner's Information

City of Moxee
Petitioner
 11-27-13
Signature
255 W. Seattle Ave.
Street Address
Moxee, WA 98936
City, State and Zip Code
PO Box 249, Moxee, WA 98936
Mailing Address, if different than the street address
Byron Adams
Contact Person Name
(509) 575-8851 byronadams@charter.net
Contact Phone Number and E-mail Address

Section 2 – Respondent's Information

BNSF Railway Company
Respondent
2454 Occidental Ave. S., Suite 1-A
Street Address
Seattle, WA 98134
City, State and Zip Code
Mailing Address, if different than the street address
Richard Wagner
Contact Person Name
(206) 625-6152 Richard.Wagner@bnsf.com
Contact Phone Number and E-mail Address

Central Washington Railroad

Respondent

111 University Parkway, Ste 200

Street Address

Yakima, WA 98901

City, State and Zip Code

Mailing Address, if different than the street address

Tim Marshall

Contact Person Name

(509) 969-1746

tmarshall@cbrr.com

Contact Phone Number and E-mail Address

Section 3 – Proposed Crossing Location

1. Existing highway/roadway N/A

2. Existing railroad Moxee Branch Line Segment 0446

3. Location of proposed crossing:

Located in the NE 1/4 of the SW 1/4 of Sec. 35, Twp. 13, Range 19 W.M.

4. GPS location, if known 120°24'59" W, 46°34'03" N

5. Railroad mile post (nearest tenth) 6.7

6. City Moxee

County Yakima

Section 4 – Proposed Crossing Information

1. Railroad company Central Washington Railroad
2. Type of railroad at crossing Common Carrier Logging Industrial
 Passenger Excursion
3. Type of tracks at crossing Main Line (Branch Line) Siding or Spur
4. Number of tracks at crossing 1
5. Average daily train traffic, freight 2 (four times per week)
Authorized freight train speed 20 mph Operated freight train speed N/A
6. Average daily train traffic, passenger N/A
Authorized passenger train speed N/A Operated passenger train speed N/A
7. Will the proposed crossing eliminate the need for one or more existing crossings?
Yes No
8. If so, state the distance and direction from the proposed crossing.
N/A

9. Does the petitioner propose to close any existing crossings?
Yes No

Section 5 – Temporary Crossing

1. Is the crossing proposed to be temporary? Yes _____ No X

2. If so, describe the purpose of the crossing and the estimated time it will be needed
N/A

3. Will the petitioner remove the crossing at completion of the activity requiring the temporary crossing? Yes _____ No X

Approximate date of removal _____ N/A _____

Section 6 – Current Highway Traffic Information

1. Name of roadway/highway _____ Morrier Lane (proposed) _____

2. Roadway classification _____ Minor Arterial _____

3. Road authority _____ City of Moxee _____

4. Estimated average annual daily traffic (AADT) _____ 2,000 (Projected, opening year 2015) _____

5. Estimated average pedestrian use per day _____ 0 _____

6. Number of lanes _____ 2 _____

7. Roadway speed _____ 35 mph _____

8. Is the crossing part of an established truck route? Yes _____ No X

9. If so, trucks are what percent of total daily traffic? _____ N/A _____

10. Is the crossing part of an established school bus route? Yes _____ No X

11. If so, how many school buses travel over the crossing each day? _____ N/A _____

12. Describe any changes to the information in 1 through 7, above, expected within ten years:

The AADT is projected to increase to 5,500 by 2035, based on anticipated industry development. Pedestrian usage per day at the proposed railroad crossing is expected to be low due to no pedestrian facilities along SR 24.

Section 7 – Alternatives to the Proposal

1. Does a safer location for a crossing exist within a reasonable distance of the proposed location?
Yes No

2. If a safer location exists, explain why the crossing should not be located at that site.
N/A

3. Are there any hillsides, embankments, buildings, trees, railroad loading platforms or other barriers in the vicinity which may obstruct a motorist's view of the crossing?
Yes No

4. If a barrier exists, describe:

- ◆ Whether petitioner can relocate the crossing to avoid the obstruction and if not, why not.
- ◆ How the barrier can be removed.
- ◆ How the petitioner or another party can mitigate the hazard caused by the barrier.

N/A

5. Is it feasible to construct an over-crossing or under-crossing at the proposed location as an alternative to an at-grade crossing?
Yes No

6. If an over-crossing or under-crossing is not feasible, explain why.

A roadway overpass or underpass crossing at the rail line is not feasible due to limiting geometric physical characteristics and financial impacts. Currently, SR 24 and the railroad line run parallel to one another, with approximately 75 feet between the edge of highway and rail centerline. Due to the physical layout and close proximity of the existing rail line and highway, a grade-separated crossing is not possible as the roadway approach would require a minimum grade in excess of 35%. This approach grade is substandard, does not facilitate truck traffic, and significantly restricts sight distance at the SR 24 intersection.

A grade-separated crossing would require major realignment of either the state highway or rail line. Vertical realignment is not feasible for either facility due to necessary grades exceeding

maximum tolerable limits. Major horizontal realignment would provide adequate separation to construct a grade-separated crossing. However, such horizontal realignment would require substantial right-of-way acquisition, utility relocations, canal realignment and piping considerations, permitting, engineering, and construction costs including a temporary highway/rail detour. Costs associated with horizontal realignment of either facility would exceed \$50 million, not including permitting, right-of-way acquisition, utility relocation considerations, and the actual cost of the grade separated crossing. In total, the project would exceed \$70 million. The excessive costs associated with such realignment as required for the grade separation deems the grade-separated crossing impracticable.

7. Does the railway line, at any point in the vicinity of the proposed crossing, pass over a fill area or trestle or through a cut where it is feasible to construct an over-crossing or an under-crossing, even though it may be necessary to relocate a portion of the roadway to reach that point?

Yes No

8. If such a location exists, state:

- ◆ The distance and direction from the proposed crossing.
- ◆ The approximate cost of construction.
- ◆ Any reasons that exist to prevent locating the crossing at this site.

N/A

9. Is there an existing public or private crossing in the vicinity of the proposed crossing?

Yes No

10. If a crossing exists, state:

- ◆ The distance and direction from the proposed crossing.
- ◆ Whether it is feasible to divert traffic from the proposed to the existing crossing.

The Union Gap Irrigation District has a private crossing approximately 200 feet west of the proposed crossing location. This private crossing is located on the west side of the open channel Union Gap Canal, which runs north and south. It is not feasible to divert traffic from the proposed crossing to the existing crossing due to geometric constraints, sight distance limitations, proximity to the open channel canal, and the crossing is private.

Section 8 – Sight Distance

1. Complete the following table, describing the sight distance for motorists when approaching the tracks from either direction.

a. Approaching the crossing from North, the current approach provides an unobstructed view as follows:

(North, South, East, West)

Direction of sight (left or right)	Number of feet from proposed crossing	Provides an unobstructed view for how many feet
Right	25	>500 (unobstructed)
Right	50	>500 (unobstructed)
Right	100	260
Right	150	120
Right	200	90
Left	25	>500 (unobstructed)
Left	50	>500 (unobstructed)
Left	100	105
Left	150	80
Left	200	75

b. Approaching the crossing from South, the current approach provides an unobstructed view as follows:

(Opposite direction-North, South, East, West)

Direction of sight (left or right)	Number of feet from proposed crossing	Provides an unobstructed view for how many feet
Right	25	>500 (unobstructed)
Right	50	>500 (unobstructed)
Right	100	N/A
Right	150	N/A
Right	200	N/A
Left	25	>500 (unobstructed)
Left	50	>500 (unobstructed)
Left	100	N/A
Left	150	N/A
Left	200	N/A

2. Will the new crossing provide a level approach measuring 25 feet from the center of the

railway on both approaches to the crossing?

Yes No

3. If not, state in feet the length of level grade from the center of the railway on both approaches to the crossing. 25 feet on the north side, 5 feet on the south side

4. Will the new crossing provide an approach grade of not more than five percent prior to the level grade?

Yes No

5. If not, state the percentage of grade prior to the level grade and explain why the grade exceeds five percent.

Section 9 – Illustration of Proposed Crossing Configuration

Attach a detailed diagram, drawing, map or other illustration showing the following:

- ◆ The vicinity of the proposed crossing.
- ◆ Layout of the railway and highway 500 feet adjacent to the crossing in all directions.
- ◆ Percent of grade.
- ◆ Obstructions of view as described in Section 7 or identified in Section 8.
- ◆ Traffic control layout showing the location of the existing and proposed signage.

Section 10 – Proposed Warning Signals or Devices

1. Explain in detail the number and type of automatic signals or other warning devices planned at the proposed crossing, including a cost estimate for each.

The proposed crossing will include crossing gates, flashing lights, audible bells, road markings, crossbucks, and warning signs on the northbound and southbound crossing sides as shown on the attached Morrier Lane At-Grade Rail Crossing plan sheets. All equipment, warning devices, and markings will be installed per MUTCD and Railroad-Highway Grade Crossing Handbook. Additional spare conduits will be installed for intertie with a future traffic signal at SR 24 and Morrier Lane. The estimated cost for the proposed railroad crossing is \$250,000. When a traffic signal is warranted and constructed in the future, the interconnect will include preemption control with blank-out signs for turning traffic from SR 24.

With approximately 75 feet between the edge of highway and rail centerline, queuing and pavement marking locations are critical at the Morrier Lane and SR 24 intersection. As shown on the attached Morrier Lane At-Grade Rail Crossing plan sheets, there is approximately 36 feet between the southbound southerly stop line and the crossing pad. This distance provides adequate storage for a passenger vehicle should a train approach the crossing while vehicles are queued at the stop line. The storage area does not provide adequate length for the WB-50 design vehicle when it is queued at the stop bar. However there is adequate storage beyond the stop line to move clear of the crossing pad. The "Do Not Stop on Tracks" regulatory sign will be post-mounted adjacent to the southbound stop line prior to the crossing pad.

2. Provide an estimate for maintaining the signals for 12 months. \$1,000

3. Is the petitioner prepared to pay to the respondent railroad company its share of installing the warning devices as provided by law?

Yes X No

Section 11 – Additional Information

Provide any additional information supporting the proposal, including information such as the public benefits that would be derived from constructing a new crossing as proposed.

Currently, two north-south arterials, Beaudry Road and Birchfield Road, intersect the Moxee Branch rail line and SR 24 at-grade. These arterials and rail line serve the western side of the City of Moxee and its urban growth area (UGA) boundary as shown on the attached SR 24 Corridor Vicinity Map. The arterials are spaced approximately 1.7 miles apart along SR 24. Existing land use between Beaudry Road and Birchfield Road primarily consists of agricultural, specifically for hop production. However, the land is zoned light-industrial and has a strong potential for development due to the close proximity of state highways and interstates, as well as rail access.

This corridor along SR 24 between the City of Yakima and City of Moxee has been targeted as a focal point for future business and industrial development in Yakima County Development Association's SR 24 Industrial Sub-area Plan, given the development potential of the Moxee area. The attached Sub-area Plan recommended that a corridor for a new north-south arterial be identified and preserved in the vicinity of the Morrier Lane extension, in providing access to approximately 340 acres of undeveloped industrially-zoned land. Local agencies and organizations have shown strong support for the Morrier Lane extension proposal, including a new at-grade intersection at SR 24. Supporters include the Federal Highway Administration (FHWA), Washington State Department of Transportation (WSDOT), Transportation Improvement Board (TIB), Yakima County Commissioners Office, Yakima County Development Association (SIED Board), Trans-Action Committee, Yakima Valley Conference of Governments (YVCOG), and the City of Moxee.

The City of Moxee recently received approximately \$500,000 funding from FHWA through WSDOT to begin design engineering of the Morrier Lane extension and intersection at SR 24, among other related improvements. In addition, TIB contributed nearly \$80,000 towards design engineering, with a future commitment of approximately \$700,000 for construction. Furthermore, the City of Moxee received the attached access break approval, and intersection plan approval from WSDOT for constructing a new at-grade intersection at the proposed Morrier Lane extension location.

Beyond the support for roadway improvements, the City of Moxee received grant and loan funds from the SIED Board for extending the City's wastewater conveyance system and domestic water main along the north side of SR 24 (north of the railroad tracks), from Beaudry Road to Birchfield Road, and beyond. With utilities readily available, and support of the proposed Morrier Lane extension in place, including the at-grade railroad crossing, industrial development within this corridor will very likely transpire. Industrial development will significantly benefit the local community by creating new jobs, increasing revenues to state and local jurisdictions through property, sales, business and occupation, and utility tax revenues, and providing regional growth opportunities.

In addition to the apparent economic benefits, the proposed Morrier Lane improvements will provide additional connectivity and reduced congestion to the existing roadway network within the City of Moxee. Roadway improvements consist of the Morrier Lane and Duffield

Road extensions as shown on the attached SR 24 Corridor Vicinity Map. By extending Morrier Lane from Mieras Road to SR 24, vehicular demand on Beaudry Road and Birchfield Road will be reduced as a result of an additional north/south arterial. By extending Duffield Road from Beaudry Road to Morrier Lane, vehicular demand on Beaudry Road will be further reduced, decreasing congestion, and improving level of service (LOS) at the Beaudry Road and SR 24 intersection. In 2010, the Beaudry Road and SR 24 intersection had an LOS B, providing reasonably free traffic flow, acceptable by agency standards. Two years later in 2012, the intersection's LOS dropped to C as a result of increased traffic volumes. The City is anticipating traffic volumes to increase further, and as a result, LOS will decrease to unacceptable levels. By 2030, the Birchfield Road and Beaudry Road intersections at SR 24 are projected to have an LOS F, with very long delays. By constructing the Morrier Lane intersection at SR 24, demand will be distributed among the three north/south arterials.

The City plans to implement the improvements in three phases. The first phase includes constructing the Morrier Lane and SR 24 at-grade intersection, the Morrier Lane at-grade rail crossing, Morrier Lane roadway, and Duffield Road extension from Beaudry Road to Morrier Lane. The second phase includes extending Morrier Lane north from the Duffield Road extension to Mieras Road. Finally, the third phase includes extending Morrier Lane south from SR 24 to Postma Road. Phases will be constructed as funding becomes available.

Following construction of the first phase, the Morrier Lane intersection at SR 24 will be three-way, with stop control on the north minor leg. A traffic control signal at SR 24 will be implemented when it is warranted, as determined by the Manual on Uniform Traffic Control Devices (MUTCD) and WSDOT. Based on Condition B of Warrant 1, Eight-Hour Vehicular Traffic, of the MUTCD, a traffic control signal shall be considered when the minor street approach count is at least 75 vehicles per hour for any eight hours within an average day. Traffic volumes on Morrier Lane will be monitored on an annual basis to assist in determining the consideration of a traffic signal. When WSDOT concludes a traffic control signal is necessary, the signal will be designed to include railroad preemption control with blank-out signs for turning traffic from SR 24. Preemption calculations are attached.

By providing additional connectivity and reducing congestion on adjacent roadways, the number of collisions at the Beaudry Road and Birchfield Road intersections at SR 24 may decrease as a result of the Morrier Lane construction. In a prior study, it was determined that intersection collisions along SR 24 (Bell Road, Rivard Road, and Faucher Road) occur at a rate of less than one collision per year when the minor leg is stop-controlled. At the signalized intersections along SR 24 (Birchfield Road and Beaudry Road), collisions occur at an average rate of 3.5 per year. A majority of the collisions at the Beaudry Road and Birchfield Road signalized intersections at SR 24 are rear-end and entering varieties. Based on recorded collisions at minor leg stop-controlled intersections, the majority of collisions are entering. Similar to traffic volumes, collision occurrences and severity of such events will be monitored on an annual basis in determining the need for a signal.

The Morrier Lane extension and related improvements will address public needs by expanding the roadway network, reducing delays, and in turn may reduce collisions. These improvements will ultimately meet a regionally-identified need to create a regionally-significant industrial corridor along SR 24.

Section 12 – Waiver of Hearing by Respondent

Waiver of Hearing

The undersigned represents the Respondent in the petition to modify highway-rail grade crossing warning signals at the following crossing:

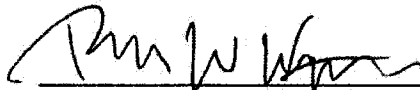
USDOT Crossing No. _____

We have investigated the conditions at the crossing. We are satisfied the conditions are the same as described by the Petitioner in this docket. We agree the warning signals should be modified and consent to a decision by the commission without a hearing.

Dated at Seattle , Washington, on the 7th day of
January , 20 14 .

BNSF Railway

Printed name of Respondent



Signature of Respondent's Representative

Manager Public Projects NW Division WA, ID & BC

Title

206.625.6152, Richard.Wagner@BNSF.com
Phone number and e-mail address

2454 Occidental Avenue South, Ste 2D, Seattle WA 98134

Mailing address

Section 12 - Waiver of Hearing by Respondent

Waiver of Hearing

The undersigned represents the Respondent in the petition to construct a highway-railroad grade crossing.

USDOT Crossing No.: _____

We have investigated the conditions at the proposed or existing crossing site. We are satisfied the conditions are the same as described by the Petitioner in this docket. We agree that a crossing be installed or reconstructed and consent to a decision by the commission without a hearing.

Dated at YAKIMA, Washington, on the 8th day of

JANUARY, 20 14.

Timothy M. Kelly
Printed name of Respondent

Tim Kelly
Signature of Respondent's Representative

Chief Operating Officer
Title

Central Washington Railroad
Name of Company

509-834-2542 tkelly@cbrr.com
Phone number and e-mail address

111 S. University Parkway Suite 200

YAKIMA, WA. 98901
Mailing address

CITY OF MOXEE
Yakima County, Washington

**MORRIER LANE/SR 24 INTERSECTION
AND IMPROVEMENTS**

STATE ENVIRONMENTAL POLICY ACT

ENVIRONMENTAL CHECKLIST

Prepared by



801 North 39th Avenue
Yakima, WA 98902

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www.hlacivil.com

HLA Project No. 13057
August 2013

STATE ENVIRONMENTAL POLICY ACT
ENVIRONMENTAL CHECKLIST

A. BACKGROUND

1. *Name of Proponent:* City of Moxee
Phone Number: (509) 575-8851
Address of Proponent: P.O. Box 249
Moxee, WA 98936

2. *Person Completing Form:* Benjamin A. Annen, EIT
Phone Number: (509) 966-7000
Address: Huibregtse, Louman Associates, Inc.
801 North 39th Avenue
Yakima, WA 98902

3. *Date Checklist Submitted:* August 2013

4. *Agency Requiring Checklist:* City of Moxee
Washington Utilities and Transportation Commission

5. *Name of Proposal, if Applicable:* Morrier Lane/SR 24 Intersection and Improvements

6. *Proposed timing or schedule (including phasing, if applicable):*
Begin Construction September 2014
Complete Construction July 2016

7. *Do you have any plans for future additions, expansions, or further activity related to or connected with this proposal? If yes, explain.*
The corridor along SR 24 between Yakima and Moxee has been targeted as a focal point for future business and industrial development in the *SR 24 Industrial Sub-area Plan*, given the development potential of the Moxee area. The availability of relatively flat, undeveloped land, zoned for industrial and commercial use, with rail access and close proximity to Interstate 82 (I-82) provides the area with an abundance of opportunities to support business and industrial development activities. The Sub-area Plan recommended that a corridor for a new north-south arterial be identified and preserved in the vicinity of the Morrier Lane extension. Beyond the limits of this proposal, the Morrier Lane extension will eventually continue south from SR 24 to Postma Road.

8. *List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.*
An Archaeological Survey and Inventory report was prepared Reiss-Landreau Research on August 20, 2013. Also related to this proposal is the WSDOT

Environmental Classification Summary, which will be submitted following completion of the Section 106 Report.

9. *Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.*

No.

10. *List any governmental approvals or permits that will be needed for your proposal, if known.*

- Moxee City Council – Approval of the project design, authorization to advertise for bids, and award of construction contract.
- WSDOT – Approval of the SR 24/Morrier Lane Intersection Design, construction authorization.
- Washington Utilities and Transportation Commission – Approval of petition to construct a new at-grade railroad crossing.
- BNSF – At-grade railroad crossing approval.
- Selah Moxee Irrigation District – Irrigation crossing permit.

11. *Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page.*

This proposal consists of new construction including a new intersection at SR 24 and Morrier Lane, and widening approximately 1,200 linear feet of SR 24 to a three lane facility with left turn pockets and right turn deceleration tapers. The proposal includes extending a new minor arterial (Morrier Lane) from SR 24 to Mieras Road, through industrially-zoned land to be acquired by the City. As part of the Morrier Lane extension, the proposal includes a new at-grade railroad crossing with BNSF branch line number 0849. The proposal also includes extending Duffield Road from Beaudry Road to the new Morrier Lane extension. Duffield Road will be classified as a major collector. All roadways will be designed to include curb and gutter, sidewalk, storm drainage systems, and illumination. In addition to the roadway improvements, the proposal includes extending City-owned utilities including sanitary sewer and domestic water.

12. *Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, Cityship, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit application related to this checklist.*

The alignment of the intersection and improvements proposed is north of State Route 24, within Sections 34, and 35, Township 13 North, Range 19, East, in Yakima County, as shown on the attached map.

B. ENVIRONMENTAL ELEMENTS

1. EARTH

a. *General description of the site (underline one):* Flat, rolling, hilly, steep slopes, mountainous, other.

b. *What is the steepest slope on the site (approximate percent slope)?*
≤ 5% slope

c. *What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland.*

Soils in Yakima County, classified by the U.S. Department of Agriculture, Natural Resource Conservation Service (NRCS), are described in their 2009 publication, Soil Survey of Yakima County Area Washington. A majority of the soil found within the area of the proposed project is classified as Outlook silt, Sinloc silt loam, and Umapine silt loam. Umapine silt loam is classified as prime farmland.

d. *Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.*

There are no surface indications of unstable soils, but there are moisture sensitive silty soils in the area.

e. *Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.*

Backfilling for utilities will consist of crushed aggregate for pipe zone bedding and native material for trench backfill. Excavation of existing material for construction of new roadway will be kept on site and used for fill slopes. Any additional fill (gravel and soil) will be supplied by the contractor at the time of construction.

f. *Could erosion occur as a result of clearing, construction, or use? If so, generally describe.*

The land in the area of the proposed improvements is very flat. Construction-related ground disturbance will be limited to the right-of-way acquired by the City. The contractor may be required to use dust control measures such as watering of the construction area to eliminate wind-borne erosion if a problem arises. Because of the limited extent of the flat topography, water-borne erosion is not expected to be a problem during construction. Construction of the improvements will not affect wind-borne or water-borne soil erosion following project completion.

g. *About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or building)?*

Approximately 60% of the right-of-way will be covered with impervious surfaces following construction.

- h. *Proposed measures to reduce or control erosion, or other impacts to the earth, if any:*
Potential erosion due to construction activities will be controlled through the implementation of sedimentation and erosion control best management practices.

2. AIR

- a. *What types of emissions to the air would result from the proposal (i.e., dust, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.*

During construction, minor amounts of dust and exhaust from equipment activity may result in emissions to the air. The completed project will have a very minor effect on air quality due to new vehicular traffic and related emissions.

- b. *Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.*

No.

- c. *Proposed measures to reduce or control emissions or other impacts to air, if any:*

The contractor may be required to use dust control measures such as watering of the construction area to eliminate wind-borne erosion if a problem arises. The contractor will also be required to clean mud and dust from public roadways as necessary.

3. WATER

- a. *Surface:*

1. *Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.*

One irrigation canal exists within the project area; the Hubbard Canal. This water body is man-made and does not support either Mid-Columbia River Steelhead (*Oncorhynchus mykiss*) or Bull Trout (*Salvelinus confluentus*). In addition, the water body does not contain habitat suitable for Mid-Columbia River Steelhead or Bull Trout. There are no other bodies of surface water within the project area.

2. *Will the project require any work over, in, or adjacent to (within 200 feet) of the described waters? If yes, please describe and attach available plans.*

The water and sewer main will need to cross under the Hubbard Canal while the new roadway will cross over. The irrigation canal drains into the Yakima River, a water body that does support listed fish (the Mid-Columbia River Steelhead *Oncorhynchus mykiss*, and the Bull Trout *Salvelinus confluentus*). These construction activities are expected to have no effect on water quality within the irrigation canals, and as a result, will have no effect upon the listed fish species within the Yakima River or upon their habitat.

3. *Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.*

None.

4. *Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.*

No.

5. *Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.*

No.

6. *Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.*

No.

b. *Ground:*

1. *Will ground water be withdrawn, or will water be discharged to ground water? Give general description, purpose, and approximate quantities if known.*

Ground water will be withdrawn as required for construction dewatering, if encountered.

2. *Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: domestic sewage, industrial, containing the following chemicals...; agricultural, etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.*

None.

c. *Water Runoff (including storm water):*

1. *Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will the water flow? Will this water flow into other waters? If so, describe.*

All storm water will be collected by catch basins and piped to infiltration trenches meeting the *Eastern Washington Storm Water Manual* standards. This project will not result in the discharge of storm water into a surface water body including any irrigation or drainage canal.

2. *Could waste materials enter ground or surface waters? If so, generally describe.*

No waste materials are anticipated to enter ground or surface waters.

- d. *Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:*
All storm water will be collected on site; no runoff should leave the improvement area.

4. PLANTS

- a. *Check or underline type of vegetation found on the site:*
 deciduous tree: alder, maple, aspen, other
 evergreen tree: fir, cedar, pine, other
 shrubs
 grass
 pasture
 crop or grain
 wet soil plants; cattail, buttercup, bullrush, skunk cabbage, other
 water plants: water lily, eelgrass, milfoil, other
 other types of vegetation: Hops
- b. *What kind and amount of vegetation will be removed or altered?*
Minor amounts vegetation (grass and weeds) will be removed. Hop plants will be removed within the project areas.
- c. *List threatened or endangered species known to be on or near the site.*
There are no listed endangered or threatened plants within the general project vicinity.
- d. *Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:*
None.

5. ANIMALS

- a. *Underline any birds and animals which have been observed on or near the site or are known to be on or near the site:*

Bird: hawk, heron, eagle, songbird, other
Mammals: deer, bear, elk, beaver, other: ground squirrel
Fish: bass, salmon, trout, herring, shellfish, other
- b. *List any threatened or endangered species known to be on or near the site.*
The known endangered or threatened species nearest the project site include the Mid Columbia River Steelhead, the Bald Eagle, and the Bull Trout. All of these species are associated with the Yakima River, approximately 2.5 miles west of the project.

- c. *Is this site part of a migration route? If so, explain.*
The area may be within the Pacific Flyway migratory route for some bird species.
- d. *Proposed measures to preserve or enhance wildlife, if any:*
None.

6. ENERGY AND NATURAL RESOURCES

- a. *What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.*
Street lighting will be operated by electricity.
- b. *Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.*
No.
- c. *What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:*
LED street lights will be used for illumination.

7. ENVIRONMENTAL HEALTH

- a. *Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.*
The water main will be disinfected and flushed with chlorinated water following construction and prior to being put into service. A fuel spill may occur as a result of construction activities.
- Describe special emergency services that might be required.*
Emergency medical aid may be required should an injury occur during construction.
 - Proposed measures to reduce or control environmental health hazards, if any:*
None.
- b. *Noise*
- What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?*
The project area is adjacent to SR 24, thus associated vehicle traffic may exist. Noise from the traffic will not affect the project.

2. *What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.*
Short-term construction noise is anticipated to be from 7:00 a.m. to 7:00 p.m.
Long-term noise will be associated with normal vehicular traffic and rail traffic.
3. *Proposed measures to reduce or control noise impacts, if any:*
Restrict construction to 7:00 a.m. to 7:00 p.m.

8. LAND AND SHORELINE USE

- a. *What is the current use of the site and adjacent properties?*
The current use of the site is agricultural (hop fields), East Valley School District, highway, and railroad right-of-way. Current use of the adjacent properties includes agricultural (hops), East Valley School practice fields, state highway, and Burlington Northern Santa Fe Railroad tracks.
- b. *Has the site been used for agriculture? If so, describe.*
Yes, some of the proposed project site is currently in agricultural use (hop fields).
- c. *Describe any structures on the site.*
A home and garage exist at the east end of the Duffield Road extension at Beaudry Road. The proposed improvements will lie to the North of these structures.
- d. *Will any structures be demolished? If so, what?*
No.
- e. *What is the current zoning classification of the site?*
The project lies within the City of Moxee and the City of Moxee Urban Growth Area. The majority of land is zoned light industrial, and a small portion of the project area is zoned residential.
- f. *What is the current comprehensive plan designation of the site?*
Industrial.
- g. *If applicable, what is the current shoreline master program designation of the site?*
Not applicable.
- h. *Has any part of the site been classified as an "environmentally sensitive" area?*
No.

- i. *Approximately how many people would reside or work in the completed project?*
No people will reside or work in the completed project within the right-of-way. The possible number of additional jobs created by potential development and rail usage is unknown.
- j. *Approximately how many people would the completed project displace?*
None.
- k. *Proposed measures to avoid or reduce displacement impacts, if any:*
Not applicable.
- l. *Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:*
None.

9. HOUSING

- a. *Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.*
None.
- b. *Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.*
None.
- c. *Proposed measures to reduce or control housing impacts, if any:*
Not applicable.

10. AESTHETICS

- a. *What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?*
35 feet; street lights
- b. *What views in the immediate vicinity would be altered or obstructed?*
None.
- c. *Proposed measures to reduce or control aesthetic impacts, if any:*
None.

11. LIGHT AND GLARE

- a. *What type of light or glare will the proposal produce? What time of day would it mainly occur?*
Street light illumination will produce light at night-time. The proposed railroad crossing will produce light if active protection is installed as part of the project.
- b. *Could light or glare from the finished project be a safety hazard or interfere with views?*
No.
- c. *What existing off-site sources of light or glare may affect your proposal?*
None.
- d. *Proposed measures to reduce or control light and glare impacts, if any:*
The new street lights will use LED technology, producing minimal light pollution.

12. RECREATION

- a. *What designated and informal recreational opportunities are in the immediate vicinity?*
Fishing along the Yakima River approximately 2.5 miles to the west. The Yakima Sportsman State Park is located approximately 2.5 miles northwest of the project. The City of Moxee has a city park approximately 2 miles to the southeast.
- b. *Would the proposed project displace any existing recreational uses? If so, describe.*
No.
- c. *Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:*
None.

13. HISTORIC AND CULTURAL PRESERVATION

- a. *Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? If so, generally describe.*
The Hubbard Canal is the only property identified as being present in the area of potential effect for this project. However, because the canal has been altered and modified over time, the cultural resources survey concluded that completion of the project will not constitute an adverse effect on the canal.
- b. *Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.*
See above.

- c. *Proposed measures to reduce or control impacts, if any:*
Casings will be constructed under the canal per irrigation district guidelines.

14. TRANSPORTATION

- a. *Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.*
See attached Figure 1.

- b. *Is the site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?*
No public transit service is provided within the project limits.

- c. *How many parking spaces would the completed project have? How many would the project eliminate?*
Not applicable.

- d. *Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).*
The proposal includes a new public roadway as described in Section A. Background, question 11.

- e. *Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.*
The proposal will provide opportunities for industrial development, creating potential for rail usage.

- f. *How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.*
Vehicular trips would not be generated by the project. Should adjacent industrial properties develop, new vehicular trips would most likely be generated during morning and evening rush hours.

- g. *Proposed measures to reduce or control transportation impacts, if any:*
Temporary measures include providing proper signage and traffic control during construction. Permanent measures include constructing left turn lanes and right turn deceleration tapers on SR 24 at new Morrier Lane intersection.

15. PUBLIC SERVICES

- a. *Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other?) If so, generally describe.*
No.

- b. *Proposed measures to reduce or control direct impacts on public services, if any.*
None.

16. UTILITIES

- a. *Underline the utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, irrigation, cable TV, drains, other.*
Non-city utilities may be extended as part of the improvements.

- a. *Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.*

The project will result in open trench construction of the following City utilities:

- Approximately 6,400 linear feet of new water main including new valves and hydrants; and
- Approximately 3,700 linear feet of new sanitary sewer main including new manholes.

C. SIGNATURE

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.



Proponent or Person Completing Form
Benjamin A. Annen, EIT
Project Consulting Engineer



City of Moxee

September 19, 2013

City of Moxee, applicant;
& SEPA Consulted Agencies;

RE: ER 2013-04
Determination of Nonsignificance

Dear Mayor LaBree:

This office has completed environmental review of your application to construct a new intersection at SR 24/ Morrier Lane, widening approximately 1,200 linear feet of SR 24 to a three lane facility with left turn pockets and right turn deceleration tapers. The proposal includes extending a new minor arterial (Morrier Lane) north from SR 24 to the Mieras Road/Morrier Lane intersection through industrially-zoned land. Right-of-way through this area is to be acquired by the City. As part of the Morrier Lane northerly extension, the proposal includes a new at-grade railroad crossing with BNSF branch line number 0849. The proposal also includes extending Duffield Road westerly from Beaudry Road to the new Morrier Lane northerly extension. Duffield Road will be classified as a major collector. All roadways will be designed to include curb and gutter, sidewalk, storm drainage systems, and illumination. In addition to the roadway improvements, the proposal includes extending City-owned utilities including sanitary sewer and domestic water.


Enclosed is the Determination of Nonsignificance (DNS) issued on September 19, 2013 and agency comments. The appeal period for the DNS expires at 5:00 p.m. on October 4, 2013. This determination fulfills the requirements of the State Environmental Policy Act. If you have any questions on the decision or the appeal process, please call Byron Adams at (509) 575-8851.

Sincerely,

Byron Adams
City Supervisor

DETERMINATION OF NONSIGNIFICANCE

1. **Description of proposal:** To construct a new intersection at SR 24/ Morrier Lane, widening approximately 1,200 linear feet of SR 24 to a three lane facility with left turn pockets and right turn deceleration tapers. The proposal includes extending a new minor arterial (Morrier Lane) north from SR 24 to the Mieras Road/Morrier Lane intersection through industrially-zoned land. Right-of-way through this area is to be acquired by the City. As part of the Morrier Lane northerly extension, the proposal includes a new at-grade railroad crossing with BNSF branch line number 0849. The proposal also includes extending Duffield Road westerly from Beaudry Road to the new Morrier Lane northerly extension. Duffield Road will be classified as a major collector. All roadways will be designed to include curb and gutter, sidewalk, storm drainage systems, and illumination. In addition to the roadway improvements, the proposal includes extending City-owned utilities including sanitary sewer and domestic water.
2. **Proponent:** City of Moxee, applicant
2. **Location of Proposal:** The project is within the corporate limits of the City of Moxee and generally lies within Sections 34 and 35, Township 13 North, Range 19 EWM.
4. **Lead Agency:** City of Moxee
5. **File No:** ER-2013-04
6. **The lead agency for this proposal has determined that it does not have a probable significant adverse impact on the environment. An environmental impact statement is not required under RCW 43.21C.030(2)(c). This decision was made after review of a completed environmental checklist, review of agency and public comments, and other information on file with the lead agency.**

The public comment period for this environmental application was between August 30, 2013 and September 17, 2013. This is a final environmental determination unless appealed to the Moxee City Hearing Examiner by filing a written notice of appeal with the City of Moxee by 5:00 p.m. on or before October 4, 2013.
7. **Responsible Official:** Byron Adams
8. **Position/Title:** City Supervisor
9. **Address:** P.O. Box 249, Moxee, WA 98936
10. **Date:** September 19, 2013
11. **Signature:** 

YAKIMA HERALD REPUBLIC

Affidavit of Publication

STATE OF WASHINGTON,)

COUNTY OF YAKIMA)

Debbie Martin, being first duly sworn on oath deposes and says that she/he is the Accounting clerk of Yakima Herald-Republic, Inc., a daily newspaper. Said newspaper is a legal newspaper approved by the Superior Court of the State of Washington for Yakima County under an order made and entered on the 13th day of February, 1968, and it is now and has been for more than six months prior to the date of publication hereinafter referred to, published in the English language continually as a daily newspaper in Yakima, Yakima County, Washington. Said newspaper is now and has been during all of said time printed in an office maintained at the aforesaid place of publication of said newspaper.

That the annexed is a true copy of a:
CITY OF MOXEE NOTICE OF ENVIRONMENTA

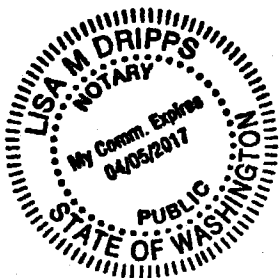
it was published in regular issues (and not in supplement form) of said newspaper once each day and for a period of 1 times, the first insertion being on 08/30/2013 and the last insertion being on 08/30/2013

Yakima Herald-Republic 08/30/13

and the such newspaper was regularly distributed to its subscribers during all of the said period. That the full amount of the fee charged for the foregoing publication is the sum of \$261.43

Debbie Martin

Accounting Clerk



Sworn to before me this 30th day of August 2013

Lisa M. Driggs

Notary Public in and for the
State of Washington,
residing at Yakima

RECEIVED
SEP 03 2013
CITY OF MOXEE

**CITY OF MOXEE
NOTICE OF ENVIRONMENTAL DETERMINATION
MORRIER LANE/SR 24 INTERSECTION AND
ROADWAY IMPROVEMENTS
ER 2013-04**

NOTICE OF PROPOSAL

On August 27, 2013, the City of Moxee received an Environmental Checklist application from the City's Engineering Firm to construct a new intersection at SR 24/ Morrier Lane, widening approximately 1,200 linear feet of SR 24 to a three lane facility with left turn pockets and right turn deceleration tapers. The proposal includes extending a new minor arterial (Morrier Lane) north from SR 24 to the Mieras Road/Morrier Lane intersection through industrially-zoned land. Right-of-way through this area is to be acquired by the City. As part of the Morrier Lane northerly extension, the proposal includes a new at-grade railroad crossing with BNSF branch line number 0849. The proposal also includes extending Duffield Road westerly from Beaudry Road to the new Morrier Lane northerly extension. Duffield Road will be classified as a major collector. All roadways will be designed to include curb and gutter, sidewalk, storm drainage systems, and illumination. In addition to the roadway improvements, the proposal includes extending City-owned utilities including sanitary sewer and domestic water. This application was determined complete for processing on August 27, 2013. A decision on the application should be made within 120 days from the determination of completeness. The proposal is consistent with infrastructure, utilities, city services and the City of Moxee Comprehensive Plan.

ENVIRONMENTAL REVIEW

The City of Moxee is the lead agency for this proposal under the State Environmental Policy Act (SEPA) and expects to issue a Determination of Non-Significance (DNS). The optional process authorized by WAC 197-11-355 is being used. The environmental checklist and other information on file with the City of Moxee are available to the public upon request. The proposal may include mitigation measures under applicable codes, and the project review process may incorporate or require mitigation measures regardless of whether an EIS is prepared. After the comment period, an environmental determination will then be issued without an additional comment period. A copy of the subsequent determination for this proposal may be obtained upon request.

REQUEST FOR WRITTEN COMMENT

Your views on the proposal are welcome. All written comments received by September 17, 2013 will be considered prior to drafting the determination. This may be the only opportunity to comment on the environmental impacts of the proposal. Please mail your comments to City of Moxee, P.O. Box 249, Moxee, Washington 98936. Be sure to reference File No. ER-2013-04 in your correspondence.

If you have any questions about this proposal, please contact Byron Adams at (509) 575-8851.

(356749) August 30, 2013

RECEIVED
SEP 03 2013
CITY OF MOXEE

Courtesy of Yakima Herald-Republic

CITY OF MOXEE
DETERMINATION OF NONSIGNIFICANCE
FILE NO. ER 2013-04

AFFIDAVIT OF MAILING

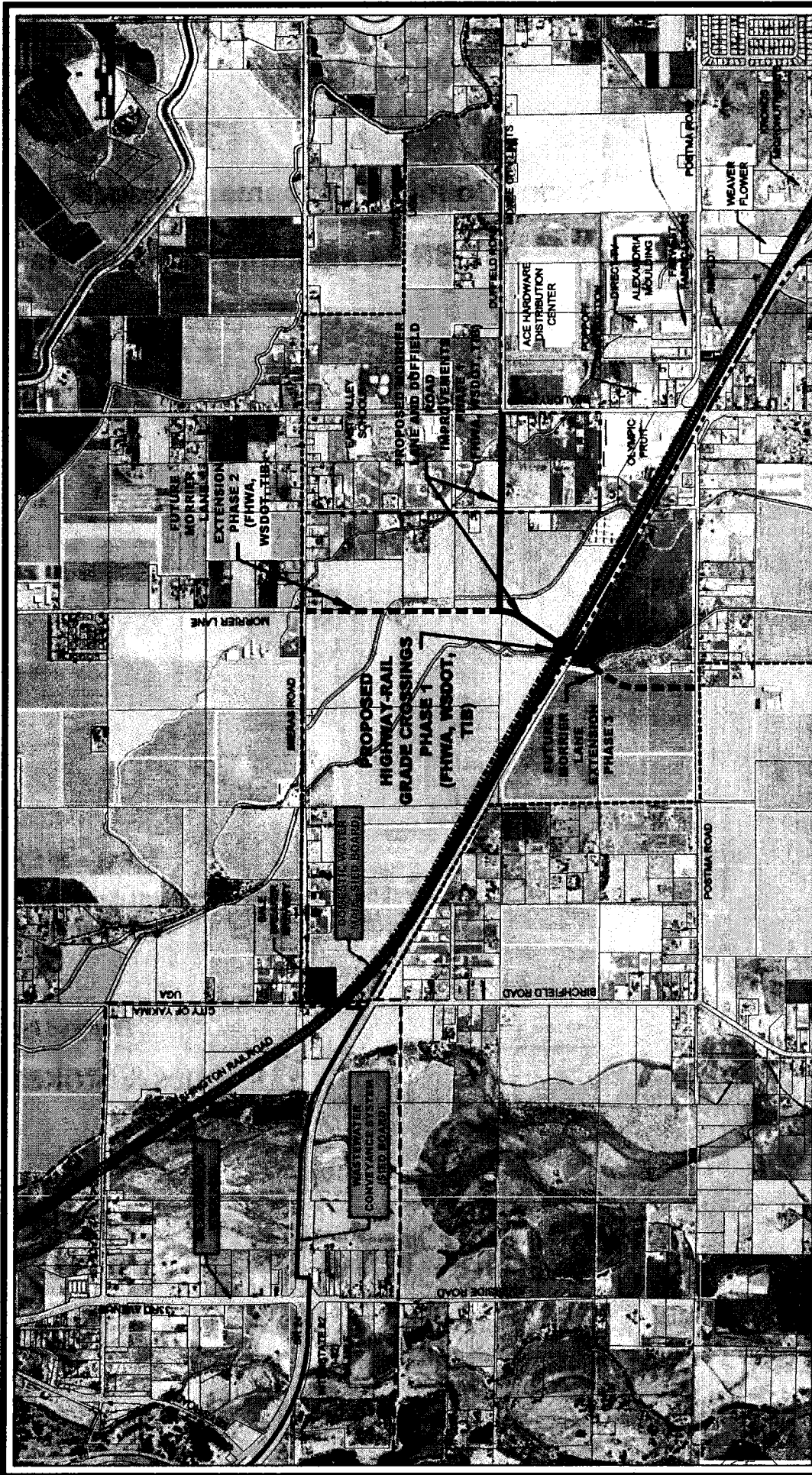
STATE OF WASHINGTON) DETERMINATION OF
)ss NONSIGNIFICANCE
 YAKIMA)

I, Laura Henley, being first duly sworn, and as an employee of the City of Moxee, I dispatched through the United States Mail, a Determination of Nonsignificance, File No. ER 2013-04, which is enclosed here-with; that said Notice was addressed to parties of record, that said parties are individually listed on mailing list retained by the Planning Department and that said notices were mailed by me on the 19th day of September, 2013.

That I mailed said notices in the manner herein set forth and that all of the statements are made herein are just and true. Dated this 19th day of September, 2013.



Laura Henley, Deputy Clerk



One South 24th Avenue
 Thomas, VA 24648
 804-646-7000
 Fax 804-646-5100
 www.hla.com

HLA
 HANCOCK, LEONARD ASSOCIATES, INC.
 Civil Engineering • Land Surveying • Planning

CITY OF MOXEE SR 24 CORRIDOR VICINITY MAP

JOB NO. 13087
 DRAWING NO. SR24_VICINITY
 DATE: 11-28-13

Yakima County Development Association

SR 24 Industrial Sub-area Plan

Prepared for:

**Yakima County Development Association
Yakima, WA**

Prepared by:

 **Jones & Stokes**

*Revised
October 2004*

D. Transportation

Local Road Network

The street system in the Sub-area was originally constructed to support rural agricultural uses. There are several roads that run North-South through the Sub-area which connect to SR-24. According to Yakima County, Birchfield and Beaudry Roads are designated "Major Collectors." Mieras and West Birchfield Roads are designated "Minor Collectors." Keyes Road is designated a "Minor Arterial" as well as a designated Tourist Route.

Traffic Volumes and Level of Service

Analysis indicates that level of service (LOS) for the major intersections in the study area are as follows:

- Riverside Road and SR-24 (currently two-way stop controlled) – LOS F;
- Birchfield Road and SR-24 (signalized) – LOS B;
- Beaudry Road and SR-24 (signalized) – LOS C;
- Bell Road and SR-24 (two-way stop controlled) – LOS A

The LOS standard for Yakima County is LOS C. Analysis shows that all study intersections except Riverside Road are operating within that standard under current conditions.

As discussed in the following section, the intersection of Riverside Road and SR 24 will be improved by WSDOT as part of the SR 24/I-82 interchange improvement project. WSDOT analysis indicates that this improvement will provide adequate capacity to accommodate a high level of projected growth within the area through the year 2020.¹²

Access on SR 24

WSDOT has indicated that under current guidelines, no additional intersections would be allowed on SR 24 between Birchfield Road and Beaudry Road.¹³

Planned or Programmed Improvements

The County's Six-Year Transportation Program has identified several major transportation improvement projects both within the Sub-area and in the surrounding area. This includes funded improvements to Keys Road from Scenic Crest Road to West

¹² Access Point Decision Report, SR 24, I-82 to Keys Road. Washington State Department of Transportation (WSDOT). 2003.

¹³ Kerry Wood, Washington State Department of Transportation, South Central Region. Personal communication with Jennifer Barnes of Jones & Stokes, May 2004.

Birchfield Road, Riverside Road from West Birchfield Road to SR 24, and Beaudry Road in the vicinity of Norman Road. Several unfunded improvement projects have also been identified including Mieras Road from Birchfield Road to a point near White Road and improvements to the bridges on Beauchene Road, Terrace Heights Drive, Demarais Road, and the Moxee Dump Road.¹⁴

WSDOT is implementing a major improvement of the I-82 and SR 24 interchange, which also includes elimination of the intersection of Keys Road and SR 24, and major improvement and signalization of the intersection of Riverside Road and SR 24.¹⁵ In addition, as traffic increases on the SR 24, WSDOT will be evaluating the need to make SR 24 a four lane road from Riverside Road to Moxee as well as to provide grade separated crossings or potentially even rerouting SR 24 if that is a cost effective alternative.

Longer-term road improvements to serve the Sub-area under consideration include:

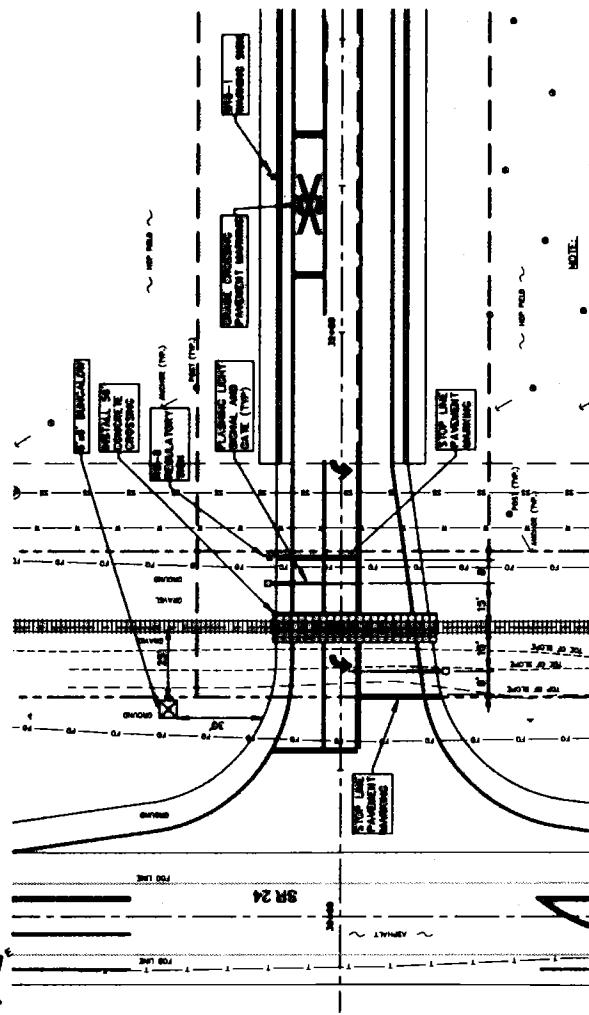
- Securing the right-of-way necessary to accommodate the extension of Morrier Lane south from Mieras Road to provide a north-south arterial connection to SR 24. This would include a signalized intersection with SR 24 and deep truck oriented turn pockets to facilitate right and left turns off of SR 24 without adversely affecting through traffic. In addition, consideration will need to be given in the design phase to providing an appropriate means of crossing the railroad lines.
- A potential new north-south arterial from Roza Hill Drive to connect to SR 24 via Morrier Lane extended.
- A potential new east-west road aligned with Duffield Road to connect the extension of Morrier Lane with Beaudry Road.

Rail

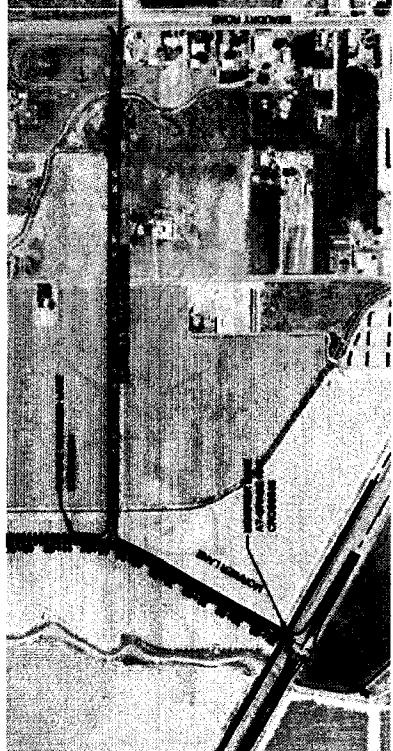
The Sub-area also has freight service provided by the Burlington Northern/Santa Fe Railroad on a designated Rail Emphasis Route. This service is a key ingredient in making the SR 24 Sub-area a unique and viable candidate to focus on in the County for industrial development. The Burlington Northern Santa Fe Railroad generally runs parallel and adjacent to SR-24 through the eastern portion of the Sub-area. At approximately Birchfield Road the rail right-of-way changes direction and heads in a northwest/southeasterly direction, moving away from SR 24.

¹⁴ *Plan 2015* IBID, page XI-22.

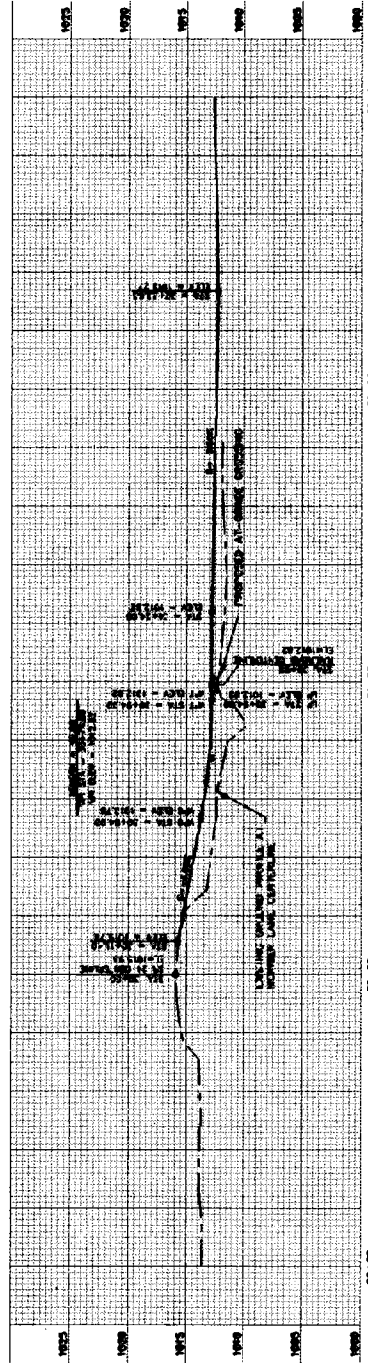
¹⁵ Access Point Decision Report, IBID.



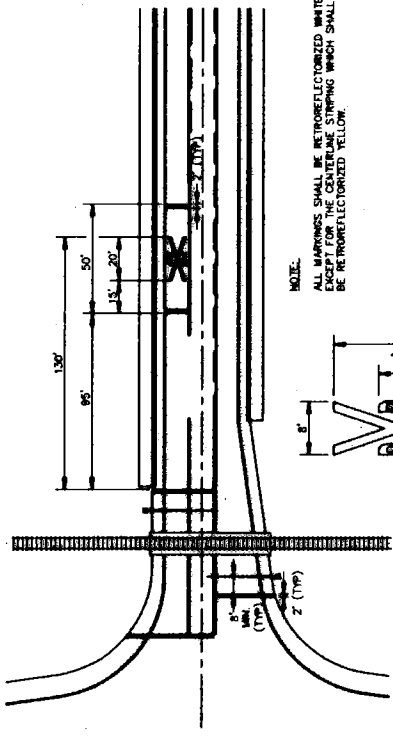
MORRIER LANE AT-GRADE CROSSING



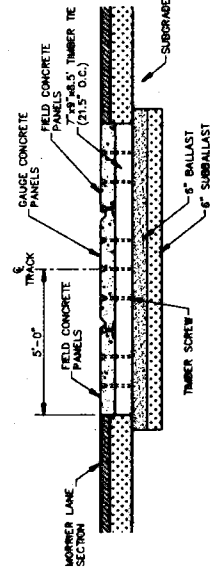
OVERALL PROJECT MAP



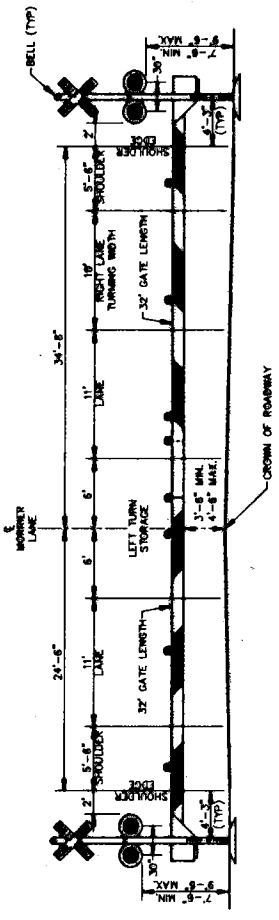
<p>HLA Haskins & Lamson Associates, Inc. Civil Engineering • Land Surveying • Planning</p>	<p>29+00 30+00 31+00 32+00 33+00</p>	<p>PRELIMINARY SUBJECT TO REVISION</p>	<p>JOB NUMBER: 10057</p> <p>DATE: 11-22-13</p> <p>FILE NAME: 10057.dwg</p> <p>DESIGNED BY: RJA</p> <p>ENTERED BY: AJJ</p>	<p>CITY OF MOXEE MORRIER LANE AT-GRADE RAIL CROSSING PLAN AND PROFILE</p>	<p>SHEET 1 of 2</p>
			<p>300 North 20th Avenue Tallahassee, FL 32304 904-644-7900 Fax: 904-644-7900 www.hla.com</p>		



PAVEMENT MARKINGS
NOT TO SCALE



CONCRETE CROSSING PAD
NOT TO SCALE



CROSSING DETAIL STA. 30+83 (LOOKING NORTH)
NOT TO SCALE

NOTE.
THE ACTIVATION OF THE FLASHING LIGHTS AND GATES WILL BE PROGRAMMED TO PROVIDE A CONSTANT WARNING TIME BASED ON TRAIN SPEED.

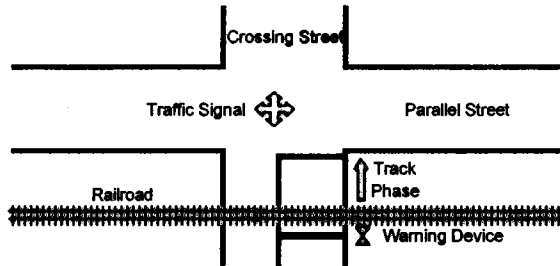
<p>HLA Hullington, Lamm Associates, Inc. Civil Engineering • Land Surveying • Planning</p>	<p>100 South 40th Avenue Tulsa, OK 74106 918-444-7200 Fax: 918-444-3500 www.hla.com</p>	<p>PRELIMINARY SUBJECT TO REVISION</p>	<p>JOB NUMBER: 10057 DATE: 11-22-13 FILE NAME: 10057.dwg DRAWING: 10057.dwg</p>	<p>DESIGNED BY: BJA ENTERED BY: ALH</p>	<p>CITY OF MOXEE MORRIER LANE AT-GRADE RAIL CROSSING DETAILS</p>	<p>SHEET 2 OF 2</p>
		<p>2</p>				



Minnesota Department of Transportation
GUIDE FOR DETERMINING TIME REQUIREMENTS FOR
TRAFFIC SIGNAL PREEMPTION AT HIGHWAY-RAIL GRADE CROSSINGS

City Moxee, WA
 County Yakima
 District WSDOT SCR

Date 11/13/13
 Completed by Ben Annen
 District Approval _____



Parallel Street Name
SR24
 Crossing Street Name
Morrier Lane MP 3.10

Railroad BNSF/CWR
 Crossing DOT# _____

Railroad Contact _____
 Phone _____

SECTION 1: RIGHT-OF-WAY TRANSFER TIME CALCULATION

Preempt verification and response time

- 1. Preempt delay time (seconds) 1.
- 2. Controller response time to preempt (seconds) 2.
- 3. Preempt verification and response time (seconds): add lines 1 and 2 3.

Remarks

 Controller type: _____

Worst-case conflicting vehicle time

- 4. Worst-case conflicting vehicle phase number 4.
- 5. Minimum green time during right-of-way transfer (seconds) 5.
- 6. Other green time during right-of-way transfer (seconds) 6.
- 7. Yellow change time (seconds) 7.
- 8. Red clearance time (seconds) 8.
- 9. Worst-case conflicting vehicle time (seconds): add lines 5 through 8 9.

Remarks

Worst-case conflicting pedestrian time

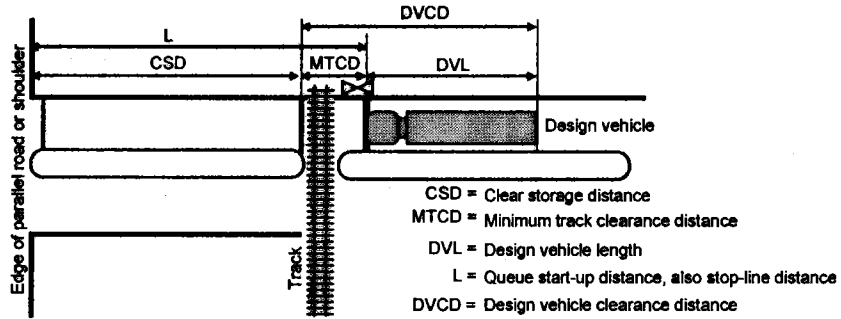
- 10. Worst-case conflicting pedestrian phase number 10.
- 11. Minimum walk time during right-of-way transfer (seconds) 11.
- 12. Pedestrian clearance time during right-of-way transfer (seconds) 12.
- 13. Vehicle yellow change time, if not included on line 12 (seconds) 13.
- 14. Vehicle red clearance time, if not included on line 12 (seconds) 14.
- 15. Worst-case conflicting pedestrian time (seconds): add lines 11 through 14 15.

Remarks

Worst-case conflicting vehicle or pedestrian time

- 16. Worst-case conflicting vehicle or pedestrian time (seconds): maximum of lines 9 and 15 16.
- 17. Right-of-way transfer time (seconds): add lines 3 and 16 17.

SECTION 2: QUEUE CLEARANCE TIME CALCULATION



		Remarks	
18. Clear storage distance (CSD, feet)	18.	33	_____
19. Minimum track clearance distance (MTCD, feet)	19.	32	_____
20. Design vehicle length (DVL, feet)	20.	55	Design vehicle type: _____
21. Queue start-up distance, L (feet): add lines 18 and 19	21.	65	
22. Time required for design vehicle to start moving (seconds): calculate as 2+(L+20)	22.	5.3	Remarks
23. Design vehicle clearance distance, DVCD (feet): add lines 19 and 20	23.	87	_____
24. Time for design vehicle to accelerate through the DVCD (seconds)	24.	13.0	Read from Figure 2 in Instructions.
25. Queue clearance time (seconds): add lines 22 and 24	25.	18.3	

SECTION 3: MAXIMUM PREEMPTION TIME CALCULATION

		Remarks	
26. Right-of-way transfer time (seconds): line 17	26.	33.0	_____
27. Queue clearance time (seconds): line 25	27.	18.3	_____
28. Desired minimum separation time (seconds)	28.	4.0	_____
29. Maximum preemption time (seconds): add lines 26 through 28	29.	55.3	

SECTION 4: SUFFICIENT WARNING TIME CHECK

		Remarks	
30. Required minimum time, MT (seconds): per regulations	30.	20.0	_____
31. Clearance time, CT (seconds): get from railroad	31.	10.0	_____
32. Minimum warning time, MWT (seconds): add lines 30 and 31	32.	30.0	Excludes buffer time (BT)
33. Advance preemption time, APT, if provided (seconds): get from railroad ..	33.	0.0	_____
34. Warning time provided by the railroad (seconds): add lines 32 and 33	34.	30.0	
35. Additional warning time required from railroad (seconds): subtract line 34 from line 29, round up to nearest full second, enter 0 if less than 0	35.	26	

If the additional warning time required (line 35) is greater than zero, additional warning time has to be requested from the railroad. Alternatively, the maximum preemption time (line 29) may be decreased after performing an engineering study to investigate the possibility of reducing the values on lines 1, 5, 6, 7, 8, 11, 12, 13 and 14.

Remarks: Beaudry Road (adjacent crossing) crossing circuit plans from rail road show 20s MWT plus 10s for speed variance and ballast changes plus 4s for equipment response time. These calcs consider the 10s as CT and the 4s as buffer time. Morrier Lane circuit plans should be similar.

SECTION 5: TRACK CLEARANCE GREEN TIME CALCULATION (OPTIONAL)**Preempt Trap Check**

36. Advance preemption time (APT) provided (seconds): 36. Line 33 only valid if line 35 is zero.
37. Multiplier for maximum APT due to train handling 37. See instructions for details.
38. Maximum APT (seconds): multiply line 36 and 37 38. **Remarks**
39. Minimum duration for the track clearance green interval (seconds) 39. **For zero advance preemption time**
40. Gates down after start of preemption (seconds): add lines 38 and 39 40.
41. Preempt verification and response time (seconds): line 3 41. **Remarks**
42. Best-case conflicting vehicle or pedestrian time (seconds): usually 0 42.
43. Minimum right-of-way transfer time (seconds): add lines 41 and 42 43.
44. Minimum track clearance green time (seconds): subtract line 43 from line 40 44.

Clearing of Clear Storage Distance

45. Time required for design vehicle to start moving (seconds), line 22 45.
46. Design vehicle clearance distance (DVCD, feet), line 23 46. **Remarks**
47. Portion of CSD to clear during track clearance phase (feet) ... 47. **CSD* in Figure 3 in Instructions.**
48. Design vehicle relocation distance (DVRD, feet): add lines 46 and 47 48.
49. Time required for design vehicle to accelerate through DVRD (seconds) 49. Read from Figure 2 in Instructions.
50. Time to clear portion of clear storage distance (seconds): add lines 45 and 49 50.
51. Track clearance green interval (seconds): maximum of lines 44 and 50, round up to nearest full second 51.

SECTION 6: VEHICLE-GATE INTERACTION CHECK (OPTIONAL)

52. Right-of-way transfer time (seconds): line 17 52.
53. Time required for design vehicle to start moving (seconds), line 22 53.
54. Time required for design vehicle to accelerate through DVL (on line 20, seconds) 54. Read from Table 3 in Instructions.
55. Time required for design vehicle to clear descending gate (seconds): add lines 52 through 54 55. **Remarks**
56. Duration of flashing lights before gate descent start (seconds): get from railroad 56. **Remarks**
57. Full gate descent time (seconds): get from railroad 57.
58. Proportion of non-interaction gate descent time 58. Read from Figure 5 in Instructions.
59. Non-interaction gate descent time (seconds): multiply lines 57 and 58 59.
60. Time available for design vehicle to clear descending gate (seconds): add lines 56 and 59 60.
61. Advance preemption time (APT) required to avoid design vehicle-gate interaction (seconds):
subtract line 60 from line 55, round up to nearest full second, enter 0 if less than 0 61.

CITY OF MOXEE
Morrier Lane At-grade Railroad Crossing
Wednesday, October 30, 2013 11:00 a.m. to 1:00 p.m.
City Hall, 255 W Seattle Ave, Moxee, WA 98936

DIAGNOSTIC MEETING RECORD

Welcome, Introductions

Kim Rath (IHD-CWR)	Kathy Hunter (WUTC)	Byron Adams (Moxee)
Tim Kelly (CWR)	Richard Wagner (BNSF)	Michael Battle (HLA)
Todd Daley (WSDOT)	Dave McFadden (YCDA)	Ben Annen (HLA)

Project Description

The City of Moxee intends to file a petition with the Washington Utilities and Transportation Commission (WUTC) to allow construction of a new at-grade crossing at the future Morrier Lane arterial and BNSF Railway tracks, operated by Central Washington Railroad (CWR).

Need and Economic Benefits

- SR 24 corridor focal point for regional industrial development
 - Morrier Lane will provide access to 340 acres, light industrially-zoned land
 - Potential for new spurs to future industries
 - Support from:
 - FHWA – \$340,000 funding for design engineering
 - WSDOT – Approved access break in SR 24 for new at-grade intersection
 - TIB – \$50,000 funding for design engineering, \$700,000 for construction
 - Yakima County Commissioners Office – Endorsed
 - Trans-Action Committee – Top project priority list
 - Yakima County Development Association (SIED) – Utility extension funding
 - Yakima Valley Conference of Governments – Top project priority list for region, next in line for construction funding from FHWA
 - SR 24 Corridor Vicinity Map
 - Dave McFadden advised SR 24 corridor last remaining industrial-zoned land with rail access in Yakima Valley. Potential industries only interested if direct access is provided from SR 24, Mieras Road unsuitable for truck traffic movements.
-

Morrier Lane Railroad Crossing Information

Morrier Lane

- Proposed north-south roadway
- Classified as a minor arterial
- Projected AADT of 2,000 vehicles (Year 2015), 12% truck traffic, from 2011 SR 24 and Morrier Lane Intersection Study
- Two lanes, 35 mph posted speed limit



Railroad Tracks

- Industrial Branch Line (Moxee Segment 0446)
- Owned by BNSF, leased by Central Washington Railroad (CWR)
- One set of tracks, two trains per day, four times per week
- Operating train speed 20 mph (authorized), 10 mph (average), must use authorized train speed in calculations
- Existing at-grade crossings: 1.0 mile west (Birchfield), 0.7 miles east (Beaudry)

Design Elements

- Review Preliminary Layout
- Must construct at MP 3.10 on SR 24, sufficient sight distance, WSDOT granted access break to City at this location
- SR 24 and Morrier Lane Intersection
 - Interim – north leg construction only, stop controlled
 - Future – south leg construction, signalized intersection with preemption
- BNSF/WSDOT standards
- Submit to Iron Horse Real Estate for BNSF/CWR Engineering Approval

Active traffic control devices

- Automatic crossing gates
- Flashing light signals
- Warning bells
- Pavement markings
- Advanced warning signs
- Rick stated lights and gates required, always err on side of safety

Future active traffic control devices

- Preemption with future traffic signal when warranted
- Active turn restriction signs
- Kathy advised preemption calculations must be submitted with Petition, regardless if signal is unwarranted by initial construction and conditions

Proposal Alternative

Overpass/Underpass

- Limiting geometric physical characteristics
- 75 feet between SR 24 highway edge and rail centerline
- Requires grade in excess of 30%, substandard for truck traffic
- Deficient sight distance
- Grade separation requires highway realignment
- Excessive costs, provide comparison of cost alternatives

Review action items and next steps

1. Submit petition to respondents (BNSF Railway and Central Washington Railroad) for Waiver of Hearing execution
2. File complete petition with WUTC
3. Dave McFadden to contact Reeve Geary on developing conceptual master plan of SR 24 corridor for marketing

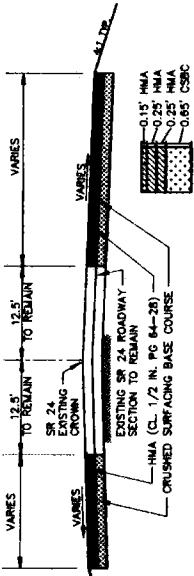
4. Railroad engineering design review by IHD, BNSF standards
 5. Construction & Maintenance agreement execution, between CWR and City
 6. Contractor's right of entry agreement
-

Questions/Concerns

- Kathy Hunter stated acute public need/necessity must be demonstrated beyond economic benefits, and included in petition
- HLA/City discussed reduced congestion at adjacent SR 24 intersections and rail crossings. Unacceptable level of service at adjacent intersections for build-out year without Morrier Lane/SR 24 intersection.
- Rick concerned with queuing and limited storage between SR 24 and railroad, will address on preliminary design
- Traffic signal warranted when? WSDOT to provide signal warrant trigger number for minor leg traffic volumes
- Kathy advised annual signal warrant analysis evaluation may be condition of approved crossing

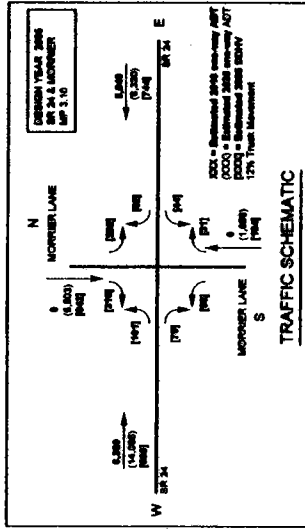
INTERSECTION DESIGN INFORMATION

- MORRIER LANE DESIGN SPEED = 35 MPH
- MORRIER LANE DESIGN LANE = MINOR ARTERIAL
- MORRIER LANE (FUTURE) CLASSIFICATION = MDL-14
- SR 24 DESIGN CLASS = MAJOR FUNCTIONAL ARTERIAL
- SR 24 FUNCTIONAL CLASSIFICATION = MAJOR FUNCTIONAL ARTERIAL
- ACCESS ROAD TYPE = INDUSTRIAL/COMMERCIAL
- SR 24 PORTED SPEED = 35 MPH
- SR 24 DESIGN SPEED = 35 MPH
- SR 24 ADT CURRENT/DESIGN YEAR = 041,000 / 041,000
- SR 24 ADT CURRENT/DESIGN YEAR = 0,300 / 0,400



SR 24 ROADWAY SECTION AT STA. 221+00
NOT TO SCALE

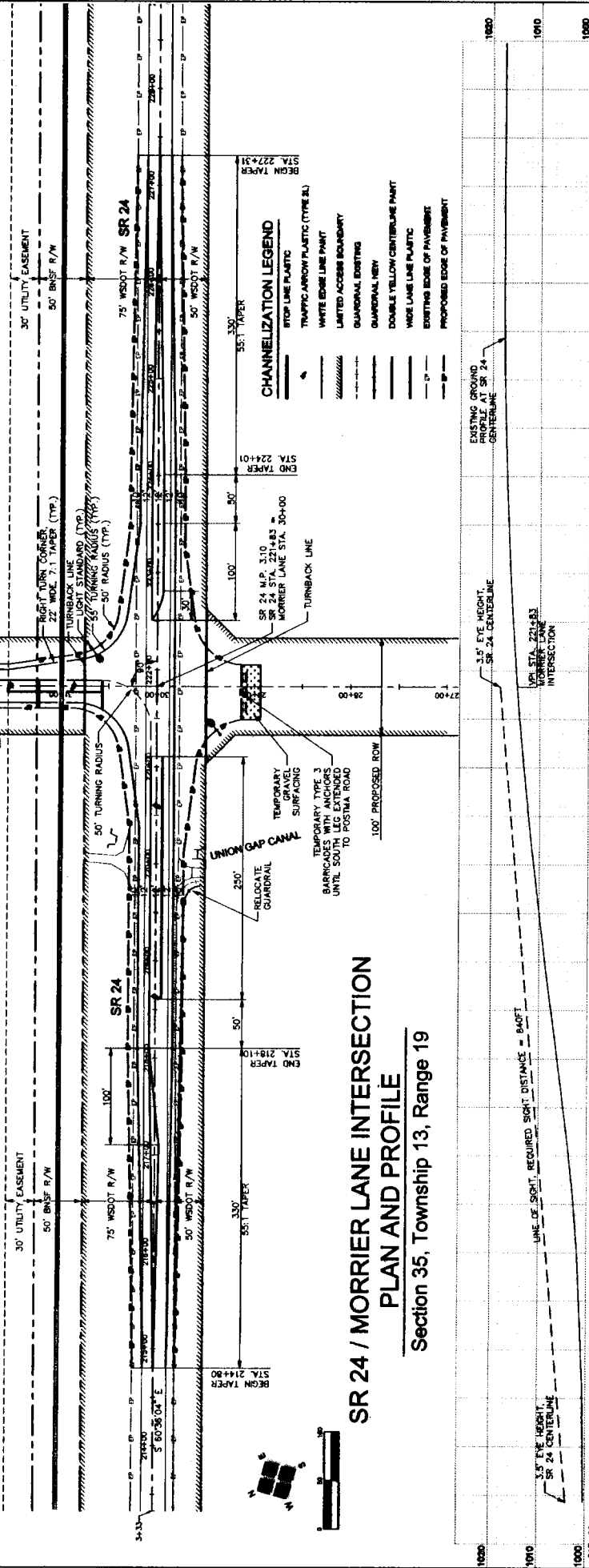
NOTE: MORRIER LANE ROADWAY SECTION TO MEET CITY CURRENT STANDARDS.



TRAFFIC SCHEMATIC

**SR 24 / MORRIER LANE INTERSECTION
PLAN AND PROFILE**

Section 35, Township 13, Range 19



- CHANNELIZATION LEGEND**
- STOP LINE PLASTIC
 - TRAFFIC ARROW PLASTIC (TYPE 2)
 - WHITE EDGE LINE PAINT
 - LIMITED ACCESS BOUNDARY
 - GUARDRAIL EXISTING
 - GUARDRAIL NEW
 - DOUBLE YELLOW CENTERLINE PAINT
 - WIDE LANE LINE PLASTIC
 - EXISTING EDGE OF PAVEMENT
 - PROPOSED EDGE OF PAVEMENT

SOUTH CENTRAL REGION PROJECT DEVELOPMENT

WSDOT
SR 24 / MORRIER LANE INTERIM INTERSECTION PLAN MP 3.10
YAKIMA COUNTY



[Signature]
DATE APPROVED: 11-21-13
AGENCY APPROVAL

PLOTS	IP1	SHEET	1	OF	2
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