

**INTERSTATE 70 CORRIDOR  
SECOND TIER EIS**

**SIU 4: Exit 117 – Exit 133  
Boone County, Missouri**

MoDOT JOB NO. J411341G

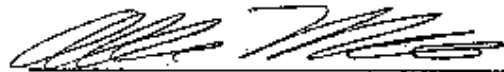
**Section 4(f) Evaluation**

**U.S. Department of Transportation  
Federal Highway Administration  
and  
The Missouri Department of Transportation**

**October 14, 2004**

12-16-04

Date of Approval



Federal Highway Administration  
Division Administrator



## CHAPTER IV

### Section 4(f)

#### A. Affected Environment

Section 4(f) of the Department of Transportation (DOT) Act of 1966 limits FHWA participation in projects that adversely impact publicly owned park and recreation lands, wildlife and waterfowl refuges and historic sites<sup>1</sup>. The Secretary of Transportation may only approve projects requiring the use of these lands if there is no feasible and prudent alternative to the use and the project includes all planning to minimize harm. Properties in the project area to which Section 4(f) might apply include Cosmo Park and Lake of the Woods Recreation Area and the historic resources determined to be eligible for the NRHP during the historic architecture survey conducted for the project. Cosmo Park, or the Columbia Cosmopolitan Recreation Area, is a 533-acre park located in the northeastern quadrant of the I-70/MO-740 (Stadium) interchange. All of the reasonable alternatives have been reworked in order to stay outside of the park (see **DEIS Exhibit III-1D**). The Lake of the Woods Recreation Area is a 145-acre park located at 6700 St. Charles Road. As part of the effort to create continuous frontage roads adjacent to I-70, a new frontage road would connect into St. Charles Road opposite the park. No right of way acquisition from the park is proposed (see **DEIS Exhibit III-1I**). The historic architecture survey conducted for the SIU 4 portion of I-70 evaluated over 260 individual buildings. Ultimately, five buildings were determined to be eligible for the NRHP. A fifth site (the Candlelight Lodge Retirement Center, site number 4BO84) is currently listed on the NRHP. These are shown on **DEIS Exhibit III-5A through J** and **Table IV-1**<sup>2</sup>.

**Table IV-1: Listed and Eligible Historic Properties in the Project Corridor**

Resource Number	Name	Location	Type of Property	NRHP Status	Notes
4BO4	Amerman Farm	Old Rocheport Road, 0.5 mile west of MO-J	Large Queen Anne House, some outbuildings	Eligible, Criterion C	Some outbuildings close to the house are contributing, but the entire farm is not eligible.
4BO28	Dougherty Log Building	Van Horn Tavern Road, southeast of U.S. 40 interchange	Log building	Eligible, Criterion D	1820s tavern, relocated and now used as agricultural outbuilding.

<sup>1</sup> Sites listed on or eligible for the National Register of Historic Places, regardless of ownership.

<sup>2</sup> Historic resources are routinely divided into architectural and archaeological components. Pursuant to the Preliminary Development Process, archaeological fieldwork is conducted only after the preferred alternative is selected. Currently, no archaeological resources that are eligible for the NRHP are known to occur in the project corridor. Section 4(f) applies to archaeological sites where it is vital to preserve the resources in place. One important component of the Final EIS would be to incorporate the archaeological fieldwork into the decision-making process.

**Table IV-1: Listed and Eligible Historic Properties in the Project Corridor**

Resource Number	Name	Location	Type of Property	NRHP Status	Notes
4BO84	Candlelight Lodge Retirement Center	700 feet north of I-70 between the Business Loop 70 West and Stadium Boulevard interchanges	Early twentieth century Colonial Revival hotel	Listed, Criteria A and C	Built in 1929, it is the former Pierce Pennant Motor Hotel. Considered significant for its architecture and history.
4BO91	Duncombe Insurance Lustron House	West Road, 250 feet south of I-70 Drive SW	Prefab steel Lustron House, garage	Eligible, Criteria A and C	High integrity.
4BO147	Bowling Estate	Southwest of Paris Road overpass	1913 brick mansion	Eligible, Criterion C	Surrounding lands may be integral to the building's context and therefore included as part of the historic site.

The reasonable alternatives avoid the impacts to all of these resources, except for the Bowling property – located between I-70 and the Business Loop 70 in the vicinity of mile marker 127.5 (see **DEIS Exhibit III-5E**). The Bowling property consists of approximately 30 acres. There are two dwellings and assorted other outbuildings on the property. Existing I-70 forms the property's northern border. To the west is the Columbia Municipal Power Plant. The Business Loop of I-70 is the southern border. Industrial/ commercial properties adjoin the property's eastern boundary with the COLT rail line/Paris Road (MO-B) in close proximity. There is a single drive/access road across the site and most of the northern half of the property is wooded. The configuration of the property is shown on **Exhibit IV-1**<sup>3</sup>. Based on fieldwork conducted by the Center of Archaeological Research and a field review by the MoDOT and the SHPO, the Bowling Estate was found to be eligible for the NRHP. The larger of the two dwellings was found to be individually eligible. The NRHP boundary was tentatively determined to be the entire 30-acre parcel.

All reasonable alternatives of the I-70 project include a relocation of the on and off movements between I-70 and Business Loop I-70. In this area, the reasonable alternatives include a one-way frontage road system and the collector/distributor system (the one-way frontage road system is the recommended preferred alternative). Currently, the connection between I-70 and Business Loop I-70 is a pair of direct ramps – located immediately adjacent to the I-70/U.S. 63 interchange. The reasonable alternatives propose an interchange, west of Paris Road, to provide access between I-70 and the Business Loop. The reasonable alternatives would result in identical encroachments upon the Bowling property. As currently depicted, approximately 6.3

<sup>3</sup> Exhibits IV-1 and 2 are located at the end of this text.



acres (approximately 20 percent) from the property's northwestern corner would be acquired to construct the approach roads to the interchange. None of the buildings would be displaced. The proposed ramps along I-70 would also result in a narrow encroachment along the property's entire northern border.

Based on coordination with the SHPO, these impacts will result in an Adverse Effect determination. Consequently, Section 4(f) applies. The remainder of this section is organized in accordance with the format of an individual Section 4(f) evaluation: 1) Introduction/ Purpose and Need, 2) Description of Section 4(f) Resources, 3) Impacts to Resources, 4) Alternatives Considered, 5) Measures to Minimize Harm, 6) Coordination and 7) Conclusions.

## B. Individual Section 4(f) Statement

### 1. Introduction/Purpose and Need

As is discussed in Chapter I of the I-70 (SIU 4) DEIS, the purpose and need associated with the Second Tier of the I-70 (SIU 4) project is to:

1. Accommodate existing and future traffic volumes on I-70,
2. Improve outdated I-70 design elements,
3. Accommodate all users of I-70, and
4. Improve user safety.

Within SIU 4, the challenges to accomplish these transportation goals are highest within Columbia, because of the high degree of development and the constraints associated with the urban environment. The use of the Bowling property is the result of the closure of the existing I-70 to Business Loop I-70 ramps and their replacement by an interchange adjacent to the Bowling property. All of the reasonable alternatives include a relocation of the on and off movements between I-70 and Business Loop I-70. Currently, the connection between I-70 and Business Loop I-70 is a pair of direct ramps located immediately adjacent to the I-70/U.S. 63 interchange. These ramps need to be relocated because they conflict with the ability to improve the I-70/U.S. 63 interchange. **Exhibit IV-2A and B** depict the areas described in this text.

The recommended preferred alternative for the I-70/U.S. 63 interchange is a four-movement system interchange. The four-movement system configuration organizes travel between U.S. 63 and I-70 so that the four most critical vehicle movements are not required to stop. These major movements include 1) U.S. 63 (southbound) to I-70 (westbound), 2) U.S. 63 (northbound) to I-70 (westbound), 3) I-70 (eastbound) to U.S. 63 (northbound) and 4) I-70 (eastbound) to U.S. 63 (southbound). The investigation of alternatives at the I-70/U.S. 63 interchange was extensive and included a Major Investment Study (MIS). The final MIS report was dated June 2000 and included an evaluation of transportation system characteristics (including an environmental overview), a transportation needs summary, an explanation of the evaluation methodology, an investigation of strategies and the identification of a preferred strategy. The identification of the four-movement system interchange as the preferred strategy was arrived at through a three-level screening process. At each screen, unsuitable strategies were discarded and the most suitable selected for further consideration. The three strategies found to be most suitable included a limited build option, a two-movement system interchange and the four-movement system interchange. The four-system interchange ultimately emerged as the

preferred alternative. Both the two-movement system and four-movement system interchanges would require the relocation of the existing I-70/Business Loop ramps (thereby requiring the use of the Bowling property). While the limited build option would not require the relocation of the ramps, it was rejected based on its performance. Ultimately, it was determined that the limited build option would not satisfy the area's transportation needs. For example, the average intersection volume to capacity ratio exceeded 1.2 (compared to 0.84 for the four-movement system). Additionally, the limited build was expected to have a 27 percent higher crash rate, 49 percent higher delay times during the peak PM hour and 262 percent longer average interchange delays, than the four-movement system. Although it was substantially less expensive, the limited build option was dropped from consideration and should not be considered feasible and prudent.

Consequently, in order to satisfy the transportation goals of the project, an improved I-70/U.S. 63 interchange is required. In order to improve the interchange adequately, the I-70/Business Loop ramps need to be relocated.

## 2. Description of Section 4(f) Resource

The Bowling property consists of approximately 30 acres (parcel number 1710900011080001/ resource number 4BO147). Buildings on site include a brick mansion, a stucco four-square house, a granary, two garages and two portable buildings. The brick mansion is an elaborately detailed example of a 20<sup>th</sup> century eclectic revival colonial. It was constructed in 1913. Very few external alterations have been noted. This building is considered to be individually eligible for the NRHP under Criterion C, architecture. The stucco house is not considered to have the integrity for the National Register as an individual building because of a large addition to the north side. However, this house was at the height of fashion for the time of its construction, and it still expresses that historic period and is considered a contributing resource for the property. The remaining buildings are not considered contributing.

According to coordination with the SHPO, the entire 30-acre parcel is included within the NRHP boundary. Existing I-70 forms the property's northern border. To the west are Bowling Road and the Columbia Municipal Power Plant. The Business Loop of I-70 is the southern border. Industrial/commercial properties adjoin the property's eastern boundary with the COLT rail line/Paris Road (MO-B) in close proximity. There is a single drive/access road across the site and about the northern half of the property is wooded. The configuration of the property is shown on **Exhibit IV-1**. The Bowling family originally purchased the property in 1897. The current brick mansion was built in 1913 after the original building was destroyed by fire. The property is now held in trust by relatives (The Juliet Bowling Napier Trust).

The determination that the NRHP boundary should be the entire 30-acre property is the result of the character of the property. Based on historic photographs, the historic setting is believed to be similar in appearance to what it is today. It is currently wooded to the north and around the buildings. The site opens up to the south. Around the houses, the landscaping retains much of its original character and some of its original elements, including a fountain. The draft Architectural Inventory Form is contained in Chapter IV.B.8.

### 3. Impacts to Resources

Both of the reasonable alternatives in this area (one-way frontage road and collector/distributor) include a removal of the on- and off-ramps between I-70 and Business Loop I-70 and their replacement with an interchange. The impact to the Bowling property is identical under either reasonable alternative. The new interchange would connect to the Business Loop and to Vandiver Road, via a new connector road. None of the buildings on the Bowling property would be displaced. In addition to the interchange impacts, the proposed widening along I-70 would also result in a narrow encroachment along the property's entire northern border. As currently depicted, approximately 6.3 acres (roughly 20 percent) of the property would be acquired. Because of the extent of the right of way acquisition and the close proximity between the new connector road and the brick mansion, a determination of adverse effect is expected<sup>4</sup>.

The impacts to the Bowling property come from two sources: the mainline widening associated with constructing the one-way frontage road or the collector/distributor systems and the new roadway that connects the new interchange to the Business Loop. These will be discussed below.

#### a. Mainline Encroachments on Bowling Property

Regardless of whether a new interchange is constructed, the reasonable alternatives would encroach upon the Bowling property. The addition of I-70 travel lanes and the ramp components of the one-way frontage road system or the collector/distributor road system would result in a narrow encroachment along the entire northern border of the Bowling property. The reasonable alternatives utilize a narrow I-70 median design and a symmetrical widening plan to minimize the footprint and facilitate construction. Only by altering the project's centerline could these encroachments be avoided. The construction costs and traffic delays associated with a non-symmetrical widening (moving the centerline north) can not be considered feasible and prudent. Moving the centerline to the north would force the construction to be conducted piece meal (in order to create traffic lanes open) – both costly and disruptive to traffic. A northern shift could also increase displacement impacts.

As currently depicted, the mainline improvements to I-70 would result in an encroachment of approximately 160 feet (49 meters) deep into the northern border of the Bowling property. The property's north border is approximately 990 feet (300 meters) long. The encroachment attributable to the improvement of I-70 is approximately 3.6 acres (1.5 hectares). These encroachments would narrow the wooded buffer between I-70 and the buildings on the Bowling property. Nevertheless, a substantial wooded buffer would remain. Based on coordination with the SHPO, mainline encroachments, on their own, would not result in a determination of adverse effect.

#### b. Interchange Connector Road Encroachments on Bowling Property

The new interchange is intended to facilitate movement between I-70 and the Business Loop. The existing ramps (one allowing westbound I-70 traffic to exit to westbound on the Business Loop and the other allowing eastbound Business Loop traffic to exit to eastbound I-70) need to be removed to allow for the improvement of the U.S. 63 interchange. The proposed interchange

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<sup>4</sup> The one-way frontage road is the recommended preferred alternative. The reasonable alternatives are depicted on DEIS Exhibit II-20A/B and II-21A/B.

would increase the driving public's ability to move between I-70 and the Business Loop. Rather than the two movements currently allowed, the interchange would allow for all movements. For example, Business Loop traffic (eastbound or westbound) can access I-70 both eastbound and westbound. The same applies to I-70 traffic destined for the Business Loop.

The proposed new interchange ramps would be located within the work area associated with either the one-way frontage road system or the collector/distributor road system. The direct impacts to the property would come not from the interchange ramps, but rather from the connector road – the road that would connect the interchange to the local roadway network. To the north of I-70, the connector road is arranged so that it would create an intersection between the connector road, Vandiver Road and Parker Street. To the south of I-70, the connector road would merge into existing Bowling Road and intersect with the Business Loop at the existing intersection.

The connector road affects approximately 2.7 acres of the Bowling property. It traverses the northwestern corner of the property. While this does not result in the acquisition of any of the existing buildings, the edge of the right of way does come within approximately 60 feet (18 meters) of the rear of the brick mansion. The connector road would also eliminate a driveway connection between the Bowling property and Bowling Street. As can be seen on **Exhibit IV-1**, the connector road would remove some of the vegetation from the rear of the brick mansion and would be closer to the brick mansion than to existing Bowling Road. The traffic volumes on existing Bowling Road are very low. The traffic volumes on the connector road would be substantially greater. These changes are expected to materially alter the on-site conditions.

Consequently, it is the interchange connector road that precipitates the determination of adverse effect.

#### **4. Alternatives Considered**

The improvement of the U.S. 63 interchange requires the relocation of the existing Business Loop ramps. Because the proposed interchange connector road is the basis for the determination of adverse impact, the development/evaluation of alternatives focuses primarily on the alternatives that would replace the movements between I-70 and the Business Loop while avoiding the Bowling property. The No-Build Alternative as well as alternatives outside of the existing I-70 corridor are also examined. **Exhibit IV-2 A and B** depict the areas associated with the avoidance alternatives.

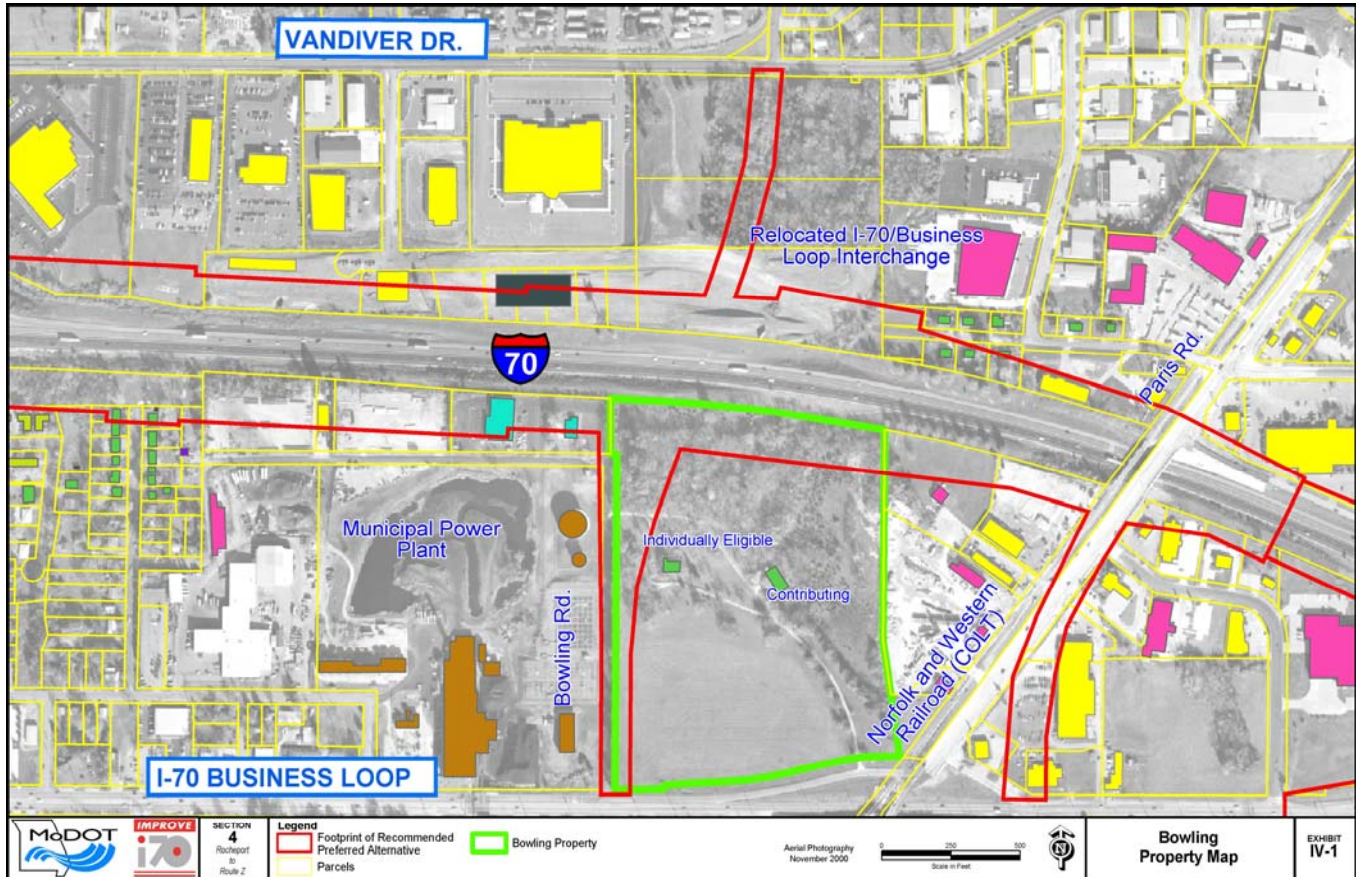
##### **a. No-Build Alternatives**

Both the traditional No-Build Alternative and the basic widening preliminary concept maintain the existing ramps between I-70 and the Business Loop (see Chapter II, Alternatives). Neither of these satisfy the purpose and need of the project – they fail to accommodate existing and future traffic volumes on I-70, they retain outdated design elements, they do nothing to accommodate the higher traffic volumes expected on I-70 in the future and they make no improvements to user safety.

### b. Alternatives that do not Utilize the Existing I-70 Corridor

With the acceptance of the First Tier EIS for SIU 4 in December 2001, FHWA approved the continued investigation of the *Widen Existing I-70 Strategy* for improving I-70. Within SIU 4, it also proposed to investigate a new four-lane freeway, within a Near North Corridor or a Far North Corridor (see **Figure IV-1**). The utilization of the Near North Corridor or the Far North Corridor could potentially eliminate the need to use land from the Bowling property.

**Figure IV-1: Corridor Location Map**



The analysis conducted during the I-70 First Tier EIS concluded that while a northern I-70 corridor might reduce traffic on I-70, these traffic reductions would not be large enough to preclude the need to improve existing I-70. Using the need to improve existing I-70 as a starting point, the Second Tier EIS continued the evaluation of the northern corridors. The first part of the Second Tier EIS analysis was to confirm whether the First Tier EIS finding was still true with updated I-70 Columbia traffic volumes. The second part was to determine whether transportation deficiencies on I-70 would be best addressed by improving only the existing highway or by improving the existing highway and developing a new highway north of I-70. An important step in evaluating the corridors was to determine I-70 traffic volumes in 2030 without a northern corridor and traffic volumes with a Near North Corridor and a Far North Corridor (including traffic volumes on I-70). The I-70 Columbia Travel Demand Model indicated that ADT

(vehicles per day) would range from 30,000 to 60,000 on the Near North Corridor, from 5,000 to 16,000 on the Far North Corridor and from 72,200 to 118,000 under the existing I-70 corridor. Based on this evaluation, the Far North Corridor was eliminated from further consideration because it was inconsistent with the purpose and need of the project. The Far North Corridor was found to result in very little diversion of existing I-70 traffic onto the Far North Corridor. Overall, only about two percent of the traffic on I-70 would be rerouted to the Far North Corridor. Because the Far North Corridor would divert so few vehicles, it would have virtually no benefit on existing I-70 traffic operations. Consequently, the improvements required within the I-70 corridor would be virtually identical even after incurring the impacts and costs associated with developing the Far North Corridor. These conclusions were presented to the project's Advisory Group and also to the public during a public involvement meeting.

The Near North Corridor would divert about 22 percent of the I-70 traffic. This represents roughly 26,000 vehicles per day, enough to warrant additional consideration. Because the Near North Corridor would offer some traffic relief to I-70, MoDOT decided to investigate the level of environmental and socio-economic impacts associated with constructing a freeway in that corridor and compare those impacts to the impacts of improving the existing I-70 corridor. Overall, the analysis showed that the cost to build the Near North Corridor and minimal I-70 improvements would cost \$275 million more than improving I-70 alone. The difference is largely the result of the need for new roadways and structures. Other impacts associated with the Near North Corridor include approximately 1,500 acres of property acquisition, 180 acres of floodplain encroachments, 550 residential displacements and 990 acres of farmland impacts. Following the completion of the corridor traffic evaluation and the corridor impact assessment, the Near North Corridor was eliminated from further consideration because 1) The traffic analysis indicated that the Near North Corridor would draw significantly less traffic than its capacity could support, 2) Even with the Near North Corridor, additional lanes would be needed on I-70 to allow it to operate at a minimally acceptable level. Even one additional lane would require replacement of every bridge along I-70 and the reconstruction of each interchange along the entire SIU 4 section of I-70, and 3) the analysis determined that any alignment within the Near North Corridor would have considerable environmental and socio-economic impact as compared to building all the required improvements along the I-70 corridor only.

### **c. Removal of Business Loop 70 East/I-70 Connectivity Alternatives**

The elimination (and non-replacement) of the existing I-70/Business Loop ramps would have a negative impact on traffic operations at the adjacent interchanges (such as the MO-763 and U.S. 63 interchanges). Trips that formerly used the existing I-70/Business Loop ramps would need to be rerouted, negatively impacting the other intersections in the roadway network. Under the non-replacement scenario, peak hour volumes at the MO-763 interchange are predicted to increase by 36 percent and volumes at the U.S. 63 interchange by 10 percent. An example of non-interchange increases to the roadway network is Paris Road, which is expected to experience an increase of 24 percent. It has been determined that the non-replacement of the movements served by the existing I-70/Business Loop ramps would result in the failure to meet the project's threshold standards regarding interchange operation.

The removal/non-replacement of the ramps is inconsistent with the Columbia Transportation Plan. Coordination with the local stakeholders also indicates that the elimination of the connection between I-70 and the Business Loop is a concern. In addition, businesses now served by the existing ramps would lose direct access to I-70. Another ramification of the non-replacement of the I-70/Business Loop ramps would be longer travel times/distances to and from the Business Loop.

For example, I-70 westbound travelers destined for the Columbia Country Club would experience an increase in travel distance of 2.7 miles (4.3 km) (I-70 to MO-763 interchange to Business Loop to the Country Club).

**d. Relocation of Interchange to the East (Paris Road)**

Several alternatives that relocate the interchange to the east of the Bowling property were examined. The Paris Road alternative relocates the interchange to the east, at the Paris Road crossing. This solution was first developed during the First Tier EIS. It was eliminated because it failed to meet the project's threshold standards regarding interchange operation and because of the residential and business displacements associated with the configuration. It is also expected to require extensive and costly impacts to the COLT railroad.

Moving the interchange to Paris Road eliminates the ability to create a complete interchange. This is because the COLT railroad immediately parallels Paris Road to the west. The level of development in this area further limits the ability to construct a complete interchange. A complete interchange would result in an unreasonable level of community impacts. Consequently, only two ramps are practical (Paris Road to I-70 eastbound and I-70 westbound to Paris Road). Without all of the movements, trips are rerouted to other interchanges in the system. This places greater traffic loads on them. As part of a reevaluation of the traffic conditions associated with an interchange at Paris Road, for Section 4(f) purposes, it was determined that these diversions would not allow the system to operate within the threshold standards established for the project.

Depending on the exact configuration of the Paris Road interchange, as many as 10 additional business structure displacements could result, as well as additional residential structure displacements. Some of these potentially displaced buildings may also be eligible for the NRHP.

Finally, an interchange at Paris Road would directly impact the existing COLT railroad. The complexity associated with railroad involvement (including a probable realignment) and the expense of the additional displacements would result in higher design and construction costs. The ramp spacing between the U.S. 63 interchange and the Paris interchange may also violate safety criteria. Additionally, to function properly, the frontage road/ramp system would need to be extended to the Paris interchange, crossing the COLT line at-grade, a situation unlikely to satisfy either the railroad or the City of Columbia.

**e. Relocation of Interchange to the East (Realignment of Recommended Preferred Alternative)**

Another alternative that relocates the Business Loop interchange to the east of the Bowling property is a realignment of the recommended preferred alternative that was developed when the NRHP eligibility was discovered. While it may avoid the impact of the connector road encroaching upon the Bowling property, it does not eliminate the encroachments associated with the improvements to I-70 itself. It also would require the displacement of the businesses adjacent to the Bowling property and require a new tunnel under the COLT railroad.

This design places the interchange connector road across the triangular area formed by Paris Road, I-70 and the eastern border of the Bowling property. The skew of the overpass is altered so that the northern connector road terminus is at the Vandiver/Parker intersection (as it is in the recommended preferred alternative). The southern part of the connector road follows the eastern border of the Bowling property, requires a new structure to underpass the COLT railroad and terminates at the Business Loop. The intersection of the connector road at



Business Loop 70 would be a mere 400 feet (121.9 m) from the relocated Paris Road intersection created in the recommended preferred alternative. While this alternative avoids the Bowling property, it would require a reworking of the existing Bowling property ingress/egress pattern.

Among the consequences that prohibit this configuration from being considered feasible and prudent are the following:

- Potentially unsafe weaving movements would be created between the new interchange and the U.S. 63 interchange. Moving the interchange to the east moves it closer to the U.S. 63 interchange. This creates a situation where the U.S. 63 ramps conflict with the new interchange ramps. Specifically, it reduces the distance available to weave from ramp lanes to through lanes. There are several ways to measure the adequacy of these weave movements. Some of them indicate that the relocation proposed here is minimally adequate, while others suggest it is inadequate. The professional judgement of the project team is that moving the new interchange closer to the U.S. 63 interchange, as needed to avoid the Bowling property, would result in unacceptable operations.
- The costs associated with the alteration of the COLT railroad are extraordinary. In order to avoid the Bowling property, an underpass is required at the COLT railroad. Any involvement with a railroad increases construction costs and times. Rarely would a railroad be allowed to be out of service. The cost of an underpass is extremely high. The construction of the underpass is expected to take several months and may require the temporary closure of the Business Loop.
- The displacement of a large number of businesses, located adjacent to the Bowling property, would result. The use of the triangular property immediately east of the Bowling property would result in displacements to the businesses that currently exist. These include the Central Concrete Company, Sutherland Home Improvement and Bob Young Auto Repair. The recommended preferred alternative avoids these impacts.
- The new Business Loop intersection would be substandard. A new intersection on the Business Loop would increase local delays and complicate traffic management. Further, the new intersection would be approximately 400 feet (121.9 m) from the relocated Paris Road intersection. At this distance, conflicts between the two intersections may develop. Further, the new connector road intersection would occur immediately adjacent to the tunnel/underpass of the COLT railroad. Design limitations caused by the railroad could negatively impact the functional characteristics of the intersection.

**f. Relocate Interchange to the West of the Bowling Property**

Relocating the new interchange to the west of the Bowling property would eliminate the operational conflicts with the U.S. 63 interchange, but were rejected because of the displacements associated with them. The area adjacent to I-70 and west of the Bowling property are fully developed. Any interchange configuration through the area west of the Bowling property must contend with the power plant, residences and a multitude of commercial enterprises. Additionally, the MO-763 interchange is only 0.6 mile (.97 km) from the Bowling property.



## 5. Measures to Minimize Harm

This section will address all of the planning efforts that were undertaken to minimize the impacts to the Bowling property. As the design process proceeds, the specificity of the recommended preferred alternative would increase. This would allow the mitigative measures proposed to be more detailed.

### a. Design Modifications

The design of the recommended preferred alternative sought to balance and minimize the impacts associated with the new interchange/connector road. In addition to the Bowling property, several other important design constraints are present. First, in order to function properly, the connector road needs to terminate at existing intersections. New intersections would negatively impact the overall roadway network and conflict with existing intersections. Consolidating and relocating the terminal intersections increases the project's relocation impacts substantially. The need to utilize the Bowling/Business Loop and the Vandiver/Parker intersections influences the range of possible alignments. Second, the design was constrained by the presence of the two fixed resources vital to the community – the power plant and the COLT Railroad. Impacts to the operations of these resources needed to be avoided. Finally, the design also needed to be incorporated properly into the design of I-70 itself. Unless it could function as a component of the overall system, it could not be considered feasible. The recommended preferred alternative works within these constraints and avoids the acquisition of all of the buildings on the Bowling property.

### b. Footprint Minimization

To the extent practical the encroachment on the Bowling property was minimized by reducing the project footprint. As the design process proceeds, additional footprint reductions would be evaluated. One specific area that could reduce project-related impacts is examination of the possibility of connector road realignments that shift the footprint (slightly) from the Bowling property toward the power plant property.

### c. Payment of Fair Market Value

The Missouri Department of Transportation acquisition and relocation process is conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (the Uniform Act), as amended. The Uniform Act, as well as Missouri state law, requires that just compensation be paid to the owner of private property taken for public use. The appraisal of fair market value is the basis of determining just compensation to be offered to the owner of property to be acquired.

### d. Restoration and Landscaping

In order to rehabilitate the areas of the Bowling property disturbed by the project, a landscaping plan would be a component of the project. Important elements of this plan would include the following:

- To the extent feasible, a phased construction schedule would be used to minimize exposed areas. Provisions would be made for the use of temporary vegetative cover to stabilize areas not subject to active construction.

- A re-vegetation plan would be a component of this project. This plan would compensate for the loss of trees caused by construction.
- If possible, construction would be limited to a single growing season. In any case, vegetative covers would be well established prior to end of the growing season.

**e. Best Management Practices**

In addition to the implementation of standard Best Management Practices (BMPs), such as an appropriate soil erosion control plan, specific BMPs would be established to minimize impacts to the Bowling property.

**f. Section 106 Programmatic Agreement**

Whenever there is a federal undertaking, Section 106 of the National Historic Preservation Act establishes a formalized process to identify historic properties, determine the effect of the undertaking, consider measures to mitigate impacts to the historic property, and provide an opportunity for the SHPO and/or the Advisory Council on Historic Preservation (ACHP) to comment on the project. This process is underway and will be completed. Chapter IV.B.9 contains the draft Section 106 Programmatic Agreement for SIU 4.

## **6. Coordination**

The Improve I-70 project includes an extensive public involvement/outreach program. This section will address the public involvement program as it relates to Section 4(f) issues.

**a. Property Owner Coordination**

In addition to the notifications, meetings and other outreach that have been targeted to the property owners within the study area, an individual outreach effort has been undertaken for the owners of the Bowling property. This started during the historic architecture evaluation and will continue through the balance of the project. The property owners have been able to provide extensive data about the history, ownership and development of the area. The data that the property owners have been able to provide to the project's architectural historians greatly enhanced their ability to determine the effect of the undertaking.

**b. Transportation Agency Coordination**

As the nature of the Bowling property became clear, the project team began bringing the issues to the technical experts within the DOT. The involvement of the technical experts guided the development and evaluation of the alternatives. As soon as it seemed likely that a Section 4(f) issue existed, coordination within the Federal Highway Administration also began. The early involvement of the key players in the transportation agencies allowed for the project to be processed in a timely manner and with all necessary information.

**c. Local Stakeholder Coordination**

Similarly, the local stakeholders (such as the City of Columbia) were queried about their thoughts on the issues associated with the Bowling property. The Bowling property coordination was conducted through the project's public involvement process and through the informal coordination process that has occurred between the project team and the local planning

community. The major issues arising from this coordination were a general concern for the preservation of important cultural resources, the concern that alternatives that avoid the Bowling property would impact other nearby buildings that might also be culturally sensitive and concern that non-Bowling alternatives may have negative impacts on the local roadway network. This coordination assisted in the development and evaluation of alternatives.

**d. SHPO/Section 106 Coordination**

The related nature of Section 4(f) and Section 106 makes coordination with the SHPO essential. Among the coordination with the SHPO has been on-going informal contact, field visits to each of the sites recommended for the NRHP and the review of the draft cultural resource report. This coordination allowed for the Section 4(f) issues to be addressed as early as possible in the development of the project.

## **7. Conclusions**

The recommended preferred alternative for the I-70/U.S. 63 interchange is a four-movement system interchange. In order to satisfy the transportation goals of the project, an improved I-70/U.S. 63 interchange is required. In order to adequately improve the interchange, the I-70/Business Loop ramps need to be relocated. All reasonable alternatives of the I-70 project include the replacement of these movements with a new interchange immediately west of Paris Road with a connector road between Vandiver Drive and the Business Loop. The reasonable alternatives result in identical encroachments upon the Bowling property. Based on fieldwork conducted by the Center of Archaeological Research and a field review by the MoDOT and the SHPO, the property was found to be eligible for the NRHP. The larger of the two on-site dwellings was found to be individually eligible. The NRHP boundary was tentatively determined to be the entire 30-acre parcel. As currently depicted, the recommended preferred alternative would require the acquisition of approximately 6.3 acres from the property's northwestern corner. None of the dwellings would be displaced. The proposed ramps along I-70 would also result in a narrow encroachment along the property's entire northern border. These impacts will result in an Adverse Effect determination by SHPO. Consequently, Section 4(f) would apply. Pursuant to analysis, coordination and consultation it has been determined that there are apparently no feasible and prudent alternatives to the use of the Bowling property. Additionally, it has been determined that the project has incorporated all necessary planning to minimize harm. As a result, the Secretary of Transportation can approve this project.

### 8. Draft Architectural Inventory Form

MISSOURI OFFICE OF HISTORIC PRESERVATION ARCHITECTURAL/HISTORIC INVENTORY SURVEY FORM			
1 No. <input style="width: 90%;" type="text" value="4BO147"/> 2 County <input style="width: 90%;" type="text" value="Boone"/> 3 Location of Negatives <input style="width: 90%;" type="text" value="CAR/SMSU"/>	4 Present Local Name <input style="width: 90%;" type="text" value="Napier House"/> 5 Other Name <input style="width: 90%;" type="text" value="Bowling House"/>	I-70 SIU 4 MoDOT Job No. J411341G Quad: Columbia Air Photo Sheet: 10	
6 Specific Legal Location Section <input style="width: 20px;" type="text" value="6"/> Twn <input style="width: 20px;" type="text" value="48"/> N Rng <input style="width: 20px;" type="text" value="12"/> W 7 Address <input style="width: 90%;" type="text"/> City <input style="width: 80%;" type="text" value="Columbia"/> Vicinity <input type="checkbox"/>	16 Thematic Category <input style="width: 90%;" type="text"/> 17 Date(s) or Period <input style="width: 90%;" type="text" value="1913"/> 18 Style or Design <input style="width: 90%;" type="text" value="20th Century Eclectic Revival, Colonial"/> 19 Architect/Engineer <input style="width: 90%;" type="text"/> 20 Contractor/Builder <input style="width: 90%;" type="text"/> 21 Original Use <input style="width: 90%;" type="text" value="residence"/> 22 Present Use <input style="width: 90%;" type="text" value="residence"/> 23 Ownership <input type="radio"/> Public <input checked="" type="radio"/> Private	28 Number of Stories <input style="width: 40px;" type="text" value="2 1/2"/> 29 Basement? <input type="checkbox"/> Yes 30 Foundation Material <input style="width: 90%;" type="text" value="concrete"/> 31 Wall Construction <input style="width: 90%;" type="text" value="brick masonry"/> 32 Roof Type and Material <input style="width: 90%;" type="text" value="hipped asphalt"/> 33 Number of Bays Front <input style="width: 20px;" type="text" value="7"/> Side <input style="width: 20px;" type="text" value="3"/> 34 Wall Treatment <input style="width: 90%;" type="text" value="running bond"/> 35 Plan Shape <input style="width: 90%;" type="text"/> 36 Changes: Explain in No. 42 Addition <input type="checkbox"/> Yes Altered <input type="checkbox"/> Yes Moved <input type="checkbox"/> No 37 Condition: Interior <input style="width: 90%;" type="text"/> Exterior <input style="width: 90%;" type="text" value="good"/> 38 Preservation Underway <input type="checkbox"/> No 39 Endangered? <input type="checkbox"/> Yes By What <input style="width: 90%;" type="text" value="highway expansion"/> 40 Visible from Public Road <input type="checkbox"/> Yes 41 Distance from and Frontage on Road <input style="width: 90%;" type="text" value="See map"/>	
8 Description of Location <input style="width: 90%; height: 60px;" type="text"/> 9 Coordinates UTM Zone <input style="width: 40px;" type="text" value="15 NAD83"/> East <input style="width: 60px;" type="text" value="559476"/> North <input style="width: 60px;" type="text" value="4313225"/>	24 Owner Name and Address <input style="width: 90%;" type="text" value="Juliet Bowling Napier Trust, et al., Box 1867, Columbia, MO 65205"/> 25 Open to Public <input type="checkbox"/> No 26 Local Contact Person/Organization <input style="width: 90%;" type="text" value="Judith Napier, 1619 Mores Blvd., Columbia, MO"/> 27 Other Surveys in Which Included <input style="width: 90%;" type="text"/>		
10 Resource Type <input style="width: 80%;" type="text" value="Building"/> 11 On National Register? <input type="checkbox"/> No 12 Is It Eligible? <input type="checkbox"/> Yes 13 Part of Estab. Hist. Dist.? <input type="checkbox"/> No 14 District Potential? <input type="checkbox"/> No 15 Name of Established Dist. <input style="width: 90%;" type="text" value="Not applicable"/>			
42 Further Description of Important Features <span style="float: right;">See Continuation Sheet <input checked="" type="checkbox"/></span>			
43 History and Significance <span style="float: right;">See Continuation Sheet <input checked="" type="checkbox"/></span>			
44 Description of Environment and Outbuildings <span style="float: right;">See Continuation Sheet <input checked="" type="checkbox"/></span>			
45 Sources of Information <span style="float: right;">See Continuation Sheet <input checked="" type="checkbox"/></span>			
46 Prepared By: <input style="width: 150px;" type="text" value="David Quick"/>		47 Organization: <input style="width: 150px;" type="text" value="Center for Archaeological Research/SMSU"/>	
48 Date: <input style="width: 100px;" type="text" value="2/3/2004"/>			
<b>WHEN COMPLETED, RETURN FORM TO:</b>			
HISTORIC PRESERVATION PROGRAM, PO BOX 176, JEFFERSON CITY, MO 65102			Revision Date(s) <input style="width: 150px;" type="text"/>

ARCHITECTURAL/HISTORIC INVENTORY SURVEY FORM— CONTINUATION SHEET PAGE NO. 1

REFERENCE NUMBER	NAME	COUNTY	ADDRESS
	Napier House	Boone	

Continuation Form, Property: 4BO147

42 Description of Important Features

This elaborately detailed mansion is constructed with running bond brick masonry with soldiers used for lintels. It has a molding a small distance below the denticulated cornice that creates a brick frieze. There is a projecting bay just to the west of the principle entrance. The entrance portico has an elliptical arch supported by Doric columns. There is a large porch on the east end with Ionic columns. This porch has been screened but both the column details and the spindled railing remain visible. The porch has a spindled balustrade on its roof. The only exterior changes appear to be the screening of the porch, the replacing of a tile roof with asphalt, and an access ramp on the rear.

43 History and Significance

In 1875, the property was part of 416 acres owned by E.C. More. More was a lawyer, congressman, and farmer (he once served as the president of the state board of agriculture) in the late 1800s (Switzler 1882:777-778). Some time after 1875, much of the southern part of the 416 acres was subdivided into large and small lots as part of E.C. More's Subdivision shown on the 1898 plat map (attached). On the 1898 map, Lot 46 contains the initials "CBB," and the road on the west side of the lot is identified as Bowling. According to Julie Napier, Charles B. Bowling, her great-grandfather, purchased the lot in 1897. It already contained a house built by More in 1883. The lot is shown as approximately 1,575 ft north-south by 980 ft east-west, about 34 acres. It is one of several large lots in the north part of the subdivision; the south part contained smaller lots about 335 ft by 125 ft. The subdivision indicates the apparent suburbanization of the area. The smaller town lots front More's Boulevard along the south side of Section 6, then the city limit. There is also a station indicated on the railroad line at More's Boulevard. By 1917, the area had been incorporated into the city of Columbia, but Lot 46 retained its 1898 dimensions (see attached plat).

Sometime after 1917, Lot 46 was extended southward and incorporated nine of the original smaller town lots, since today the parcel extends south to More's Boulevard, now North Boulevard and I-70 Business Loop. This probably occurred in the 1920s when the power plant to the west (4BO146) expanded southward, and Lake View Avenue, the former southern boundary of the power plant and the Bowling lot, was terminated at the west side of the power plant. The Bowling lot would have been 42 acres after this change, if the north boundary was the same. When I-70 was built, there were changes to the north. About 12 acres of the original lot were taken by I-70 or are now part of different parcels north of the I-70. The current lot is approximately 29 acres.

In 1908, Charles B. Bowling's son, Charles C. Bowling (1884-1968), built a house just to the east of the house that was present when C. B. Bowling purchased the lot in 1897 (built by More in 1883). This stucco four-square house (4BO147.2) is described more fully below. On February 12, 1913, the 1883 house was completely destroyed in a fire (Crighton 1987). According to Julie Napier, the present brick house (4BO147.1) was completed by the end of 1913.

According to an obituary (Missouri Columbian 1944), Charles B. Bowling (1860-1944) was president of the Exchange National Bank for 36 years, from 1908 until his death. He had earlier worked with his father and grandfather in the lumber and building business. He also for a time served as president of the Boone County Mill and Elevator Company and was president of the Exchange Realty Company.

C. B. Bowling was part of a well known and probably well-to-do extended family. His grandfather, Brightberry McAlester (1809-1899), was a carpenter, builder, and ultimately an architect. He, with various partners, built, and sometimes designed, a number of major buildings in Columbia: a courthouse in 1846, a county jail in 1856, the president's mansion at the University of Missouri in 1865, a scientific building at the university in 1872 (Switzler 1882:913), and a large building for the Columbia school system in 1881 (Switzler 1882:815). He designed, but did not build, the school building. James D. Bowling (1831-1913) married Brightberry's daughter Martha Temperance McAlester (1837-1911) in 1859, and their only son, Charles B. Bowling, was born in 1860. In 1870, James became Brightberry's partner in the building and lumber business. C. B. Bowling's first wife was Laura J. Campbell of Tennessee. They married in 1882, and Laura died in 1899. In 1901, C. B. married Laura's cousin Margaret O. Berry. John Polk Campbell, the founder of Springfield, Missouri, was the grandfather of both of C. B.'s wives. One of C. B.'s cousins was Dr. Andrew W. McAlester, one of the founders of the School of Medicine at the University of Missouri in 1872 and the first Chair of Surgery and Obstetrics (Switzler 1882:913).

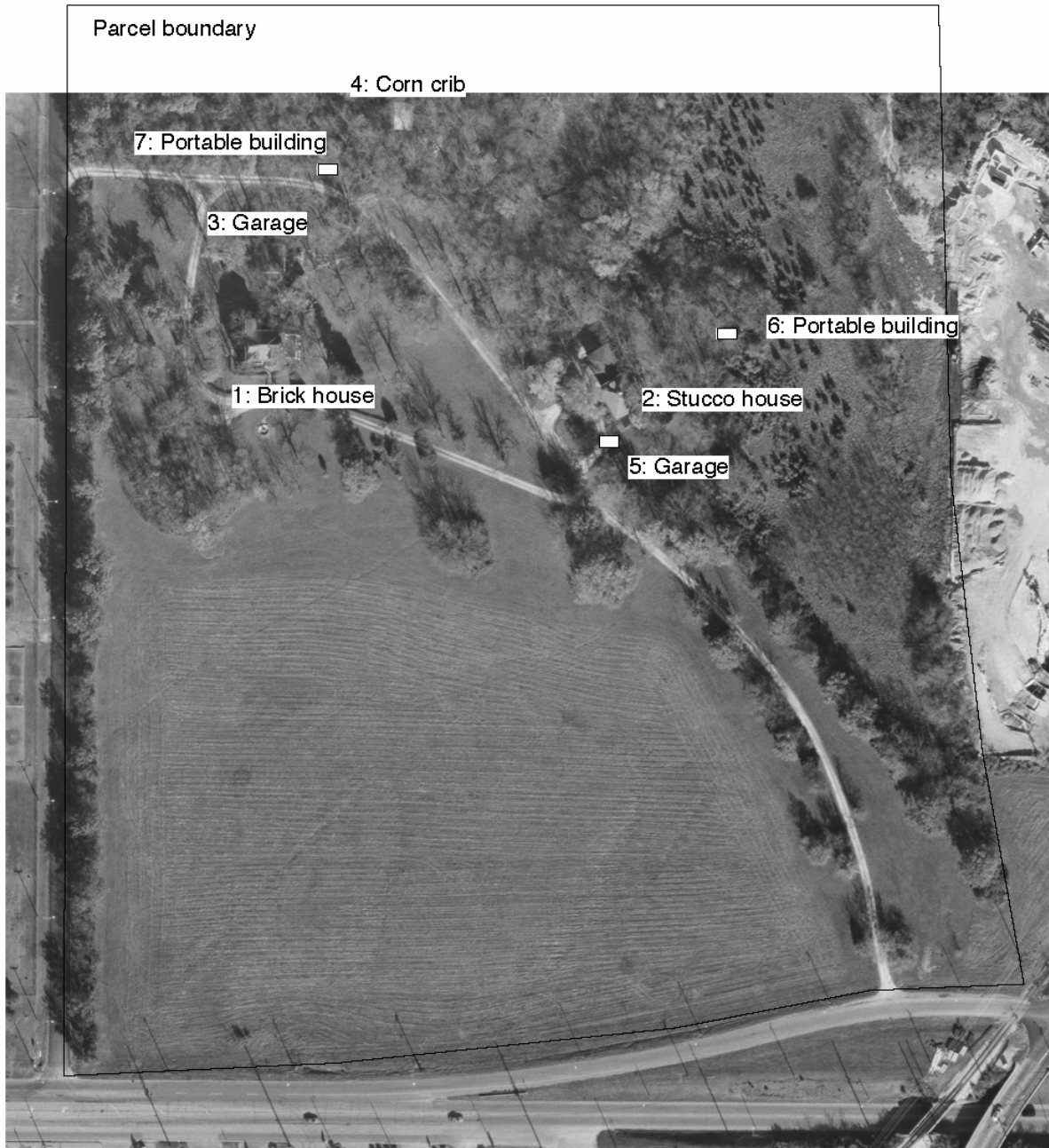
(continued on next page)

ARCHITECTURAL/HISTORIC INVENTORY SURVEY FORM— CONTINUATION SHEET PAGE NO.

2

REFERENCE NUMBER	NAME	COUNTY	ADDRESS
	Napier House	Boone	
Continuation Form, Property: <input data-bbox="527 367 748 399" type="text" value="4BO147"/>			
<p>Both houses on the property display style and architectural sophistication. Julie and Laura Napier, the current occupants and C. B. Bowling's great-granddaughters, said that family history attributes the design and construction of the houses to C. B. and C. C. Bowling. The style and sophistication of the houses is attributed to their work in the family building and lumber business and the influence of Brightberry McAlester.</p>			
<p>The house 4BO147.1 is recommended eligible for the National Register as an excellent example of an Eclectic Revival Colonial mansion with nearly complete exterior integrity. The house is recommended under Criterion C in the area of Architecture. While Charles B. Bowling was clearly a successful business man and a member of a prominent family, there is no evidence to indicate that he stood out as individually significant within the fields of business or community affairs and consequently the property is not recommended eligible under Criterion B.</p>			
<p>Although not eligible as an individual property because of a recent addition, the stucco house 4BO147.2 is considered a contributing building. Its association with 4BO147.1 contributes to the feeling of a suburban family estate from the early 1900s. The property also contains five other noncontributing buildings (see below).</p>			
44 Environment and Outbuildings			
<p>The stucco house (4BO147.2) is not considered to have the integrity for the National Register as an individual building because of a large addition to the north side. However, this house was at the height of fashion for the time of its construction, and it still expresses that historic period and is considered a contributing resource for the property. It is noteworthy for its bell-cast hipped roof with broad eaves and modillions. Indicative of its fashionable character are the broad eaves and the second-story windows that are located just at the base of the eaves. The fenestration of the principle facade has a curious asymmetry in the off-center location of the door and corresponding location of other fenestration. The door itself has side lights and is topped by a finely executed fan motif.</p>			
<p>Building 4BO147.4 is an elevated granary with a central wagon bay. An air photograph taken during the 1940s shows the property before the building of I-70. The character of the property is similar to its appearance today, wooded to the north and around the houses and opening up more to the south. However, in the photo there are a number of additional agricultural buildings to the north of the houses in the direction of the current location of I-70. These buildings may predate C. B. Bowling's ownership of the property.</p>			
<p>The property also contains two recent garages (4BO147.3 and 4BO147.5) and two portable buildings (4BO147.6 and 4BO147.7). There is also a fountain just south of the house that appears in the 1940s photo, though its date of construction is unknown.</p>			
45. Sources of Information			
Boone County plat maps 1875, 1898, 1917, 1930, 1947			
<i>Columbia Missourian</i> , 1944, Obituary of Charles B. Bowling.			
Crighton, John C., 1987, <i>A History of Columbia and Boone County</i> , Computer Color-Graphics, Columbia, Missouri.			
Switzler, William F., 1882, <i>History of Boone County, Missouri</i> , Western Historical Company, St. Louis, Missouri.			
Interviews and e-mail from Laura and Julie Napier, current occupants, February and March 2004.			
Brink, Ben, and Janet Brink, 2004, Brink-Day Genealogy. Electronic document, <a href="http://brinkfamily.net/genealogy/index.htm">http://brinkfamily.net/genealogy/index.htm</a> , accessed March 2004.			

4BO147





1940s Air Photo



I-70 SIU 4 MoDOT Job No. J4I1341G

County: Boone

Quadrangle: Columbia

Air Photo Sheet: 10



view to NE, brick house

Property

4BO147

Building

1



view to SE, brick house

Property

4BO147

Building

1



I-70 SIU 4 MoDOT Job No. J4I1341G

County: Boone

Quadrangle: Columbia

Air Photo Sheet: 10



Property

4BO147

Building

1

view to SW, brick house



Property

4BO147

Building

1

view to N, house and surroundings

I-70 SIU 4 MoDOT Job No. J4I1341G

County: Boone

Quadrangle: Columbia

Air Photo Sheet: 10



view to NE, stucco house, contributing resource

Property

4BO147

Building

2



view to SE, stucco house, contributing resource

Property

4BO147

Building

2



I-70 SIU 4 MoDOT Job No. J4I1341G

County: Boone

Quadrangle: Columbia

Air Photo Sheet: 10



Property

4BO147

Building

2

view to S, stucco house addition, contributing resource



Property

4BO147

Building

2

view to E, house and surroundings, contributing resource

I-70 SIU 4 MoDOT Job No. J4I1341G

County: Boone

Quadrangle: Columbia

Air Photo Sheet: 10



view to W, garage, noncontributing resource

Property

4BO147

Building

3



view to NE, garage, noncontributing resource

Property

4BO147

Building

3



I-70 SIU 4 MoDOT Job No. J411341G

County: Boone

Quadrangle: Columbia

Air Photo Sheet: 10



Property

4BO147

Building

4

view to NE, corn crib, noncontributing resource



Property

4BO147

Building

5

view to E, noncontributing resource



I-70 SIU 4 MoDOT Job No. J411341G

County: Boone

Quadrangle: Columbia

Air Photo Sheet: 10



view to SE, noncontributing resource

Property  
4BO147

Building  
6

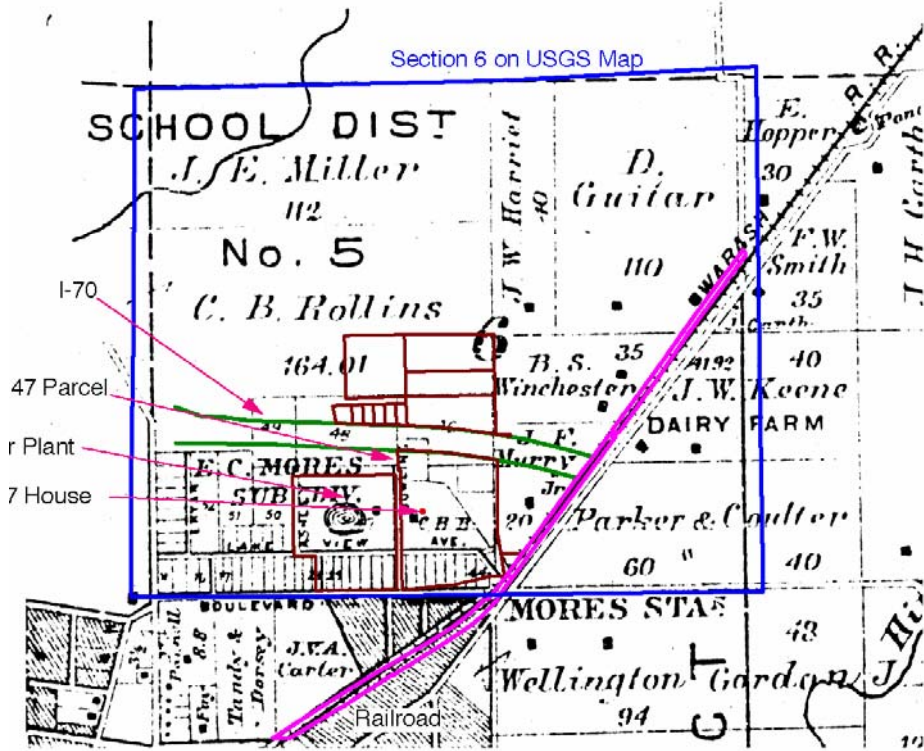
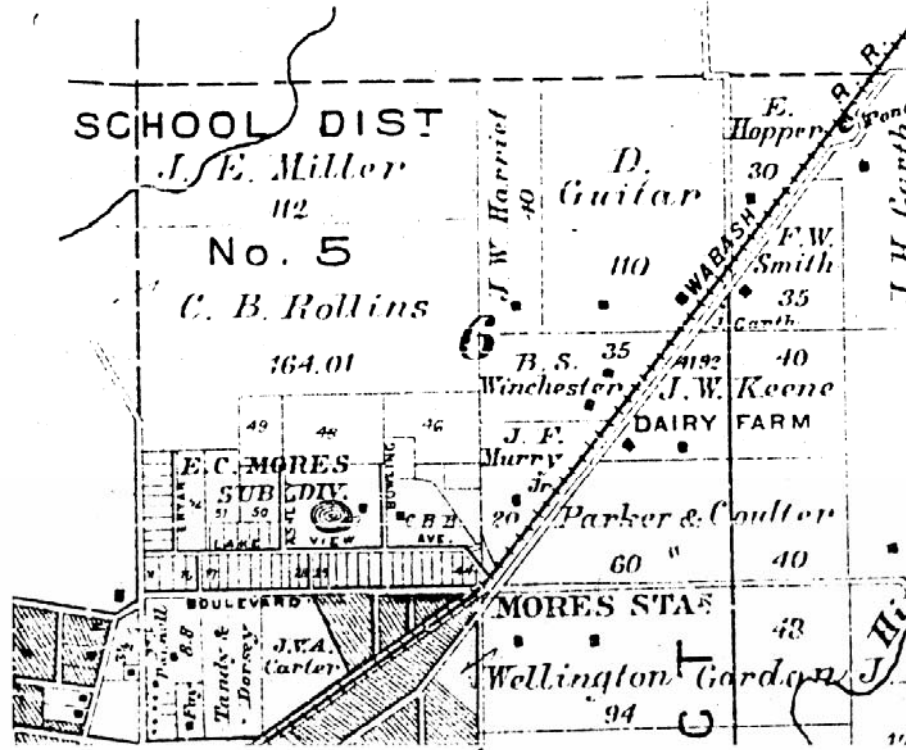


view to NE, noncontributing resource

Property  
4BO147

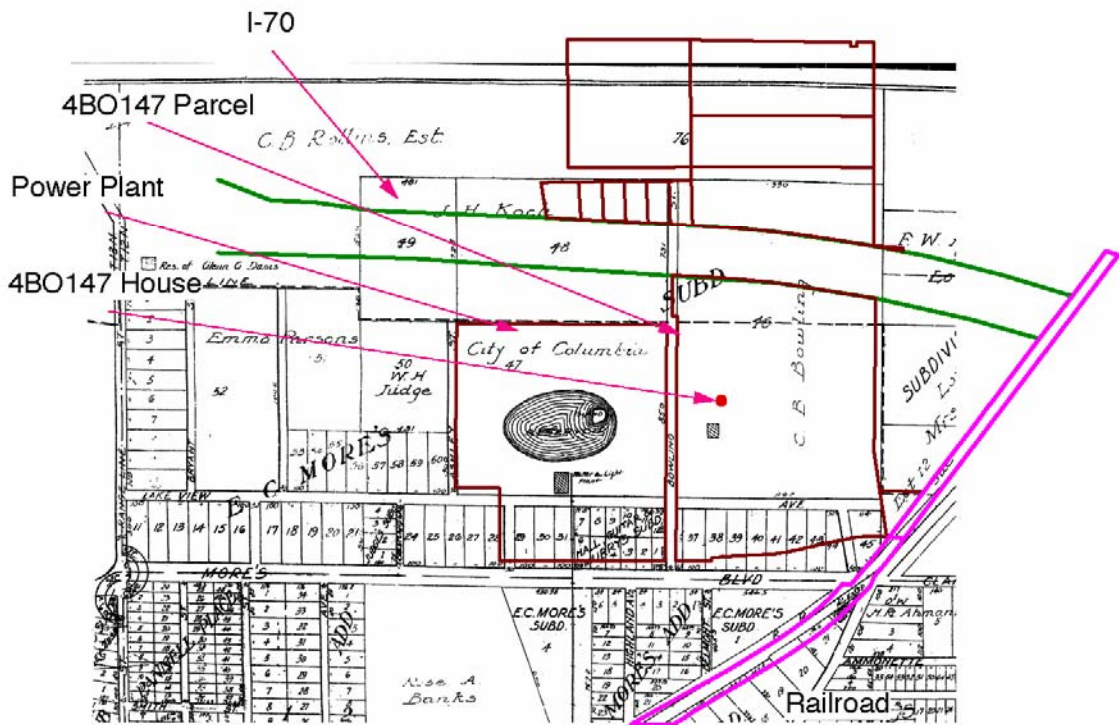
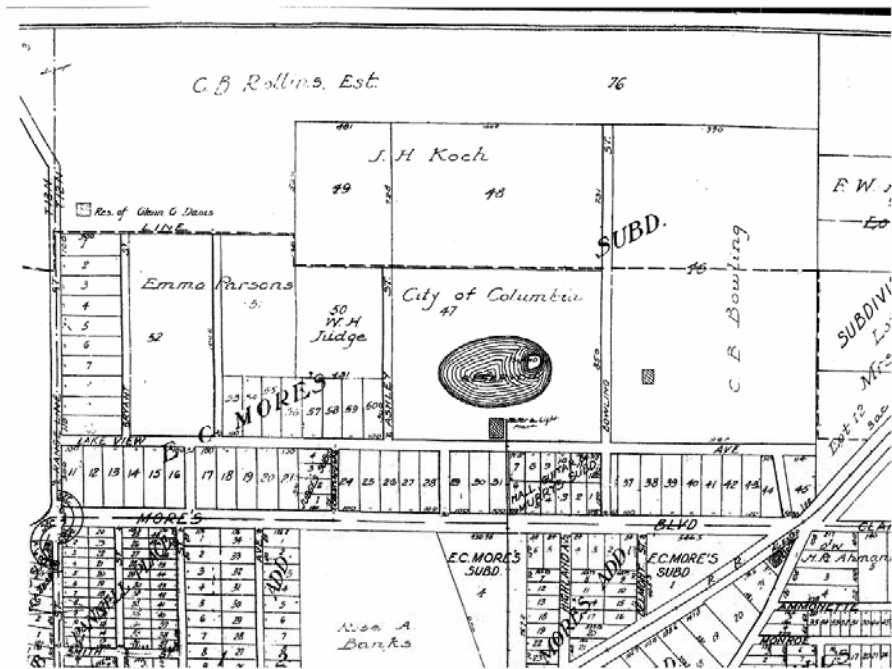
Building  
7

1898 Plat Map





1917 Plat Map





## 9. Draft Section 106 Programmatic Agreement for SIU 4

**PROGRAMMATIC AGREEMENT  
BETWEEN THE FEDERAL HIGHWAY ADMINISTRATION AND  
THE MISSOURI STATE HISTORIC PRESERVATION OFFICER, AND THE  
ADVISORY COUNCIL ON HISTORIC PRESERVATION  
SUBMITTED PURSUANT TO 36 CFR 800.14(b)((2))**

**Regarding Interstate 70 Corridor, SIU4,  
From East of Route BB to Route Z  
Boone County**

**Missouri Department of Transportation Job Nos. J4I1341G**

**Whereas**, the Federal Highway Administration (FHWA) has determined that the improvements to Interstate 70 from east of Route BB to Route Z may have an effect upon properties included in or eligible for inclusion in the National Register of Historic Places (NRHP), and has consulted with the Advisory Council on Historic Preservation (Council), and the Missouri State Historic Preservation Office (SHPO), pursuant to Section 800.13 of the regulations (36 CFR 800) implementing Section 106 of the National Historic Preservation Act (NHPA); and Section 110 of the same act, and

**Whereas**, the Missouri Department of Transportation (MoDOT) has participated in consultation and has been invited to concur in this Programmatic Agreement, and

**Whereas**, the full impacts of this project on cultural resources cannot be determined until the final design has been completed,

**Now therefore**, the FHWA, the Council, the SHPO and the MoDOT agree that the project shall be administered in accordance with the following stipulations to satisfy the FHWA's Section 106 responsibility for all individual aspects of the project.

### **Stipulations**

The FHWA shall insure the following measures are carried out:

- I. A historic and architectural investigation was conducted to identify all historical, architectural, and bridge resources within this section of the I-70 Corridor. Based on the results of the investigations MoDOT concluded that the proposed project would impact one architectural resource, 4BO147, the Bowling-Napier Estate, which includes the 1913 brick mansion and surrounding 30 acre parcel. The residence and parcel have been determined eligible under Criterion C. The proposed construction will encroach on the property. The

State Historic Preservation Office concurs that the recommended preferred alternative would have an adverse effect on the property. Concerning those cultural resources which are determined to be significant:

- A. MoDOT has consulted with the SHPO to determine the effect of the project on the eligible resource following the guidance found in 36 CFR 800.5.
  - B. MoDOT will consult with the SHPO to determine appropriate mitigation measures and levels of documentation.
  - C. MoDOT will complete the mitigation measures and allow the SHPO a thirty (30) day comment period. If the SHPO has comments they shall be satisfactorily addressed prior to the demolition of any NRHP eligible resources.
  - D. MoDOT shall provide copies of the mitigation documentation to SHPO.
- II. Pursuant to 36CFR800.4, the MoDOT has taken steps to identify archaeological sites that may be affected by the proposed project. A Phase I archaeological survey will be conducted and any sites that will be adversely affected will be further evaluated in coordination with the State Historic Preservation Office. Concerning these threatened archaeological resources:
- A. MoDOT shall consult with the SHPO to determine the effect of the project on the eligible resource(s) following the guidance found in 36 CFR 800.5.
  - B. For those sites adversely effected, FHWA shall ensure that prior to construction a Phase II archaeological testing investigations to determine their eligibility for listing on the NRHP.
  - C. Archaeological Data Recovery Plan(s) to mitigate adverse effects on NRHP eligible archaeological sites that cannot be avoided. Mitigation will include recovery of significant archeological information by means of controlled excavation and other scientific recording methods.
  - D. The FHWA shall ensure that a report on the archaeological investigations carried out pursuant to this agreement is provided to the SHPO, and upon request, to other interested parties.
  - E. The FHWA shall ensure that procedures to be used for the processing, analysis, and curation of collected materials are in accordance with the Advisory Council's Handbook *Treatment of Archaeological Properties, Part III* of the Secretary of Interior's Guidelines and currently accepted standards for the analysis and curation of archaeological remains.
  - F. The FHWA shall ensure that a determination, finding, or agreement is supported by sufficient documentation to enable any reviewing parties to understand its basis.

- III. The Council and the SHPO may monitor activities carried out pursuant to this Programmatic Agreement, and the Council will review such activities if so requested. The FHWA will cooperate with the Council and the SHPO in carrying out their monitoring and review responsibilities.
- IV. Disputes regarding the completion of the terms of this agreement shall be resolved by the signatories with Council participation if requested.
- V. Any party to this Programmatic Agreement may request that it be amended, whereupon the parties will consult in accordance with 36 CFR 800.13 to consider such an amendment.
- VI. Any party to this Programmatic Agreement may terminate it by providing thirty (30) days notice to the other parties, provided that the parties will consult during the period prior to the termination. In the event of termination the FHWA will comply with 36 CFR 800.4 through 800.6 with regard to this project.
- VII. This Programmatic Agreement shall expire ten (10) years after its execution. The agreement can be extended for two (2) five (5)-year periods if all parties agree in writing.

Execution and implementation of this Programmatic Agreement evidences that the FHWA has satisfied its Section 106 responsibilities for improvements to Interstate 70 from east of Route BB to Route Z, Boone County, Missouri.

**Advisory Council on Historic Preservation:**

By: \_\_\_\_\_ Date: \_\_\_\_\_

**Federal Highway Administration**

By: \_\_\_\_\_ Date: \_\_\_\_\_

**Missouri State Historic Preservation Officer:**

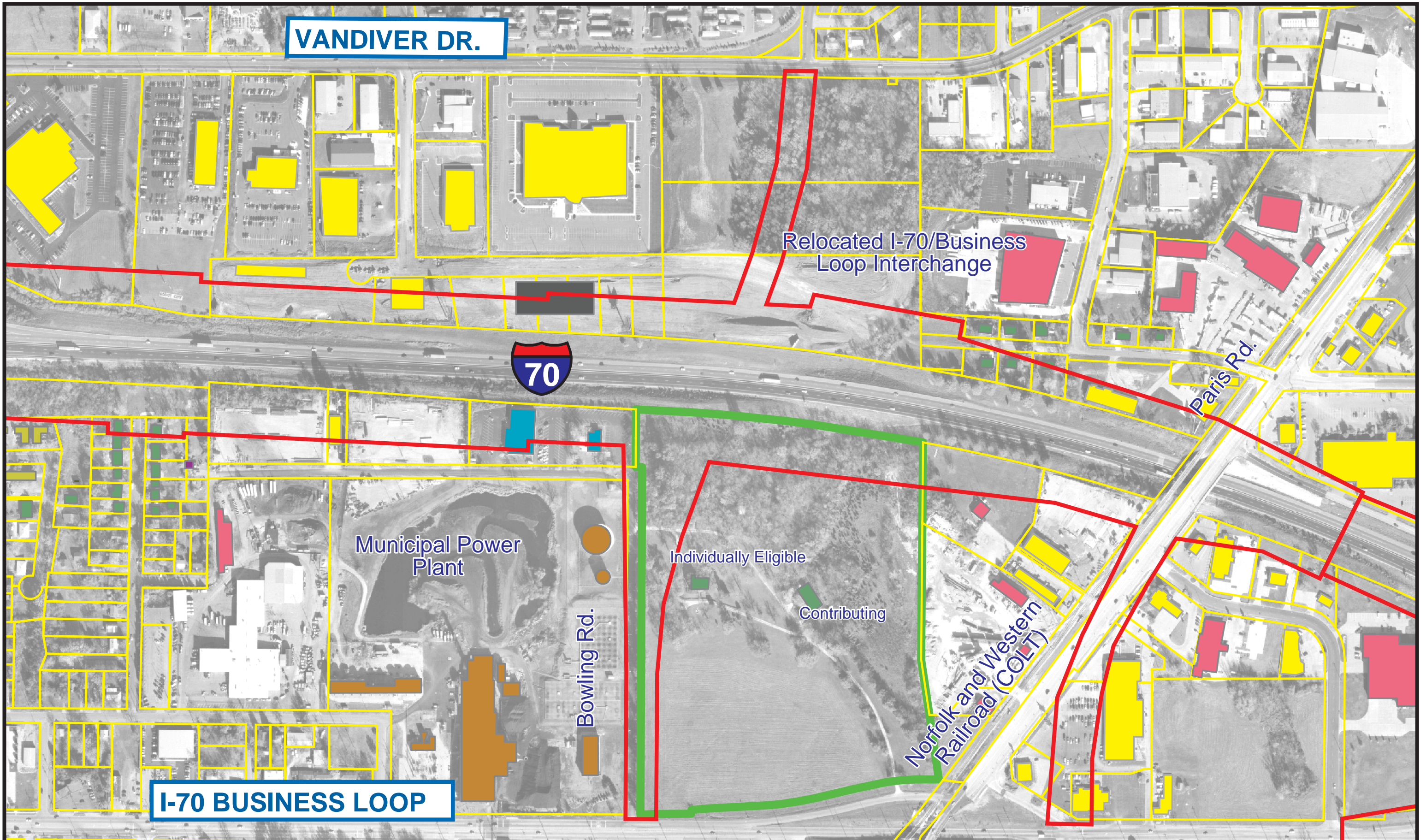
**By:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Concur:**

**Missouri Department of Transportation**

**By:** \_\_\_\_\_ **Date:** \_\_\_\_\_





VANDIVER DR.

Relocated I-70/Business Loop Interchange



Paris Rd.

Municipal Power Plant

Individually Eligible

Contributing

Bowling Rd.

Norfolk and Western Railroad (COLT)

I-70 BUSINESS LOOP



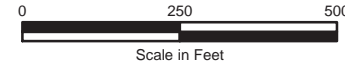
SECTION 4  
Rocheport to Route Z

Legend

- Footprint of Recommended Preferred Alternative
- Parcels

- Bowling Property

Aerial Photography November 2000



Bowling Property Map

EXHIBIT IV-1

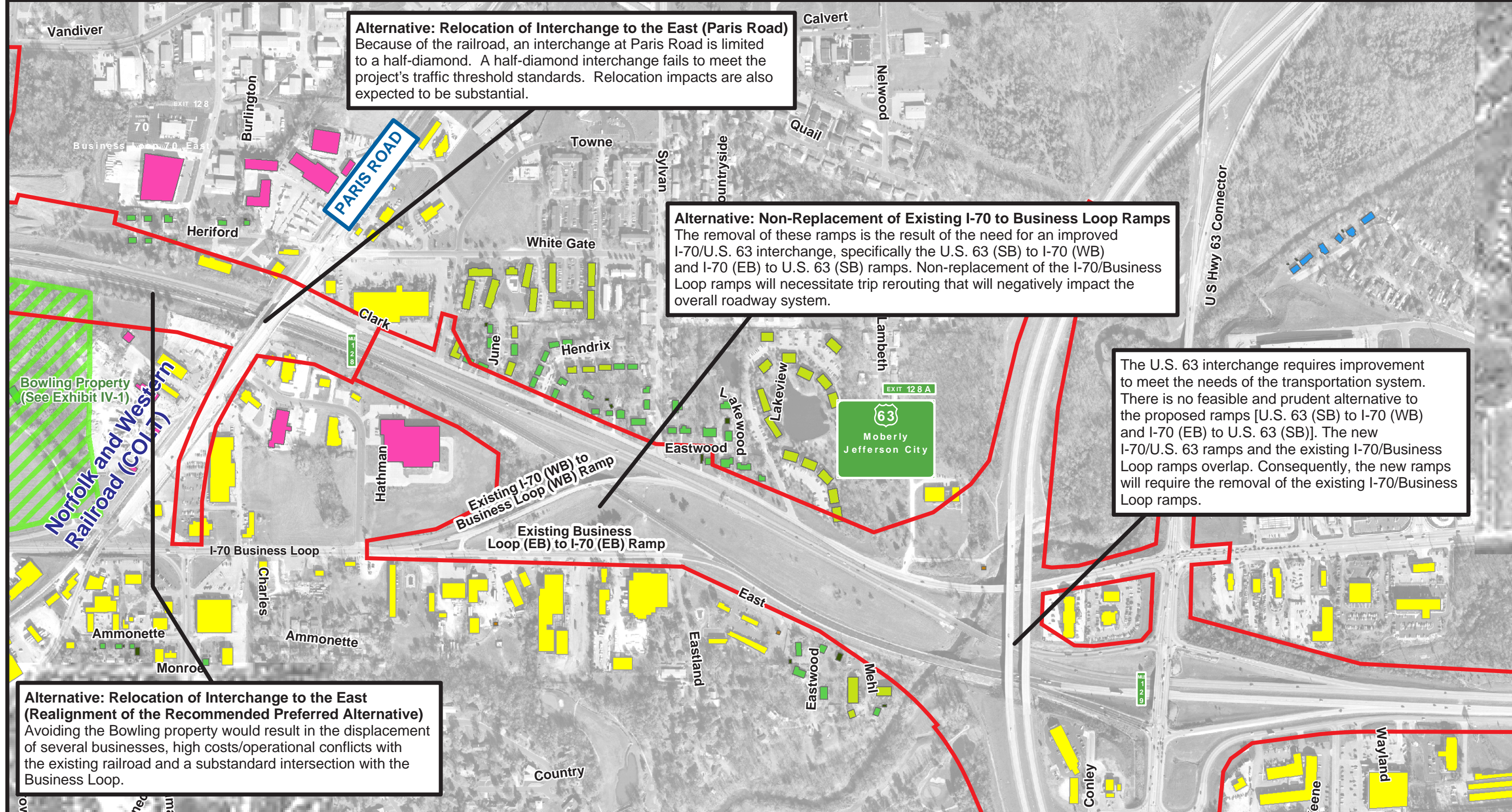


**Alternative: Relocation of Interchange to the East (Paris Road)**  
 Because of the railroad, an interchange at Paris Road is limited to a half-diamond. A half-diamond interchange fails to meet the project's traffic threshold standards. Relocation impacts are also expected to be substantial.

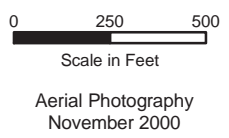
**Alternative: Non-Replacement of Existing I-70 to Business Loop Ramps**  
 The removal of these ramps is the result of the need for an improved I-70/U.S. 63 interchange, specifically the U.S. 63 (SB) to I-70 (WB) and I-70 (EB) to U.S. 63 (SB) ramps. Non-replacement of the I-70/Business Loop ramps will necessitate trip rerouting that will negatively impact the overall roadway system.

The U.S. 63 interchange requires improvement to meet the needs of the transportation system. There is no feasible and prudent alternative to the proposed ramps [U.S. 63 (SB) to I-70 (WB) and I-70 (EB) to U.S. 63 (SB)]. The new I-70/U.S. 63 ramps and the existing I-70/Business Loop ramps overlap. Consequently, the new ramps will require the removal of the existing I-70/Business Loop ramps.

**Alternative: Relocation of Interchange to the East (Realignment of the Recommended Preferred Alternative)**  
 Avoiding the Bowling property would result in the displacement of several businesses, high costs/operational conflicts with the existing railroad and a substandard intersection with the Business Loop.



Building Type		
Agricultural	Industrial	Park
Church	Cemetery	Public
Commercial	Single Family	Multiple Family
Fraternal	Utility	Bowling Property
Garage	Mobile Home	



Footprint of Recommended Preferred Alternative. Alignment Details Shown On Chapter II-12 Through II-26.

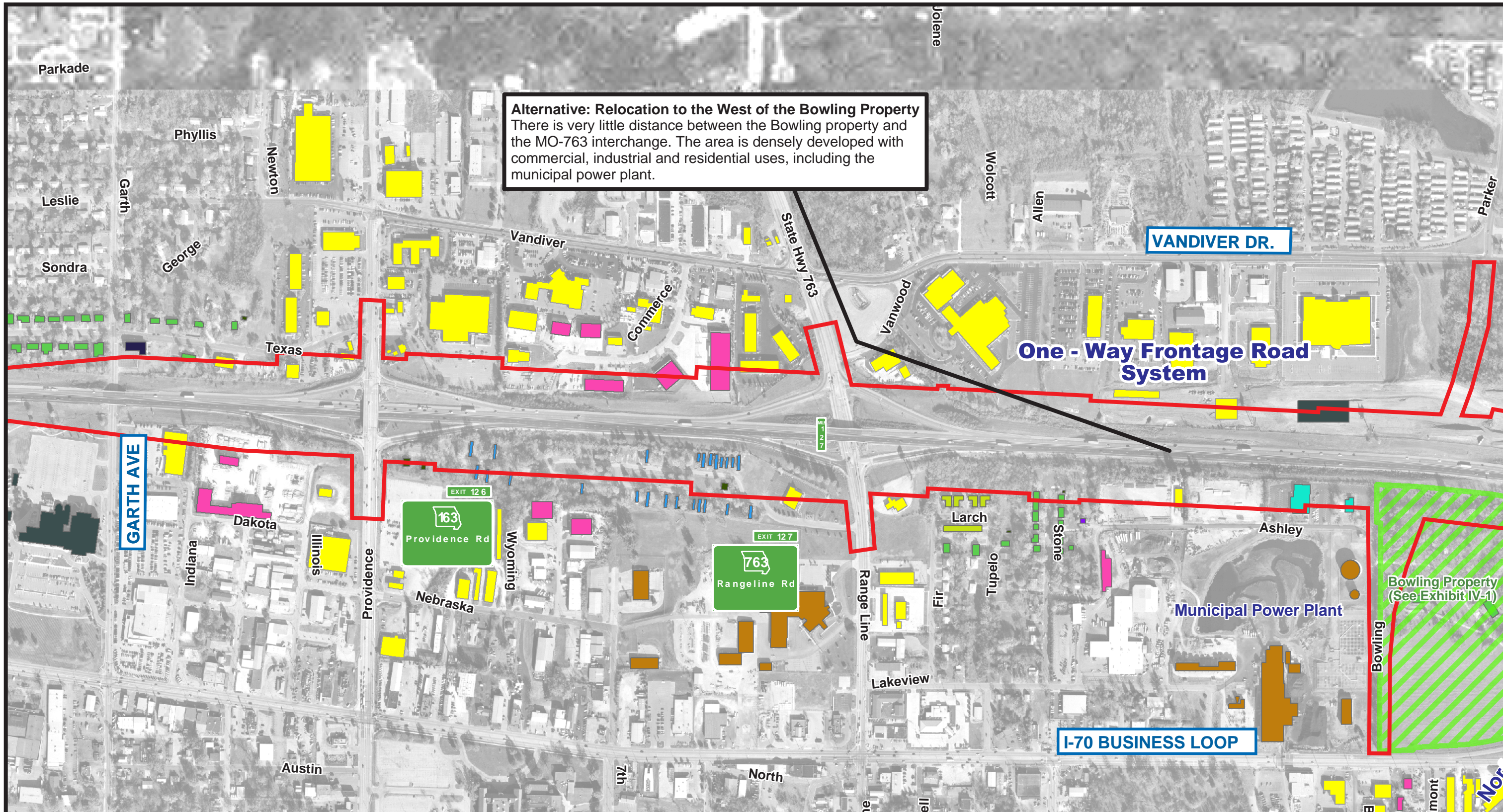


**SECTION 4**  
 Rocheport to Route Z

**Section 4(f) Alternatives Map - East of Bowling Property**

**EXHIBIT IV-2A**





**Alternative: Relocation to the West of the Bowling Property**  
 There is very little distance between the Bowling property and the MO-763 interchange. The area is densely developed with commercial, industrial and residential uses, including the municipal power plant.

Building Type		
Agricultural	Industrial	Park
Church	Cemetery	Public
Commercial	Single Family	Multiple Family
Fraternal	Utility	Bowling Property
Garage	Mobile Home	

0 250 500  
 Scale in Feet  
 Aerial Photography  
 November 2000

Footprint of Recommended Preferred Alternative. Alignment Details Shown On Chapter II-12 Through II-26.

**SECTION 4**  
 Rocheport to Route Z

**Section 4(f) Alternatives Map - West of Bowling Property**

**EXHIBIT IV-2B**