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**Research Report
KTC-04-30/SPR 210-00-1F**

Environmental Commitment Follow-Up

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College of Engineering
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in cooperation with

**Kentucky Transportation Cabinet
Commonwealth of Kentucky**

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16. Abstract Three recently completed road construction projects were investigated to determine Kentucky Transportation Cabinet (KYTC) effectiveness in implementing project commitments (including environmental commitments). Documentation was obtained from KYTC districts in which the projects were constructed and KYTC officials involved with the projects from planning through construction were interviewed. The projects were inspected to audit completion of project commitments. Key stakeholders (officials of local governments, resource agencies, MPOs, interest groups, and adjacent landowners) were interviewed about the projects. They were asked to grade KYTC for implementation of project commitments using a standard report card format. The findings for these investigations are presented. The auditing procedure employed in this study can be used to rate future KYTC projects, identify problems, and suggest solutions.			
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EXECUTIVE SUMMARY

BACKGROUND

KYTC officials have sought to achieve improved implementation of environmental commitments on all projects. Officials have realized that there are other transportation commitments made on projects and those commitments are also important in that they reflect on the credibility of agency and effected public/stakeholder perception of KYTC actions. Those transportation commitments impact the “when”, “how” and “how much” of a project as well as the “what”. They can arise throughout the project development process and can be made by a variety of KYTC personnel, its agents and contractors/subcontractors working on highway construction projects.

KYTC officials initially developed a procedure to track environmental commitments that was expanded to include all commitments under the umbrella term “project commitments”. The resulting procedure was termed “CAP” for “Communicate All Promises”. It included a series of actions and tools to provide a “gatekeeper” system for them, to capture them throughout the life of the project, to provide them in a coherent package for KYTC construction personnel and contractors, and to require contractors to formulate a CAP Action Plan to insure their proper implementation. Rollout of the CAP procedure occurred in June 2003. However, it has not been fully implemented to date.

This study examines KYTC follow-through of project commitments. The Study Advisory Committee identified several recently completed projects that contained environmentally sensitive features and that were developed using context-sensitive design concepts prior to the implementation of the CAP procedure. Those were considered good baseline projects to compare with subsequent ones developed using CAP. This study evaluates the implementation of environmental commitments on those recent pre-CAP projects and, in doing so, develops a consistent methodology for reviewing/auditing future projects. To conform to CAP, the focus of the reviews was expanded to include all project commitments. The projects identified by the Study Advisory Committee for investigation were:

- the reconstruction of KY 234 (Cemetery Road) into Bowling Green (landscaping completed in April 2003),
- the construction of Jefferson Boulevard in Louisville (completed in December 2002), and
- the reconstruction of a segment of U.S. 150 into Perryville (completed in September 2002).

Those projects were developed by KYTC officials in Districts 3 (Bowling Green)), 5 (Louisville) and 7 (Lexington) respectively.

CONCLUSIONS

The KTC investigations of the three projects found all of them to be successful. All of the environmental commitments had been properly implemented (as far as could be determined at this time) and most of the other project commitments had been implemented to the satisfaction of the stakeholders. Most stakeholders interviewed in this study gave projects high grades (Bs and As).

Each of the projects had different form of environmental commitments than the others (e.g. wetlands, historic and community issues). They also had unique non-environmental (project) commitments. The project settings also varied (urban-Jefferson Boulevard/Louisville, predominantly rural-U.S. 150/Perryville & urban-rural mix-KY 234/Cemetery Road/Bowling Green). They were high visibility projects and KYTC officials worked diligently to implement the projects in an environmentally sensitive manner.

This investigation revealed that project commitments can exist before a project is started and continue to be implemented years after it is concluded. Project commitments identified under the CAP procedure are made primarily by KYTC planning and design officials or consultants and are retained in the project manager's list until they are listed on the planning sheets. However that list may not be complete as new project commitments can arise after a project is let for construction.

The project stakeholders (primarily adjacent landowners) interviewed in this study considered KYTC project commitments to include: features contained in design drawings (plans), conceptual renderings, ROW agent comments, KYTC officials' comments throughout the project including those made during construction, comments by other stakeholders with greater positions of influence with KYTC (e.g. the SHPO), and contractor promises/agreements that landowners believe constitute KYTC commitments. Beyond those are stakeholder expectations of how work should be performed on or adjacent to their properties that constitute non-communicated commitments. Stakeholders may have expectations about subsequent KYTC maintenance along a project. Other stakeholders, such as resource agencies may have additional requirements for a commitment that, in effect, constitute additional KYTC commitments.

Project commitments may also be changed "on the fly". As the CAP procedure has been implemented, all project commitments are the purview of the project manager until the project is let (through plans, specifications and estimates). Many project commitments arise/become modified after this process in ROW, construction or beyond. The project manager is no longer managing those commitments once the project goes to construction. Currently, KYTC has no structured means of capturing those additional commitments/modifications.

Project commitments can generate other commitments or amend existing commitments. Project commitments may be altered or ultimately rejected by the stakeholders as a project develops. When stakeholders reject a KYTC project commitment, it should be documented by KYTC officials involved with the project for auditing purposes.

The process developed under this study to evaluate project commitment follow-up can be used by KYTC officials as part of a formal review/auditing process. Over time, a pattern should emerge related to expected grades for KYTC projects and KYTC officials. Problem issues can be highlighted in the "Lessons Learned" section of the Project Summaries employed by researchers. Those can be compiled to highlight problem issues encountered on all projects and prompt changes in KYTC policies and practices where improvements are necessary.

RECOMMENDATIONS

1. Develop a standard review process for all projects incorporating the CAP procedure.

2. Review projects 3-6 months after completion. Include site audits and stakeholder surveys/interviews as part of the review process.
3. KYTC personnel conducting project reviews should prepare Project Commitment Follow-Up Summary Reports for each project and submit those to the district managers/engineers and appropriate Central Office officials.
4. Designated personnel such as district environmental coordinators, planners and project managers should meet annually to review those summaries and participate in discussions about how to eliminate any problems and how to improve the Project Commitment process.
5. Develop procedures to capture commitments made by KYTC personnel or agents during the right of way (ROW) phase of project development and construction.
6. Identify the best approach for KYTC to deal with contractor/landowner agreements.
7. Formulate implementation tracking procedures to go beyond construction by tracking pertinent project commitments into maintenance and operations.

INTRODUCTION

Background

Environmental assessment and permitting activities are a normal part of KYTC project planning, design, and construction processes. Environmental permits obtained by KYTC during project development usually contain specific requirements that are addressed in the design and construction phases. However, they can arise/continue throughout project development including maintenance. KYTC officials have termed those “environmental commitments” whose implementation is considered vital to the proper completion of any project. KYTC officials have sought to achieve improved implementation of environmental commitments on all projects. The need exists to review completed projects to document the effectiveness of those efforts and to identify issues requiring further attention by KYTC officials.

A relevant article discussed a national survey of state highway agencies and regulatory agencies concerning environmental mitigation commitments on transportation projects (1). It indicated that state highway agencies had experienced few problems related to those commitments. The same survey found that highway or regulatory agencies rarely audited projects to determine whether those commitments were properly implemented. It also found that special interest groups and the public had been more active in seeking litigation during the NEPA review process than after a project was underway or completed. The authors assumed most of that litigation was intended to block projects rather than to assure that proper mitigation actions were performed. In addressing the conformance with environmental commitments, a 1993 FHWA study recommended improvements in seven areas:

- Development of a model procedure for tracking mitigation measures,
- Use of a mitigation summary sheet to follow each project through design and construction,
- Inclusion of the subject of mitigation implementation on FHWA audits,
- Periodic interagency meetings with resource and regulatory agencies,
- Environmental sensitivity training for State construction and maintenance personnel,
- Audit and environmental training for FHWA staff,
- The uses of interdisciplinary staffs by the state environmental sections, including giving this staff a prominent role in project development (2).

No known actions were ever taken to implement those recommendations.

As state highway agencies move to adopt context-sensitive solutions and accept public input on projects, public opposition to projects will probably diminish. However, the public will be focused on how highway agencies follow-through in implementing their commitments.

Incorporation of Transportation Commitments

KYTC officials have responded effectively to the significant impacts generated by environmental statutes and regulations. They have been cognizant of the issues related to compliance with environmental commitments and have been working diligently to resolve any problems that might arise. To do this, they have adopted a more proactive stance to ensure

environmental sensitivity and gain public support. They have emphasized follow-through on environmental commitments as a major element in obtaining better rapport with both resource agencies and the public.

Beyond those measures, KYTC officials realized that there were other transportation commitments made on projects that did not address environmental issues. However, those commitments were also important in that they reflected on the credibility of KYTC and effected public/stakeholder perception of KYTC actions. Those transportation commitments impacted the “when”, “how” and “how much” of a project as well as the “what”. They could arise at any time during the project development cycle and could be made by any KYTC personnel, its agents and project contractors/subcontractors. KYTC officials initially developed a procedure to track environmental commitments that was expanded to include transportation commitments under the umbrella term “project commitments”. The resulting procedure was termed “CAP” for “Communicate All Promises”. It included a series of actions and tools to provide a “gatekeeper” for project commitments, to capture them throughout the life of the project, to provide them in a coherent package for KYTC construction personnel and contractors, and to require the preparation of a CAP Action Plan to insure their proper implementation.

The CAP procedure functions as follows:

- By rule, only project managers can commit to a promise (commitment),
- Promises are recorded on the Preconstruction Database (CAP List),
- The CAP List is a required deliverable on all contract documents,
- Contractors are required to develop a CAP Action Plan, and
- The CAP action plan must be reviewed and approved by the preconstruction project manager and resident engineer prior to construction.

This procedure should result in more responsive bids and provide greater potential for meeting a project’s engineering, environmental and community goals. It is designed to improve communication and prevent undesirable surprises/conflicts once the project is in construction. To support CAP, the Kentucky Transportation Center (KTC) worked with KYTC officials to present several workshops on context-sensitive construction that were presented to contractors and district construction personnel around the state in early 2003. Rollout of the CAP procedure occurred in June 2003. However, it has not be fully implemented to date.

Study Objectives/Tasks

This study examines and reviews KYTC follow-through in enacting environmental commitments. Due to the timing of this study, even recently completed highway projects pre-dated the use of CAP. The Study Advisory Committee considered recently completed projects that contained environmentally sensitive features and which were developed using context-sensitive design concepts. They selected several candidate projects for researchers to investigate. The Study Advisory Committee thought that those projects would serve as good baseline projects to compare with subsequent ones developed using CAP. The intent of this study was to evaluate the implementation of environmental commitments on those recent pre-CAP projects and, in doing so, develop a consistent methodology for reviewing/auditing future projects. To conform to CAP, the focus of those reviews was expanded to include all project commitments.

The objectives of the study included:

1. Identifying recently completed KYTC projects which are thought to reflect the current KYTC emphasis on follow-through of project commitments,
2. Determining the commitments made for those projects, their sources and when they were agreed upon,
3. Assessing whether problem issues impacted or complicated compliance with those commitments,
4. Reviewing the completed projects and determining the extent of compliance, any variances that occurred, and on-going requirements (and their follow-through),
5. Identifying and contacting key stakeholders including resource agencies, local government officials, and the public to determine if the follow through met their expectations, and
6. Developing a rational procedure for evaluating environmental/transportation commitments with the intent of using it to describe the project commitments, factors related to their enactment, problems encountered on the project, their implementation, stakeholder expectations/satisfaction with the follow-through, and compliance with on-going requirements (maintenance).

To address those goals, researchers were assigned five tasks. Those were to:

Task 1. Investigate recent KYTC projects that reflect the current emphasis on follow-through of project commitments. Researchers would determine the KYTC commitment procedures in place during those projects and their anticipated effect on implementation. Researchers would conduct investigations of those projects to assess KYTC implementation.

Task 2. Contact key KYTC district personnel involved in developing the projects from planning through maintenance. They would obtain all environmental review/permitting documentation. researchers would interview the KYTC personnel to ascertain all environmental commitments on those projects, when and how those were obtained, and any problems related to their implementation and continuation.

Task 3. Conduct site audits to review the completed projects and determine the extent of implementation of environmental commitments, any problems/defects and effectiveness of follow-up (maintenance) work.

Task 4. Interview project stakeholders (e.g. local governments, resource agencies, interest groups and individuals) to determine their level of satisfaction with KYTC implementation of environmental commitments.

Task 5. Prepare this final report outlining the research process, documenting findings, providing procedures for future evaluations of environmental commitments and recommendations for resolving any problems that might exist.

WORK ADDRESSING STUDY TASKS

Task 1. KYTC Projects

The Study Advisory Committee provided three recently completed projects for researchers to investigate. Those were: 1) the reconstruction of KY 234 (Cemetery Road) into Bowling Green (landscaping completed in April 2003), 2) the construction of Jefferson Boulevard in Louisville (completed in December 2002), and 3) the reconstruction of a segment of U.S. 150 into Perryville (completed in September 2002). Those projects were developed by KYTC officials in Districts 3 (Bowling Green), 5 (Louisville) and 7 (Lexington) respectively. The project settings also varied (urban-Jefferson Boulevard/Louisville, predominantly rural-U.S. 150/Perryville & urban-rural mix-KY 234/Cemetery Road/Bowling Green). These projects were relatively large scale with projects costs of \$13.5 M for KY 234 (contracts), \$5.5 M for Jefferson Boulevard, and \$5.5 M for US 150. Those projects involved different types of environmental impacts – community impacts for the KY 234 reconstruction, environmental impacts (wetlands) for the construction of Jefferson Boulevard, and historic impacts to the Perryville battlefield and the historic district in downtown Perryville for the U.S. 150 reconstruction.

Task 2. Project Reviews with KYTC Personnel

To begin the project investigations, researchers contacted the relevant KYTC offices in the three districts that had been identified by Study Advisory Committee members. Typically, these included project managers, planners, resident engineers, and environmental coordinators. Researchers visited those districts and met with those officials to: 1) discuss the scope of the projects, context-sensitive issues, project commitments and important events that occurred throughout project development into maintenance, and 2) identify key stakeholders/resource agencies. Researchers requested pertinent documents which were provided in full by the KYTC district officials who were very cooperative. Typical documentation included NEPA reviews, project plans and other letting documents, intra-agency memorandums, memorandums of agreement (with stakeholders), newspaper clippings and other related correspondence.

Task 3. Site Audits

The information/documents were reviewed by researchers along with notes from the meetings with KYTC district personnel. These were used to locate the project termini and identify design features to be placed during construction that constituted project commitments. Lists of design features were compiled for projects where many design features were incorporated as project commitments. Thereafter, researchers visited the project sites and drove/walked through the projects identifying pertinent design features and landmarks. Researchers took pictures including montages and forward/rearward views throughout the site inspections to provide continuous visual record of the roadways and surroundings throughout the entire length of each project. They noted the presence of the various special design elements (e.g. commitments) and examined how they were performing.

Task 4. Project Stakeholder Interviews

During the site visits, researchers conducted interviews with local stakeholders including local government officials, business persons, and residents (landowners adjacent to the roadway) if

those parties were available. The interviews of some officials and most residents along the project that were conducted by telephone. Both methods proved acceptable. Key project stakeholders included officials from local governments; local planning and development organizations; and state and federal resource agencies. They were identified by several means: references by the KYTC district personnel, KYTC plans, referrals by other stakeholders during the interviews and, reviews of KYTC documents and correspondence. KTC researchers did not attempt to contact all residents along a project. In some cases, residents had either relocated or were deceased.

In conducting the interviews, researchers began the process by explaining the reason for the contact and the purpose of the KTC research. The interviewees were prompted to express their opinions about the project and how/whether it impacted them. If the subjects had been affected by the project in a manner that resulted in a project commitment, they were asked to respond to questions on a Project Commitment Stakeholder Report Card Form developed by researchers (Appendix A). Part 1 of the form identified the stakeholder (and agency if applicable) and the nature of their project involvement. Part 2 contained a two-part question seeking the stakeholder's opinion of the completed project (overall) in the form of letter grade for the project, and, secondly, in a short explanation for that grade. Part 3 of the questionnaire asked for the stakeholder to identify up to three project commitments that directly influenced them or their agency. As with Part 2, the interviewee was asked to grade each of those commitments and provide a justification/reason for each grade (e.g. Were they satisfied with what KYTC promised?). Part 4 was another two-part question requesting a letter grade for the construction activities to implement the previously identified (up to three) project commitments. Part 5 was a two-part question requesting a letter grade for the project commitments as finally implemented (e.g. were they satisfied with what KYTC delivered/built?) and a reason for that grade. In part 6, the interviewee was asked to identify the methods of interfacing with KYTC officials. Three choices were given, face-to-face meetings, public meetings and document preparation/approval. In part 7, the interviewee was asked to grade KYTC officials based upon their dealings with the interviewee and provide a reason for the grade provided.

The report card method was used for rating the project commitments/KYTC officials (3). All interviewees are familiar with the grading system using letter grades A-F, with 'A' representing the highest possible grade and 'F' representing the worst possible grade. They seemed able to quickly grasp the nuances of grading issues ranging from overall project impacts to KYTC official-stakeholder relations.

After completing the site evaluations and stakeholder interviews, researchers prepared a Project Commitment Follow-Up Summary for each project. Those summaries contained background information including: 1) a full description of the project including the official project title, 2) project number, 3) KYTC district number, and 4) miscellaneous information data (project length, start/end dates, contractor and cost). The project purpose and need was included along with context-sensitive factors. A short history of the project is included to frame each project in terms of its overall location, its need, major project development events including those occurring after the completion of construction. Part 1A of the Summary (Commitments) contained a list of stakeholders. Part 1B provided a complete list of project commitments (made by both KYTC officials and the contractor), stakeholders to whom the commitments were made and how they were made. It should be noted that the stakeholders were given the opportunity to determine whether an

interaction with a KYTC official, document, or contractor constituted a “commitment”. Part 1C contains a list of KYTC procedures to record and implement project commitments made to stakeholders. Part 1D is a question/response to determine whether KYTC Construction or Maintenance officials were involved in the project commitment process and if any follow-up actions are needed to complete the project or provide special maintenance. Part 2 pertains to audits of project commitments. Part 2A is a list of problems encountered in implementing project commitments. This is obtained from the KYTC district officials. Part 2B is a listing of follow-on KYTC inspections to evaluate project commitments (if performed). Part 2C is the KTC assessment of project commitments taken from the site inspections and the Project Commitment Stakeholder Report Cards. Part 3 contains “Lessons Learned” from the specific projects and commitments as provided by KYTC officials and the various stakeholders. Part 4. contains a “Project Summary” where the auditor relate his impressions of the project including stakeholder grades, total project impact on the community and his thoughts on salient issues that should be addressed on future projects.

For this study, researchers submitted the Project Commitment Follow-Up Summaries (less the “Lessons Learned” and “Project Summary” Parts) to KYTC district officials allowing them to review the factual portions of the Summaries for completeness to obtain needed information and correct any errors or omissions. The Project Commitment Follow-Up Summaries were corrected based on those reviews. Those are provided in Appendices B-D.

It should be noted that researchers elected not to contact any contractors involved on projects. Except for the waterline issue in Perryville (which was brought to our attention by the Mayor of Perryville), researchers did not contact utilities about the projects.

CONCLUSIONS

The investigations of the three projects found all of them to be successful. All of the environmental commitments had been properly implemented (as far as could be determined at this time) and most project commitments had also been implemented to the satisfaction of the stakeholders. Most stakeholders interviewed in this study gave the projects high grades (B’s and A’s). Each of the projects had different environmental commitments than the others (e.g. wetlands, historic and community issues). They also had different transportation commitments. The project settings also varied (urban, rural and urban-rural mix). The role of KYTC varied from full project development (U.S. 150/Perryville and KY 234/Cemetery Road/Bowling Green) to partial involvement in permitting and construction management (Jefferson Boulevard/Louisville). While none of those projects were implemented using the CAP process, they were implemented after KYTC had made the commitment to adopt Context Sensitive Solutions. They were high visibility projects. KYTC officials worked diligently to implement the projects in an environmentally sensitive manner. These certainly can be used as baseline project for evaluating the improvements/benefits provided by the CAP procedure.

In addressing project commitments, KYTC officials probably anticipated that most would be identified in the early phases of project development, prior to construction (unless there were long-term maintenance commitments or warranties). This investigation indicates that the situation can become more involved. Project commitments, including environmental commitments, can exist

before a project is initiated (e.g. the extension of the multi-purpose path along Lovers Lane in conjunction with its installation on the Cemetery Road project and, the KYTC promise allow the state historic preservation officer (SHPO) to comment on proposed plans for the U.S. 150 project that was made several years before the project became active). Project commitments may also be changed “on the fly”. As the CAP process has been implemented, all project commitments are the purview of the contract manager until the project is let (through plans, specifications and estimates). Many project commitments arise/become modified after this process in ROW, construction or beyond. The project manager is no longer managing those commitments once the project goes to construction. If a project is accelerated (e.g. U.S. 150 at Perryville), unexpected changes may occur. Those may require the termination of existing commitments and the establishment of new ones. When KYTC officials show the public plans and discuss them with stakeholders they are making commitments. When changes to those plans occur, the previously contacted stakeholders must be informed and given an opportunity to express their feelings (e.g. the Cemetery Board and American Legion Post in Perryville).

Sometimes, it can take as long as five years after project completion to determine if commitments are properly implemented (e.g. U.S. Army Corps of Engineers requirements for the compensatory wetland used to mitigate the wetland taking for the Jefferson Boulevard project). When dealing with aesthetic features such as tree plantings, the period needed to determine successful commitment implementation may be even longer, especially when artist renderings of the “future” appearance of a project are involved. One interviewee on the Cemetery Road project commented that it will take several more years before she could determine if KYTC officials kept their promise about the landscaping as it would take that long to assess the impact of mature trees on the viewshed from the roadway. Another time-related aspect of project commitments occurs when those commitments relate to “how” something is to be done (e.g. ‘no bulldozers are permitted in waterways’) rather than “what” is to be installed. The former cannot be determined by site inspections. The only way to determine the effectiveness in dealing with that type of commitment is to contact the resource agencies and determine if there were any NOV’s, citations or formal complaints.

Another issue involves what constitutes project commitments. Based upon the CAP procedures, project commitments are to be made only by the project manager who controls the list of those. Presumably, those commitments are made primarily by KYTC planning and design officials or consultants and are retained in some intermediate step to be compiled in the project manager’s list. The stakeholders (primarily adjacent landowners) interviewed in this study provided a different interpretation of project commitments. They believe that KYTC project commitments include: features contained design drawings (plans), conceptual renderings, ROW agent comments, KYTC officials’ comments throughout the project including those made during construction, comments by other stakeholders with greater positions of influence with KYTC (e.g. the SHPO), and contractor promises/agreements that they believe constitute KYTC commitments. Beyond those are stakeholder expectations of how work should be performed on or adjacent to their properties which constitute non-communicated commitments. Owners of properties may have expectations about KYTC maintenance (e.g. grass mowing on medians and ditches on the Jefferson Boulevard project). Another expectation is that a feature installed by KYTC will not cause negative impact to a property owner after construction (e.g. the drainage system along the Jefferson Boulevard project). Other stakeholders, such as resource agencies may have additional requirements for a

commitment that constitute additional KYTC commitments. For example, the compensatory wetland created for the Jefferson Boulevard project was one commitment. Its implementation included the requirement for periodic reporting to the Corps of Engineers. That reporting constitutes an additional commitment for KYTC officials.

Project commitments can generate other commitments or amend commitments. As an example, KYTC officials promised local stakeholders that a sidewalk would be constructed adjacent to U.S. 150 in Perryville. Later, another commitment was made to use a curing compound on the concrete sidewalk so it would match the appearance of other concrete in the area.

Project commitments may be altered or ultimately rejected by the stakeholders as a project develops. When Secretary Mudge announced the KYTC decision to proceed with the Cemetery Road project in August 1996, he stated that property acquired along the ROW would be used to provide the community with a 14-acre park. The stakeholders subsequently expressed concerns about creation of the park as plans for it included the construction of an access road. Locals were concerned about the potential for undesirable activities associated with the access road and requested that KYTC cancel plans to build the park. Currently, KYTC officials are proposing to provide the community with a similar park using excess property purchased for the Cemetery Road project. The new park could only be accessed by an extension of the multi-purpose path that is restricted to pedestrians and bicyclists (hopefully making it more acceptable to the public). On a similar note, KYTC officials originally promised the community that they would signalize five intersections on Cemetery Road using pole and mast arm traffic lights. At one intended site, the residents of a subdivision did not want their entry road realigned with another cross street negating the possibility of a signalized intersection there. Since project completion, KYTC officials have studied the traffic patterns and are proposing to install a traffic light at the intersection of Cemetery Road with a road across from an entrance to Spero Keriakes Park. When stakeholders reject a KYTC project commitment, it should be documented by KYTC officials involved with the project for commitment tracking purposes.

The process developed under this study to evaluate project commitment follow-up can be used by KYTC officials as part of a formal review/auditing process. The CAP procedure will simplify the effort needed to compile most project commitments, especially those considered environmental commitments. The most time consuming efforts will be in reviewing the plans, inspecting a project site, interviewing KYTC construction personnel and identifying and contacting pertinent stakeholders to obtain their evaluations (grading). Report cards have been found to be a viable means of assessing stakeholder opinion about projects. Some biases were observed by researchers. Usually, lower grades were given to projects by adjacent landowners who had property takings. Higher grades were given by local government officials who routinely dealt with KYTC on roadway projects. KTC researchers believed that some local government officials were hesitant to criticize KYTC actions as they did not want to negatively impact their on-going relationship with KYTC officials. Other interviewees showed a similar reluctance to be critical of KYTC in terms of assigning low grades even if they took issue with some KYTC actions. As long as potential biases can be anticipated/detected, they can be compensated for by KYTC personnel performing the stakeholder interviews (by including or excluding comments from the lessons learned). Several interviewees expressed concerns about being identified and did not want their surveys to negatively

impact relations with KYTC. The individual stakeholder survey forms have not been included in this report to preserve their anonymity.

The number of stakeholders that need to be interviewed will vary by the project. The Jefferson Boulevard project did not involve as many stakeholders as the other projects because the project was located away from most business and residential areas. Therefore, few stakeholders were contacted. On the other projects, researchers contacted 13-15 stakeholders of whom about half were businessman or residents with properties adjacent to the projects. It would be difficult to contact and survey every adjacent landowner along a project in person or by telephone.

If this auditing process was used over time, a pattern should develop related to expected grades for KYTC projects and KYTC officials. Problem issues could be highlighted in the “Lessons Learned” section of the Project Summaries. Those could be compiled to highlight problem issues and prompt changes in KYTC policies and practices where improvements were necessary.

RECOMMENDATIONS

1. Develop a standard review process for all projects incorporating the CAP procedure.
2. Review projects 3-6 months after completion. Include site audits and stakeholder surveys/interviews as part of the review process.
3. KYTC personnel conducting project reviews should prepare Project Commitment Follow-Up Summary Reports for each project and submit those to the district managers/engineers and appropriate Central Office officials.
4. Designated personnel such as district environmental coordinators, planners and project managers should meet annually to review those summaries and participate in discussions about how to eliminate any problems and how to improve the Project Commitment process.
5. Develop procedures to capture commitments made by KYTC personnel or agents during the right of way (ROW) phase of project development and construction.
6. Identify the best approach for KYTC to deal with contractor/landowner agreements.
7. Formulate implementation tracking procedures to go beyond construction by tracking pertinent project commitments into maintenance and operations.

REFERENCES

1. Hines, M. and McDaniel, J.B., “Enforcement of Environmental Mitigation Commitments in Transportation Projects: A Survey of Federal and State Practice”, Legal Research Digest, National Cooperative Highway Research Program, Transportation Research Board, Washington, DC, March 1999.
2. A Review Report on Evaluation of Environmental Mitigation Measures, Federal Highway Administration, Report No. OPR T93-01, 1993.
3. Gormley, W.T. and Weimer, D.L., Organizational REPORT CARDS, Harvard University Press, Cambridge, MA, 1999.

APPENDICES

APPENDIX A – Project Commitment Stakeholder Report Card Form

Project Commitment Stakeholder Report Card Form

Date Compiled:

Compiled by:

Project Title/Location:

Project No.:

District:

1. Stakeholder (Agency/Individual):

Stakeholder name:

Nature of project involvement:

2. Provide letter grade (A, B, C, D, F) for overall project as implemented:	Grade
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Reason:

3. Provide letter grade(s) for the project commitments that impacted you/your agency

Commitment:	Grade
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Reason

Commitment	Grade
------------	-------

Reason

Commitment	Grade
------------	-------

Reason

4. Grade construction activities to implement project commitments

Commitment	Grade
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Reason

Commitment	Grade
------------	-------

Reason

Commitment	Grade
------------	-------

Reason

5. Grade features implemented as a result of project commitments

Commitment	Grade
------------	-------

Reason

Commitment	Grade
------------	-------

Reason

Commitment	Grade
------------	-------

Reason

6. Methods of interfacing with KYTC officials

Face-to-Face:

Public Meetings:

Document Preparation/Approval:

7. Grade to KYTC officials	Grade
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Reason

***APPENDIX B – Project Commitment Follow-Up Project Summary: U.S.
150 at Perryville***

Project Commitments Project Summary

Date Compiled: 2-23-05

Compiled by: Ted Hopwood

Project Title/Location: Springfield-Perryville Rd. (US 150) Boyle County

Project No.: FD04 011 0150 001-005

District: 7

Project Description:

Length: 2.77 miles
Project Start: October 2001
Project Complete: September 2002
Contractor: Haydon Brothers Contracting, Inc.
Cost: \$5.5 Million

Purpose and Need: The purpose of the project is to correct geometric and sight distance deficiencies, address narrow lanes and shoulders, provide safety clear zones and replace substandard bridges, and improve the level of service and safety for the traveling public.

Context-Sensitive Factors: The Perryville Battlefield and the historic "Merchants' Row" area of downtown Perryville.

History of Project: This project is part of a 13.2 mile reconstruction of U.S. 150 between Perryville and Springfield. The work covered in this section of the reconstruction is a segment on the East end of the project running from downtown Perryville and terminating slightly beyond the existing U.S. 150 which it intersects. The road goes through a portion of land involved in the Battle of Perryville that occurred during the Civil War in 1862. It also touches upon a portion of the historic district in downtown Perryville.

Existing U.S. 150 was mostly built over an earlier road that pre-dated the Civil War. In the 1928 construction of U.S. 150, the Kentucky Highway Department straightened a portion of the earlier route to shorten the road. However, the revised road went through a portion of land that was a significant part of the Perryville Battlefield. In 1975, the boundary of the Perryville Battlefield was established by the National Park Service placing it due North of the existing U.S. 150.

By the early 1990s, the road had become functionally obsolete. It had numerous geometric deficiencies, narrow lanes and limited shoulders. The original proposal was to upgrade U.S. 150 in place, eliminating the deficiencies and straightening sections of the road along the existing alignment.

In 1992, plans went forward to begin design of the revised U.S. 150. KYTC signed a memorandum of agreement (MOA) with the SHPO, the Advisory Council on Historic Preservation, and the FHWA. It recognized that the new road would have adverse affects to the battlefield area and the historic district in Perryville. The MOA gave the SHPO the opportunity to comment on the final design and noted that all parties would meet to resolve any disputes.

KYTC agreed that the final design and construction process would be environmentally sensitive. KYTC also promised to conduct an archeological survey of the area using metal detectors. Over time, the work was delayed and in 1999, the SHPO and the National Park Service conducted a new study showing that the battlefield boundary extended south of the existing road.

That finding required the establishment of a new southerly alignment agreed upon by the SHPO and the Kentucky Heritage Council. The projected new route cut across several farms not impacted by the earlier plans. During efforts to secure right-of-way through those properties, several property owners sued KYTC to prevent the taking of their property. That temporarily halted project development. After KYTC successfully defended the takings, design work resumed and progressed until the project was almost ready for letting in 2000. The decision was made to progress with this section of the project rather than an adjacent section to the West. The change was made to improve the road prior to a battlefield reenactment scheduled for October 2002. It was anticipated that the reenactment would bring some 20,000 participants and tourists to Perryville.

Due to the aforementioned delays in implementing this project, KYTC officials had overlooked the previous MOA with the SHPO allowing him opportunity to comment on the final design. In January 2001, they sought to promptly rectify the situation by meeting with locals and the SHPO, discussing their existing plans, and accommodating project design modifications that would make it better fit within the Perryville area and the battlefield. A series of meetings was held with the SHPO both in Frankfort and in Perryville to address his concerns and methods for resolving them. Prominent among the additional design features were:

1. use of grass shoulders along the rural portion of the project,
2. use of stone facings on a bridge at Doctor's Fork and on retaining walls in Perryville,
3. employment of weathering steel guardrails along rural portions of the project,
4. installation of fencing around the Perryville Cemetery,
5. tinting of concrete sidewalks in Perryville,
6. special treatment of the entry roadway into the battlefield (at the intersection of U.S. 150), and KY 1920, and
7. special treatment of the U.S. 68/U.S. 150 intersection within the Perryville Historic District.

In a subsequent meeting, KYTC provided visual renderings of the completed roadway in Perryville. The SHPO stated concern that the proposed cut at the crest of hill going into Perryville would require deep retaining walls and would visually detract from the historic area. KYTC officials and other stakeholders walked the route in that area and agreed to provide a fill rather than the previously proposed cut.

Thereafter, KYTC officials made the necessary design changes and worked diligently to expedite the project which went to letting in September 2001. It was let on September 28, 2001 with the award going to Haydon Brothers Contracting, Inc. The project which would normally take two work seasons to complete was accelerated to a mandatory completion by September 30, 2002 with a penalty of \$1,600/day in liquidated damages. At the same time, the archeological survey was completed with no significant findings allowing KYTC to proceed on the selected alignment.

The project was completed on time (with some minor revisions and “punch list” work outstanding). The roadway had a grand opening in downtown Perryville with a number dignitaries and highway officials in attendance. KYTC agreed to reimburse the Perryville Battlefield Preservation Association (PBPA) up to \$20,000 for signs or landscaping in the project area. This is in addition to the first and largest use of transportation enhancement funds in Kentucky (\$2.5 million most of which was used to buy land and preservation easements to expand the battlefield park and protect the battlefield). PBPA applied for and received the \$20,000 reimbursement for landscaping and sidewalk construction in September 2004.

Part 1. Commitments

A. List the stakeholders (include KYTC) involved with commitments.

1. KYTC Officials- District 7, Central Office, Resident Engineers Office (Danville)
2. Local Governments-City of Perryville, Boyle County Judge-Executive’s Office
3. Resource Agencies-Kentucky Heritage Council, Kentucky Park Services
4. Interest Groups-Perryville Battlefield Preservation Association (PBPA), Perryville Enhancement Program
5. Individuals-Primarily adjacent landowners and businesses
6. Others-Perryville Cemetery & Perryville American Legion

B. List of project commitments made by KYTC officials/contractor

Commitment	To Whom	Mechanism
1. Grass shoulders along rural area.	SHPO & others	Face-to-Face & Public Mtgs.
2. Weathering steel guardrails along rural area.	“ “ “ “	“ “ “ “ “ “
3. Rock facings on retaining walls & bridge.	“ “ “ “	“ “ “ “ “ “
4. Tree plantings to obscure bridge & culvert.	“ “ “ “	“ “ “ “ “ “
5. Avoidance of an historic barn.	“ “ “ “	“ “ “ “ “ “
6. Decorative fencing on top of retaining walls.	“ “ “ “	“ “ “ “ “ “
7. Special treatment at battlefield entry road (sign).	“ “ “ “	“ “ “ “ “ “
8. Use of clear curing compound on sidewalk concrete.	“ “ “ “	“ “ “ “ “ “
9. Change grade of road along cemetery.	“ “ “ “	“ “ “ “ “ “

10. Retention of existing U.S. 150.	“ “ “ “	“ “ “ “ “ “
11. Elimination of several entrances to PBPA property.	“ “ “ “	“ “ “ “ “ “
12. Performance of archeological survey along the route.	“ “ “ “	“ “ “ “ “ “
13. Use of signal poles and mast arms for traffic signals at the U.S. 68/U.S. 150 intersection.	“ “ “ “	“ “ “ “ “ “
14. Consultations on environmental issues.	SHPO & Advisory Council on Historic Preservation	“ “ “ “ “ “
15. Replacement of the cemetery front entrance with steps.	Perry Cemetery Board	“ “ “ “ “ “
16. 5’ Sidewalk in Perryville with no grass berm.	SHPO & Others	Public Mtgs.
17. Reimburse City of Perryville for assistance with water lines by the Perryville maintenance person.	City of Perryville	Face-to-Face Mtgs.
18. Fixing water lines.	City of Perryville	Face-to-Face Mtgs.
19. Location of water lines on West end of project.	City of Perryville & Landowner.	“ “ “ “ “ “ (?)
20. KYTC reimbursement of American Legion for land/easements.	American Legion	Face-to-Face Mtgs.
21. Grade of American Legion post relative to U.S. 150.	American Legion	“ “ “ “ “ “
22. Contractor promises related to his use of American Legion property.	American Legion	“ “ “ “ “ “
23. Commitment to retain flagpole.	American Legion	“ “ “ “ “ “
24. Treatment of land in front of Legion Post.	American Legion	“ “ “ “ “ “
25. New U.S. 150 was to have a historic/old road appearance.	Public	Public Mtgs.
26. Extra entrances and wider entrances to rural properties.	Landowner	Face-to-Face Mtgs.
27. Contractor use of landowner’s property-entrance.	“ “ “ “ “ “	“ “ “ “ “ “
28. KYTC commitment to make minor (needed) changes to design.	“ “ “ “ “ “	“ “ “ “ “ “
29. Placing of property entrances.	“ “ “ “ “ “	“ “ “ “ “ “
30. KYTC suggestion of L-shaped entrance to his home.	“ “ “ “ “ “	Face-to-Face & Public Mtgs.
31. Leased property as a construction road.	“ “ “ “ “ “	Face-to-Face Mtgs.
32. KYTC decision to raise the grade of U.S. 150 in Perryville.	“ “ “ “ “ “	Public Mtgs.

33. KYTC appraisal of property.	“ “ “ “ “ “	Face-to-Fact Mtgs.
34. Promise to remove large surface rocks from property.	“ “ “ “ “ “	“ “ “ “ “ “
35. Widening of entrances.	“ “ “ “ “ “	“ “ “ “ “ “
36. Items on the post-completion punch list.	“ “ “ “ “ “	“ “ “ “ “ “
37. Addition of curbs on U.S. 150 along property.	“ “ “ “ “ “	“ “ “ “ “ “
38. The sidewalk on U.S. 150 across from property.	“ “ “ “ “ “	“ “ “ “ “ “
39. Addition of curbs to property entrance.	“ “ “ “ “ “	“ “ “ “ “ “
40. Blacktop entrances into property.	“ “ “ “ “ “	Public Mtgs.
41. Coordination with Battlefield Park.	Public	“ “ “ “
42. Completion schedule for work.	U.S. 150 Review Committee	“ “ “ “
43. KYTC ROW commitment about highest offer for land.	Business Owner	Face-to-Fact Mtgs.
44. Access to store during construction.	“ “ “ “ “ “	“ “ “ “ “ “
45. KYTC promised a safer road.	Mayor	“ “ “ “ “ “
46. Bull Lane connection.	County Judge Executive	Face-to-Face & Public Mtgs.
47. Road access for the front of store	Business Owner	“ “ “ “ “ “

C. List KYTC procedures to record and implement the project commitments that were made to the stakeholders.

1. KYTC Memorandums
2. Memorandum of Agreement with SHPO outlining measures to mitigate impacts to historic properties.
3. Notes and specifications on plans detailing commitments.
4. Formal partnering between KYTC and Contractor included commitments to meet project deadline, and to incorporate all project commitments.
5. Formal agreement with Perryville Battlefield Preservation Association (PBPA).

D. Was there any involvement by KYTC Construction or Maintenance personnel during the process of commitments being made to stake holders? X Yes ___ No. If Yes, describe when and at what stage of project development? Are follow-up actions needed to complete project? Are there any long-term commitments such as plant warranties or special maintenance requirements?

Construction utilized a public meeting in Perryville to kick-off the construction phase, and to demonstrate that they understood project commitments and listen to any other local concerns.

Typical “punch-list” activities were being completed by the contractor in the year following completion of the construction.

Part 2. Audit Results of Project Commitments

A. List any problems encountered in implementing the project commitments.

<u>Commit. No.</u>	<u>Problem</u>
1	Decorative Fencing – the final details were worked out by the contractor through the partnering process.

B. Were there any follow on KYTC inspections to check on the implementation of the commitments?

Yes No If Yes, what were the findings?

None other than standard construction practices and follow-up on complaints.

C. KTC audits/observations of KYTC project commitments currently in place.

<u>Commit. No.</u>	<u>Findings/Comments</u>
1.	The grass shoulders appear to be holding up well and only one location was observed with rutting (Figure 1). The grass shoulders have acquired patches of weeds that need to be sprayed. Some residents think grass shoulders cannot be used because the soil is too soft. There are complaints that parked vehicles tend to use paved entrances into private properties blocking them.
2.	The weathering steel guardrail is performing well. Some residents call this rusty guardrail and think that it is employed to give the guardrail a “used” appearance. Some residents stated that they would prefer galvanized guardrails.
3.	The rock facing on the bridge and the retaining walls looks good and is performing well (Figure 2).
4.	Most of the plantings appear to be in good condition. A few have died and should be replaced.
5.	The barn has been preserved. Apparently some locals, especially impacted landowners question the wisdom of preserving the barn at the expense of taking their property (farmland). They believe the barn is not historically significant (i.e. Civil War related).
6.	Decorative fencing on the retaining walls and around the cemetery looks good and is in good condition.
7.	There is a small road sign noting the direction of the Perryville Battlefield onto KY 1920 (Figure 3).
8.	The sidewalk concrete has a light appearance due to the use of the clear curing compound and matches the color of the concrete used on the curbs along U.S. 150 in Perryville.
9.	Change of grade on road by the cemetery created several issues. First, the Perryville Cemetery Board wasn’t notified and the change should have allowed the retention of the existing entrance road (that the Cemetery Board members favored). The grade change resulted in a change of grade at the top of the hill. Neither the American Legion nor the landowner across the street was informed of that until after construction was started. Both parties are very dissatisfied with the resulting berms/reduced elevation of their properties (Figure 4).
10.	Old U.S. 150 remains as rural collector serving residents along that portion of road.
11.	The entrances to several lots in Perryville owned by the PBPA now have no access onto U.S. 150. This was done in consultation with PBPA. The several lots are contiguous. Entrances very close to the signalized intersection were

- eliminated, but adequate access to PBPA's property was maintained.
12. The archeological survey was conducted prior to construction with no significant findings.
 13. The signal poles and mast arms of traffic signals at the U.S. 68/U.S. 150 intersection will aid in the aesthetics of the roadways as the historic district in Perryville is restored (Figure 5).
 14. Consultations took place between KYTC and the SHPO. The SHPO had considerable input to the project.
 15. See relevant comments for commitment no. 9.
 16. The sidewalk is in good condition and has a good appearance. One landowner indicated that it is being used.
 17. Both the Mayor and the Perryville maintenance person noted that KYTC was to pay them for his services. The project has been officially completed for over a year and Perryville has not been reimbursed for that work.
 18. According to the Perryville maintenance person, the original utility plans were not changed after the decision was made to increase the grade of U.S. 150 by the cemetery. As a result, shutoff valves/lines are buried deeply and the KYTC is currently trying to locate suitably long valve stems (?). He noted that the project has been officially completed for over a year and this issue hasn't been resolved.
 19. Apparently, the original roadway plans required that new water lines running along U.S. 150 be routed into the field of an adjacent landowner. An easement was acquired and the lines were placed in advance of the road. The road design that was eventually constructed eliminated the need to locate the water lines in the field and the land owner now wants the lines to be moved from the field.
 20. The American Legion was dissatisfied with their settlements with KYTC and thought that they had given up more than other landowners for less compensation.
 21. According to the American Legion Post Commander, the contractor used the American Legion parking lot for storage of equipment and materials. The contractor promised to reimburse the Legion for that use but never did. KYTC officials knew about that arrangement and never pressed the contractor for payment. A subcontractor laying sewer lines did not properly dispose of rock generated in excavation and left it on Legion property. The contractor was reluctant to dispose of it and the best the Legion could do was to get him to push the rock over an embankment. On leaving the lot, the contractor did not clean up the area to the satisfaction of Legion officials.
 22. The American Legion was shown plans by KYTC which had U.S. at approximately the same grade as the Legion lot. During construction Legion officials learned that the road was being raised above the level of the lot. No KYTC officials notified them of this change nor gave them an opportunity to express their concerns. Now the level of the Legion property is below U.S. 150 and they are unhappy with their situation. See commitment 9.
 23. Apparently, the American Legion received some payment to compensate for the loss of their flagpole. The flagpole was retained due to efforts of KYTC officials.
 24. The land in front of the American Legion was supposed to be returned post-construction at nearly the same grade as the road. When it wasn't, a berm was

	placed in front of the Legion building. Legion officials requested a retaining wall be placed in front of the building to reduce the intrusion of the berm onto their property. Initially KYTC resisted that proposal saying that a wall would pose a traffic hazard. Eventually, KYTC built the wall.
25.	A landowner stated that KYTC officials promised that the road would have an historic road appearance. The landowner took that to mean a terrain-conforming winding road. Instead, the landowner sees a relatively straight level road with cuts in the rolling terrain.
26.	A landowner was promised extra entrances and wider entrances into her family's property. She stated it took considerable effort by her husband to get KYTC to deliver what was promised to them about this issue.
27.	The contractor was allowed to use an entrance on the landowner's property. In return he was to have graveled the driveway after the project was complete. He did not do that. See commitment 21.
28.	An official of the KYTC resident's crew promised to make needed minor changes to the project to allow it to address the landowner's concerns. KYTC did a good job of making those changes.
29.	One of the entrances built on the landowner's property is too steep to use for farm work.
30.	KYTC officials advised a Perryville homeowner that a modification to his sidewalk would look and function better than a straight entrance in front of U.S. 150. The homeowner took that advice and is happy with the result.
31.	The contractor used a landowner's property as a construction road. He promised to leave the land as he found it. The property owner complained of loss of topsoil, ruts and large rocks in his field. See commitments 21 and 27.
32.	KYTC put a berm on his property (across from the American Legion post). It was not what KYTC had promised to do earlier and it makes his property difficult to maintain. See commitments 9, 15 and 21.
33.	The landowner was unhappy at the appraisal value for land lost to ROW. However, he thought the negotiation process was fair.
34.	KYTC & the contractor promised to remove large surface rocks from his land so he could mow it for upkeep. The rocks were not removed.
35.	The landowner's entrances were to be widened. However, he felt they had not been widened as much as shown in the KYTC plans.
36.	Post-construction punch-list items have not been completed in a timely manner. The landowner complains that construction-related silt barriers are still in place on his land.
37.	The curbs were provided along U.S. 150 as promised and look good.
38.	The sidewalk across from the landowner's property was provided as promised and is serving the needs of an adjacent subdivision.
39.	KYTC promised to put a wide curb entrance into the landowner's property in Perryville. The entrance was installed as promised.
40.	The entrances into property of another rural landowner met his needs and he is very satisfied with them.
41.	On a few occasions, the road to the battlefield was made impassible by construction and made it difficult to access by visitors.

42.	KYTC promised to complete the project by September 2002 and the project was substantially completed by that date.
43.	According to one landowner, KYTC ROW officials told some landowners that the offer they were given was the “best and final” and that they couldn’t get any more money. He was going to take his offer to court and received a last-minute offer substantially above the initial one. He said that other landowners believed what the ROW officials told them about their initial offer being the best they could get. After all settlements were made, the disparity between what some people gave up and what they received caused some hard feelings toward KYTC. He said people felt they had been deliberately misinformed by KYTC officials. See commitments 24 and 33.
44.	The contractor promised to maintain access to this businessman/landowner’s property during construction. He did a good job of keeping his promise.
45.	KYTC promised a safer road. The new road is considered to be safer than the one it replaces.
46.	There was a problem with the Bull Lane connection to U.S. 150. KYTC had to have the contractor modify the road.
47.	The business owner was told by a KYTC official that access to U.S. 150 could not be provided for the front of his store. The owner was able to obtain that access.

Part 3. Lessons Learned

1.	Some commitments involved features that not common or well understood by local residents. The public in the general area needs to be informed that the grass shoulders have a special design that permits them to be used for parking. Regular mowing of the grass shoulders to a low height might promote their use instead of persons parking cars on adjacent landowners’ property entrances.
2.	See above. The public had a multitude of incorrect explanations about the weathering steel guardrails (including one saying old rusty guardrails were used to give the road an “old” appearance). The feature and its purpose need to be clearly explained to locals.
9.,15., 22. & 32	This is an unusual situation where an environmental commitment, given late in the project development, conflicted with one or two project commitments given earlier by KYTC officials. KYTC officials had met with local stakeholders in Perryville and discussed how the road would affect their properties. Later, the SHPO recommended changes to the road that were incorporated into the final design. Those changes impacted the stakeholders, but they were apparently not appraised about them by KYTC officials. Therefore, they were not able to provide their input on those changes and only learned about them after construction was underway. This was a rush project, but if KYTC officials discuss plans with the public, they are making commitments that things will be done in a certain manner. If those circumstances change, KYTC officials should be obliged to revisit all previously contacted stakeholders and, at least, inform them of the revisions. Several of the stakeholders impacted by this situation were still upset about it.
17.	When KYTC officials agreed to reimburse the City of Perryville for the

	<p>maintenance person's time, they made a commitment. There may be billing issues related to this matter, but those have been brought to our attention. The timeliness in fulfilling a commitment is almost as important as the act. It appears that the City of Perryville should have been paid for that work if the billing was in order.</p>
18.	<p>When a project commitment is made, attendant features may be impacted by that commitment. It is incumbent on KYTC to implement commitments that do not create other problem issues.</p>
20.	<p>Part of the American Legion's dissatisfaction with the property settlement stems from the resulting change in the roadway elevation that was not explained to Legion representatives by KYTC officials.</p>
21., 27. & 31.	<p>Stakeholders feel that promises/agreements made by/with the contractors are the same as those made by KYTC. When they are not kept, KYTC is considered the offender. Also, there needs to be an implicit code of behavior by contractors and their subcontractors. The American Legion should not have had to deal with the contractor to get the subcontractor's mess cleaned up. The resident engineer's crew should have handled that issue. Perhaps, the Legion officials did not</p>
24.	<p>complain to resident engineer or his representatives on site. KYTC officials should not say that something cannot be done which proves doable. When they say something can't be done due to reasons such as safety, they either need to stand by their pronouncement or initially state that something <i>shouldn't</i> be done. In denying a request, they have made a project commitment.</p>
25.	<p>They lose significant credibility when their decision gets overturned. Terms such as "historic/old road appearance" invite a variety of interpretations. The author of those comments was undoubtedly referring to the use of grass shoulders and perhaps the weathering steel guardrail. KYTC officials need to be explicit in describing what features will be implemented and leave the visual</p>
26.	<p>impressions to the mind of the listener. KYTC officials must be exact in their promises and follow-through efforts. The CAP system should correct many of these situations. There is a concern about</p>
29.	<p>project commitments that arise in ROW or construction. If KYTC officials promised to put in an entrance for farm equipment, the entrance should be suitable for that purpose. If the farmer can't get his</p>
33.	<p>equipment up the entrance, KYTC should have it redone. Equity on land purchases seems to be a big issue with landowners. If the acquisition process is fair and open, the land owners are usually not unhappy</p>
34.	<p>with KYTC even if they don't get their desired settlement. KYTC officials must follow through with promises made by contractors if they</p>
35.	<p>are a party to the promise. Plans are project commitments. KYTC officials should review the plans and contact the owner to determine why he feels the plans were not properly</p>
36.	<p>implemented. Project commitments must be kept in a timely manner. If problems arise in their implementation, KYTC officials should contact the impacted party and at least</p>
43.	<p>offer an explanation why the commitment hasn't been fulfilled. This commitment issue bears somewhat on commitments 24 and 33. The proper</p>

47.

approach would be for the ROW agent to say that an offer was the best the landowner could get unless he went through arbitration or litigation. Landowners are aware of settlements with their neighbors and are very upset by perceived disparities. Actions of contract ROW agents may be difficult for KYTC to regulate. But, as with contractors, stakeholders view their actions to be equivalent to those of KYTC officials.
See commitment 24. KYTC officials should not say something cannot be done which proves doable. This lowers KYTC credibility with the public/stakeholders.

Part 4. Project Summary

This was a high-visibility project implemented in a compressed time-frame to provide a more aesthetic treatment prior to a major battle reenactment. Most of the environmental commitments were adequately addressed and are performing well. The battlefield sign is partially obscured and only seems to be of benefit to motorists traveling westbound on U.S. 150 (through Perryville). It was placed next to the cemetery and, due to its location; the designer probably did not want to make it obtrusive.

Most of the stakeholders surveyed graded the overall project high (As and Bs). They commented favorably about the appearance of the road and all other environmental commitments. The highest grades were from local government officials and the SHPO. Most stakeholders had contact with KYTC officials either in face-to-face or public meetings. Some stakeholders graded KYTC officials well (As and Bs). In cases where contentious issues were involved, the stakeholder grades for KYTC officials were expectedly lower. The KYTC resident engineer's crew was commended by the several stakeholders, even those critical of other KYTC officials. Most of the stakeholders appreciated KYTC officials meeting their commitment to complete the project in time for the 2003 reenactment of the Battle of Perryville.

KYTC officials did not encounter any significant problems in implementing the project commitments.

If the CAP system was in place early in the development of this process, the commitment giving the SHPO an opportunity to comment on the design would have been on record. That would have allowed his input earlier in the progress of the project and might have prevented some issues with adjacent landowners (see below).

Several problems arose related to a belated design change to U.S. 150. That change was enacted at the suggestion of the SHPO. That change eliminated a steep cut planned for a hill on the West side of Perryville. The SHPO was concerned about the visual impact of the cut and its effect upon adjacent properties. Prior to this, KYTC officials had discussed the initial design with some of those property owners. When KYTC revised that design, apparently KYTC officials didn't inform those property owners of the revision. Some learned about it only during construction when the road was being constructed in front of their property. The property owners expressed some animosity and frustration toward KYTC for not giving them an opportunity to provide input on the revised design. Rush projects and last-minute changes will probably create similar situations in the future. KYTC officials should develop ways of tracking prior commitments and keeping the stakeholders up-to-date concerning subsequent revisions.

The investigation of this project revealed several other issues that need to be addressed. They relate to comments/agreements made by KYTC officials, contractors and agents working for KYTC. KYTC officials must be careful when using words that have absolute implications. Some examples are:

- when a KYTC official states that something “can’t” be done, he is acting as an authority for KYTC. If that official’s pronouncement is overturned, by whatever means, it reduces public respect for the authority (and veracity) of KYTC officials. In many instances, the term “can’t” should be replaced with a statement that implies an official objection to something, but does not preclude the possibility that the objection can be overruled.
- ROW agents should not infer to landowners that a price offered represents the highest amount that KYTC will pay for their land. They should be informed that the offer is the best they will receive without legal action or arbitration.
- the public frequently considers contractors on KYTC projects as KYTC agents whose promises/agreements are endorsed/guaranteed by KYTC. This is especially true if KYTC officials are present. Many of those are apparently made verbally and, if the contractor doesn’t follow-through with his end of an agreement (in the view of the public), then the public views the situation as a lack of faith by KYTC. KYTC officials should not be a party to public-contractor agreements. If they are, then KYTC must assume some responsibility to see that the agreement is kept by both parties.
- when KYTC is funding the work of a contractor (and his subcontractors) on a project, there are certain expectations by stakeholders (adjacent landowners) on how the work will be performed. If a contractor/subcontractor conducts work on private property (or work that impacts private property) and does not properly clean up after his work is completed, it should be incumbent on KYTC officials to have the situation corrected. The stakeholders should be informed as to what constitute reasonable expectations when highway contractors are working on or adjacent to their property. Those expectations currently constitute unspoken commitments in the minds of stakeholders.



Figure 1. This is a typical paved farm entrance constructed along U.S. 150 by KYTC. Note the wide radius employed to facilitate use of the entrance by vehicles towing trailers.



Figure 2. This is a Westward view along U.S. 150 toward the West end of the project. Note the use of grass shoulders and weathering steel guardrails.



Figure 3. The Perryville battlefield sign is on corner of Jackson Avenue and Cemetery Road/U.S. 150 across the road from KY 1920 and is adjacent to a historic marker.

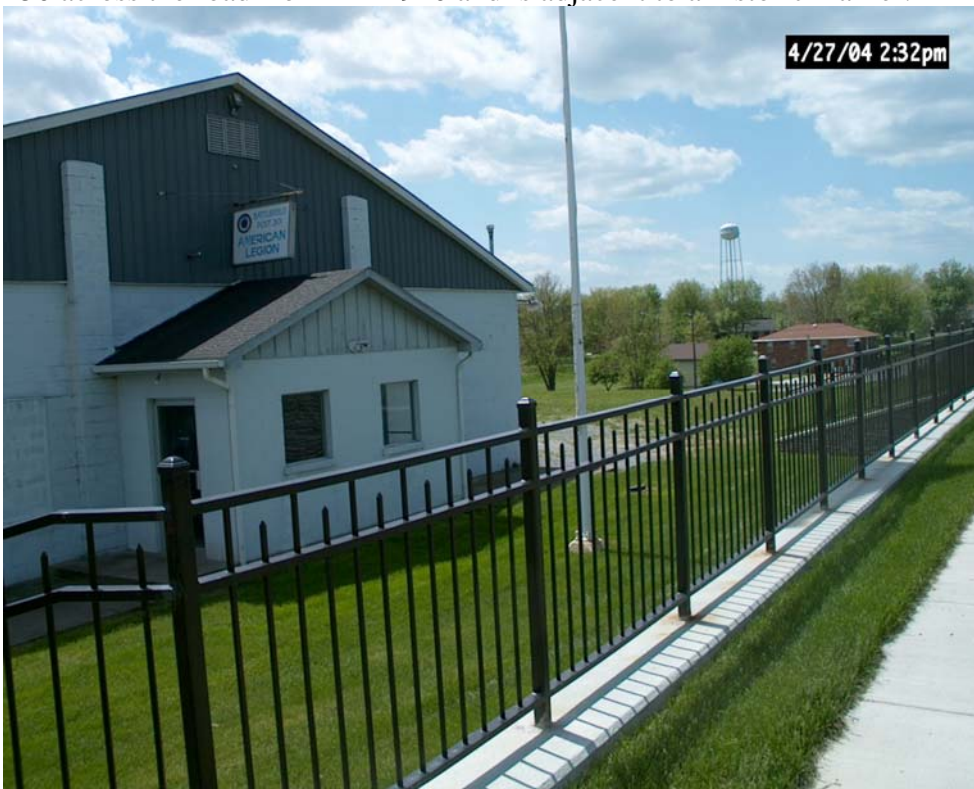


Figure 4. A view of the American Legion Post in Perryville. The Legionnaires objected to the elevated U.S. 150 roadway, but were pleased to be able to retain their flag pole.



Figure 5. Rock facings were used on retaining walls in Perryville along U.S. 150. This is the front entrance into the Perryville Cemetery near the downtown area.

***APPENDIX C – Project Commitment Follow-Up Project Summary:
Jefferson Boulevard at Louisville***

Project Commitments Project Summary

Date Compiled: 6-14-04

Compiled by: Sudhir Palle

Project Title/Location: The Jefferson Boulevard (KY 8556) Jefferson County

Project No.: FD52 05 8556

District: 5

Project Description:

Length: 1.52 miles

Letting Date: 5-31-2002

Work Start: 7-22-2002

Work Complete: 12-03-2003

Contractor: Gohmann Asphalt and Construction, Inc.

Total Amount: \$5.8 Million

Purpose and Need: The purpose of the project is to improve the level of service and safety for the traveling public by extending Jefferson Boulevard.

Context-Sensitive Factors: The Wetland Area, Noise Barrier Wall, Stormwater Drainage Secured Access to USPS.

History of Project: The project was included as part of FY 1994 Annual Element of the Louisville Area Transportation Improvement Program for roadway improvements to Jefferson Boulevard from McCawley Avenue to Poplar Road by a total of 2.01 miles from McCawley Avenue to Poplar Level Road. The project was split into two sections and they are: 1) Between McCawley Avenue to North Ditch by 0.48 miles and this involved mostly grade and drain work, and 2) Between North Ditch and Poplar Level Road by 1.53 miles and this involved grade, drain and asphalt surface work. This project required the construction of a road over Northern Ditch and the clearing and filling of approximately 9.5 acres of wetlands.

An agreement was entered into between Jefferson County Fiscal Court and Kentucky Transportation Cabinet on November 22, 1994 where the County was to design the improvement, acquire necessary rights of way, and relocate utilities for the improvement and KYTC was to accept bids, award the contract, and provide for construction supervision of the improvement.

It was estimated that approximately 13 acres of wetlands would be impacted by this project requiring various options for mitigating the wetlands had to be developed. That involved a combination of preservation of some or all of the remaining wetlands adjacent to the proposed project and creation or restoration of wetlands within the Pond Creek watershed. Eventually, out of five candidate properties, KYTC purchased a 59-acre tract (at approx. \$760,000) for wetland mitigation prior to construction of the Jefferson Boulevard Extension. Known as the Mac Sawyer property, the land is located in Jefferson County at the NE intersection of I-65 and I-265.

Since the planned roadway was to cross over a CSX railroad, it required coordination between the railroad facility owner, KYTC District Engineer and the Contractor to install a railroad crossing. The railroad company was to construct the railroad crossing after the contractor had completed approaches to the railroad tracks. The contractor also had to coordinate with the utility companies (Louisville Gas and Electric Company, Williams/Texas Gas, Bellsouth

Telecommunications, Louisville Water Company, Insight Communications and Metropolitan Sewer District) to adjust or relocate their facilities. The project involved construction of noise barriers to abate noise levels above the KYTC Noise Abatement Policy for a community. The project was completed in December 2003 (with some minor revisions and “punch list” work outstanding).

Part 1. Commitments

A. List the stakeholders (include KYTC) involved with commitments.

1. KYTC Officials - District 5, Central Office, Resident Engineers Office (Louisville)
2. Local Governments – Jefferson County Fiscal Court, City of Louisville, Municipal Sewer District (MSD)
3. Resource Agencies – NREPC, Army Corps of Engineers
4. Interest Groups - US Postal Service (USPS), CSX Railroad
5. Individuals - Primarily adjacent landowners and businesses
6. Others - Various Utilities (Louisville Gas and Electric)

B. List of project commitments made by KYTC officials/contractor

Commitment	To Whom	Mechanism
1. A “Pump-Around” method was used to establish and maintain flow from the existing upstream manhole to the next existing downstream manhole prior to constructing the proposed MSD Type-1 Manhole and isolating the affected sanitary sewer. Sanitary service was never to be interrupted.	MSD	Face-to-Face & Public Mtgs.
2. The contractor was to maintain access to the USPS facility at all times.	USPS	Face-to-Face Mtgs.
3. The roadway contractor shall not perform any construction activities on the USPS property between November 15 and January 15 due to the holiday traffic.	“ “ “ “ “ “	“ “ “ “ “ “
4. The roadway contractor was to phase his work so that the new entrance to Jefferson Boulevard is constructed first.	“ “ “ “ “ “	Face-to-Face & Public Mtgs.
5. The roadway contractor would not park or store construction equipment, materials, employee vehicles, temporary restrooms, etc. on the USPS property.	“ “ “ “ “ “	“ “ “ “ “ “
6. The roadway contractor would phase his work so that the new USPS entrance to McCawley Road was completed before the existing entrance to McCawley Road is removed.	“ “ “ “ “ “	Face-to-Face Mtgs.
7. The roadway contractor was to perform his construction activities on the USPS property	“ “ “ “ “ “	Face-to-Face Mtgs.

	during their normal business hours. No work will be allowed while the facility is closed.	“ “ “ “ “ “	“ “ “ “ “ “
8.	The roadway contractor was to match the existing fence on the USPS property. The existing rolling gate was to be reused by the contractor and paid for under the bid item “Remove and Reset Gate”.	“ “ “ “ “ “	“ “ “ “ “ “
9.	The roadway contractor was to progress the construction of the proposed parking lot as much as possible prior to removing any existing USPS fencing. At that time, the roadway contractor was to coordinate with the Station Manager to develop a strategy to secure the facility before any existing fencing was removed.	“ “ “ “ “ “	“ “ “ “ “ “
10.	The roadway contractor was to match the existing parking lot light standards and their intensity. The existing standards were to be reused by the contractor and paid for under the bid item “Remove and Reset Light Standard”	“ “ “ “ “ “	“ “ “ “ “ “
11.	The USPS architect was to be contacted to coordinate the fencing and lighting details for the facility.	“ “ “ “ “ “	Face-to-Face Mtgs.
12.	Completion date for the project was to be November 1, 2003, with liquidated damages being assessed at a rate of \$2000 for each calendar day beyond that specified date.	Public	Face-to-Face & Public Mtgs.
13.	Early completion of McCawley road and Jefferson Boulevard near Jefferson Mall by March 1, 2003. This included the new signal at the intersection of Jefferson Boulevard and McCawley Road.	Public and Jefferson Mall	“ “ “ “ “ “
14.	Based on an agreement with the property owner of Parce 1, J.C. Penney Properties, Inc., the roadway contractor would not perform any construction activities in the easement area of Parcel 1 between November 15, 2002 and January 15, 2003.	J.C. Penney Properties	“ “ “ “ “ “
15.	Restoration of 47.5 acres of prior converted cropland in Nelson County was to be constructed within 6 months of the start of the Jefferson Boulevard Extension.	Army Corps of Engineers	Face-to-Face Mtgs
16.	Sediment control structures were not to be placed within the channels of intermittent or perennial streams.	Division of Water	“ “ “ “ “ “
17.	Stream banks in the vicinity of bridge construction were to be protected from erosion by natural or man-made materials.	“ “ “ “ “ “	“ “ “ “ “ “
18.	Heavy Equipment was not to enter any stream	“ “ “ “ “ “	“ “ “ “ “ “

channel except over approved low water crossing structures.											
19. Existing vegetation was to be retained on site as long as possible and permanent seeding of finished areas was to take place as soon as possible.	“	“	“	“	“	“	“	“	“	“	“
20. In areas not rip-rapped or otherwise stabilized, re-vegetation of stream banks and riparian areas was to occur concurrently with project progression.	“	“	“	“	“	“	“	“	“	“	“
21. Construct noise barriers were to be installed to abate noise levels above the KYTC Noise Abatement Policy.	Public							“	“	“	“

C. List KYTC procedures to record and implement the project commitments that were made to the stakeholders.

1. KYTC Memorandums
2. Notes and specifications on plans detailing commitments.
3. Formal partnering between KYTC and contractor included commitments to meet project deadline, and to incorporate all project commitments.

D. Was there any involvement by KYTC Construction or Maintenance personnel during the process of commitments being made to stake holders? Yes No. If Yes, describe when and at what stage of project development? Are follow-up actions needed to complete project? Are there any long-term commitments such as plant warranties or special maintenance requirements?

Construction utilized several public and face to face meetings in Jefferson Co. to kick-off the construction phase and to demonstrate that they understood project commitments and listen to any other local concerns.

Part 2. Audit Results of Project Commitments

A. List any problems encountered in implementing the project commitments.

<u>Commit. No.</u>	<u>Problem</u>
21	Because of the negotiated right of way settlement and a change in zoning of the McDonald Parcel (Number 11) the length of the noise barrier was altered with FHWA approval.

B. Were there any follow on KYTC inspections to check on the implementation of the commitments?
 Yes No If Yes, what were the findings?
 None other than standard construction practices and follow up on complaints.

C. KTC audits/observations of KYTC project commitments currently in place.

<u>Commit. No.</u>	<u>Findings/Comments</u>
1.	The drainage system appears to be holding up well although some property owners have complained about the grass being not mowed.

2 thru 11	The USPS appears to be satisfied with the contractor although the contacts at USPS have moved to other locations.
12.	The completion date for the project was extended beyond November 1, 2003 due to various change orders on the project that had to be processed. The time was extended to December 3, 2003 to incorporate the change orders as compared to the original contract. There were no liquidated damages charged for this extension as it was mutually agreed upon.
13.	This section was not completed by March 1, 2003 because the shopping center had not been built and opened by that date. Also the paint striping could not be placed before the temperatures were above 45 °F. Therefore, the decision was made to extend the completion date for that intersection beyond March 1, 2003. The intersection with the new signal was finished before the shopping center was opened.
14.	J.C. Penny Properties was satisfied with the work on the project.
15.	U.S. Army Corps of Engineers will be monitoring this project for 5 years after the project is completed. U.S Army District Engineer Lee Anne Devine stated that KYTC may have missed a report to be submitted to them. She also stated that a compliance inspection of the restored area is scheduled in March 2005 and that the Corps was satisfied with the compensatory wetland to date.
16 thru 20.	These commitments appear to have been held up well though no documentation exists regarding otherwise.
21.	The noise barrier wall is in good condition.

Part 3. *Lessons Learned*

<u>Commit No.</u>	
1.	Appearance and maintenance of the drainage systems seem to be of concern with the property owners.
2 thru 11.	This is an observation that if a follow up on commitments with USPS needed to be done then it had be within six months from the completion date of the project as it was found that contact personnel had changed jobs.
12.	This appears to be insignificant as it did not affect the public directly as this was a new roadway extension being built.
15.	Project commitments related to compensatory wetlands extend for at least 5 years beyond project completion (to U.S. Corps of Engineers). Additionally, there are reporting requirements that constitute additional commitments.

Part 4. *Project Summary*

This project was a successful project in terms of project commitments made that can be verified by follow-up inspections. The project overall grades were 'Bs' and 'Cs'. Most commitments made related to construction practices appear to have been kept as there were no

violations/citations recorded or noted by KYTC officials involved with the project. The slippage in the project completion date was only one month and it did not impact the traveling public.

Some concern was expressed by adjoining property owners about mowing of grass around the permanent drains and on the medians. This was not a project commitment per se, but reflects unstated maintenance expectations by local residents. One property owner was concerned that the drainage system along the road would overflow onto his property (though that had apparently not occurred to date).

Equity on land purchases was an issue. One property owner was concerned about the fairness of the KYTC appraisal for his property.



Figure 1. This is the entrance to the USPS Facility from McCawley Road.



Figure 2. T CSX railroad crossing is shown with noise barrier walls visible along the other side of Jefferson Boulevard.



Figure 3. The permanent drainage system along Jefferson Boulevard is shown with wetland areas in the background.



Figure 4. The rip rap and drains along the bank of Northern Ditch are shown adjacent to the Jefferson Boulevard bridge.



Figure 5. The intersection of Fern Valley Road and Jefferson Boulevard is at the north end of the project.

***APPENDIX D – Project Commitment Follow-Up Project Summary:
Cemetery Road/KY 234 at Bowling Green***

Project Commitments Follow-Up Summary

Date Compiled: 2-1-05

Compiled by: Ted Hopwood

Project Title/Location: Cemetery Road from Collett Lane to Shaker Mill Road and the I-65 Interchange with KY 234 (Warren County)

Project No.: FD52 114 0234 009-013

District: 3

Project Description:

Length: 2.3 miles

Project Start:

August 2000 (interchange bridge)

April 2001 (grade, drain and surfacing)

September 2002 (landscaping)

Project Complete:

July 2001 (interchange bridge)

February 2003 (grade, drain and surfacing)

April 2003 (landscaping)

Contractors:

Van Meter Construction Co. (interchange bridge)

Scotty's Contracting Co. (grade, drain and surfacing)

D & M Landscaping (landscaping)

Costs:

interchange bridge - \$2.7 Million

pave and drain - \$10.3 Million

landscaping - \$0.5 Million

Purpose and Need: This project was conceived to provide improved and additional access into the Bowling Green Central Business District from a new interchange on I-65. It was also intended to relieve traffic congestion and improve safety on Cemetery Road by construction of a 4-lane facility and to accommodate future growth in the community by providing additional capacity sufficient to handle expected traffic volumes.

Context-Sensitive Factors: Community impacts to residents along the reconstructed roadway and historic properties.

History of Project: In 1983, KYTC produced a report (Interchange Justification Study-Interstate 65-KY 234) recommending the construction of an interchange with I-65 at KY 234. A further KYTC Advanced Planning Report in 1985 concluded that the proposed interchange would necessitate improvements to Cemetery Road in order to provide an acceptable Level of Service. That report recommended expanding Cemetery Road from a 2-lane to a 4-lane facility.

The proposed project had been halted several times due to public opposition, primarily to construction of the interchange with I-65. In 1996, the Secretary of Transportation announced that the project would be implemented. Some initial public opposition resurfaced, but in 1997 after community discussions on how expansion of the road could co-exist with the community, the project moved forward. The FHWA issued a Finding of no Significant Impact and

Programmatic Section 4(F) Evaluation for the proposed project in March 1997. The alternate selected was considered to offer fewer disruptions to the public during construction and require less utility relocations. It provided space for the design for bike lanes, walking trails and landscaping to buffer the neighborhoods from the expanded/new road and to have the road serve as a scenic entranceway into the city. Those features were incorporated into the final project design. Another design/aesthetic feature was to provide the interchange bridge with faux stone facings and employ aesthetic landscaping about the interchange. In addition to the design features, access was limited along a portion of the route from Ewing-Ford Road to the I-65 interchange. Truck traffic entering Cemetery Road from the interstate was to be diverted onto Lovers Lane (KY 880).

In 1997, the local planning commission employed a consulting firm to develop a land use plan for the Cemetery Road corridor. Several features were derived from that effort that impacted the KYTC design. Another key local effort was the development of zoning overlay along the roadway which the planning commission developed to limit and control growth along the roadway. This effort was coordinated with the KYTC plan to limit access East of the Ewing Ford intersection with Cemetery Roadway.

The related projects were let between August 2000 and September 2002 and the last phase (landscaping) was completed in April 2003. Since then, minor features have been introduced along the roadway including an entranceway and banners (hung on light posts) from Western Kentucky University. Maintenance of the extensive landscaping has proven somewhat problematic with the city and county governments sharing some of that work with a community development agency, Operation P.R.I.D.E.

Part 1. Commitments

A. List the stakeholders (include KYTC) involved with commitments.

1. KYTC Officials-District 3, Central Office, Resident Engineers Office (Bowling Green)
2. Local Governments-City of Bowling Green, Warren County Judge-Executive’s Office
3. Resource Agencies/MPOs-Kentucky Heritage Council, City-County Planning Commission (Bowling Green-Warren County), the Greenways Commission, Operation P.R.I.D.E.
4. Interest Groups-Citizens for Improving Cemetery Road
5. Individuals-Primarily adjacent landowners and businesses
6. Others-Neighborhood Associations, Western Kentucky University, Warren County 4H Extension Board and the Bowling Green Tree Board

B. List of project commitments made by KYTC officials/contractor

<u>Commitment No.</u>	<u>To Whom</u>	<u>Mechanism</u>
1. No impacts to historic/eligible properties including cemetery	SHPO & others	Face-to-Face Meetings, Public Meetings & Document Preparation/ Approval
2. Controlled access between the Ewing	Local Governments,	“ “ “ “ “ “

Ford Road/Cemetery Road intersection and I-65	Resource Agencies, Interest Groups, Individuals & Others	
3. Berms and landscaping	“ “ “ “ “ “	“ “ “ “ “ “
4. Median landscaping	“ “ “ “ “ “	“ “ “ “ “ “
5. Bridge aesthetics	Local Governments, Resource Agencies, Interest Groups, Individuals & Others	Face-to-Face Meetings, Public Meetings & Document Preparation/ Approval
6. Interchange landscaping	“ “ “ “ “ “	Face-to-Face Meetings & Document Preparation/Approval
7. Construct a multi-purpose bicycle/pedestrian path	“ “ “ “ “ “	Face-to-Face Meetings, Public Meetings & Document Preparation/ Approval
8. Develop a 14-acre park on excess property purchased by KYTC	“ “ “ “ “ “	Face-to-Face Meetings
9. Divert truck traffic entering Cemetery Road from I-65 onto Lovers Lane	“ “ “ “ “ “	Face-to-Face Meetings, Public Meetings & Document Preparation/ Approval
10. Signalize 5 intersections using mast mounted lights	Local Governments & Resource Agencies, “ “ “ “ “ “	Face-to-Face Meetings & Document Preparation/Approval
11. Minimize 4F takings at Spero Keriakes Park and grade park land	Local Governments	“ “ “ “ “ “
12. Reconstruct stone wall subdivision entrance at Hayes Lane intersection	Local Governments, & Others	
13. Add guardrail along multipurpose path at sinkhole	Resource Agencies	Document Preparation/ Approval
14. Provide signing and bollards at end of multipurpose path	“ “ “ “ “ “	“ “ “ “ “ “
15. Install conduit for decorative light posts	Local Governments	Face-to-Face Meetings & Document Preparation/Approval
16. Install white plank access control fence from Lovers Lane to I-65	Local Governments, Resource Agencies, Interest Groups, Individuals & Others	“ “ “ “ “ “
17. Provide land from excess property for installation of Western Kentucky University gateway	“ “ “ “ “ “	“ “ “ “ “ “
18. Relocate pine trees along the ROW	Local Governments, Resource Agencies, Individuals & Others	“ “ “ “ “ “
19. Plant new maple and dogwood trees along the ROW	“ “ “ “ “ “	“ “ “ “ “ “
20. Maintain landscape along KY 234 at the I-65 intersection	Local Governments & Resource Agencies	“ “ “ “ “ “

21. Extend multipurpose path along Lovers Lane with that road is reconstructed	“ “ “ “ “ “	“ “ “ “ “ “
22. Revise drainage in yard of adjacent landowner	Individuals	Face-to-Face Meetings

C. List KYTC procedures to record and implement the project commitments that were made to the stakeholders.

1. KYTC Memorandums
2. Memorandums of Agreement (Municipal Order with City of Bowling Green and Resolution with Warren County Judge Executive)
3. Project plans (some commitments, especially plans for landscaping)
4. Constant communication with agencies through participation in work groups tasked with certain aspects of the project. This communication was included in the minutes of those agency meetings and became written records of “promises”

D. Was there any involvement by KYTC Construction or Maintenance personnel during the process of commitments being made to stake holders? X Yes ___ No. If Yes, describe when and at what stage of project development? Are follow-up actions needed to complete project? Are there any long-term commitments such as plant warranties or special maintenance requirements?

As promises came to decision points, Construction, Maintenance, and Traffic personnel were made aware so that they could provide input in the decisions being made and to assure follow-through of those decisions (such as the guardrail along the shared use path near the sinkhole, the implementation of the road closure & bollards on the old section of Ewing Ford Road near Brite Way, the perpetual care of the massive landscaping effort along the roadway, and the signing for the shared use path).

Part 2. Audit Results of Project Commitments

A. List any problems encountered in implementing the project commitments.

<u>Commit. No.</u>	<u>Problem</u>
20.	Since the end result of this project was the creation of a “road within a park”, KYTC personnel were outside their “professional comfort zone” and required much additional information on how to care for this project. An intensive effort was undertaken to address the long-term care of the landscaping material as well as the shared use path. Several sources of professional expertise on this matter were not included in the initial conversations on this matter. Eventually, a maintenance plan was developed that included those who will actually be making that “maintenance” happen.

B. Were there any follow on KYTC inspections to check on the implementation of the commitments?

X Yes ___No If Yes, what were the findings? By creating an inclusive effort and community buy-in, many eyes (from KYTC, local agencies, and the general public) were constantly watching the progress of the project. Any concerns were communicated to the proper authorities to be addressed. This communication would activate KYTC to meet with its partners in the

project to develop solutions to these concerns.

C. KTC audits/observations of KYTC project commitments currently in place.

<u>Commit. No.</u>	<u>Findings/Comments</u>
1.	No historic/eligible property including the cemetery was impacted by the project.
2.	Fencing exists from Ewing Ford road to the intersection providing for access control along that segment of roadway.
3.	Berms and landscaping are present along both sides of the road where indicated in the plans (Figure 1). The plantings – trees and shrubs are in good condition. The grass along the right of way appeared to be properly mowed. Local government agencies and resource agencies complained about maintenance requirements.
4.	Flowers and shrubs are present in the raised medians along Cemetery Road and are in good condition. Local government agencies charged with maintenance complained that they are high-maintenance plantings.
5.	The interchange bridge contains faux stone facings giving it a pleasing appearance.
6.	KYTC land at the I-65 interchange has been landscaped containing numerous trees and shrubs (Figure 2). Crown vetch has been used to stabilize the slopes and provide a natural appearance for the area.
7.	The multi-purpose bike path extends along Cemetery Road from Lovers Lane to Ewing Ford Road (Figure 3). The path is asphalt paved about 10 feet wide and sits adjacent to the curb and gutter several feet from the Cemetery Road roadway.
8.	This park was originally promised by the Secretary of Transportation in 1996. Originally, it was to be located on excess purchased land adjacent to Ewing Ford Road. Public opinion was in opposition to the park which was to have possessed an access road. There was concern that the park would generate illicit activities and by mutual agreement with all stakeholders this plan was shelved. Currently, excess purchased land for the park exists along the controlled access portion of the road. KYTC officials plan to propose extending the multi-purpose path to this land and border it to form a new park not accessible by vehicles.
9.	A sign is present on Westbound Cemetery Road directing trucks to take Lovers Land (KY 880) to Scottsville Road.
10.	Five intersections were to be signalized on reconstructed Cemetery Road using signal poles and mast arms (Figure 4). Only four were constructed. The Mount Ayr Neighborhood Association neither wanted Hays Lane to be aligned with Sherwood Way nor a signalized intersection to be placed in the intersection as initially planned. Currently, plans are being prepared by KYTC to provide another signalized intersection on Cemetery Road (see commitment 12 below).
11.	The Spero Keriakes Park takings (including those used only for road construction) were limited in scope. The land adjacent to Cemetery road has been landscaped and the blends in well with the rest of the park (Figure 5). Bowling Green Parks Department officials were pleased with the KYTC actions relative to the park. Plans exist to improve access into the park by signalizing the Hampton Drive/Keriakes Park intersection with Cemetery Road.
12.	The stone wall at the Mount Ayr Subdivision was dismantled during construction to accommodate the expanded right of way of Cemetery Road. KYTC paid the City of Bowling Green to relocate and rebuild the wall.

13.	The Greenways Commission requested a guardrail be constructed along a portion of the multipurpose path to prevent people from falling into an adjacent sinkhole. The guardrail has been installed and is serving its intended purpose.
14.	Bicycle path signing and bollards have been placed at the end of the multipurpose path at Ewing Ford Road. They are in good condition.
15.	During the construction of Cemetery Road, electric conduit was installed by KYTC for ornamental light posts purchased and installed by the City of Bowling Green and Warren County.
16.	Excess purchased land created by re-routing the West end of Ewing Ford Road was used by Western University to create a gateway for the university.
17.	KYTC relocated pine trees along the project right of way to other sites on Cemetery Road and along the Riverfront. Most of the trees are still alive.
18.	New maple trees paid for by KYTC and dogwood trees furnished by others were planted along Cemetery Road by the City of Bowling Green and volunteers. Those trees are doing well.
19.	The landscaping at the intersection has a good appearance. There are many trees and shrubs planted about the intersection and they appeared to be doing well. The ground appeared to be well manicured where mowing was required.
20.	When Cemetery Road was reconstructed the multipurpose path was extended down Lovers Lane between old and new Cemetery roads. Officials from KYTC, local governments, and resource agencies agreed that when Lovers Lane is reconstructed, the multipurpose path will be extended to a soccer field. KYTC officials are currently developing plans to reconstruct that road (including installation of the multipurpose path.
21.	One adjacent landowner had asked KYTC officials to provide proper/desired drainage on his property.
22.	One adjacent met with KYTC officials who discussed where the new road right of way extended up to his property. During construction, the property owner believed that the contractor had parked equipment and piled material on his property though he did not complain about it. When the project was completed, the land was returned to its original condition and he had no complaints about the current condition of his property.

Part 3. Lessons Learned

<u>Commit No.</u>	<u>Lesson</u>
2.	This fencing was not stipulated in the original plans and apparently was an aesthetic add on replacing commonly used woven-wire fence. No documentation was provided by KYTC District 3 concerning its use.
3.	When seeking agreements with local governments/resource agencies that involve their assumption of maintenance activities, try to involve the specific local government agencies that will assume those duties for their input.
4.	See commitment 3.
8.	Project commitments can be “shelved” by mutual agreement of KYTC and stakeholders. The commitments can be revisited after project completion with revised details (in this case elimination of a park access road) to make them acceptable to the stakeholders.
10.	See commitment 9. The commitment change being revisited is signalization at an intersection other than the one originally planned for by KYTC.
12.	This commitment was made during the right-of-way phase of the project as the consequence of condemnation proceedings to obtain the land on which the stone

<p>20.</p> <p>21.</p> <p>22.</p>	<p>wall was located. This occurred <u>after</u> the letting date for the grade, drain and surfacing project.</p> <p>This commitment pertains to a future project that was made during a current project.</p> <p>One adjacent landowner stated that a KYTC official met with him and promised to drain rainwater away from his property. Apparently this was not done.</p> <p>In addressing property issues, it might be beneficial for KYTC officials to mark property lines during construction to ensure the public that no unwarranted intrusions were being made on their property.</p>
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Part 4. Project Summary

This project represents close interaction between local government, resource agencies/MPOs and KYTC and the application of context sensitive solutions in project development. Early on, this project was opposed by locals who had significant concerns about the interaction of the I-65 intersection with Cemetery Road especially regarding development. KYTC officials listened to those concerns and produced a design that incorporated controlled access, extensive landscaping, truck routing, and a multi-purpose path to limit development and provide an appealing gateway into Bowling Green. The local governments and resource agencies developed special zoning along the Cemetery Road (a zoning overlay) to limit the impacts of any commercial development to the surrounding residential areas.

The completed project conformed to most of the project commitments both environmental- and transportation-related. Several commitments were set aside by mutual agreement of KYTC and the stakeholders until after the project was completed. KYTC District 3 Planning is currently working on fulfilling those commitments.

The overall project received high grades from most stakeholders (mostly As and Bs). KYTC insistence on placing the responsibility for landscape maintenance along much of Cemetery Road on local governments may have had a slight negative impact on the grades. Most of the stakeholders reported contacts with KYTC officials in either face-to-face meetings and public meetings (or both). Most of the stakeholder grades for KYTC officials were high (As and Bs).

KYTC officials did not encounter any significant problems in implementing the project commitments.

Some project commitments were made during ROW and throughout construction. Those would be difficult to capture with the CAP system as it currently exists. Public expectations about KYTC commitments related to landscaping cannot be assessed until the plantings (especially the trees) are fully matured. That determination will not be available for several years. A commitment was made to extend the multi-purpose path along Lovers Lane when it is reconstructed. Commitments made on forthcoming projects need to be recorded in some KYTC document for inclusion in the Lovers Lane CAP.



Figure 1. Berming and landscaping were widely employed along Cemetery Road/KY 234.

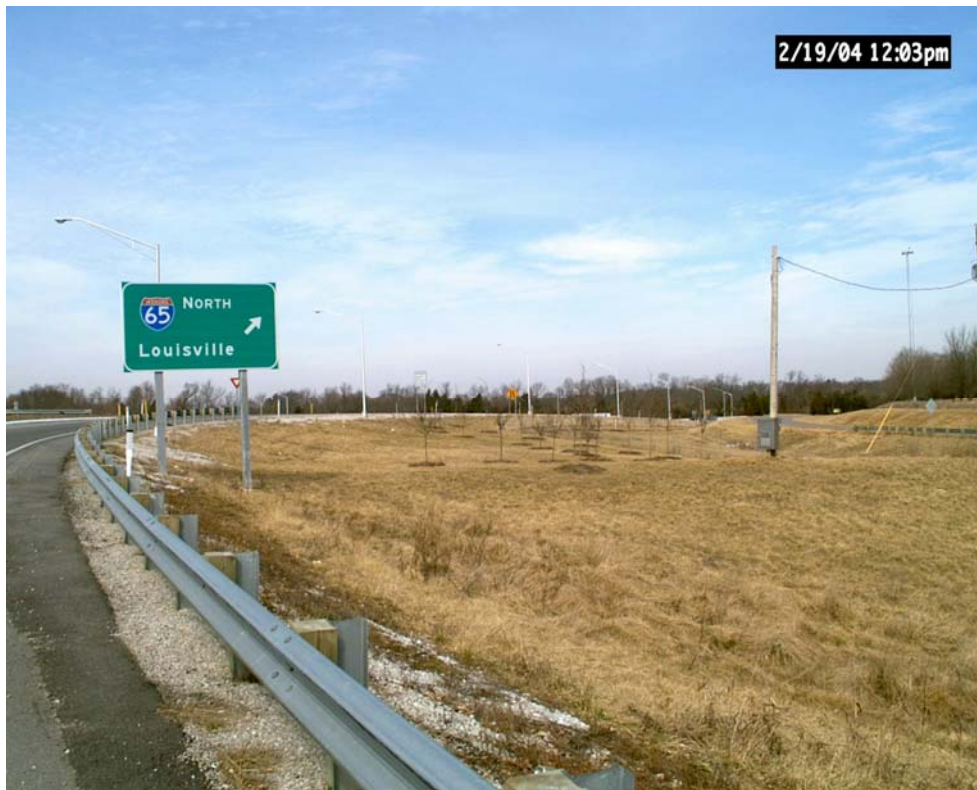


Figure 2. The I-65/KY 234 interchange was landscaped as part of the Cemetery Road/KY 234 project.

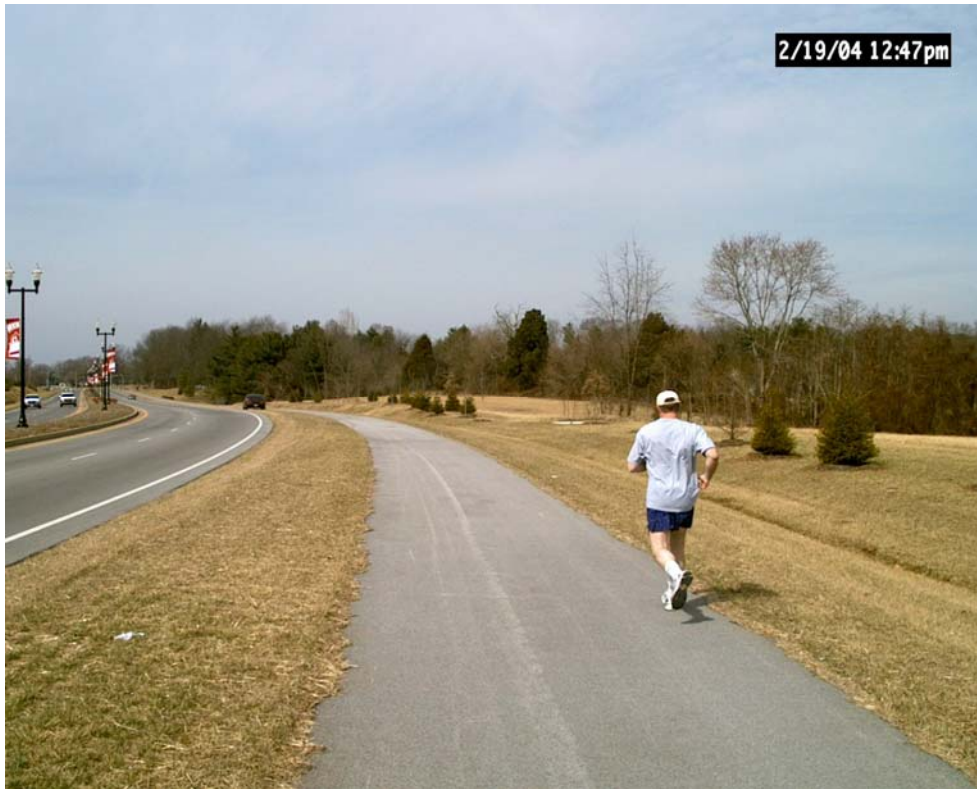


Figure 3. The multi-purpose path constructed along Cemetery Road/KY 234 is used by bicyclists and runners.



Figure 4. Sign pole and mast arm light signals were installed at four intersections along Cemetery Road/KY 234.



Figure 5. A small portion of Spero Keriakes Park was taken for ROW during the Cemetery Road/KY 234 project. A berm was used to transition between the park and sidewalk.