

Attachment A

Additions and Errata to Revised EA

Attachment A: Additions and Errata to Revised EA

The following additions and corrections apply to the Revised EA and accompanying technical appendices for the Bigelow Gulch Road/Forker Road Urban Connector Havana Street to Sullivan Road, which was issued on November 8, 2007. These corrections serve to clarify or enhance the readability of the Revised EA. Because these changes to the Revised EA neither alter the analysis nor the conclusion of No Significant Impact, the issuance of a Revised EA is not required. Changes to the Revised EA text are identified by the corresponding section number in the Revised EA. These revisions are incorporated into the Revised EA by reference.

Executive Summary

The first paragraph and first sentence of the Project Benefits section on page ES-2 read: “The Bigelow Gulch Road/Forker Road is a history of high collision rates, substandard roadway conditions, and a declining vehicle capacity.”

This sentence has been changed to read: “The Bigelow Gulch Road/Forker Road has a history of high collision rates, substandard roadway conditions, and increasing vehicle demand.”

Chapter 2 Project Description

2.2.2 Why is the project needed?

Transportation Capacity and Roadway Deficiencies

The first paragraph of this subsection of the project Description made reference to Average Annual Daily Traffic (AADT) instead of **Average Daily Traffic (ADT)**. The paragraph read:

“Average Annual Daily Traffic (AADT) represents the average number of vehicles that travel a roadway on a typical day. The 2003 AADT on Bigelow Gulch Road west of Argonne Road was 10,048 trips; that number is projected to increase to 12,000 trips by 2025 if no changes are made to the current infrastructure (No Action). The 2003 AADT on Bigelow Gulch Road (east of Argonne Road) was 7,563 trips; that number is projected to remain approximately level through 2025 under No Action.”

This paragraph should be changed to read:

“**Average Daily Traffic (ADT)** represents the average number of vehicles that travel a roadway on a typical day. The 2003 **ADT** on Bigelow Gulch Road west of Argonne Road was 10,048 trips; that number is projected to increase to 12,000 trips by 2025 if no changes are made to the current infrastructure (No Action). The 2003 **ADT** on Bigelow Gulch Road (east of Argonne Road) was 7,563 trips; that number is projected to remain approximately level through 2025 under No Action.”

2.3.3 What changes to the Urban Connector Alignment have occurred since the January 2006 Environmental Assessment?

The Impervious Surface element of Table 2-2 Summary of Impacts – Original Alignment and Proposed Alignment erroneously indicated 395,287 square feet less net impervious surface. This statement should be removed with the impervious surface area portion of the table to read as follows:

Table 0-1. Summary of Impacts—Original Alignment and Proposed Alignment

Environmental Element	Original Alignment	Proposed Alignment
Impervious Surface	Construct 742,940 square feet of new impervious surface.	Construct 793,252 square feet of new impervious surface. Remove and restore as habitat 339,975 square feet of existing roadway

The area of impervious surface was correctly presented elsewhere in the Revised EA.

Section 4.9 Transportation

Per above errata to Section 2.2.2, Table 4.9-1 in section 4.9 of the Revised EA presents Historical Average Annual Daily Traffic. The title of the table has been correctly changed to: “**Average Daily Traffic (ADT)**” rather than Average Annual Daily Traffic (AADT).

The data presented in Table 9.4-1 is based on 24-hour traffic counts taken on typical weekdays – it is more accurately described as Average Daily Traffic (ADT), based upon the American Association of State Highway and Transportation Officials (AASHTO) definition of counts that are taken over more than one day, but not over every day of a year. Correction to the more accurate term of ADT has been made. As the commenter noted, ADT is typically more conservative than AADT because the averages do not include lower weekend volumes. Please note, the traffic volumes in Table 9.4-1 are presented to show general historic trends. Analysis and design completed for this project are based on peak volumes projected for typical weekdays.

Section 4.10 Air Quality

Attached to this section is a technical memorandum addressing Transportation Conformity for carbon monoxide (CO) and PM₁₀ air quality in the project area. This memorandum combines Appendix C (CO Hot-spot analysis) of the January 2006 EA and a PM₁₀ analysis. The memorandum was prepared to address air quality comments from the U.S. Environmental Protection Agency (see Table E-2 in Attachment E, Letter 48 for EPA comments) and from FHWA. The analysis demonstrated that the proposed project satisfies Transportation Conformity concluded the following:

The proposed project satisfies Transportation Conformity requirements specified by federal regulations 40 CFR Part 93.

Section 4.14 Cultural and Historic Resources

The November 2007 Revised EA included an “Addendum Cultural Resources Survey Report” as Appendix 5 to that document. Reference was made throughout Appendix 5 and in Appendix E of the 2005 Cultural Resources Assessment for the Bigelow Gulch/Forker Road Urban Connector Project to “**Susan Axon**” as author of a 2001 Archeological and Historic Services (AHS) report. The correct spelling of the author’s name is **Susan Axton**.

Section 4.16.5 Social and Economic Elements

Page 4.16-10, second sentence under the Commercial heading states: “Traffic delays may occur to commercial vehicles using along the corridor...”

This has been corrected to read: Traffic delays may occur to commercial vehicles using the corridor...”



Memorandum

Date: March 5, 2008

To: Bill Hemmings, Spokane County Public Works
cc: Jeff Houk, Federal Highway Administration

From: James Wilder

Subject: Transportation Conformity Analysis for Carbon Monoxide and Particulate Matter - Bigelow Gulch/Forker Road Urban Connector, Spokane County, Washington

SUMMARY

Spokane County proposes to construct the Bigelow Gulch Road/Forker Road Urban Connector Project (Connector) within the Spokane County Maintenance Area for carbon monoxide (CO) and particulate matter smaller than 10 microns (PM10). Because the Connector project will receive federal funding it is subject to Transportation Conformity analysis for both CO and PM10.

This Transportation Conformity analysis demonstrates that the proposed project satisfies Transportation Conformity requirements specified by the federal regulations 40 CFR Part 93. This memo consolidates the results of two related air quality technical analyses which were previously prepared as part of NEPA Environmental Assessment for the project:

- January 2006 Environmental Assessment - Appendix C, CO Hot-Spot Analysis prepared October 20, 2005.
- January 2008 Internal Draft Qualitative Particulate Matter Hot-Spot Analysis.

PROJECT DESCRIPTION

The Connector project will widen existing arterial roadways to create an urban corridor between Havana Road at the west end of the project to Wellesley Avenue at the east terminus of the project (Figure 1). The entire Connector is within the Spokane County PM10 maintenance area, and portions of the Connector would be within the CO maintenance area. The projected annual average daily traffic (AADT) volume along the Connector under full buildout conditions is 12,500 to 19,000 vehicles per day for the year 2025 (Jones & Stokes 2007). The following sensitive receptors are present along the corridor:

- 82 single family dwellings within 500 feet of the road.
- Two churches within 500 feet of the road.
- Two schools, with classroom buildings within 200 feet of the road and baseball playfields within 300 feet of the road.

Spokane County has proposed Best Management Practices to reduce construction-phase PM10 emissions generated by windblown dust and tailpipe emissions (Spokane County 2007). Construction-phase impacts would be temporary and localized (less than 5 years at any given location), and are not considered further in this Transportation Conformity analysis.

REGIONAL AIR QUALITY ANALYSIS: INCLUSION IN COMFORMING 2007 REGIONAL TRANSPORTATION PLAN

The proposed Connector is included in the Spokane Regional Transportation Council (SRTC) 2007 Metropolitan Transportation Plan (MTP) (SRTC 2007). That document includes a regional air quality conformity evaluation as required by the federal Transportation Conformity regulation. On-road vehicle emissions from roadways within the nonattainment area were forecast for the period 2005 through 2030, and the forecast emissions were less than the allowable emission budgets specified by the State Implementation Plan.

CARBON MONOXIDE HOT-SPOT ANALYSIS

The CO hot-spot analysis described in this document summarizes air quality memoranda prepared October 20, 2005 and July 21, 2004. The 2004 memorandum concluded that even with traffic volumes that are forecast to be conservatively high, the modeled carbon monoxide (CO) concentrations were much less than the allowable limits. Following subsequent traffic modeling, Spokane County prepared a revised traffic-volume forecast that showed lower volumes than those used for the July 21, 2004 hot spot modeling. The October 20, 2005 updated hot-spot modeling memorandum, using lower traffic volumes, concluded that CO concentrations would also be much less than the allowable limits.

Traffic projections indicate that the number of cars traveling on the Bigelow Gulch Urban Connector would increase considerably over time. However, because the project would increase capacity, improve the overall flow of traffic, and decrease traffic delays, the overall impact would be to decrease carbon monoxide (CO) emissions throughout the project corridor. The intersection of Sullivan Road and Wellesley Avenue was modeled with the Build 2006 and Future 2025 traffic volumes and emission factors. Modeled future concentrations for the proposed project are less than the NAAQS limits. Because the proposed project would likely

improve air quality throughout most of the corridor (an environmental benefit), no mitigation measures are necessary.

National Ambient Air Quality Standards

The U.S. Environmental Protection Agency (EPA) and Washington State Department of Ecology (Ecology) have established regulations that govern both the concentrations of pollutants in the outdoor air and contaminant emissions from air pollution sources. The Spokane Regional Clean Air Agency (SRCAA) enforces federal, state, and local air quality regulations in Spokane County. Although EPA, Ecology, and SRCAA have each established their own standards, EPA standards apply in Spokane County because Ecology and SRCAA have not adopted more stringent standards.

The key air pollutants considered in this report were limited to CO. This air pollutant is emitted in significant amounts during road construction and from vehicles on city streets.

EPA and Ecology establish regulations designed to limit emissions from air pollution sources and to minimize concentrations of pollutants in the outdoor air. Although their regulations are similar in stringency, each agency has established its own standards. Table 1 lists the national and State of Washington ambient air quality standards.

Table 1. National and State of Washington Ambient Air Quality Standards

Pollutant	National (EPA)		Washington State
	Primary	Secondary	
Carbon Monoxide			
8-hour average	9 ppm	9 ppm	9 ppm
1-hour average	35 ppm	35 ppm	35 ppm
Particulate Matter PM10			
Annual-average	50 ug/m3	50 ug/m3	50 ug/m3
24-hour average	150 ug/m3	150 ug/m3	150 ug/m3
Particulate Matter PM2.5			
Annual-average	15 ug/m3	15 ug/m3	15 ug/m3
24-hour average	35 ug/m3	35 ug/m3	35 ug/m3

Notes:

Annual standards never to be exceeded. Short-term standards not to be exceeded more than once per year unless noted.

ppm= parts per million

ug/m3 = micrograms per cubic meter

Air Quality Attainment and Transportation Conformity Status

Portions of the proposed corridor are inside the current CO maintenance area for Spokane County, and the entire project is within the PM10 maintenance area. The eastern terminus intersection of Sullivan Road and Wellesley Avenue is the only signalized intersection inside the CO maintenance area.

Methodology

In accordance with guidance from Spokane Regional Transportation Council (SRTC) (Tsuchida 2003), the CO hot spot analysis focused on the only signalized intersection in the CO nonattainment area at Sullivan Road and Wellesley Avenue.

Traffic volumes used for the modeling were developed based upon the SRTC's Regional Travel Demand Model. In addition, Spokane County (Panaas 2003) provided future roadway geometry and turning movement volumes. Existing and future traffic volumes and turning movements are shown in Figure 2 (Existing Condition), Figure 3 (2025 No Action), and Figure 4 (2025 With Project).

Projected signal cycles and speed limits at the intersection were provided by Spokane County (Panas 2003). Future signal cycles have not yet been designed. As a worst-case assumption, signal cycles for the Build Year (2006) and the Future Year (2025) were assumed to be the same as for the current condition. A cycle time of 60 seconds was used for Wellesley Avenue, with a red time of 35 seconds, and yellow time of 5 seconds. A cycle time of 60 seconds was used for Sullivan Road, with a 15 second red time, and a 5 second yellow time. That intersection is projected to operate at LOS A or B in the design year.

The SRTC (Tsuchida 2003) provided CO emission factors for the Build Year (2006) and Future Year (2020). As a worst-case modeling assumption, the emission factors for the year 2020 were also applied to the year 2025. Emission factors based on the Environmental Protection Agency's (EPA's) MOBILE5B emission model (the emission model that was used for the original 2004 modeling) are listed in Table 2.

Table 2. MOBILE5B Emission Rates for Carbon Monoxide

Speed	Year	
	2006	2020 and 2025
Idle (grams/hour)	185.3	81.3
35 mph vehicle speed (grams per vehicle mile)	15.1	14.4

CAL3QHC Dispersion Model

Impacts from CO associated with the proposed project were evaluated using the CAL3QHC line source dispersion model. EPA and Washington State Department of Transportation (WSDOT) recommend CAL3QHC for CO modeling. The CAL3QHC model estimates the length of vehicle queues formed by idling vehicles at signalized intersections (EPA 1995). The contribution of idling vehicle emissions is estimated and internally converted into line sources using the CALINE3 link format. Input parameters required for the CAL3QHC model include traffic volumes, free flow and idling emission rates, number of travel lanes in each link, and signal timing of each intersection.

At the request of the SRTC (Tsuchida 2003) the modeling was done for two years and two conditions: the Build Year (2006), the Future Year 2025 (No Action), and the Future Year 2025 (With Project). The CAL3QHC model was run with typical default values as specified by EPA guidance (KJS 1995):

- level terrain around each intersection, with no terrain features that could affect downwind dispersion;
- average time of 60 minutes;
- wind speed of 1.0 meters per second;
- E atmospheric stability class;
- wind directions set at 2-degree increments (180 total wind directions);
- surface roughness factor of 175 centimeters; and
- settling and deposition velocities of 0 centimeters per second.

Mixing zone widths were based on the number of lanes in each model link, assuming a standard lane width of 12 feet. A 10-foot turbulence zone was added to each side of modeled free-flowing

links. Background CO concentrations of 3 parts per million (ppm) and 2.1 ppm were used for 1-hour and 8-hour averaging periods, respectively. The modeled 1-hour CO concentration was converted to an estimated 8-hour concentration by applying a 0.7 scale factor.

Carbon monoxide concentrations were estimated at locations referred to as “sensitive receptor sites.” Sensitive receptor sites are those locations where the maximum total CO concentration is likely to occur and where the general public is likely to have continuous access (e.g., sidewalks). Receptor locations used in this analysis were determined from aerial photographs. Receptors were placed at sidewalk locations adjacent to the queues that form at traffic signals. Consistent with EPA recommendations, receptors were located on sidewalks approximately 50 feet and 100 feet from cross streets, 10 feet from the edge of the nearest traffic lane, and 5.9 feet (1.8 meters) above the ground to correspond to a typical breathing height. A total of 22 receptor sites were modeled around the intersection.

Significance Criteria for Transportation Conformity for CO

Transportation projects proposed for construction within nonattainment areas or maintenance areas are subject to the Transportation Conformity regulations specified under the federal regulations 40 CFR Part 93. The permitting agency must demonstrate conformity by the following steps:

- Confirm the project is included in the regional Transportation Improvement Plan.
- Use an EPA-approved air quality dispersion model to assess CO concentrations at the most heavily congested intersections.
- If the modeled CO concentration exceeds the NAAQS limit and the modeled concentrations for the Proposed Action Alternative exceed those for the No Action Alternative, the proponent must provide mitigation to reduce the CO concentrations for the Proposed Action.

Modeled Carbon Monoxide Concentrations for Intersection of Sullivan Road and Wellesley Avenue

As shown in Table 3, the modeled CO concentrations for the Year 2025 With Project condition are slightly higher than those for the Year 2025 No Action. However, the modeled 1-hour and 8-hour average CO concentrations were less than the allowable NAAQS limit for each of the modeled scenarios. Therefore, it is concluded the project would not cause any significant air quality impacts.

The horizon year 2025 is presented in this document to demonstrate compliance for the full-buildout land use condition. Federal Highway Administration (FHWA) requested that this

Transportation Conformity analysis should also assess the horizon year 2030, which is the horizon year listed in the 2007 MTP. The forecast 2030 population and regional traffic volumes are not substantially different from the forecast 2025 traffic volumes described in the November 2007 Revised EA, which were the basis for this air quality assessment. The regional growth factor described in the 2007 MTP is 1.055% per year. Using that growth factor, the 2030 regional traffic volumes (and the local traffic volumes along the Connector) are expected to be only 5.5% higher than the forecast 2025 volumes. It is unlikely such a small adjustment to the 2025 traffic volumes used for this air quality analysis would alter the conclusions of the analysis.

Table 3. Modeled 1-Hour and 8-hour CO Concentrations^a

Intersection and Modeled Year	CO Concentration Including Project (ppm)		Allowable NAAQS Limit (ppm)	
	1-Hour	8-hour	1-hour	8-hour
Sullivan Road and Wellesley Avenue				
2006 (Build Year)	4.5	3.2	35	9
2025 (No Action)	4.6	3.3	35	9
2025 (With Project)	5.6	3.9	35	9
^a Listed concentrations include background: 3 ppm (1-hour) and 2.1 ppm (8-hour).				

QUALITATIVE PM10 HOT-SPOT ANALYSIS

The Connector would be constructed within the Spokane County Maintenance Area for PM10. This qualitative PM10 hot-spot analysis was prepared according to EPA guidance (EPA 2006). The qualitative analysis accounts for primary emissions (road dust, tailpipe emissions, tire wear, and break wear), but does not consider temporary short-term construction emissions. As described in the following sections, the Connector project satisfies Transportation Conformity requirements for PM10 for the following reasons:

- SCRCOA has prepared the PM10 maintenance plan (SRCAA 2004), which demonstrates ongoing emission control programs will ensure the ambient impacts from combined sources within the maintenance area (including new and expanded roads such as the Connector) will be less than the allowable limits.
- The Connector project is included in the regional Metropolitan Transportation Plan (MTP) (SRTC 2007).

- By comparison to historical PM10 monitoring data for a monitoring station adjacent to busy roadways (the Latah Creek Neighborhood monitoring station), it is unlikely that the Connector will cause a PM10 hot-spot (i.e., cause ambient PM10 concentrations near the road to approach allowable ambient limits).

Spokane County has proposed Best Management Practices to reduce construction-phase PM10 emissions generated by windblown dust and tailpipe emissions (Spokane County 2007). Construction-phase impacts would be temporary and localized, and are not considered further in this Transportation Conformity analysis.

PM10 and PM2.5 Attainment Status and Regional Emissions

The entire Connector corridor is within the Spokane County PM10 maintenance area. The PM10 maintenance plan for the area was prepared by SRCAA in 2004 and was approved by EPA (Washington Department of Ecology 2004). The Year 2002 PM10 emission inventory developed for the attainment plan showed the major emission sources within the maintenance area to be unpaved roads (47% of total), residential wood stoves (30% of total) and construction emissions (6% of total). Entrained dust from paved roads accounted for only 3% of the total PM10 emissions, while on-road mobile sources (tailpipe emissions, tire and brake wear) accounted for only 2% of the total.

Based on recent PM2.5 monitoring data, the Washington Department of Ecology (Ecology) has recommended that Spokane County be designated an attainment area for PM2.5 (Edgar personal communication 2007). As a result, this memorandum does not include an analysis of PM2.5 emissions or ambient impacts for the Bigelow Gulch Urban Connector project since such an analysis would not be required in an attainment area.

Existing PM10 Ambient Concentrations

SRCAA and Ecology operate PM10 monitoring stations in the county. Those monitoring stations have indicated ambient PM10 concentrations in the Spokane area are low, and the region has been in attainment for PM10 since the mid-1990s. Table 4 shows recent PM10 monitoring data for the two active monitoring stations near Spokane, and the allowable ambient concentration limits specified by the National Ambient Air Quality Standards (NAAQS). Data collected in 1999-2000 at the temporary Latah Creek Neighborhood monitoring station, which was done as part of a special study by SRCAA, are also listed in the table. PM10 concentrations at any station are considered to be in attainment if the measured 2nd highest 24-hour value is less than the allowable (NAAQS) limits of 150 micrograms per cubic meter and 50 micrograms per cubic meter, respectively. As listed in Table 4, there were no monitored PM10 exceedances during the period 2003-2007.

**Table 4. Historical PM10 Monitoring Data for Spokane, WA
 (All data in micrograms per cubic meter)**

Monitoring Site and Monitoring Date	4601 N. Monroe Street	3530 East Ferry Avenue	Latah Creek Neighborhood (North Station)
<u>2007</u> Highest 24-hr 2 nd Highest 24-hr Annual Average	62 61 No Data	58 49 No data	No data
<u>2006</u> Highest 24-hr 2 nd Highest 24-hr Annual Average	No data	101 88 26	No data
<u>2005</u> Highest 24-hr 2 nd Highest 24-hr Annual Average	No data	143 142 26	No data
<u>2004</u> Highest 24-hr 2 nd Highest 24-hr Annual Average	57 25 22	138 113 27	No data
<u>2003</u> Highest 24-hr 2 nd Highest 24-hr Annual Average	61 53 20	104 89 27	No data
<u>1999-2000</u> Highest 24-hr 2 nd Highest 24-hr Annual Average	58 54 19	126 86 27	58 51 30
<u>National Ambient Air Quality Standards</u> 24-hour average: 150 Annual-Average: 50 Sources: EPA 2007; SRCAA 2000.			

Comparison to Surrogate PM10 Monitoring Station

According to EPA guidance for PM10 hot spot analyses (EPA 2006), one preferred method to evaluate potential future PM10 hot spots near a proposed new roadway project is “Comparison to another location with similar characteristic”. To do so, a “surrogate” air quality monitoring station located near an existing roadway that is similar to the proposed project is evaluated. If the surrogate station has historically shown no PM10 exceedances and the historical traffic volumes along the roads near the surrogate station are higher than the forecast traffic volumes along the proposed project, then it can be inferred that no PM10 hot spots are likely to occur in the future near the proposed new roadway.

SRCAA’s historical Latah Creek Neighborhood monitoring station was selected as the surrogate by which to evaluate potential future impacts near the Connector. SRCAA operated the Latah Creek PM10 monitoring station from 1999-2000 as a special study to assess whether the agency’s regional monitoring stations adequately represent site-specific concentrations in a residential area. The locations of the two monitoring stations operated in the Latah Creek Neighborhood are shown in Figure 5. The monitors were mounted on telephone poles next to a major thoroughfare (Inland Empire Way), in a residential area near two freeways (I-90 and State Route 195). The Latah Creek station therefore represents an urbanized residential environment that experiences higher traffic volumes than will occur at the Connector. The historical traffic volumes and truck percentages that occurred along I-90 and SR-195 were obtained from the WSDOT web site (WSDOT 2007). The traffic volumes and truck percentages at the Latah Creek neighborhood are compared in the forecast traffic volumes along Bigelow Gulch Connector in Table 5.

As listed in Table 4 the measured 2nd-highest 24-hour PM10 concentration at the Latah Creek monitoring station was 51 micrograms per cubic meter, which is only a small fraction of the NAAQS limit of 150 micrograms per cubic meter. Furthermore, as listed in Table 5 the traffic volumes and truck percentages on the major roadways near the Latah Creek monitoring station were much higher than the forecast full-buildout traffic volumes for Bigelow Gulch Connector project. Based on that comparison, it is unlikely the future PM10 concentrations near the Connector would approach the ambient air quality limits.

Table 5. Comparison of Traffic Volumes and Truck Percentages: Bigelow Gulch Connector vs. Latah Creek Neighborhood

Roadway	AADT Traffic Volume	Truck Percentages
Future Connector (Full Buildout, 2025)	12,500 – 19,000	9% - 10%
I-90 Near Latah Creek Neighborhood (WSDOT 2007)	101,000	13% - 25%
SR-195 Near Latah Creek Neighborhood (WSDOT 2007)	13,000 – 14,000	13% - 23%
Inland Empire Way	Unknown	Unknown

The horizon year 2025 is presented in this document to demonstrate compliance for the full-buildout land use condition. As previously mentioned, FHWA requested that this Transportation Conformity analysis also assess the year 2030, which is the horizon year listed in the 2007 MTP. The forecast 2030 population and regional traffic volumes are not substantially different from the forecast 2025 traffic volumes described in the November 2007 Revised EA, which were the basis

for this air quality assessment. The regional growth factor was previously described in this memorandum and will not be repeated here. Since the 2025 traffic volumes are not substantially different than the 2030 volumes, but the on-road vehicle fleet would be expected to have slightly higher emission rates in 2025, the year 2025 was selected as the year of peak emissions for this project.

Evaluation of “Contributing Factors” Demonstrating Suitability of “Surrogate Monitor” Comparison

The use of the “surrogate monitor” method to evaluate PM10 hot spots adequately demonstrates the Connector will conform to the State Implementation Plan, based on the following contributing factors:

Air Quality. Measured PM10 concentrations at the surrogate monitor were less than the allowable ambient air quality standards.

Transportation and traffic conditions. Traffic volumes and truck percentages were higher at the surrogate monitor location, where measured PM10 concentrations were within ambient standards.

Built and natural environment. The surrogate monitor location was at least as urbanized as the region around the Connector, so the surrogate monitor location is suitable.

Climate. Weather patterns are similar at the Corridor location and at the surrogate monitor.

Adopted emission control measures. Fugitive dust control measures adopted by WSDOT and Spokane County are equivalent at the state highways near the surrogate monitor location and at the Connector.

CONCLUSION OF TRANSPORTATION CONFORMITY ANALYSIS

The proposed project satisfies the requirements under Transportation Conformity for the following reasons:

- The project is included in the conforming transportation plan and transportation improvement program .

- Predictive modeling of CO concentrations at the intersection of Sullivan Road and Wellesley Avenue determined CO levels would be well below the NAAQS air quality limits under all future scenarios. No impacts are expected and therefore no mitigation is provided.
- The qualitative PM10 hot spot analysis demonstrates it is unlikely the Connector would cause localized PM10 concentrations near the roadway to approach the ambient air quality standards.

CITATIONS

Edgar, Ron. Spokane Regional Clean Air Agency. January 3, 2008. Telephone conversation with Jim Wilder of Jones & Stokes regarding PM10 and PM2.5 attainment status

Environmental Protection Agency. 1992. User's guide to CAL3QHC version 2.0: a modeling methodology for predicting pollutant concentrations near roadway intersections. Office of Air Quality Planning and Standards, Technical Support Division, Research Triangle Park, NC. November 1992. EPA-454/R-92-006.

Environmental Protection Agency. 2007. AirData: Access to Air Pollution Data. Available: <http://www.epa.gov/oar/data/> Accessed January 2008.

Environmental Protection Agency. 2006. Transportation Conformity Guidance for Qualitative Hot-Spot Analyses in PM2.5 and PM10 Nonattainment and Maintenance Areas. EPA Report EPA-420-B-06-902. March 2006.

Jones & Stokes. 2007. Revised Environmental Assessment and Section 4(f) Evaluation. Bigelow Gulch Road/Forker Road Urban Connector. Prepared for Federal Highway Administration and Washington State Department of Transportation. November 2007.

KJS (KJS Associates, Inc.). 1995. Guidebook for Conformity. KJS Associates, Inc.

Tsuchida, Pam. Spokane Regional Transportation Council. March 30, 2003 - telephone conversation and email correspondence with Jamie Burrell and James Wilder of Jones & Stokes.

Spokane Regional Transportation Council. 2007. Metropolitan Transportation Plan Update, 2007. Available on web site. www.srtc.org/mtp%Update.html. Accessed February 2008.

Spokane County Air Pollution Control Authority. 2000. Latah Valley PM10/PM2.5 Air Quality Study (May 1999 – April 2000. Available: www.spokanecleanair.org/air_quality_reports.asp

March 5, 2008
Bill Hemmings
page 13

Spokane Regional Transportation Council. 2007. Transportation Improvement Program for Spokane County, FY 2007 – FY 2010. Prepared by Spokane Regional Transportation Council. October 12, 2006.

Panaas, Chris. Spokane County. March 25, 2003 - telephone conversation and email correspondence with Jamie Burrell of Jones & Stokes.

Washington Department of Ecology. 2004. A Plan for Maintaining Particulate Matter (PM10) National Ambient Air Quality Standards in the Spokane Moderate Nonattainment Area. October 2004.

Washington State Department of Transportation 2007 Transportation Data, Annual Traffic Report. Reviewed January 2008. Available:
www.wsdot.wa.gov/mapsdata/tdo/annualtrafficreport.htm

Figures

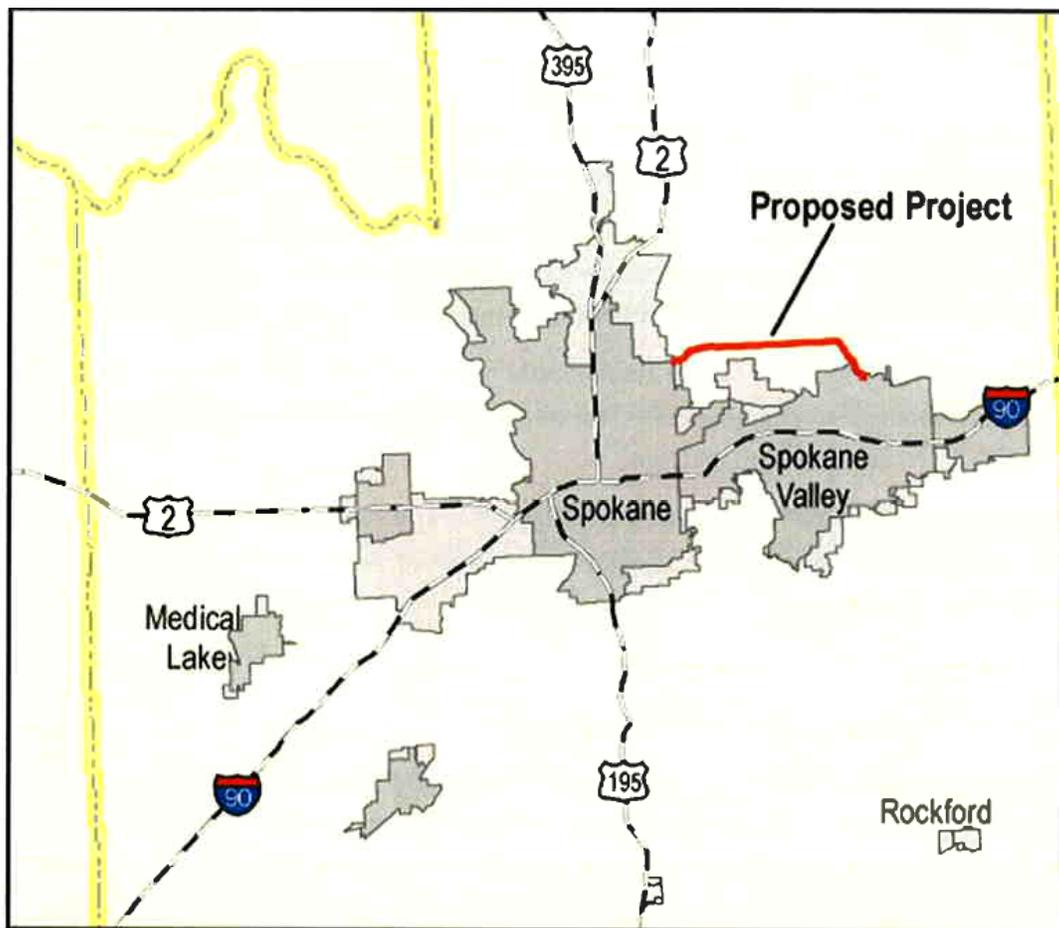
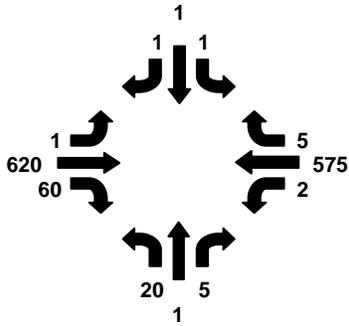
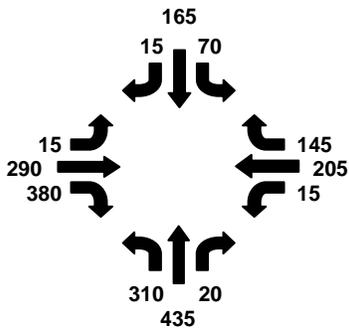


Figure 1. Vicinity Map

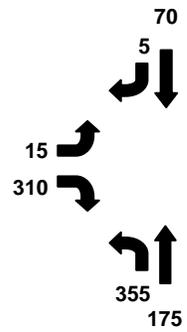
Bigelow Gulch Road and Jensen Road (2004)



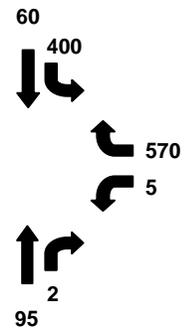
Bigelow Gulch Road and Argonne Road (2001)



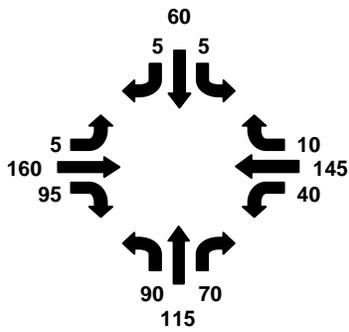
Bigelow Gulch Road and Forker Road (2002)



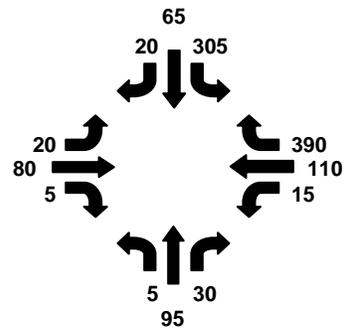
Forker Road and Progress Road (2000)



Wellesley Avenue Evergreen Road (2001)



Wellesley Avenue and Progress Road (2002)



Wellesley Avenue and Sullivan Road (2002)

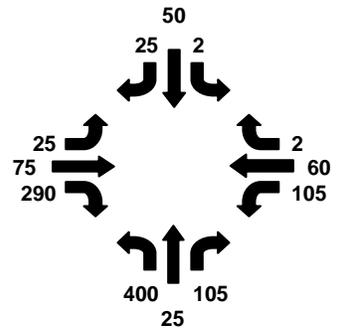
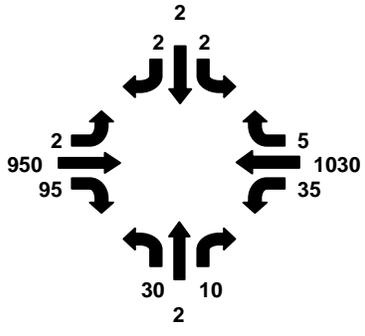


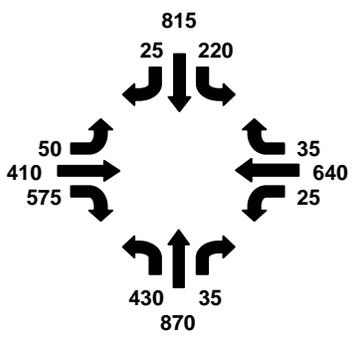
Figure 2. Existing PM Peak Hour Intersection Traffic Volumes



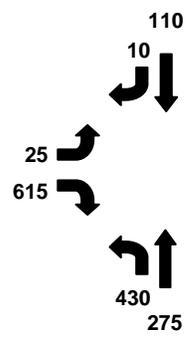
Bigelow Gulch Road and Jensen Road



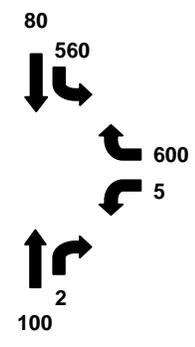
Bigelow Gulch Road and Argonne Road



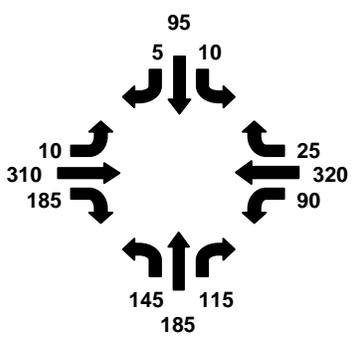
Bigelow Gulch Road and Forker Road



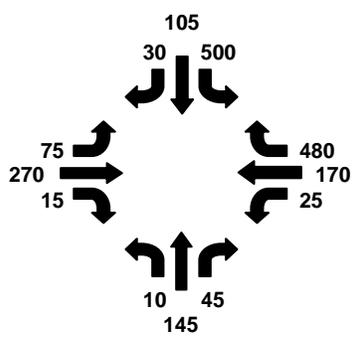
Forker Road and Progress Road



Wellesley Avenue Evergreen Road



Wellesley Avenue and Progress Road



Wellesley Avenue and Sullivan Road

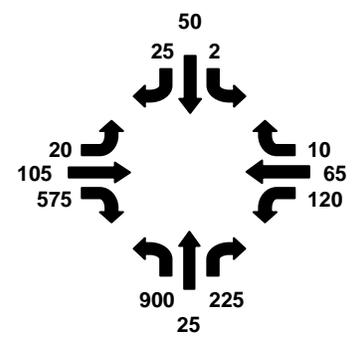


Figure 3. 2025 No Action Alternative - PM Peak Hour Intersection Traffic Volumes

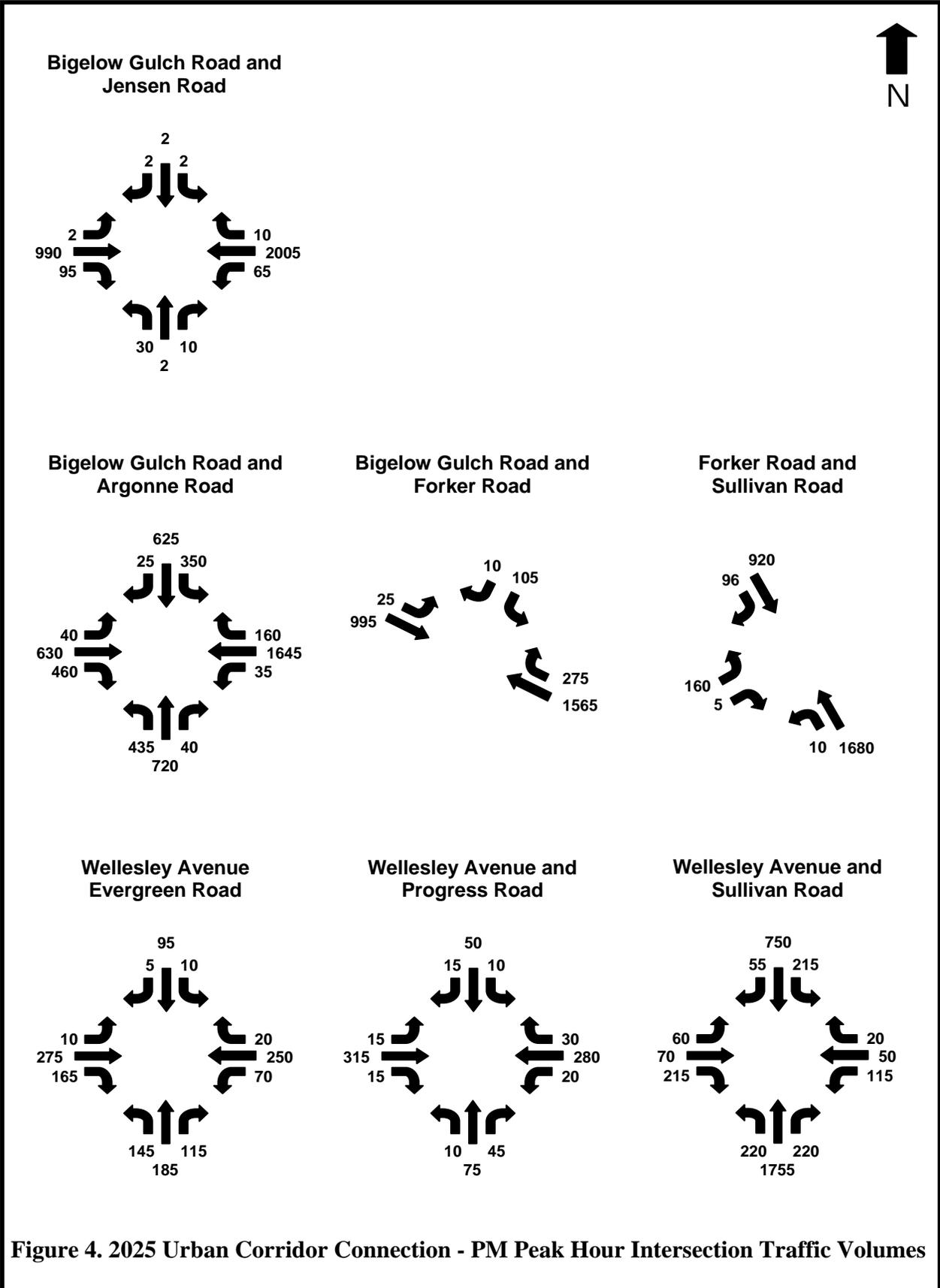


Figure 4. 2025 Urban Corridor Connection - PM Peak Hour Intersection Traffic Volumes