

PROPOSED KIRBY-WHITTEN PARKWAY (SHELBY FARMS PARKWAY)
IN MEMPHIS, SHELBY COUNTY, TN

SUMMARY OF SEPTEMBER 24, 2013 PUBLIC HEARING
AND
PUBLIC INPUT RECEIVED DURING COMMENT PERIOD
(SEPTEMBER 24, 2013 THROUGH OCTOBER 15, 2013)
AND
COMMENT DISPOSITION



April 2014

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1.0 INTRODUCTION

The Tennessee Department of Transportation (TDOT) is in the process of preparing an environmental document under the National Environmental Policy Act (NEPA) to identify and evaluate the environmental effects of the proposed Kirby-Whitten Parkway (Shelby Farms Parkway) in Memphis, Tennessee. The Supplemental Final Environmental Impact Statement (SFEIS) for the project was approved on January 30, 2012.

This report provides: (a) a general description of the Public Meeting held on September 24, 2013 with a summary of the comments received both at the meeting and during the official comment period, which extended through October 15, 2013; and (b) dispositions to these public comments.

2.0 PROJECT DESCRIPTION

The primary purpose and need for this project is to create a new north-south route in the east Memphis area of Shelby County, Tennessee. Since the late 1960s, the east Memphis community has expressed the need for greater accessibility. By providing improved access, the new roadway is expected to improve mobility of Bartlett and Germantown residents, as well as the Poplar Avenue employment and commercial corridor commuters, reduce congestion, and lessen travel time along existing routes in east Memphis. It will also result in a more efficient, safer roadway, and will provide opportunities for economic growth in east Memphis.

The Selected Alternative for the proposed project is designed to enhance the Shelby Farms Park and includes trails and tunnels to improve pedestrian safety and accessibility throughout the park. The design also provides a grand entrance to the park, which will highlight the view of the park and will better accommodate park users during events.

The need for the Kirby-Whitten Parkway (Shelby Farms Parkway) has been documented in several transportation studies and is needed to complete the one-mile grid system that has been the basis of the Memphis regional transportation plans since the 1980s. The Kirby-Whitten Parkway was chosen as the north-south route between I-240 and Germantown Parkway in 1983; since that time, the route has been redesigned to address environmental concerns and public recreation needs.

The current roadway (Farm Road) lacks system connectivity and consists of two lanes with poor geometrics and no shoulders. The proposed roadway consists of a four-lane, divided, partially-controlled access facility, which gives preference to through traffic but will provide at-grade or grade-separated access to selected public roads and streets.

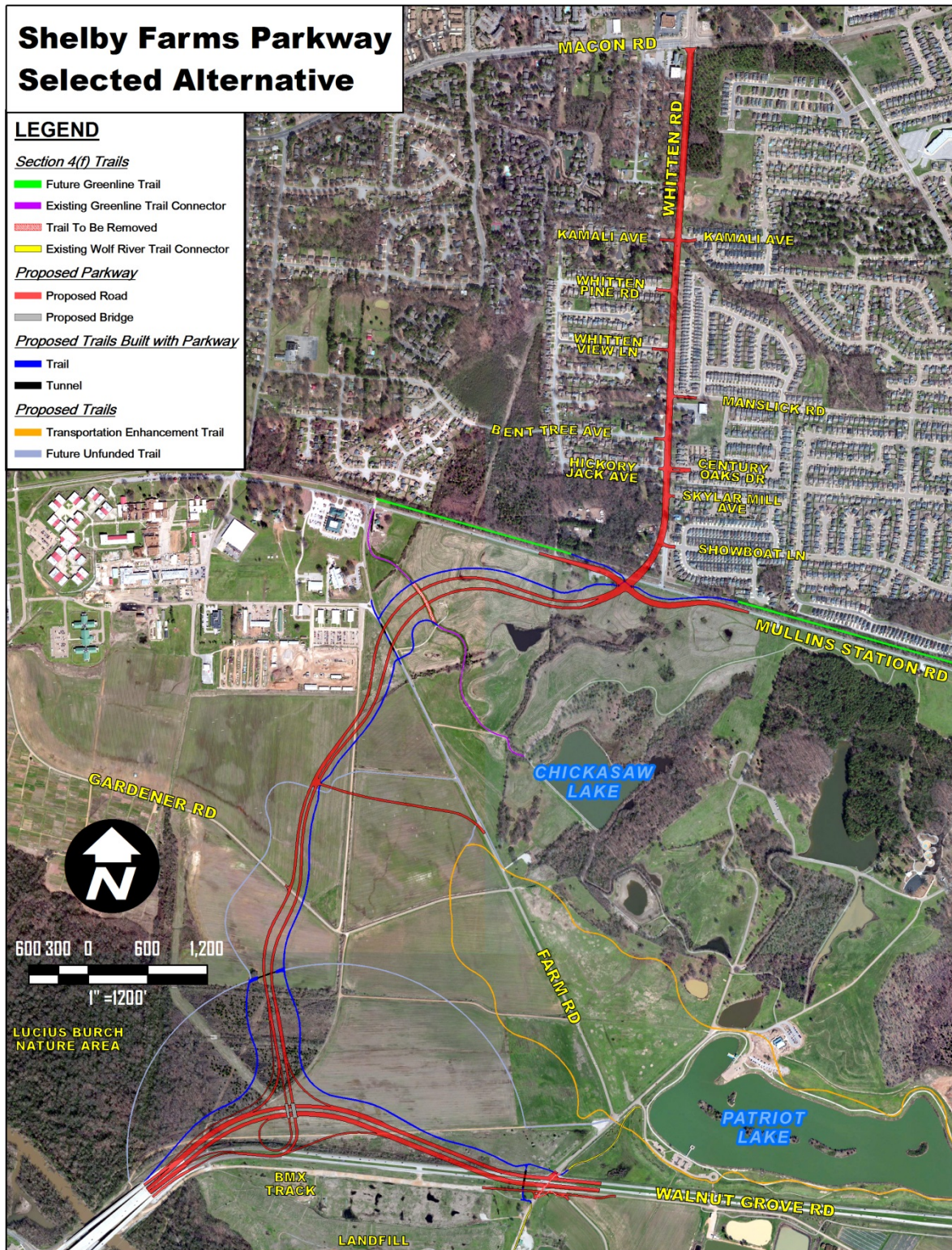
The Shelby Farms Parkway Advisory Team (SFPAT) was formed to provide expert and public opinion during the decision-making process regarding the Shelby Farms area.

The SFPAT consisted of 17 individuals from organizations, major employers, and the local community who were guided by Context Sensitive Solution (CSS) principles. CSS is defined as “a collaborative, interdisciplinary approach that involves all stakeholders to develop a transportation facility that fits its physical setting and preserves scenic, aesthetic, historic, and environmental resources, while maintaining safety and mobility. CSS is an approach that considers the total context within which a transportation improvement project will exist.” Among the organizations represented by the SFPAT was Friends of Shelby Farms, who had previously challenged the project in court. More recently, Shelby County and TDOT have consulted with the Shelby Farms Park Conservancy (SFPC), the organization responsible for managing the park.

The SFPAT evaluated three build alternatives and the No-Build Alternative, and ultimately recommended Alternative Q (the Selected Alternative) based on its overall design qualities, including fewer lanes, advantages in functionality, fewer environmental impacts, improved safety, and aesthetics. The SFPAT also reached a consensus on additional Partnership Goals to be pursued in conjunction with the project design criteria. These goals were also utilized in the consideration of alternatives:

- Create a road that enhances and embraces the park.
- Create a design concept that is socially, economically, and environmentally responsible.
- Create a safe and effective roadway design.
- Reduce corridor congestion.
- Produce an excellent design that enhances the quality of life in the community.
- Create the opportunity for non-vehicular traffic to enter and use the park.
- Create the opportunity for vehicular and non-vehicular crossing of the corridor including access for the physically challenged.

Figure 1: Project Location Map – Selected Alternative



3.0 PUBLIC HEARING

3.1 Notification

The Public Hearing was widely publicized through multiple venues. A public notice was published in the *Memphis Commercial Appeal* on August 23, September 10, and September 17, 2013. The public notice was also published in the *Tri State Defender* on September 19, 2013, and in *La Prensa* on September 24, 2013. The headlining article in the September 22, 2013 edition of the *Commercial Appeal* focused on the Public Hearing and provided the time, date, location, and purpose of the meeting, as well as background information about the project (see Appendix H). Another headlining article provided this information in the *Daily News* on September 24, 2013 (see Appendix H).

An article announcing the Public Hearing appeared on the *Local Memphis* website (www.localmemphis.com) on September 20, 2013, and on *The Daily News* website (www.memphisdailynews.com) on September 24, 2013. The *Memphis Business Journal* website (www.bizjournals.com) announced the Public Hearing and provided project information, including contact information, on September 20, 2013.

Channel 3, WREG in Memphis announced the Public Hearing on their news program on Sunday, September 22, 2013. Coverage was also posted on the WREG website (<http://wreg.com>) on September 24, 2013, prior to the meeting. An article appeared on the WMC-TV website (<http://eastmemphis.wmctv.com>) on September 23, 2013. An article also appeared on the Memphis Sun website (www.memphissun.com) on September 20, 2013. The Memphis City and Press website (<http://memphis.cityandpress.com>) announced the meeting on September 23, 2013. It was also announced on the Memphis Center for Independent Living website (www.mcil.org) on August 14, 2013. An article on the NBC 12 website (www.nbc12.com) discussed the project and Public Hearing on September 23, 2013.

An announcement of the Public Hearing was placed on the TDOT project website (<http://www.tdot.state.tn.us/kirbyparkway/>) beginning on August 14, 2013. It was announced on the Shelby County Government website (www.shelbycountyttn.gov) on September 20, 2013, and on the SFPC website on September 11, 2013. An announcement also appeared on the City of Memphis website (www.memphistn.gov). The City of Memphis Mayor, A. C. Wharton, Jr., posted a tweet announcing the Public Hearing on Twitter on September 23, 2013.

In addition, a letter notice was mailed to approximately 25 citizens in August 2013; a revised letter was mailed on September 11, 2013, to correct the meeting time and the day of the week that were erroneously listed in the first letter. The recipients of these letters included all citizens who had submitted comments to the Section 4(f) determination presented in the SFEIS and at the meeting on May 3, 2012 (held in the Benjamin L. Hooks Central Library in Memphis). The Memphis Urban Area Metropolitan Planning Organization (MPO) posted an announcement (in the form of an event) on

Facebook beginning August 14, 2013, and posted the corrected public notice on its Facebook wall on September 13, 2013.

TDOT also utilized six mobile road signs on Macon Road, Walnut Grove Road, Mullins Station Road, and Whitten Road to advertise the Public Hearing.

Following the Public Hearing, the project was discussed on the *Behind the Headlines* Radio Roundtable on September 27, 2013. An article covering the meeting appeared on the *Daily News* website on September 25 and 26, 2013, and an October 1, 2013 article cites the roundtable discussion and discusses the project in general. An article covering the Public Hearing appeared on the *Commercial Appeal's* website (www.commercialappeal.com) on September 24, 2013, following the meeting. An article also appeared in the print edition of *The Commercial Appeal* on September 25, 2013. The meeting was covered by My Fox Memphis, WHBG, with an article posted on their website (www.myfoxmemphis.com) on September 24, 2013.

The project and Public Hearing was discussed in coverage by WKNO 91.1 (NPR for the Mid-South, WKNP 90.1) and on their website (<http://wknofm.org>) on November 1, 2013. On September 26, 2013, an article appeared on the Memphis Flyer website (www.memphisflyer.com) discussing the project and encouraging public comments during the comment period following the Public Hearing.

3.2 Description of the Public Hearing

The Public Hearing was held on Tuesday, September 24, 2013, from 5:00 to 7:00 PM at the Agricenter International facility in Germantown. Approximately 278 citizens attended. In addition, 33 staff members from TDOT, the City of Memphis, Shelby County, Palmer Engineering, and SSR Engineering were present. The purpose of the meeting was to: 1) present a project update to the public; and 2) notify the public of the Federal Highway Administration's intention to file a Determination of Section 4(f) *de minimis*¹ use related to minor project impacts to recreational use trails within the Shelby Farms Park.

The hearing was conducted in a town hall format in which interested attendees were able to address the presenting panel and the audience. Attendees were given three minutes apiece to express their views and ask questions; no one was permitted to transfer their allotted time to another attendee (i.e., pool time). Though attendees were asked to sign up in advance to speak during the question-and-answer session, those who had not signed up were offered the opportunity to speak after those who had signed up finished speaking.

The format of the meeting included the following sessions:

¹Section 4(f) of the US Department of Transportation Act states that FHWA may not approve the use of Section 4(f) property (park, recreation area, wildlife or waterfowl refuge, or historic site) unless it is determined that there is no feasible and prudent avoidance alternative, the action includes all possible planning to minimize harm, or FHWA determines that the use of the property, including measures to minimize harm, will have a *de minimis* impact (one that will not adversely affect the features, attributes, or activities qualifying the property for protection under Section 4(f)).

- Sign in/Sign up to Speak/Visit Displays/Talk with Project Team and/or Court Reporter - 5:00 to 5:30 PM – Attendees had the opportunity to review project displays and/or speak individually with TDOT and members of the project consultant team.
- PowerPoint Presentation - 5:30 to 5:50 PM – A PowerPoint presentation was given on the selection of the Selected Alternative, including the Determination of Section 4(f) de minimis use.
- Question and Answer Session - 5:50 to 7:00 PM – Following the presentation, a question and answer session was held. A panel of TDOT, Shelby County and City of Memphis engineers, and Shelby Farms Park Conservancy representatives provided an opportunity for the public to ask questions or give comments.

TDOT provided a handout to all attendees that contained information on the project timeline, selection of the Selected Alternative, anticipated project schedule, right-of-way and relocations, Section 4(f) impacts, and procedures for submitting comments. TDOT also provided comment forms for use by attendees for submitting comments. Comment forms could be submitted at the meeting or mailed in prior to the October 15, 2013, deadline. Appendix B contains the handouts and comment card that were distributed at the meeting and which were also available on the project website.

A court reporter was also available throughout the meeting to record the presentation and question and answer session, and to take individual comments before and after the presentation and question and answer session. Thirty citizens' comments were recorded by the court reporter as part of the question and answer session. Six attendees provided individual comments to the court reporter.

3.3 Public Comments

The public had several ways to comment on the proposed project and to have those comments included in the official public record of the meeting:

- By speaking during the question and answer session;
- By making an oral statement to the court reporter at the meeting;
- By submitting a comment form either at the meeting or by mail to TDOT following the meeting;
- Through letters submitted by mail or by email and attached information submitted to TDOT via TDOT.Comments@tn.gov.

During the official comment period (September 24, 2013, through October 15, 2013), 231 public comments were received through the various formats listed above (see Table 1).

Table 1: Comment Method	
Comment Card	29
Email to comments@tn.gov	106
Letter	9
Sierra Club Form Letter (all in one envelope)	51
Oral Comment during Public Hearing	30
Oral Comment to Court Reporter	6
Total	231

3.3.1 Verbal Comments Provided at the Public Meeting

During the meeting, members of the public were encouraged to express their comments or concerns and to ask questions about the project. A total of 36 oral comments were recorded during the Public Hearing. Attendees were asked to sign up to speak. The meeting concluded after all who expressed an interest in speaking had been afforded the opportunity to do so. While some who signed up to speak did not choose to do so, no one was denied the opportunity to speak due to lack of time or any other reason.

Question and Answer Session

Thirty people gave comments/questions that were recorded by the court reporter during the question and answer portion of the meeting. Those comments/questions and their dispositions are summarized in Table 3.

Comments Given to the Court Reporter

Six people gave comments directly to the court reporter either before or after the Question and Answer session. Those comments/questions and their dispositions are summarized in Table 3.

3.3.2 Public Comments

The public could provide written comments by filling out a comment form distributed by TDOT at the meeting or by mailing the form at a later date. By the close of the comment period (received or postmarked by October 15, 2013), TDOT had received 29 completed cards. TDOT also received nine letters by mail and 106 comment letters via TDOT.Comments@tn.gov. Fifty-one form letters authored by the Sierra Club and signed by citizens were also received in one envelope, for a total of 195 written comments. Some written comments were signed by more than one person; each person who signed the comment is counted in the for/against tallies, and the comment, as appropriate, in Table 3 to reflect the number of citizens voicing each question or concern. Each letter or comment card is counted as one item, regardless of how many people signed it. The written comments and their dispositions are summarized in Table 3.

The comment form asked the respondents to provide input on the following subjects:

- Primary interest in the project
- Any issues or concerns about the project

- Comments regarding the finding of minor (de minimis) Section 4(f) impacts to the Greenline Trail, Greenline Trail Connector, and the Wolf River Greenway Trail Connector

Any additional comments could be made on the comment form, attached to the comment form, or mailed or emailed to TDOT.

Comment Form Question - Issues or Concerns about the Project and Additional Comments and Other Comments Received

Twenty-seven comment cards contained comments on the card, while two were accompanied by letters. In addition, TDOT received seven letters that were not attached to comment cards. Comments from the comment cards voiced both support for and opposition to the project; commenters also addressed concerns with the project, including environmental impacts, traffic issues, and financial considerations. These comments are included in Table 3, along with all other comments regarding the project.

Comment Form Question - Primary Interest in Project

On the comment form, participants were asked to identify their primary interest in the project. The available options were: Concerned Citizen, Affected Resident, Affected Landowner, and Affected Business; there was also a field to write in the name of the affected business, if applicable. Twenty-nine responses came from concerned citizens within the project area, 11 responses came from affected residents, and four responses came from affected landowners. Some respondents selected more than one category as their primary interest in the project, while one of the respondents did not select a primary interest.

Comment Form Question- Finding of Minor Section 4(f) de minimis impacts to Greenline Trail, Greenline Trail Connector, and the Wolf River Greenway Trail Connector

Participants were asked to comment on the finding of minor (de minimis) Section 4(f) impacts to the Greenline Trail, Greenline Trail Connector, and the Wolf River Greenway Trail Connector. These comments are summarized and answered in Table 3, along with all comments received on the project.

3.3.3 Project Support and Opposition

The majority of commenters indicated whether they support or oppose the project; several commenters voiced conditional support, stipulating that the SFPC's requirements be met. Others indicated that while they oppose the project in general, they request that the SFPC's requirements be met if the project moves forward. Seven citizens did not clearly indicate support or opposition, while one comment letter was blank. The summary of support and opposition to the project is provided in Table 2.

Table 2: Tally of Support/Opposition to Project	
Support the Project	51
Support the Project if SFPC Requirements are Met	19
Oppose the Project	139**
Oppose the Project But Request that SFPC Requirements be Met	1
Unclear	7
Blank	1
Total	218

*Some citizens submitted their comments in multiple formats. For the purpose of counting for/against votes, each citizen was counted once regardless of the number of comment submissions.

**Fifty-one (51) of the responses received were identical and came in one envelope on a photocopied Sierra Club letterhead. Forty-six (46) of these came from one apartment complex approximately 4 miles from the project area. Property records show a Sierra Club member listed under the owner address.

The seven letters and letters attached to comment cards are located in Appendix C. Thirty-two comment cards without attachments are in Appendix D. Appendix E contains the comments received through the TDOT comments site. Appendix F contains the Sierra Club form letters and Appendix G contains the meeting transcript (and the sign-in sheets).

Table 3: Comments and Dispositions

Alternatives-Related Comments

1. The alternative commissioned by the Sierra Club needs to be considered. The Sierra Club alternative is less costly and simpler, and should be considered as part of the Section 4(f) process. (14 comments + 12 Sierra Club forms (#1 circled)) 1.1 Question- Why did the Shelby Farms Parkway Advisory Team refuse to consider this alternative or any similar one? (1 comment) 1.2 Question- Can the current process be slowed down in order to consider this alternative? (1 comment) 1.3 Question- Should planners and public officials at least consider this alternative as a “stop gap” which can be implemented quickly to address the current Walnut Grove & Farm Rd congestion issues, and thus reduce current traveler concerns while plans for the Parkway proceed through the current process which will take 5-6-7 or more years before the Parkway is opened (“on the off assumption that it will get implemented”)? (1 comment) Fix Farm Road. Specific suggestions include widening it, adding a roundabout, adding an intersection, and closing it to traffic. (9 comments) The problem could be fixed with a fix to the left-hand turn lane going from Humphreys Blvd to Farm Road. Why haven’t traffic engineers addressed these issues before? (1 comment)

The alternative as proposed by the Sierra Club includes the following elements:

- 1. Increases the eastbound Walnut Grove Road left turn lane from approximately 350 feet to 900 feet.*
- 2. A third auxiliary lane is proposed for the westbound Walnut Grove Road between Farm Road and the Humphreys Boulevard interchange.*
- 3. The southbound Farm Road right turn lane is increased to 550 feet before a free-flow into the westbound auxiliary lane with an increased radius.*
- 4. A new northbound merge distance of 300 feet along Farm Road with a right turn lane from Walnut Grove Road and an increased turning radius.*

This alternative would provide some short-term improvement to the situation, but does not meet the purpose and need for the project due to not providing a new north-south corridor or significantly reducing travel time through the area. In addition, the proposed alternative would only serve as a short-term solution that would only provide temporary relief but would not improve safety or level of service.

The Shelby Farms Parkway Advisory Team (SFPAT) realized that the existing two-lane Farm Road was not working and additional lanes are needed to meet the traffic demand of this north-south corridor. A range of alternative lane configurations was considered and the Team selected a four-lane alternative to strike a balance between 1) limiting the desire for I-40 to I-240 traffic to cut through the park and 2) not forcing neighborhood commuter traffic to use the interstate to travel between adjacent crossroads. Level of service would continue to erode and pedestrians would be at greater risk crossing Walnut Grove Road with the Sierra Club proposed improvement. While the Sierra Club suggestion might provide a short-term improvement to address some areas of concern, it does not address all concerns such as the offset intersections on Mullins Station Road. In addition, air quality would continue to worsen for the park due to congestion at the signalized intersection.

For the purposes of evaluation for this response, TDOT counted traffic between Feb. 25th and Feb. 27th of 2014 at both the Walnut Grove Road and Mullins Station Road intersections with Farm Road. Those counts were used to perform Highway Capacity Software analyses for both

intersections both as they exist and with the Sierra Club's suggested improvements at the Walnut Grove Road intersection. The Memphis MPO's traffic model includes the Shelby Farms Parkway in its 2040 version, so this analysis only deals with current traffic volumes since the model shows relatively little traffic at this intersection following construction of the parkway. Analyses were performed on both the AM and PM peak hours.

The Sierra Club's suggested alternative does not change the Farm Road/Mullins Station Road intersection where all three legs perform at Level of Service (LOS) F. The northbound Farm Road approach traffic experiences a delay of 343 seconds in the PM peak hour and 60 seconds in the AM peak hour which both equate to LOS F. The eastbound Mullins Station Road approach traffic experiences a delay of 51 seconds in the PM peak hour and 74 seconds in the AM peak hour which both equate to LOS F. Westbound Mullins Station Road traffic experiences a delay of 36 seconds in the PM peak hour at LOS E and 271 seconds in the AM peak hour at LOS F. The overall average intersection delays are 194 seconds in the PM peak hour and 153 seconds in the AM peak hour, well above the threshold for LOS F in both time periods. While it would be possible to expand this intersection similar to the suggested Sierra Club improvements at Walnut Grove Road to provide some short-term benefit, any dual turning movements would need to have two lanes to receive them which is not compatible with two-lane roadways.

The Sierra Club's suggested improvements to the Walnut Grove Road intersection at Farm Road would reduce congestion for the southbound Farm Road traffic merging on to westbound Walnut Grove Road which would eliminate 115 seconds of delay in the AM and 154 seconds of delay in the PM. Westbound right turns to Farm Road would also benefit from the addition of a right turn lane separate from the stop condition although this turn currently operates at LOS A in the PM and LOS B in the AM.

The most critical movement at this intersection is the eastbound left turn to Farm Road. The PM period is the critical time period with 624 vehicles turning left in the peak hour. This heavy volume creates a 626 second delay with a ratio of queue length to storage length of 6.26 using the current 350 foot left turn lane. The Sierra Club has proposed extending the lane to 900 feet which would help during most of the day, but still leave a of queue length to storage length ratio of 2.49 during the PM peak hour, meaning queue lengths could reach over 2000 feet and spill out into the through traffic lanes. This heavy movement operates well above the threshold of LOS F in both the AM and PM peak hours. The presence of this traffic signal also means that the westbound through movement, the eastbound through movement, and the southbound Farm Road left turns all operate at LOS F.

This alternative was not presented to or considered by the Shelby Farms Parkway Advisory Team (SFPAT) due to the understanding that maintaining a full signalized intersection with these combinations of movements would not operate at an acceptable level of service. The SFPAT also had a goal of moving the north-south corridor as far west as possible. The SFPAT did consider an at-grade signalized intersection with a single flyover ramp for just the eastbound Walnut Grove Road to northbound Shelby Farms Parkway to handle the most critical movement. The team ultimately recommended the trumpet interchange (Alt. Q) in order to provide all free-flow movements both to improve travel time and eliminate the safety concerns of a signalized intersection.

Shelby County, TDOT, and the City of Memphis selected the trumpet interchange in order to meet the purpose and need of the project to provide a new north-south connector road that provided continuity with other previously constructed sections of the Kirby-Whitten Parkway. These lead agencies agreed with moving the new parkway as far west as possible to minimize impacts to the recreational areas of Shelby Farms Park. The proposed interchange and parkway location are an integral part of the Shelby Farm Park Master Plan and returning to the current intersection location as suggested by the Sierra Club would have severe impacts on the currently planned Shelby Farms Park Conservancy project for expansion of Patriot Lake.

Each of the reasonable alternatives subjected to detailed examination and documented in the original Final Environmental Impact Statement (FEIS) (1991) were considered to accomplish the project purpose and need to varying degrees and were considered candidates for selection; however, noteworthy changes to the alternatives examined since circulation of the original FEIS have occurred, hence the need for the Supplemental Final Environmental Impact Statement (SFEIS). The Selected Alternative has been modified after careful consideration of all reasonable alternatives, including the assessment of their potential environmental impacts (social, economic, and environmental), project costs, and the evaluation of public and agency comments stemming from the extensive project coordination and public involvement/public hearing process.

Although no improvements are currently planned, as with other roads in the Memphis area, the city will continue to study low-cost options in the area of Shelby Farms.

The SFPAT considered alternatives between Farm Road and the Lucius Birch Natural Area. They chose to move as far west as possible to avoid further bisection of the park as much as possible. Widening Farm Road to four lanes would bisect more of the recreation area than an alignment farther to the west. The selected western alignment also allows for parts of Farm Road to be removed and returned to park uses. An additional 0.554 acres of trail will be converted to recreational use within the park. Portions of Farm Road will remain open for access to the Visitor's Center. A future second entrance to the park from Walnut Grove Road to the east of Patriot Lake is being considered, but not as part of this project.

The team did not consider a roundabout at Walnut Grove Road due to the volumes encountered. In general terms, circulating volume in a roundabout requires one lane for 0-1,400 vehicles per hour, two lanes for 1,400-2,000 vehicles per hour, and three lanes for 2,200-2,900 vehicles per hour. Construction of a roundabout at Walnut Grove Road with more than three circulating lanes would be unprecedented in Tennessee and would require considerable driver education as well as more lane-widening outside of the roundabout to handle the exiting traffic safely. The heavy left turn movement (1,846 vph in PM) from eastbound Walnut Grove Road to northbound Kirby-Whitten Parkway requires utilizing three-quarters of the roundabout and mixing with through traffic on Walnut Grove Road in both directions, which greatly increases circulating volumes and makes the roundabout infeasible. For that reason, the SFPAT recommended that this left-turn movement be accomplished with a grade separated structure.

2. Fix Walnut Grove Road. Specific suggestions include: adding a short third lane on Walnut Grove; replacing the stop light with a roundabout; lengthening the Walnut Grove Road turn lane; prohibiting all left turns at the junction of Walnut Grove and Farm Road; keeping the light green for Walnut Grove from 6 to 9 a.m. on weekdays; and possibly add an extra lane for inbound traffic from Farm Road to merge onto Walnut Grove Road. Question: What happens if there's a better interchange at Walnut Grove and Farm Road and a better interchange coming out of the park on Farm Road; is there any alternative to that? What if you put that kind of thing there; what would happen? (5 comments)

Short-term improvements such as a third lane on Walnut Grove Road or extended turning lanes could be considered as separate, interim projects as described in the previous answer. The existing and future traffic numbers do not support the use of a roundabout. Traffic simulations were run with the existing traffic volumes to compare travel times between Humphreys Boulevard and Macon Road both in the northbound and southbound directions for both the AM and PM peak hours. These simulations were performed for the current configuration as well as the configuration with the improvements suggested by the Sierra Club. Travel times for those conditions were compared to the travel times previously calculated for the design year (2040) traffic for the selected Alternative Q.

The proposed improvements suggested do not meet the purpose and need for the project since the simulated northbound travel time in the AM from Humphreys Boulevard to Macon Road would only slightly be reduced from 19.7 minutes in the simulated existing condition to 16.9 minutes with the suggested Sierra Club improvements. The design year travel time for this same route using the new proposed parkway would be reduced to 6.3 minutes. In the PM peak hour, the northbound simulated travel time is reduced from 24.6 minutes in the existing configuration to 24.0 minutes with the suggested improvements compared to 6.6 minutes with the new parkway. For the southbound movement, the travel times in the AM are currently 16.1 minutes which are reduced to 13.3 minutes with the suggested Sierra Club improvement as opposed to 7.5 minutes with the new parkway. The southbound PM time decreases from 9.8 minutes currently to 9.7 minutes with the Sierra Club proposed improvements as opposed to 6.1 minutes with the new parkway.

Keeping the signal green during peak hours on Walnut Grove Road would eliminate the possibility of turning left to Farm Road during the peak hours, which would reduce commuter traffic and access to the park. Enforcement would be required and a dangerous situation could be created where traffic tries to make the movement anyway. Keeping the light green would also create an unsafe situation for pedestrian and bicycle traffic crossing Walnut Grove Road during the restricted time period.

3. Fix Sycamore View Road. Specific suggestions include: extend it to Walnut Grove at Wolf River by Baptist Hospital and Christian Brothers High School, and finish Sycamore View. Question: Why can't Sycamore View be completed to Walnut Grove Road, intersecting at Wolf River Bridge? Impacting the existing prison would be more appropriate than impacting the park and residents of Mullins Station Road. (3 comments) Build the Parkway, but with modifications. Suggestions include re-routing the proposed Parkway around the Shelby Farms Park; connect Sycamore View to the Parkway but not Farm Road; connect Sycamore View to the Parkway instead of Whitten. (3 comments)

Improvements to Sycamore View Road would not allow direct connections to the more numerous destinations on Whitten Road north of I-40. The prison has expressed serious security concerns with passing Sycamore View Road through the site. In addition, any work further west would

impact the Lucius Burch State Natural Area.

The Sycamore View Road connection to the Kirby-Whitten Parkway was removed from final design due to concerns from the public and the prison. In addition, the connection was removed by the City of Memphis from their Long Range Transportation Plan.

4. Fix Mullins Station Road. Specific suggestions include: widen Mullins Station Road; widen it and build a new road across the west side of the park at the Farm Road intersection and connect it to Walnut Grove, close to the Wolf River Bridge; improve intersections between Mullins Station and Whitten and Appling Roads; finish the Mullins Station corridor. (4 comments)

Improvements to Mullins Station Road alone would not meet the purpose and need for the project. Although improving Mullins Station Road would provide some relief for drivers, it does not fully address the need for improved north-south travel time and congestion issues in the area, the main elements from the purpose and need. The SFPAT did locate the new Kirby-Whitten Parkway as far west as possible while providing a safe weaving distance on Walnut Grove Road and not impacting the Lucius Burch Natural Area.

5. Please explore possible alternatives and fully assess impacts to the Park before moving forward in the process. Other alternatives may be less expensive, take less time to construct, not have a negative impact on the water, and not take 128 acres from the Park. Question: What is the process for getting new alternatives looked at? (6 comments) Where or who or what persons were charged with considering whether to build something? Where are the reports of deliberations of other solutions to traffic issues so we could consider those? When does the public have the opportunity to offer opinions about those alternatives which you have not presented here tonight? (1 comment)

Alternatives have been considered since the beginning of the NEPA process in 1981. A full range of options were considered that best suited the park's needs and provided solutions to the traffic issues in the area. The selected alternative minimizes impacts to the park and provides the best option to reduce traffic congestion, crashes, and air pollution and has been developed in consultation with local government, the public, the Shelby Farms Park Conservancy- (SFPC) and other interested parties. The decision to choose the selected Alternative Q was made by the City of Memphis, Shelby County, and TDOT. Information from the public, local officials, and the SFPAT was considered in that decision. Two public meetings and two public hearings have been held during the CSS process where attendees had the opportunity to suggest additional alternatives for consideration. Previous alternatives considered were presented and discussed at previous Advisory Team meetings and were later discarded for the selected alternative. In addition, the public has had time after the 2007 Public Hearing and after the SFEIS was signed in January 2012 to comment on the alternatives. The Sierra Club alternative was analyzed and considered after the 2013 Public Hearing; however, the alternative provided minimal congestion relief or long-term improvements to safety and traffic flow. The Project Team has considered numerous alternatives for more than 30 years and during the NEPA process. TDOT accepts all comments and opinions offered throughout the project development process. Additional alternative analysis is not anticipated at this time. The proposed project would require approximately 81 acres for right of way. The SFEIS noted an approximate impact of 119 acres, which was based on the corridor and assumed right of way at that time. After the 2013 Public Hearing, updated design plans were utilized to calculate the current right of way impacts, which resulted in the lower number of impacted acres.

6. Alternative commuter routes should be used. (1 comment)
<i>Public comment indicates that commuters are already avoiding this corridor and using alternative routes in many instances, which is one of the reasons (reduction in traffic congestion) for constructing a new facility.</i>
7. When can we discuss the No-Build option? (1 comment)
<i>The No-Build option has been considered throughout the NEPA process; however, it does not meet the purpose and need for the project. The No-Build Option was considered in the SFEIS. The SFPAT was tasked with developing a build option that would be compared to the No-Build Alternative in the SFEIS. The City of Memphis, Shelby County and TDOT identified the build option of Alternative Q as the Selected Alternative.</i>
8. Grade connections and improved traffic signals might be a more appropriate and less costly solution. (1 comment)
<i>Traffic signals and minor improvements will not correct the traffic congestion and crashes in the project area. The solution that works best for this is the production of a free-flowing movement by replacing the congested Farm Road signalized intersection with a free-flowing interchange, which is provided by the proposed Kirby-Whitten Parkway design. The SFPAT did consider signalized intersection options, but did not choose one due to the high design year traffic volumes anticipated for the eastbound to northbound movement. Traffic simulations indicated that the signalized intersection would result in longer travel times through the corridor. These travel time comparisons were presented to the SFPAT as part of their decision-making process regarding recommendations. Another consideration by the SFPAT was that safety could be improved by eliminating the at-grade intersection.</i>
9. Other alternatives – There are numerous other possible solutions to addressing the congestion problem. Why have these not been considered? Representatives of the Sierra Club and of other organizations made suggestions at the Shelby Farms Parkway Advisory Team meetings, but were told their suggestions would not be considered. (1 comment)
<i>Each of the reasonable alternatives subjected to detailed examination and documented in the original FEIS (1991) were considered to accomplish the project purpose and need to varying degrees and were considered candidates for selection; however, noteworthy changes to the alternatives examined since circulation of the original FEIS have occurred, hence the need for the SFEIS. The Selected Alternative has been modified after careful consideration of all reasonable alternatives, including the assessment of their potential environmental impacts (social, economic, and environmental), project costs, and the evaluation of public and agency comments stemming from the extensive project coordination and public involvement/public hearing process. During the CSS process the SFPAT discussed many different variations of the alternatives and ultimately recommended Alternative Q which was accepted by the City of Memphis, Shelby County, and TDOT. The Sierra Club's suggested alternative was first presented at the September 24, 2013 Public Hearing. An analysis of the Sierra Club's suggested alternative is described in the answer to Question 1 previously. This analysis shows that the suggestions would provide some improvement to a few movements, but would not accomplish a significant improvement to the north-south travel time through Shelby Farms Park while also not completing the grid network in east Memphis.</i>
10. 2.1 Question- Why did the engineers and planners not consider staggered work times to stretch out the flow of traffic? This seems a very reasonable solution since there is such a high employment concentration at the hospital, related businesses, and the high school.

(1 comment)
<i>Staggering work times would take a very heavily coordinated effort to implement and there would be no guarantee that those work schedules would remain staggered in future years. Additionally, decisions regarding the working hours of private companies are outside of local government control as well as outside the purview of this road improvement project.</i>
11. 2.2 Question- Why were alternatives which draw or keep traffic away from the park not considered? For example, making major fixes to Germantown Road. (1 comment) 2.3 Question- Why didn't the team consider a road alignment based on extending Sycamore View (but not extending Whitten Rd)? (1 comment)
<i>Germantown Road is at or near capacity and already has six lanes. Adding additional lanes to handle the anticipated traffic would be very expensive and damaging from a right-of-way and utilities perspective. Improvements to Sycamore View Road would not allow direct connections to the more numerous destinations on Whitten Road north of I-40. The prison has expressed serious security concerns with passing a heavily travelled Sycamore View Road through the site.</i>
12. The plan that was agreed upon by the Shelby Farms Park Advisory Team is no longer valid due to issues and concerns that arose after their compromise was reached. (3 comments + 14 comments from Sierra Club Form (#6 circled))
<i>The SFPAT held follow-up meetings on 7-31-08 and 6-27-12 where additional issues were discussed along with mitigation measures. The Team did not suggest revisions to their recommended alternative. The SFPAT discussed issues regarding the landfill and the potential aquifer breach at these meetings as well as whether any changes needed to be made to their recommendation. In the case of the landfill meeting on 7-31-08, the SFPAT made a slight change to request that the loop ramp of the trumpet be small enough to ensure no potential for opening the landfill. The potential aquifer breach was discussed at the 6-27-12 meeting along with possible mitigation measures to control hazardous spills. The SFPAT made a resolution that no changes be made to the preferred alternative location since mitigation could be provided to protect the aquifer.</i>
Baptist Hospital-Related Comments
13. The project may increase traffic congestion at Baptist Hospital, which is already congested. (4 comments)
<i>A Level of Service study was not completed for the recently constructed Walnut Grove Road in front of the Baptist Hospital as part of this project, since it is approximately one-half mile outside the project area, and had recently been reconstructed.</i>
Bicycling/Pedestrians-Related Comments
14. The project will and should improve facilities for bicyclists and pedestrians. (3 comments) The project will harm facilities for bicyclists and pedestrians. (3 comments)
<i>The Selected Alternative will be enhanced by the inclusion of multiple bicycle and pedestrian multi-use paths separated from the roadway. There will also be two tunnels provided under the Kirby-Whitten Parkway and one under Walnut Grove Road for cross-roadway connectivity. Details of the Farm Road/Kirby-Whitten Parkway intersection will be coordinated with the SFPAT during final design once the Record of Decision (ROD) has</i>

been completed. Park and trail users will be able to safely and conveniently use the separate facilities. After construction of the Selected Alternative, existing multi-use paths will connect with newly constructed trails, increasing the total lengths of the trails and improving safety at roadway intersections.

Comments Related to Section 4(f) De Minimis Determination

15. The de minimis finding is accurate; there will be minimal or positive impacts to the Park. (6 comments)

Noted

16. The SFEIS has not met the conditions for satisfying Section 4(f) requirements, including outlining mitigation for impacts; mitigation and/or final plans should be approved before a Section 4(f) determination can be made. Memphis should not set a precedent of improperly considering Section 4(f) and putting roads through parks. (6 comments) 128 acres is too large to be a de minimis impact on the Park and is three times larger than any other de minimis finding. There will be a significant impact to the Park and a de minimis finding is inappropriate. (15 comments + 11 Sierra Club form comments circled (#8)) Everything from Germantown Road east to the Wolf River (except area 10) and everything from Mullins Station south to the Wolf River is Park-land (4f) (de minimis). There is absolutely no doubt that the proposed road will consume close to 200 acres of Parkland and adversely affect many more acres of Parkland. We are sure we can legally prove that fact. (1 comment)

The Section 4(f) de minimis determination is currently being revised to combine all four of the Section 4(f) impacts into one document, rather than having four separate documents. This revised documentation will be presented to the officials with jurisdiction over the resource, who must concur in writing that the project will not affect the activities, features, and attributes that make the property eligible for Section 4(f) protection. The FHWA makes the final determination that the use of the property, including any measures to minimize harm (such as any avoidance, minimization, mitigation, or enhancement measures) committed to by the applicant will have a de minimis impact. The September 2013 public hearing served as the required opportunity for public review and comment, and all comments received at the public hearing and during the subsequent comment period will be considered in the Section 4(f) process. Mitigation of impacts caused by the roadway has been proposed and is discussed in Appendix E of the SFEIS. Mitigation has also been proposed for impacts to the trails. This mitigation is discussed in the revised Section 4(f) documentation, which will be included as a part of the ROD. These impacts and their proposed mitigation measures were presented at the September, 2013 public hearing. The mitigation measures to which the applicant commits, which will be included in the approved Section 4(f) de minimis finding and in the ROD, will be legally binding.

Current design shows that approximately 81 acres will be converted to transportation right-of-way, which TDOT and Shelby County are proposing is not too large to be considered a de minimis impact, in light of the overall size of the park and other important relevant circumstances such as a 1,000 foot wide study corridor. For example, an important relevant circumstance is that a 1,000 foot corridor through Shelby Farms, with a total area of 243 acres, was reserved for the proposed roadway as early as 1975, before Shelby Farms was used as a recreational area. A December 2006 Grant of Conservation Easement made by Shelby County to the Land Trust for Tennessee specifically excludes, in Exhibit A-1, "land for proposed 'Parkway right-of-way' to be used for the Shelby Farms Parkway and Walnut Grove Road widening

and improvement projects.” Corridors of land that are formally reserved for future transportation facilities before or at the same time a park is established is considered joint planning, and any resulting impacts of the transportation facility is not considered a “use” under Section 4(f). Maps dating from as early as 1975 and 1983 (located in Appendix E of the SFEIS) clearly show plans for a north-south road approximately where Kirby-Whitten Parkway would lie. These maps which date from a time period prior to any official designation of Shelby Farms as a park or recreation area strongly suggest the joint-planning exception to Section 4(f) applies to the proposed Kirby-Whitten Parkway. See 23 CFR 774.11(i)(1). The total right-of-way for the project as currently contemplated consists of 81 acres – a reduction of 162 acres from the area of the 1,000’ corridor. As a result, the project would use approximately 67% less acreage than originally proposed. The SFEIS noted an approximate impact of 119 acres, which was based on the corridor and assumed right of way at that time. After the 2013 Public Hearing, updated design plans were utilized to calculate the current right of way impacts, which resulted in the lower number of impacted acres. Due to the proposed roadway corridor being shifted to the west, and out of the original 1,000 foot corridor, much of the Selected Alternative is no longer positioned within the original corridor. Note that the roadway was shifted to the west for the express purpose of minimizing any impacts to any features and attributes that qualify the resource for protection under Section 4(f). Of the 81 acres to be used, 71.5 acres fall outside the original 1,000-foot corridor, and 9.5 acres are within the original corridor; however, much of the new alignment passes through or along Area 10, which is occupied by county government buildings not devoted to recreational activities and which is further to the west of activities and features that make the property eligible for 4(f) protection, including Patriot Lake, Plough Park, Arboretum, and the Kite Flying area. The 81 acres used is 1.8% of the park’s total 4,500 acres.

Minimization and Mitigation measures for the roadway project are specified in Appendix E of the SFEIS. They include:

- 1. Relocation of the roadway corridor to the west to move the facility closer to the county government buildings in Area 10 and farther away from recreational areas to the east.*
- 2. Adoption of numerous recommendations of the Shelby Farms Parkway Advisory Team, including use of 4 lanes instead of 6, a 40 mph design speed, a curvilinear alignment, and a trumpet interchange with Walnut Grove Road, which allows for free-flowing movement of traffic.*
- 3. Complementing the facility with bicycle, pedestrian, and equine trails that will provide safe, easy and convenient connectivity within the park.*
- 4. Reduction in the amount of land required for the project from the planned corridor’s 243 acres to the proposed 81 acres.*

Even if Shelby Farms Park is considered a Section 4(f) property as a whole, a de minimis finding is appropriate for the following reasons:

- 1. The proposed pathway of the road does not directly or constructively use any of the features and attributes that would qualify Shelby Farms Park for protection under Section 4(f). Instead, the proposed pathway passes almost exclusively through actively farmed and fallow agricultural fields and Area 10, which houses various county government buildings;*
- 2. The alignment of Kirby-Whitten Parkway has been shifted outside its contemplated corridor for the express purpose of minimizing any*

impacts to any features and attributes that qualify the resource for protection under Section 4(f);

- 3. The number of acres used for Kirby-Whitten Parkway in relation to the overall acreage of the park is minimal; and*
- 4. Development of Kirby-Whitten Parkway is anticipated to enhance access to the park.*
- 5. Proposed changes to the BMX track access were shown on the maps and drawings at the Public Hearing and associated impacted acreage is being addressed in further detail in the revised proposed de minimis finding.*

As a result, no Section 4(f) analysis is required for this project, because even assuming the exemptions for joint planning and multiple uses do not apply, any use of Section 4(f) land is de minimis in light of the proposed mitigating measures associated with the proposed implementation of Kirby-Whitten Parkway.

In addition to the roadway, three additional locations with Section 4(f) de minimis impacts have been identified and were presented to the public at the September, 2013 public hearing. Minimization and mitigation measures for these three locations are as follows:

Greenline Trail Connector: The proposed Kirby-Whitten Parkway will cross this proposed connector trail, with the trail being safely routed beneath the roadway via tunnels. This will maintain continuity in the Shelby Farms trail system while maintaining functionality and purpose. The tunnels will be designed to accommodate equine traffic.

Wolf River Greenway Connector: This trail currently crosses Walnut Grove Road at-grade. The proposed trail will cross beneath Walnut Grove Road through a proposed tunnel, eliminating the at-grade crossing. The tunnel will be designed to accommodate equine traffic.

Greenline Trail: The trail will be realigned to match the proposed improvements, and the functionality and purpose of the trail will remain the same. The proposed trail crossing at the Whitten Road will be designed to have safe sight distance with the realigned intersection, and will be benefited with a protected signalized crossing.

17. The alignment and typical sections look fine. (1 comment)

Noted

18. Build it as proposed; it will be a big improvement over the Farm Road as it is now. (1 comment)

Noted

19. I am a frequent user of the trail system and would find it a shame if it were negatively affected. I have concerns over the Greenline expansion and the traffic at Whitten and the trail. (1 comment)

The Greenline Trail will be realigned to match the proposed improvements, and the functionality and purpose of the trail will remain the same. The proposed trail crossing at Whitten Road will be designed to have safe sight distance with the realigned intersection, and will be benefited with a protected signalized crossing. The City and County are considering options for a future Greenline trail bridge over the Kirby-Whitten

Parkway as a separate project. The Kirby-Whitten Parkway is being designed to accommodate that possibility.

20. Project should be delayed until de minimis 4(f) factors are ascertained. (1 comment)

The Section 4(f) evaluation for the roadway is included in the approved SFEIS. The evaluations for the three trail de minimis impacts were completed and presented at the September 2013 public hearing. These evaluations discuss all factors related to the Section 4(f) impacts. The evaluations for the roadway and the three trails are being combined into one Section 4(f) de minimis document, which will be updated since the SFEIS was signed in January 2012 and will be included in the Record of Decision (ROD). Once officials with jurisdiction (Shelby County Government, Shelby Farms Park Conservancy, and the Land Trust for Tennessee) over Shelby Farms determine whether they concur with the proposed de minimis finding, which states that the project will not adversely affect the activities, features, or attributes that make the property eligible for Section 4(f) protection, FHWA will be in a position to decide whether to issue a Section 4(f) approval. See 23 C.F.R. Part 774.

21. Define de minimis a little better. 500 acres of recreational land will be cut in half. The impact is relative; what is de minimis to TDOT may not be de minimis to others. (2 comments)

FHWA issued guidance for making findings of de minimis (minor) impact and also amended its Section 4(f) regulations to provide for these findings (23 CFR 774.3(b), 774.5(b), 774.17). Refer to the Section 4(f) Policy Paper at <http://www.environment.fhwa.dot.gov/4f/4fpolicy.asp>. An impact to a park, recreation area, or wildlife or waterfowl refuge may be determined de minimis if:

- 1. The transportation use of the Section 4(f) property, together with any impact avoidance, minimization, and mitigation or enhancement measures incorporated into the project, does not adversely affect the activities, features, and attributes that qualify the resource for protection under Section 4(f);*
- 2. The official(s) with jurisdiction over the property, after being informed of the public comments and FHWA's intent to make the de minimis impact finding, concur in writing that the project will not adversely affect the activities, features, and attributes that qualify the property for protection under Section 4(f); and*
- 3. The public has been afforded an opportunity to review and comment on the effects of the project on the protected activities, features, and attributes of the Section 4(f) property*

Source: FHWA Web site, <http://www.environment.fhwa.dot.gov/4f/4fpolicy.asp#intro>

For additional information, refer to Comment 18.

Environmental-Related Comments

22. The project poses a threat to the aquifer. (12 comments) The project will have negative impacts on groundwater. (2 comments) The Conservancy's position on the Parkway harming the aquifer is incorrect. (1 comment) The project crosses the 100-year floodplain. Flooding has recently occurred in the area and will be a problem with the road. (4 comments). The project will have environmental

impacts due to runoff, including a negative impact on the Wolf River due to runoff that will be discharged into it. The study area used in the recharge area impacts study was not large enough to adequately assess the impact. (6 comments)

Additional information about the Memphis aquifer is located in Section IV.N and Appendix H of the SFEIS (<http://www.tdot.state.tn.us/kirbyparkway/docs/FEIS-20120208-Section-2-Appendix.pdf>). The commitments regarding the aquifer are summarized below. A breach, or paleochannel, has been identified in the Memphis aquifer, a prolific aquifer that provides water to people throughout the Tennessee-Mississippi-Arkansas region, north of the closed landfill at Shelby Farms.

With the application of the commitments and other mitigation measures, it is not expected that the construction or maintenance and operations of Kirby-Whitten Parkway through Shelby Farms will negatively impact the Memphis aquifer or its water quality. A total-containment policy will be adopted for any spills of hazardous or chemical materials on the road crossing Shelby Farms. The City of Memphis has committed to employ appropriate measures to capture oil and grit that might otherwise find their way into the aquifer through the window but has not committed on the type of containment system. Prompt response to such an incident and thoroughly cleaning the spill site, including the soil, should result in no spill products reaching the Memphis aquifer. An example of a total-containment method used along Interstate 65 near Mammoth Cave in Barren County, Kentucky, is featured in Appendix H of the SFEIS. Mammoth Cave is an underground resource that feeds groundwater resources. The city of Memphis has committed to including appropriate mitigation measures for managing the runoff from hazardous spill incidents as an element of the construction of the project and will maintain total containment methods following construction.

A monitoring program will be initiated to evaluate the down-gradient extent of a potential leachate plume, its direction of migration, and the impacts of decomposition and dilution on leachate contaminants. This process would involve periodic sampling of the existing well network. This information should serve well to evaluate the potential for any spill contents to reach water supplies. The University of Memphis Groundwater Institute participated in developing commitments for this project and will be involved as design progresses.

TDOT and the city of Memphis will work with the City's design consultant to determine how far downstream runoff can be discharged in an economically practical way. Guidelines in TDOT's Drainage Manual are used for all design projects in Tennessee (http://www.tdot.state.tn.us/Chief_Engineer/assistant_engineer_design/design/DrainManChap%201-11.htm). Standard practice is to connect drainage outfalls with the same channels they are currently using as much as is practical. All drainage outfalls on this project will reach their current outfall channel before reaching the Wolf River.

The SFPC is concerned about two possible impacts of the road on the Park: flooding in the Park and the impacts upon the Memphis Aquifer lying under the Park. With the application of the commitments and other mitigation measures, it is not expected that the construction or maintenance and operations of Kirby-Whitten Parkway through Shelby Farms will negatively impact the Memphis aquifer or its water quality. According to Dr. Jerry Anderson of the Groundwater Institute, reports have indicated that the groundwater supply most susceptible to contamination is the Sheahan well field, which is five miles away and downgradient of Shelby Farms.

Minimal clearing of trees and vegetation cover within the floodplains and zero-bank clearing at streams would reduce floodplain and water quality impacts. Every action will be executed to reduce the risk of flood loss; to minimize the impact of floods on human safety, health, and

welfare; and to restore and preserve the natural and beneficial values served by floodplains.

The project will not result in a significant increase in flooding in the Wolf River floodplain. The guidelines of FEMA's National Flood Insurance Program (42 USC 50) will be met. They will also be consistent with requirements of floodplain management guidelines for implementing Executive Order 11988 and FHWA's guidelines in 23 CFR 650A. Any hydraulic structures will be sized according to TDOT's policies in the TDOT Drainage Manual (http://www.tdot.state.tn.us/Chief_Engineer/assistant_engineer_design/design/DrainManChap%201-11.htm) or the TDOT Design Procedures for Hydraulic Structures (http://www.tdot.state.tn.us/chief_engineer/assistant_engineer_design/structures/thmall.pdf) during the design phase of the project. Structures will be sized to pass the appropriate flood flows in a riverine environment, and the floodplain connection will be maintained with three box culverts for flow equalization purposes. Water surface elevations are specified in hundredths of a foot, so an accurate numerical estimation cannot be provided until the hydraulic design is complete.

The additional runoff discharged into the Wolf River will not be significant or have any impacts to the river. The same drainage area will be discharged into the stream as the area discharged there prior to construction. The roadway will be moved as far west as possible from the potential breach in the aquifer, which will mean that surface drainage will flow toward the road instead of from the road toward the potential breach location.

23. The project poses a threat to wetlands. (4 comments)

Executive Order 11990, Protection of Wetlands, provides guidelines to avoid wetlands where possible and minimize contact with them where total avoidance is not feasible. Federal resources management agencies (e.g., Natural Resources Conservation Service (NRCS), the US Army Corps of Engineers (USACE), and US Fish and Wildlife Service (USFWS)) also recommend impact minimization measures as the best management practices (BMPs). Mitigation measures and BMPs are proposed during highway construction to avoid, minimize, or mitigate impacts to jurisdictional wetlands caused by the selected alternative. These measures may include avoidance and minimization through roadway design modifications and mitigation through wetland banking. A combination of measures to mitigate for wetland losses and changes in functions and values will be employed, as warranted. Selection of BMPs or mitigation measures is influenced primarily by functional values, wetland type, or objectives.

The proposed alignment is estimated to impact approximately 1.7 acres of wetlands; however, detailed wetland delineation will occur in the permitting phase.

24. The Parkway will destroy animal habitat, including habitat of buffalo and birds; the project, including construction, will have a negative impact on habitat. Question: Wildlife won't stay in the nature preserves; how is this going to affect the wildlife between Germantown Road and through Walnut Grove? (6 comments)

Although shown in the SFEIS as impacts to the buffalo grazing and roaming area, this area is not used by buffalo and their rangeland will not be directly impacted by the project. The grazing and roaming area is fenced and will protect the buffalo from vehicular traffic. While wildlife migration cannot be easily controlled, no significant migration patterns have been brought to light in the project corridor. The project is not

<p><i>expected to result in any substantial impacts to wildlife. The selected alternative will use the existing Walnut Grove crossing of Wolf River. Most new development will take place north of the River where the habitat is predominantly pasture and row crops. These areas generally do not provide substantial cover or shelter for wildlife. As such, any impacts are likely to be minimal and temporary as there is abundant similar type habitat outside the project boundary.</i></p>
<p>25. Impact studies on the grassland locations in the park are necessary. This is restored native prairie grassland that provides habitat to six species of endangered grassland birds. (2 comments)</p>
<p><i>While there are no known federally endangered bird species in the native grasslands section of Shelby Farms Park, TDOT and the City of Memphis are coordinating with the SFPC to determine if, and to where, grasslands can be relocated. In addition, TDOT will be updating the ecological study for the entire project corridor to determine if there are any endangered species and/or environmentally sensitive areas that need to be considered. The updated study will be on the project website and will be addressed in the ROD.</i></p>
<p>26. The project will harm the environment/ecosystem due to increased auto emissions and pollution. Question: Emission pollution from increased traffic? (6 comments)</p>
<p><i>The air quality analysis for this project shows existing pollution levels to be the same or improved after the project has been completed. The proposed project will not violate Environmental Protection Agency (EPA) Clean Air standards. Traffic patterns are expected to change with implementation of the project, resulting in reduced traffic congestion in the area and an associated improvement in air quality. In addition, allowing traffic on Walnut Grove Road to flow freely with the removal of stop conditions at Farm Road will result in vehicles producing lower emissions.</i></p>
<p>27. The project will create noise pollution; traffic noise will spoil the park atmosphere. (4 comments) Trees and berms should be used for noise mitigation. (1 comment)</p>
<p><i>Recreational areas will experience some noise-related impacts from the proposed project. Field measurements were taken and an analysis was performed to identify potential traffic noise impacts as required by the FHWA's Noise Abatement Policy in place in 2005. This policy classified recreational areas as Activity Category B, with a Noise Abatement Criteria (NAC) standard of 67 dBA Leq. The traffic noise impact analysis considered four receptors along the project corridor and indicated that traffic noise impacts would exist for the Build Scenario. In the design year, the NAC would be exceeded at one receptor within the park (a parking area just north of the Farm Road/Gardener Road intersection) and the increase in noise levels from existing noise levels is 10 dBA at another receptor located near the BMX track just south of Walnut Grove Road. On July 13, 2011, the Noise Abatement Policy was revised and recreational areas were reclassified from Activity Category B to Activity Category C; however, the Noise Abatement Criteria standard remained the same at 67 dBA Leq. Activity Categories B (Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals) and C (exterior of commercial structures and developed lands not included in Category B) are applicable to the receptors on this project. For Category B, the Noise Abatement Criteria (NAC) is 67 dBA Leq. For Category C, the Noise Abatement Criteria (NAC) is 72 dBA Leq.</i></p> <p><i>Noise abatement is only considered reasonable in areas where "frequent human use" occurs (TDOT Policy on Highway Traffic Noise Abatement).</i></p>

“Frequent human use” is defined as “any activity that results in prolonged human exposure to traffic noise on a regular basis over the course of a year in a given location.” Park users would experience temporary, short-term exposure to noise; therefore the installation of noise barriers is not reasonable along the Kirby-Whitten Parkway through Shelby Farms. For this reason, noise walls are not included in the project.

FHWA does not consider the planting of vegetation (trees and shrubs) to be a noise abatement measure. There is an extensive landscaping plan for the Kirby-Whitten Parkway, however, the results will be aesthetic and will not provide any noise abatement benefits. While very dense vegetation can provide a reduction in noise impacts, it would require approximately 200’ of very thick trees and shrubs, which cannot be seen through, to reduce noise by 10 dBA. Provision of a mature forested area along the road is not feasible.

Berms, if high enough, can provide noise abatement, however, the Shelby Farms Parkway Advisory Team decided to not incorporate a landscaped berm to maintain the aesthetic qualities of Shelby Farms. As part of their Team Recommendation in February 2006, the Team discussed the possibility of hiding the roadway from the view of the recreational areas of the park through the use of berms that would also provide noise abatement. The Team wanted to showcase the quality of the design so that anyone could see it and also wanted those using the parkway passing through the park to be able to see the beauty of the park uses. A sentence was added to the Other Considerations section of the recommendation that said “The Team’s vision for the Shelby Farms Parkway is a road that blends into the natural and topographic setting of Shelby Farms”.

28. The project will lead to increased litter in the Park. (1 comment)

Noted

29. If the road is not built, the congestion will cause more air pollution than the Parkway would cause. (1 comment)

Noted

30. Key environmental problems were not presented to the public or to the Advisory Team. (2 comments)

As part of the CSS process, the SFPAT, a 19-member Resource Team that included users and representatives of users of the park, participated in a process to assist Shelby County, the city of Memphis, and TDOT in selecting a roadway design concept that met the citizens’ needs. During that process, two public meetings and a public hearing were held along with six meetings with the SFPAT. New information such as potential impacts to the aquifer was later presented in the SFEIS, which also had a public comment period. Follow-up meetings were held with the SFPAT on 7-31-08 to discuss the landfill and 6-27-12 where the aquifer breach issues were discussed. The SFPAT did not suggest changes to their recommendations at these meetings. An additional NEPA Public Hearing was held in the fall of 2013, followed by a 22-day comment period. All environmental issues were presented as the information was gathered. All environmental concerns have been presented in the NEPA documents which are on TDOT’s website.

31. The project will cause an impact of the road leaching from the landfill. (1 comment)

A study was performed during the CSS process to define the landfill boundaries and look at possible clean-up scenarios. Ultimately, the SFPAT met to review the findings of the study and options available and chose to modify the Selected Alternative slightly to avoid any impacts to the

<i>existing landfill. Any leaching occurring now may continue to occur, but will not be due to road construction.</i>
32. The environmental studies are debatable. The project should be delayed until more environmental studies are completed. (2 comments) Environmental issues have not been properly addressed. (Sierra Club Form, 49 comments (#3 circled))
<i>All of the required environmental studies have been completed and approved by agencies with jurisdiction. In all cases, the environmental documents were updated numerous times to reflect changes to the design and the regulations since the early 1980's. The ecological study is currently being updated again, and additional environmental studies will be undertaken in the permitting process.</i>
33. There is no reflection of economic justice here. Question: Can anyone who rides a bus actually come to this public meeting? (1 comment)
<p><i>"Economic Justice," a concept of fairness in business practices and in the allocation of benefits, does not apply to this project. However, Environmental Justice principles have been considered. Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations (dated February 11, 1994), requires Federal agencies to identify and address, as appropriate, disproportionately high and adverse human health and environmental effects, including the interrelated social and economic effects of their programs, policies, and activities on minority populations and low-income populations. A review of Census information, accompanied by numerous site visits, revealed no concentrations of low income and/or minority populations in the project area. The recreational facilities in Shelby Farms are available to and used by all populations of residents through Shelby County and beyond. The implementation of the proposed project would not have a disproportionately high and/or adverse impact on any particular population.</i></p> <p><i>Regarding attendance of the public meeting by those that use public transportation or are disabled, the public notice for the hearing states that "Persons with a disability, who require aids or services to participate at the meeting, may contact (TDOT) at the following address no later than ten (10) days prior to the date of the meeting." Special transportation service is provided by TDOT for Public Hearings when requested in advance.</i></p>
34. There will be major impacts on the Park; there will be negative impacts to its naturalness. (2 comments)
<p><i>As discussed in Appendix E of the SFEIS, TDOT and Shelby County state that Section 4(f) does not apply in light of the joint planning exception, and to the extent that there is a use of the park, that use is de minimis. The de minimis determination is discussed in the proposed de minimis finding, which will be available in the ROD.</i></p> <p><i>Currently, Shelby Farms is divided into northern and southern sections by Walnut Grove Road. Construction of the Kirby-Whitten Parkway will further divide the park into a large eastern section, which contains the majority of the recreational resources, and a much smaller western section, much of which is being used as agricultural land, as well as a prison and governmental offices located farther west. The naturalness of the park will be maintained in those areas where most of the recreational resources are located. Construction of the new parkway will move the through traffic much farther west, with portions of the existing Farm Road taken out of vehicular service to be used as multi-use paths. Other portions of existing Farm Road will remain in service to accommodate the much lower internal park circulation traffic. In addition, new trails will</i></p>

be in place after construction of the Kirby-Whitten Parkway, which will provide pedestrian access to areas of the park that were previously inaccessible for recreational use.

35. The project takes public land. (1 comment)

The project from Walnut Grove Road to Mullins Road will require a change in use of property that is currently owned by Shelby County. Property required for the project north of Mullins Station Road is privately owned.

36. Gardens will be impacted by the project. (1 comment)

There are no gardens directly impacted by the project, however, access to the gardens will be impacted with the introduction of a right-in/right-out intersection at the proposed Kirby-Whitten Parkway and Gardener Road, meaning that access into the garden area will require travelling south on the Kirby-Whitten Parkway from Mullins Station Road and turning right into the garden area. When leaving the gardens, a right turn is required on the Kirby-Whitten Parkway towards Walnut Grove Road. Therefore, users will have limited access to the gardens directly from the Kirby-Whitten Parkway. The gardens located near the park are farther west of the project area, and so are not directly impacted. The majority of the land used for the construction of the project is farmland.

37. The SFEIS for the proposed Parkway briefly addresses these environmental risks, but mitigation details are deferred until Final Engineering, after approval for the road. The public should not be expected to approve the road on this basis. (1 comment)

Mitigation details and commitments are provided on the Environmental Commitments sheets (green sheets) in the SFEIS, within the SFEIS narrative, and in the Section 4(f) discussion in Appendix E of the SFEIS. Mitigation measures have been considered to the greatest extent practicable, but all mitigation details won't be final until final design has been completed.

Financial-Related Comments

38. Too expensive - The \$24.5 million cost estimate for the parkway (shown in the 2011-2014 TIP) has not been updated to reflect the cost of addressing/mitigating the environmental issues, the cost of addressing the Conservancy's issues, the cost of addressing other issues which have been raised, or the cost of inflation. There is also no cost estimate for the operating costs of running the parkway- the basic costs, and the supplemental costs associated with maintaining all of the environmental mitigation activities. (2 comments from Sierra Club letter + 8 citizen comments indicating the cost estimates are outdated + 12 comments from the Sierra Club form letter). The project will be a burden to Memphis' budget; the project is fiscally irresponsible; the project is too expensive (Sierra Club letter + 8 comments) (#2 circled))

The most recent planning level cost estimates developed for the project in 2008 estimated the interchange to be approximately \$7.8 million of the total project cost of \$23.8 million, which includes mitigation as outlined in the SFEIS for Shelby Farms Park. The Memphis MPO prioritizes projects that are recommended for funding. Federal funds will cover 80% of the project costs, and City of Memphis will be responsible for the remaining 20%. For the purposes of this summary, an updated 2014 planning level cost estimate was done that places the total cost of the project at approximately \$35.8 million of which \$10.0 million is attributed to the grade separated interchange. The cost estimate mostly increased due to inflation, but also includes additional costs of \$1.8 million for landscaping, \$500,000 for shared use paths, and \$1.4 million for

<i>multimodal tunnels to mitigate for Section 4(f) impacts. Cost estimates are not typically performed for long-term operating or maintenance costs. When local governments commit to constructing a project, they have committed to the long-term operating and maintenance costs. Following the conclusion of the NEPA process, the City of Memphis will take over design, construction, and maintenance of the project.</i>	
39. Memphis would pay the local share of the project's cost, but the great majority of the benefits would accrue to individuals living in suburbs, which is unfair. (2 comments from Sierra Club letter + 1 citizen comment)	
<i>Shelby Farms Park is within Memphis city limits and except for the east side of Whitten Road, the entire project is within city limits. The project decreases travel time and improves travel convenience between Poplar Road and I-40, and will benefit both City and County residents. The project area is within the MPO planning area, which includes the City of Memphis. A Select Link Analysis performed on the current MPO model indicates that the biggest origin-destination pairs using the proposed Kirby-Whitten Parkway are from the neighborhoods closest to the park.</i>	
40. The project plan (SFEIS) provides no financial justification (no estimate of benefits, no cost/benefit analysis, and no comparison to other projects) for the project. (Sierra Club letter)	
<i>Due to the subjective nature of the calculation of benefit/cost ratios, TDOT does not have a policy of developing benefit/cost ratios to justify these types of projects. Cost estimates for the Kirby-Whitten Parkway and the two final interchange types were presented to the SFPAT while developing their recommendations. The Purpose and Need refers to crashes and capacity as justification. Projects are prioritized in a three-year plan and regionally prioritized by the MPO based on need and available funding.</i>	
41. When actual costs exceed budgeted cost, what will happen to the plan, such as cosmetic issues, plantings, accommodations for pedestrian and bicycle traffic? What will be the sacrifices? (4 comments)	
<i>The project costs have specific line items for construction, landscaping, and trails. The Record of Decision will contain a list of commitments that will have to be provided independent of any cost overruns.</i>	
42. Why does the SFEIS not state the cost of the project? Ideally, it should show the cost of each of the major components of the project. How can citizens approve a project when it is so hard to find out what it costs? (1 comment)	
<i>Project costs were briefly covered in the SFEIS; however, updated costs will be shown in the ROD. For the purposes of this summary, an updated 2014 planning level cost estimate was done that places the total cost of the project at approximately \$35.8 million of which \$10.0 million is attributed to the grade separated interchange. The cost estimate mostly increased due to inflation, but also includes additional costs of \$1.8 million for landscaping, \$500,000 for shared use paths, and \$1.4 million for multimodal tunnels to mitigate for Section 4(f) impacts.</i>	
<i>The ROD will be available on the TDOT web site once approved.</i>	
43. What is the cost of addressing/mitigating the environmental issues which have been identified? (1 comment)	
<i>The only known cost associated with mitigation at this time is landscaping and tunnel crossings. Approximately \$1.8 million will be allocated for aesthetic landscaping treatments throughout the project area. Cost estimates for run-off containment will be developed once final design</i>	

<i>commences and concepts are further developed. Three tunnel crossings estimated to cost \$1.4 million and shared use paths estimated at \$500,000 will be constructed to mitigate for impacts to the trails. All three crossings will be wide enough to accommodate pedestrians and equestrian uses.</i>
44. 3.5 Question- What is the additional cost of the project due to inflation? (1 comment)
<i>A contingency of 10% was included in the 2008 cost estimate to cover inflation costs. The updated cost estimates include a similar contingency.</i>
45. 3.6 & 3.7 Question- What is the estimated cost of operating the parkway- the basic costs, and separately, the supplemental costs associated with maintaining all of the environmental mitigation activities? Have these estimated operating costs been shared with anyone - citizens or public officials? (1 comment) 3.8 Question- What will happen with the expected ongoing environmental mitigation procedures if the city budget is tightly constrained (as it is currently) and someone proposes cutting these costs from the budget? (1 comment)
<i>Cost estimates for long-term maintenance have not been prepared. The City and County are obligated to implement the commitments described in the SFEIS and provide continued maintenance. The ROD will contain a list of commitments, which are legally binding.</i>
General Comments
46. The through road may lead to increased crime. (1 comment)
<i>Concern noted</i>
47. Please revisit the plan to extend Kirby Whitten. The plan you have is outdated! (1 comment)
<i>The Selected Alternative has been continuously updated after careful consideration of all reasonable alternatives, including the assessment of their potential environmental impacts (social, economic, and environmental), project costs, and the evaluation of public and agency comments stemming from the extensive project coordination and public involvement/public hearing process.</i>
48. Is MATA being brought into this planning at all so as to foster a more sane and effective public transit system making use of the improved conditions? (1 comment)
<i>MATA is a voting member of the Memphis MPO and participates in transportation project planning on a regional level.</i>
49. How about recharge stations for those with electric vehicles and using electric vehicles within the park for security, etc.? (1 comment)
<i>Recharge stations are provided at the Shelby Farms Visitors Center. Additional recharge stations are not part of this project.</i>
50. Is this going to be a cohesive effort or another ramp to nowhere (1 comment)
<i>The SFPAT included a cross-section of representatives with a wide variety of viewpoints, goals, and experiences. The SFPAT worked together to select an alignment and roadway design concepts to which the group could agree. The consensus of the group was the best combination of the group's work. This process resulted in all members reaching consensus on and signing the final recommendation. That recommendation will</i>

<i>serve as the background for the final design of the project, although coordination with the SFPAT will be ongoing. Ultimately, the City of Memphis and TDOT will make the final decisions regarding design of the project.</i>	
51. A deadline for making a decision should be set and the project should be dropped if there is no consensus by that time. (2 comments)	<i>Since the Public Hearing was held, the next steps toward completing the NEPA process are 1) the completion of the Section 4(f) process and 2) the completion and signing of the Record of Decision (ROD). Upon completion of the ROD in 2014, final design will begin.</i>
52. I'm concerned that the agreement(s) between the Conservancy and the government are not guaranteed and that the lack of lighting will not be approved by FHWA.	<i>Lighting plans have not been developed in the preliminary stages of the project but all lighting decisions are made locally. No street lighting will be provided for the Kirby-Whitten Parkway between the interchange and Mullins Station Road, but lighting will be provided in the tunnels for safety reasons. Commitments made in the final NEPA document are binding.</i>
53. If the state, county and city are so good at management, why is a non-profit entity managing Shelby Farms? (1 comment)	<i>The Shelby Farms Park Conservancy (SFPC) manages the park by benefit of a management agreement that is held with Shelby County government. The SFPC was established in 2006 after the SFPAT identified their selected alignment for the Kirby-Whitten Parkway. The SFPAT knew the SFPC and Master Plan would be put in place when their work was done, and one mission of the SFPC was to work on behalf of the citizens to ensure that the road is sensitive to recreational use and environmental resources.</i>
54. Why didn't TDOT update the TDOT website to correct the name of the city in which the public hearing was occurring in? (Since TDOT was notified of this mistake a week prior to the public hearing). (1 comment)	<i>TDOT recognized the error and corrected the website. The Public Hearing was well-advertised with the correct city through local newspapers, radio, televised broadcasts, variable message boards, and through social media. Approximately 278 citizens attended the Public Hearing, and 194 comments were received after the meeting since citizens had the opportunity to submit comments even if they did not attend the Public Hearing.</i>
55. Have the owners of the rental houses been consulted? (1 comment)	<i>No, right- of-way activities will not begin until completion of the NEPA process and final design.</i>
56. The public wants drawings, rendering and models; thorough environmental studies; true cost analysis; honest traffic projections; the NEPA and CSS studies have been manipulated and illegal. (1 comment)	<i>Drawings, renderings, and digital models of the final design will be developed and presented to the public after the signing of the ROD. Preliminary drawings and renderings were made available in the SDEIS and SFEIS, which can be viewed at http://www.tdot.state.tn.us/kirbyparkway/. Future documentation will also be made available at this website. Final design cannot commence until approval of the ROD. Thorough environmental studies have been conducted and approved by agencies with jurisdiction. Updated cost</i>

estimates will be made available as the project progresses through Design. Traffic projections were recently updated and are consistent with the projections that were given to the SFPAT and to the public. The NEPA environmental studies have been transparent and thorough, and were updated in the SFEIS. The CSS process is not a regulatory process required by FHWA or TDOT on projects. The CSS process is endorsed by the FHWA and more info is found here: http://www.fhwa.dot.gov/context/css_primer/index.htm. For this project, it was an effort to involve a concerned group of citizens. Far from evidencing any intent to withhold information, it was an open endeavor to involve the public. It was performed at the discretion of Shelby County, TDOT and the SFPAT. In addition, further public involvement will be conducted after the preliminary right-of-way design is completed through an advertised design public meeting.

57. Planning officials have not sufficiently justified the need for the road; concerned about the documentation of the need for this project. (2 comments)

The need for the Kirby-Whitten Parkway project was documented in several transportation studies. For more than three decades, Memphis regional transportation plans have included a north-south connection in the vicinity of Shelby Farms. These plans were part of an overall strategy for a coherent road pattern based on a one-mile grid system. According to plans, a road pattern consisting of a north-south element was missing from the desired grid. In 1983, Kirby-Whitten Parkway was chosen as the north-south route between I-240 and Germantown Parkway. Since that time, the route has been redesigned to reflect opinions stated during several public meetings. Prior to 1983, the regional plans consisted of two major north-south roadway projects, the northern extension of Kirby-Whitten Parkway and the proposal for a Riverdale Road. In 1983, development of the Agricenter International center located in Shelby Farms decreased the possibility for Riverdale Road. The proposed Kirby-Whitten Parkway extension northward to Whitten Road remained intact.

58. The plan has numerous environmental, legal, and financial problems. (1 comment)

All of the required technical environmental studies have been completed and approved, as required by agencies with jurisdiction. In all cases, the environmental documents were updated numerous times to reflect changes to the design and the law since the early 1980's. All planning and design has adhered to applicable laws and regulations, and the CSS and public involvement processes have provided the public with a transparent view of the plans and decision-making. The plan is funded by local and Federal monies, and has been a high priority project through thirty years of project reevaluations, studies, and public discussion. The project was developed in conformance with applicable Federal (and state) laws including but not limited to the National Environmental Policy Act (NEPA) and Section 4(f) of the U.S. Department of Transportation Act, and is financially constrained as required for FHWA approval.

59. It should be clear that the FHWA has approved the form of the plan, not the plan itself. (1 comment)

FHWA conducted an independent analysis of the project documentation for project compliance with NEPA and other applicable laws, including Section 4(f) of the Department of Transportation Act, and relevant FHWA regulations, including 23 CFR Parts 771 and 774.

I-40/I-240-Related Comments

60. The I-40/I-240 interchange reconstruction project may alleviate congestion at the park; traffic projections are needed after that construction is complete. (Sierra Club letter + 9 citizen comments + 30 comments from Sierra Club form (#7 circled))

Planned improvements for I-40 and I-240 were anticipated in the design of this project and the identification of the Selected Alternative. Some of those improvements have been constructed. In addition, MPO traffic model projections included the planned improvements to I-40/240 and a need is still seen for the Kirby-Whitten Parkway.

61. Constructing the road while I-240 construction is occurring would cause more traffic problems for Cordova, Bartlett, and Germantown. (1 comment)

Construction of I-240 is expected to be completed prior to construction starting for the Kirby-Whitten Parkway. Traffic congestion will improve once both projects have been completed. Should any construction overlap, maintenance of traffic plans will be coordinated to ensure that major traffic disruptions do not occur.

Comments Related to Integrity of Park

62. The quality of the Park is of greater benefit to our community than moving traffic more quickly. (3 comments)

The need for the Kirby-Whitten Parkway project was documented in several transportation studies. For more than three decades, Memphis regional transportation plans have included a north-south connection in the vicinity of Shelby Farms. These plans were part of an overall strategy for a coherent road pattern based on a one-mile grid system. According to plans, a road pattern consisting of a north-south element was missing from the desired grid. In 1983, Kirby-Whitten Parkway was chosen as the north-south route between I-240 and Germantown Parkway. Since that time, the route has been redesigned to reflect opinions stated during several public meetings. Prior to 1983, the regional plans consisted of two major north-south roadway projects, the northern extension of Kirby-Whitten Parkway and the proposal for a Riverdale Road. In 1983, development of the Agricenter International center located in Shelby Farms decreased the possibility for Riverdale Road.

The quality of Shelby Farms is of great importance to the City and every effort has been made during project development to create a road that enhances and improves access to Shelby Farms with minimal adverse impacts, while improving mobility of citizens and reducing traffic congestion. Refer to Comment 16 for a list of minimization and mitigation efforts. In addition, a robust landscaping plan has been developed to improve the aesthetics of the road. Also, trails will be constructed adjacent to, and crossing beneath, the proposed roadway so that connectivity can be safely maintained throughout Shelby Farms.

63. The Parkway will detract from the Park and will hurt the image of Memphis; fewer people will want to use the Park. (2 comments)

A major objective of the SFPC is to improve connectivity and accessibility to the Park, particularly for poorly served parts of the City. The Kirby-Whitten Parkway provides improved access to the park while reducing congestion and improving safety.

64. The Parkway will divide the park. (4 comments) Parks should not have traffic running through them. (1 comment)

Currently, Shelby Farms is divided into northern and southern sections by Walnut Grove Road. Construction of the Kirby-Whitten Parkway will further divide the park into a large eastern section, which contains the majority of the recreational resources, and a much smaller western section, much of which is being used as agricultural land. Moving the project as far west as possible was recommended by the SFPAT, as shown in the SFEIS. The park is already split into eastern and western portions by Farm Road with recreational facilities east of Farm Road and mostly

agricultural land west of Farm Road. Farm Road currently carries approximately 14,500 vehicles per day through the park and is congested during peak periods. Construction of the new parkway will move the through traffic much farther west, with portions of the existing Farm Road taken out of vehicular service to be used as multi-use paths. Other portions of existing Farm Road will remain in service to accommodate the much lower internal park circulation traffic.

Connectivity between the western and eastern section of Shelby Farms will be maintained with the inclusion of two tunnels beneath the proposed Kirby-Whitten Parkway. One will be located south of Mullins Station Road at the existing Farm Road and a second will be located south of the park entrance. Non-motorized traffic will also be able to cross the Kirby-Whitten Parkway at-grade at the new signalized intersection of the Kirby-Whitten Parkway and Farm Road and at Mullins Station Road. A new tunnel under Walnut Grove Road will help to safely move bicycle and pedestrian traffic across Walnut Grove Road compared to the existing at-grade intersection. Many large urban parks have traffic running through them as a means for providing access to the park. Farm Road would no longer be a commuter road and will serve as an internal park road after construction. It will also be converted to non-vehicular use in some areas according to the project design and the Master Plan.

65. This is an irreversible use of parkland that will ruin the Park's integrity. The Park will never be able to return to a natural state if the Parkway is built. (16 comments)

In the past, Shelby County Government, which exercised jurisdiction over Shelby Farms, determined that the area was a multi-use area and that the project did not go through or utilize any parkland within the multi-use area. FHWA had concurred with this determination. FHWA asked for this question to be revisited in part because of the Grant of the Conservation Easement describing the entire Shelby Farms Park as a park. The proposed pathway for this project would pass mostly through agricultural fields. Because a corridor for a north-south road was envisioned concurrently with development of Shelby Farms as a park, project planners do not think that any land currently intended for recreational park use is being used for the Kirby-Whitten Parkway. To the extent that the project is going through any 4(f) property, TDOT and Shelby County think after careful consideration the use is de minimis, because the project will not adversely affect the activities, features, or attributes that make Shelby Farms eligible for Section 4(f) protection. The SFPC, as an organization with jurisdiction over Shelby Farms, is being given the opportunity to indicate whether they concur with the proposed de minimis finding after having had the benefit of reviewing public comments on the 4(f) issue. Finally, the Federal Highway Administration will then make the final decision whether to approve the 4(f) analysis and proposed de minimis finding for the project. Shelby Farms Park is currently crossed by Farm Road, Gardener Road, and North Pine Lake Drive, which crosses the park in multiple places.

66. We will be throwing away 150 acres and destroying 128 acres of park. (1 comment)

The current pathway for Alternative Q acquires less land than contemplated in earlier plans. The original 1,000-foot corridor consisted of 243 acres. The total right-of-way for the project as currently contemplated consists of 81 acres – a reduction of 162 acres. As a result, the project would use approximately 67% less acreage than originally provided. Of the 81 acres to be used, 71.5 acres fall outside the original 1,000-foot corridor, and 9.5 acres are within the original corridor; however, much of the new alignment passes through or along Area 10, which is occupied by county government buildings not devoted to recreational activities. The 81 acres used is 1.8% of the park's total 4,500 acres.

Comments that Oppose Project

67. I am opposed to the project. Specific comments include: the project is morally wrong; the road is not needed; existing speed limits should be enforced; the road will not add value to the park. (20 comments)

Noted. The project meets the goals from the purpose and need. The proposed road adds value to the park with improved access. Enforcement is the responsibility of local government.

Comments Related to Engineering Plans

68. Question: Will an elevated crossway or other provision to safeguard the path of bicyclists and pedestrians seeking access to Shelby Farms at the intersection of Walnut Grove Road and Farm Road? (2 comments)

A proposed tunnel crossing will assist those using the trail crossing Walnut Grove Road. The tunnel will be sized to accommodate bicyclists and equestrian traffic. The proposed tunnels will be designed to accommodate equine traffic by meeting or exceeding the requirements specified in the "U.S. Forest Service Equestrian Design Guidebook for Trails, Trailheads and Campgrounds," which require a tunnel height of 10 feet and width of 12 feet. The Wolf River Trail tunnel will be 12 feet high, while the Greenline Trail tunnel will be 10 feet high.

69. The public should be allowed to see a full and complete concept plan of the Parkway that shows how all recreational needs, including traffic flow at new entrances/exits to the Park, will be impacted/mitigated by the Parkway. (3 comments)

Before final design is completed, a design public hearing will take place to show the final detailed design plans to the public. Preliminary drawings and renderings were made available in the SDEIS and SFEIS; materials related to the Public Hearing can be viewed at <http://www.tdot.state.tn.us/kirbyparkway/>. Subsequent plans will also be made available at this website as design progresses.

70. The Conservancy believes that 11-foot lanes are sufficiently safe; I request that the road design be narrowed to 11 feet. (1 comment)

The SFPAT agreed to the recommendations for 12-foot lanes, which are considered prudent for safety reasons. In addition, TDOT roadway standards require 12' lanes with 12' shoulders for this type of facility.

71. The cloverleaf design is inappropriate for a park and will encourage more traffic. (1 comment)

The proposed interchange is a trumpet interchange, which has one loop ramp as compared to four loop ramps in a cloverleaf interchange. The trumpet interchange was designed to enhance the major traffic movements and shift the interchange location as far west as possible. It is anticipated that more traffic will use the improved roadway and interchange than currently uses Farm Road due to the increased mobility allowed by the improved design and increased number of lanes.

72. Tunnels are not likely to be useful for wildlife. Additional tunnels along the west edge of the parkway should allow for movement of wildlife throughout the park; there need to be underpasses or overpasses for wildlife to cross the Parkway. The pedestrian tunnels should be redesigned to accommodate equestrian traffic. Question: What is the height of the tunnels? (6 comments)

To accommodate equestrian traffic, the Wolf River Trail tunnel will be 12 feet high, while the Greenline Trail tunnel will be 10 feet high; these

<i>heights could also accommodate all wildlife in the project area. These tunnels could accommodate wildlife but are not designed specifically to do so. Since the Kirby-Whitten Parkway will not be fenced, directing wildlife to tunnels would be difficult.</i>
73. The pedestrian/bicycle path across the intersection of Whitten and Mullins Station must be revisited – it is counterproductive and does not appear to be safe. (1 comment)
<i>The crossing of the Greenline Trail at Whitten Road will have improved sight distance for pedestrians and a crossing signal. The current plan as shown before the Kirby-Whitten Parkway is constructed does not have a safe crossing at the unsignalized Whitten Road.</i>
74. An additional tunnel at Gardener Road at the Parkway is needed to allow vehicular access to the community gardens and park destinations west of the parkway. How will the Parkway affect individuals that like to use Gardener Road? (1 comment)
<i>The proposed plan includes a right-in/right-out intersection at Gardener Road, meaning that access into the garden area will require travelling south on the Kirby-Whitten Parkway from Mullins Station Road and turning right into the garden area. When leaving the gardens, a right turn is required on the Kirby-Whitten Parkway towards Walnut Grove Road. Therefore, users will have limited access to the gardens directly from the Kirby-Whitten Parkway.</i>
75. I would like a connector trail from the Walnut Grove pedestrian bridge to the dirt trails that pass under the bridge. (1 comment) I request that an additional trail be included to connect the north side of Walnut Grove Road just east of the Wolf River with the lower dirt trails that extend north and south along the Wolf River. (1 comment + 9 in agreement)
<i>A connector will be added for this location which is referenced in both comments. Details of the connections to existing trails will be coordinated throughout final design with the SFPAT.</i>
76. The widths of the medians should be increased and include more variety. (1 comment).
<i>The median width is variable to allow for landscaping. The landscaping plan will be developed in the design phase. Further widening of the median would require additional property from Shelby Farms to be used for roadway right-of-way.</i>
77. Question: How will adequate lighting, camera, security patrols, air quality, and surface be maintained and what entity will be responsible? (1 comment)
<i>The City of Memphis will be responsible for maintaining the infrastructure and for security. Air quality is addressed during periodic attainment updates performed by the Memphis MPO. The City will also be responsible for lighting that is to be included in the tunnel locations. No other lighting will be added as part of this project through Shelby Farms Park. Lighting will be provided on Whitten Road north of the park.</i>
78. There should be guarantees that the connectivity of trails will be protected; multi-use access to trails, included the non-paved trails, must be given high priority; full interface to the park's upper trail system via overpasses/underpasses must be provided. (2 comments)
<i>Approximately 15,606 feet, or 2.96 miles, of trails will be added during construction of the Kirby-Whitten Parkway, as shown in the SFEIS. The park currently contains 15.02 miles of paved trails; the additional trails will constitute a 20% increase. Final design for the Kirby-Whitten</i>

Parkway will not begin until the ROD is issued by FHWA. Final design will include an at-grade crossing (a striped crosswalk) of the Kirby-Whitten Parkway for users of the Greenline at Mullins Station. This crossing will be compatible with a potential future grade-separated crossing for the Greenline. Tunnels will be used for the trails to cross the Kirby-Whitten Parkway and at Walnut Grove Road. As final design progresses, details of the features incorporated will be coordinated through the SFPAT and the SFPC.

An additional .554 acres of trail will be converted to recreational use within the park. Portions of the existing trails will be removed during construction to accommodate improvements with the new trails.

79. Additional access is needed along the Park's bisection of Walnut Grove Road. (1 comment)

A crossing location is provided with this project at the existing Walnut Grove Road intersection. In addition, an existing dirt crossing is provided under the Wolf River bridge near Humphreys Boulevard. These crossings are within the limits of this project. Additional crossings of Walnut Grove Road east of Farm Road would have to be pursued as separate projects either through the Shelby Farms Master Plan or the City or County governments.

80. The plan offers only marginal solutions for pedestrian safety. (1 comment)

The Selected Alternative will be enhanced by the inclusion of multiple bicycle and pedestrian multi-use paths separated from the roadway. There will also be two tunnels provided (under the Kirby-Whitten Parkway and under Walnut Grove Road) for cross-roadway connectivity. Details of the Farm Road/Kirby-Whitten Parkway intersection will be coordinated with the SFPAT during final design once the ROD has been completed. Park and trail users will be able to safely and conveniently use the separate facilities. Pedestrian crosswalks will be placed only at locations where signalized crosswalks are provided.

81. Is the date of groundbreaking known? (1 comment)

No construction dates are set at this time.

82. A lot of runners would prefer not to run on concrete. (1 comment)

Trails will be constructed from similar materials as existing trails through the park. The trail designs will be coordinated with the SFPAT and SFPC.

83. Question: Are there any plans to improve the BMX track? Will there be impacts from temporary construction easements? If the track is hidden by the big hill, vandalism and break-ins may occur. (1 comment)

There are no improvements to the BMX track as part of this project. The entrance will be moved to the Catch'em Lake entrance, and there will be a slightly relocated Moore Road from there that will tie into the road leading to the BMX track, which helps improve overall access to the track. An additional 0.8 acres of Agricenter non-recreational use land will be converted to road right-of-way for the relocation of Moore Road. The track will still be visible from Walnut Grove Road. No easements on the BMX track are expected to be needed during construction.

84. Are bike lanes going to be afforded from the north in Bartlett down to the park on Whitten? (1 comment)

<i>Six foot bicycle lanes will be included on both sides of the new Kirby-Whitten Parkway from Mullins Station Road to Macon Road. No improvements will be made north of Macon Road as part of this project.</i>	
85. Why isn't there a tunnel at the street light that is going east to west on Mullins Station? (1 comment)	<i>Tunneling under the new Kirby-Whitten Parkway would be difficult given the proposed lower grade for it. The Kirby-Whitten Parkway is being lowered to allow for the possibility of constructing an overpass bridge for the Greenline over the Kirby-Whitten Parkway in the future as part of a separate project.</i>
86. The large culvert in the woods providing trail access across the drainage creek needs to remain intact for continuity of the trail (east to north movement). (1 comment)	<i>No existing trail drainage facilities are being removed with this project. Proper drainage will be provided for all trail crossings.</i>
87. A small length of multi-use path should be added to maintain the connection to the dirt trails from the visitor center and the bridge. (1 comment)	<i>This connection will be part of an enhancement grant and not part of the Kirby-Whitten Parkway project. The details of connectivity of trails will be coordinated with the SFPAT and the SFPC throughout final design.</i>
Comments that Support Project	
88. Stated support of project due to the improved traffic conditions it will provide. (24 comments)	<i>The elimination of the traffic signal at Walnut Grove Road and Farm Road, and the modification of Farm Road to be a right in/right out intersection will improve traffic flow significantly along Walnut Grove Road, and is expected to reduce the number of crashes that currently occur at this intersection. A grade separated interchange will improve traffic flow and eliminate conflicts for the heaviest movements.</i>
89. Stated support of the project and belief that the project will serve the public/Shelby County well. (4 comments)	<i>Comment noted</i>
90. Stated support of the project and approval of the design. (7 comments) Stated support of the project and belief that it will enhance users' experiences and view of the Park. (11 comments) This project will alleviate congestion, improve safety, and enhance the experience of the park; it will also better divert through traffic from park facilities. (4 comments)	<i>Comment noted</i>
91. Suggest Segment B to C be straightened to remove curves and reduce potential crashes. (1 comment)	<i>The curvilinear alignment is one of the measures to minimize any impacts the project would have on the features in Shelby Farms Park that qualify for protection under Section 4(f). In addition, the curvature in the roadway is included for traffic calming to encourage lower driving</i>

speeds.
92. Well-designed. Costs for the tunnels under Mullins and Kirby Parkway for the Greenline Trail should be made now. (1 comment)
<i>Tunnels estimated to cost \$1.4 million will be constructed as part of the project with two under the Kirby Whitten Parkway (Shelby Farms Parkway) and one under Walnut Grove Road. A tunnel will not be provided under Mullins Station Road. The City of Memphis and Shelby County are exploring the potential of providing an overpass at Whitten Road for the extended Greenline as part of this project or through a future independent project.</i>
93. Stated support of the project due to improved safety it will provide. (4 comments)
<i>The final alignment, pedestrian and bicycle paths, and tunnels are all designed to provide increased safety for both vehicular and non-vehicular traffic.</i>
94. All environmental concerns have been addressed. (1 comment) States support of project. (1 comment) Not building the road will have negative consequences for the Park and its users. (1 comment)
<i>Comment noted</i>
95. The project will have a great impact on the agricultural land. I'm concerned about the intersection with Mullins Station and the new urban area from Mullins Station to Macon Road; otherwise, I like the plan. (1 comment)
<i>A board member of the Agricenter is a member of the SFPAT. He has not expressed concern with the conversion of a portion of the agricultural land to construct the Kirby-Whitten Parkway. Many of the homes along Whitten Road were constructed with the understanding that Whitten Road would eventually be widened. The five-lane typical section is narrower than the seven-lanes previously planned for this section.</i>
96. Please begin construction as soon as possible. (5 comments)
<i>Final design will begin after the signing of the ROD. A construction date has not been set for the project.</i>
97. The Colonial Parkway could be used as a model for the proposed project. (1 comment)
<i>The SFPAT was presented with and discussed numerous examples of similar facilities both in Memphis and across the United States. Some elements of other facilities were included in the development of recommendations for this project. The Colonial Parkway example will be passed on to the final design consultant as another potential example.</i>
Comments Related to Tractor-Trailers
98. Tractor-trailers should not be allowed on the Parkway; an exception should be made. (10 comments) We will have to hear tractor-trailers in my neighborhood. (1 comment) The project's Advisory Team's signed agreement was based on an assumption that no tractor-trailers would be allowed on the road; the planners have defaulted on the requirement to prohibit commercial truck traffic. (Sierra Club letter + 1 citizen comment) What measures will be taken to ensure that large trucks and vehicles with hazardous

materials do not access the Parkway? (1 comment)

Restricting tractor-trailer traffic on the Kirby-Whitten Parkway will require an exception to be made by Congress. TDOT, the County, and FHWA clarified this point in the SFEIS, which was signed on January 30, 2012. Currently, tractor trailer use is restricted on Walnut Grove Road west of I-240 (southeast of the project area). According to 23 CFR 658.19(a), reasonable access between National Network routes, such as nearby I-240, I-40, and US 79, and points of loading and unloading to household goods carriers, motor carriers of passengers, and other covered truck tractor/semitrailer combinations is required; therefore, since non-motorized traffic and tractor trailer traffic will be separated in the proposed Kirby-Whitten Parkway, thereby making the road safer for all users, tractor trailer traffic cannot be prohibited from using the Kirby-Whitten Parkway because the state cannot deny reasonable access to tractor trailers (23 CFR 658.19(h)(ii)).

The City and County mayors have committed to the SFPC that they would use all of their resources to seek an exception and prohibit tractor-trailers. The SFPAT made a recommendation for a lower design speed and signalized intersections for the Kirby-Whitten Parkway in part to discourage cut-through truck traffic from I-40 and I-240. Vehicle Classification counts indicated that the combined medium and heavy truck traffic on Farm Road, Walnut Grove Road, and Mullins Station Road comprised less than 2% of traffic in the project area with several areas having fewer than 1% trucks. The recommended design concept, coupled with proposed improvements to the I-40/I-240 interchange, is expected to result in similar low truck percentages on the Kirby-Whitten Parkway. In a count for the Walnut Grove Road intersection with Farm Road performed in March 2014, 92 of the 44,387 vehicles counted (0.21%) were tractor-trailers. An additional 643 vehicles (1.45%) in the same count were single unit box trucks.

At the time that the SFPAT signed their recommendation in February 2006, they knew they were making recommendations that would be subject to state and federal policies. The SFPAT was made aware of the inability to restrict tractor-trailer traffic and the need for congressional action at their 6-27-12 meeting. While they encouraged the City and County to pursue an exception, they did not choose to change their recommendation for the project.

99. Question: Will the Conservancy wait to sign de minimis after being assured that tractor-trailers will be banned? (1 comment)

The SFPC has indicated it is not necessary for the tractor-trailer ban to be a necessary condition to sign the de minimis determination. The City and the County are working independently through the legal channels to ban the use of tractor-trailers.

Traffic-Related Comments

100. I am concerned that the current rush hour backup from the Crossings/Shelby Place neighborhoods onto Whitten Road will be exacerbated by the Parkway. Question: Will the crossing at Mullins Station and the Parkway be signaled? If not, the angle of the road, combined with the speed of through traffic past Showboat, will create a new dangerous intersection. I have been told that any plans to expand Mullins Station Road are a separate project. There must be a signal at Mullins Station and the Parkway so that the Greenline users will be able to make the crossing at grade. (1 comment)

The intersection of Mullins Station Road with the new Kirby-Whitten Parkway will be signalized. Any improvements to Mullins Station Road

<i>beyond the reconfiguration of this intersection would have to be a separate project.</i>
101. The road will start or empty at the Walnut Grove/Farm Road light, which is already congested. (1 comment) Farm Road could mostly be closed to traffic rather than growing and causing further bisection of the park. (1 comment)
<i>The new road as proposed will relocate traffic from the Walnut Grove/Farm Road light to an unsignalized, grade-separated interchange. The existing Walnut Grove/Farm Road intersection will become a right-in/right-out intersection for access to park facilities.</i>
<i>Eliminating Farm Road as a commuter road in Shelby Farms would increase traffic on other congested area routes such as Germantown Parkway which is contrary to the purpose and need of this project. Response times for emergency vehicles would also be negatively affected.</i>
102. The project is unlikely to alleviate congestion and will cause more traffic to travel through the Park, in the Walnut Grove/I-240 area, at the Macon/Whitten Road intersection, and on Whitten Road. (Sierra Club letter + 8 comments)
<i>More traffic is projected to pass through the park as a result of this project. One of the project goals is to reduce corridor congestion, and by reducing corridor congestion, park visitors will be able to access the park more easily. The widening of Walnut Grove Road to six lanes, the elimination of the traffic signal at Walnut Grove Road and Farm Road, and the modification of Farm Road to be a right in/right out intersection will improve traffic flow significantly along Walnut Grove Road, and is expected to reduce the number of crashes that currently occur at this intersection. The right in/right out intersection was shown on all of the CSS drawings and was recommended by the SFPAT.</i>
103. Federal guidelines call for one major north-south or east-west artery every three miles; a major road is not needed here. (1 comment)
<i>This statement seems to be referencing Interstate interchange spacing requirements. This project is not proposing a new interstate interchange, so interstate guidelines do not apply.</i>
104. Project creates more high speed traffic with limited visibility at the exit for Humphries Blvd. and Baptist Hospital intersection. (2 comments) The speed limit should be no greater than 35 mph. (1 comment)
<i>The posted speed limit on the Kirby-Whitten Parkway will be 35 MPH. With the serpentine design and typical section layout, drivers are anticipated to travel at safer speeds on the Kirby-Whitten Parkway. Sight distance for traffic passing over Humphreys Boulevard is more than required for the posted design speed. Speed limits are evaluated by the City Engineer on an ongoing basis.</i>
105. Anyone who lives in the area should just accept traffic issues. (1 comment)
<i>The project as proposed is intended to improve mobility of traffic in the general project area.</i>
106. Question: Why don't the Memphis Police Department and Shelby County Sheriff Officers enforce traffic laws and speed laws on Walnut Grove Road and Farm Road? (1 comment)
<i>This comment will be shared with local law enforcement.</i>
107. I would like traffic in the area reduced or the flow brought closer to the western edge of the park. (1 comment)

<i>The Selected Alternative was moved as far west as possible to accommodate safe weaving distances, as recommended by the SFPAT, and to minimize impacts to the park.</i>	
108. Concerned that increased traffic from Farm Road will become a bottleneck. (1 comment)	
<i>According to traffic projections, without the proposed Kirby-Whitten Parkway project, Farm Road traffic will continue to worsen causing long delays.</i>	
109. We need to know more about the influence of new construction on traffic conditions before we build a new road through the park. (1 comment)	
<i>Planned improvements for I-40 and I-240 were anticipated in the design of this project and the identification of the Selected Alternative. Some of those improvements have been constructed. In addition, MPO traffic model projections included the planned improvements to I-40/240. An analysis of the Indirect and Cumulative Noise Impacts from this project is included in the SFEIS on page 51 and discusses improvements to I-40. Improvements to I-40/I-240 were also discussed in Section V.E. of the SFEIS, "Disposition to Comments Made at the Public Hearing," on page 90.</i>	
110. The forecast error of 42% [or 42.5%] was identified. (2 comments from Sierra Club letter + 6 comments from Sierra Club form (#4 circled))	
<p><i>In the 2005 traffic forecast:</i></p> <ol style="list-style-type: none"> <i>1. 2005 traffic counts at this point on Walnut Grove Road east of Farm Road were 44,790 vpd.</i> <i>2. Forecasted travel demand for 2010 based on the Memphis MPO model was 48,449 vpd.</i> <i>3. Forecasted 2026 travel demand (assuming a new Kirby-Whitten Parkway) using the Memphis MPO model was 54,700 vpd.</i> <p><i>In the updated 2012 traffic forecast:</i></p> <ol style="list-style-type: none"> <i>1. Forecasted 2040 travel demand (assuming a new Kirby-Whitten Parkway) using the Memphis MPO model was 44,000 vpd.</i> <p><i>Traffic counts performed on March 5th and 6th of 2014 indicated 43,510 vpd in the same area of Walnut Grove Road.</i></p> <p><i>Different assumptions were used in different MPO model runs based on the configuration of the Kirby-Whitten Parkway (Shelby Farms Parkway) and expectations for improvements to Walnut Grove Road. Traffic on Walnut Grove Road is currently capacity constrained, meaning that the number of vehicles that can get through the area during peak periods is limited by the number of available lanes, with the average daily traffic (ADT) ranging from 31,000 to 43,000 vehicles per day (vpd) over the last 20 years. Travel demand from macro forecasting models can often be larger than counts due to comparing the demand of how many vehicles that want to make a trip versus how many can fit through that corridor and won't take an alternative route to avoid congestion.</i></p> <p><i>TDOT continually updates traffic forecasts for projects as the design process progresses. The forecast included traffic effects from the planned</i></p>	

<i>improvements for I-40 and I-240, which is anticipated to be constructed prior to the Kirby-Whitten Parkway project design year.</i>	
111. Traffic in the vicinity of the Park has not grown since 2004. National travel patterns have been showing a decline in traffic volumes across the country, drawing into question the need for the road. (2 comments from Sierra Club letter + 7 comments from Sierra Club form (#5 circled) + 3 citizen comments)	
<i>Traffic forecasts are showing relatively small increases for this project. The purpose of the project is to reduce existing and future congestion and improve level of service and safety. Given the current level of service at the intersections in the corridor and the anticipated reduction in travel time traveling north-south through the corridor, the project is warranted without any growth in traffic. Refer to traffic analyses described in the answers to comments 1 and 2 in this summary.</i>	
112. One of the justifications for the road is the service level on Farm Rd, but service levels are very hard to determine on 2-lane rural roads according to standard AASHTO traffic manuals. (Sierra Club - 1 comment)	
<i>Highway Capacity Manual procedures are used to determine level of service on all types of roads including two lane roads. The accepted methodology for calculating level of service is Highway Capacity Software (HCS). For this project, the SFPAT and project planners elected to use travel delays and intersection level of service along with travel time through the corridor to compare alternatives, make recommendations, and ultimately choose the selected alternative. The level of service on two-lane roads was not a major factor in making decisions on this project since the congestion and delay occur at the intersections and the length of free-flow two-lane segments is relatively short.</i>	
113. The Memphis MPO has recently begun an updated "Household Travel Survey" and Travel Demand Model update, which will provide more accurate data on current and future regional travel patterns, and better perspective on whether past growth estimates are reliable or not. (Sierra Club - 1 comment)	
<i>The Memphis MPO plans to complete the Household Travel Survey in December of 2014 as well as an update to the Transcad model. TDOT continually updates traffic forecasts for projects as the design process progresses. It is not anticipated that new data in the MPO model will significantly change the need to reduce congestion or improve level of service in this area given the severe congestion currently experienced at the intersections and the long travel times for the corridor.</i>	
114. Traffic concerns could be minimized without a project of this scale. Look at ways to minimize through traffic. (1 comment)	
<i>One of the purposes of the project is to improve connectivity. Minor improvements to temporarily improve traffic flow would not serve this purpose. Please refer to the responses to comments 1 and 2 in this summary for a description of travel time and level of service comparisons in the corridor.</i>	
115. The traffic modeling projections are outdated. (1 comment)	
<i>Updated traffic forecasts were provided as an attachment to the "Dispositions to Comments from Section 4(f) Determination presented in the SFEIS and Meeting on May 3, 2012" document. The forecasted daily trips for the proposed Kirby-Whitten Parkway from the 2005 forecasts used by the SFPAT ranged from 32,700 average daily traffic (ADT) near Walnut Grove Road to 13,600 ADT near Macon Road in the design year 2026.</i>	

The 2012 forecasts developed for use in final design for the project increase to 37,400 ADT near Walnut Grove and to 24,400 ADT near Macon Rd in the updated design year 2040.