

## SR 240 - MP 21.43 TO I-182/MP 36.21

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### **CHARACTERISTICS**

#### **Segment Description:**

This route segment begins at MP 21.43 in Benton County and ends at MP 36.21, the junction of I-182 in Richland. The segment is coincident with SR 182 from MP 34.87 to 36.04 (SR 182 3.83 to 4.95).

**County/Counties:** Benton

**Cities/Towns Included:** This corridor passes through the cities of Richland and Kennewick.

**Number of lanes in the corridor:** 2 to 4

**Lane width:** 12 to 12 feet.

**Speed limit:** 55 to 60 mph.

**Median width:** 0 to 0 feet.

**Shoulder width:** 2 to 8 feet.

#### **Highway Characteristics:**

This route has two functional class designations. From MP 21.43 to MP 30.63 this urban-minor arterial is designated as non-HSS and carries a T-3 freight designation transporting 2,300,000 tons annually. From MP 30.63 to MP 36.21 this urban-principal arterial is designated as NHS and HSS and also carries a T-2 freight designation transporting 7,100,000 tons annually.

#### **Special Use Lane Information (HOV, Bicycle, Climbing):**

There is a slow vehicle lane from MAP 23 to 23.05 right.

#### **Access Control Type(s):**

This route segment has established Limited Access control. From MP 21.43 to MP 34.85 is Partial control and from MP 34.85 to MP 36.21 is Full control.

#### **Terrain Characteristics:**

This route segment is in flat terrain throughout its length. The slow vehicle lane mentioned above is due to traffic pulling away from major intersections.

#### **Natural Features:**

This section allows access to the Hanford Reservation, the Saddle Mountain Wildlife Area and the Hanford Reach of the Columbia River for recreational uses.

#### **Adjacent Land Description:**

This section is adjacent to residential, commercial, private agriculture, rangelands, the Hanford Reservation, and recreational uses.

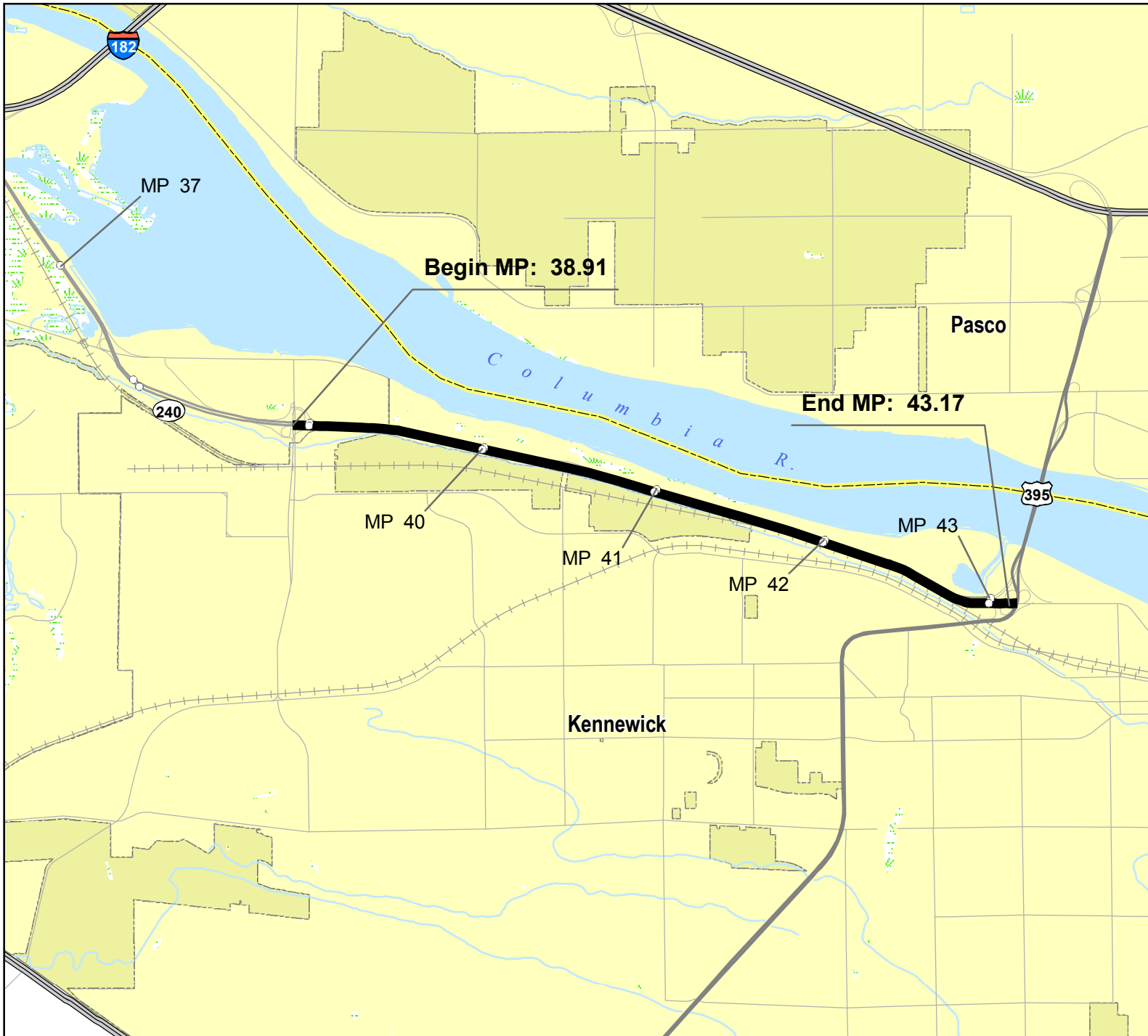
#### **Environmental Issues:**

This section runs through semi-arid area that may be home to small and large animals and birds that may in some cases be endangered.

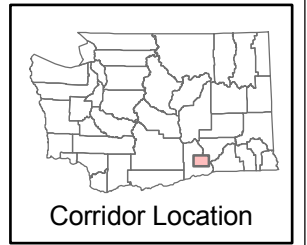
#### **Major Economic Issues:**

There are no major economic issues.

# HSP Congested Corridor Analysis Characteristics



- Milepost Marker
- █ HSP Corridor Location
- ▬ U.S. Interstate
- ▬ U.S. Highway
- ▬ State Route
- ▬ Local Roads
- ▬ Railroad
- ▬ Wetlands
- ▨ Military Reservation
- ▨ Tribal Lands
- ▬ City Limits
- ▬ Urban Area
- ▬ County Line



## SR 240 - MP 21.43 TO I-182/MP 36.21

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### **ASSETS**

#### **Pavement:**

There are 41.74 lane miles of Hot Mix Asphalt and 41.74 lane miles of Bituminous Surface Treatment on this segment of SR 240.

#### **Signal:**

There are six signalized intersections within the urban area of Richland.

#### **Structures:**

There is one structure in this corridor that consists of a Post-Tensioned Box Girder.

(Ramps, and locally owned structures (if any exist) are not identified in this section and may not be reflected on maps.)

#### **Features Crossed:**

There are no features crossed.

#### **ITS Facilities:**

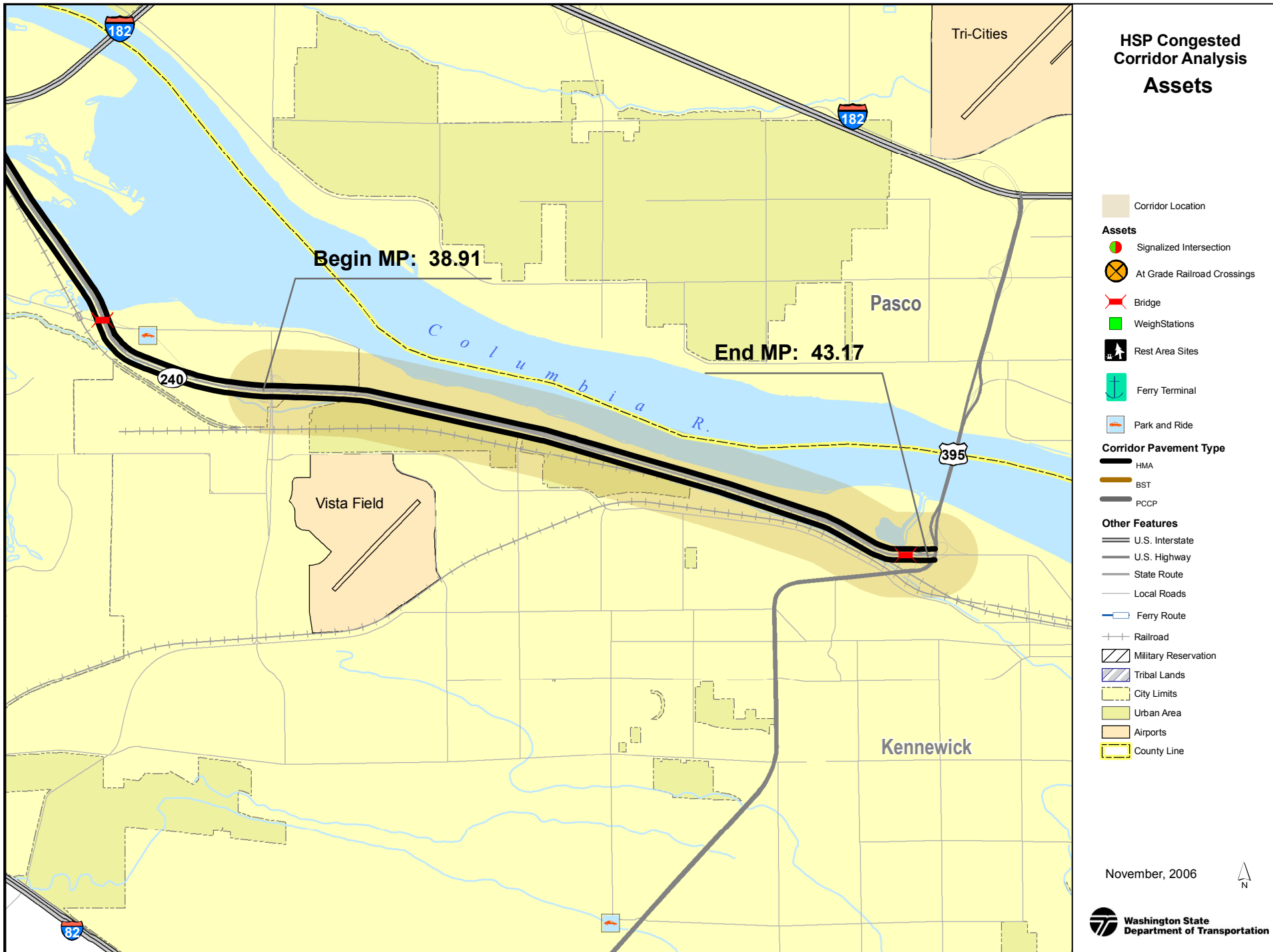
There are no intelligent Transportation systems on this corridor.

#### **Railroad Crossings:**

There is one at-grade crossing at MP 28.55. This BNSF crossing has a single track, flashing lights, gates and is illuminated. Trains using this track travel under 40 miles per hour.

#### **Asset Other:**

None Identified.



**USAGE**

**General Origin and Destination Travel Characteristics:**

This section of highway serves two functions. The start of the section is rural and serves as a commuter route to the Hanford reservation and also as a recreational and trucking route to the Columbia basin. The second part is a by-pass route around the City of Richland and serves as a commuter route and accommodates traffic using the route in lieu of clogged city streets.

**Snow/ice Issues:**

There are no sections within this corridor which present a problem for normal snow/ice control.

**Annual Average Daily Traffic:**

Ranges from 3,600 to 30,000.

**Significant Seasonal Average Annual Daily Traffic Changes:**

The traffic in this corridor has very little seasonal variation.

**General Description of Major Average Annual Daily Traffic Locations:**

Annual average daily traffic volumes increase throughout the section from 7,600 at Horn Road to 33,000 at the I-182 ramp.

**Freight:**

**Freight Classification:** T2

**Yearly Tonnage:** 7.1M

**Truck Percentage of Annual Average Daily Traffic:** 8%

**Additional Usage Comments:**

There are no additional comments.

**Average Annual Societal Cost of All Collisions:** Approximately \$8.73M

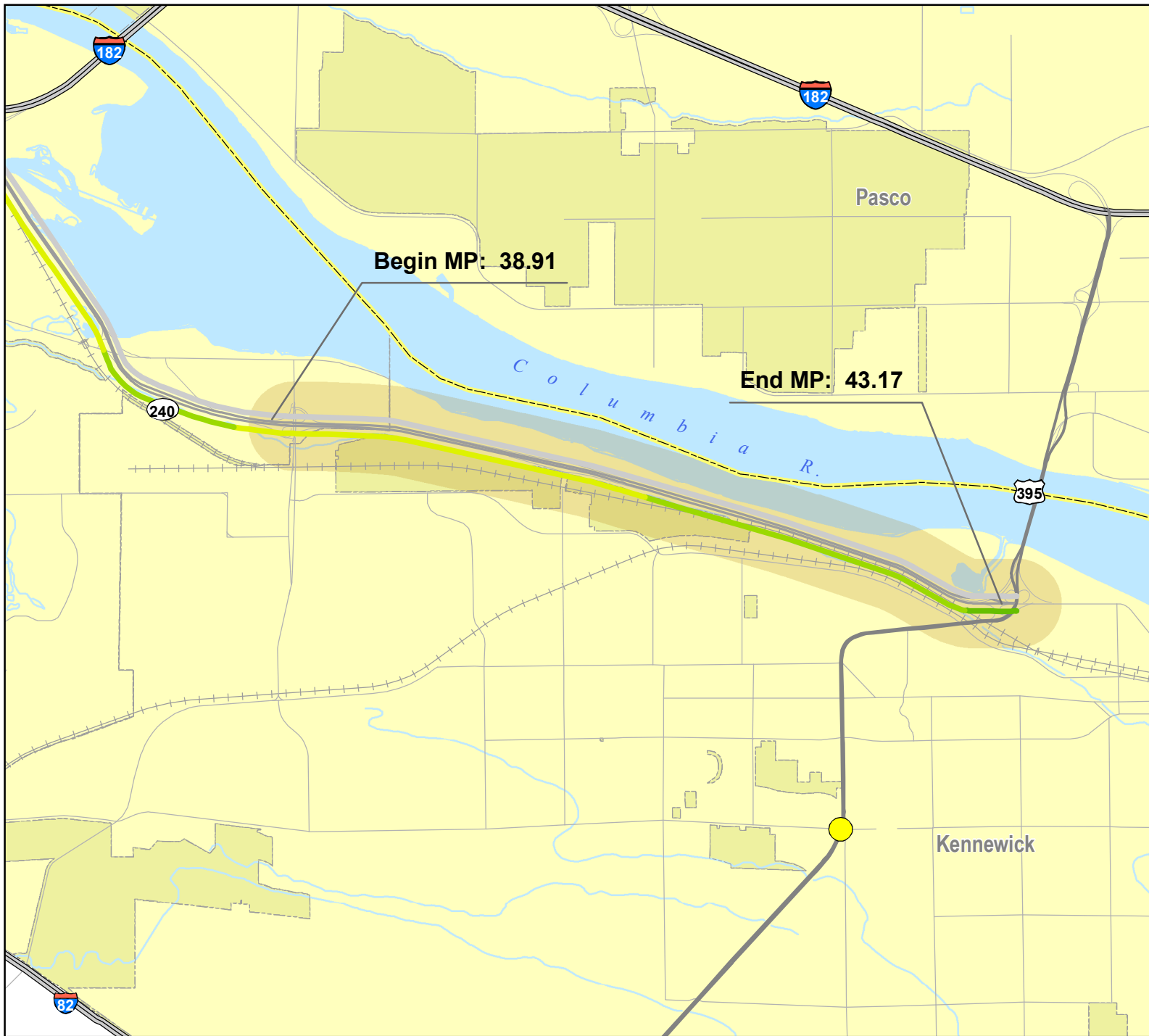
**Collisions:**

**Severe No of Collisions:** 4

**Less Severe No of Collisions:** 189

**List Data Years:** 2003 to 2005

# HSP Congested Corridor Analysis Usage



- HSP Corridor Location
- Safety Analysis Areas**
  - PAL Spot 07-09
  - PAL Corridor 07-09
  - HAC 07-09
  - HAL Corridor 07-09
  - HAL Spot 07-09
- Freight Classification**
  - T-1
  - T-2
  - T-3
- Traffic Sections AADT**
  - < 3,000
  - 3,001 - 10,000
  - 10,001 - 20,000
  - 20,001 - 40,000
  - 40,001 - 80,000
  - 80,001 - 100,000
  - 100,001 - 120,000
  - > 120,000
  - Trucks 10% and Over
- Other Features**
  - U.S. Interstate
  - U.S. Highway
  - State Route
  - Local Roads
  - Railroad
  - Tribal Lands
  - Military Reservation
  - City Limits
  - Urban Area
  - County Line

## ***NEEDS AND STRATEGIES***

### **Preservation**

#### **Pavement Condition and Needs:**

This section from MP 21.43 to MP 28.86 is bituminous surface treatment (BST) last paved in 2000. The section from MP 28.86 to 36.21 is hot mix asphalt (HMA) last paved in 2000.

#### **Pavement Management Strategies:**

This section of bituminous surface treatment (BST) last paved in 2000 is scheduled to be re-paved in 2006 and 2012. The section of HMA was last paved in 2000 and is scheduled to be overlaid in 2010 and 2020.

#### **Structures Condition and Needs:**

There are none described. (This may include ramps and locally owned structures if any exist.)

#### **Structures Management Strategies:**

There are none identified.

#### **Additional Condition and Needs:**

There are none identified.

#### **Additional Management Strategies:**

There are none identified.

### **Improvement**

#### **Mobility Condition and Needs:**

This section of SR 240 experiences traffic back-ups throughout the day especially during the am and pm peak hours Monday through Friday.

#### **Mobility Management Strategies:**

By adding two general purpose lanes from MP 21.43 to MP 28.86 and constructing an urban interchange at the SR 240/Coast/Stevens Drive intersection traffic will flow better and reduce back-ups.

#### **Safety Condition and Needs:**

The two lane section of this corridor experiences many rear-end type collisions due to slowing traffic caused by congestion.

#### **Safety Management Strategies:**

Adding general purpose lanes in the two lane section of this corridor will reduce the occurrence and severity of rear-end collisions.

#### **Environmental Condition and Needs:**

There are none identified.

#### **Environmental Management Strategies:**

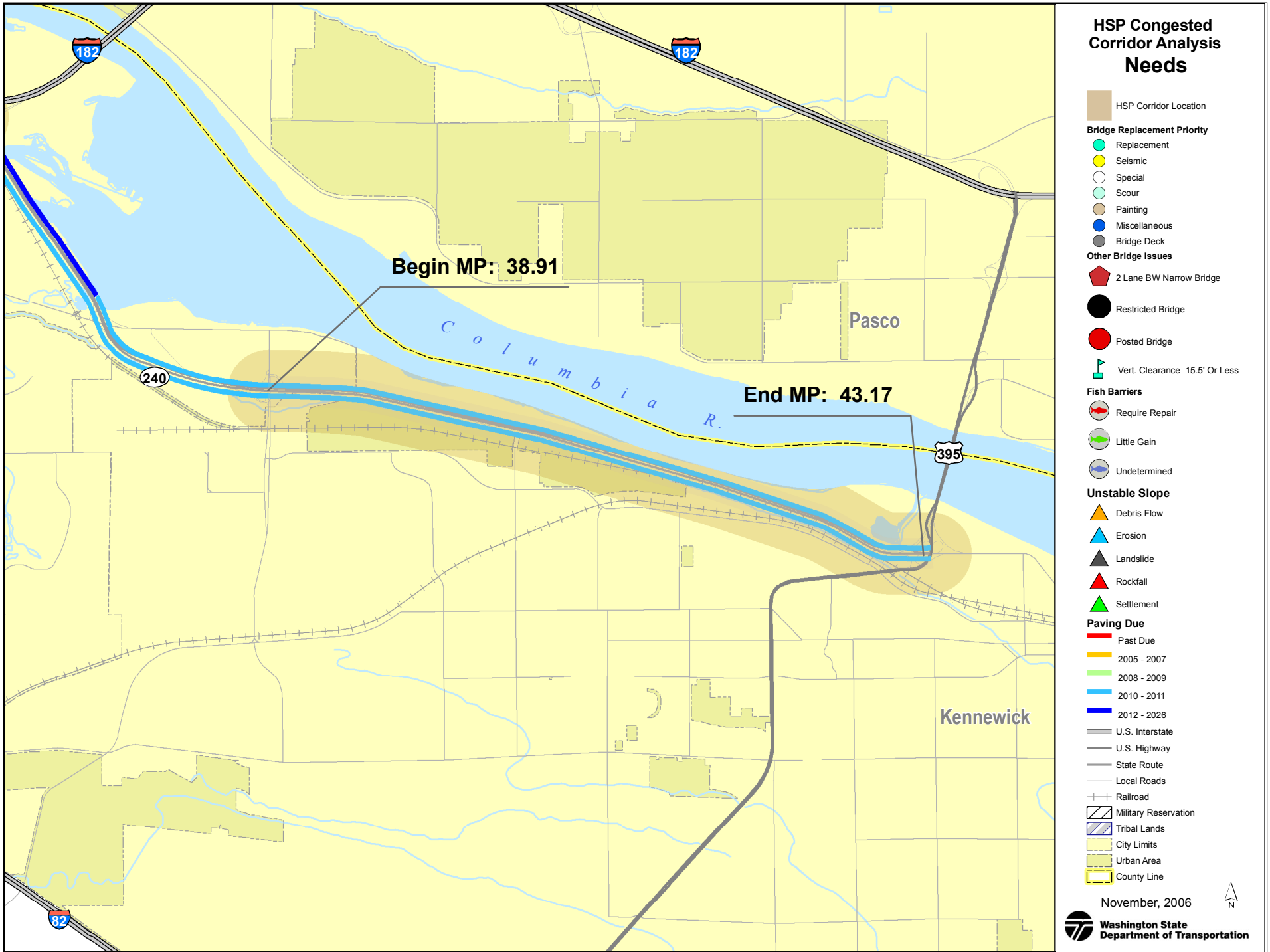
There are none identified.

#### **Restrictions:**

There are none identified.

#### **50-Year Configuration:**

This entire corridor segment lies within the city limits of Richland. As the Hanford reservation continues to transition to private commercial and industrial uses and the surrounding lands begin to infill with residential and recreational uses the character of the roadway will change also becoming a multi-lane divided highway with interchanges and frontage roads to protect the flow of traffic on the highway.



# HSP Congested Corridor Analysis Needs

- HSP Corridor Location
- Bridge Replacement Priority**
- Replacement
- Seismic
- Special
- Scour
- Painting
- Miscellaneous
- Bridge Deck
- Other Bridge Issues**
- 2 Lane BW Narrow Bridge
- Restricted Bridge
- Posted Bridge
- Vert. Clearance 15.5' Or Less
- Fish Barriers**
- Require Repair
- Little Gain
- Undetermined
- Unstable Slope**
- Debris Flow
- Erosion
- Landslide
- Rockfall
- Settlement
- Paving Due**
- Past Due
- 2005 - 2007
- 2008 - 2009
- 2010 - 2011
- 2012 - 2026
- U.S. Interstate
- U.S. Highway
- State Route
- Local Roads
- Railroad
- Military Reservation
- Tribal Lands
- City Limits
- Urban Area
- County Line

November, 2006

## ***TIERED PROPOSED SOLUTIONS***

### **Minimum Fix**

**Description:**

This project will channelize two intersections at MP 25.14 (Twin Bridges Road) and MP 20.49 (Horn Road) and add right turn lanes and illumination.

**Delay Reduction:** None identified.

**Collision Reduction:** None identified.

**Deficient Concrete Lane Miles:** None identified.

**Total Estimate Cost:** 358,300

**Cost Estimate Explanation:**

The estimate is based on intersection improvements

**Minimum Fix Benefits:**

This project will serve to maintain an acceptable level of service on the facility and to enhance safe operations in areas where turning movements are creating congestion and delay. There are \$38,917,181 in Safety benefits associated with this project.

### **Moderate Fix**

**Description:**

This project will add two lanes to the section from MP 21.43 to MP 28.82. Intersections will be channelized and illuminated and signal systems will be constructed.

**Delay Reduction:** None identified.

**Collisions Reduction:** None identified.

**Deficient Concrete Lane Miles:** None identified.

**Total Estimate Cost:** 14,009,700

**Cost Estimate Explanation:**

The estimate is based on intersection improvements and general purpose lane additions.

**Moderate Fix Benefits:**

This project will serve to maintain an acceptable level of service on the facility and to enhance safe operations in areas where turning movements are creating congestion and delay. There are \$119,496,794 in general purpose lane benefits and \$ 36,040,873 in Safety benefits associated with this project.

### **Maximum Fix**

**Description:**

This project will upgrade intersections, add signal and illumination systems, add general purpose lanes and construct an urban interchange at Coast Rd.

**Delays Reduction:** None identified.

**Collisions Reduction:** None identified.

**Deficient Concrete Lane Miles:** None identified.

**Total Estimate Cost:** None identified.

**Cost Estimate Explanation:**

The estimate is based on intersection improvements, signals and illumination, adding general purpose lanes and constructing an urban interchange at Coast Rd.

**Maximum Fix Benefits:**

This project will serve to maintain an acceptable level of service on the facility and to enhance safe operations in areas where turning movements are creating congestion and delay. There are \$ 131,617,092 in general purpose lane benefits and \$ 37,657,760 in Safety benefits associated with this project.

**Off-System Solutions:**

None identified.

**Special Studies/Reports:**

None identified.

**Required Studies**

None identified.

**Start/Completion Date of Study:**

None identified.

**Expected Results**

None identified.

**Funded Projects within Corridor Limits**

Project No	Title
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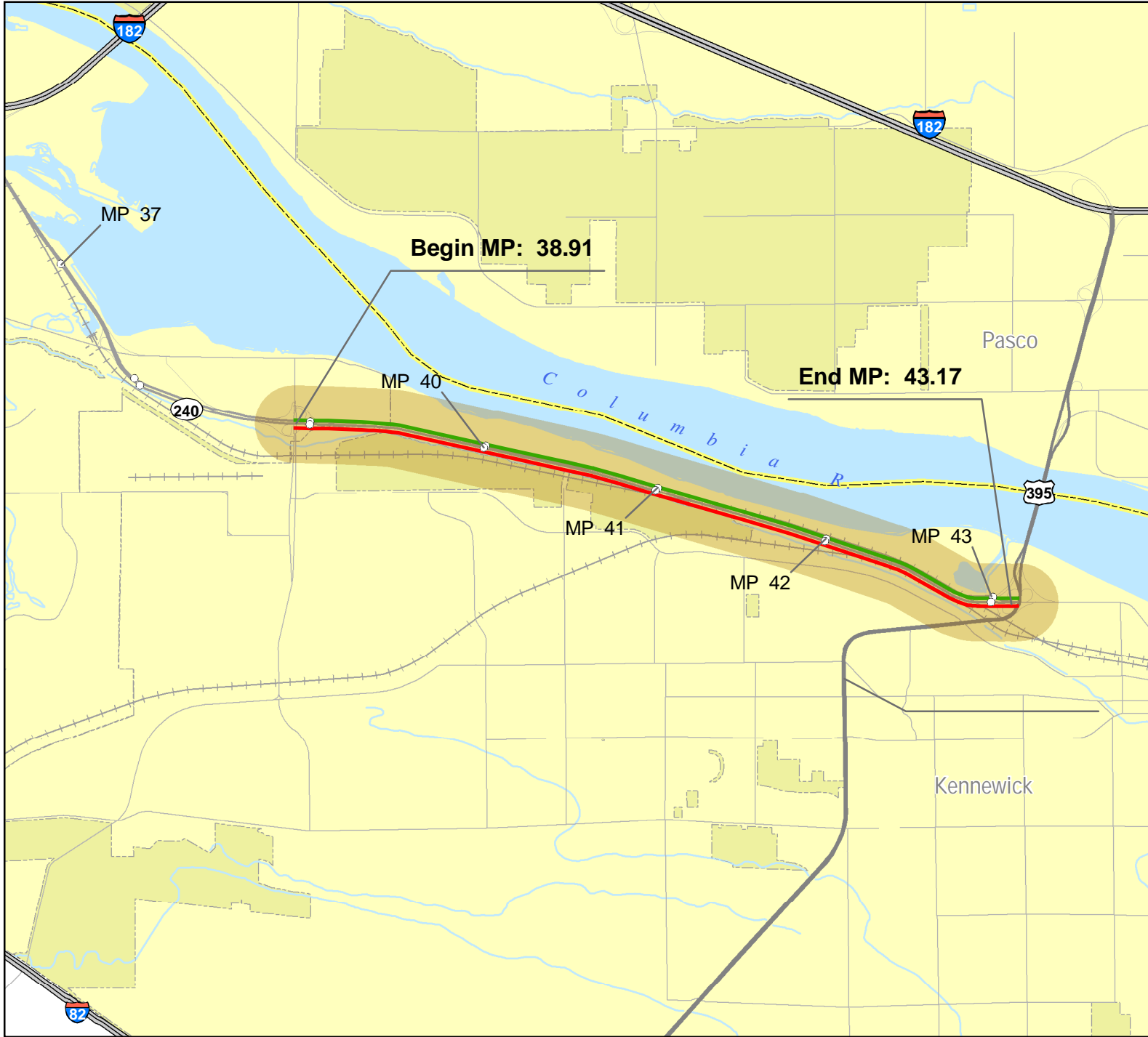
524002E/XL252	SR 240/14 Miles South of SR 24 to Snively Rd. (Construct Passing Lanes)
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**Additional Comments:**

None identified.

**Data Sources and Contacts used:**

Collision Data Mart  
2004 Annual Traffic Report  
2005 State Highway Log  
2003-2022 Washington State Highway System Plan  
Pavement Management System  
Geographic Information System



## HSP Congested Corridor Analysis Solutions

HSP Corridor Location

### Solutions

- Tier 1
- Tier 2
- Tier 3

### Other Features

- U.S. Interstate
- U.S. Highway
- State Route
- Milepost Marker
- Local Roads
- Railroad
- Tribal Lands
- Military Reservation
- City Limits
- Urban Area
- COUNTY

November, 2006

