



I-65 RAMP MODIFICATIONS SCOPING STUDY



Kentucky Transportation Cabinet
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GRESHAM
SMITH AND
PARTNERS

I-65 RAMP MODIFICATIONS SCOPING STUDY

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Section 1.0

EXECUTIVE SUMMARY

Executive Summary

Scoping Study I-65 Ramp Modifications Item No. 5-8102.00

Background / Existing Conditions

In June, 1999, the Downtown Development Corporation adopted the *South Central Louisville Development Coordination Study*. The focus of that study was directed toward the major venues located within the limits of the project area and their relationships to one another and to downtown Louisville. One of the study's recommendation categories was Specific Physical Improvements which recommended a series of modifications to access points along I-65 including ramp closures and revisions in the vicinity of the University of Louisville. The current scoping study evaluated these recommendations as well as other alternatives to improve traffic operations associated with ramps on I-65 and the adjoining street systems.

Ramps in this area were constructed in the late 1950's and early 1960's using design criteria that are now considered outdated. This section of I-65 has an average daily traffic (ADT) as high as 158,000 vehicles per day. Congestion and crashes are daily occurrences. Between January 1, 2002 and April 30, 2004 there were 1,137 crashes along the scoping study section of I-65.

Major venues in this vicinity include the University of Louisville, the Kentucky Fair and Exposition Center, Six Flags/Kentucky Kingdom Amusement Park, Papa John's Cardinal Stadium and Churchill Downs. Also, just south of the study area are the Louisville International Airport and the United Parcel Service Worldport and Global Operations Center.

Project Purpose

The purpose of the scoping study was to establish ways to:

Improve traffic flow, safety and access associated with ramps along I-65 from Crittenden Drive to St. Catherine Street.

A map of the study area is shown in Figure ES 1. The need for the project is demonstrated by:

- Poor traffic flow
- Too many ramps, too close together
- Insufficient acceleration, deceleration, merging and weaving distances
- Safety problems, high incidence of crashes
- Inefficient and confusing access to and from I-65 and to and from major venues



FIGURE ES1 - STUDY AREA

Control of access on the interstate and other freeway systems is considered critical to providing the highest quality of service in terms of safety and mobility. New or revised access point requests require the preparation and processing of an Access Point Request Document. Generally, a new access requires an Interchange Justification Study (IJS), and a revised access requires an Interchange Modification Study (IMS). These studies are needed on Interstate and other freeway systems in accordance with Federal Code 23 U.S.C. 111 and FHWA Policy - Additional Interchanges to the Interstate System (Federal Register: February 11, 1998, Volume 63, Number 28).

Scoping Study Methodology

The scoping study included considerable public involvement. As a part of the initial phase of public involvement, Key Person Interviews were conducted with representatives of various organizations who are familiar with traffic operations within the study area. Information obtained from the interviews was used to help refine purpose and need and project goals; it was also used in conjunction with crash data to identify and confirm problematic locations and project issues and concerns. A Project Advisory Committee was also formed and included many of the people involved with the Key Person Interviews, along with other interested parties from the community.

Project goals were determined to be:

- Organize and simplify traffic flow associated with ramps, improving operational efficiency.
- Improve access to and from I-65 in this area.
- Improve access to and from major venues.
- Respect current and planned local street traffic flow patterns and neighborhood character.
- Coordinate with area master plans.
- Improve geometrics.
- Improve signing.
- Reduce crashes.
- Develop phasing and scheduling compatible with funding.

From the interviews, the ten most frequently mentioned problem locations were determined and are shown below.

- Warnock area at northbound I-65 ramps & Sav-A Step
- Second southbound exit to Arthur Street
- Eastern Parkway northbound exit, then quick left to northbound Crittenden Drive
- Ramp to northbound I-65 from Preston, and weave on I-65 at Jackson Street
- First southbound exit to Arthur Street, at Gaulbert Avenue
- Short weave southbound between Eastern Parkway and Crittenden Drive
- On-ramp to I-65 southbound from Arthur Street near Lee Street
- Lack of access to Crittenden Drive from northbound I-65
- Weave between Magnolia/Preston on-ramp to southbound and exit to Arthur Street
- Brandeis Avenue at Arthur Street

Using the most frequently mentioned problems, combined with mapping, crash data, site observations and geometric review, alternatives development began. Subsequent alternatives were developed using comments and suggestions from the Project Advisory Committee (PAC). Five alternatives, including the No-Build Alternative, were ultimately evaluated. The four build alternatives considered varying extents of ramp closures, relocations and improvements, as well as some associated local street improvements. Alternatives were studied and evaluated based on geometric design, environmental considerations, traffic operations, constructability, costs, Federal Highway Administration policy requirements and public input. Public Meetings were held with the Old Louisville Neighborhood Council, St. Joseph's Area Association and the Preston Area Business Association. A DVD was developed showing computer-simulated renderings of possible improvements, and shared with the PAC and at neighborhood meetings. Individual meetings were conducted with owners or managers of businesses along Arthur Street.

Crash Information

Crash information was collected from Kentucky State Police Crash Data. Crash locations were plotted on project mapping. There was correlation between crash locations and previously identified problem locations. The critical crash rate in Kentucky for roadways having a similar functional classification as the study section was 104 crashes per 100 million vehicle-miles. The actual crash rate for the study area was 545.4 crashes per 100 million vehicle-miles, over five times higher than the critical crash-rate. The Critical Rate Factor (CRF) is 5.2. Rear-end collisions were the most frequently occurring type of crash. Crash data for a 2-year, 4-month period is shown in Table ES 1.

CRASH DATA			
January 1, 2002 to April 30, 2004			
ITEM	INTERSTATE & RAMPS	FEEDER STREETS	TOTAL
REAR END	363	241	604
SIDESWIPES	134	96	230
OTHERS	166	137	303
CRASH TOTAL			1,137
CRASH RELATED DATA			
FATALITIES	3	1	4
INJURIES	166	145	311
VEHICLES INVOLVED	1,362	982	2,344

TABLE ES1

Alternatives Considered

No-Build Alternative – The No-Build Alternative does not meet the basic purpose and need for the project. It does not address traffic flow, safety and inefficient access to and from I-65 and to and from major venues; nor does it correct or improve geometric deficiencies or do anything to improve merging and weaving conditions made difficult by close spacing of entrance and exit ramps. Traffic on I-65 will continue to increase and problems associated with the No-Build Alternative will get worse.

Alternative 1 – The main components of this alternative include new ramps from northbound I-65 and to southbound I-65 that connect to the Central Avenue Extension. Acceleration/merge distance would be increased for the Crittenden Drive ramp to northbound I-65. Some entrance and exit ramps would be removed at Eastern Parkway and replaced with new ramps; the short weave between the Eastern Parkway on-ramp to southbound I-65 and the off-ramp to Crittenden Drive would be corrected by closing the on-ramp and replacing it with a ramp from Eastern Parkway to southbound I-65 that ties in south of Crittenden Drive. Improvements are included at Warnock Street and on Arthur Street. The short ramp from Preston Highway to northbound I-65 is replaced with a new ramp eliminating the short weave at the Jackson Street exit. Ramp closings include the ramp from northbound I-65 to Woodbine and the ramp from southbound I-65 to Arthur Street at Gaulbert Avenue, as well as the on-ramp to I-65 southbound near Lee Street. Alternative 1 is shown in Figure ES 2.

Note: In figures showing the four build alternatives, ramp closures are shown in blue and proposed improvements are shown in red.

Alternative 2 – This alternative is similar to Alternative 1 with the following key exceptions: There is no new access provided from or to the Central Avenue Extension. There is no new ramp from Eastern Parkway to southbound I-65. Hahn Street is relocated to intersect Eastern Parkway opposite Arthur Street. Alternative 2 is shown in Figure ES 3.

Alternative 3 – This alternative is the same as Alternative 2 except the new ramp from Eastern Parkway to southbound I-65 is included, and the relocation of the Hahn Street intersection is not included. Alternative 3 is shown in Figure ES 4.

Alternative 4 – This alternative is similar to Alternative 1 with the following key exceptions: An additional ramp is included from the Central Avenue Extension to northbound I-65, allowing for the removal of the existing on-ramp from Crittenden Drive to northbound I-65. At the north end of the project, the ramp from southbound I-65 to Arthur Street at Gaulbert Avenue remains open while the ramps to southbound I-65 from Preston Street and Magnolia Avenue (at Floyd Street) are closed. Local access is provided to Jackson Street from the Preston Street on-ramp

to I-65 northbound. Alternative 4 is shown in Figure ES 5. Pictures of existing locations are shown in Figures ES6 - ES9. Computer simulated renderings of possible improvements are shown in Figures ES 6A – ES 9A.

Limited Environmental Overview

The Kentucky Transportation Cabinet (KYTC) provided an Environmental Overview Resources map for the study area. This map includes various potential environmental concerns such as parks, hazmat sites, Superfund sites, Olmsted Parkways, Preservation Districts, churches, cemeteries, etc. Additional potential environmental issues will need to be addressed in detail during Phase I design and preparation of the environmental document for this project. These include potential impacts to residential, commercial and industrial properties as well as businesses.

Traffic Analysis

The Kentucky Transportation Cabinet contracted with its state-wide traffic forecasting consultant, *Jordan, Jones and Goulding*, to do traffic analyses for the project. Traffic analyses were made for existing conditions and each of the proposed alternatives. CORSIM models of the study area were used for the analyses.

The 2015 alternative simulation models combined traffic projected for the year 2015 with each respective alternative. Written summaries of observations along with tables showing level of service and delay for key intersections within the project limits were provided.

According to *Jordan, Jones and Goulding*, improvements to traffic conditions could be expected with all the alternatives and all the proposed improvements would work. Alternates 1 and 4 provided the best results of all the alternatives with Alternate 4 working better at the intersection of Crittenden Drive and Central Avenue.

Recommendations

Ultimately, alternatives were refined and updated and brought back to the Project Advisory Committee for a final meeting. At this meeting, the decision was made to eliminate Alternatives 2 and 3. Alternatives 1 and 4 provide for better overall traffic improvements and better access to and from I-65 and major venues. The final recommendations were:

- Alternatives 1 and 4, or components of each with some variations, should be carried forward to Phase I Design for additional consideration.
- The project should ultimately be split into specific phases that would facilitate maintenance of traffic and enhance and stage funding possibilities. These phases and their associated estimates of possible costs are shown in Table ES2.

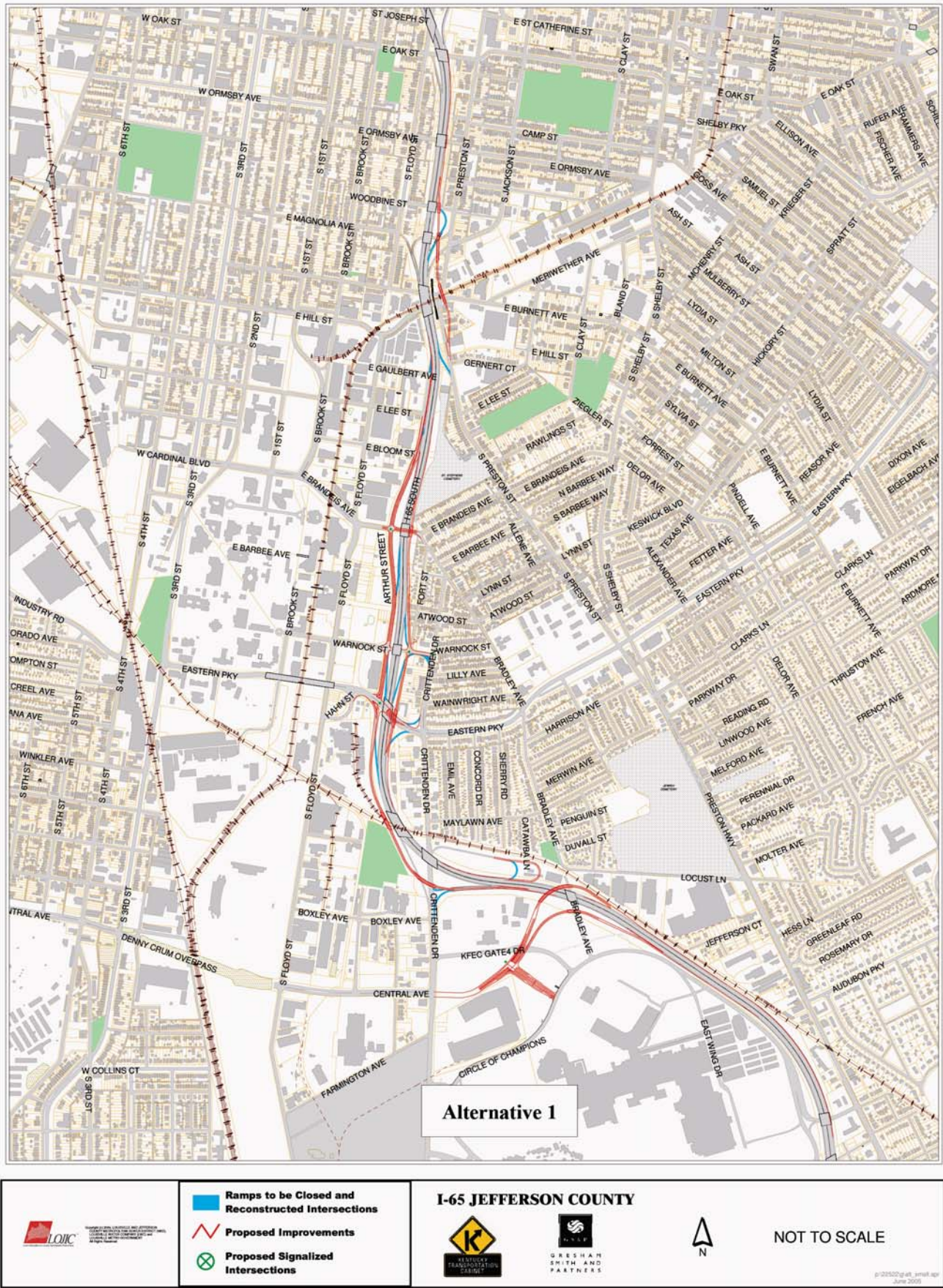


FIGURE ES2 - ALTERNATIVE 1



FIGURE ES4 - ALTERNATIVE 3



FIGURE ES5 - ALTERNATIVE 4



FIGURE ES6 – EXISTING I-65 AT KENTUCKY FAIR AND EXPOSITION CENTER AND CENTRAL AVENUE EXTENSION



FIGURE ES6A – SIMULATION SHOWING POSSIBLE NEW ACCESS FROM/TO I-65 AT CENTRAL AVENUE EXTENSION



FIGURE ES7 – EXISTING I-65 AT CRITTENDEN DRIVE



FIGURE ES7A – SIMULATION SHOWING POSSIBLE NEW RAMP FROM EASTERN PARKWAY TO SOUTHBOUND I-65



FIGURE ES8 – EXISTING I-65 AT PRESTON, JACKSON AND WOODBINE STREETS



FIGURE ES8.A – SIMULATION SHOWING POSSIBLE NEW RAMP FROM PRESTON STREET TO NORTHBOUND I-65 AT JACKSON STREET



FIGURE ES9 – EXISTING I-65 AT WARNOCK STREET



FIGURE ES9A – SIMULATION SHOWING POSSIBLE NEW EXIT RAMP FROM NORTHBOUND I-65 TO WARNOCK STREET

PRELIMINARY ESTIMATES OF PROBABLE COSTS

PRIORITY	ALTERNATE NO. 1	ITEM 1 RDWAY	ITEM 2 R/W	ITEM 3 UTILITIES	ITEM 4 ENGR.	TOTAL
1	I-65 Connector to Crittenden Dr./Central Ave.	13,900,000	686,000	115,000	1,470,100	16,171,100
2	Arthur Street Southbound I-65	13,555,000	203,000	245,000	1,400,300	15,403,300
3	Crittenden Drive Ramp to Northbound I-65	1,270,000	155,000	65,000	149,000	1,639,000
4	I-65 Northbound Ramp to Warnock Street	4,800,000	1,740,000	165,000	670,500	7,375,500
5	Preston Street Ramp to Northbound I-65	9,850,000	3,000,000	980,000	1,383,000	15,213,000
6	Warnock Street Ramp to Northbound I-65	3,190,000	1,800,000	175,000	516,500	5,681,500
	TOTALS	46,565,000	7,584,000	1,745,000	5,589,400	61,483,400
	ALTERNATE NO. 4					
1	I-65 Connector to Crittenden Dr./Central Ave.	17,250,000	1,082,000	162,000	1,849,400	20,343,400
2	Arthur Street to Southbound I-65	13,555,000	204,000	215,000	1,397,400	15,371,400
3	I-65 Northbound Ramp to Warnock Street	4,800,000	1,740,000	165,000	670,500	7,375,500
4	Preston Street Ramp to Northbound I-65	13,225,000	3,650,000	1,200,000	1,807,500	19,882,500
5	Warnock Street Ramp to Northbound I-65	3,190,000	1,800,000	175,000	516,500	5,681,500
	TOTALS	52,020,000	8,476,000	1,917,000	6,241,300	68,654,300

Notes: (A) Priority 1 does not include cost for reconstruction of KFEC entrance or toll booths.

(B) Signing and lighting are included in Item 1.

(C) Item 4 (Engineering) is estimated as 10% of Item 1 through 3.

(D) Date of estimates is August 2005

TABLE ES2

I-65 RAMP MODIFICATIONS SCOPING STUDY

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Introduction

This Scoping Study examined the possibility of providing ramp improvements on I-65 in Louisville Metro. The project became known as the I-65 Ramp Modifications Scoping Study. This project was identified in the Kentucky Transportation Cabinet's six-year highway plan as item number 5-8102.00.

Study Location

The I-65 Ramp Modifications Scoping Study begins south of Crittenden Drive and extends north to St. Catherine Street in Louisville Metro. This section of I-65 is located between the Watterson Expressway (I-264) and the Kennedy Bridge at the Ohio River. A map of the study area is shown in Figure 1.



FIGURE 1 - STUDY AREA

Project Purpose and Need

The purpose of the I-65 Ramp Modifications Scoping Study was to establish ways to *improve traffic flow, safety and access associated with ramps along I-65 from Crittenden Drive to St. Catherine Street*. The intent of this scoping study is not to increase capacity on I-65 with additional lanes, but to reduce congestion and improve safety and access through ramp modifications within the study area.

The need for the project is demonstrated by:

- Poor traffic flow
- Too many ramps, too close together
- Insufficient acceleration, deceleration, merging and weaving distances
- Safety problems, high incidence of crashes
- Inefficient and confusing access to and from I-65 and to and from major venues

Project Goals

Based on information obtained through interviews with key stakeholders and input from the Project Advisory Committee, goals for the study were developed and are listed below:

- Organize and simplify traffic flow associated with ramps, improving operational efficiency
- Improve access to and from I-65 in this area
- Improve access to and from major venues
- Respect current and planned local street traffic flow patterns and neighborhood character
- Coordinate with area master plans
- Improve geometrics
- Improve signing
- Reduce crashes
- Develop phasing and scheduling compatible with funding

Background Information

The segment of I-65 within the study limits experiences traffic congestion on a daily basis. Ramps in this area were constructed in the late 1950's and early 1960's using design criteria that are now considered outdated. This section of I-65 has an average daily traffic (ADT) as high as 158,000 vehicles per day. Congestion and crashes are daily occurrences. Between January 1, 2002 and April 30, 2004 there were 1,137 crashes along the scoping study section of I-65.

The study area includes major venues such as the University of Louisville, Kentucky Fair and Exposition Center, Six Flags/Kentucky Kingdom Amusement Park, Papa John's Cardinal Stadium and Churchill Downs, as well as a variety of hotels, restaurants and employment centers. Also, located just south of the study

I-65 Ramp Modifications Scoping Study

area are the Louisville International Airport and the UPS Worldport. Traffic generated by these attractions contributes to the congestion on I-65. It is not uncommon for a traffic incident on southbound I-65 to create a bottleneck that impacts traffic all the way to Indiana. Likewise, traffic incidents in the northbound direction can affect traffic well south of I-264.



In June 1999, the Downtown Development Corporation adopted the *South Central Louisville Development Coordination Study*. The focus of this study was directed toward the major venues located within the limits of the scoping study and their relationships to one another and to downtown Louisville. The Coordination Study recommendations were organized into three major categories. One of these categories was “Specific Physical Improvements” which recommended a series of modifications to access points along I-65, in the vicinity of the University of Louisville campus. The rationale for the access improvements recommendations were:

- Significant backups and regional peak hour congestion resulting from:
 - Too many entrance and exit ramps
 - Substandard merging and weaving sections
 - Inadequate acceleration and deceleration lanes
- Access to and from the University of Louisville is confusing and inefficient

The current scoping study concentrated on operational strategies that increase capacity, reduce congestion and improve safety. While there are many strategies that can accomplish these things, the

focus was on making modifications to ramps that will improve merge, diverge and weaving conditions. Some ramp reconfigurations studied could actually contribute to a reduction in mainline traffic within a high accident section on I-65.

The I-65 Ramp Modifications Scoping Study examined access modifications recommended by the *South Central Louisville Development Coordination Study* - as well as additional alternatives - to improve traffic operations associated with ramps on I-65 and the adjoining street systems. The alternatives, recommendations and contents of the scoping study are based on the results of the following procedures:

- Identify existing deficiencies by (1) conducting Key Person Interviews with stakeholders familiar with local traffic operational problems, (2) reviewing crash data within the limits of the study area, and (3) examining I-65, ramps and adjacent streets for substandard geometric conditions.
- Consider public involvement input received from the Project Advisory Committee, local neighborhood associations, local business association and local merchants.
- Consider the Environmental Overview.
- Develop and study improvement alternatives.
- Consider traffic analyses of alternatives as conducted by KYTC statewide traffic forecasting consultant.
- Determine the effectiveness of alternatives based upon geometric design, environmental considerations, traffic operations, constructability, costs and Project Advisory Committee input.
- Evaluate alternatives versus Federal Highway Administration policy requirements to modify interstate highway access.
- Identify opportunities for phased construction that consider traffic operational conditions.

PUBLIC INVOLVEMENT

Public involvement for this scoping study was a priority from the beginning. As part of the initial phase of public involvement, GS&P conducted Key Person Interviews with representatives of various organizations who are familiar with traffic operations within the study area and could be directly impacted by the results of this study. Open-ended interview questions were developed and active listening techniques were used during the interviews; this involved follow-up questions and probing and paraphrasing techniques.

These interviews provided anecdotal evidence of problems and problem locations in the study area; problem locations were verified by crash history. The interviews also identified issues and concerns, and helped refine purpose and need and project goals shown on page 1. A list of the key persons interviewed is shown in Table 1.

KEY PERSONS INTERVIEWED		
<i>Cabinet Secretary Louisville Metro</i> Bruce Traugher	<i>Louisville Metro Council</i> Dan Johnson George Melton George Unseld	<i>KIPDA</i> Harold Tull Phil Williams
<i>Louisville Metro Public Works</i> Mark Adams Rick Storm	<i>University of Louisville</i> Bob Bringhurst Ken Dietz Larry Detherage Larry Owsley Mitchell Payne	<i>Jefferson County Public Schools</i> Susan Biasioli Richard Caple Church Fleischer Terry Harrison John Lee
<i>TARC</i> Karen Scott	<i>TRIMARC</i> Todd Hood Jack Nevin	<i>St. Joseph's Area Association, Inc.</i> Gail Linville Cathy Ward
<i>Kentucky Fair and Exposition Center</i> Harold Workman	<i>CTS Project Mgr., Ohio River Bridges</i> Charles Raymer	<i>Old Louisville Neighborhood Council</i> Herb Fink
	<i>Churchill Downs</i> David Sweasey	

TABLE 1

From the key person interviews, the most frequently mentioned problems were:

- Too many access points; too many ramps
- Short exits and deceleration points, inadequate stacking
- Acceleration, deceleration, merging, weaving problems
- Come off, get lost; how do I get there from here? Signs
- Traffic flow in and out of U of L; snarls associated with attractors
- Safety, accidents

Problem locations are shown in Tables 2A and 2B

MOST FREQUENTLY MENTIONED PROBLEM LOCATIONS
Top 10 Problem Locations
1. Warnock area (at NB I-65 ramps & Sav-A Step)
2. Second SB exit to Arthur Street
3. Eastern Parkway NB exit, then quick left to NB Crittenden
4. Ramp to NB I-65 from Preston, and weave on I-65
5. First SB exit to Arthur Street, where Gaulbert comes in
6. Short weave SB between Eastern Parkway and Crittenden
7. Lee Street on-ramp to I-65 SB; short acceleration lane
8. NB on I-65, there is no direct access to Crittenden Drive
9. Weave between Magnolia/Preston on-ramp to SB and Arthur exit
10. Arthur at Brandeis is confusing; Brandeis from Arthur to Bradley

TABLE 2A

OTHER PROBLEM LOCATIONS MENTIONED MORE THAN ONCE
• Crittenden Drive on-ramp to NB I-65
• Backups onto I-65 (SB exit to Crittenden)
• Jackson/Woodbine exit area - too many decisions, too much activity
• Accidents near Crittenden curve, curve at Crittenden
• Ramp from Warnock to SB I-65 & ramp from Eastern Parkway too close
• Lack of 2 lane exit from NB I-65 to Eastern Parkway; backs onto I-65

TABLE 2B

Nearly all of the problem areas mentioned are closely related to high accident locations and existing geometric deficiencies. The Key Person Interviews were very useful in identifying or confirming the locations of major problem areas and locations that could contribute to driver confusion including the adjoining street systems. Information on problems and problem locations, combined with mapping, crash data and information gained from site observations, was very useful in alternatives development. Main issues and concerns expressed during the interviews are listed on the right:

- Access – interstate, attractions, local
- Neighborhood
- Traffic flow and safety
- Project coordination
- Surface street traffic patterns
- Trucks
- Roadway geometric standards
- Impacts, inconveniences
- Environmental
- Other

Key Person Interview summary information as well as questions asked can be found in Appendix A.

A Project Advisory Committee (PAC) was then formed which included many of those involved in the Key Person Interviews along with other interested parties from the community (See Table 3). Using comments and suggestions from the Project Advisory Committee alternative concepts were further developed.

PROJECT ADVISORY COMMITTEE MEMBERS		
<i>University of Louisville</i> Ken Dietz Larry Owsley	<i>St. Joseph's Neighborhood Association</i> Gail Linville	<i>Louisville Metro</i> Bruce Traugher
<i>Churchill Downs</i> David Sweazy	<i>TRIMARC</i> Todd Hood	<i>KIPDA</i> Harold Tull
<i>Louisville Metro DPW</i> Rick Storm	<i>Old Louisville Neighborhood Council</i> Herb Fink	<i>KFEC</i> Harold Workman
<i>Federal Highway Administration</i> Bob Farley	<i>TARC</i> Barry Barker	

TABLE 3

I-65 Ramp Modifications Scoping Study

The Project Advisory Committee had its first meeting on March 8, 2005. At this meeting committee members agreed on the Purpose and Need Statement including project goals. The original purpose of the project had been refined slightly by information obtained in the interviews. The need should establish justification that a problem exists. Need for the project likewise was taken directly from a summary of problems mentioned in the interviews. The PAC added several goals beyond those identified in the interviews.

GS&P showed a DVD to the committee members which simulated possible conceptual ramp improvements. (A copy of the DVD is included with this report.) Committee members discussed several concerns and made a number of suggestions, regarding alternatives under consideration.

The PAC agreed the project should be broken into fundable phases with worst problems being solved first.

At this meeting, it was suggested that public meetings be held as a part of regularly scheduled neighborhood meetings. Project Advisory Committee information is included in Appendix B.

With multiple alternatives (4) in hand, the project was ready for more intense public involvement. Public meetings were held with the Old Louisville Neighborhood Council on April 21, 2005, the St. Joseph's Area Association on May 9, 2005, and the Preston Area Business Association on July 12, 2005. Meetings were also held with officials from the University of Louisville, FHWA and the Kentucky Fair and Exposition Center. The DVD presentation, which included computer-generated simulations of possible ramp improvements, was shown at each of these meetings. In May, 2005, individual meetings were conducted with business owners or managers along Arthur Street that would be affected by the project. Attempts were made to meet with Shelby Park / Smoketown residents but neighborhood representatives had to cancel scheduled meetings on multiple occasions. The complete Neighborhood Meeting and business and other meeting notes can be found in Appendix C.

The comments and concerns from the public meetings led to the refinement of the concept alternatives. The updated alternatives were brought back to the Project Advisory Committee for a final meeting.

The second and final Project Advisory Committee Meeting was held on June 16, 2005. Alternatives 1, 2 and 3 were first discussed. A representative of KYTC's statewide traffic forecasting consultant explained to the committee the traffic analysis done on Alternatives 1, 2 and 3. The representative explained the process of developing the traffic models and indicated that

an improvement to traffic conditions on all these alternatives could be expected – that all proposed improvements would work - but that Alternative 1 yielded the best results. This was due to the expanse of the proposed ramp modifications. GS&P explained that an additional alternative, Alternative 4, was developed after considering comments obtained from neighborhood meetings, meetings with business owners along Arthur Street and a meeting with Kentucky Fair and Exposition Center representatives. The improvements contained in Alternative 4 were then presented to the committee members, with emphasis on the areas that changed. The PAC broke into smaller groups to review Alternative 4 more closely. KYTC's statewide traffic forecasting consultant explained that Alternative 4 traffic has the same improvements as other alternatives and probably works better at Crittenden Drive and Central Avenue. After this review and discussion, committee members recommended that only Alternatives 1 and 4 be carried forward to Phase 1 design. Alternatives 2 and 3 were eliminated. Alternatives 1 and 4 provide for better overall traffic improvements and better access to and from I-65 and major venues. The complete meeting notes for Project Advisory Committee Meetings 1 and 2 can be found in Appendix B of the report.

Problem Locations

1) Warnock Street at northbound I-65 ramps near Sav-A-Step

Left turns are prohibited from the I-65 northbound exit ramp to Warnock Street and from Warnock Street to the on-ramp to northbound I-65; however, drivers continually make these illegal left-turns (See Figure 2).



FIGURE 2 - ILLEGAL LEFT TURN TO WARNOCK STREET

There is insufficient spacing between the northbound I-65 exit ramp to Eastern Parkway and the northbound exit ramp to Warnock Street and the entrance ramp to I-65 northbound from Warnock Street. There is insufficient acceleration and

I-65 Ramp Modifications Scoping Study

merging distance on the existing on-ramp to northbound I-65. The intersection of Warnock Street and Crittenden Drive (See Figure 3) is the sight of numerous accidents due to the unusual configuration of the intersection.



FIGURE 3 - AERIAL OF WARNOCK STREET AT CRITTENDEN DRIVE

2) Second southbound exit from I-65 onto Arthur Street

The unusual yield situation at this location, which is between Brandeis Avenue and Warnock Street, may cause confusion as to which movement is to yield – the exit ramp or Arthur Street (See Figure 4).



FIGURE 4 - SECOND SOUTHBOUND I-65 EXIT ONTO ARTHUR STREET

3) Northbound I-65 exit to Eastern Parkway (then left turn to Crittenden Drive)

This unadvisable movement occurs with some regularity. A driver exiting from northbound I-65 to Eastern Parkway desiring to turn left onto northbound Crittenden Drive quickly crosses three lanes to reach the left turn lane, or delays traffic on

the exit ramp while waiting for a gap. Figure 5 shows a vehicle making this movement. The primary purpose of this exit ramp is to provide access to eastbound Eastern Parkway as well as southbound Crittenden Drive.



FIGURE 5 - I-65 NORTHBOUND TRAFFIC
EXITING AT EASTERN PARKWAY

4) Ramp to northbound I-65 from Preston Street and weave at Jackson Street and Woodbine Street exits

The on-ramp from northbound Preston Street is very short and provides little acceleration distance (See Figure 6). Jackson Street and Woodbine Street exits are immediately north of the on-ramp (See Figure 7); all three ramps are too close together making entering, exiting and weaving maneuvers difficult. Also, the southbound through movement on Preston Street is required to stop for northbound left turns from Preston Street to the on-ramp. Preston Street (KY 61) is actually briefly routed onto I-65 to continue the KY 61 route on to Jackson Street.



FIGURE 6 - ON-RAMP TO NORTHBOUND I-65 FROM PRESTON STREET



FIGURE 7 - NORTHBOUND EXITS TO JACKSON AND WOODBINE STREETS



FIGURE 9 - VIEW OF FIRST SOUTHBOUND I-65 EXIT RAMP ONTO ARTHUR STREET FROM GAULBERT AVENUE

5) First I-65 southbound exit ramp onto Arthur Street near Gaulbert Avenue

There is a lack of adequate deceleration length at the exit ramp; and the Gaulbert Avenue/Arthur Street Intersection is located at the base of the exit ramp. Right turning vehicles here create accident potential (See Figures 8 and 9).



FIGURE 8 - FIRST I-65 SOUTHBOUND EXIT ONTO ARTHUR STREET AT GAULBERT AVENUE

6) Short weave southbound between Eastern Parkway and Crittenden Drive

There is inadequate weaving distance between the on-ramp from Eastern Parkway to southbound I-65 and the exit ramp to Crittenden Drive, making entering, exiting and weaving maneuvers difficult (See Figures 10 and 11).



FIGURE 10 - WEAVE PROBLEM BETWEEN ON-RAMP FROM EASTERN PARKWAY TO SOUTHBOUND I-65 AND EXIT RAMP TO CRITTENDEN DRIVE



FIGURE 11 - SHORT WEAVE DISTANCE ON I-65 SOUTHBOUND BETWEEN EASTERN PARKWAY AND CRITTENDEN DRIVE

7) On-ramp to southbound I-65 from Arthur Street near Lee Street

This short ramp has inadequate acceleration and merging distance for traffic entering I-65 southbound (See Figure 12).



FIGURE 12 - SHORT ON-RAMP TO SOUTHBOUND I-65 FROM ARTHUR STREET NEAR LEE STREET

8) Lack of direct access to Crittenden Drive from northbound I-65

Currently, access to Crittenden Drive from northbound I-65 is provided by exiting at Eastern Parkway eastbound and then turning right onto southbound Crittenden Drive. (See Figure 13).



FIGURE 13 - NO DIRECT ACCESS TO CRITTENDEN DRIVE FROM NORTHBOUND I-65

9) Weave between Preston/Magnolia/Floyd on-ramps and exit to Arthur Street at Gaulbert Avenue

There is inadequate weaving distance between the Preston Street/Magnolia/Floyd on-ramp and the exit ramp to Arthur Street at Gaulbert Avenue (See Figure 14).



FIGURE 14 - ARTHUR STREET EXIT RAMP AT GAULBERT AVENUE

10) Brandeis Avenue at Arthur Street

There is an unusual lane configuration at this intersection with a free flow left turn movement from southbound Arthur Street onto Brandeis Avenue. This movement is separated by guardrail from the two-way movement on Brandeis Avenue at the intersection. This intersection is shown in Figure 15.



FIGURE 15 - INTERSECTION OF ARTHUR STREET AND BRANDEIS AVENUE



FIGURE 17 - SHORT MERGING DISTANCE FOR ENTERING TRAFFIC FROM CRITTENDEN DRIVE TO I-65 NORTHBOUND

11) Crittenden Drive on ramp to northbound I-65

The existing ramp from Crittenden Drive to northbound I-65 has a curve just in advance of the merging lane that only allows for a speed of some 20 mph. The merging distance is short – roughly 300 feet. The curve and the short merge distance are contributing factors to accidents and congestion at the location. The ability to increase the radius of the curve is restricted due to the proximity of the Southern Railroad tracks. See Figures 16 and 17.



FIGURE 16 - TRAFFIC ENTERING I-65 NORTHBOUND FROM CRITTENDEN DRIVE

Crash Information

There was an abundance of qualitative crash data for I-65 within the project limits. Key Person Interviews indicated numerous locations of high crash incidence. Observations during the daily morning and afternoon commutes verified that this stretch of roadway is hampered by a combination of heavy traffic and crashes on a daily basis. Quantitative data was then obtained in order to give a clear picture of how serious the problem is.

Initially, GS&P collected Kentucky State Police crash data within the project limits. Crash locations were then plotted on project mapping (See Figures 18, 19 and 20). The crash locations correlated with the previously identified high crash areas. Between January 1, 2002 and April 30, 2004, there were approximately 1,137 crashes along the 1.9 mile stretch between the Bradley Avenue Bridge and the Woodbine Street Bridge on the mainline, ramps and feeder streets at ramp termini. This is an average of 1.3 crashes per day. Although this number appeared to be high, the data was then compared to other crash data with statistical methods.

The Kentucky Transportation Center uses a critical crash rate in its analysis of crash data throughout the state. The critical crash rate is a statistically determined crash rate threshold in terms of crashes per 100 million vehicle-miles. If a section of roadway has an actual crash rate greater than its respective critical crash rate, there is indication that potentially hazardous conditions exist and improvements are needed. In 2003, the Kentucky Transportation Center published Analysis of Traffic Crash Data (1998-2002). Within this research report, various critical crash rates for Kentucky roadways were listed with respect to functional classification (e.g. Urban Interstate, Urban Undivided Four-lane), annual average daily traffic (AADT) and length of section.

For the studied section of I-65, using 2002 traffic counts, the critical crash rate is 104 crashes per 100 million vehicle-miles according to the tables published by the Kentucky State Police Crash Data; the actual crash rate is 545.4 crashes per 100 million vehicle-miles. This crash rate surpasses the critical crash rate by over five times, confirming the serious need for improvement.

A summary of crash types and general locations is given in Table 4. Clearly, the largest portion of crashes is the rear end type. The stopping of traffic on I-65, ramps and feeder streets due to congestion-related incidents could easily be a contributing factor to this type of crash. The large number of sideswipes is also significant. This type of crash is often the result of inadequate weaving distance between on and off ramps. Vehicles entering the mainline must merge out of the auxiliary lane while vehicles leaving the mainline are merging into the auxiliary lane. Conflicts occur when the weaving distance is insufficient. An example of this situation is the short distance between the southbound on-ramp from Eastern Parkway and the off-ramp to Crittenden Drive.

There are substantial numbers of crashes which have been shown graphically on project mapping, but were not included in the I-65 crash rate calculations. These crashes occurred within the project limits, but on feeder streets away from ramp termini. Confusing intersection geometrics could be a contributing factor to a great number of these crashes. Many of the unusual intersection designs in the area contradict driver expectancy and could lead to driver confusion. Examples of these unusual areas are the intersection of Warnock Street and Crittenden Drive, as well as the guardrail-separated section of Brandeis Avenue between Arthur Street and Bradley Avenue.

CRASH DATA			
January 1, 2002 to April 30, 2004			
ITEM	INTERSTATE & RAMPS	FEEDER STREETS	TOTAL
REAR END	363	241	604
SIDESWIPES	134	96	230
OTHERS	166	137	303
CRASH TOTAL			1,137
CRASH RELATED DATA			
FATALITIES	3	1	4
INJURIES	166	145	311
VEHICLES INVOLVED	1,362	982	2,344

TABLE 4

Project Alternatives

Development of alternative concepts considered comments contained in the *South Central Louisville Development Coordination Study*, comments from Key Person Interviews, comments from local neighborhood and business associations, comments from individual local businesses and comments and suggestions from the Project Advisory Committee. Existing I-65 roadway and bridge plans were reviewed for substandard geometrics, and critical bridge clearances were measured in the field. (Although not a part of the project, it is noted that, based on critical bridge clearances, adding additional lanes to I-65 would not be possible unless roadway grades and bridge decks were raised to allow for required clearances at existing bridge locations.) Concept plans were developed for Alternatives 1, 2, 3 and 4 using Logic Mapping. For all four build alternatives, ramp closures are shown in blue and proposed improvements are shown in red. A No-Build Alternative was also considered.

No-Build Alternative – The No-Build Alternative does not meet the basic purpose and need for the project. It does not address traffic flow, safety and inefficient access to and from I-65 and to and from major venues; nor does it correct or improve geometric deficiencies or do anything to improve merging and weaving conditions made difficult by close spacing of entrance and exit ramps. Since the No-Build Alternative does not meet purpose and need and since it does not address any of the project goals, the No-Build Alternative is not considered a viable alternative.

Alternative 1 – This alternative is shown in Figure 21 and includes a new ramp from northbound I-65 to the Central Avenue Extension (which connects to Crittenden Drive); this provides much better access to Crittenden Drive from northbound I-65 than currently exists. Also, a new ramp from Central Avenue Extension to southbound I-65 would be provided. These ramps would provide significantly improved access to the Kentucky Fair and Exposition Center on the north side of its property. This connection from I-65 to Central Avenue Extension would also provide improved access to Papa John's Cardinal Stadium, Churchill Downs and South Louisville Metro. Also, this would provide additional access to the University of Louisville via Central Avenue, Floyd Street and 3RD Street. (See rendering in Figure 21.)



FIGURE 18 - CRASH LOCATIONS AT I-65 NEAR CRITTENDEN DRIVE

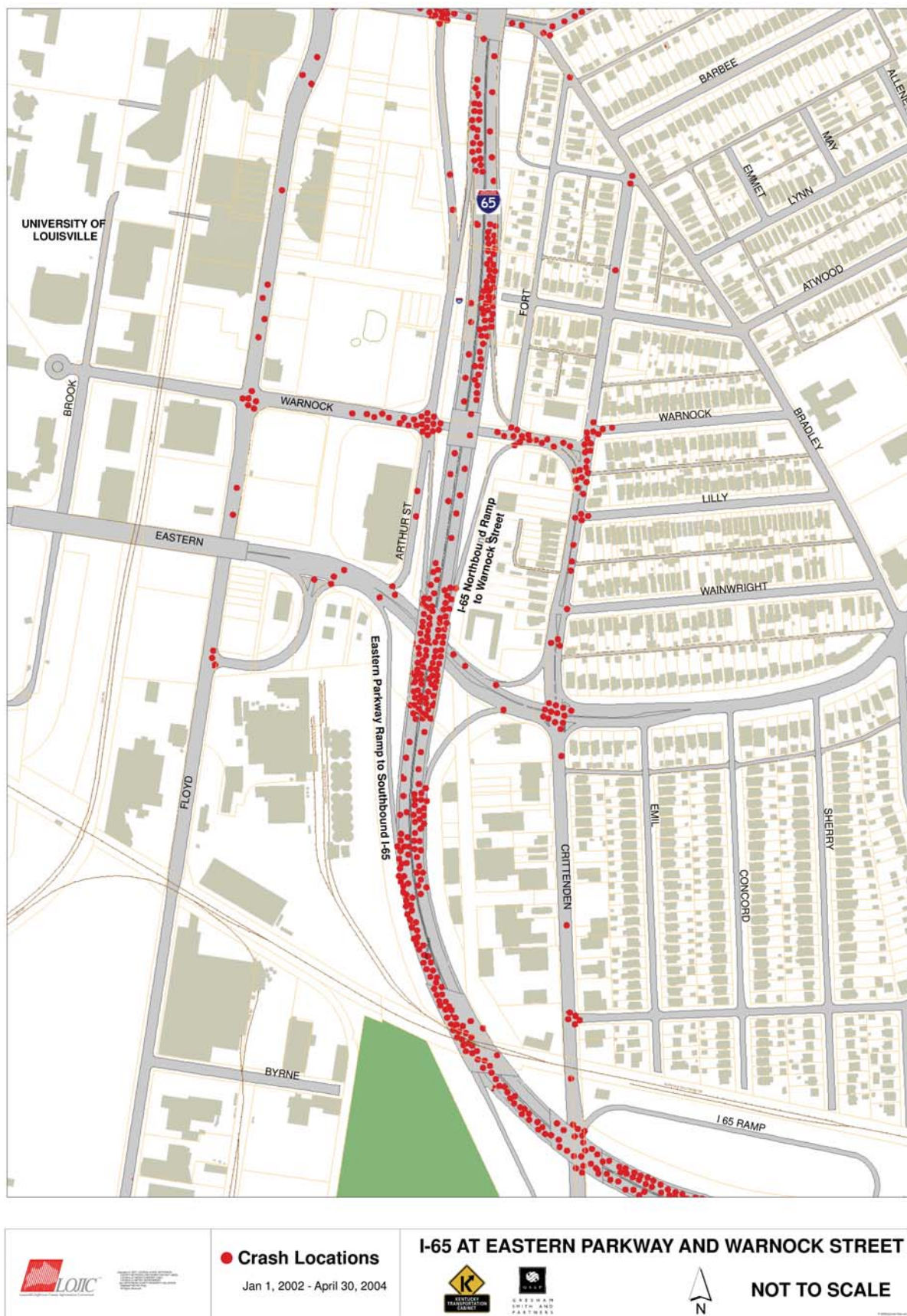
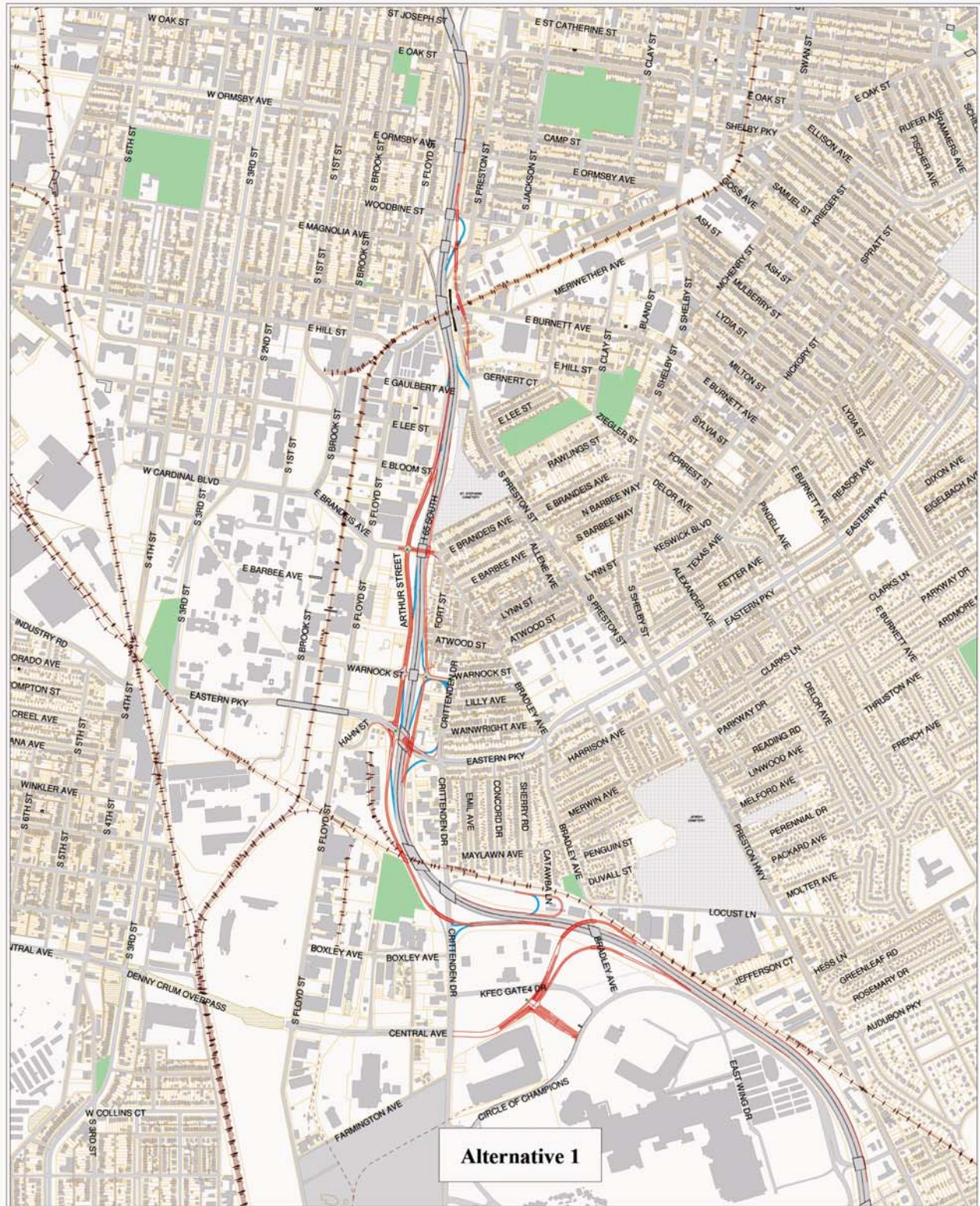


FIGURE 19 - CRASH LOCATIONS AT I-65 NEAR EASTERN PARKWAY AND WARNOCK STREET



FIGURE 20 - CRASH LOCATIONS AT I-65 NEAR PRESTON STREET

I-65 Ramp Modifications Scoping Study



Alternative 1



FIGURE 21 - ALTERNATIVE 1

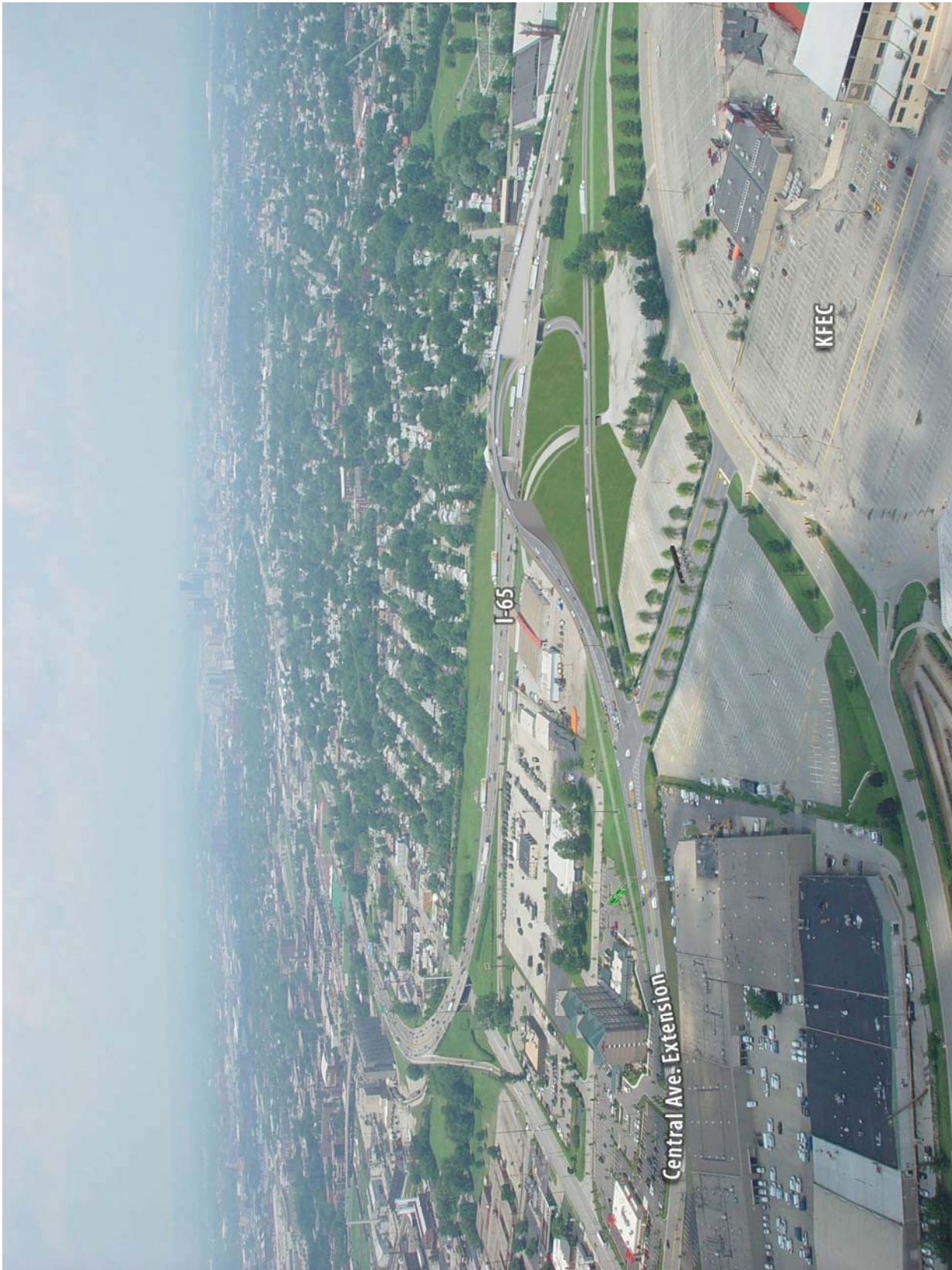


FIGURE 22 – RENDERING OF PROPOSED NEW ACCESS TO AND FROM CENTRAL AVENUE EXTENSION AS PART OF ALTERNATIVE 4

Acceleration/merge distance would be increased for the ramp from Crittenden Drive to northbound I-65. This would be done by lengthening the existing loop ramp. The existing loop ramp has a curve approaching the merging lane that only allows for a speed of some 20 mph at the beginning of the merge. The slow approach speed, short merging distance and heavy volume of I-65 mainline traffic cause congestion and difficult merging conditions. Numerous accidents have occurred at this location. Lengthening the ramp will allow for an additional 300 feet of acceleration lane.

Some entrance and exit ramps would be removed at Eastern Parkway and replaced with new ramps. Alternative 1 proposes the closure of the northbound I-65 exit ramp to Eastern Parkway and the entrance ramp to southbound I-65 from Eastern Parkway. The existing short weave between the Eastern Parkway on-ramp to southbound I-65 and the off-ramp to Crittenden Drive would be corrected by replacing the on-ramp with a ramp from Eastern Parkway that crosses the railroad and Crittenden Drive on structure and ties-in to southbound I-65 south of Crittenden Drive. (See rendering, Figure 23).

The existing on-ramp from Crittenden Drive to southbound I-65 would be closed. The sweeping right turn lane from southbound Crittenden to westbound Eastern Parkway would be converted into a standard right turn lane through the intersection; this will assist in allowing room for a dual left turn lane from westbound Eastern Parkway onto the proposed ramp to southbound I-65.

Improvements are included in the Warnock Street area, the focal point of which is a new 2-lane exit ramp from northbound I-65 to Warnock Street. (See rendering, Figure 24).

A new, improved ramp from Warnock Street to northbound I-65 is also included, dramatically improving merge and acceleration distances at this location. In order to obtain adequate clearance at Brandeis Avenue, the proposed entrance ramp will include a new, separate structure over Brandeis Avenue. A signalized intersection with the ramp termini and Warnock Street would allow for turning movements in all directions. Illegal left turns are currently very common at this intersection. The reconstruction of the intersection of Warnock Street with Crittenden Drive is also a part of this proposal, if not already accomplished by a Louisville Metro project. Signal coordination of the three intersections on Warnock Street (at Crittenden Drive, northbound I-65 ramps and at Arthur Street) would be included. Fort Street would be closed at Warnock Street; Fort Street can be accessed from Atwood Street.

On southbound I-65 in the Arthur Street area, several improvements are proposed that would increase weaving distances between

ramps and eliminate short acceleration and deceleration distances. These include closures of the following ramps:

- Exit ramp from southbound I-65 to Arthur Street at Gaulbert Avenue,
- Entrance ramp to southbound I-65 from Arthur Street near Lee Street,
- Exit ramp from southbound I-65 south of Brandeis Avenue
- Entrance ramp to southbound I-65 at Warnock Street

The acceleration lane for the entrance ramp to southbound I-65 from Preston Street and Magnolia/Floyd Streets would be extended to an Exit Only lane at a new 2-lane exit ramp onto Arthur Street between Lee and Bloom Streets; one southbound I-65 lane would be optional to continue south or exit at this location. Arthur Street would be widened on the east side from Eastern Parkway to near Lee Street, and become a 3-lane, local collector-distributor roadway. The intersection of Brandeis Avenue and Arthur Street is changed to a standard intersection in this and all alternatives. Signalization would be proposed at the intersection of Eastern Parkway and Arthur Street, and Arthur Street and Brandeis Avenue should be evaluated for signalization.

Northbound at the north end of the project, the existing short ramp from Preston Highway to northbound I-65 would be replaced with a new ramp eliminating the short weave at the Jackson Street exit. The proposed ramp would begin on Preston Street just north of Gernert Court and on structure cross over Burnett Avenue, CSX Railroad, South Preston Street, Jackson Street exit ramp and Woodbine Street; the existing bridge over Ormsby Avenue could be widened. The exit ramp from northbound I-65 to Woodbine Street would be closed. (See rendering, Figure 25).

Alternative 2 – This alternative is similar to Alternative 1 with the following key exceptions: There is no new access provided from or to the Central Avenue Extension. There is no new ramp from Eastern Parkway to southbound I-65. Hahn Street is relocated to intersect Eastern Parkway opposite Arthur Street. Alternative 2 is shown in Figure 26.

Alternative 3 – This alternative is the same as Alternative 2 except the new ramp from Eastern Parkway to southbound I-65 is included, and the relocation of the Hahn Street intersection is not included. As in Alternative 2, there is no new access provided from or to the Central Avenue Extension. Alternative 3 is shown in Figure 27.

Alternative 4 – This alternative is similar to Alternative 1 with the following key exceptions: An additional ramp is included from



FIGURE 23 - RENDERING OF PROPOSED RAMP FROM EASTERN PARKWAY ACROSS CRITTENDEN DRIVE, THAT TIES INTO SOUTHBOUND I-65



FIGURE 24 - RENDERING SHOWING PROPOSED 2-LANE EXIT RAMP FROM NORTHBOUND I-65 TO WARNOCK STREET, IMPROVED ENTRANCE RAMP FROM WARNOCK STREET TO I-65 NORTHBOUND AND IMPROVED INTERSECTION AT WARNOCK STREET AND CRITTENDEN DRIVE



FIGURE 25 - RENDERING SHOWING POSSIBLE NEW RAMP FROM PRESTON STREET TO NORTHBOUND I-65, WITH NORTHBOUND EXIT RAMP TO WOODBINE STREET REMOVED



I-65 Ramp Modifications Scoping Study

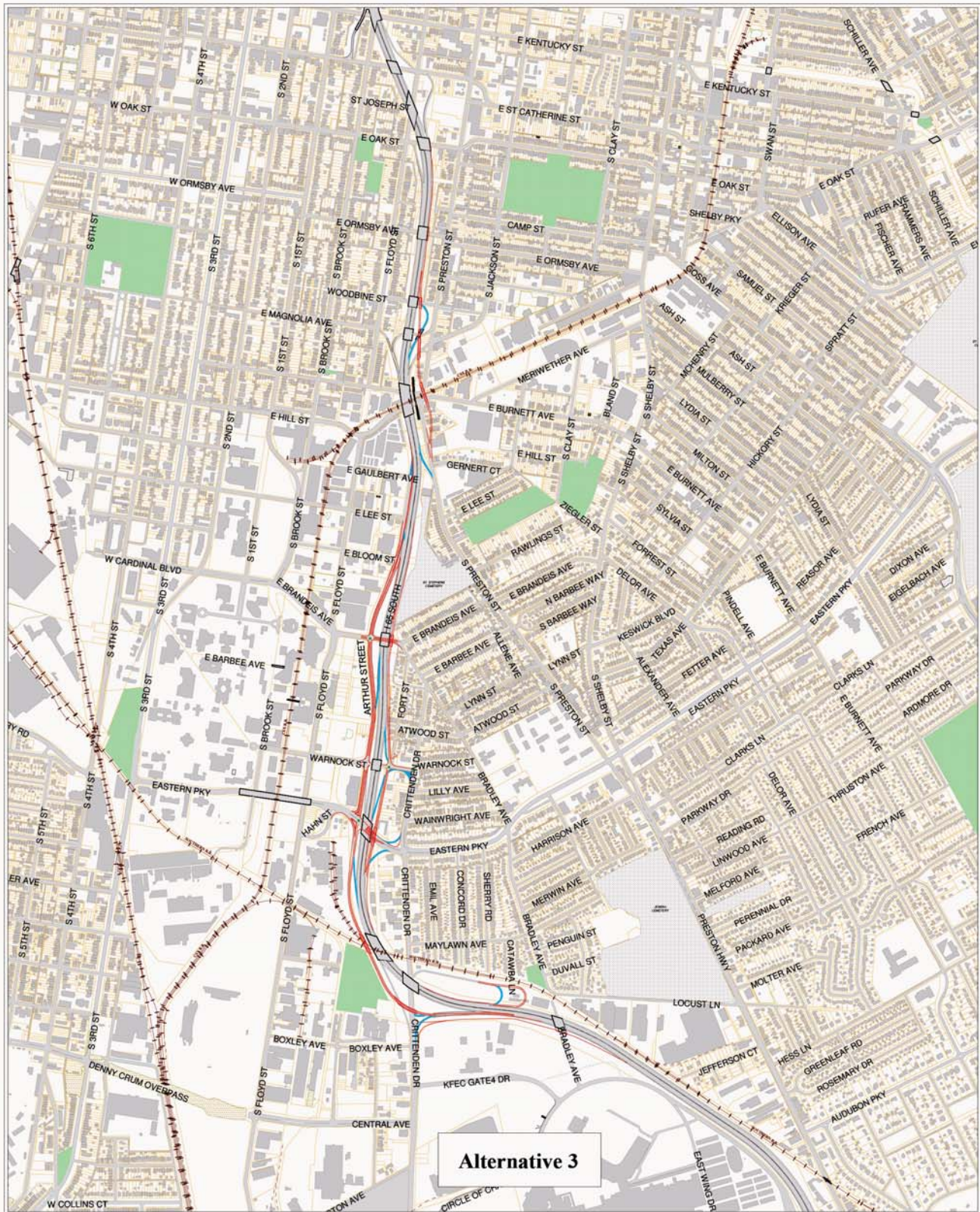


FIGURE 27 - ALTERNATIVE 3

I-65 Ramp Modifications Scoping Study

the Central Avenue Extension to northbound I-65, allowing for the removal of the existing on-ramp from Crittenden Drive to northbound I-65; this also increases acceleration/merge distance for this movement. At the north end of the project, the ramp from southbound I-65 to Arthur Street at Gaulbert Avenue remains open while the ramps to southbound I-65 from Preston Street and Magnolia Avenue (at Floyd Street) are closed. Local access is provided to Jackson Street from the Preston Street on-ramp to I-65 northbound. Alternative 4 is shown in Figure 28. A rendering showing the additional ramp from Central Avenue Extension to northbound I-65 is shown in Figure 29.

Limited Environmental Overview

This study did not require environmental baseline studies. One initial goal that has been focused on throughout the project has been to avoid, where possible, changes to the character of the surrounding neighborhoods while reducing traffic congestion on I-65 through the limits of the project. Considering the magnitude of this project and the overall length of alternatives studied, the environmental impacts necessitated by construction requirements do not appear to be unreasonable. During preparation of a final environmental impact report it may be necessary to adjust and/or modify certain portions of the recommended alternatives.

Air quality is always a major concern related to proposed improvements of transportation systems especially considering urban interstate highways. Daily traffic congestion on I-65 has increased over the last several years. Vehicle emissions along the project route are a major source of air pollution in the neighborhoods. This project, by improving traffic flow and safety along this portion of I-65, will reduce congestion and therefore should not adversely affect air quality.

Environmental justice is also a concern related to proposed improvements of interstate highway systems. The locations of improvements proposed by this project that require the acquisition of properties, are controlled by existing interstate access points and/or current design criteria. There are no disproportionate impacts to low income or minority populations with any of the build alternatives and no apparent ways to economically avoid the acquisition of these properties.

The Kentucky Transportation Cabinet (KYTC) provided an Environmental Overview Resources map for the study area (See Figure 30). This map includes various potential environmental concerns such as parks, hazmat sites, Superfund sites, Olmsted Parkways, Preservation Districts, churches, cemeteries, etc. Throughout the course of the study, it was recognized additional potential environmental issues will need to be addressed in detail during Phase I design and preparation of the environmental document for this project.

The following environmental issues pertain to Alternatives 1 and 4, however, there may be additional issues to consider once base line environmental studies have been completed during Phase 1 design. These issues have been numbered and their locations shown on the Environmental Overview Resources Map (Figure 31).

1. The Tabernacle of David Church located near the Warnock Street exit ramp.
2. Residential properties on Fort Street located near the Warnock Street entrance ramp.
3. St. Stephens Cemetery that may also be effected by the Warnock Street entrance ramp.
4. Commercial and residential properties located along the relocated Preston Street entrance ramp.
5. Commercial properties located along the Jackson Street exit ramp from the relocated Preston Street ramp.
6. Businesses located along Arthur Street that will be affected by the relocation of the I-65 southbound exit ramp to Arthur Street.

Traffic Analysis

The Kentucky Transportation Cabinet contracted its statewide traffic forecasting consultant, *Jordan, Jones and Goulding*, to do traffic analyses for the project. CORSIM models of the study area were used for analysis of existing conditions and each of the proposed alternatives. For each of the four alternatives developed by Gresham, Smith and Partners, *Jordan, Jones and Goulding* evaluated the traffic impacts and provided written summaries of observations along with tables showing level of service and delay for key intersections within the project limits.

Existing Model

The existing conditions model was created with traffic counts conducted in the study area and based on the current roadway network. The existing conditions model was calibrated to ensure that it accurately reflected the existing traffic conditions in the study area. According to *Jordan, Jones and Goulding*...

“There are no obvious long queues that have trouble clearing on the surface street network. There are no problems with queuing on the interstate ramps either.

There is one slow spot on I-65 NB in the AM Peak near the Crittenden Drive on-ramp. Vehicles from the on-ramp have trouble merging onto the interstate at this point and this creates a bottleneck. The bottleneck can also be attributed to the sharp curve in I-65 near this area as well.”

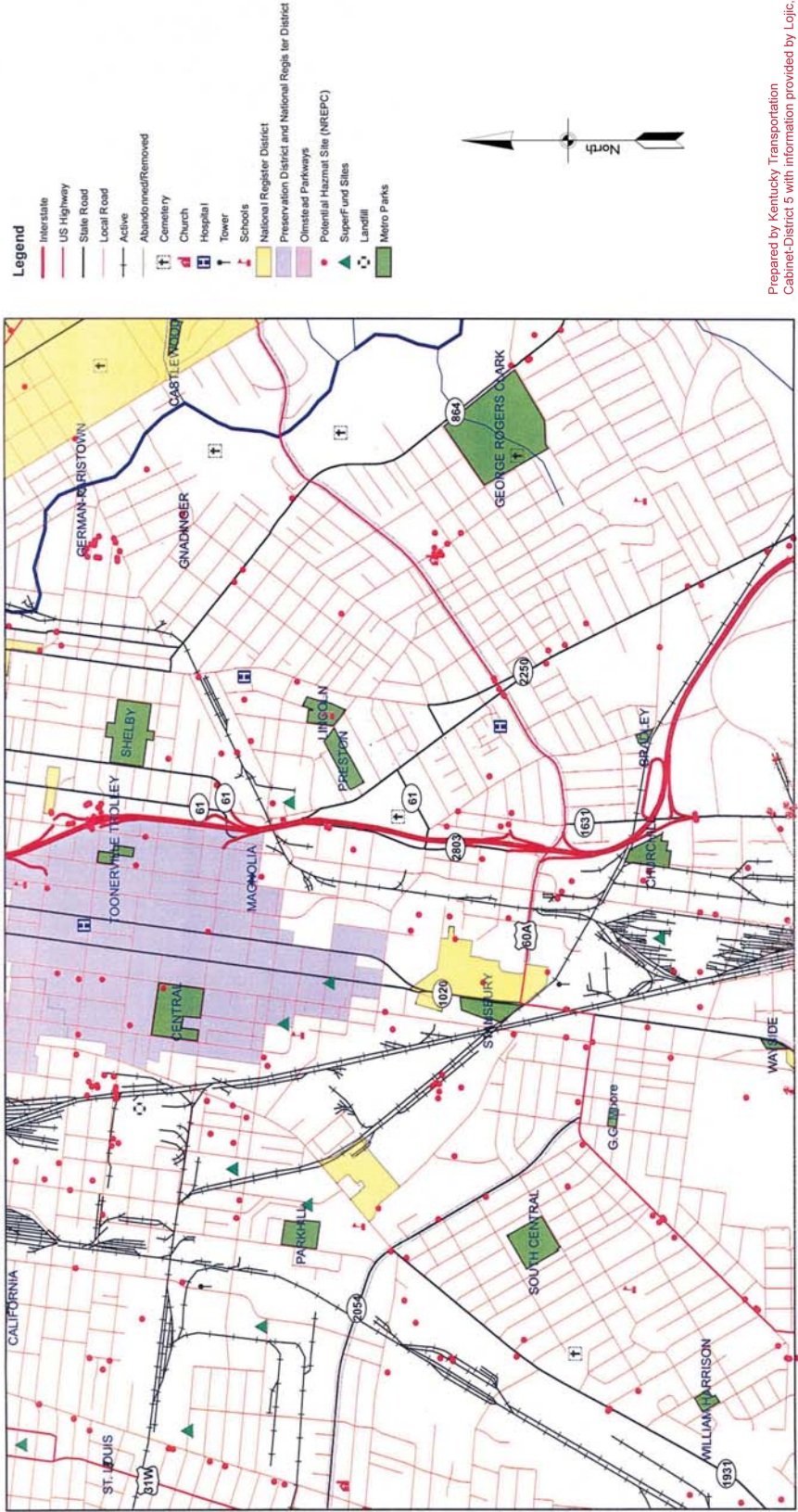


FIGURE 28 - ALTERNATIVE 4



FIGURE 29 - RENDERING SHOWING POSSIBLE NEW ACCESS TO AND FROM CENTRAL AVENUE EXTENSION AS PART OF ALTERNATIVE 4

INTERSTATE 65 IMPROVEMENTS: 5-8102
ENVIRONMENTAL OVERVIEW RESOURCES



Prepared by Kentucky Transportation
Cabinet-District 5 with information provided by Lojic,
NREPC, and the KY GIS.

FIGURE 30 - ENVIRONMENTAL OVERVIEW RESOURCES

INTERSTATE 65 IMPROVEMENTS: 5-8102

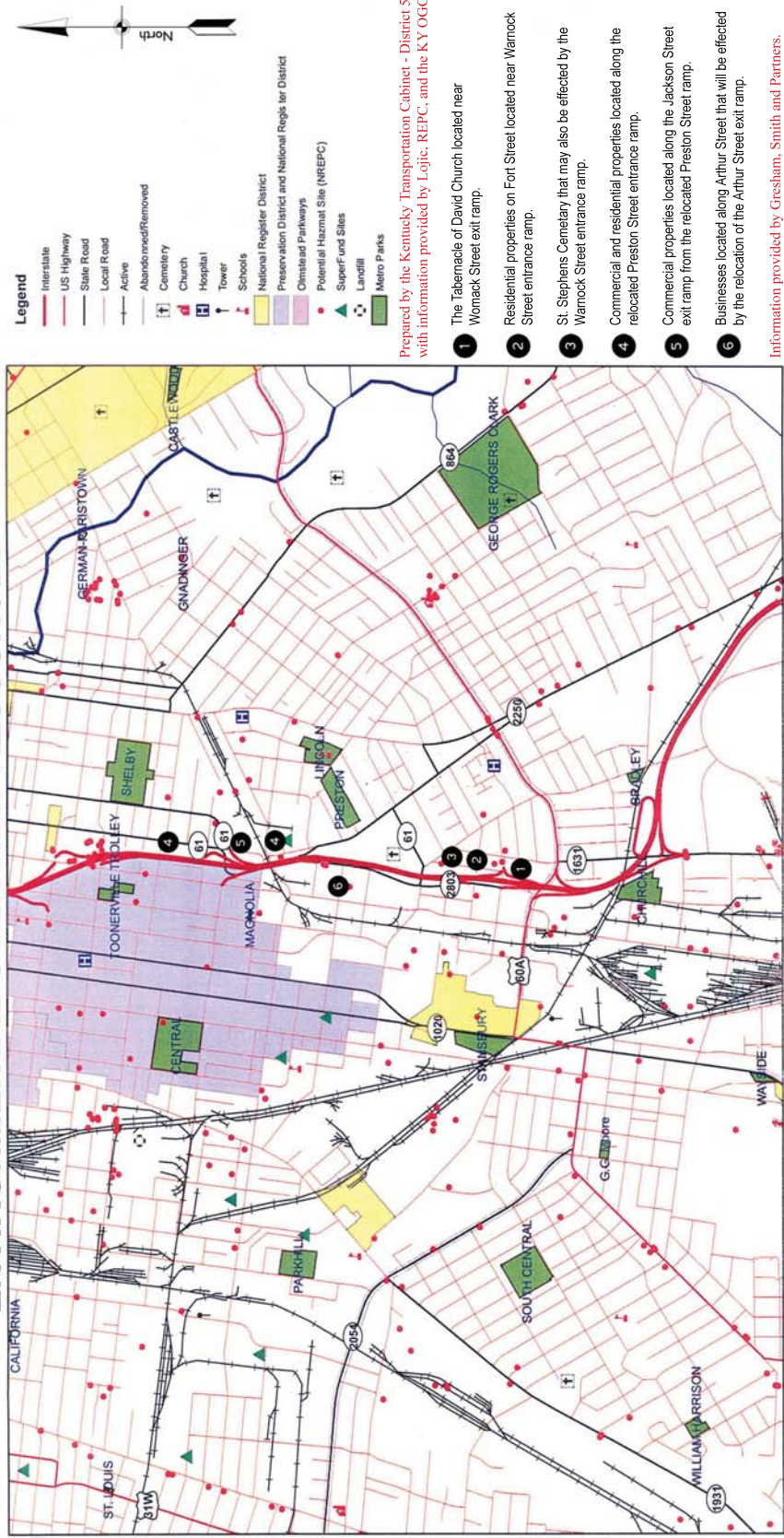


FIGURE 31 - ENVIRONMENTAL OVERVIEW RESOURCES

I-65 Ramp Modifications Scoping Study

2015 Existing + Committed Model

With the existing model calibrated, a future conditions model was developed based on projected traffic volumes expected in 2015 with existing roadway geometrics and currently committed roadway changes. This 2015 Existing + Committed (E+C) model included spot improvements at the intersection of Warnock Street and Crittenden Drive proposed by Metro Government and traffic was redistributed accordingly. The E+C conditions model was used as a baseline for the evaluation of traffic conditions with each project alternative. According to *Jordan, Jones and Goulding...*

“During the AM Peak, the eastbound approach at Crittenden Drive and Central Avenue accumulates a lengthy left turn queue, but appears to clear each cycle. There are no visible backups on the interstate ramps or the interstate itself.”

During the PM Peak the eastbound approach at Crittenden Drive and Central Avenue accumulates a lengthy left turn that does not clear each cycle starting halfway through the simulation. There is still available space on Central Avenue to store these vehicles. The interstate ramps adequately accommodate any queues that form on the ramps.”

2015 Alternative Models

The 2015 alternative simulation models combined traffic projected for the year 2015 with each respective alternative. Trips inside and through the study area were redistributed based on the changes in the roadway network associated with each respective alternative. The traffic analysis included Alternates 2 & 3 which were dropped from consideration during the final PAC meeting. According to *Jordan, Jones and Goulding...*

Alternate 1

“There are no obvious long queues that have trouble clearing on the surface street network. There are no problems with queuing on the interstate ramps. The interstate itself moves freely without backups.”

Alternate 2

“Alternate 2 still continues to function well – we did not observe major congestion or significant queuing throughout the model.”

The largest difference between Alternate 1 and Alternate 2 is that more traffic is now shifted to the Eastern Parkway and Crittenden Drive intersection. This causes

longer queues for the Eastern Parkway approaches of the intersection, especially during the PM peak hour.

The area along Warnock Street between the I-65 ramps does get congested every few cycles, but vehicles manage to clear out without causing long term problems.

The relocation of Hahn Street to opposite Arthur produced no noticeable changes in traffic flow. Traffic operation near the interchange for the on-ramps from Crittenden Drive to I-65 SB is smooth.”

Alternate 3

“Alternate 3 also works well. The addition of the on-ramp to I-65 SB from Eastern Parkway alleviates the queuing issue that developed in Alternate 2 at the Eastern Parkway and Crittenden Drive intersection.

The area along Warnock Street between the I-65 ramps does get congested every few cycles, but vehicles manage to clear out without causing long term problems.

Traffic operation near the interchange for the on-ramps from Crittenden Drive to I-65 SB is smooth.”

Alternate 4

“In Alternate 4, the interstate traffic moves well with no visible backups. There were no queuing problems on the ramps either. More congestion occurs at the intersection of Preston Street and Brandeis Avenue because of the new ramp that connects directly to Jackson Street. Vehicles are using Preston Street to get to Jackson Street now instead of using the interstate.

There is occasional queuing at Eastern Parkway and Arthur Street on the Arthur Street approach, but it clears up within several cycles of the signal.

Eliminating the loop ramp from Crittenden Drive to I-65 NB and replacing it with a new ramp near the Fairgrounds has made a small impact on traffic operations. The left turn queue on eastbound Central Avenue at Crittenden Drive has disappeared since many of these vehicles now travel straight through the intersection to the new ramp.”

I-65 Ramp Modifications Scoping Study

Level of Service Comparisons for Key Intersections

Several intersections were identified as key intersections in the study area. Those intersections include Crittenden Drive and Eastern Parkway, Arthur Street and Warnock Street, and Crittenden Drive and Central Avenue. *Jordan, Jones and Goulding* also provided tables showing level of service and delay for these key intersections. The Levels of Service (LOS) for these signalized intersections were defined in terms of average delay in seconds per vehicle per cycle length for a 15 minute period during peak hour conditions.

Level of Service	Range of Delay
LOS A	up to 10 s/veh
LOS B	11-20 s/veh
LOS C	21-35 s/veh
LOS D	36-55 s/veh
LOS E	56-80 s/veh
LOS F	81+ s/veh

The improvements at these key intersections associated with each alternative developed by Gresham, Smith and Partners and the levels of service provided by *Jordan, Jones and Goulding* are shown on the following pages.

Intersection of Crittenden Drive and Eastern Parkway

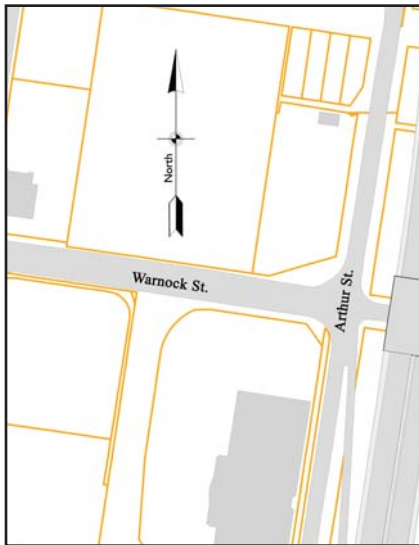


EXISTING

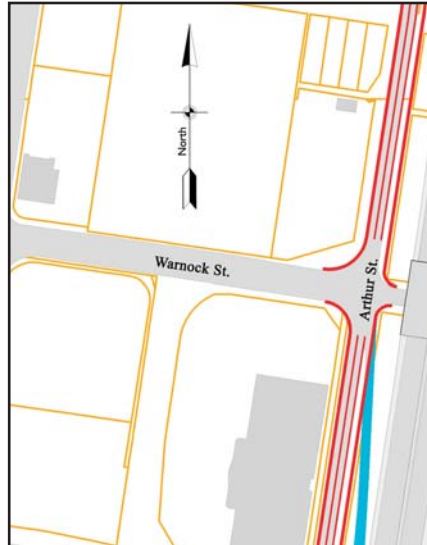
ALTERNATIVES I-4

	AM Peak				PM Peak			
	Intersection Delay/LOS				Intersection Delay/LOS			
	Approach Delay/LOS				Approach Delay/LOS			
	NB	SB	EB	WB	NB	SB	EB	WB
2003 Existing	32/C				33/C			
	26/C	33/C	37/D	30/C	25/C	32/C	37/D	32/C
2015 E+C	28/C				33/C			
	23/C	32/C	31/C	28/C	27/C	33/C	36/D	33/C
2015 GSP Alt 1	29/C				31/C			
	30/C	20/B	31/C	31/C	33/C	14/B	35/D	32/C
2015 GSP Alt 2	30/C				30/C			
	38/D	21/C	26/C	31/C	35/D	16/B	31/C	31/C
2015 GSP Alt 3	30/C				30/C			
	36/D	20/C	30/C	30/C	33/C	16/B	33/C	30/C
2015 GSP Alt 4	29/C				31/C			
	33/C	20/B	30/C	32/C	31/C	16/B	35/C	32/C

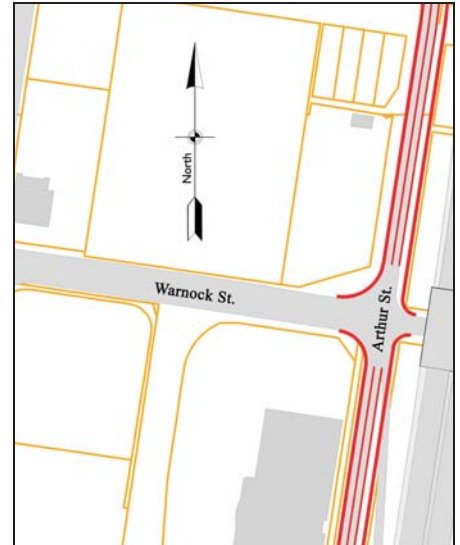
Intersection of Arthur Street, Warnock Street and I-65 Southbound On-ramp



EXISTING



ALTERNATIVES 1, 3, 4



ALTERNATIVE 2

Intersection of Arthur Street, Warnock Street and I-65 Southbound On-ramp (cont.)

	AM Peak				PM Peak			
	Intersection Delay/LOS				Intersection Delay/LOS			
	Approach Delay/LOS				Approach Delay/LOS			
	NB	SB	EB	WB	NB	SB	EB	WB
2003 Existing	14/B				14/B			
	-	12/B	12/B	19/B	-	18/B	12/B	14/B
2015 E+C	19/B				23/C			
	-	30/C	8/A	7/A	-	39/D	19/B	12/B
2015 GSP Alt 1	18/B				20/C			
	-	30/C	7/A	7/A	-	39/D	8/A	8/A
2015 GSP Alt 2	20/B				22/C			
	-	31/C	7/A	9/A	-	38/D	12/B	10/A
2015 GSP Alt 3	20/B				20/B			
	-	31/C	6/A	8/A	-	36/D	9/A	9/A
2015 GSP Alt 4	20/C				22/C			
	-	31/C	7/A	8/A	-	38/D	10/B	10/B

Intersection Warnock Street and I-65 Northbound on and off ramps



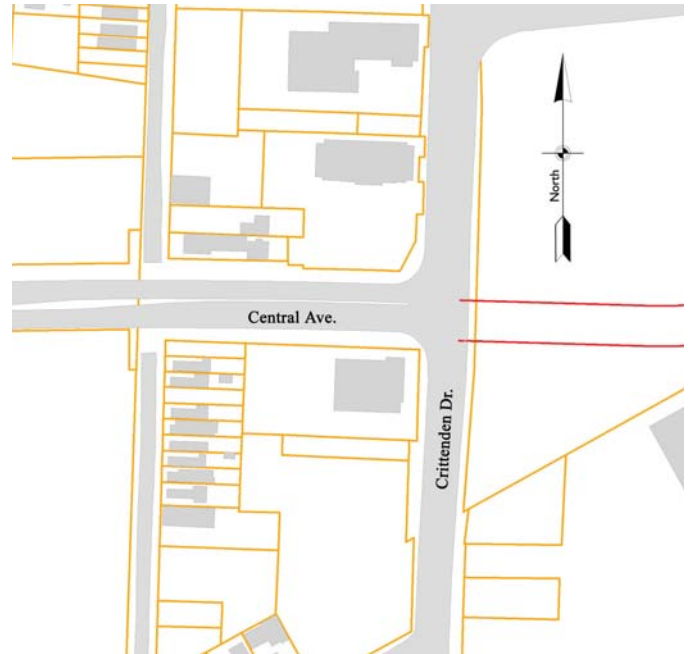
	AM Peak				PM Peak			
	Intersection Delay/LOS				Intersection Delay/LOS			
	Approach Delay/LOS				Approach Delay/LOS			
	NB	SB	EB	WB	NB	SB	EB	WB
2003 Existing	-	-	-	-	-	-	-	-
2015 E+C	15/B	-	10/A	20/B	30/C	-	12/B	12/B
2015 GSP Alt 1	16/B	-	6/A	10/A	22/C	-	5/A	10/A
2015 GSP Alt 2	17/B	-	4/A	9/A	19/B	-	5/A	10/A
2015 GSP Alt 3	16/B	-	5/A	9/A	19/B	-	5/A	9/A
2015 GSP Alt 4	17/B	-	5/A	9/A	21/C	-	6/A	9/A

*Existing intersection unsignalized, therefore no LOS.

Intersection Crittenden Drive and Central Avenue



EXISTING ALTERNATIVES 2,3



ALTERNATIVES 1,4

	AM Peak				PM Peak			
	Intersection Delay/LOS				Intersection Delay/LOS			
	Approach Delay/LOS				Approach Delay/LOS			
	NB	SB	EB	WB	NB	SB	EB	WB
2003 Existing	19/B	13/B	34/B	-	15/B	12/B	34/C	-
2015 E+C	20/B	23/C	40/D	42/D	29/C	27/C	55/D	47/D
2015 GSP Alt 1	18/B	21/C	39/D	33/C	22/C	23/C	35/C	46/D
2015 GSP Alt 2	14/B	18/B	36/D	30/C	18/B	22/C	37/D	43/D
2015 GSP Alt 3	13/B	17/B	36/D	30/C	19/B	21/C	36/D	43/D
2015 GSP Alt 4	19/B	20/B	39/D	33/C	27/C	24/C	34/C	48/D

Evaluation of Build Alternatives

Alternative 1 provides much improved access to major venues (KFEC, Churchill Downs and Papa John's Cardinal Stadium) with ramps to and from the Central Avenue Extension. These ramps also provide access to South Louisville Metro and alternative access to the University of Louisville. Access to U of L is significantly improved with improvements at Warnock Street, as is local street access. Improvement of the Warnock Street/Crittenden Drive Intersection also allows for significant improvement in local street traffic flow and safety. The proposed ramp from Warnock Street to northbound I-65 could require the relocation of some 20 grave sites in the St. Stephens Cemetery; this situation would exist for all four build alternatives since this ramp is included in each.

Alternative 1 also improves access to and from I-65 by improving spacing of ramps and eliminating short weaving distances; these weaving distances are particularly improved southbound along Arthur Street and between Eastern Parkway and Crittenden Drive and northbound at the Preston Street on-ramp and the exits to Jackson Street and Woodbine Street.

At the north end of the project, no connection from Preston Street northbound to Jackson Street is provided. This movement is currently allowed for through the use of I-65 northbound; traffic from Preston Street northbound uses the short on-ramp to I-65 northbound and then quickly exits to Jackson Street. KY 61 is actually routed onto I-65 northbound to continue the route.

Alternative 1 provides for the closure of the first southbound exit ramp to Arthur Street at Gaulbert Avenue. Reasons to consider closing this ramp include:

- The weave distance between this ramp and the on-ramps from Preston and Floyd/Magnolia is inadequate.
- Gaulbert Avenue intersects with Arthur Street at the base of the ramp.

Most business owners on Arthur Street from Gaulbert Avenue to Bloom Street opposed the possible closing of this ramp. Southbound I-65 traffic would need to exit to Brandeis Avenue and go around the block using Floyd Street and then Bloom Street, Lee Street or Gaulbert Avenue to access the businesses. Several owners suggested closing the on-ramps from Preston and Floyd/Magnolia instead.

Alternative 2 does provide improved access to and from I-65, improving weaving and merging distances at numerous locations. Like Alternative 1, it does make improvements at Warnock Street that would provide better access to the University of Louisville while improving local street traffic flow and safety. However, it does not include new access to or from Central Avenue Extension,

and thus does not improve access to KFEC, Churchill Downs or Papa John's Cardinal Stadium.

To address the short weave southbound between the Eastern Parkway on-ramp and the exit ramp to Crittenden Drive, the on-ramp from Eastern Parkway is eliminated. This requires traffic desiring to enter southbound I-65 from this area to use either the Arthur Street on-ramp just south of Warnock or the on-ramp from Crittenden Drive. Hahn Street is relocated to intersect with Eastern Parkway opposite Arthur Street; according to the traffic analysis, this "produced no noticeable changes in traffic flow". The north end of the project is identical to Alternative 1.

At the second PAC Meeting, there was consensus that Alternative 2 did not address several problem locations and was less effective than other alternatives. Thus, the decision was made to eliminate Alternative 2 from further consideration.

Alternative 3 is the same as Alternative 2 except the new ramp from Eastern Parkway to southbound I-65 is included, and the relocation of the Hahn Street intersection is not included. As in Alternative 2, there is no new access provided to or from the Central Avenue Extension. At the second PAC Meeting, there was consensus that Alternative 3 was less effective than other alternatives, and the decision was made to eliminate Alternative 3 from further consideration.

Alternative 4 was developed primarily due to concerns expressed at the first PAC Meeting about the effects that Alternative 1 would have on businesses on Arthur Street from Gaulbert Avenue to Bloom Street. This was due to the fact that Alternative 1 proposes the closure of the first southbound exit to Arthur Street at Gaulbert Avenue. While there was agreement the situation at Gaulbert Avenue is undesirable, there was likewise concern over the impact the ramp closure would have on these businesses. Subsequent meetings with business owners in this area confirmed this concern. So, as mentioned previously, Alternative 4 allows for the exit ramp at Gaulbert Avenue to remain open; however, in order to address the poor ramp spacing and short weave in this area, the entrance ramps to southbound I-65 from Preston and Floyd/Magnolia would be closed as a part of Alternative 4. It is noted that a fire station is located on Preston Street near the on-ramp to I-65 southbound. This will need to be taken into consideration regarding any possible ramp closure in this area.

The PAC generally liked the fact that the Preston Street on-ramp to northbound I-65 allows for a connection to Jackson Street in Alternative 4. Also, at the south end of the project the proposed ramp from Central Avenue Extension to northbound I-65 was received favorably; this would allow for the removal of the existing on-ramp from Crittenden Drive to northbound I-65 and would increase acceleration/merge distance for this movement.

Conclusion

Alternatives 1 and 4 address the purpose and need determined for the project to *improve traffic flow, safety and access associated with ramps along I-65 from Crittenden Drive to St. Catherine Street*. Alternatives 1 and 4 also better address problems identified and specific problem locations. Traffic flow and safety would be improved with either alternative through the removal of some ramps, the modification of others and addition of new ramps. These modifications will provide better spacing of ramps and improved merging, weaving acceleration and deceleration areas. The proposed improvements will organize and simplify traffic flow associated with ramps, improving operational efficiency.

PAC members favored blending the best components from Alternatives 1 and 4. For instance, the PAC suggested that Alternative 1 be used but with the ramp components from Alternative 4 at the Central Avenue Extension. And, the PAC suggested consideration be given to closing only the Floyd/Magnolia on-ramp to southbound I-65, leaving the Preston Street on-ramp open (since the Arthur Street exit would be moved farther to the south).

Either Alternative 1 or 4, or some components of each, offer much improved access to and from I-65 and to and from major venues in the project area. As mentioned, however, there are still some issues involved with Alternatives 1 and 4 which need to be resolved during Phase I Design.

Recommendations

- Alternatives 1 and 4, or components of each with some variation, should be carried forward to Phase I Design for further consideration.
- The project should be split into specific phases (as shown in Cost Table 5) that would facilitate maintenance of traffic and enhance and stage funding possibilities. Any of the phases could be built as stand-alone projects.

PRELIMINARY ESTIMATES OF PROBABLE COSTS						
PRIORITY	ALTERNATE No. 1	ITEM 1 RDWAY	ITEM 2 R/W	ITEM 3 UTILITIES	ITEM 4 ENGR.	TOTAL
1	I-65 Connector to Crittenden Dr./Central Ave.	13,900,000	686,000	115,000	1,470,100	16,171,100
2	Arthur Street Southbound I-65	13,555,000	203,000	245,000	1,400,300	15,403,300
3	Crittenden Drive Ramp to Northbound I-65	1,270,000	155,000	65,000	149,000	1,639,000
4	I-65 Northbound Ramp to Warnock Street	4,800,000	1,740,000	165,000	670,500	7,375,500
5	Preston Street Ramp to Northbound I-65	9,850,000	3,000,000	980,000	1,383,000	15,213,000
6	Warnock Street Ramp to Northbound I-65	3,190,000	1,800,000	175,000	516,500	5,681,500
	TOTALS	46,565,000	7,584,000	1,745,000	5,589,400	61,483,400
	ALTERNATE No. 4					
1	I-65 Connector to Crittenden Dr./Central Ave.	17,250,000	1,082,000	162,000	1,849,400	20,343,400
2	Arthur Street to Southbound I-65	13,555,000	204,000	215,000	1,397,400	15,371,400
3	I-65 Northbound Ramp to Warnock Street	4,800,000	1,740,000	165,000	670,500	7,375,500
4	Preston Street Ramp to Northbound I-65	13,225,000	3,650,000	1,200,000	1,807,500	19,882,500
5	Warnock Street Ramp to Northbound I-65	3,190,000	1,800,000	175,000	516,500	5,681,500
	TOTALS	52,020,000	8,476,000	1,917,000	6,241,300	68,654,300
Notes: (A) Priority 1 does not include cost for reconstruction of KFEC entrance or toll booths. (B) Signing and lighting are included in Item 1. (C) Item 4 (Engineering) is estimated as 10% of Item 1 through 3. (D) Date of estimates is August 2005.						

Appendix A

KEY PERSON INTERVIEWS INFORMATION

Purpose of Interviews:

- Obtain Input / Involve Key Stakeholders in Helping to Define:
 - Project Scope
 - Problems and Problem Locations
 - Issues and Concerns
 - Purpose and Need
 - Project Goals

KEY PERSONS INTERVIEWED		
Cabinet Secretary Louisville Metro Bruce Traughber	Louisville Metro Councilmen Dan Johnson George Melton George Unseld	KIPDA Harold Tull Phil Williams
Louisville Metro Public Works Mark Adams Rick Storm	University of Louisville Bob Bringhurst Ken Dietz Larry Detherage Larry Owsley Mitchell Payne	Jefferson County Public Schools Susan Biasioli Richard Caple Church Fleischer Terry Harrison John Lee
TARC Karen Scott	TRIMARC Todd Hood Jack Nevin	St. Joseph's Area Association, Inc. Gail Linville Cathy Ward
Kentucky Fair and Exposition Center Harold Workman	CTS Project Mgr., Ohio River Bridges Charles Raymer	Old Louisville Neighborhood Council Herb Fink
	Churchill Downs David Sweasey	

Key Person Interview Guide

- What in your opinion should be the purpose and need of this project?
 - What should be the project goals?
- What do you see as the main problems that cause this project to be necessary?
 - Could you identify specific problem locations regarding traffic flow and safety?
- What do you see as project issues and concerns?
- What must be done to make the project successful?
- What must not be done ... what should be avoided?
- What environmental concerns are you aware of?
- Is there any other input that you would like to share?
 - Anything unusual regarding the project?

“What do you see as the main problems that cause this project to be necessary?”

**Most Frequently Mentioned Problems
From Key Person Interviews**

<i>General Problems</i>	<i>Times Mentioned</i>
▪ Too many accesses; too many ramps	3
▪ Short exits; short decels; inadequate stacking	3
▪ Acceleration/deceleration/merging/weaving problems	2
▪ Come off, get lost; how do I get to the interstate, there from here; sign	2
▪ Traffic flow in and out of U of L; snarls associated with attractors	2
▪ Safety / accidents	2

“Could you identify specific problem locations regarding traffic flow and safety?”

**Most Frequently Mentioned Problem Locations
From Key Person Interviews**

<i>Top 10 Problem Locations</i>	<i>Times Mentioned</i>
1. Warnock area (at NB I-65 ramps & Sav-A Step)	11
2. Second SB exit to Arthur Street	8
3. Eastern Parkway NB exit, then quick left to NB Crittenden	7
4. Ramp to NB I-65 from Preston, and weave on I-65	7
5. First SB exit to Arthur Street, where Gaulbert comes in	7
6. Short weave SB between Eastern Pkwy and Crittenden	6
7. Lee Street on-ramp to I-65 SB; short accel	5
8. NB on I-65, there is no direct access to Crittenden Drive	5
9. Weave between Magnolia/Preston on-ramp to SB and Arthur exit	5
10. Arthur at Brandeis is confusing; Brandeis from Arthur to Bradley	4

Other Problem Locations Mentioned More Than Once

1. Crittenden Drive on-ramp to NB I-65	2
2. Back-ups onto I-65 (SB exit to Crittenden)	2
3. Jackson/Woodbine exit area -- too many decisions, too much activity	2
4. Accidents near Crittenden curve; curve at Crittenden	2
5. Ramp from Warnock to SB I-65 & ramp from Eastern Pkwy too close	2
6. Lack of 2 lane exit from NB I-65 to Eastern Parkway; backs onto I-65	2

“What do you see as the main project issues and concerns?”

- **Access – Interstate, Attractions, Local**
- **Neighborhood**
- **Traffic Flow and Safety**
- **Project Coordination**
- **Surface Street Traffic Patterns**
- **Trucks**
- **Roadway Geometric Standards**
- **Impacts / Inconveniences**
- **Environmental**
- **Other**

**Jefferson County, I-65
Issues and Concerns Grouping**

Access (Interstate, Attractions, Local)

1. Access from I-65 to Crittenden
2. Northbound off-ramp to Crittenden
3. KFEC access during construction
4. Access from KFEC and Churchill Downs to I-65 southbound
5. Large attractors
6. Providing service/access to large generators (U of L, KFEC, Churchill Downs)
7. How generators' needs will change in the future
8. Amount of traffic generated by attractions
9. Ingress and egress to campuses
10. Main entrance to U of L (Warnock and Cardinal Blvd., but Eastern Parkway plays an important role as well)
11. Main access points to U of L
12. Other attractions in the area
13. Access
14. Access to everything -- U of L, neighborhoods, businesses
15. Good access between Eastern Parkway and Floyd
16. Overall traffic flow through this area with all its major attractions

Neighborhood

1. Well-established neighborhood -- people don't deal well with change
2. Dense population of senior citizens -- a lot of them walk, crossing streets
3. Pedestrian traffic or bicycles
4. Traffic through neighborhoods
5. Residential areas -- hard to mix it with industrial and attraction traffic
6. Neighborhood streets
7. Other residents traffic usage
8. Look at it from the minds and eyes of the people who live in the area
9. Don't want more traffic in neighborhoods
10. Neighborhood traffic (impact)

Traffic Flow and Safety

1. Traffic flow
2. Safety
3. Traffic flow and safety
4. Accidents
5. High accident area
6. Ramp metering -- is this an area to test it?
7. Need to include ITS in the project
8. Overall traffic flow through this area with all its major attractions

Project Coordination

1. Metro Louisville project at Warnock
2. Lee Street closure to through traffic
3. U of L plans to expand to the north from Brandeis to Bloom
4. U of L property and future plans
5. T2
6. TRIMARC involvement
7. TRIMARC equipment
8. Need southbound TRIMARC signs (DMS)

Surface Street Traffic Patterns

1. Cardinal Boulevard is the major east/west movement for the area
2. Crittenden Drive -- lot of changes in growth patterns -- usage will increase
3. Eastern Parkway vs. Warnock issue (access to Floyd)
4. Boxley situation

Trucks

1. Truck traffic in Old Louisville
2. Trucks around campuses
3. Trucks (no more in the U of L area)
4. Trucks -- make sure design is adequate to accommodate
5. Keep trucks out of residential areas

Roadway Geometric Standards

1. Lack of adequate acceleration/deceleration lengths
2. Difficult weaves, lack of adequate weaving lengths

Impacts / Inconveniences

1. Expedite work
2. Do work with a minimum of disruption and inconvenience

3. Businesses any ramp closures would affect
4. U of L athletic complex improvements should be left alone

Environmental

1. Noise
2. Historic properties
3. Purina
4. Pollution problems (dirt from) from interstate, Purina, Franklin Brickyard
5. Possible old industrial area near Hahn Street
6. Railroad line
7. Air Quality, probably not big on this project

Other

1. Special Events
2. Different interests -- some may be competing
3. Need a vision for I-65 compatible with the future (need to define future activities along I-65)
4. Shelby Elementary School – new school under construction
5. Maintenance of side slopes, ramp termini, landscaping

“What in your opinion is the Purpose and Need of this project?”

Jefferson County, I-65 Purpose and Need Grouping

Improve Traffic Flow, Safety and Access

1. Improve traffic flow, safety and access
2. To improve traffic flow, safety and access -- access to and access from
3. Improve traffic flow and safety
4. Improve traffic flow, reduce congestion
5. Improve access and safety to the immediate area
6. OK as shown on the announcement: To improve traffic flow and safety on I-65 near the University of Louisville by closing and/or modifying on and off ramps
7. OK as shown on the announcement except as modified to read: To improve traffic flow and safety on I-65 near the University of Louisville and Old Louisville by closing and/or modifying on and off ramps
8. Update to current standards

Improve Access to and from Major Attractors

9. Improve access to and egress from major attractors (U of L, KFEC, Churchill Downs, Papa John's Cardinal Stadium) in this area
10. Accessibility to four major entertainment areas
11. Improve access to attractors, but not through neighborhoods
12. Provide better traffic movement to major venues in this area to better move patrons in and out; to get traffic away as well as to get it in and access major arteries
13. Improve traffic flow, safety and access for major attractors
14. Improve traffic flow, safety, signage and access to U of L and surrounding areas (within the South Central Business Association) with the least amount of disruption
15. Improve access, traffic flow and safety through the corridor considering area activities, attractors, generators and downtown
16. Improve access to U of L and surrounding neighborhoods

Enhance Local Street Traffic Patterns

17. Better transportation in general, make transportation more efficient
18. Lessen confusion on how to get from A to B
19. Make it as unobtrusive as possible for those who live here
20. Reduce the use of public streets for interstate movements

Improve Safety

21. Safety is a big issue
22. Improve safety
23. Alleviate unsafe ramp entrances and exits and improve merging capability

Organize, Simplify, Beautify

24. Clean up some of these ramps
25. Dress up entrances off I-65 to this part of town (signature entrances)

Other

- 26. Reduce congestion on I-65
- 27. Make it easy for pass-through traffic to stay on the interstate
- 28. Reduce truck traffic in Old Louisville

“What should be the project goals?”

Jefferson County, I-65 Project Goals Grouping

Improve Operational Efficiency

1. Make everything work as well as the ramp to I-65 southbound from Crittenden Drive
2. Improve ramps
3. Provide a facility that's more operationally efficient

Improve Traffic Flow, Safety and Access

4. Relieve some of the traffic
5. Eliminate or reduce congestion
6. Address safety concerns
7. Improve traffic flow, safety and access
8. Improve safety, traffic flow and access
9. Improve traffic flow, safety signage and access to U of L and surrounding areas with the least amount of disruption
10. Improve traffic flow, access and safety
11. Improve access, safety, traffic flow

Respect Neighborhood Character

12. Protect, preserve the residential aspects of this area along the I-65 Corridor
13. Minimize impacts to neighborhoods
14. Put traffic on primary surface roads

Organize and Simplify

15. Easier on and off
16. Eliminate as many points of conflict as possible
17. Designate better access points

Improve Access to Attractors

18. Provide better traffic movement to major venues
19. Include signature entrances

Improve Signing

20. Improve signage
21. Better signing (wayfinding) on surface streets

Other

22. Develop a phased approach – have short, medium and long term objectives
23. Finally resolve something or decide you can't and then leave it alone
24. Minimize heavy (industrial) truck traffic through neighborhoods

***“What needs to be done
to make the project successful?”***

- **Use Extensive Public Involvement**
- **Improve Access**
- **Improve Geometric Deficiencies**
- **Secure Funding**
- **Keep the Community in Mind**
- **Assure Good Coordination**
- **Improve Signing**
- **Consider Aesthetics**

**Jefferson County, I-65
To Make Project Successful Grouping**

Use Extensive Public Involvement

1. Consider elderly residents; the more they know, sooner, better they accept; so talk to them
2. Come to a Neighborhood Meeting toward the beginning; at least we have an input or a say
3. Good public involvement effort; include a good cross section of folks
4. Get neighborhood associations, U of L and KFEC singing out of the same songbook – get them to agree on common ground; talk with them
5. Communicate well with the two different groups (attractors, residents) – sell them
6. Keep media informed/aware
7. Disseminate info through media
8. Get input from everyday travelers
9. Get people's input
10. Assure stakeholders issues are addressed
11. Neighborhoods are in a partnership with U of L (South Central Neighborhood Association Groups)
12. Talk with people (let neighborhoods know)
13. Need broad-based support. (How?) By talking to folks.
14. Talk with neighborhoods, etc., as you are doing

Improve Access

1. Clean up traffic; figure out a single point of access for U of L
2. Improve access in Warnock area
3. Simplify access in Warnock area
4. Simplify access in and out
5. Limit and organize access points
6. Improve ingress/egress for buses into schools
7. Consider closing on-ramp to SB I-65 near Lee Street
8. Improve access to U of L

Improve Geometric Deficiencies

1. Improve the ramp system ... that would be a major improvement
2. Lengthen merge lanes
3. Address the fact that you have a lot of activity (attractions generating traffic) in the area but there are short deceleration and acceleration distances – it is tight – address the safety issues
4. There are too many things going on
5. Elimination of or improvements to ramp entrances/exits to handle capacity with adequate merging and weaving areas
6. Shorten Eastern Parkway entrance ramp to SB I-65 ... or eliminate it.

Secure Funding

1. Get the money
2. Put enough money into it to do it right – most things are customized based on available resources
3. Get the money – federal and state
4. Get a few hundred million dollars
5. Secure money to do the work
6. Must have a rough estimate of costs by June or July this year, so Design money can be put in Six-Year Road Plan

Keep the Community in Mind

1. Protect the interests of businesses, but easier for a business to relocate than people
2. Be aware of specific agendas
3. Get trucks to Cardinal Blvd. and Hill Street
4. Solutions should not worsen neighborhood situations
5. Particularly need to serve U of L
6. Complete it in a timely fashion

Assure Good Coordination

1. Coordinate with T2
2. Get neighborhood associations, U of L and KFEC singing out of the same songbook – get them to agree on common ground; talk with them
3. Coordinate with new merged government to understand their expectations
4. Coordinate with U of L. (Would some form of partnering be a possibility?) Regarding Louisville Metro, funding is unlikely, but wouldn't rule out the possibility of some form of a partnering effort, especially regarding signature entrances, etc.
5. Timing (don't do anything during the first Saturday of May like that ramp's closed, or take some crazy route to get them here)

Improve Signing

1. Clarity in how to get on and off
2. Improve signage
3. Good signage (routing and points of interest, e.g., Speed Museum)

Consider Aesthetics

1. Beautification/landscaping
2. Enhance aesthetics, include landscaping and maintenance of same

“What should not be done ... or what should be avoided?”

**Jefferson County, I-65
What Must Not Be Done**

1. Plenty of people will have things they want avoided
2. Avoid Cracker Barrel
3. Don't overlook special agendas/interests
4. Avoid damage to U of L new athletics complex
5. Tread lightly with Metro until you find out what peoples' roles are
6. Don't ignore anybody
7. Don't say what you're going to do at a public meeting (it's already decided); rather present possible solutions
8. Cornerstone 2020 is another document that can be interpreted
9. Don't keep the public out of an awareness of what's going on; avoid not keeping public informed
10. Don't put more traffic through neighborhoods
11. Don't add more lanes to mainline I-65
12. Avoid U of L property
13. Avoid backroom design – include folks in process
14. Avoid T2 area (Light Rail project)
15. Don't just do it and not tell anybody
16. Don't add any additional on and off ramps – maybe even close some
17. Don't just buy everything up and tear it down
18. Do not maintain the status quo – changes are needed
19. Stay off U of L property/infrastructure
20. There is one church and several businesses to be considered
21. Cemetery
22. We don't want trucks on residential streets
23. We don't want through traffic on neighborhood streets
24. Don't close something without giving us other options
25. Don't mess up traffic during Derby

“What environmental concerns are you aware of?”

Environmental

1. Noise
2. Historic properties
3. Purina
4. Pollution problems (dirt from) from interstate, Purina, Franklin Brickyard
5. Possible old industrial area near Hahn Street
6. Railroad line
7. Air Quality, probably not big on this project

“Is there any other input that you would like to share?”

Other

1. Special Events
2. Different interests -- some may be competing
3. Need a vision for I-65 compatible with the future (need to define future activities along I-65)
4. Shelby Elementary School – new school under construction
5. Maintenance of side slopes, ramp termini, landscaping

Appendix B

PROJECT ADVISORY COMMITTEE INFORMATION

Project Advisory Committee
I-65 Ramp Modification Project
Item No. 5-8102.00
Louisville Metro

Name	Organization
Barry Barker	TARC
Ananias Calvin	KYTC Central Office Div. of Design
Ken Dietz	University of Louisville
Bob Farley	Federal Highway Administration
Herb Fink	Old Louisville Neighborhood Council
Greg Groves	KYTC District 5
Todd Hood	TRIMARC
Tony Lewis	Gresham, Smith and Partners
Gail Linville	St. Joseph's Neighborhood Association
Larry Owsley	University of Louisville
Tala Quinio	KYTC District 5
Ben Robertson	Gresham, Smith and Partners
Bill Seymour	Gresham, Smith and Partners
Paul Slone	Jordan, Jones and Goulding
Rick Storm	Louisville Metro DPW
David Sweazy	Churchill Downs
Dave Taylor	Gresham, Smith and Partners
Bruce Traugher	Louisville Metro
Harold Tull	KIPDA
Harold Workman	Kentucky Fair & Exposition Center
Diane Zimmerman	Jordan, Jones and Goulding

**Project Advisory Committee Meeting
I-65 Ramp Modifications Project
University Club, University of Louisville
*March 8, 2005
2:00 PM***

AGENDA

Introductions

Committee Purpose

Meeting Objectives

Summary of Key Person Interviews

Project Purpose and Need

Project Goals

Project Alternatives – DVD Presentation

Discussion of Alternatives

Next Steps

PROJECT ADVISORY COMMITTEE MEETING NOTES
March 8, 2005

JEFFERSON COUNTY
I-65 RAMP MODIFICATION SCOPING STUDY
Item 5-8102.00

MEETING DATE: Tuesday March 8, 2005

PARTICIPANTS:

Greg Groves	KYTC D-5
Gabi Istre	JJG
Tala Quinio	KYTC D-5
Ananias Calvin III	KYTC Central Office Design
Andrea Clifford	KYTC D-5
Todd Hood	TRIMARC
Harold Workman	K.S.F.B.
Shawn Dikes	Parsons Brinkerhoff
Harold Tull	KIPDA
Rick Storm	Louisville Metro Public Works
Herb Fink	Old Louisville Neighborhood Association
Larry Owsley	U of L
Gail Linville	St. Joseph's Area Association
Cathy Ward	St. Joseph's Area Association
Mike Zanone	St. Joseph's Area Association
Diane Zimmerman	JJG
Bill Seymour	Gresham, Smith and Partners
Dave Taylor	Gresham, Smith and Partners
Ben Robertson	Gresham, Smith and Partners

Greg Groves welcomed everyone to the meeting and asked attendees to introduce themselves. Greg then explained the Committee's purpose -- functioning in an advisory role -- offering advice, direction and input to the KYTC for the project. Mr. Groves introduced Bill Seymour of Gresham, Smith and Partners (GS&P).

Bill explained the meeting objectives which were 1) reach consensus on a Project Purpose and Need Statement, 2) reach consensus on Project Goals, and 3) obtain committee input on alternates under consideration. Mr. Seymour then shared a presentation summarizing the Key Person Interviews that had been conducted for the project.

1. Purpose & Need Statement: A draft Purpose and Need Statement was presented by the consultant based on information obtained from the Key Person Interviews. The Purpose was accepted as presented:

- ***"Improve traffic flow, safety and access associated with ramps along I-65 from Crittenden Drive to St. Catherine Street."***

2. There was also agreement to the Need for the project which is demonstrated by:

- ***Poor traffic flow***
- ***Too many ramps, too close together***
- ***Insufficient acceleration, deceleration, merging and weaving distances***
- ***Identified safety problems, adverse accident history (1137 from January 2002 – April 2004)***
- ***Inefficient and confusing access to and from I-65 and to and from major venues***

Herb Fink, Old Louisville Neighborhood Association representative, mentioned that improved signing should be a part of the Need. It was agreed that improved signing would be a part of the project and that this was covered under project goals.

3. Project Goals: Old Louisville is in the process of changing the existing one way streets back to two-way. Old Louisville neighborhood association is concerned about truck traffic through existing streets and would like to see trucks rerouted. The advisory committee felt that while this was not within the scope of the project some of the proposed improvements may indirectly assist with this situation. After committee input and discussion, the draft project goals were revised to the following:

- ***Organize and simplify traffic flow associated with ramps, improving operational efficiency.***
- ***Improve access to and from I-65 in this area.***
- ***Improve access to and from major venues.***
- ***Respect current and planned local street traffic flow patterns and neighborhood character.***
- ***Coordinate with area master plans.***
- ***Improve geometrics.***
- ***Improve signing.***
- ***Reduce crashes.***
- ***Develop phasing and scheduling compatible with funding.***

4. GS&P showed a DVD to the Project Advisory Committee which simulated possible, conceptual ramp improvements. The committee then divided into two smaller groups and reviewed and discussed the conceptual improvements.
5. Parsons Brinkerhoff is currently performing a study of pedestrian traffic on Eastern Parkway at U of L, and has been asked to look at improving the problem of semi-trucks crossing under the train overpass at Eastern parkway and 3rd Street. ITS will be considered.
6. Many of the local neighborhood roads shown in LOJIC as 1-way are actually now 2-ways and will need to be changed on the exhibits.

7. A question was raised regarding whether southbound traffic on Crittenden Drive could be allowed to access northbound I-65 at the existing ramp to northbound I-65. This movement is currently not allowed, and members of the committee explained this was likely due to the problem of backing southbound left turners onto the existing railroad tracks. The consultant will review this situation.
8. Larry Owsley from U of L made a suggestion that since this project was very large and would more than likely need to be broken into fundable phases that we make sure to package the phases in an order that solves the worst problems first.
9. There was discussion about the impact that changes along Arthur Street would have on businesses within the Gaulbert Avenue to Bloom Street area between Floyd Street and Arthur Street. In particular, with the possible closure of the exit ramp from southbound I-65 to Arthur Street at Gaulbert Avenue, access to businesses in this area from southbound I-65 would be less direct than currently exists. Since proposed access to Arthur Street would be beyond (south of) these businesses, traffic exiting I-65 southbound would need to go west, then north, then east to "come back" to these businesses. The consultant has agreed to take another look at this situation. Contact will be made with these business owners for discussion and input.
10. A concern was mentioned about the volume of pedestrian traffic from U of L students near the Warnock Save a Step and near Papa Johns Cardinal Stadium and how the reconfiguration of the I-65 ramps would have an affect. It was mentioned that the reconfiguration of these and other ramps would result in new traffic signals that could facilitate pedestrian safety.
11. Rick Storm from the Louisville Metro said they were working on a project for improvements at Warnock and I-65 and Warnock at Crittenden Drive as well. He said more than likely funding would only be available for Warnock at I-65.
12. The St. Joseph's Area Association was concerned about how the proposed ramp from northbound I-65 to Crittenden Drive would impact Bradley Park and the neighborhood. Greg Groves of KYTC, District 5 explained how concrete form liners could be used to enhance the aesthetics of the necessary retaining wall. Mr. Groves also mentioned that as future phases of the project progress, photographic renderings or computer simulations could be done to help illustrate how this ramp would look within the area context.
13. Members of the committee consider landscaping an important portion of this project and would like to see it included in the overall need of the project.
14. A discussion was established concerning how the committee would like to handle Public Meetings. A suggestion was made to hold smaller public meetings at the regularly scheduled neighborhood meetings; this method has proven successful on other projects. Another suggestion was for a representative of the design team to attend all neighborhood meetings which keeps everyone informed during the entire design process. KYTC will give this matter further consideration.
15. All of the Project Advisory Committee members are supportive of the project and are eager to see this project move along.



Kentucky Transportation Cabinet
Louisville Metro
I-65 Ramp Modifications
Item 5-8102.00



Key Person Interviews Summary

Project Advisory Committee Meeting
March 8, 2005

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Persons Interviewed






<ul style="list-style-type: none"> • Harold Workman • Mark Adams, Rick Storm • George Melton • Harold Tull, Phil Williams • Charles Raymer • George Unseld • Karen Scott • Gail Linville, Cathy Ward • Larry Owsley, Ken Dietz • Dan Johnson • Bruce Traugher • Herb Fink • Richard Caple • Jack Nevin, Todd Hood • David Sweazy • John Lee, Susan Biasioli 	<ul style="list-style-type: none"> • KFEC • Louisville Metro DPW • Councilman • KIPDA • LSIORBP • Councilman • TARC • St. Joseph's Area Assoc. • U of L • Councilman • Louisville Metro • Old Lou. Neigh. Assoc. • JCPS • TRIMARC • Churchill Downs • JCPS
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Key Person Interview Guide



- What in your opinion should be the **purpose and need** of this project?
 - What should be the **project goals**?
- What do you see as the **main problems** that cause this project to be necessary?
 - Could you identify **specific problem locations** regarding traffic flow and safety?
- What do you see as **project issues and concerns**?
- What must be done **to make the project successful**?
- What must **not be done** ... what should be avoided?
- What **environmental concerns** are you aware of?
- Is there any **other input** that you would like to share?
 - Anything unusual regarding the project?

General Problems



- Too many access points; too many ramps
- Short exits & decels, inadequate stacking
- Acceleration, deceleration, merging weaving problems
- Come off, get lost; how do I get there from here; signs
- Traffic flow in and out of U of L; snarls associated with attractors
- Safety, accidents

Top 10 Problem Locations

- Warnock area at NB I-65 ramps & Sav-A-Step
- Second SB exit to Arthur Street
- Eastern Pkwy NB exit (then left to NB Critt.)
- Ramp to NB I-65 from Preston and weave
- First SB exit to Arthur Street
- Short weave SB between Eastern Pkwy & Critt.
- On-ramp to I-65 SB from Arthur St. near Lee St.
- Lack of access to Crittenden Dr. from NB I-65
- Weave between Floyd/Preston SB on-ramp and exit to Arthur Street
- Brandeis Avenue at Arthur Street

Main Issues and Concerns

- Access – interstate, attractions, local
- Neighborhood
- Traffic flow and safety
- Project coordination
- Surface street traffic patterns
- Trucks
- Roadway geometric standards
- Impacts, inconveniences
- Environmental
- Other

To Make Project Successful



- Include extensive public involvement
- Improve access
- Improve geometric deficiencies
- Secure funding
- Keep community in mind
- Assure good coordination
- Improve signing
- Consider aesthetics

What Must Not Be Done? Don't ..



- Exclude the public, design in a vacuum
- Damage U of L property
- Put more traffic through neighborhoods
- Overlook special interests
- Exclude Louisville Metro
- Be overly disruptive
- Fail to make things better
- Maintain the status quo ... do nothing

Purpose and Need Statement (Draft)



Purpose

- *Improve traffic flow, safety and access associated with ramps along I-65 from Crittenden Drive to St. Catherine Street.*

(The Purpose defines the transportation problem to be solved.)

Need

The Need provides data to support the problem statement which is the Purpose.



Several factors demonstrate the need for action:

- Poor traffic flow
- Too many ramps, too close together
- Insufficient acceleration, deceleration, merging and weaving distances
- Identified safety problems, adverse accident history (1137 from Jan. 2002 – April 2004)
- Inefficient and confusing access to and from I-65 and to and from major venues

Project Goals (Draft)



- Organize and simplify traffic flow associated with ramps, improving operational efficiency
- Improve access to and from I-65 in this area
- Improve access to and from major venues
- Respect local street traffic flow patterns and neighborhood character
- Improve geometrics and signing
- Reduce crashes

Next Steps



- Engage Project Advisory Committee
- Finalize Analysis of Alternatives
- Conduct Environmental Overview
- Hold Public Meeting
- Evaluate Any Additional Alternatives
- Provide Recommendations / Report
- Begin Preliminary Design

**Project Advisory Committee Meeting
I-65 Ramp Modification Project
Item No. 5-8102.00
University Club, University of Louisville
*June 16, 2005
10:00 AM***

AGENDA

Introductions

Meeting Objectives

**Project Review
Traffic Information**

Project Update / Summary of Public Input

Discussion of Alternate 4

General Discussion

Next Steps

PAC Meeting # 2 Agenda Talking Points

Introductions / Welcome – Greg Groves

Meeting Objectives – Bill

- Provide PAC an Update on Public Input
- Present / Review / Discuss Alternate 4
- Discuss Next Steps

Project Review – Bill

- Explain PAC Binder
 - Agenda
 - Exhibits
- Review Alternates 1, 2, & 3
 - Discuss similarities and 5 components
- Traffic information – **Diane**

Project Update / Summary of Public Input -- Bill

- Meetings (See Additional Meetings Tab; also info was previously e-mailed to PAC)
 - KFEC
 - Arthur Street business owners
 - Smoketown / Shelby Park
 - Also, had meeting with FHWA
- Note: We will e-mail you notes for Smoketown / Shelby Park and PAC Meeting # 2
- Results of this public input brought about Alternate 4

Discussion of Alternate 4 – Bill

- Explain 3 main changes
 - First Arthur Street exit remains open; Magnolia / Preston Ramps closed
 - Added secondary ramp to Jackson Street
 - Changes to KFEC ramps (Crittenden Drive/Central Avenue)
- Traffic information -- **Diane**
- Small Group review with group facilitators

General Discussion – Bill & Greg

- PAC thoughts on Alternate 4
- Narrowing of alternates

Next Steps -- Greg

PROJECT ADVISORY COMMITTEE MEETING NOTES
June 16, 2005

JEFFERSON COUNTY
I-65 RAMP MODIFICATION SCOPING STUDY
Item 5-8102.00

MEETING DATE: Thursday June 16, 2005

PARTICIPANTS:

Ananias Calvin	KYTC Central Office Div. of Design
Ken Dietz	University of Louisville
Bob Farley	Federal Highway Administration
Herb Fink	Old Louisville Neighborhood Council
Greg Groves	KYTC District 5
Todd Hood	TRIMARC
Gail Linville	St. Joseph's Neighborhood Association
Larry Owsley	University of Louisville
Tala Quinio	KYTC District 5
Ben Robertson	Gresham, Smith and Partners
Bill Seymour	Gresham, Smith and Partners
Jeremy Kubac	Gresham, Smith and Partners
Rob Fraizer	Parsons Brinckerhoff
Rick Storm	Louisville Metro DPW
Ken Brown	University of Louisville
Dave Taylor	Gresham, Smith and Partners
Bruce Traugher	Louisville Metro
Harold Tull	KIPDA
Harold Workman	Kentucky Fair & Exposition Center
Diane Zimmerman	Jordan, Jones and Goulding
Melissa L. Shuter	University of Louisville
Cathy Ward	St. Joseph's Neighborhood Association

Greg Groves welcomed everyone to the meeting and asked attendees to introduce themselves. Greg then explained the Committee's purpose -- functioning in an advisory role -- offering advice, direction and input to the KYTC for the project. Mr. Groves explained that so far we have experienced a widespread acceptance of the project and people want the project to start immediately. Greg introduced Bill Seymour of Gresham, Smith and Partners (GS&P).

Bill explained the highlights of Alternates 1, 2 and 3 and mentioned that Alternate 4 would be discussed in detail later.

1. Mr. Seymour asked Diane Zimmerman of JJG to explain the traffic analyses her firm has done for Alternates 1, 2 and 3. Diane explained the process of developing the model and indicated that an improvement to traffic conditions on

all alternates could be expected. Ms. Zimmerman explained that all proposed improvements would work, and that Alternate 1 yielded the best results of Alternates 1, 2 and 3 due to the expanse of the proposed ramp modifications.

2. Bill Seymour explained how the meeting with Smoketown/ Shelby Park had to be rescheduled until after this meeting; meeting minutes would be sent out accordingly to keep everyone informed.
3. Bill explained that Alternate 4 was developed after considering the comments obtained from neighborhood meetings, meetings with business owners along Arthur Street and a meeting with KFEC. The improvements contained in Alternate 4 were then presented, with emphasis on the areas that changed.
4. Herb Fink expressed that he was in favor of closing the Magnolia/Preston southbound on-ramp because he feels this would help reduce truck traffic in Old Louisville. Herb also mentioned that residents in Old Louisville would more than likely disagree with this idea. Herb also mentioned the owner from the Magnolia Bar and Grill has collected signatures of those in favor of keeping the on-ramp open.
5. Bruce Traughber of Louisville Metro questioned how the proposed on-ramp to northbound I-65 from KFEC would be an improvement.

It was explained that currently vehicles traveling on Crittenden Drive southbound do not have the option of getting to I-65 North. Also, there is a huge benefit to have the option of accessing I-65 North or South directly from the KFEC and eliminating the excess vehicles onto Crittenden drive. The third item improved with this ramp configuration is the traffic movement with Central avenue thus helping Churchill Downs and U of L.

Bruce also asked if the elimination of the I-65 southbound exit ramp onto Arthur Street at Gaulbert was in the traffic model

Diane explained that it was in the model.

Bruce asked about how many vehicles used the Magnolia/ Preston I-65 southbound on-ramp.

Diane explained that in the peak period 1100 vehicles per hour (vph) use this ramp and 800 of those are coming from Preston; this indicates that 300 vph are coming from the Old Louisville area.

Bruce explained that Louisville Metro wants to make Preston 2-way all the way to downtown.

6. A discussion occurred regarding the elimination of the Magnolia/ Preston on-ramp. If this ramp is closed, traffic could access southbound I-65 at the Oak Street on-ramp. Oak Street would need to be made two-way between Jackson and Floyd.

Bill Seymour explained that an “old rule of thumb” for left turns is if you have 300 or more per hour, dual left turn lanes will likely be needed. With 800 vph using the Preston portion of the southbound on-ramp, and if say half of these vehicles would need to turn left at the Oak street on-ramp,

dual left turn lanes could be needed. There was concern that it could be difficult to accommodate dual left turn lanes at this location.

Ken Dietz commented that he didn't think Oak Street should be made two-way any further than Preston due to the "S-turn" between Preston and Jackson.

Bruce Traugher thought the Magnolia ramp could be closed while still utilizing the Preston Street on-ramp.

It was explained that due to the short weave distance between the Magnolia/Preston on-ramp to SB I-65 and the first Arthur Street exit ramp from SB I-65, either the Magnolia/Preston on-ramp or the Arthur Street exit would need to be removed; leaving both in place does not address the weave/safety problem in this area.

7. Bill Seymour asked Diane to describe the traffic conditions with Alternate 4.

Diane explained the Alternate 4 traffic has the same improvements as the other alternates and probably works better at Crittenden Drive and Central Avenue.

8. Greg Groves mentioned that we may be catering too much to the five or seven business owners along Arthur Street at the expense of the Smoketown/Shelby Park neighborhoods.
9. Greg Groves was asked how the Kentucky Transportation Cabinet would handle the impacts to the businesses along Arthur Street if the scenario shown on Alternate 1 were built. This scenario would close the first exit ramp from SB I-65 to Arthur Street and prevent direct right-turn access to Gaulbert, Lee, and Bloom.

Greg explained that he couldn't say for sure how the Right of Way Division would handle this situation, but as a general rule as long as we maintain reasonable access, no damages would be considered.

10. Bill Seymour suggested that we break into small groups where the PAC could review Alternate 4 more closely. Gresham, Smith and Partners' employees would help answer any questions or concerns. The PAC divided into four small groups for review and discussion and later returned to the full committee.
11. Harold Workman of KFEC was concerned with Central Avenue being extended and its traffic intermingling with event traffic. Harold felt the direct connection to I-65 both northbound and south would be a great advantage, and the increase in traffic being routed through the single intersection near Gate 4 could probably be handled. Harold felt that Alternate 4 was much better than the other alternates.

Greg Groves mentioned we may be able to look into a grade separation for the vehicles coming from Central Avenue or Crittenden drive if they were to cause a traffic problem.

12. Herb Fink asked about signaling Hahn Street at Eastern Parkway.

Since Hahn doesn't line up with the Arthur street frontage road and due to the fact that Hahn Street is too close to the intersection with Arthur, it was not thought prudent to signalize this intersection.

Larry Owsley and Ken Dietz from U of L understand the advantage of redoing the southbound on-ramp to I-65 and would rather have this improvement instead of Hahn Street. U of L still wants to see Hahn Street left open for student traffic but is OK if no improvements are made to Hahn Street itself.

13. Bruce Traughber felt that Smoketown/Shelby Park, and St. Joseph's neighborhood would probably want Preston Street reconnected at the CSX railroad. He feels we should at least take a "quick look" at making this connection.
14. Bruce still wants to see the project split into phases due to the overall project cost.
15. Cathy Ward from the St. Joseph's neighborhood association hoped that pedestrian movements would be taken into consideration while designing this project. She pointed out that Alternate 4 could improve pedestrian movement along the east side of Crittenden Drive.
16. A question was raised regarding the possible elimination of any alternates -- in particular Alternates 2 and 3 -- and keeping only Alternates 1 and 4 for further consideration.

There was agreement within the PAC to eliminate Alternates 2 and 3.

From discussion, PAC members preferred some components from Alternate 1 and some from Alternate 4. Greg Groves and Bill Seymour attempted to capture and summarize PAC comments:

- ***Eliminate Alternates 2 and 3.***
 - ***Blend the best components from Alternates 1 and 4. From discussion, the PAC suggested that Alternate 1 be used but with the KFEC component from Alternate 4 (with variation); the variation would consider a grade separation near Gate 4 for the Central Avenue connection to SB I-65. This connection carries traffic from Central Avenue and Crittenden Drive to Gate 4 and to the SB I-65 entrance ramp.***
 - ***As a part of Alternate 1, consider closing only the Magnolia on-ramp to SB I-65, leaving the Preston on-ramp open (since the Arthur Street exit would be moved farther south).***
 - ***Review the possibility of connecting Preston at the CSX Railroad, most likely with a grade separation.***
 - ***Obtain Smoketown/Shelby Park input regarding the Preston on-ramp to SB I-65, the connection of Preston Street at CSX and the NB ramp connection to Jackson Street.***
17. Herb wanted to point out that Old Louisville has made a tremendous move in the correct direction to improve their neighborhood and they don't want to see anything impede on their progress. He feels we need to be very careful not to introduce more traffic, especially trucks, onto the residential streets.

18. Melissa L. Shuter wondered if the Preston Street connection was made across the CSX railroad and the Alternate 4 scenario was used at Arthur Street would this help alleviate the Smoketown/Shelby Park problems.

If the Preston on-ramp to I-65 were closed, the Preston Street connection would allow this neighborhood the option of traveling south to enter I-65 at Eastern Parkway. The Oak Street on-ramp would also be available. Further review and input on this would be necessary.

Subsequent discussion: Fire Station is located on Preston near the on-ramp to SB I-65; will need to consider EMS input regarding any possible ramp closure in this area.

Appendix C

OTHER MEETING NOTES

Memo

To: Attendees

From: Jonathan Haycraft

Date: 8/05/2003

Re: I-65 Jefferson County

Meeting with KFEC about I-65 improvements.

A Meeting was held on July 23, 2003. The following persons were in attendance:

Harold Workman	KFEC
Mike Sausman	KFEC
Bill Seymour	Gresham, Smith and Partners
Dave Taylor	Gresham, Smith and Partners
Jonathan Haycraft	Gresham, Smith and Partners

The purpose of the meeting was to discuss KFEC's future development plans across from Central Avenue along Crittenden Drive. The following items were discussed:

1. KFEC has no future plans for they're property in that area. They do have a proposal to turn the old Cardinal football stadium into an arena with a 3000 car parking garage that would wrap around the outside of the arena.
2. KFEC has plans in the future to buy the land next to it from the school district, perhaps for storage of maintenance equipment, etc.
3. The 60" sewer under I-65 at Bradley Avenue was discussed and plans were requested. Plans of the fairgrounds and the new hotel development at said location were also requested and received.
4. KFEC voiced a request for an on ramp to I-65 South at this location as well.

MEETING NOTES

JEFFERSON COUNTY I-65

ITEM NO. 5-8102.00

GS&P Project No. 22522.00

MEETING DATE: February 11, 2005

PARTICIPANTS: Greg Groves – KYTC D-5 Preconstruction
Tala Quino – KYTC D-5 Design
Jason Richardson – KYTC D-5 Design
Shawn Dikes – Parsons Brinkerhoff
Diane Zimmerman – Jordan Jones and Goulding
Gabi Istre – Jordan Jones and Goulding
Paul Slone – Jordan Jones and Goulding
Bill Seymour – Gresham, Smith and Partners
Tony Lewis – Gresham, Smith and Partners
Dave Taylor - Gresham, Smith and Partners

DISCUSSION: RESULTS OF ALTERNATIVE 1 TRAFFIC ANALYSIS,
ALTERNATIVES 2 AND 3

1. Greg Groves opened the meeting with a discussion of the project history and introduced Shawn Dikes.
2. Shawn Dikes discussed Parsons Brinkerhoff's current project to evaluate University of Louisville pedestrian traffic across Eastern Parkway. All parties agreed to keep one another informed of project developments and recommendations and PB requested to be included in the Advisory Team. JJ&G will be responsible for incorporating possible recommendations by PB into their modeling.
3. Bill Seymour continued the discussion with work done to date and review of discussions with JJ&G regarding traffic analysis of Alternative 1.
4. Tony Lewis and Paul Slone discussed problems with the Alternative 1 traffic volumes submitted from JJ&G to GS&P on November 30, 2004 and the CORSIM model submitted from JJ&G to GS&P on January 4, 2005.
5. JJ&G expressed confidence in the results of the revised Alternative 1 Traffic Analysis submitted from JJ&G to GS&P on January 21, 2005. These results

indicate that, “There are no obvious long queues that have trouble clearing on the surface street network. There are no problems with queuing on the interstate ramps. The interstate itself moves freely without backups.” The full narrative summary of this analysis is attached.

6. Tony Lewis agreed that the reporting of results on future alternatives can simply be a narrative summary of problem areas, apparent causes, and possible solutions. It was also agreed that, if necessary, GS&P could look at the CORSIM models with JJ&G to discuss future alternatives.
7. Dave Taylor presented Alternatives 2 and 3
 - Alternative 2 – Same as Alternative 1 except:
 - The ramps to and from the fairgrounds proposed in Alternative 1 are not included,
 - The ramp from Arthur at Eastern to I-65 southbound proposed in Alternative 1 is not included,
 - The existing ramps from Crittenden to I-65 southbound are left as existing,
 - Hahn is re-routed to intersect Eastern opposite Arthur,
 - The existing ramp from Arthur at Warnock to I-65 southbound is left as existing, and
 - The acceleration lane from Arthur at Warnock will be lengthened to connect with the deceleration lane to Crittenden on I-65 southbound.
 - Alternative 3 – Same as Alternative 1 except:
 - The ramps to and from the fairgrounds proposed in Alternative 1 are not included,
 - The existing ramps from Crittenden to I-65 southbound are reconstructed to accommodate the ramp from Arthur at Eastern, and
 - The bridge over Bradley (KFEC maintenance / equipment access) is widened.
8. Dave Taylor agreed to present these alternatives graphically on a map to Gabi Istre via mail by February 14, 2005.
9. JJ&G agreed to have analysis of Alternatives 2 and 3 completed and narrative summaries of results to GS&P by February 25, 2005.
10. Dave Taylor asked about the status of the Environmental Overview and Greg Groves indicated that Kevin Dant would need to address that question.

11. An Advisory Committee Meeting was set for March 8, 2005 at 2:00. GS&P will set up this meeting ASAP.
12. KYTC D-5 agreed to complete Right of Way and Utility Cost estimates.
13. Dave Taylor will revise and submit the project schedule. The final scoping study accepted date of July 1, 2005 is to remain unchanged.

This represents our understanding of the items discussed at this meeting. If you have any questions or comments concerning any of the information contained herein, please contact me.

Prepared by: Tony Lewis
Project Engineer

wms

Enclosure – Alternative 1 Traffic Analysis Results from JJ&G

Copy Participants
Greg Groves – KYTC D-5 Preconstruction
Tala Quino – KYTC D-5 Design
Jason Richardson – KYTC D-5 Design
Shawn Dikes – Parsons Brinkerhoff
Diane Zimmerman – Jordan Jones and Goulding
Gabi Istre – Jordan Jones and Goulding
Paul Slone – Jordan Jones and Goulding
Bill Seymour – Gresham, Smith and Partners
Tony Lewis – Gresham, Smith and Partners
Dave Taylor - Gresham, Smith and Partners

Alternative 1 Traffic Analysis Results from JJ&G

2003 Existing Models

Worst Intersection LOS

AM Peak: LOS C at Crittenden Dr & Central Ave

PM Peak: LOS C at Crittenden Dr & Central Ave

Worst Intersection Approach LOS

AM Peak: LOS D at Crittenden Dr & Eastern Pkwy EB approach

PM Peak: LOS D at Crittenden Dr & Eastern Pkwy EB approach

Longest Queue

AM Peak: 220' on WB approach of I-65 SB on ramp & Arthur St & Warnock St

PM Peak: 260' on EB approach of Crittenden & Eastern Pkwy

2015 E+C Models

Worst Intersection LOS

AM Peak: LOS C at Crittenden Dr & Warnock St

PM Peak: LOS D at Crittenden Dr & Central Ave

Worst Intersection Approach LOS

AM Peak: LOS D at Crittenden Dr & Central Ave EB and WB approaches

PM Peak: LOS D at Crittenden Dr & Central Ave EB and WB approaches

Longest Queue

AM Peak: 360' on WB approach of I-65 NB ramps & Warnock St

PM Peak: 400' on EB approach of I-65 SB on ramp & Arthur St & Warnock St

2015 GSP Alt 1 Models

Worst Intersection LOS

AM Peak: LOS C at Crittenden Dr & Eastern Pkwy

PM Peak: LOS C at Crittenden Dr & Eastern Pkwy

Worst Intersection Approach LOS

AM Peak: LOS D at Crittenden Dr & Central Ave EB approach

PM Peak: LOS D at Crittenden Dr & Central Ave WB approach

Longest Queue

AM Peak: 340' on WB approach of I-65 NB ramps & Warnock St

PM Peak: 340' on WB approach of I-65 NB ramps & Warnock St
360' on SB approach of Floyd St & Central Ave

2015 E+C Model Observations

AM Peak:

The EB approach at Crittenden Dr and Central Ave accumulates a lengthy left turn queue, but appears to clear each cycle. There are no visible backups on the interstate ramps or the interstate itself.

PM Peak:

The EB approach at Crittenden Dr and Central Ave accumulates a lengthy left turn that does not clear each cycle starting halfway through the simulation. There is still available space on Central Ave to store these vehicles. The interstate ramps adequately accommodate any queues that form on the ramps.

2015 GSP Alt 1 Model Observations

AM Peak:

There are no obvious long queues that have trouble clearing on the surface street network. There are no problems with queuing on the interstate ramps. The interstate itself moves freely without backups.

PM Peak:

Same comments as mentioned for the AM Peak.

Old Louisville Neighborhood Council
April 21, 2005

Meeting Notes

JEFFERSON COUNTY
I-65 RAMP MODIFICATION SCOPING STUDY
Item 5-8102.00

A sign-up sheet for attendees was circulated. Participants from Old Louisville, KYTC and GS&P were:

Tala Quinio	KYTC D-5
Kevin Dant	KYTC D-5
Herb Fink	Old Louisville Property Improvement Committee
Charles Anderson	President, Old Louisville Neighborhood Council
Bill Seymour	Gresham, Smith & Partners
Dave Taylor	Gresham, Smith & Partners
Ben Robertson	Gresham, Smith & Partners
Jeremy Kubac	Gresham, Smith & Partners

Herb Fink welcomed everyone to the meeting and introduced attending members from the KYTC and GS&P. He then asked the attendees from various surrounding neighborhoods to introduce themselves. The introduction was followed by a brief explanation of the project.

Bill Seymour then gave a brief project history that highlighted the evolution of the project from its initial advertisement in 2002 to the present day. He then made a Power Point presentation that summarized results from key person interviews, including issues and concerns, problems, problem locations, purpose and need and project goals.

This was followed by a brief question and answer session during which a number of the residents voiced concerns and posed questions about the project. A DVD was then shown that explained the project and helped the attendees visualize the project concepts through renderings. At the conclusion of the DVD, the floor was once again opened for questions and comments.

The following is a list of comments and questions:

1. There were several comments requesting the project be extended to include modifications to the St. Catherine Street ramps.
2. An attendee asked if the flyover ramp from northbound I-65 to the KFEC/Central Ave. and the ramp from the KFEC/Central Ave. to southbound I-65 have been conceived in order to accommodate a new arena at the Fair and Expo Center. It was explained that these ramp concepts were developed prior to the new arena discussions for Louisville. It was acknowledged, however, that the new ramp concepts could be helpful if the arena were eventually located at KFEC.

3. An attendee suggested that reduced speed signs should be placed on the Jackson Street off-ramp. The attendee also voiced concern over truck traffic through the neighborhoods.
4. An attendee suggested that truck traffic on 7th Street south of Hill Street be rerouted to Cardinal Boulevard/Brandeis Street. During discussion, the point was made that there was no access to north bound I-65 from Brandeis. Charles Anderson mentioned that the University of Louisville would not allow truck traffic to be routed to Cardinal Boulevard.
5. An attendee asked what part of the project addressed truck traffic as mentioned in the slide show. In response, Bill Seymour explained that dealing with truck traffic in the neighborhoods was not within the scope of the project. However, the intention of the project is to avoid doing anything that would increase the truck traffic in the neighborhoods. It is also the intention of the project to make all improvements compatible with any action taken by the city to reduce truck traffic.
6. An attendee commented that a holistic solution to the truck traffic problem would include finishing the extension of 9th Street.
7. An attendee asked why there was no access from Preston St./St. Stephens Cemetery area to the Shelby Park Neighborhood. After a discussion, it was noted that currently, north bound traffic on Preston St. gets on I-65 and then immediately gets off at Jackson Street in order to cross the CSX railroad. Through further discussion, one idea suggested was to allow traffic on the proposed Preston Street on ramp to exit to Jackson Street after crossing the railroad. This would keep the traffic off the interstate. Another idea mentioned was to run Preston Street under the railroad. Dave Taylor explained how problematic viaducts can be and the attendees agreed.
8. An attendee expressed displeasure at the thought of closing the off ramp from northbound I-65 to eastbound Eastern Parkway. Mr. Seymour confirmed the proposed movement from northbound I-65 to eastbound Eastern Parkway would require traffic to go east on Warnock and then south on Crittenden and turn left on Eastern Parkway. He then agreed with the concern over this movement, but mentioned that the traffic study had indicated that it would work.
9. An attendee commented that the flyover ramp from north bound I-65 to the KFEC would add to noise problems in the surrounding neighborhoods. The attendee then suggested that the ramp go under I-65. Dave Taylor explained that the proximity of the Southern railroad would make it difficult, if not impossible to take an off-ramp under I-65 in that area.
10. An attendee commented that the study should look into a more appropriate speed limit for I-65.
11. An attendee pointed out that many trucks taking the Jackson Street off-ramp make the hard turn to the right to Preston Street and then another right to Burnett Street. The trucks then have to turn left on 1st or 3rd Street. It is often difficult for trucks to make these turns. The attendee suggested that the “hook” off the main ramp be closed to prevent trucks from taking that route.
12. An attendee suggested putting the concepts on the internet for public viewing.

13. An attendee commented that preventing Arthur Street traffic from turning west north of Brandeis Street would prevent her from taking her usual route to Cardinal Blvd. Mr. Seymour explained that she would still be able to reach Cardinal/Brandeis from Arthur. She then pointed out that it would help limit traffic around Manual High School.
14. Herb Fink commented that limiting turns from Arthur Street would hurt the businesses in that area.
15. An attendee commented that poor signing for I-65 on Crittenden Drive caused people to end up at Cracker Barrel.
16. An attendee asked why Warnock was used for traffic to and from I-65 instead of Eastern Parkway. It was explained that the reverse curve on Eastern Parkway would make it difficult to use. Furthermore, using Warnock allowed the north bound off ramp to be extended. Extending the off ramp to Eastern Parkway would not be feasible because the bridges over the Southern Railroad and Crittenden Drive could not be widened because of clearance issues.
17. Some attendees asked about the funding and time frame of the project. They were informed that the current funding is limited to the scoping study. Additional project phases and funding will be dependent on state budget considerations as the project evolves.



Key Person Interviews

- One on one talks with community leaders and key stakeholders
- Provide opportunity for public input
- Help identify issues, concerns, suggestions, much more
- Enhance project awareness, build relationships and trust

Purpose of Interviews

- Obtain Input / Involve Key Stakeholders in Helping to Define:
 - Project Scope
 - Problems and Problem Locations
 - Issues and Concerns
 - Purpose and Need
 - Project Goals

I-65 Ramp Modification Project Louisville, KY

Persons Interviewed

• Harold Workman	KFEC
• Mark Adams, Rick Storm	Louisville Metro DPW
• George Melton	Councilman
• Harold Tull, Phil Williams	KIPDA
• Charles Raymer	LSIORBP
• George Unseld	Councilman
• Karen Scott	TARC
• Gail Linville, Cathy Ward	St. Joseph's Area Assoc.
• Larry Owsley, Ken Dietz	U of L
• Dan Johnson	Councilman
• Bruce Traugher	Louisville Metro
• Herb Fink	Old Lou. Neigh. Assoc.
• Richard Caple	JCPS
• Jack Nevin, Todd Hood	TRIMARC
• David Sweazy	Churchill Downs
• John Lee, Susan Biasioli	JCPS

Key Person Interview Guide



- What in your opinion should be the purpose and need of this project?
 - What should be the project goals?
- What do you see as the main problems that cause this project to be necessary?
 - Could you identify specific problem locations regarding traffic flow and safety?
- What do you see as project issues and concerns?
- What must be done to make the project successful?
- What must not be done ... what should be avoided?
- What environmental concerns are you aware of?
- Is there any other input that you would like to share?
 - Anything unusual regarding the project?

General Problems



- Too many access points; too many ramps
- Short exits & decels, inadequate stacking
- Acceleration, deceleration, merging weaving problems
- Come off, get lost; how do I get there from here; signs
- Traffic flow in and out of U of L; snarls associated with attractors
- Safety, accidents

Top 10 Problem Locations



- Warnock area at NB I-65 ramps & Sav-A-Step
- Second SB exit to Arthur Street
- Eastern Pkwy NB exit (then left to NB Critt.)
- Ramp to NB I-65 from Preston and weave
- First SB exit to Arthur Street
- Short weave SB between Eastern Pkwy & Critt.
- On-ramp to I-65 SB from Arthur St. near Lee St.
- Lack of access to Crittenden Dr. from NB I-65
- Weave between Floyd/Preston SB on-ramp and exit to Arthur Street
- Brandeis Avenue at Arthur Street

Main Issues and Concerns



- Access – interstate, attractions, local
- Neighborhood
- Traffic flow and safety
- Project coordination
- Surface street traffic patterns
- Trucks
- Roadway geometric standards
- Impacts, inconveniences
- Environmental
- Other

To Make Project Successful



- Include extensive public involvement
- Improve access
- Improve geometric deficiencies
- Secure funding
- Keep community in mind
- Assure good coordination
- Improve signing
- Consider aesthetics

What Must Not Be Done? Don't ..



- Exclude the public, design in a vacuum
- Damage U of L property
- Put more traffic through neighborhoods
- Overlook special interests
- Exclude Louisville Metro
- Be overly disruptive
- Fail to make things better
- Maintain the status quo ... do nothing

Purpose and Need Statement



Purpose

- *Improve traffic flow, safety and access associated with ramps along I-65 from Crittenden Drive to St. Catherine Street.*

(The Purpose defines the transportation problem to be solved.)

Need

The Need provides data to support the problem statement which is the Purpose.



Several factors demonstrate the need for action:

- Poor traffic flow
- Too many ramps, too close together
- Insufficient acceleration, deceleration, merging and weaving distances
- Identified safety problems, adverse accident history (1137 from Jan. 2002 – April 2004)
- Inefficient and confusing access to and from I-65 and to and from major venues

Project Goals



- Organize and simplify traffic flow associated with ramps, improving operational efficiency
- Improve access to and from I-65 in this area
- Improve access to and from major venues
- Respect current and planned local street traffic flow patterns and neighborhood character
- Coordinate with area master plans
- Improve geometrics
- Improve signing
- Reduce crashes
- Develop phasing and scheduling compatible with funding

Next Steps



- Continue working with PAC
- Finalize Analysis of Alternatives
- Conduct Environmental Overview
- Hold Public Meeting
- Evaluate Any Additional Alternatives
- Provide Recommendations / Report
- Begin Preliminary Design

Saint Joseph's Area Association Meeting
May 9, 2005

JEFFERSON COUNTY
I-65 RAMP MODIFICATION SCOPING STUDY
Item 5-8102.00

MEETING DATE: Monday May 9, 2005

PARTICIPANTS:

Gail Linville	Saint Joseph's Neighborhood
Rich Case	Saint Joseph's Neighborhood
Kenneth Case	Saint Joseph's Neighborhood
Mike Zanone	Saint Joseph's Neighborhood
John Schnell	Saint Joseph's Neighborhood
Linda Klotter	Saint Joseph's Neighborhood
Geneva L. Blankenship	Saint Joseph's Neighborhood
Florine Langley	Saint Joseph's Neighborhood
Claude Sailer	Saint Joseph's Neighborhood
Tala Quinio	KYTC District 5
Elizabeth Faust	Saint Joseph's Neighborhood
Helen Spalding	Saint Joseph's Neighborhood
Ruth Gerlack	Saint Joseph's Neighborhood
Lillian Lile	Saint Joseph's Neighborhood
Kristen Byrd	Saint Joseph's Neighborhood
Ruth Roland	Saint Joseph's Neighborhood
Jane Smith	Saint Joseph's Neighborhood
Ernie Smith	Saint Joseph's Neighborhood
Andrea Clifford	KYTC District 5
Bill Seymour	Gresham, Smith and Partners
Dave Taylor	Gresham, Smith and Partners
Jeremy Kubac	Gresham, Smith and Partners
Ben Robertson	Gresham, Smith and Partners

Gail Linville welcomed everyone to the meeting and discussed a few neighborhood specific items before introducing Bill Seymour with Gresham, Smith and Partners (GS&P). Mr. Seymour gave a brief introduction to the other GS&P employees and then proceeded with a power point presentation followed by a DVD synopsis of the proposed ramp improvements. The power point presentation summarized the Key Person Interviews that had been conducted for the project and defined the project purpose & need along with the overall goals of the project. Bill also introduced Tala Quinio, Project Manager, and Andrea Clifford, Public Information Officer, both from the Kentucky Transportation Cabinet, District 5. This was followed by a question and answer session and an opportunity for participants to visit the display boards and ask one-on-one questions. The following is a summary of the questions and responses.

1. Will the improvements that have been proposed to the existing Warnock exit still be completed or will this future work prevent any interim improvements from being made.
 - a. **The proposed improvements to Warnock is a Metro Louisville project and is independent of the proposed future I-65 ramp improvements even though coordination has existed between the two projects.**
 - b. **Louisville Metro is also looking at adding a signal to the intersection of Warnock and Crittenden Drive which is also independent of this project.**
 - c. **The schedule for the interim Warnock improvements is the responsibility of Louisville Metro and is completely unrelated to any schedules that may be discussed for the I-65 ramp improvements.**
 - d. **Mr. Seymour pointed out that the FHWA has reviewed the Louisville Metro interim project, and will require that detectors be included on the ramp to prevent traffic from backing onto the interstate due to a proposed signal at the ramp's intersection with Warnock.**
2. Will you still be able to access Preston via Brandeis Avenue once the proposed ramp improvements are completed?
 - a. **Yes. Also, the proposed improvements would remove the existing guardrail on Brandeis under I-65 and allow for a standard intersection at Arthur Street.**
3. Have any thoughts been given to making Brandeis a two-way street between Bradley and Preston? Making this street two-way could provide a smooth connection between Preston and the University of Louisville & Manual High School.
 - b. **This could be a good idea that is certainly worth exploring but also may be difficult due to the narrow lane width and the on street parking. This would need to be coordinated with, and ultimately a responsible of, Louisville Metro.**
 - c. **It was discussed that residents along Brandeis actually park off alleys at the rear of each lot whereas the on street parking was typically used by U of L commuter students.**
 - d. **It was also mentioned that majority of the residences along Brandeis in this area have become rental property for U of L students and thus a more direct connection to the University would likely be welcomed.**
4. Could the offset of Warnock at Crittenden drive be realigned to provide a smooth connection to the University from Preston if Brandeis couldn't be made two-way?
 - e. **We looked at improving this intersection but felt the amount of property damage would be a major consideration, and perhaps**

make it difficult to justify. Again, this would also be a Louisville Metro responsibility.

5. How many properties are involved with the I-65 northbound exit ramp onto Warnock?
 - f. **Dave Taylor mentioned the Apartments and two houses along Fort Street would be taken but the church should stay with the use of a retaining wall.**
 - g. **Also, Fort street would no longer connect to Warnock and would end with a cul-de-sac.**
6. Will Arthur Street remain one-way and what will happen with the on street parking near the tennis center?
 - h. **Yes, Arthur Street will be widened to three lanes and will remain a one-way local street.**
 - i. **We are not sure if the parking will remain since we really aren't to that point in the project.**
7. It looks like this overall plan would really improve the University of Louisville campus.
8. The Southbound I-65 exit ramp onto Crittenden drive causes a safety problem with the high speed exit and the immediate weave to turn into KFEC. It is also very difficult and very dangerous to try and turn out of the Burger King or the adjacent gas station parking lot. It seems like it would be better to have a direct connection to KFEC.
 - j. **We understand this is a safety concern and we can certainly see if we can improve this exit maneuver.**
9. Has anyone considered making the East-West streets connecting Bradley to Crittenden Drive alternating one-way streets?
 - k. **This really is outside the scope of this project but could be a good idea and certainly worth looking into.**
10. Gail Linville commented that she would like to see this project get started as soon as possible.

I-65 Ramp Modification Project Additional Meeting Notes

Meeting with Harold Workman, Mike Sausman and Larry Pfau, KFEC May 16, 2005

This meeting was requested by Harold Workman. Also in attendance were Tala Quinio, Dave Taylor and Bill Seymour. KFEC has identified some concerns with traffic flow regarding a possible improvement concept in the vicinity of Gate 4. These concerns were summarized as the following:

- 1) The mixing of traffic, into Gate 4 traffic, that doesn't want to come here. NB I-65 traffic exiting at a possible flyover to Central Avenue (and the reverse movement – traffic from Central Avenue to SB I-65) would all go through the signal at the proposed Gate 4 to the KFEC.
- 2) 90 degree turn at the proposed signal at Gate 4.
- 3) Short distance at Gate 4 for stacking. The concern was that traffic could stack back into the Fair/Expo Center, stack back toward Central Avenue or stack to the south on the ramp, perhaps even backing up onto NB I-65.

Considerable discussion was held regarding these concerns. The possibility of separating traffic on this ramp – involving separating traffic bound for Central Avenue from traffic bound for Gate 4. This could possibly be done by an exclusive (and barrier-separated) lane along the ramp for the NB movement toward Central Avenue, and a grade separation for the SB movement from Central Avenue to SB I-65.

KFEC favors having direct access from their property to SB I-65 similar in concept to that shown on the scoping study schematic. There was discussion of possibly eliminating direct access to KFEC from NB I-65 as a way of minimizing Item 3 above. KFEC feels this would be difficult to do from a public relations viewpoint.

There was also concern that, even with an exclusive or bypass lane for traffic going from NB I-65 to Central Avenue, traffic exiting from NB I-65 toward Gate 4 would block access to the exclusive lane due to queueing.

It was noted that this study is a scoping study and that some of these concerns might not be fully addressed until a future phase of the project. Discussion was held regarding traffic information KFEC has available, as well as the possibility of having JJG or KIPDA get involved in some of the traffic analyses. KFEC mentioned that it plans a traffic study of its own in the near future in and around the Fair/Expo Center.

Meeting with Bob Grantz, Cox's Smokers' Outlet May 16, 2005

Mr. Bob Grantz, Manager of Cox's Smokers' Outlet, viewed the schematic with Tala Quinio, Dave Taylor and Bill Seymour. Mr. Grantz is against the concept of closing the first SB exit ramp from I-65 to Arthur Street at Gaulbert Avenue. He said he understood what the proposal was trying to accomplish, but he was against it. He would rather

eliminate the Magnolia/Preston on-ramp to SB I-65, leave in place the first exit ramp from SB I-65 to Arthur Street, and close or make one-way Gaulbert Avenue. He mentioned that most of their business comes from Indiana and likely returns via Arthur, Brandeis and Preston to NB I-65. He felt the proposal would put him out of business. There was a comment that the route for the TARC bus that exits at the first Arthur Street exit and then turns right onto Gaulbert Avenue should be changed. Mr. Grantz asked that the owner of the business, his brother Bill Grantz, be contacted.

Mr. Bill Grantz was contacted later the same afternoon by telephone. He said he was totally against any changes to the Arthur Street exit. He said that 70% of their business comes from Indiana. He mentioned that there was a lot of revenue generated in this area, this corridor, and that they (business owners) pay a lot of taxes. Mr. Grantz said he was against any proposal that would create any extra effort getting customers to his business. He mentioned that with all the competition, he must make it as easy and convenient for people to get to his stores as possible. He asked who else he could express his concerns to. He was told Barry Sanders, Greg Groves and Tala Quinio at the KYTC. He will follow-up with a letter to KYTC expressing his position.

Meeting with Ken Singer, Expressway Liquors May 17, 2005

Dave Taylor and Bill Seymour met with Mr. Singer at his business on Lee Street. A brief explanation of the project was provided and it was explained that everything was very conceptual at this time. Mr. Singer stated that he prefers closing the Magnolia/Preston Street on-ramp to SB I-65 instead of closing the first SB exit to Arthur Street. He feels this would solve the problem of merging and weaving between the on-ramp from Magnolia/Preston and the off-ramp at Arthur. He definitely prefers leaving open the first exit ramp to Arthur from SB I-65. He mentioned that the hotels advise people NB on I-65 to exit at Jackson Street, loop under I-65, go north on Floyd to enter I-65 SB at the Magnolia on-ramp and then exit at the first Arthur Street exit at Gaulbert. He said traffic could go to the Oak Street on-ramp to I-65 SB if the Magnolia/Preston on-ramp were closed.

He said NB I-65 traffic going to the businesses on Arthur Street can exit at either Eastern Parkway or Warnock and go to Floyd Street to access the area. Or, he felt Arthur Street could be made two-way to provide access to the businesses. The two-way section of Arthur Street could be between Warnock and Bloom or Lee Street. A traffic signal could be installed at Lee Street or Bloom Street. He wants to leave the on-ramp to I-65 SB near Lee Street in place, with improvement to (extensive of) the acceleration lane. He acknowledged a bus exiting at the Arthur Street exit ramp near Gaulbert and then slowing or coming to a dead stop to turn right onto Gaulbert was a problem; he thought buses should be re-routed, not allowed to turn right onto Gaulbert. He felt a feeder ramp to Gaulbert from the exit ramp would work, i.e., he proposed a lane from the ramp that would drop onto Gaulbert. He said that when a SB vehicle exiting onto Arthur swerves to avoid a bus turning onto Gaulbert, the vehicle is hit by another SB exiting vehicle going straight onto Arthur Street. He said you could stop the two-way on Arthur either at Bloom or Lee Street, probably Bloom, with a traffic signal at Bloom or Lee. He mentioned the possibility of the need for a new connector between Lee and Gaulbert behind the motel.

Mr. Singer feels the second SB off-ramp to Arthur is not needed, and described that ramp as a pain, as dangerous. And, he said, "I understand what you're trying to accomplish". He also mentioned that it might be a problem making Arthur Street two-way. He reiterated he would like to see the entrance ramp to SB I-65 near Lee Street made safer (extend the merge distance) and leave it open. He again mentioned the ramp to SB I-65 from Oak Street, and that Oak Street is two-way in that area. He would like to see left turns onto the ramp to SB I-65 from Oak Street. He mentioned that an accident near the entrance ramp from Magnolia/Preston to SB I-65 can keep you from getting to the first Arthur Street SB exit near Gaulbert. He would like to see a third lane on Arthur Street from Gaulbert to Lee Street.

Meeting with Phillip Campbell, Owner Harley-Davidson May 17, 2005

Dave Taylor and Bill Seymour met with Mr. Campbell and began the meeting by explaining the accident situation in this area, and the purpose and need for the project. It was stressed that everything was very conceptual at this time. Mr. Campbell stated that he doesn't like it; the railroad track makes this a useless piece of property. He said he doesn't think the exit ramp (from SB I-65 to Arthur Street near Gaulbert) is an issue ... outside (of the situation at) Gaulbert, which is an issue. He feels a third lane on the ramp – a turn lane onto Gaulbert – would be beneficial. He wondered what the traffic count is on the ramp (first SB ramp to Arthur Street). He said there are tons of trucks (that use the exit ramp), people stop and ask directions, and that he gets a large amount of trade off the interstate. He said closing the ramp (first exit ramp from SB I-65 to Arthur Street) you might as well consider the whole area obsolete.

He felt that police on the interstate -- policing of the interstate -- would help to control speeds. When an event is going on, a lot of traffic uses the motels and everything else down through here. He also said making trucks use the fast lane would be a hell of a help. He mentioned that he didn't know how many people used the Magnolia/Preston on-ramp, but if you could get the Magnolia/ Preston on-ramp out – and allow for that traffic to join I-65 SB either north or south of where it currently does -- it would be good. He said he thought the BP gas station would be out of business in a minute (if the first SB exit ramp to Arthur Street were closed), and that it does a damn good business, probably one of the best in town. He further thought that closing this ramp would close the motel, and that he knew it would affect his business. He said that 35% of his business is from out-of-town. He bought this property because of the exposure and easy access, and that he doesn't want to think about the ramp being closed. He said too many people use this ramp, and that he would be in the Mayor's Office about this. He mentioned that the city gets a bunch of revenue off these properties (along Arthur Street). He also said he had been at this location for 10 years and he has never seen a cop giving a ticket (on I-65 for speeding); he acknowledged it would be difficult to pull anyone over in this area. He believes that slowing drivers down would stop most accidents; and he thinks there should be education to teach people how to merge.

Meeting with Lee Stinnett and another manager, BP (Arthur Street and Lee Street) May 19, 2005

Dave Taylor and Jeremy Kubac briefly introduced the project. A display board was shown detailing crash data for the project area. Another display board was then shown which depicted possible ramp modifications. The gentlemen from BP immediately

pointed out that they would not like to see the off ramp to Arthur Street at Gaulbert Ave. closed. Alternatively, they suggested closing the Magnolia/Preston on ramp to SB I-65 in order to extend the existing Arthur Street off ramp. They added that they would not be opposed to closing off Gaulbert from the ramp as well as closing the on ramp between Lee and Bloom. Part of their rationale was that there are many businesses along Arthur Street that get traffic from I-65 via Lee Street and Bloom Street. They pointed out that making that traffic go to Brandeis and then back up Floyd would add more traffic to UofL. Mr. Kubac mentioned that the Old Louisville residents may not want to lose the Magnolia/Preston on ramp. The gentlemen from BP replied that they would only have to go three blocks north to Oak Street. After more discussion of extending the Arthur Street off ramp, one of the gentlemen commented that the Arthur Street on ramp could possibly be extended along the fill slope between I-65 and Arthur Street. There was also discussion about current safety issues. The gentlemen pointed out that the many cars drive at highway speeds along Arthur Street because the only speed limit sign is near Lee Street. There is also a mainline speed limit sign that is too close to the Arthur Street off ramp. The conversation came to a close after the gentlemen mentioned that the proposed ramp closure would hurt their business which is currently the busiest BP station in Kentucky and Indiana.

Meeting with Pam Mitchell, Days Inn May 19, 2005

Dave Taylor and Jeremy Kubac briefly introduced the project. A display board was shown detailing crash data for the project area. Another display board was then shown which depicted possible ramp modifications. Ms. Mitchell thought that closing the Arthur Street off ramp was a good idea. She mentioned that she has been involved in a collision near the end of the ramp. She also said that the merge at the Magnolia/Preston on ramp to SB I-65 was confusing and mentioned closing one of the two ramps. Mr. Taylor asked Ms. Mitchell how she thought the proposed ramp changes would affect business. She replied that customers already have trouble following the signs to get to the hotel. Approximately half of their business is reservations with the other half being interstate traffic. She thought that they would lose some of their interstate business if the Arthur Street off ramp was closed. Ms. Mitchell also mentioned that the 55 mph speed limit sign for the mainline was positioned such that it appeared to be on the off ramp. People often drive on Arthur Street at Highway speeds. Ms. Mitchell mentioned that the owners of the hotel were in Nashville and Mr. Taylor asked if she would let them know about the project so that we could possibly schedule a meeting. In closing comments, Ms. Mitchell did say that she would like to see the Arthur Street off ramp closed because of all the collisions.

Meeting with Lynn Quinlan, BP (Arthur Street and Warnock Street) May 19, 2005

After Dave Taylor and Jeremy Kubac introduced the project, Ms. Quinlan decided that she would rather have the owners of the BP store comment on the project.

Meeting with Arvin Patel, Quality Inn May 20, 2005

Dave Taylor and Tala Quinio met with Mr. Arvin Patel of the Quality Inn. After project information was explained, Mr. Patel said that he had a good business, and if the ramp

to Arthur Street was closed, they (the state) are buying his property. He insisted that the ramp to Arthur Street stay open. He mentioned several times that closing the ramp would ruin his business, and that they (the state) would have to buy him out.

Preston Area Business Association
July 26, 2005

JEFFERSON COUNTY
I-65 RAMP MODIFICATION SCOPING STUDY
Item 5-8102.00

MEETING DATE: Tuesday July 12, 2005

PARTICIPANTS:

Tala Quinio	KYTC District 5
Benjamin Robertson	Gresham, Smith and Partners
Dave Taylor	Gresham, Smith and Partners
Terri Weber	GLI
Mary Rose Evans	Parkway Village
Roy Evans	Parkway Village
Don Schwartz	Southern Storage
Bill Seymour	Gresham, Smith and Partners
Liz D Martin	
Judy Hettich	MDA Metro Government
John Gribbins	Noe Middle School
Tom Redmond	Redmond Brokerage Co.
Betty Shelton	City of Parkway Village
Mike Zanone	St. Joseph's Neighborhood Association
Gail Linville	St. Joseph's Neighborhood Association
Gene Harrington	LaQuinta Inn & Suites
Paul Clephas	LaQuinta Inn & Suites
Stanley Sosowsry	H & S Hardware
Robbie Gibson	Belmar Flower Shop

Robbie Gibson from the Preston Area Business Association asked everyone to introduce themselves and then proceeded with a few business related items. A short discussion occurred between the Association members and then a brief break to enjoy appetizers and beverages followed. Robbie Gibson introduced Bill Seymour with Gresham, Smith and Partners (GSP) where he gave a general introduction to the project.

Mr. Seymour defined the project limits as from near Crittenden Drive on the south to St. Catherine on the north. A short power point presentation was made followed by a DVD presentation showing conceptual renderings of ramp improvements. A question and answer session followed immediately after the presentation.

1. How much property damage is expected as a result of these suggested improvements?

It was explained this project is still in the preliminary stage and is subject to change, however for the overall scope, minimal property is being taken. The current configuration takes approximately seven

homes and one small apartment complex. A comment was made that it wasn't anything like the airport.

2. Belmar Flower Shop expressed interest in having the Preston connection at the railroad tracks. They were also concerned about the local street system and signing. When you currently exit I-65 onto a local street, this is not the same street you use to re-enter I-65.

Several comments have been made regarding the Preston connection across the railroad and this will be evaluated for feasibility. Improved signing will also play a major role in the scope of this project.

3. How does this project accommodate the discussion of an arena especially at the Silo location?

When this project began, there had been no serious discussion regarding the location for a new arena; however, the proposed improvements should help regardless of the final location.

4. What will happen to the Fire House on Preston if the Magnolia/Preston I-65 Southbound ramp is closed?

This is a serious concern that will need to be considered before a final decision is made.



Kentucky Transportation Cabinet
Louisville Metro
Item 5-8102.00



K



I-65 Ramp Modifications Project


Kentucky State Fair Board
Facilities Committee
January 26, 2006



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Project Background

- South Central Louisville Development Corporation Study – June, 1999
- I-65 Ramp Modification Study
 - KYTC selected Gresham, Smith and Partners to conduct Scoping Study
 - Study began in August, 2004








I-65 Ramp Modification Project

Louisville, KY



Key Person Interviews

- One on one talks with community leaders and key stakeholders
- Provide opportunity for public input
- Help identify issues, concerns, suggestions, much more
- Enhance project awareness, build relationships and trust



Purpose of Interviews

- Obtain Input / Involve Key Stakeholders in Helping to Define:
 - Project Scope
 - Problems and Problem Locations
 - Issues and Concerns
 - Purpose and Need
 - Project Goals

General Problems

- Too many access points; too many ramps
- Short exits & decels, inadequate stacking
- Acceleration, deceleration, merging weaving problems
- Come off, get lost; how do I get there from here; signs
- Traffic flow in and out of U of L; snarls associated with attractors
- Safety, accidents

Top 10 Problem Locations



- Warnock area at NB I-65 ramps & Sav-A-Step
- Second SB exit to Arthur Street
- Eastern Pkwy NB exit (then left to NB Critt.)
- Ramp to NB I-65 from Preston and weave
- First SB exit to Arthur Street
- Short weave SB between Eastern Pkwy & Critt.
- On-ramp to I-65 SB from Arthur St. near Lee St.
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Main Issues and Concerns



- Access – interstate, attractions, local
- Neighborhood
- Traffic flow and safety
- Project coordination
- Surface street traffic patterns
- Trucks
- Roadway geometric standards
- Impacts, inconveniences
- Environmental
- Other

Purpose and Need Statement



Purpose

- *Improve traffic flow, safety and access associated with ramps along I-65 from Crittenden Drive to St. Catherine Street.*

(The Purpose defines the transportation problem to be solved.)

Need

The Need provides data to support the problem statement which is the Purpose.



Several factors demonstrate the need for action:

- Poor traffic flow
- Too many ramps, too close together
- Insufficient acceleration, deceleration, merging and weaving distances
- Identified safety problems, adverse accident history (1137 from Jan. 2002 – April 2004)
- Inefficient and confusing access to and from I-65 and to and from major venues

Project Goals




- Organize and simplify traffic flow associated with ramps, improving operational efficiency
- Improve access to and from I-65 in this area
- Improve access to and from major venues
- Respect current and planned local street traffic flow patterns and neighborhood character
- Coordinate with area master plans
- Improve geometrics
- Improve signing
- Reduce crashes
- Develop phasing and scheduling compatible with funding


Next Steps



- Continue working with PAC
- Finalize Analysis of Alternatives
- Conduct Environmental Overview
- Hold Public Meeting
- Evaluate Any Additional Alternatives
- Provide Recommendations / Report
- Begin Preliminary Design




Kentucky Transportation Cabinet
Louisville Metro
Item 5-8102.00



I-65 Ramp Modifications Scoping Study



*Breakfast Group
KFEC Executive Conference Room
March 1, 2006*


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I-65 Ramp Modification Project Louisville, KY



Key Person Interviews


- Obtain Input on / Help Define:
 - Project Scope
 - Problems and Problem Locations
 - Issues and Concerns
 - Purpose and Need
 - Project Goals








General Problems


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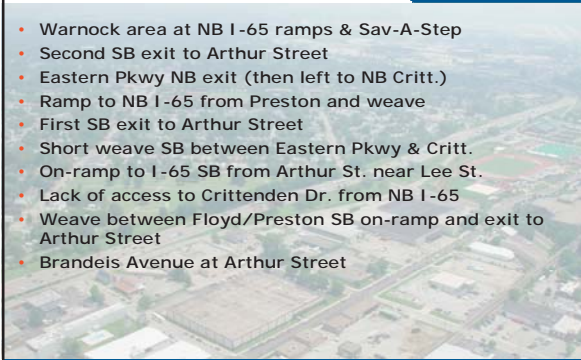


Top 10 Problem Locations

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Main Issues and Concerns



- Access – interstate, attractions, local
- Neighborhood
- Traffic flow and safety
- Project coordination
- Surface street traffic patterns
- Trucks
- Roadway geometric standards
- Impacts, inconveniences
- Environmental
- Other



Purpose and Need Statement



Purpose

- *Improve traffic flow, safety and access associated with ramps along I-65 from Crittenden Drive to St. Catherine Street.*

(The Purpose defines the transportation problem to be solved.)

Need

The Need provides data to support the problem statement which is the Purpose.



Several factors demonstrate the need for action:

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- Inefficient and confusing access to and from I-65 and to and from major venues

Accident History



Project Goals



- Organize and simplify traffic flow associated with ramps, improving operational efficiency
- Improve access to and from I-65 in this area
- Improve access to and from major venues
- Respect current and planned local street traffic flow patterns and neighborhood character

Project Goals (cont.)



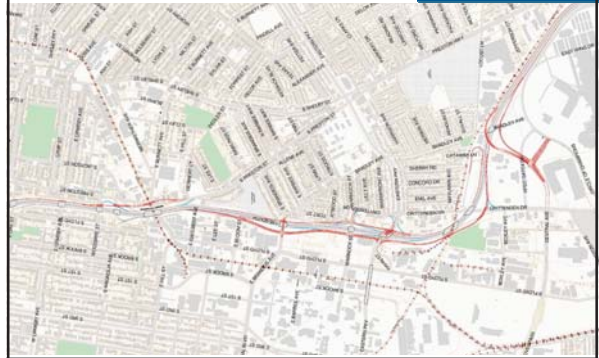
- Coordinate with area master plans
- Improve geometrics
- Improve signing
- Reduce crashes
- Develop phasing and scheduling compatible with funding

Project Status

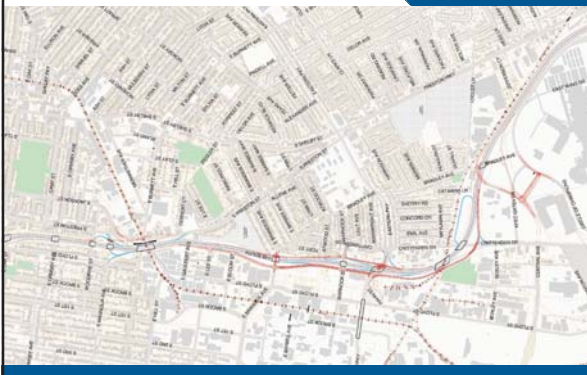


- Project Advisory Committee was formed
- Four Alternatives were developed
- Project Advisory Committee agreed that Alternatives 1 and 4 (or components of each with some variations) should be carried forward to Phase I Design

Alternate 1



Alternate 4



Proposed Access Ramps



Proposed Access Ramps



Proposed Ramp to SB I-65



Arthur Street



Brandeis at Arthur



Existing Ramps



Proposed Ramp



Proposed Ramp



22522.00\O_Comm\I-65ScopingStudy

Bill Seymour\Grace Crawford

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