Chapter 5. Section 4(f) Evaluation

5.1. Introduction

This Section 4(f) evaluates the potential use of historic properties and recreational resources by the proposed Urban Connector Alignment. Section 4(f) of the U.S. Department of Transportation (DOT) Act of 1966 (49 USC 303) applies to this project due to the presence of eligible historic properties and recreational resources in the vicinity of the proposed project.

5.1.1. What is Section 4(f)?

Section 4(f) of the DOT Act of 1966, codified in Federal Law at 49 USC Sec. 303, declares:

It is the policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites.

Section 4(f) specifies:

The Secretary [of Transportation] may approve a transportation program or project…requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, State, or local significance, or land of an historic site of national, State, or local significance (as determined by the federal, State, or local officials having jurisdiction over the park, area, refuge, or site) only if:

1. There is no prudent and feasible alternative to using that land; and
2. The program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use.

Section 4(f) further requires consultation with the Department of the Interior and, as appropriate, the involved offices of the departments of Agriculture and Housing and Urban Development in developing transportation projects and programs that use lands protected by Section 4(f).

Supporting information must demonstrate that there are unique problems or unusual factors involved in the use of alternatives that avoid these properties or that the cost, social, economic, and environmental impacts, or community disruption resulting from such alternatives reach extraordinary magnitudes.

“Use” of a Section 4(f) resource, defined in section 23 Code of Federal Regulations (CFR) 771.135(p), occurs in the following circumstances:

1. when land is permanently incorporated into a transportation facility;
2. when there is a temporary occupancy of land that is adverse in terms of the statute’s preservationist purpose; or
3. when there is a constructive use of land, which occurs when the transportation project does not incorporate land, but its proximity impacts substantially impair the activities, features, or attributes that qualify a resource for protection under Section 4(f).

This Section 4(f) evaluation has been prepared because the proposed Urban Connector Alignment proposes to use Section 4(f) resources. This Section 4(f) evaluation includes documentation of the resources, consultations, and studies of alternative alignments. In addition, this evaluation ensures that the proposed action includes all possible planning measures to minimize harm to the affected properties.

Test of Prudence and Feasibility
From a Section 4(f) perspective, an alternative that avoids impacts on a Section 4(f) resource must be selected if it is determined to be feasible and prudent. A feasible alternative is one that can be built based on sound engineering principles. A determination of prudence requires weighing numerous factors, such as community disruption, displacements, safety, and cost; and a conclusion that the social, economic, environmental, and/or cost impacts are of an extraordinary magnitude.

5.1.2. What is the proposed action?

The proposed action is the construction and operation of an urban corridor 8.26 miles in length from Havana Street at the western extent of the corridor to the intersection of Sullivan Road and Wellesley Avenue at the eastern extent. From Havana Street to
Forker Road (approximately 7.4 miles), the new roadway would be a rural-type, four-lane roadway with alternating gravel median to two-way left-turn pockets and paved shoulders. Approximately 0.56 mile of the proposed Urban Connector at the Argonne Road/Bigelow Gulch Road intersection was constructed in 2005 by Spokane County as a separate project to address a safety need.

The proposed action also includes a reduced-width (reduced from 120 feet to 80 feet) section of right-of-way and a speed limit reduction (from 40 mph to 35 mph) for 0.14 mile of the alignment. The reduced-width right-of-way, from Jensen Road to Old Argonne Road, was proposed to avoid 4(f) use of the historic Karl Paulson farmstead (see Table 5-1 for a description).

Between Forker and Wellesley roads (approximately 0.8 mile), the new roadway would be an urban-type, four-lane roadway with two-way left-turn pockets, bike lanes, and sidewalks. See Chapter 2, Project Description.

The purpose of the proposed action is to increase capacity, improve transportation system linkage, improve roadway safety, and accommodate existing and future freight linkage. The need for the project was defined in the report Connecting Our Community—A Regional Study of Urban Connectors (Spokane County 1998a). A more detailed description of the purpose and need is presented in Chapter 2 of this Revised EA.

5.2. What Section 4(f) Resources occur in the project area?

Two types of Section 4(f) resources are located in the project area (Figure 5-1). These resources include five eligible historic properties, and recreation lands operated by the East Valley School District 361.

5.2.1. What historic properties are present in the project area?

An evaluation of potential historic properties was conducted in the project’s Area of Potential Effect (APE) for listing in the National Register of Historic Places (National Register). The APE is defined as the geographic area or areas within which an undertaking may directly or indirectly cause change of character or use of historic properties. The APE is influenced by the scale and nature of an undertaking (36 CFR 800.16d). This project’s APE consists of the proposed 120-foot-wide right-of-way (ROW) (76-foot-wide roadway) from the intersection of Bigelow Gulch Road and Havana Street to the project’s terminus at Wellesley Avenue and Sullivan Road. Appendix E of the January 2006 EA and Appendix 5 of this Revised EA present a description of the APE.
Table 5-1. Eligible Historic Properties within the Project Area

<table>
<thead>
<tr>
<th>Property Address and Name</th>
<th>Date Built</th>
<th>DAHP No.</th>
<th>Township/ Range/ Section</th>
<th>USGS Quad</th>
<th>Figure No.</th>
<th>Eligibility Documentation</th>
</tr>
</thead>
<tbody>
<tr>
<td>8101 E. Bigelow Gulch Road Karl Paulson Farmstead</td>
<td>1906</td>
<td>32-408</td>
<td>T 26N/R 44E/ S 30</td>
<td>Spokane NE</td>
<td>Appendix E of January 2006 EA</td>
<td>Locally significant farmstead of 10.62 acres (land, house, and outbuildings) because it represents the early agricultural settlement of the Spokane Valley and development of a successful local variety of cabbage by the farmer, Kurt Paulson (National Register Criterion A, agriculture). House built in 1906 and two of three outbuildings built in 1906. The property (land and buildings) is a well-preserved example of a locally distinctive farmstead in the Spokane Valley.</td>
</tr>
<tr>
<td>10806 E. Bigelow Gulch Road Ole Hansen House</td>
<td>1893</td>
<td>32-412</td>
<td>T 26N/R 44E/S 28</td>
<td>Spokane NE</td>
<td>Appendix E of January 2006 EA</td>
<td>The property (house only) is a well-preserved example of a locally distinctive brick farmhouse in the Spokane Valley in the Federal Revival style (National Register Criterion C, architecture).</td>
</tr>
<tr>
<td>11122 E. Bigelow Gulch Road George H. Collin House</td>
<td>1925</td>
<td>–</td>
<td>T 26N/R 44E/S 28</td>
<td>Spokane NE</td>
<td>Appendix E of January 2006 EA</td>
<td>The property (house only) is a well-preserved example of a locally distinctive Gothic Vernacular farmhouse in the Spokane Valley (National Register Criterion C). Outbuildings are not eligible since they were constructed in the 1970s.</td>
</tr>
<tr>
<td>11727 E. Bigelow Gulch Road Green House</td>
<td>1910</td>
<td>–</td>
<td>T 26N/R 44E/S 28</td>
<td>Spokane NE</td>
<td>Appendix E of January 2006 EA</td>
<td>The property (house only) is a well-preserved example of a locally distinctive Vernacular farmstead in the Spokane Valley during the early 1900s (National Register Criterion C). Three outbuildings appear to be less than 50 years old and therefore not eligible.</td>
</tr>
<tr>
<td>12424 E. Bigelow Gulch Road George H. Collin House</td>
<td>1910</td>
<td>–</td>
<td>T 26N/R 44E/S 27</td>
<td>Greenacres</td>
<td>Appendix E of January 2006 EA</td>
<td>The property (house only) is a well-preserved example of a locally distinctive Gothic Vernacular farmhouse constructed in the Spokane Valley at the turn of the 19th century (National Register Criterion C). Outbuildings include a barn, detached garage, steel grain silo, and three small sheds.</td>
</tr>
</tbody>
</table>

Figure 5-1

Historic and Recreational Resources within the Bigelow Gulch Urban Connector Project Area

Bigelow Gulch Urban Connector

Section 4(f) Evaluation
Information regarding historic properties, including but not limited to archaeological sites, historic buildings/structures, and Traditional Cultural Properties, was researched within a 0.5-mile radius area around the proposed roadway.

Of 16 properties surveyed, five were determined as eligible by the Washington State Department of Archaeology and Historic Preservation (DAHP) (Figure 5-1). (Note: this agency was formerly known as the State of Washington Office of Archaeology and Historic Preservation.) See Appendix F of the January 2006 EA for the correspondence. The five properties eligible for listing in the National Register include 8101 East Bigelow Gulch Road, 10806 East Bigelow Gulch Road, 11122 East Bigelow Gulch Road, 11727 East Bigelow Gulch Road, and 12424 East Bigelow Gulch Road (Table 5-1).

Four of the five eligible properties meet the requirements for eligibility through National Register Criterion C, which applies to properties significant for their physical design or construction, including such elements as architecture, landscape architecture, engineering, and artwork. One of the properties, 8101 East Bigelow Gulch Road (the Karl Paulson Farmstead), meets the requirements for eligibility through National Register Criterion A, which applies to contribution to the agricultural development of the community and a farmstead. All five properties are privately owned and are active farms or residences.

While all of the five eligible properties are 4(f) properties, none would be used by the proposed action.

5.2.2. **What recreation resources are present in the project area?**

Recreation resources in the Bigelow Gulch project area include baseball/softball fields and an adjacent multiple-use sports field used for a variety of sports activities by the school and general public. The facilities are located at East Valley Middle School and adjacent East Valley High School at the east end of the proposed action (see Figure 5-1 for location).

**East Valley Middle School**

East Valley School District 361 owns the sports fields located at the middle and high schools. Figures 5-2 and 5-3 show portions of the sports fields. The fields are used during school hours by the school district and during non-school hours by the Spokane County and City of Spokane recreation programs, sports associations, and the general public. Access to the sports fields is from Sullivan Road, an unimproved gravel roadway located between the schools, from Progress Road west of the East Valley Middle School, and from Wellesley Avenue on the south.
5.2.1.1 Karl Paulson Farmstead

The Karl Paulson Farmstead, located at 8101 East Bigelow Gulch Road, is 10.62 acres and includes a house and three outbuildings. The wood-frame two-story house has a cross-shaped plan and intersecting gable roof with composition shingles. There are three outbuildings with gable roofs and horizontal wood siding associated with the property (Figure 24). Two of the barns date to 1908.

The house was constructed by George Gates in 1906 and purchased by Karl and Doris Paulson in 1929. Paulson was a noted Spokane Valley farmer who developed a new cabbage called the “Paulson Evergreen Cabbage,” which he later patented. The Paulson home represents the early agricultural settlement of the Spokane Valley and the successful cabbage farming attributed to Karl Paulson. The property is eligible under Criterion A, in the area of agriculture and architecture/landscape architecture, as a well-preserved example of a locally distinctive, small farmstead in Spokane Valley.

5.2.2 What recreation resources are present in the project area?

Recreation resources in the Bigelow Gulch study area include baseball/softball fields and an adjacent multiple use sports field used for a variety of sports activities by the school and general public. The facilities are located at East Valley Middle School and adjacent East Valley High School at the east end of the proposed project (see Figure 23 for location).

Figure 25. Looking Northwest at Middle School Sports Field

Figure 26. Looking South on Sullivan Road between Valley Middle School and High School properties

5.2.2.1 East Valley Middle School

East Valley School District No. 361 owns the sports fields located at the Middle and High Schools. Figures 25 and 26 show portions of the sports fields. The fields are utilized during school hours by the School District and during non-school hours the Spokane County and City of Spokane recreation programs, sports associations and by the general public. Access to the sports fields is from Sullivan Road, an unimproved gravel roadway located between the schools, from Progress Road west of the East Valley Middle School, and from Wellesley Avenue on the south.

The East Valley Middle School is located on the west side of Sullivan Road, the East Valley High School on the east side of the road. Recreational resources at the middle school include four baseball/softball fields and adjacent multiple use sports fields (e.g., soccer). The high school recreational resources include a track, baseball diamond, and tennis courts.

The function of the Middle School and High School sports fields is to provide fields for a variety of sports activities for the students. Additionally, the fields are accessible to the general public during non-school hours and the Spokane County Parks Department schedules and uses the fields for sports league activities.

The most important values of the fields are that they are used for school sporting events, community league play and general recreational uses for approximately 8 months of the year.
The East Valley Middle School is located on the west side of Sullivan Road, and the East Valley High School on the east side of the road. Recreational resources at the middle school include four baseball/softball fields and adjacent multiple use sports fields (e.g., soccer). The high school recreational resources include a track, a baseball diamond, and tennis courts.

The function of the middle and high school sports fields is to provide fields for a variety of sports activities for the students. Additionally, the fields are accessible to the general public during non-school hours and the Spokane County Parks Department schedules and uses the fields for sports league activities.

The most important values of the fields are that they are used for school sporting events, community league play, and general recreational uses for approximately 8 months of the year.

5.3. What are the Alternatives?

The alternatives are listed below:

- Proposed Urban Connector Alignment (Alternative 1),
- No Action Alternative,
- Section 4(f) Avoidance Alternatives (Alternatives 2 and 3), and
- Alternative that minimizes harm (Alternative 1a).

5.3.1. Alternative 1 Alignment

A brief description of the proposed project appears in Section 5.1.2. The Alternative 1 alignment would begin at Havana Street at the western end of the corridor and terminate at the intersection of Sullivan Road and Wellesley Avenue on the east. Figure 5-1 shows the alignment. The alignment would include a 120-foot-wide ROW (except for the 0.14-mile section between Jensen Road and Old Argonne Road) and would use recreational land at the East Valley Middle School. No use would be made of recreational land at the East Valley High School.

East Valley Middle School

The Alternative 1 alignment would encroach upon the middle school property on the west side of Sullivan Road. The Alternative 1 alignment would use a total area of approximately 2.36 acres (102,946 square feet) of the recreational resource, a baseball/softball field, and adjacent multiple-use sports field (active recreation) and approximately 1.06 acres (46,174 square feet) of open space (Table 5-2). The size of the overall school resources and the area of the recreational fields that would be used by Alternative 1 are shown in Table 5-2 and in Figure 5-4.
Table 5-2. Section 4(f) Resources and Area Affected by the Alternative 1 Alignment

<table>
<thead>
<tr>
<th>4(f) Property</th>
<th>Total Property (acres)</th>
<th>4(f) Resource (acres)</th>
<th>Area Affected by Alternative 1 Alignement</th>
<th>Percentage of the Total Acreage</th>
<th>Percentage of the 4(f) Resource Acreage</th>
</tr>
</thead>
<tbody>
<tr>
<td>East Valley Middle School</td>
<td>36.16</td>
<td>27.14</td>
<td>2.36 acres of sports field (102,802 square feet) and 1.06 acres of open space (46,174 square feet) for a total of 3.42 acres (148,976 square feet)</td>
<td>9.46</td>
<td>12.60</td>
</tr>
</tbody>
</table>

Discussion

From an engineering perspective, Alternative 1 would be feasible (i.e., technically possible and constructible), and would meet the test of sound engineering principles and practices.

Construction of Alternative 1 would require that one of the middle school sports fields be relocated. Construction of this alternative would temporarily increase dust, noise, and exhaust emissions in the immediate vicinity of the sports field. Operational impacts would include a slight increase in noise because of closer proximity to traffic and increased traffic volumes.

With mitigation, none of those effects would be severe enough to substantially impair the use, enjoyment, or function of the sports field.
Alternative 1 at East Valley Middle School, Section 4(f)

Resource Use

Bigelow Gulch Urban Connector

Figure 5-4

Section 4(f) Evaluation
5.3.2. No Action

The Urban Connector Alignment would not be built under No Action. Under this alternative, the roadway would be maintained in its present configuration of two lanes of traffic, with continued operations and maintenance of the roadway. Maintenance activities would range from occasional pavement replacement to annual pothole patching, winter maintenance, brush clearing, and striping.

No Action could be considered an avoidance alternative, but it is not feasible and prudent, because it clearly would not meet the project’s stated purpose and need to increase capacity, improve transportation system linkage, and to improve roadway safety. Choosing not to complete the project would exacerbate existing congestion and safety problems and potentially result in more negative community effects than would result from using a portion of the Section 4(f) resources as proposed. Also, under this alternative, there would be no use of Section 4(f) resources.

5.3.3. Section 4(f) Avoidance Alternatives

Two avoidance alternatives were considered that would avoid the use of the recreational resources at the middle school by shifting the alignment to the west of the middle school (Figure 5-5). These avoidance alternatives include the following:

- Alternative 2 (North Rees/North Calvin Roads), and
- Alternative 3 (Evergreen Road).

The description and analysis of those two avoidance alternatives is presented in this section.

Alternative 2

Alternative 2 would involve shifting the proposed Urban Connector Alignment west of the East Valley Middle School recreation facilities (Figure 5-5).

The Alternative 2 route west of the middle school would extend south from the intersection of Bigelow Gulch and North Forker Road and then proceed in a southwesterly direction along East Forker Road from the intersection of Forker and Progress roads. This alignment would follow North Forker Road for less than 0.25 mile before proceeding south along an alignment between North Rees and North Calvin roads to intersect with East Wellesley Avenue. This option would proceed east on East Wellesley Avenue to the intersection of East Wellesley Avenue and North Sullivan Road (Figure 5-5).
Figure 5-5
Alternative 2 and 3 Alignments to Avoid 4(f) Properties
Bigelow Gulch Urban Connector
Section 4(f) Evaluation

Legend
- Proposed Avoidance Right-of-Way
- Proposed Connector Alignment

Source: Spokane County Engineers, 2004
Discussion

From an engineering perspective, the portion of this alternative that would avoid the middle school recreational fields would be feasible (i.e., technically possible and constructible), although less than ideal, because of tighter turn radius movements.

Impacts of Alternative 2 would include the following:

- severe community disruption (i.e., displacement of 66 residences) to the single-family neighborhood east of the middle school,
- impact to Trentwood Elementary School and one church, and
- impacts on a community water supply well.

Alternative 2 would require construction west of the middle school through existing residential and agricultural districts. The alignment would displace families, disrupt established travel patterns of commuters, increase the ROW costs, and generate higher levels of impacts as compared to the proposed alternative that has some level of effect on the Section 4(f) resource. This alternative would cause significant community disruption to what is largely a residential neighborhood of approximately 345 residences (plus an additional 75 homes under construction or planned for construction) in an area designated as Urban 3.5 (3.5 units per acre) within the City of Spokane Valley west and south of the middle school.

Alternative 2 would displace a total of 66 residences (58 more residences than Alternative 1); a community well would need to be relocated; and portions of property at one school and one church would be impacted. The 66 residences represent approximately 20% of the homes within the area between Forker Road on the west, Sullivan Road on the east, and East Wellesley Avenue on the south. The level of cost in ROW acquisition and relocation expenses of 66 homes, one church, and the community water supply well would be considered disruptive and high cost (between $8.5 and $12.3 million additional cost more than the proposed action). Estimated cost for the proposed action is $52.6 million.

Many travelers heading east on the Bigelow Gulch Urban Connector, if forced to reconnect to Wellesley Avenue at a location other than Sullivan Road, would likely use local residential arterials to either reconnect with Sullivan Road or State Route (SR) 290. This would place higher volumes of traffic on smaller residential streets; directly segment an established single-family neighborhood; and result in increased air, noise, and traffic while reducing pedestrian safety.

Alternative 3

As with Alternative 2, Alternative 3 would involve shifting the proposed Urban Connector Alignment west of the East Valley Middle School recreation facilities (Figure 5-5).
The route for Alternative 3 would extend south from the intersection of Bigelow Gulch and North Forker Road and then proceed in a southwesterly direction along East Forker Road from the intersection of Forker and Progress roads. The route would follow North Forker Road for less then 0.25 mile before proceeding south along Evergreen Road to intersect with East Wellesley Avenue. This option would proceed east on East Wellesley Avenue to the intersection of East Wellesley Avenue and North Sullivan Road (Figure 5-5).

**Discussion**

From an engineering perspective, the portion of Alternative 3 that would avoid the recreational fields would be feasible (i.e., technically possible and constructible), although less than ideal, because of tighter turn radius movements.

Impacts of this alternative would include the following:

- severe community disruption (i.e., displacement of 87 residences versus eight residences under the proposed action) to the single-family neighborhood east of the middle school,
- impact to Trentwood Elementary School and two churches, and
- impacts on a community water supply well.

Alternative 3 would require construction west of the middle school through existing residential and agricultural districts. The alignment would displace families, disrupt established travel patterns of commuters, increase the ROW costs, and generate higher levels of impacts as compared to the proposed action (Alternative 1) that has some level of effect on the Section 4(f) resource. This alternative would cause significant community disruption to the largely residential neighborhood previously described for Alternative 2. This alternative would displace a total of 87 residences (79 more residences than Alternative 1); a community well would need to be relocated; and portions of property at one school and two churches would be impacted. The 87 residences represent approximately 25% of the homes within the area between Forker Road on the west, Sullivan Road on the east, and East Wellesley Avenue on the south. The level of cost in ROW acquisition and relocation expenses of 87 homes, two churches, and the community water supply well would be considered disruptive and high cost (between $10.7 and $15.9 million additional cost). As previously mentioned, the estimated cost of the proposed action is $52.6 million.

Many travelers heading east on the Bigelow Gulch Urban Connector, if forced to reconnect to Wellesley Avenue at a location other than Sullivan Road, would likely use local residential arterials to either reconnect with Sullivan Road or with SR 290. This would place higher volumes of traffic on smaller residential streets; directly
segment an established single-family neighborhood; and result in increased air, noise, and traffic while reducing pedestrian safety.

5.3.4. Alternatives that Minimize Harm

If no avoidance alternative is feasible and prudent, then it must be determined whether there are alternatives that would minimize harm to the 4(f) resource. One alternative was identified and evaluated that would modify the Alternative 1 alignment and result in less use of 4(f) resources. Because this alternative represents modification to the Alternative 1 alignment, it is identified here as Alternatives 1a. Its alignment is identical to Alternative 1, but its right-of-way is reduced along the entire alignment, as described below.

Alternative 1a (Reduced Right-of-Way for Entire Alignment)

Alternative 1a would follow the same alignment as Alternative 1 (Figure 5-1). However, the ROW width would be reduced from 120 to 80 feet for its entire length and would include reducing the shoulders, the medians, and the turn lanes. Although this alternative would not avoid use of Section 4(f) resources, it would minimize the impacts and require less use at the middle school property.

The narrow ROW under Alternative 1a would result in less use of recreational property at the middle school than would occur under Alternative 1. However, even though Alternative 1a would reduce the use of Section 4(f) resources, it would not totally avoid use of recreational property at the middle school (Table 5-3). No use would be made of recreational land at the East Valley High School.

<table>
<thead>
<tr>
<th>4(f) Property</th>
<th>Total Property (acres)</th>
<th>4(f) Resource (acres)</th>
<th>Area Affected by Alternative 1a Alignment</th>
<th>Percentage of the Total Acreage</th>
<th>Percentage of the 4(f) Resource Acreage</th>
</tr>
</thead>
<tbody>
<tr>
<td>East Valley Middle School</td>
<td>36.16</td>
<td>27.14</td>
<td>1.58 ac of sports field (68,825 square feet) and 0.71 ac of open space (30,928 square feet) for a total of 2.29 ac (99,753 square feet)</td>
<td>6.3</td>
<td>8.4</td>
</tr>
</tbody>
</table>

Discussion

Alternative 1a would not be feasible because it would fail the test of sound engineering principles and practices. The reduced roadway width would create an unsafe condition along the alignment. It would also not meet the project’s purpose and need, which is to improve traveler safety, reduce congestion, and accommodate existing and future freight and commuter travel demands in the region.
Under this alternative, the basic safety issues on Bigelow Gulch Road would not be addressed. From January 1, 1994, to October 31, 2006, 546 reported collisions occurred on Bigelow Gulch Road and Forker Road, averaging 43 collisions per year and a collision rate of 1.68 per million vehicle miles. The fatal collision rate is approximately 2.16 per hundred million vehicle miles (hmvm), which is 3.6 times higher than both the eastern Washington fatal collisions rate of 0.59 per hmvm and higher than the Spokane County fatal collisions rate of 1.53 per hmvm. Data also indicates that 39% of the reported collisions involved injuries and 1.3% of the collisions involved fatalities, which are higher than the fatality rate of 1% in eastern Washington (Washington State Department of Transportation [WSDOT] 2005).

Impacts of construction and operation of this alternative would be similar to those defined for Alternative 1.

5.4. What is the difference between the alternatives evaluated?

Five alternatives (including the proposed Urban Connector [Alternative 1] alignment and No Action) were identified and evaluated for this Section 4(f) evaluation (Table 5-4).

Alternative 1 alignment would include use of 3.42 acres of Section 4(f) resources (recreational land at East Valley Middle School). Future land uses of the Section 4(f) resources are unlikely to be altered by Alternative 1.

The only known future uses are recreation improvements proposed for the East Valley Middle School, a portion of which would be negotiated as mitigation between Spokane County and the East Valley School District (Figure 5-6).

No Action, while avoiding the Section 4(f) resources, would not be feasible and prudent. It clearly would not meet the proposed project’s stated purpose and need to increase capacity, improve transportation system linkage, and improve roadway safety (Table 5-4).

Alternative 1a (reduced ROW for the entire alignment) was judged to be infeasible because, as with No Action Alternative, it would not meet the project purpose and need or sound engineering practices.

Alternative 2, while avoiding Section 4(f) resources, would not be feasible and prudent since it would result in a severe impact to the community at the east end of the project. In addition, it would include displacement of residences and incur a high additional cost ranging from $8.5 to $12.3 million (Table 5-4).
Table 5-4. **Section 4(f) Resources Comparison Chart**

<table>
<thead>
<tr>
<th>Alignment Evaluated</th>
<th>Unique Engineering or Construction Problems</th>
<th>Extraordinary Costs</th>
<th>Property Disruption</th>
<th>Community Disruption</th>
<th>Section 4(f) Resource Use</th>
<th>Failure to Fill Public Need</th>
<th>Environmental Considerations</th>
<th>Other Unusual Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban Connector alignment (Alternative 1)</td>
<td>None</td>
<td>None</td>
<td>Relocation of 8 houses along Bigelow Gulch Road; minimizes effects to residential middle school ball field</td>
<td>Least impact to community, temporary changes to use of recreation at middle school</td>
<td>Would use 1 of 4 ball fields and multi-use sports at middle school, but would allow for relocation of the fields</td>
<td>Fullfill public need</td>
<td>Impacts on 0.71 acre of wetland</td>
<td>Land adjacent to the middle school will replace 4(f) use of the sports fields; improved safety with pedestrian tunnel between schools</td>
</tr>
<tr>
<td>No Action Alternative (Alternative 4)</td>
<td>Not applicable</td>
<td>None anticipated</td>
<td>None anticipated</td>
<td>None anticipated</td>
<td>None</td>
<td>Does not fulfill purpose and need of project</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

**Avoidance Alternatives**

<table>
<thead>
<tr>
<th>Alignment Evaluated</th>
<th>Unique Engineering or Construction Problems</th>
<th>Extraordinary Costs</th>
<th>Property Disruption</th>
<th>Community Disruption</th>
<th>Section 4(f) Resource Use</th>
<th>Failure to Fill Public Need</th>
<th>Environmental Considerations</th>
<th>Other Unusual Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shifted Roadway Corridor (Alternative 2)</td>
<td>Slight shift in alignment at 8101 E. Bigelow Rd., potential safety issues; impacts well at the corner of North Progress and East Wellesley; turn radius effects single-family homes</td>
<td>Engineering, acquisition, and construction cost of well and residences. Estimated additional cost $8.5 to $12.3 million</td>
<td>Impact to approximately 66 residential units, 1 school (elementary), 1 church, and 1 community well</td>
<td>Second greatest impact to residential community at east end of project</td>
<td>Avoids Section 4(f) property including historic or recreation</td>
<td>Yes, but with effects to public</td>
<td>Same wetland impact</td>
<td>Need to relocate 66 residences, church, and community well</td>
</tr>
<tr>
<td>Alignment Evaluated</td>
<td>Unique Engineering or Construction Problems</td>
<td>Extraordinary Costs</td>
<td>Property Disruption</td>
<td>Community Disruption</td>
<td>Section 4(f) Resource Use</td>
<td>Failure to Fill Public Need</td>
<td>Environmental Considerations</td>
<td>Other Unusual Factors</td>
</tr>
<tr>
<td>---------------------</td>
<td>---------------------------------------------</td>
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<td>--------------------------</td>
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<td>----------------------</td>
</tr>
<tr>
<td>Shifted Roadway Corridor (Alternative 3)</td>
<td>Community well at the corner of North Progress and East Wellesley; turn radius effects number of single-family homes</td>
<td>Engineering, acquisition, and construction cost of well and residences. Estimated additional cost $10.7 to $15.9 million</td>
<td>Impacts on approximately 87 residential units, elementary school, 2 churches, and 1 community well</td>
<td>Highest impact to residential community and school</td>
<td>Minimizes use to area used for informal recreation on middle school property</td>
<td>Yes – increases effects to public</td>
<td>Avoids significant Section 4(f) effect, but severe impacts on community</td>
<td>Need to relocate 87 residences, 2 churches and community well</td>
</tr>
</tbody>
</table>

### Alternatives that Minimize Harm

| Reduced ROW Width (Alternative 1a) | Would not meet sound engineering practices | Engineering and reconstruction cost of well location | Relocation of 8 houses along Bigelow Gulch Road, disruption; impacts on community well minimizes effects to middle school ball field | Same as proposed action | Avoids Section 4(f) property including historic or recreation | Does not fulfill purpose and need of project | Same as proposed action | Relocate community well |
PROPOSED LAND EXCHANGE = 1.4 ACRES MOL

LAND ACQUISITION = 1.4 ACRES MOL

PROPOSED GOAL POST

PROPOSED RELOCATION OF STORAGE RAIL CAR

PROPOSED RELOCATION OF BALL FIELD

PED TUNNEL

UTILITY BOXES

TENNIS COURTS

TRAFFIC SIGNAL

Source: Spokane County Public Works Department, 2002.

Figure 31

Conceptual Sports Field Layout for East Valley School District

Figure 5-9

Conceptual Sports Field Layout for East Valley School District

Bigelow Gulch Urban Connector

Section 4(f) Evaluation
Alternative 3 would also avoid Section 4(f) resources but would not be feasible and prudent due to the significantly greater impact to the community at the east end of the project. It would displace more residences than any of the other alternatives and would have additional costs ranging from $10.7 to $15.9 million (Table 5-4).

5.4.1. How would Spokane County minimize harm to Section 4(f) resources?

If there are no feasible and prudent avoidance alternatives, then potential measures to minimize the use to the Section 4(f) resource must be determined. Measures to minimize harm were identified for Alternative 1 based on the use of Section 4(f) resources.

East Valley Middle School

Under Alternative 1, the proposed use of the East Valley Middle School sports field would be offset by replacement of the field and a land exchange between Spokane County and East Valley School District shown in Figure 5-6.

A conceptual sports field layout (Figure 5-6) will be developed by a sports field consultant hired by Spokane County, and an agreement will be negotiated between Spokane County and the East Valley School District. Spokane County and the School District would enter into an interlocal agreement prior to construction to ensure implementation of mitigation for the effects to property. This interlocal agreement between Spokane County and the school district would provide assurance that equivalent usefulness would be created at other locations at each school.

The proposed measures to minimize harm are identified in Figure 5-6, and include the following:

1. Adding an exit-only access to Wellesley Avenue for reasons of safety just east of the tennis courts on the high school site. This would require restriping the two soccer fields approximately 18 feet to the east.

2. Relocating the northeastern ball field of the quad complex to the area between the extension of Sullivan Road and the power line easement (west of Sullivan Road and south of the quad complex).

3. Working with the school district to plan and construct a pedestrian tunnel or a pedestrian bridge between the middle and high schools.

4. Providing additional land (1.4 acres) for the middle school along its northern property line to provide additional land for recreational resources and offset the Section 4(f) use of the existing sports field (Figure 5-6). This resource could be considered as area for buffering through a shared agricultural/horticultural program between the schools.
5. Conducting necessary geotechnical studies to address soils and groundwater conditions.

6. Ensuring that alternative parking is an element of planning, design, and construction if so desired by the School District.

### 5.5. What are the findings and conclusions?

Table 5-5 summarizes the results of the Section 4(f) alternatives analysis previously described.

<table>
<thead>
<tr>
<th>Alternative</th>
<th>Feasible and Prudent?</th>
<th>Uses Section 4(f) Land?</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alternative 1 (Urban Connector Alignment)</td>
<td>Yes</td>
<td>Yes</td>
<td>Measures taken to Minimize</td>
</tr>
<tr>
<td>Alternative 1a (minimization)</td>
<td>No</td>
<td>Yes</td>
<td>NA(^1)</td>
</tr>
<tr>
<td>Alternative 2 (avoidance)</td>
<td>No</td>
<td>No</td>
<td>NA(^1)</td>
</tr>
<tr>
<td>Alternative 3 (avoidance)</td>
<td>No</td>
<td>No</td>
<td>NA(^1)</td>
</tr>
<tr>
<td>No Action</td>
<td>No</td>
<td>No</td>
<td>NA(^3)</td>
</tr>
</tbody>
</table>

\(^1\) NA - Alternatives not feasible and prudent were eliminated.

Alternative 1 was judged to result in the least harm to Section 4(f) resources and would:

1. have the lowest level of effects to the natural environment;
2. have the lowest net effect on the school recreational facilities functions;
3. have the lowest effect on the surrounding community; and
4. avoid severe adverse effects to the school recreational fields (i.e., the affected recreational field can be relocated on school grounds).

The measures taken to minimize harm would provide the school the opportunity to expand recreational facilities and has a no net loss of resource lands.

Implementation of any of the other alternatives would result in higher levels of effect to utilities and services (community well) and negative effects to residential neighborhoods than would result from using the Section 4(f) resource.
Based upon the analysis, Alternative 1 would cause the least harm to Section 4(f) recreational properties. This alignment includes all possible planning to minimize harm to the Section 4(f) recreational resources resulting from such use.

Modifying the route to avoid all Section 4(f) resources (i.e., recreation lands at the middle school) altogether would not be feasible and prudent for the following reasons:

1. The project objectives (e.g., easing current traffic congestion, enhancing traveler safety, and supporting regional growth) would not be met.
2. There are unique problems in regards to the need for a direct linkage to the regional system between the North Spokane Corridor Freeway on the western end of the corridor and Sullivan Road linkage to Interstate 90 on the eastern end of the corridor.
3. There would be social, economic, and community impacts resulting from these alignments that would have extraordinary impacts on the established community.
4. The monetary costs associated with avoidance would be high.

5.5.1. Coordination

The Section 4(f) evaluation process, in conjunction with public involvement activities and preparation of the EA, was coordinated with the following agencies and organizations through their representatives:

- Bill Hemmings, Spokane County Division of Engineering and Roads, Program Development Engineer;
- Megan Hall and Steve Saxton, Federal Highway Administration;
- Les Portner, Retired Superintendent of Schools, East Valley School District 361;
- Dave Leighow and Sharon Love, Federal Highway Administration;
- Ross Kelley and Bob Brueggeman, Spokane County Public Works; and
- Craig Holstine, WSDOT, Environmental Affairs Office, Cultural Resources.
The following document(s) that contain supporting information and pertinent coordination information are attached in Appendix F of the 2006 EA (Coordination Documents).

- East Valley School District Correspondence (February 22, 2001) between Lester Portner (Superintendent of East Valley School District) and Jones & Stokes, indicating concurrence with the project proposal and Spokane County’s express intentions for mitigation and compensation;
- WSDOT memorandum of follow-up field investigations (December 2, 2002);
- DAHP APE Letter (May 1, 2003);
- DAHP No Adverse Effect Letter (April 5, 2004); and
- East Valley School District Correspondence (May 24, 2004).