

NCHRP Project 20-68

U.S. Domestic Scan Pilot Program: Final Evaluation Report

Prepared for
National Cooperative Highway Research Program
Transportation Research Board
of
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This report has not been edited by TRB.

final report

NCHRP 20-68, U.S. Domestic Scan Program

Task 5: Evaluation Report

prepared for

National Cooperative Highway Research Program

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1.0 Introduction and Summary

1.0 Introduction and Summary

■ 1.1 Overview of Domestic Scan Pilot Program

The purpose of this report is to evaluate the pilot domestic scan program conducted in 2006 under the National Cooperative Highway Research Program (NCHRP) Project 20-68, U.S. Domestic Scan Program, and to refine the business plan for the program based on the lessons learned from the pilot.

In 2004, the NCHRP proposed to fund and operate a Domestic Scan Program, modeled after the successful International Technology Scanning Program sponsored by the American Association of State Highway and Transportation Officials (AASHTO) and the Federal Highway Administration (FHWA) through NCHRP Project 20-36. The intended purpose of the Domestic Scan Program was to identify, review, document, and disseminate innovative practices by transportation agencies throughout the United States. The program would sponsor site visits in which groups of transportation professionals travel to different states to meet with state transportation agency staff and other practitioners to learn about, document, and disseminate information on practices of current interest and importance. In July 2005, the NCHRP completed a business plan for conducting this program that established a template for how to manage the overall program and conduct individual scans undertaken through the program.¹

In January 2006, the NCHRP awarded an initial contract under this program to a consultant to conduct two “pilot” scans and to evaluate the benefits and lessons learned from these pilot scans. The topics selected for the two pilot scans were:

1. **Scan A.** Transportation Asset Management; and
2. **Scan B.** Right-of-Way (ROW) Acquisition and Utility Relocation.

The Transportation Asset Management scan involved two weeks of scan tours conducted in August and September 2006, while the ROW/Utilities scan involved a one-week tour conducted in July 2006. Both scans were organized in the six months prior to conducting the scan tour and documented over the six-month period following completion of the tour. The evaluation of the pilot scans was completed between January and April 2007.

¹ *U.S. Domestic Scan Program: Business Plan*, prepared by Cambridge Systematics, Inc., for NCHRP Project 20-68, July 2005.

■ 1.2 Objectives of Evaluation Report

The specific objectives of this evaluation report are as follows:

- To evaluate the benefits of the two pilot scans for transportation practice;
- To evaluate the actual costs of scans and compare them to projected costs and budgets;
- To identify lessons learned on how best to conduct the scans; and
- To supplement the Domestic Scan Program business plan with updated recommendations based on lessons learned from the pilot scans.

The benefits of the pilot scans are evaluated based on three factors:

1. Feedback from scan participants, as well as host states, on the value of the scan tour visits;
2. A review of the various ways in which scan findings are being disseminated, including final reporting as well as presentations given or planned at conferences and professional meetings; and
3. A review of implementation actions (i.e., the extent to which scan findings and lessons learned are actually being applied by the officials participating in the scan tours to change practices within their own agencies).

The evaluation of the pilot scans' benefits and costs is intended to provide the basis for the AASHTO to recommend whether to continue the domestic scan program and, if so, to establish an annual budget and schedule of activities for the program through the NCHRP.

■ 1.3 Value of the Scan Program

Feedback on the value of the two pilot scans conducted under the Domestic Scan Program has been very positive. Participants in each scan indicated that the scans were quite valuable to them in terms of advancing their professional knowledge. Host states also found the scan visits to be of benefit to them for two reasons. First, it provided the opportunity for them to learn from experiences shared by scan participants; secondly, the interagency coordination required to develop and present a comprehensive presentation to the scan team exposed a wide range of staff to their agency's overall efforts.

Furthermore, the six-month evaluations of the pilot scans have confirmed that the lessons learned from the scans are being applied in practice. Specific changes to practice have already been implemented by at least five states participating in the ROW/Utilities scan

and four states participating in the Transportation Asset Management scan. Further changes are planned or are being discussed in these and other participating states. The Transportation Asset Management scan sparked additional visits by two other states to one host state from the tour, and one host agency is working with the scan team to create a series of quarterly webinars to continue discussion of asset management practices and to increase the availability of the scan products.

In addition to making changes to their own agencies' practices, scan participants have discussed findings at a number of regional and national conferences. Findings of the ROW/Utilities scan have been presented or planned for at least eight national or regional professional conferences and meetings, and at least nine presentations have been made or planned on the Transportation Asset Management scan. Presenters have noted considerable interest in the findings. These presentations are helping to ensure that the benefits of the scan extend beyond just the participating states and host agencies.

■ 1.4 Recommendations for Future Scans

Given the success of the pilot scans, it is recommended that the scan program be continued under the general model outlined in the business plan. A budget for each individual scan is recommended in the range from \$80,000 to \$135,000, with variations depending upon the scan duration and number of participants, and possibly other factors such as the requirements of the specific topic being investigated.

While the pilot scans were generally successful, they also provide some lessons learned that can further improve the administration and management of future scans. The full report describes experience and recommendations for each aspect of the business plan in detail. This section highlights specific changes to the recommendations made in the original business plan. A revised timeline of key activities/milestones for conducting and documenting individual scans is shown in Table 1.1.

Table 1.1 Timing of Scan Planning and Documentation Milestones

Activity/Milestone	Recommended Timing
Contract issued to management consultant	At least 6 months prior to tour
Nominations for co-chairs and participants solicited	At least 5.5 months prior to tour
Co-chairs selected and subject matter expert confirmed	At least 5 months prior to tour
Desk scan report completed	At least 3.5 months prior to tour (draft); at least 3 months prior to tour (final)
Participants confirmed and kick-off call held	At least 3.5 months prior to tour
Host states confirmed	At least 3 months prior to tour
Rough itinerary established	At least 2.5 months prior to tour
Air travel and hotel arrangements completed	At least 2 months prior to tour
Draft agenda obtained from host agencies	At least 3 weeks prior to tour
Ground transport arrangements completed	At least 2 weeks prior to tour
Briefing materials received by participants	At least 1 week prior to tour
Pre-trip conference call with participants	Within 1 week prior to tour
Tour Conducted	
Thank-you notes sent to host participants and tour participants	1 week after completion of tour
PowerPoint presentation delivered	1 month after completion of tour (draft); 2 months after completion of tour (final)
Draft report delivered for NCHRP and participant review	3 months after completion of tour
Final report delivered	5 months after completion of tour

Tour Scope and Duration

No changes are recommended. Either a single-week or two-week format is recommended and should be determined on a scan-specific basis, considering the subject matter of the scan and available budget.

Tour Participation

A co-chair arrangement appears preferable to a single chair, with consideration given to selecting both a state Department of Transportation (DOT) and the FHWA co-chair. Officials from the FHWA Division offices should be invited to participate in meetings in each host state. Group sizes larger than 12, up to 15 or 16 participants, may be considered if adequate travel budget is available and if the subject matter lends itself to discussion in larger groups.

Scan Tour Roles and Responsibilities

No changes are recommended. While the general assignment of roles and responsibilities remains as proposed, it is acknowledged that the division of certain specific responsibilities may vary from scan to scan depending on the specific personalities, interests, and skill sets of the various people involved.

Tour Preparation

The importance of making logistical preparations as early as possible is restated, and some target dates are advanced. Airline and hotel reservations should be made at the earliest possible time following the selection of tour dates and locations – at least two months in advance if possible, and preferably even earlier. The trip itinerary should be confirmed at least 2.5 months in advance to allow two weeks for completing travel arrangements. Airfares and hotel room availability should be investigated at the same time as the tour dates and itinerary are being finalized. The following additional pre-tour milestones should be established, in addition to those already established as described in the business plan or modified above:

- **Nominations for co-chairs and participants solicited.** Opened within two weeks of issuance of the contract or notice to proceed; minimum two-week nomination period provided;
- **Participant kick-off conference call.** As soon as possible following confirmation of participants and completion of the desk scan report, and ideally at least 3.5 months in advance of the tour;
- **Draft agendas obtained from host agencies.** At least three weeks in advance of the tour; and
- **Ground transport arrangements completed.** At least two weeks in advance of the tour.

The tour manager should obtain contact information for all participants in meetings with local hosts, and should send thank-you e-mails to all who participated. The tour manager should also request that host presenters provide participants hard copies of any presentations (for note taking).

Documentation and Dissemination of Findings

A set of minimum required elements is recommended for the desk scan report, including the following:

- An introduction describing the objectives of the scan;
- Recommendations on agencies and locations to visit, including alternative as well as primary recommendations;
- A brief description of practices at the agencies reviewed to support the recommendations; and
- Documentation on how these recommendations were made (literature reviewed, contacts made, etc.).

The target date for delivery of the final scan report to the NCHRP should be set as five months after completion of the tour, rather than six months. The final report should include, at a minimum:

- An executive summary summarizing the tour and its key findings;
- An introduction identifying the scan objectives, participants, sites visited, and topics discussed;
- Detailed documentation of findings from each site visited; and
- A summary of key findings and lessons learned from the tour.

Additional information (literature review, amplifying questions, other background information, etc.) also may be included in the desk scan and/or final report, as appropriate.

The recommendation to produce a stand-alone executive summary should be reconsidered, as this product did not appear to be used for either pilot scan. The PowerPoint presentation proved more useful for making initial findings available before the final report is published.

The NCHRP and the FHWA might also consider sponsoring additional implementation and dissemination activities suggested by scan participants. These include creating “swat teams” that can help individual agencies address a problem or get started implementing advanced principles; publishing scan findings in widely read national publications; and dispersing information through practice area web sites and discussion forums.

Scan Evaluation

The recommendation to conduct a post-tour evaluation of each scan, and in particular following up with participants about implementation actions, is retained. Evaluation six months following the tour is recommended, as it gives participants adequate time to initiate and report on follow-up activities, yet is soon enough after the scan that it helps reinforce a sense of the importance of moving forward with implementation. The NCHRP also may choose to conduct a longer-term evaluation of scan implementation results (e.g., two or three years following each scan), although this would probably require a global program evaluation contract separate from the task of conducting individual scans.

Costs and Budget

The total costs for the two pilot scans, especially for the two-week Scan A, were somewhat lower than anticipated; although for reasons noted in the full report, some of the Scan A costs were lower than might be expected for a typical scan. To some extent, management and administration costs for any individual scan will be expected to vary according to the subject matter. Also, travel costs will vary depending upon the number of participants and locations visited. A range of budget estimates for future scans (rounded for ease of interpretation) is provided in Table 1.2.

Table 1.2 Recommended Budget for Future Scans

Cost Category	One-Week Tour	Two-Week Tour
Total labor, other direct costs, and subject matter expert	\$60,000 to \$67,000	\$70,000 to \$82,000
Travel	\$22,000 to \$30,000	\$39,000 to \$53,000
Total Scan Budget	\$80,000 to \$100,000	\$110,000 to \$135,000

It is recommended that a cost-plus-fixed-fee contract be issued to the scan management contractor to cover labor, other direct costs (except travel), and the stipend for the subject matter expert. A separate authorization should be issued to provide at-cost reimbursement for travel expenses, including travel for the consultant team (subject matter expert and staff support), as well as for the NCHRP-sponsored scan participants.

2.0 Scan Process

2.0 Scan Process

This section reviews each of the major activities discussed in Section 2.0 of the 2005 business plan. Actual experience is described and compared to the proposed methodology in the business plan, and recommendations for changes compared to the original business plan methodology (if any) are provided.

■ 2.1 Program and Scan Tour Management and Administration

Experience

Program management and administration for the pilot domestic scan were undertaken consistent with the business plan. Primary funding was provided by the NCHRP. In addition, the FHWA Office of Real Estate Services and Office of Asset Management chose to provide supplemental funding for the scans. The program was administered by the NCHRP program staff person currently supporting Project 20-68. The project panel established for the NCHRP 20-68, which was initially charged with investigating and recommending the Domestic Scan Program, continued to serve as the overall project panel to provide oversight of the pilot scan program. The panel's activities included selecting scan topics, identifying scan co-chairs, and reviewing draft and final products from the scans.

To manage and conduct the two pilot scans, the NCHRP issued a contract to a consulting firm. The consulting firm was in turn responsible for hiring a subject matter expert (SME) for each scan (with guidance from the scan co-chairs); and for organizing, conducting, and documenting the scans. Logistical support functions such as travel, lodging, and ground transportation were primarily performed in-house by the consultant, with assistance from a travel agent in making air travel arrangements. Scan participants from the FHWA were responsible for making their own flight and lodging arrangements. Scan participants helped craft the key findings of the scan and reviewed the draft summary, report, and presentation prepared for each scan. Participants also provided input into the selection of the sites to be visited in the tour, as well as the specific issues/topics to be discussed.

Recommendations

The overall management of the scan pilot program and the individual pilot scans proceeded smoothly, and no significant problems were identified. If the NCHRP elects to contract for continued support of the scan program, consideration should be given to the level of experience in conducting scan tours. While less important than for an

international scan (for which the complexity involved in making international travel arrangements for a large group places a premium on travel coordination experience), prior tour coordination experience can still reduce the “learning curve” required of the consultants. Consideration should also be given to the level of in-house subject matter expertise on the part of the contractor, since this expertise can be helpful during the process of organizing, conducting, and documenting the tour. Given the broad range of topics to be covered by the scan program, however, it may be difficult to find a single contractor with expertise in all the possible areas, and therefore scan management experience as well as competency with the documentation process (e.g., writing skills) may be of greater importance. Finally, the possibility of other agencies than just the NCHRP and the FHWA sponsoring future scans should be considered.

■ 2.2 Topic Selection

Experience

The Domestic Scan Program is intended to cover a wide variety of topics within the transportation field. The 20-68 panel members have background in a broad range of transportation functional areas and include staff from state DOTs, the FHWA, the Transportation Research Board (TRB), and the NCHRP. The panel selected two very different topics – transportation asset management and ROW acquisition and utility relocation – for the pilot domestic scans. These topics were selected from responses to a topic proposal solicitation issued in July 2005 to various AASHTO committees through the AASHTO staff. The 20-68 panel met in August 2005 to select the two pilot scan topics at the same time as it prepared a request for proposals (RFP) for managing the pilot scan efforts. Both topics were believed by panel members, based on their professional experience, to represent topics of strong current interest to transportation agencies. A very strong response to the calls for participants for each scan suggests that this was indeed the case. A topic proposal solicitation form is included as Appendix A of the business plan.

Recommendations

The business plan recommended that the 20-68 panel meet annually to prioritize and recommend topics for scan tours to be initiated within the next year, as well as to conduct other scan program oversight activities. This recommendation is retained. A schedule for soliciting and selecting topics and issuing tour management contracts consistent with the NCHRP funding cycles is shown in Table 2.1 of the business plan.

■ 2.3 Tour Scope and Duration

Experience

The business plan recommended that tours conducted under the Domestic Scan Program range from one to two weeks in duration, visiting at least three, but no more than six different locations (two or three per week). Two-week tours should be conducted over two noncontiguous weeks, but scheduled no more than four weeks apart. To the extent possible given logistical constraints, tours should be national in scope, visiting a cross-section of U.S. geographical areas and contexts. Each individual location may include visits with multiple agencies.

The pilot domestic scans were organized consistent with these recommendations. Each was organized in a different way, providing the opportunity to test two different models.

Scan A, Transportation Asset Management, was two-weeks in duration and visited 12 agencies in five locations. The dates and host agencies visited included the following:

- **Week 1 - September 11 to 15.** Florida DOT, Florida Turnpike Enterprise, and Hillsborough County (in Orlando); Michigan DOT, Michigan Transportation Asset Management Council, Kent County, Southeast Michigan Council of Governments, and Grand Valley Metropolitan Council (in Detroit); and Ohio DOT (in Detroit).
- **Week 2 - August 28 to September 1.** Oregon DOT, City of Portland, and the Association of Oregon Counties (in Portland); Utah DOT (in Salt Lake City); and Minnesota DOT (in St. Paul).

Travel for participants commenced on a Sunday and concluded on Friday of the same week. Economies in travel were achieved by meeting with multiple agencies in the same location. For example, the first week of the scan tour consisted of only two stops. During the first stop, the Florida DOT, the Florida Turnpike Enterprise, and Hillsborough County all volunteered to meet with the scan team in Orlando, Florida. During the second, six agencies in Michigan and the Ohio DOT met with the scan team in Detroit, Michigan. This approach cut down significantly on the scan team's travel, and increased the number of agencies with which they could meet.

The schedule provided ample time to explore the full range of scan topics with each agency. The scan team found that meetings with state DOTs typically required an entire day. Local agencies typically required less time, so multiple meetings could be scheduled during a day, especially if the meetings occurred in the same location. Given the length of the meetings, no field visits were conducted during the asset management scan. Most of the scan team felt that field visits were not necessary given the scan topic.

The participants of the Transportation Asset Management scan felt that the two-week format was required to fully explore the breadth and depth of asset management practice. Meeting with a large number of agencies was beneficial in that it enabled the team to

contrast and compare many different approaches to asset management implementation. The participants also felt that two back-to-back weeks would have been too arduous.

Scan B, ROW Acquisition and Utility Relocation, was one week in duration and visited three agencies in three locations. Travel for participants commenced on a Sunday and concluded on Saturday of the same week. The additional travel day was included to allow for a full day of meetings on Friday, as well as a debriefing on Saturday morning, to compensate for the fact that the tour was only one week in duration. The dates and host agencies visited included:

- **July 9 to 15.** Orlando, Florida (Florida DOT District 5); Austin, Texas (TxDOT/Central Texas Turnpike Project); and St. Paul, Minnesota (Minnesota DOT).

The itinerary allowed for 1.5 days of meetings each with hosts in Orlando and Austin, and one day of meetings with hosts in Minnesota. These meetings included field visits lasting approximately three hours in each location. Tour participants felt that the time allowed in both Orlando and Austin was adequate, allowing all topics and issues to be fully discussed and allowing time for group debriefings, as well as participant down-time. However, participants generally felt that the single day in Minnesota left inadequate time for discussion and exploration of topics. To some extent, this could have been addressed with an agenda that eliminated the field visit (felt by some to be unnecessary), and allowing more time for big-picture discussions rather than presentations on technical details.

Participants on the ROW/Utilities scan did feel that the single-week format, visiting three agencies, was adequate to identify meaningful conclusions and lessons learned based on a range of agencies' experiences. Participants also felt that the seven-day travel schedule, while tiring, was acceptable for a one-week tour and was worthwhile for maximizing the benefits of the tour.

Recommendations

Either a single-week or two-week format is recommended and should be determined on a scan-specific basis, considering the subject matter of the scan and available budget. Tradeoffs also may be made between the duration of the tour, the number of participants, and the need to include field visits.

For a single-week tour, a seven-day travel schedule (Sunday to Saturday) is acceptable, although a maximum six-day schedule is recommended for two-week tours. Per the business plan, it is recommended that two-week tours be scheduled in two nonconsecutive weeks (so that people are not absent from their office for two straight weeks), but within approximately a month of each other (so that experiences from the first tour are fresh in the minds of participants during the second tour).

■ 2.4 Tour Participation

Experience

For both pilot scans, the co-chairs selected by the 20-68 project panel included a state agency official and an FHWA official. Participants were selected by the tour co-chairs, with assistance by the tour management consultant and approval by the NCHRP program staff. Nominations for state participants were solicited through the AASHTO committees, including the Asset Management Subcommittee for the Transportation Asset Management scan and the Subcommittee on Right-of-Way and Utilities for the ROW/Utilities scan. Subcommittee chairs distributed a solicitation and members were asked to nominate either themselves (if interested) or other staff at their agencies whom they felt suited the criteria established for participation in the tour, as described in the business plan. Interested parties responded directly to the NCHRP, who collected and forwarded responses to the tour management consultant. This information was then shared with the tour co-chairs, who selected an appropriate number and mix of participants, after reviewing each nominee's background and qualifications. The FHWA scan co-chair nominated other FHWA participants from headquarters and state Division offices and Resource Centers. For the ROW/Utilities scan, "alternate" participants were identified in case one of the first selections was unable to participate. This was not the case for the Transportation Asset Management scan, but fortunately all of the original team members were able to participate.

For both scans, nominations were solicited beginning on January 17, 2006, and were requested to be received by January 31. A few nominations were received after this time but still in time to be considered, as actual discussion and selection of participants did not occur until later in February by the co-chairs. As predicted, the selection process was iterative, and included discussion of each candidate's availability on two proposed tour dates. Prior to selecting participants for the ROW/Utilities scan, the tour co-chairs and management consultant identified two potential weeks for the tour and asked candidates about their availability during either or both of these weeks. Not all participants were fully confirmed until early April.

For both scans, tour co-chairs agreed after completion of the scan that all of the participants were valuable members of the scan group and met the selection criteria initially established for participants.

The FHWA's participation in the scan tours was further increased by extending invitations to the FHWA Division office administrators and key staff to attend the host presentations in their respective states. Their involvement was felt to be an extremely valuable addition to the discussion, allowing the FHWA to learn of good practices, hear the challenges faced by states, and contribute the FHWA's perspective on factors such as Federal requirements and policy guidance.

The total number of participants in each scan was 11 for the Transportation Asset Management scan and 15 for the ROW/Utilities scan, which can be compared with the range of 8 to 12 recommended in the business plan. (These totals include the subject matter expert and tour management consultant, as well as the state and the FHWA staff tour participants). While the ROW/Utilities scan group was larger than recommended, the size of the group did not appear to compromise the tour, and in fact, gave the opportunity for more people to directly learn from the tour, as well as contribute their own experiences. The size of discussion groups already was large (host agencies typically had 15 to 25 of their own staff in attendance), but the size of these groups did not appear to impede the quality of the discussion. The larger number of participants in the ROW/Utilities scan also had cost implications, but additional costs were balanced out by the fact that the tour was only one week instead of two.

Recommendations

The timeline and process proposed in the business plan for soliciting and selecting tour participants appear reasonable.

A co-chair arrangement appears preferable to a single chair because it allows the co-chairs to share their ideas and experience, leading to greater likelihood that a good mix of participants and host sites will be selected and that discussions will fully cover the key issues that need to be addressed. It also spreads out responsibilities and allows each co-chair to play a different role, depending upon their specific strengths and interests. A co-chair team that includes both a state DOT and FHWA staff person can be valuable because it ensures that the FHWA's needs are addressed and assists in identifying the FHWA staff to participate in the scan.

As a general principle, it is recommended that officials from the FHWA Division offices be invited to participate in meetings in each host state. The FHWA Division office staff also can make a valuable contribution to the tour group, in addition to headquarters staff; although the majority of the group should be comprised of state officials in order to ensure that the tour is focused on meeting state agency needs and that participants are in a position to directly implement changes in practice.

Group sizes larger than 12, up to 15 or 16 participants, may be considered if adequate travel budget is available and if the subject matter lends itself to discussion in larger groups.

To ensure that the knowledge gained from the scan circulates into practice as much as possible, participants should ideally be committed to working within the practice area of the scan for at least two to three years following the scan. The recommendation from the business plan that tour participants (including co-chairs) have at least three years of career life remaining (at least three years) is reiterated. It may be harder to avoid anticipating other unplanned events, such as transfers of staff to another department or responsibility in which they cannot play a role in implementing scan findings.

■ 2.5 Scan Tour Roles and Responsibilities

Experience

The business plan defined four sets of roles and responsibilities for people taking part in the tour:

1. Tour chair or co-chairs;
2. Subject matter expert;
3. Support staff person; and
4. Participants.

In general, roles and responsibilities were carried out as recommended in the business plan. The SME took primary responsibility for conducting background research on sites and topics (desk scan report), initiating contacts with potential host agencies, and preparing the tour documentation. The support staff person took primary responsibility for managing the overall scan effort, including organizing, conducting, and documenting the tour. The support staff person also took primary responsibility for developing logistical arrangements, working closely with an additional administrative support person at their firm to make air travel, hotel, ground transportation, and lodging arrangements. A travel agency assisted with air travel arrangements, which was particularly helpful in researching and obtaining the lowest-cost fares possible. The support staff person led the coordination with local hosts in setting up meetings, once primary contacts at each host agency were identified.

The pilot scan tours themselves included the support staff person and SME, as well as the tour co-chairs, state, and Federal participants. The co-chairs took primary responsibility for formalities (e.g., greeting hosts and introducing the group and its purpose), and also helped to guide discussions. In addition, they provided more specific input into a number of issues such as selection of participants, agendas at each host site, and discussion questions. The SME and support staff person shared responsibility for taking meeting notes and photographs. However, the SME played a larger role in helping to steer/facilitate the discussion, while the support staff person primarily attended to note taking and logistical arrangements. The specific role of the SME versus co-chairs and participants in facilitating discussions varied depending upon personalities. The presence of the support staff person on the tour was noted by participants as helpful because it allowed them to focus exclusively on the subject matter of the tour, rather than worrying about details such as where to eat or how to get to the airport.

Either the SME (Transportation Asset Management scan) or support staff person (ROW/Utilities scan) took lead responsibility for convening and facilitating debriefing sessions. On the ROW/Utilities scan tour, daily debriefing sessions were held each morning over breakfast. On the Transportation Asset Management scan tour, only one group debriefing session was held at the end of each week, although the SME also debriefed people

informally during transportation to the day's sessions. This approach was taken because of a number of participants' prior experience with the International Scan Program, which did not have daily debriefings.

The entire set of participants took part in a number of critical scan activities, including determining final sites/locations to visit, leading discussions on specific topic areas of interest to each participant, providing feedback at debriefing sessions, and reviewing and commenting on draft scan products.

Recommendations

The overall model of roles and responsibilities proposed in the business plan appeared to work well on both scans, and no specific changes are recommended. It should be acknowledged that the division of certain responsibilities may vary from scan to scan, depending on the personalities, interests, and skill sets of the people involved. For example, on one pilot scan, the subject matter expert took full responsibility for taking notes and drafting the final report (leaving the support staff person to focus exclusively on logistics), while on the other scan, note taking and follow-up documentation activities were shared somewhat more equally (although the subject matter expert still took primary responsibility for the final report). Also, as noted, responsibilities for facilitating meetings and debriefing sessions may be distributed in different ways among the co-chairs, subject matter expert, and support staff. For example, if the support staff also has subject matter expertise (not a requirement, but nonetheless helpful), he or she may play a larger role in helping to facilitate discussions.

Although one of the pilot scan tours held only weekly rather than daily debriefings, as a general practice for the Domestic Scan Program, daily group debriefings are recommended. The debriefing process ensures that all participants' thoughts are heard equally, and are shared with all other participants. Whenever possible, group debriefings should be conducted in a private, quiet room so that everyone can hear and focus adequately. Breakfast the next day is usually the best time to debrief, but participants may decide collectively to debrief the same day following meetings, if the opportunity arises.

■ 2.6 Tour Preparation

Experience

Preparation for both of the pilot scan tours proceeded more or less as planned and without any major hitches. Timely tour preparation was facilitated by a number of factors:

- The selection of a SME (recommended primarily on the personal knowledge and past experience of the co-chairs), who could quickly research and recommend appropriate agencies to visit;

- Strong interest in both of the scan tour subjects, leading to no difficulties in recruiting participants; and
- Supportive host agencies who were willing to provide considerable assistance in creating agendas, inviting local participants, and even assisting with local logistical arrangements.

One challenge that occurred in preparing for both of the pilot tours was that despite being contacted nearly two months in advance, some host agencies did not provide draft agendas until less than a week in advance of the tour, leaving little time for discussion and refinement of the agendas amongst the scan team and host agency staff. The many competing demands for time on the part of host agency staff, and the fact that they are going out of their way to host the scan team, need to be recognized. However, it also is important to stress to the host agencies the importance of obtaining draft agendas as far as possible in advance (preferably, at least three weeks) so that the agendas can be refined to meet the objectives of the scan tour as closely as possible.

Another challenge was difficulty in finding a suitable hotel (e.g., acceptable quality, convenient location, and consistent with Federal government per diem) in a couple of tour locations. Although hotel arrangements for both tours were researched six to seven weeks in advance, even with this lead time, hotel space was tight in some cities due to other major events occurring at the same time. While such conflicts may sometimes be unavoidable or unpredictable, this emphasizes the importance of solidifying itineraries and making all travel arrangements as far in advance of the tour as possible.

Participants on both pilot scan tours noted that for the most part, they felt adequately prepared for the tour, given the background in the desk scan report; briefing materials provided the week before; and the pre-trip e-mail communication and conference calls with participants (samples of briefing materials, meeting agendas, and correspondence are provided in the appendices). The ability to pull together sufficient subject-specific briefing materials depends, of course, upon the availability of such materials and/or the willingness of host agencies to go out of their way to create or assemble additional materials.

One other noteworthy issue was that a host agency on one tour went out of their way to provide extensive support to the tour group, including all local transportation, arranging hotels and meeting rooms for debriefings, and providing lunches. While this level of support was certainly welcomed, it is not routinely expected; and in this case another agency was then left feeling that they should have done more to support the visit. As a general practice in sponsoring the scans, the NCHRP is willing to make arrangements for ground transportation (including site visits involving host agency staff), as well as arrange and pay for group lunches involving host agencies as an appreciation of their willingness to host the visit. While offers of additional local assistance with the visit are gladly accepted, host agencies should be assured that they are not expected to provide this level of support to the tour.

Table 2.1 shows a timeline with milestones of the various key pre-trip activities undertaken for each pilot scan.

Table 2.1 Timing of Pre-Trip Milestones

Activity/Milestone	Recommended in Business Plan	Actual Date: TAM Scan A	Actual Date: ROW/Utilities Scan B
Tour conducted		Aug. 28-Sept. 1 and Sept. 11-15, 2006	Jul. 9-15, 2006
Contract issued to management consultant	At least 5 months prior to tour	7 months prior (kick-off call 1/09/06; Contract fully executed 1/23)	6 months prior (kick-off call 1/09/06; Contract fully executed 1/23)
Nominations for co-chairs and participants solicited		7 months prior (began 1/17, closed 1/31)	5.5 months prior (began 1/17, closed 1/31)
Co-chairs selected	At least 4 months prior to tour	6.5 months prior (2/03 - preliminary; 2/14 - confirmed)	5 months prior (2/03 - preliminary; 2/14 - confirmed)
Subject matter expert confirmed	At least 4 months prior to tour	6 months prior (2/24)	5 months prior (2/17)
Desk scan report completed	Within 6 weeks of hiring SME	Completed within 8 weeks, or 4 months prior to tour (draft- 4/27; final - 4/28)	Draft completed within 6 weeks, final within 8 weeks, or 3 months prior to tour (draft - 3/29; final - 4/10)
Participants confirmed	At least 3 months prior to tour	5 months prior (3/24)	3 months prior (began contacting 2/24; confirmed 3/20-4/10)
Participant kick-off conference call		4 months prior (5/4)	3 months prior (4/13)
Host states confirmed	At least 3 months prior to tour	2.5 months prior (6/9)	3 months prior (4/17)
Itinerary established (and locations)	At least 2 months prior to tour ^a	2 months prior (6/22)	2 months prior (5/08)
Air travel arrangements completed	At least 1 month prior to tour ^a	2 months prior (6/26)	1.5 months prior (5/24-5/26)
Hotel arrangements completed	At least 1 month prior to tour ^a	5 weeks prior (7/24)	5 weeks prior (5/24-6/05)
Ground transport arrangements completed		4 weeks prior (7/26)	2 weeks prior (6/27)
Draft agenda obtained from host agencies		1 to 4 weeks prior (7/26-8/21)	1 week prior (6/28-7/03)
Briefing materials received by participants	At least 1 week prior to tour	9 days prior (8/19)	7 days prior (7/02)
Pre-trip conference call with participants	Within 1 week prior to tour	5 days prior (8/23)	3 days prior (7/06)

^a Revision of these milestones is recommended based on pilot experience (see “recommendations”).

Recommendations

For the most part, scan organization and tour planning followed the schedule recommended in the business plan and no major problems were encountered. Some minor adjustments to the schedule are recommended, however, based on the pilot experience. Airline and hotel reservations should be made at the earliest possible time following the selection of tour dates and locations – at least two months in advance if possible, and preferably even earlier. (This revision to the recommended schedule would also require confirming the trip itinerary at least 2.5 months in advance to allow two weeks for completing travel arrangements.) Airfares and hotel room availability should be investigated at the same time as the tour dates and itinerary are being finalized. Delays in confirming one or more individual participants should not prevent making airline and hotel reservations for confirmed participants at the earliest date possible. When establishing the scan tour dates and itinerary, local sources should be checked to ensure that there is no citywide event (e.g., a national political convention or major sporting event) that could result in hotel rooms being extremely expensive or unavailable. When hotel reservations are made, the availability of meeting/conference rooms, if needed, should also be verified.

A minor point not mentioned in the business plan is that the tour manager should prepare a sign-in sheet to obtain the names, titles, and contact information of all participants in meetings with local hosts. If the local host already has such information, it should be obtained by the tour manager. (Appendix H includes a checklist of responsibilities that the tour manager should pay attention to en route, including sign-in sheets and many other details.) Another approach used in one of the scans is for the tour manager to collect business cards for all participants. Photocopies can then be sent to all scan team members.

In one of the scans, host agencies provided more background materials than necessary and the tour manager had the opportunity to select the most meaningful documents. Of all the materials included in the briefing packet, responses to the amplifying questions were the most beneficial for the scan team members. In future scans, host agencies should be encouraged to provide this information.

Another minor point not mentioned in the business plan is that the tour manager should request that host agencies provide hard copies of all presentation slides to the scan team at the time of the meeting. In some cases the scan team found it difficult to follow along without this material. The tour manager also should request a CD containing all presentations. Electronic versions of the presentations were very valuable in developing the final report, because they contain original versions of figures presented by the host agencies.

Thank-you e-mails from the tour manager on behalf of the co-chairs should be sent to all who participated (these can be sent to local participants via bcc:). A sample thank-you message is attached in Appendix C.

The following additional pre-tour milestones should be established, in addition to those already established as described in the business plan or modified above:

- **Nominations for co-chairs and participants solicited.** Opened within two weeks of issuance of the contract or notice to proceed; minimum two-week nomination period provided;
- **Participant kick-off conference call.** As soon as possible following confirmation of most participants and completion of the desk scan report, and ideally at least 3.5 months in advance of the tour;
- **Draft agendas obtained from host agencies.** At least three weeks in advance of the tour; and
- **Ground transport arrangements completed.** At least two weeks in advance of the tour.

■ 2.7 Documentation and Dissemination of Findings

Experience

The initial documentation produced for the pilot scans was a “desk scan” report by the subject matter expert. The desk scan was circulated to participants for background information and to assist in making choices regarding the specific sites to visit. The desk scan reports were structured somewhat differently for the two pilot scans, but included the following common elements:

- An introduction describing the objectives of the scan;
- A review of current leading practice among state and local agencies;
- Recommendations on agencies and locations to visit, including alternative as well as primary recommendations; and
- A list of references and contacts that served as sources for the recommendations made in the report.

In addition, the desk scan report for the ROW/Utilities scan included the following information:

- A review of the current context and key issues regarding the topic (e.g., recent legislative changes, critical needs identified by agencies);
- A review of recent relevant literature documenting current and best practices on each topic; and
- Recommended discussion topics, including “amplifying questions.”

The additional information on current context/key issues and relevant literature was later incorporated into the final report for the ROW/Utilities scan. The ROW/Utilities desk scan, however, did not include as much background information on the proposed agencies to be visited as did the Transportation Asset Management desk scan; much of this more detailed information was collected in advance of or in conjunction with the site visits. For the Transportation Asset Management scan, the amplifying questions were developed after the desk scan was finalized and were documented in an appendix to the final report.

Three post-scan products were produced for each of the scan tours – an executive summary, a full report, and a PowerPoint presentation. For the most part, these products were produced within the timeline proposed in the business plan. Table 2.2 shows the actual timing of deliverables to the NCHRP compared to the proposed timeline in the business plan.

Table 2.2 Timing of Deliverables

Activity/Milestone	Recommended in Business Plan	Actual Date: TAM Scan A	Actual Date: ROW/Utilities Scan B
Tour conducted		Aug. 28-Sept. 1 and Sept. 11-15, 2006	Jul. 9-15, 2006
Executive summary	2 months after completion of tour	2.5 months after (11/27)	2.5 months after (10/02)
PowerPoint presentation	2 months after completion of tour	1.5 months after (10/29)	2.5 months after (10/02)
Draft report	3 months after completion of tour	3.5 months after (12/27)	3 months after (10/16)
Final report	6 months after completion of tour	5 months after (2/7/07)	5 months after (12/15/06)

As an additional implementation step, participants were asked to create “personal implementation plans” describing how they planned to implement the findings of the tour. These plans were meant to assist participants in thinking through specific implementation opportunities, as well as to assist the NCHRP in evaluating the overall benefits of the scan program. For the ROW/Utilities scan, implementation plans were obtained from seven of the state DOT participants on the tour, as well as one FHWA participant. Implementation plans were not completed by the Transportation Asset Management scan participants for reasons discussed in Section 3.0.

Overall, the timing of deliverables was reasonably consistent with the recommended schedule. The executive summary and PowerPoint for the ROW/Utilities scan were a

couple of weeks late due to discussions with the NCHRP over format and regarding treatment of a couple of issues in the report.² For the Transportation Asset Management scan, the PowerPoint was drafted for use at an AASHTO meeting just over one month after the scan, but was not finalized until later. For both scans, the final report was published on-line in advance of the six-month post-tour timeframe recommended in the business plan, with both reports delivered to NCHRP five months after the tour. The expeditious delivery resulted from timely production and review of the draft report by consultants, participants, and the NCHRP (which required only minor revisions); timely review of the final report by the NCHRP 20-68 project panel; and agreement well in advance of report finalization on the specific products to provide and the format to use. The sequence of report development and review varied; for the Transportation Asset Management scan, the draft report to the NCHRP already reflected review by participants and host states of individual sections, while for the ROW/Utilities scan, the full draft report was distributed for simultaneous review by the NCHRP, participants, and host states.

A number of participants on the ROW/Utilities scan noted that they used the PowerPoint presentation in follow-up presentations at regional and national committee meetings. They noted that the flexible format of the presentation, which was set up with a “core” set of summary slides as well as additional slides with detail on specific topics/states, was helpful in allowing them to customize the presentation for different audiences and different time requirements.

Timely production of the final report was aided by the use of a standardized report template already in use by the tour management consultant. This format was capable of including graphics, pull-quotes, and other enhancements in a standard word processor rather than using page-layout software. Developing a customized page-layout format could potentially have made the report more attractive, but also would have led to longer development time to agree on the “look and feel” of the report, as well as a longer production timeframe.

For the Transportation Asset Management scan, the executive summary was integrated with the final report, while for the ROW/Utilities scan, the executive summary was maintained as a stand-alone document. The following products/deliverables were provided to the NCHRP:

- Executive summary in Microsoft Word and PDF formats;
- PowerPoint presentation;
- Final report in Microsoft Word and PDF formats; and
- Source files (JPEG, TIFF, etc.) for the graphics included in the report.

² One issue of note to future scans is that the summary initially included a set of “recommendations” for the FHWA based on feedback obtained from host agencies and participants. However, the NCHRP determined that they were unable to make recommendations of this nature in an NCHRP-sponsored report, and therefore this section was removed.

The final report for the Transportation Asset Management scan was roughly 180 pages long and included the following sections:

- Executive summary;
- Introduction;
- State transportation agencies;
- Local agencies;
- Metropolitan planning organizations;
- Associations;
- Observations and conclusions; and
- Amplifying questions (appendix).

The final report for the ROW/Utilities scan was roughly 80 pages long (without an executive summary) and included the following sections:

- Overview of pilot scan program and tour;
- Recent research, best practices guidelines, and emerging issues (excerpted from desk scan report);
- Individual sections describing findings from each of the three host states;
- Cross-cutting findings and innovative tools;
- Implementing the scan's findings; and
- Site visit agendas (appendix).

Recommendations

To promote consistency among scans and scan products, a set of minimum requirements for the desk scan and final reports is recommended. The desk scan report should include at least the following elements:

- An introduction describing the objectives of the scan;
- Recommendations on agencies and locations to visit, including alternative as well as primary recommendations;
- A brief description of practices at the agencies reviewed during the desk scan, provided in support of the recommendations; and
- Documentation on how these recommendations were made (literature reviewed, contacts made, etc.).

Discussion topics, including “amplifying questions,” may be developed either as part of the desk scan report (as was done for the ROW/Utilities scan) for advance review and discussion by participants, or following the initial conference call with input provided by participants (as was done for the Transportation Asset Management scan). Additional elements, such as a review of the current context and key issues regarding the topic and a description of recent relevant literature and studies, also may be valuable depending upon the subject matter.

The final report should include, at a minimum:

- An executive summary summarizing the tour and its key findings;
- An introduction identifying the scan objectives, participants, sites visited, and topics discussed;
- Detailed documentation of findings from each site visited; and
- A summary of key findings and lessons learned from the tour.

Again, additional information such as the background information gathered for the desk scan may prove a useful supplement to the report.

Completion and delivery of the final scan report should be targeted within five months of completion of the tour, rather than six months as initially recommended. It is recognized that extenuating circumstances, such as a longer than anticipated review period at any stage, may in some cases require a longer timeframe.

The recommendation to produce a stand-alone executive summary should be reconsidered. For the pilot scans, the executive summary was not published separately by the NCHRP, and therefore did not appear to serve a unique purpose. The PowerPoint presentation serves as an initial product to introduce the findings of the scan tour in shorter timeframe than the full report, especially at meetings or conferences that occur soon after the tour. The presentations for both scans were used or adapted for use by a number of participants, as well as the NCHRP staff, and the recommendation to produce the presentation within a two-month timeframe is therefore continued. It also may be desirable to revise or augment the presentation once the final report is compiled.

3.0 Participant Evaluations

3.0 Participant Evaluations

■ 3.1 Evaluation Findings

Participants were asked to complete written evaluations following each week of each pilot scan tour. Evaluations were completed on-site (following the final debriefing meeting) by most participants, although some completed them following their return from the tour. Verbal feedback also was obtained at the debriefing session at the end of each week, as well as through informal communication. Participants also were asked to create “personal implementation plans,” describing how they planned to implement the findings of the tour, as discussed in Section 4.0. Finally, participants were recontacted six months following completion of the tour to identify practices that their agency had implemented, practices that they were considering, barriers to implementing changes, and any meetings and conferences at which they had presented findings. They also were given an additional opportunity to comment on the value of the scan tour, or make recommendations for future scans and implementation activities. The evaluation forms are provided in Appendix F.

Post-Tour Evaluations

Overall, participants felt that both of the pilot scan tours were extremely valuable. Asked to rate on a scale of 1 to 5 the extent to which the scan met their expectations, responses averaged between 4.5 and 4.9 for each tour. Similar responses also were obtained when participants were asked whether the overall objectives of the scan were met. When asked how valuable they expect the information obtained will be to helping improve practices at their agency and/or within their profession, responses averaged 4.5 for the ROW/Utilities scan and between 4.4 and 4.7 for the Transportation Asset Management scan.

“The information will be very valuable for making recommendations to my agency for project delivery improvement.”

– Ray Lorello, Utility and Right-of-Way Program Manager, Ohio DOT

“The scan tour was extremely valuable in learning new and different ways to conduct our business. The scan program needs to remain robust and vibrant.”

– Dan Mathis, Administrator, FHWA Washington State Division Office

Responses to additional questions were helpful in identifying activities that were most and least useful, as well as evaluating other issues such as the desk scan report, quality of logistical arrangements, etc. Most of the comments were favorable. The most commonly noted problem on the ROW/Utilities tour was inadequate time at the third agency visited, where only a single day was allocated for discussion, as well as a three-hour field visit. Some participants noted that the field visit was unnecessary, or that less presentation time could have been spent on technical details and more on big-picture issues. An extra one-half day in this location would have provided more time to cover everything, but was not possible given the objective of visiting three geographically dispersed sites within a week.

The most commonly noted problem on the Transportation Asset Management tour involved the quality of hotels, especially in one particular location. Some participants also requested clarification on allowable expenditures or preference for the use of per diem rates instead of cost-reimbursement for meals and other incidentals. Given that most of the meals were paid directly by the project management consultant or a host agency, however, the per diem approach would be difficult to implement.³

A hitch also was encountered with the Transportation Asset Management tour group when tour participants (including co-chairs) opted to forgo the creation of “personal implementation plans.” Co-chairs and participants felt that it would be more effective for the co-chairs to contact participants individually at a later point in time to determine what implementation actions they had undertaken, and to communicate this information to the project management consultant for evaluation purposes.⁴

Additional participant suggestions that either reinforce recommended scan practices or might be worth considering for future scans include the following:

- An in-person meeting among participants in advance of the tour would be valuable, if such a meeting can be arranged at a convenient venue where most participants are present (e.g., an AASHTO meeting);
- The need for “downtime” as well as scheduled breaks during sessions was reiterated;
- Prior to the tour, participants appreciate regular communication from tour organizers to assure them that the scan preparations are moving forward;
- Background materials received from the agencies in advance are helpful;

³ It should be noted that a number of the tour participants had previously participated in international scan tours and, therefore, may have had certain expectations based on that experience.

⁴ Again, this may in part have been due to prior experience with the International Scan Program, where similar implementation plans were not required. Participants may also have felt that this was an unnecessary “homework assignment,” and that they would do what they could to implement scan findings anyway without preparing such a plan.

- Participants appreciate being involved in the selection of “amplifying questions” (this was done on the ROW/Utilities scan, but not the Transportation Asset Management scan); and
- Opportunities for metropolitan planning organizations (MPOs) and/or other local agencies to participate in meetings should be sought if appropriate, given the subject matter.

Six-Month Evaluations

Follow-up evaluations distributed six months after the ROW/Utilities scan tour were completed by five state participants and two FHWA participants. (Two of the state participants had been transferred to other positions since the tour took place and, therefore, could not comment directly on implementation activities; however, both of these participants were from host states that already had implemented many of the practices discussed on the tour.) The six-month evaluations confirmed that participants continued to view the tour as a valuable experience. All of the responding state participants were able to identify specific practices that they had implemented within their own agency, as well as presentations they had made on the tour findings at regional and national meetings. Follow-up actions are discussed in more detail in Section 4.0.

Follow-up evaluations distributed six months after the Transportation Asset Management scan tour were completed by four state participants and two FHWA participants. Again, the evaluations confirmed that participants continued to view the tour as a valuable experience and had indeed been working to implement specific practices within their own agency, as well as share findings with regional and national audiences. One specific suggestion made was to visit states with centralized as well as decentralized program structures.

“I believe that the scan program is very valuable and I encourage continued expansion to other subject areas. The scan process has created benefits for all by documenting effective practices as well as encouraging commitment and focus by the host organizations as well as the scan team participants.”

– Tim Hill, Transportation Administrator, Ohio DOT

“The scan tour was a great opportunity for Vermont and for me. The report is a valuable reference that recaps the best practices we observed. Each organization that hosted us was very well prepared, and got all the right people involved – very impressive!”

– Bart Selle, Asset Management Systems Manager, Vermont Agency of Transportation

■ 3.2 Recommendations

The formal evaluation forms were extremely valuable to the tour organizers in identifying successful and less successful elements of each scan tour, and this evaluation process should be continued. The six-month evaluation also was helpful for identifying implementation actions that had been undertaken and, therefore, in documenting some of the specific benefits of the tour. Despite the recalcitrance of some tour participants to complete personal implementation plans, this step is still recommended for future scan tours, both to help participants consider and focus their upcoming efforts; and to assist the NCHRP in evaluating the outcomes and impacts of the scan tours. The expectation for completing these plans should be made clear in advance of the tour, when potential co-chairs and participants are first recruited, as one of the conditions of participation.

4.0 Implementation Activities

4.0 Implementation Activities

At the completion of each tour, participants were asked to create “personal implementation plans” that identified steps they were planning to take to implement tour findings within their own agency, as well as to communicate findings to peers through intra-agency, regional, and/or national meetings and conferences. Eight participants on the ROW/Utilities scan completed such a plan; although as previously noted, the Transportation Asset Management scan participants did not complete plans. As an additional evaluation step, participants were contacted six months following each tour to determine which steps they had actually undertaken, which ones they planned to undertake, and any successes or barriers to implementation encountered. The personal implementation plan and six-month evaluation forms used for the pilot scans are attached in Appendix F.

■ 4.1 Changes to Agency Practices

Right-of-Way and Utilities

In the six-month evaluations for the ROW/Utilities scan (completed in February 2007), participants noted that they had undertaken the following specific practices:

- **Connecticut DOT.** The DOT has adopted Florida’s District 5 ROW team approach, and is in the process of developing procedures and the structure for the implementation of ROW teams for all projects.
- **Ohio DOT.** The scan participant from Ohio is working with all 12 District Permit personnel to obtain their input into a computer-generated permit application. The agency has a consultant under contract working with its Real Estate Section to computerize its forms in a web-based format, including utility billings and payment tracking. Once this task is complete, the consultant will be working on the permit initiative. Minnesota’s technology activities were noted as the inspiration for these initiatives.
- **Oklahoma DOT.** The agency has implemented appraisal waivers up to \$25,000, similar to Florida, on approximately three dozen projects. The agency is increasing the intensity of training and developing a customized training program for each individual based on their education and experience.
- **Washington DOT.** The agency is implementing a number of changes, including using consultants to do turnkey ROW acquisition; implementing a new project management approach that better integrates ROW staff into project planning; developing a more

aggressive, targeted ROW training program; conducting design visualization on complex parcels; and tracking settlement rates rather than condemnation rates to set a more positive tone.

- **Wyoming DOT.** The DOT is implementing a team approach to project delivery, beginning with the development process for a ROW management software system, and developing procedures to delegate responsibility and authority down the management chain.

Scan participants further noted that they were investigating the application of additional practices, including the following:

- **Connecticut DOT.** Creating a set of processes that better capture data necessary to better define issues that affect productivity, and using this data to streamline the ROW process through the elimination or reduction of inefficiencies. Examples would include the collection of data relative to map revisions and the measure of success rates for various negotiation techniques. The Texas practice of elevating problems through the chain of command by requiring a white paper also is being considered as method of moving problem-solving responsibilities down the chain.
- **Ohio DOT.** Including Florida District 5's "pass the torch" technique as a component of the project development process.
- **Oklahoma DOT.** Utilizing mediation practices.
- **Washington DOT.** Parcel-by-parcel handoff meetings, early owner contacts to discuss early design, assignment of ROW staff very early in the design process, financial penalties in consultant contracts for loss of key personnel, and development of a programmatic ROW schedule template.
- **Wyoming DOT.** Fully implementing the team approach, and developing a ROW management software system that will provide good performance measures.

As might be expected, participants noted that they had encountered barriers to some of the changes that they had hoped to implement. "Resistance to change" seemed to be the most common theme. One participant noted that he had encountered a number of barriers to adopting a more team-oriented approach, including resistance from middle managers who feel they are losing authority and control, a general resistance to change from employees, and challenges working within state civil service systems. Another participant noted that he had been more successful to date on implementing changes on a spot or project-specific basis, and that the decentralized project delivery process adds time to efforts to make corporate-wide changes. On the other hand, he also noted that support from top agency executives should help lead to broader, agencywide implementation of new practices.

“Fresh off the scan tour I put together a team to handle an FTA [Federal Transit Administration] project that will construct a dedicated busway from New Britain to Hartford at an estimated ROW cost of \$45,000,000. With the FTA evaluation showing the ROW phase to be a high risk factor, I charged the team with expediting the ROW process. The team was made up of representatives from all the ROW disciplines as well as representatives from the offices of construction, engineering, and utilities. To date the team has met with great success. FTA representatives attended the most recent team meeting and were greatly impressed with the enthusiasm, professionalism and the progress of the team. This has all been accomplished with only rudimentary procedures outlined to date. It is my intention to develop a comprehensive set of procedures and guidelines for the team concept and utilize this technique for all projects.”

- Richard Allen, Rights-of-Way Administrator, Connecticut DOT

Transportation Asset Management

In the six-month evaluations for the Transportation Asset Management scan (completed in April 2007), participants noted that they were undertaking the following specific practices:

- **North Carolina DOT.** Establishing outcome-based performance measures and targets; establishing priorities for investment strategies; and calculating the monetary value to achieve the performance targets for maintenance and operations. The agency noted that it has successfully established performance measures and targets, and is in the process of implementing them throughout operations.
- **FHWA - New Jersey Division.** Working with an internal FHWA asset management team to develop expertise in all FHWA offices of basic asset management skills.
- **Ohio DOT.** Working through the AASHTO subcommittees for Asset Management and Quality to develop comparable performance measures for continued benchmarking and identification of best practices.
- **Oregon DOT.** Using philosophical approaches in an attempt to gather additional support from members of upper management. In addition, Oregon DOT is continuing previously initiated work, including actively participating in the Analytical Tools for Asset Management - NT and PT pilot project, and completing a Region 2 Asset Management pilot project.
- **Vermont Agency of Transportation.** Continuing previously initiated work to improve the linkage between target asset condition and the budget, including working on new instructions for program managers for the Fiscal Year (FY) 2009 budget development; and starting a long-term effort in the Operations Division to develop a roadway condition index that will involve the maintenance districts, and will probably start with signs and culverts as a pilot.
- **FHWA.** Bringing concepts and experiences learned from the scan to the FHWA's internal asset management team; and working with the AASHTO subcommittees to

conduct a peer exchange on asset management in programming and budgeting as one of a series of annual peer exchanges on asset management.

Scan participants further noted that they were investigating the application of additional practices, including the following:

- **North Carolina DOT.** Developing traffic operational performance measures, such as traffic flow, incident response, signal timing, and intelligent transportation systems.
- **FHWA - New Jersey Division.** Working with the state DOT to commit to some basic asset management tenets, including a performance measure-driven approach and moving from “worst first” to preventive maintenance project decisions.
- **Ohio DOT.** Continuing to improve internal management information systems to better optimize transportation decisions, including pavement management, asset inventory, and condition assessment.
- **Oregon DOT.** Examining the concept of gathering “just enough” data for many assets; considering the approach used by some states where condition assessment is prepared on a average mileage basis instead of counting and evaluating each and every sign, pipe, and light bulb; and discussing the integration of financial as well as asset management systems in order to better serve the agency in the future.
- **Vermont Agency of Transportation.** Resurrecting a “consolidated asset database” proposal that would link a standardized asset condition to highway location for analysis and would tie into a major data warehouse initiative the agency is starting; and discussing Ohio DOT’s Transportation Review Advisory Council process for project evaluation.

“The scan was very valuable to me professionally and to our Department as we evolve to an Asset Management type organization. Since AM is an emerging field in the states, it is important for each state to learn from the AM lead states and not have to start from scratch.”

- Lacy Love, Director of Asset Management, North Carolina DOT

Various challenges in achieving success also were noted. Oregon DOT notes that while they have been very successful at mustering support and interest in the concept of asset management, they are still struggling with obtaining adequate financial support to fully achieve the program’s goals. While Ohio DOT’s processes already are well-advanced, as suggested by the high level of interest from other states, staff note that attempts to implement additional new practices are currently on hold pending a change in administration and reorganization of the agency. Vermont staff note that the agency is focusing on completing previous roadway commitments rather than evaluating new projects, meaning that new project evaluation approaches are not immediately relevant, although they will be of interest after the backlog of prior commitments is reduced.

Scan participants also noted that dissemination of findings would continue to be an important challenge for the scan's participants and sponsor agencies. Some specific suggestions as to how the scan's sponsoring agencies can help included:

- Continue to spread the message at annual AASHTO meetings, TRB, and other conferences, meetings, and web meetings and discussions;
- Disperse information through web sites such as the Asset Management Today site;
- Develop a "swat team" that can go to states to help them either get started or solve a developing problem in implementing asset management principles;
- Distribute information regarding the scan findings to key contacts at DOTs;
- Report scan findings in national publications with wide distribution, such as *Governing Magazine*; and
- Continue national emphasis on improving practices at all levels of government.

■ 4.2 Presentations at Meetings and Conferences

A number of ROW/Utilities scan participants noted that they had made internal presentations to agency staff and management on the tour findings, such as at statewide district ROW manager and utility coordinator meetings; and had generated lively discussion about the various practices encountered. In addition, as of February 2007, presentations had been made or planned at the following state, regional, and national meetings and conferences:

- The quarterly Washington State DOT/FHWA program delivery meeting in August 2006;
- The Northwest Regional Conference in September 2006;
- The AASHTO annual meeting in October 2006;
- The Executive Board of the AASHTO Subcommittee on Right-of-Way and Utilities in January 2007;
- The Public Real Estate Education Symposium in February 2007, for which the International Right-of-Way Association is publishing the presentation in its on-line proceedings;
- The FHWA Western Division Administrators meeting in February 2007;

- The annual meeting of the AASHTO Subcommittee on Right-of-Way and Utilities in May 2007 (including a panel presentation and discussion); and
- An upcoming two-day conference with the Northeast region states.

Participants in the Transportation Asset Management scan also noted that they had discussed findings with senior management and asset management working groups, as well as made internal presentations at staff meetings. As of April 2007, they had made or were planning to make presentations at regional and national conferences and meetings, including the following:

- The AASHTO annual meeting in October 2006;
- The AASHTO Steering Committee on Asset Management;
- The TRB annual meeting in January 2007;
- The National Pavement Management Conference in May 2007 in Virginia;
- The 7th National Conference on Transportation Asset Management in November 2007;
- The Michigan Asset Management Conference in April 2007;
- The Louisiana DOT Engineer's Conference;
- The Oregon DOT Environmental Conference; and
- International conferences for performance measurement and asset management in the fall of 2007.

Also, as a result of the scan, officials from the New Jersey and Maryland DOTs (which were not included in the scan) have conducted follow-up visits with Ohio DOT to discuss their practices in more detail. Oregon DOT invited the former director of the Ohio DOT to visit to discuss practices that they had implemented. In addition, staff from Ohio DOT are working with the scan team to create a series of quarterly webinars to continue discussion of asset management practices, and to increase the availability of the scan products to agencies unable to attend events requiring travel.

5.0 Costs

5.0 Costs

The Domestic Scan Program business plan included preliminary recommendations for the total budget per scan. Actual experience with costs is reviewed in this section and compared with projections. Costs are discussed separately for scan management activities and for travel.

■ 5.1 Scan Management Activities

Experience

The budget allocated by the NCHRP for pilot tour management activities was \$102,200 for the Transportation Asset Management scan and \$77,400 for the ROW/Utilities scan, for a total of \$179,600. (It was anticipated that the Transportation Asset Management scan would be two weeks in length and the ROW/Utilities scan one week, hence the difference in costs.) This amount, which was based on prior experience organizing and documenting similar scans sponsored by the NCHRP and the FHWA, included the following items:

- Labor, overhead, and fee for staff of the consulting team;
- A fixed stipend of \$13,000 for the subject matter expert, who was subcontracted by the scan management consultant; and
- Travel costs for the consulting team, including the tour support staff and SME.

The budget was allocated through a cost-plus-fixed-fee (CPFF) contract to a single contractor. The budget was based on labor hours by staff category as shown in Table 5.1 (This does not include SME hours, since the SME was paid on a fixed-price basis.). Table 5.1 also shows actual labor hours for each scan. Table 5.2 shows all budgeted versus actual costs, excluding travel, which is accounted for separately and discussed in Section 5.2. The total nontravel costs for organizing, conducting, and documenting the two scans were each in the range of \$60,000 to \$65,000.

Table 5.1 Budget versus Actual Hours for Scan Management Activities

Staff Category	Scan A: Transportation Asset Management		Scan B: ROW/Utilities	
	Budget	Actual	Budget	Actual
Project Management/ Technical Staff	390	278	290	286
Logistics and Production Support Staff	136	55	102	50
Total Hours	526	333	392	336

Table 5.2 Budget versus Actual Costs
Exclusive of Travel

Cost Category	Scan A: Transportation Asset Management		Scan B: ROW/Utilities	
	Budget	Actual	Budget	Actual
Labor and Overhead	\$69,656	\$44,469	\$50,033	\$41,239
<i>Other Direct Costs</i>				
Postage and Shipping	\$260	\$255	\$225	\$304
Copying	\$1,480	\$1 ^a	\$1,175	\$194
Computer Usage ^b	\$952	\$657	\$714	\$891
Telephone	\$225	\$28	\$240	\$72
Total Other Direct Costs	\$2,917	\$941	\$2,354	\$1,461
Subject Matter Expert	\$13,000	\$13,000	\$13,000	\$13,000
Fee	\$5,990	\$4,375	\$4,577	\$4,355
Total (all costs except travel)	\$91,564	\$62,498	\$69,964	\$59,996

^a Copying costs could not be identified for Scan A due to a reporting anomaly.

^b Computer usage is billed by the consultant on an hourly basis. Scan A computer usage may have been low because of the minimal effort required for editing of the subject matter expert's draft desk scan and report.

The actual labor hours show that, although the Transportation Asset Management scan was a two-week tour compared to a one-week tour for the ROW/Utilities scan, the level of effort involved did not appear to be higher. The relative difference between the two tours in expected versus actual effort is probably due to the following factors:

- For the Transportation Asset Management scan, the SME took almost complete responsibility for producing the final report (with only minor edits needed); whereas in the ROW/Utilities scan, the tour management consultant did a more significant amount of writing and editing;
- The ROW/Utilities scan labor hours include general project management activities, including initiating and managing the overall scan pilot contract and conducting oversight of the Transportation Asset Management scan; and
- Since the ROW/Utilities scan took place before the Transportation Asset Management scan, many of the ROW/Utilities scan activities and products served as “models” that the Transportation Asset Management scan was then able to use, resulting in a lower level of effort.

A review of other direct costs (ODCs) suggests that the most significant reason that actual ODCs were lower than estimated was reduced expenses for “graphics and copying.” The initially high estimate for this category was based on experience with a previous scan where the briefing packets included a significant number of documents that needed to be printed in color. For these two pilot scans, a short briefing packet with primarily black-and-white printing was adequate given the subject matter. Also, printing, copying, and shipping costs in producing draft and final reports were extremely minor since all products were produced and delivered electronically. Telephone costs were lower than projected since much of the planning work was done by e-mail, a single point of contact was identified at each host agency, and also since the FHWA covered the costs of the ROW/Utilities scan pre-tour conference calls through use of their own conference call service.

The \$13,000 stipend for the SME was adequate to attract a highly qualified expert for each scan – in one case, an independent, semiretired consultant, and in the other case, a university professor. In both cases the SME provided significant value-added to the scan.

Recommendations

For future scans, offsetting factors may be at work in determining whether the estimates developed for the pilot scans (or actual experience from these scans) will be realistic. On the one hand, template activities and lessons learned from these pilot scans will reduce the level of effort somewhat for future scans. On the other hand, different consultants organizing future scans will not initially have had the benefit of going through a “learning curve.” Finally and probably most significantly, the level of effort required to organize any given scan will vary depending upon a number of unpredictable factors such as:

- Scan topic;
- Variety and nature of agencies met with (leading to variances in the level of effort required for advance research and planning);

- Specific knowledge and contribution of the subject matter expert versus the management support staff;⁵ and
- Relative roles of the SME, tour management consultant, and scan co-chairs in carrying out various organizing and documentation activities.

For the two pilot scans, production costs were relatively low because of the minimal revisions needed following the review process; larger numbers of revisions or more graphics-intensive documents could lead to higher production costs.⁶

Tables 5.3 and 5.4 show potential budget and labor-hours estimates for future scans that reflect the experience from these pilot scans while acknowledging the possibility of varying costs and levels of effort for any given scan. A range of estimates is shown reflecting the expected difference in costs and level of effort for a one-week versus two-week scan tour. These estimates may need to be adjusted for individual scans, depending upon the specific requirements of the scan topic. A range of costs for the SME is shown to indicate that, while the stipend provided was adequate to attract a SME for each of the pilot scans, adjustments may be required in the future to account for inflation or if a SME cannot be attracted for the \$13,000 amount currently provided. The totals shown are approximate rounded totals, rather than precise addition of the low and high levels of each item.

⁵ While the roles and responsibilities of the subject matter expert are defined in his or her contract, the allocation of effort between the expert and the support staff may still vary within this framework.

⁶ The experience with these two pilot scans can be contrasted with the experience the same consultant had with organizing a scan on “transportation and growth” for the NCHRP in 2004 to investigate practices in linking transportation and land use planning, which had significantly higher costs. This scan involved arranging multiple meetings in each location with a number of local, regional, and state agencies. This work had to be done by the tour management team rather than coordinated through a single, local host agency. Also, the work performed to research potential sites to visit was more extensive because it involved contact with multiple local agencies to determine the overall suitability of the area as a case study, as well as the availability and willingness of agencies to meet with a tour group. The number of meetings and nature of the topic led to a much more substantial set of briefing materials; many of which needed to be reproduced in color. Also, a custom format was developed for the final report to accommodate the graphical nature of the report, rather than using a standard report template.

Table 5.3 Approximate Level of Effort

Staff Category	One-Week Tour	Two-Week Tour
Project Management/Technical	260-280	320-360
Logistics/Production Support	60	80
Total Hours	320-340	400-440

Table 5.4 Approximate Costs

Cost Category	One-Week Tour	Two-Week Tour
Labor (fully loaded)	\$45,000-\$50,000	\$55,000-\$65,000
Other direct costs	\$1,000-\$1,500	\$1,000-\$2,000
Subject matter expert	\$13,000-\$15,000	\$13,000-\$15,000
Total	\$60,000-\$67,000	\$70,000-\$82,000

■ 5.2 Travel Costs

Experience

A contract modification was issued to cover travel costs for the NCHRP-sponsored scan participants, which were paid by the consultant management team or individual participants, and then reimbursed by the NCHRP. (Covered costs did not include any travel expenses for the FHWA participants, who were expected to cover their own travel costs.) Because this modification was issued relatively late in the scan organization process, travel costs could be estimated after the number of participants and sites to be visited were known. Two estimates were produced for each scan, a “best estimate” and a more conservative “upper bound”; and a contract modification was issued to cover the potential upper bound travel costs. These estimated costs are shown in Table 5.5 and compared to actual travel costs for each scan.

Table 5.6 shows unit travel costs (e.g., cost per person-night) for the two scans for various categories of expenses.

Table 5.5 Projected versus Actual Travel Costs*

Scan	Best Estimate	Conservative Estimate	Actual
A: Transportation Asset Management	\$31,775	\$38,525	\$29,385
B: ROW/Utilities	\$26,225	\$31,408	\$32,437

* The “estimates” shown did not include travel costs for the consultant team (SME and support staff person), which were included in the consultant’s base contract. “Actual” costs include SME and support staff travel, as well as the NCHRP-sponsored agency participants.

Table 5.6 Unit Travel Costs by Category

Category	Unit	Budget	Scan A: Transportation Asset Management	Scan B: ROW/Utilities
Airfare	Person-leg	\$325-\$400	\$330	\$355
Group ground transport	Visit-day ^a	\$700-\$850	\$321	\$691
Hotel	Person-night	\$125-\$135	\$102	\$120
Meals	Person-day ^b	\$50-\$55 ^c	\$18	\$44
Miscellaneous ^d	Person-day		\$16	\$27
All Costs	Person-day		\$350	\$421

^a Includes days that involved meetings with host agencies (regardless of whether ground transportation was rented for the entire day, partial day, or not at all). Does not include days at the beginning or end of the trip when only individual travel occurred.

^b Includes beginning/end travel days as well as visit days.

^c The budget for the tour included “meals and incidentals” as a single category at \$50 to \$55 per day. Individual ground transport at the beginning and end of each trip was estimated at \$50 to \$75 per participant per trip-end. Local host “thank-you” meals were estimated at \$150 to \$300 per site visited. In the current accounting, these costs were lumped together with participants’ meals.

^d Includes individual ground transportation to and from airports and other miscellaneous charges such as hotel Internet and telephone usage.

Airfare and hotel costs were relatively similar for each scan and close to projected levels. Group ground transport, meals, and miscellaneous expenses (primarily for meeting space) were significantly higher for the ROW/Utilities scan than for the Transportation Asset Management scan, however. This is due to two primary factors; the first being the different roles of the host agencies and the second being the number of physical locations visited for each scan. In particular:

- Host agencies for the Transportation Asset Management scan offered to pay for group lunches in almost every case, and in some cases covered the costs of group ground transport.
- The Transportation Asset Management scan did not hold daily debriefing meetings; meaning that meeting room rental was only required for the weekly debriefing at the end of the trip (and for one week, the host agency provided a debriefing room).
- The ROW/Utilities scan needed to rent a meeting room for two full days since the host agency at one site did not have an office convenient to the location where the meeting was held.⁷
- The Transportation Asset Management scan did not take any field tours and also stayed physically in one place for most of the first week (three of five days), reducing ground transport costs and the number of person-legs of airfare. In addition, local transport here was provided by the host agency.⁸

Recommendations

Overall, the costs for the ROW/Utilities scan are deemed to be more representative of typical scan costs than those for the Transportation Asset Management scan. Host agencies are welcome to pay for group meals and ground transportation if they wish, but are not encouraged or requested to do so. In most situations, the tour group will need to travel from site to site, rather than other agencies coming to them as occurred on the Michigan/Ohio site visit. Group ground transportation is likely to be required on a daily basis in many situations, and will show little variation with the number of participants. Therefore, for a tour that involves daily ground transportation and a smaller number of participants than Scan B, higher ground transportation costs might be anticipated. Rental of a bus for a full day can typically run on the order of \$1,000.

It is recommended that individual travel cost estimates be developed for each scan based on a build-up of unit costs, considering the length of the scan tour, number of the NCHRP-paid participants, and any tour-specific considerations such as the extent to which ground transport will be required. Airfares also should be researched since they can vary considerably for different pairs of cities. Costs also should be adjusted on a regular basis for inflation. Some current suggested estimates for unit costs are:

⁷ The meeting with Florida District 5 was held at a hotel in Orlando, rather than at the District's offices in DeLand, due to proximity to a major airport and to a site that the group visited.

⁸ In particular, the meetings with the Ohio DOT were held at the Michigan DOT's offices along with the various Michigan meetings, since participants from Ohio offered to travel to Michigan.

- **Airfare** - \$375/person-leg;
- **Hotel** - \$125 per person-night, or based on government per diems for the cities to be visited (if known);
- **Group Ground Transport** - \$700 for each day of site visits (on average), or \$1,000 per day if transport will be required for the entire day (or a large fraction of it); and
- **Meals and “Miscellaneous”** - \$60, or based on government per diems for meals and incidentals (M&I) for the cities to be visited (if known), plus allowance for thank-you meals provided for local hosts.

Table 5.7 shows total estimated travel costs for a range of participants and tour durations of one and two weeks. The one-week tours assume seven total days (Sunday to Saturday) to three locations. The two-week tours include six total days each week (Sunday to Friday) to three locations one-week and two locations the other week. The number of participants includes the SME and tour manager, as well as the NCHRP-sponsored state and local agency participants, but does not include the FHWA participants. The range of 7 to 10 NCHRP-sponsored participants assumes a total group size of approximately 10 to 12, including the FHWA participants.

Table 5.7 Typical Travel Cost Budget

Type of Cost	NCHRP-Paid Participants		Tour Weeks			
			1		2	
	Unit	Unit Cost	7	10	7	10
Airfare	Person-legs	\$375	\$10,500	\$15,000	\$18,375	\$26,250
Ground	Days	\$700	\$3,500	\$3,500	\$7,000	\$7,000
Hotel	Person-nights	\$125	\$5,250	\$7,500	\$8,750	\$12,500
Meals and incidentals	Person-days	\$60	\$2,940	\$4,200	\$5,040	\$7,200
Grand Total			\$22,190	\$30,200	\$39,165	\$52,950

Finally, for ease of contracting and accounting purposes, it is recommended that travel costs for the consultant team (tour manager and SME) be reimbursed at-cost by the NCHRP just as they are for the state- and local-sponsored participants, rather than being included in the base consultant contract amount. These costs will be approximately the same for all tour participants; and some costs, such as group ground transportation, meeting room rental, and group meals, will be lumped together, making them difficult to account for separately in practice. Additional travel costs also may be budgeted for other approved project-related travel, such as to attend the AASHTO committee meetings in advance of the tour to publicize the scan and recruit participants, or following the tour to make presentations on the scan findings.

Appendix A

Topic Proposal Form

NCHRP 20-68 Domestic Scan Proposal Form

NCHRP is soliciting topic proposals for a U.S. Domestic Scan Program, loosely modeled after the existing FHWA/AASHTO International Technology Scanning Program (NCHRP 20-36). Each selected scan topic will be investigated through site visits to three to six locations over a one or two week period, conducted by a group of 8 to 12 transportation professionals with expertise in the selected topic area. Proposed topics should meet the following criteria:

- Address an important and timely need for information by transportation agencies;
- Are of interest to a broad national spectrum of people and agencies;
- Are complex and also “hands-on,” meaning they lend themselves particularly well to exploration through on-site visits; and
- Are sufficiently focused that the tour participants are able to investigate and understand key issues in the limited time available on the tour.

Proposals should be returned to: _____ No later than: _____

<p><u>Proposal Contact Information</u></p> <p>Name: Title: Address: E-mail: Telephone number: Date of submission:</p>
<p><u>Title of Proposed Scan</u></p>
<p><u>Problem Statement</u> (What topic is to be examined? What drives the need for the scan? Why now?)</p>
<p><u>Scan Scope</u> (What specific subject areas are to be examined? Which cities and states might be visited? Which agencies/organizations (including specific departments or types of staff if applicable)?)</p>
<p><u>Scan Objectives</u> (What key information is to be gained? What information is to be shared after the scan? Who would the audience be for this information?)</p>
<p><u>Benefits Expected</u> (Including potential impacts on current technology or procedures)</p>

Appendix B

Samples of Formal (Letter) Correspondence



May 16, 2006

George Lovett
Florida Department of Transportation, District 5
District General Counsel and Right-of-Way Manager
719 South Woodland Boulevard
DeLand, Florida 32720

Re: NCHRP Domestic Scan: Best Practices in Right-of-Way Acquisition and Utilities Relocation

Dear Mr. Lovett:

On behalf of the American Association of State Highway and Transportation Officials (AASHTO) and the Federal Highway Administration (FHWA), congratulations on Florida Department of Transportation's selection as one of the sites for the upcoming National Cooperative Highway Research Program (NCHRP) U.S. Domestic Scan Pilot Program scan on Best Practices in Right-of-Way Acquisition and Utility Relocation. Thank you also for offering your assistance to arrange this visit.

This letter is to confirm that our scan tour group will be visiting FDOT's District 5/Orlando office on Monday and Tuesday, July 10 and 11. The subject of our visit will be the SR 50 widening project as well as any other innovative activities that FDOT has undertaken regarding right-of-way acquisition and utility relocation procedures.

The scan tour group will consist of 16 people, including nine state DOT staff, four FHWA staff, two consultants, and a Transportation Research Board staff. In addition, the Florida FHWA Division Administrator and staff overseeing right-of-way and utilities issues will be invited to join us. The tour organizers will provide a tour bus that can be used for any site/field visits as well as local transport for our tour group. We are also able to provide lunch on both days, including for meeting participants from FDOT. We can either arrange a working lunch at our meeting facilities through a caterer, or make reservations at a local restaurant, depending upon which is more convenient for our itinerary.

Our group will be arriving during the day on Sunday (with an internal briefing meeting scheduled for Sunday evening) and departing at 7:05 pm from Orlando International Airport on Tuesday evening. Therefore we will be available to meet all day Monday and Tuesday. As we will need time for an internal breakfast briefing/debriefing meeting each day, we should plan on starting around 9:00 am, depending upon where we will be meeting in relation to our hotel.

Once again, congratulations on FDOT's selection as a site visit for this scan tour. We look forward to working with you and your colleagues to arrange and conduct the visit.

Sincerely,

CAMBRIDGE SYSTEMATICS, INC.

Chris Porter
Senior Associate
7657.002

100 CambridgePark Drive, Suite 400
Cambridge, MA 02140

tel 617 354 0167

www.camsys.com

fax 617 354 1542



July 28, 2006

Richard C. Allen
Rights of Way Administrator
Connecticut Department of Transportation
2800 Berlin Turnpike
Newington, CT 06131-7546

Dear Mr. Allen:

We would like to thank you for taking time away from the office to participate in the National Cooperative Highway Research Program (NCHRP) and Federal Highway Administration (FHWA)-sponsored domestic scan visit on *Best Practices in Right of Way Acquisition and Utility Relocation* in July 2006. We appreciate your active participation in the discussions and eagerness to share your extensive experience with the right of way acquisition and utility relocation processes at each of the sites that we visited.

Your insights and perspectives were well received and complemented nicely those of the other members of the scan tour group. We anticipate that a draft executive summary will be available for your review by mid-August, and a draft scan report prepared by the beginning of October. We look forward to your comments on both of these products and are excited about sharing the lessons learned from the scan with other agencies and communities across the country.

As a reminder, if you have not completed your evaluation form or personal implementation plan, please return those to me as soon as possible. They will provide useful information to evaluate the success and impacts of this pilot scan.

Thank you again for your generous participation and support, which helped make this pilot domestic scan a success.

Sincerely,

Christopher D. Porter
Cambridge Systematics, Inc.

On behalf of scan cochairs:

John C. Campbell
Texas Department of Transportation

Susan Lauffer
Federal Highway Administration

CDP/7657.002

100 CambridgePark Drive, Suite 400
Cambridge, MA 02140
tel 617 354 0167 www.camsys.com fax 617 354 1542

Appendix C

Samples of E-mail Correspondence

NCHRP 20-68, Pilot Domestic Scan Program

This appendix includes examples of e-mail correspondence regarding scan matters from the two pilot scans. A mix of examples are selected from the Transportation Asset Management scan and the ROW/Utilities scan (not all steps had similar correspondence in the two scans). Examples are included for:

- Initial scan team confirmation and save the date;
- Notice to nominees and nominators;
- Initial contact with host agencies;
- Request to host agencies for an agenda;
- E-mail to NCHRP-sponsored scan team members about logistics;
- E-mails to FHWA scan team members about logistics;
- Thank-you notices to all local host participants; and
- General notice of report availability.

Initial Scan Team Confirmation and Save the Date

This e-mail was the first e-mail sent to all of team members on the Transportation Asset Management scan. It served as a save the date for the tour and established a date and time for the scan team kick-off meeting.

Hi. The purpose of this e-mail is to confirm your participation in the NCHRP asset management domestic scan tour (your availability for travel permitting). The scan will consist of two, one-week tours visiting different states in the U.S. The dates currently under consideration for the tours are:

- Aug. 27-Sept. 1
- Sept. 10-Sept. 15

I'll be sending each of you a formal letter with more details regarding the scan (including travel arrangements and participant responsibilities). But for now, please hold these dates and let me know ASAP if they do not work for you.

Also, I'd like to schedule a team conference call in early May to discuss tour objectives, locations, and discussion topics. The tentative date for this call is Thursday, May 4th at 11:00 a.m. Eastern. Again, please let me know ASAP if you will not be available for this call.

I look forward to working with you all.

This e-mail was the first e-mail sent to all of the scan B team members. It served as a save the date for the tour and established a date and time for the scan team kickoff meeting. It also accompanied delivery of a more detailed confirmation letter, the desk scan report, and agenda for the kickoff call. Some participants had already received a confirmation letter (sent individually) and were sent a modified version of this e-mail.

Dear ____:

Congratulations on your selection to participate in the NCHRP Domestic Scan Pilot on Best Practices in Right-of-Way Acquisition and Utilities Relocation! A letter of confirmation is attached. If you have not yet indicated your availability, please respond to this e-mail re: your availability to participate in the scan tour either the week of June 11-17 or the week of July 9-15.

Also, please mark your calendar for a conference call with other participants on Thursday, April 13th at 3:00 p.m. EDT/ 12:00 p.m. PDT. An agenda for this call is attached. A “desk scan” report is attached to this e-mail that makes recommendations for candidate states/projects to visit and contains a preliminary list of questions for discussion with host agencies. Please review this report prior to the call. Per the instructions in Section 7 of the report, please consider and be ready to discuss:

- 1) Which states/projects you think we should visit, and why (feel free to suggest other states not included in this desk scan).
- 2) Any additions or changes you would make to the list of discussion topics and questions.

Please do not hesitate to contact Chris Porter at Cambridge Systematics with any questions, at the contact information shown below. (In Chris’s absence the week of April 3-7, you may contact Joe Guerre at 617-354-0167 or jguerre@camsys.com). We look forward to working together on this scan!

[ATTACHMENTS:]

- 1) PERSONALIZED CONFIRMATION LETTER
 - 2) DESK SCAN REPORT
 - 3) AGENDA FOR 4/13 CALL
-

Notice to Nominees and Nominators

After a full set of participants was confirmed, the following e-mails were sent to:

- Unsuccessful nominees;
- Nominators of unsuccessful nominees; and
- Nominators of successful nominees.

Dear _____:

Recently you were nominated to participate in an upcoming National Cooperative Highway Research Program (NCHRP) pilot domestic scan program, sponsored by the American Association of State Highway and Transportation Officials (AASHTO) and the Federal Highway Administration (FHWA), on Best Practices in Right-of-Way Acquisition and Utility Relocation. The sponsors very much appreciate your interest in the scan program, and your resume was forwarded to the scan consultants and tour leaders. Unfortunately, many more qualified resumes were received than were able to be accommodated on the scan. The scan organizers attempted to balance numerous factors in putting together the scan group.

NCHRP, AASHTO, and FHWA intend the domestic scan program to be of widespread value, and the scan organizers as well as participants are committed to sharing the findings of the scan as widely as possible. We expect initial results of the scan to be available in fall 2006 and will notify you as soon as they are available. We hope that you will help share and implement these findings as well.

Sincerely,

Dear _____:

Recently you nominated two candidates from [Agency X], Mr. _____ and Ms. _____, to participate in an upcoming National Cooperative Highway Research Program (NCHRP) pilot domestic scan program, sponsored by the American Association of State Highway and Transportation Officials (AASHTO) and the Federal Highway Administration (FHWA), on Best Practices in Right-of-Way Acquisition and Utility Relocation. The sponsors very much appreciate your interest in the scan program and the time you took to consider these nominations, and their resumes were forwarded to the scan consultants and tour leaders. Unfortunately, many more qualified resumes were received than were able to be accommodated on the scan, and neither Mr. _____ nor Ms. _____ were selected. The scan organizers attempted to balance numerous factors in putting together the scan group.

NCHRP, AASHTO, and FHWA intend the domestic scan program to be of widespread value, and the scan organizers as well as participants are committed to sharing the findings of the scan as widely as possible. We expect initial results of the scan to be available in fall 2006 and will notify you as soon as they are available. We hope that you and your professional colleagues will help share and implement these findings as well.

Sincerely,

Dear Mr./Ms. _____:

Recently you nominated Mr./Ms. ____ to participate in an upcoming National Cooperative Highway Research Program (NCHRP) pilot domestic scan program, sponsored by the American Association of State Highway and Transportation Officials (AASHTO) and the Federal Highway Administration (FHWA), on Best Practices in Right-of-Way Acquisition and Utility Relocation. As you are probably aware, Mr./Ms. ____ nomination was accepted.

The sponsors very much appreciate your interest in the scan program and the time you took to consider this nomination, and we look forward to Mr./Ms. ____ participation. We believe that we have selected a balanced and diverse group that will provide maximum value to the scan. NCHRP, AASHTO, and FHWA intend the domestic scan program to be of widespread value, and the scan organizers as well as participants are committed to sharing the findings of the scan as widely as possible. We look forward to working with you and Mr./Ms. ____ to implement scan findings within your own agency as well as sharing them with professional colleagues throughout the country.

Sincerely,

Initial Contact with Host Agencies

After the Transportation Asset Management scan team decided on which agencies to visit, the following e-mail was sent to the CEO of each host agency. (For the ROW/Utilities scan, notification was transmitted through the local host contact rather than the agency CEO.) The e-mail was sent out by one of the scan co-chairs. After this e-mail went out, CS contacted each agency's local host contact by phone to set a date for the visit.

Director ____,

Your agency was recently identified as a leader in transportation asset management implementation during a review conducted as part of the National Cooperative Highway Research Program's (NCHRP) pilot domestic scan program. We would like to congratulate you for your successful efforts, and as co-chairs of the scan, request a meeting with you or your representatives during an upcoming visit so that we can learn more about your program and experiences. The purpose of this scan is to identify best practices in asset management by transportation agencies and to share this information with other agencies that are working to implement asset management. The scan team includes representatives from five State DOTs, four FHWA team members, and a subject matter expert. This scan is being undertaken as part of the NCHRP's pilot domestic scan program and is sponsored by AASHTO and the FHWA.

Our primary point of contact during the initial review was _____. Mr. Joe Guerre, from Cambridge Systematics, will be contacting you shortly to discuss the scan in more detail. Mr. Guerre is providing contractor support for the scan. He will work with ____ to confirm dates, times, and locations for a visit, develop a list of topics to be discussed, and identify staff from your agency who we hope can participate.

The final list of agencies to be visited, locations, and dates are subject to everyone's availability, but following is a preliminary schedule:

August 28 – September 1

- Oregon DOT, City of Portland, and the Association of Oregon Counties (in Portland)
- Utah DOT (in Salt Lake City)
- Minnesota DOT (in St. Paul)

September 11 – September 15

- Florida DOT, Florida Turnpike Enterprise, and Hillsborough County (in Orlando)
- Michigan DOT, Michigan Transportation Asset Management Council, Kent County (in Detroit)
- Ohio DOT (in Detroit)

We look forward to working with your agency as part of this scan. Should you have any questions, please don't hesitate to contact Joe Guerre at 617-234-0460 or jguerre@camsys.com.

Regards,

Kirk Steudle
Director, Michigan Department of Transportation

and

David R. Geiger
Director, FHWA Office of Asset Management

Request to Host Agencies for an Agenda

After all of the dates were established by phone, the following e-mail was sent to each Transportation Asset Management scan host agency to help them prepare for the visit. The amplifying questions were attached to the message.

Hi _____. All of the travel arrangements for the AASHTO/FHWA domestic scan on asset management are now set. We hope to meet with [AGENCY] all day on _____. We get into town the previous night, so we'd prefer to start after 8:30 a.m. We have no restrictions on when we finish up.

Following is a list of team members that will be participating in the meeting.

Dave Geiger – FHWA, Director of the Office of Asset Management (co-chair)
Kirk Steudle – Michigan DOT, Director (co-chair)
Mike Meyer – Georgia Tech, Professor of Civil and Environmental Engineering (subject matter expert)
Bart Selle – Vermont DOT, Asset Management Systems Manager, Policy and Planning Division
Lacy Love – North Carolina DOT, Director of Asset Management
Leonard Evans – Ohio DOT, Transportation Administrator – Division of Planning
Paul Wirfs – Oregon DOT, Unit Manager – Engineering and Asset Management
Thay Bishop – FHWA, National Finance Technical Service Team
Dennis Merida – FHWA, Division Administrator – New Jersey Office

Robert Ritter – FHWA, Team Leader for the Planning Capacity Building Team in the Office of Planning
Joe Guerre – Cambridge Systematics (tour coordinator)

Attached is the list of topics we hope to address during the scan. It's a pretty comprehensive list, so we don't expect that every agency will address all of the questions.

Our focus now is on the nailing down the details of the meetings. We're asking each agency to put together an agenda that includes the following:

- 1) meeting times
- 2) topics to be discussed
- 3) who from the agency will be participating.

On previous scans, agencies have identified several topics that they'd like to discuss. They make a brief presentation on each topic and then open up for questions and answers before moving on to the next topic. It's anticipated that different agency staff may need to be involved for different portions of the meetings. Also, a formal PowerPoint presentation is not always necessary. We've found that well-structured informal discussions can be very effective.

We're also putting together a briefing packet for the participants. We can include any additional background materials that you think would be beneficial for the team to read ahead of time. I'll be sending all of the participants the briefing packet on August 21. I'd appreciate it if you could send me an agenda and any background information that you'd like to include in the packet by August 14.

Please give me a call if you'd like to discuss in more detail.

Thank you for your help organizing this. We look forward to meeting with you.

E-mail to NCHRP-Sponsored Scan Team Members About Logistics

The following e-mail went out to Transportation Asset Management scan participants (except for FHWA participants, who made their own travel arrangements) before air and hotel reservations were made.

Hi. Over the next couple of weeks, CS will begin to make travel arrangements for the domestic scan. By Thursday, June 15th, could you please send me the following:

- 1) Frequent Flyer numbers for _____ Airlines.
- 2) On each leg of the tour, everyone will depart home on Sunday and return on the following Friday. Do you have any time constraints for leaving on either Sunday (8/27 or 9/10) or for returning on either Friday (9/1 or 9/15)? Do you have any requests for departing home on an earlier date or returning on a later one?

Currently, on the first trip we'll be meeting in Orlando, FL and finishing up in Detroit, MI. On the second, we'll be meeting in Portland, OR and finishing up in Minneapolis-St. Paul, MN. This isn't official yet though.

- 3) What is your airport preferences for departing/arriving from home?
- 4) Do you have any other flight preferences (e.g., window or aisle seat, special meal/dietary requests, etc.)?
- 5) We will also be paying for hotel reservations in advance. Do you have a smoking or nonsmoking preference for your hotel room?

E-mails to FHWA Scan Team Members about Logistics

The following e-mails went out to the FHWA members of the Transportation Asset Management scan team because they were responsible for making their own travel arrangements.

Hi. We've finalized the dates and locations for the TAM domestic scan and are starting to make travel arrangements. The FHWA participants are responsible for making your own travel arrangements. To help you along, I've attached an itinerary that highlights when and where flight reservations need to be made. Once everyone meets up on Sunday, it will be easiest if everyone travels together, so I've provided specific flight information for all the mid-week flights. Please try to get on these flights. You have more flexibility on the flights to and from home, although I've indicated start and finish times so that you can plan accordingly.

I'll send an updated version once we find hotels that can accommodate everyone. For now, please focus on your flights.

Give me a call if you have any questions. Also, please let me know when you've confirmed your flights so I can keep track of the group's progress.

Hi. We've made hotel accommodations for the entire scan team. However, FHWA staff are responsible for paying for their own rooms. Attached is a list of hotels with your confirmation numbers. Please call the hotels to reserve/pay for your room. Each hotel has agreed to charge the appropriate Federal per diem rate.

Let me know if you have any questions or concerns.

Thank-you Notices to all Local Host Participants

Correspondence similar to the following e-mail was sent following the tour for the ROW/Utilities scan to all participants in meetings at each local host site (via bcc:). In each case, the correspondence was customized to reflect the specific projects visited, benefits obtained, etc., in the state visited.

On behalf of the project's sponsors and tour team members, we extend our sincere thanks to you and your colleagues at the Florida Department of Transportation for hosting the National Cooperative Highway Research Program (NCHRP) and Federal Highway Administration (FHWA)-sponsored domestic scan visit on Best Practices in Right-of-way Acquisition and Utility Relocation on [DATES]. Our group was impressed by the extent to which [AGENCY X] has developed process improvements and technological applications to facilitate right-of-way acquisition and utility relocation while ensuring that the rights of property owners are protected and their concerns respected. The commitment and enthusiasm of DOT staff and consultants was evident in all of the presentations as well as during the bus tour of the [PROJECT].

The knowledge shared during our visit to [STATE] will be of great value in formulating best practice recommendations to help other states, as well as FHWA, improve right-of-way acquisition and utility relocation policies and practices to expedite the project development process. Our scan team is documenting our findings and will notify you when products are available. We expect an executive summary to be available in early fall and the final report to be completed by the end of the year. In addition, as a pilot, this scan tour will assist NCHRP and FHWA in assessing the value of conducting additional scans on other topics to improve transportation practice.

Thank you again for your participation, which helped make this pilot domestic scan a success.

Sincerely,

Christopher D. Porter
Cambridge Systematics, Inc.

On behalf of scan co-chairs:
John P. Campbell, P.E.
Texas Department of Transportation

Susan Lauffer
Federal Highway Administration

General Notice of Report Availability

The following e-mail was sent to:

- Unsuccessful nominees, as well as nominators of successful and unsuccessful nominees;
- All participants in local host meetings; and

- Any others who had expressed interest in the scan tour and its findings.

Participants in the scan tour had been previously notified of the report's availability.

Thanks for your interest in the recent National Cooperative Highway Research Program domestic scan tour on *Best Practices in Right-of-way Acquisition and Utilities Relocation*, conducted in July 2006. I wanted to let you know that the scan report is now available. It can be downloaded from NCHRP's web site at: <http://www.trb.org/trbnet/projectdisplay.asp?projectid=653>

Regards,

Appendix D

Participant Kick-Off Conference Call Agenda

Participant Conference Call #1

April 13, 2006

3:00 to 4:30 p.m., EDT (Start: 2:00 Central/1:00 Mountain/12:00 Pacific)

Dial-in: 1-866-XXX-XXXX, Passcode XXXXX#

Welcome (Campbell and Lauffer)

Introductions

Overview of Scan Program and Tour (Porter)

- NCHRP 20-68 Domestic Scan Pilot Program objectives
- Scan tour objectives
- Scan tour overview
- Expectations of participants

Participants' Objectives

- What are the most significant issues you and your agency face related to right-of-way acquisition and utility relocation? The profession as a whole?
- What do we hope to learn from the scan tour? What specific issues or questions would we like to be addressed in our meetings and discussions?
- What products would be most beneficial? How can you contribute to those products?
- What area(s) of expertise would you like to lead discussions and/or ask questions about?

Locations, Sites, and Topics

- Desk scan overview (desk scan report to be provided in advance) (Ware)
- Additional comments and input from participants
- Which locations, sites, and topics would be most helpful to visit and discuss?

Next Steps (Porter)

- Development of itinerary
- Travel arrangements
- Read-ahead materials
- What other expectations do you have for the tour?

Questions

Appendix E

*Examples of Briefing Materials
(Including Participant Meeting Agendas)*

Briefing Materials

- 1. Itinerary**
- 2. Participant Roster**
- 3. General Information**
- 4. Briefing/Debriefing Meeting Agendas**
- 5. Discussion Topics and Questions**
- 6. Background Information: Florida**
- 7. Background Information: Texas**
- 8. Background Information: Minnesota**

Attachments

Air Travel Itinerary

Expense Report

1. Itinerary

Day	Time	Activity	Location
<i>Orlando, FL (Florida Department of Transportation; SR 50 Project)</i>			
Sunday, July 9, 2006	Various	Participants arrive individually	Orlando International Airport
	7:30-9:00 p.m.	Introductory meeting	AmeriSuites Convention Center 8741 International Drive Orlando, FL 32819 Tel: (407) 370-4720 Fax: (407) 370-4721 International Room
	Overnight		AmeriSuites Convention Center
Monday, July 10	8:00-9:00 a.m.	Breakfast	AmeriSuites Convention Center International Room
	9:00 a.m.-5:00 p.m.	Working meetings and site visits with Florida DOT District 5	AmeriSuites Convention Center International Room
	TBD	Dinner	TBD
	Overnight		AmeriSuites Convention Center
Tuesday, July 11	7:00-8:30 a.m.	Breakfast - briefing/debriefing	AmeriSuites Convention Center International Room
	9:00 a.m.-4:00 p.m.	Working meetings and site visits with Florida DOT District 5	AmeriSuites Convention Center International Room with field visits
	4:30 p.m.	Arrive and check-in at airport; dinner on your own	Orlando International Airport
	7:05 p.m.	Depart Delta Flight 6082 to Austin, TX	Orlando International Airport
<i>Austin, TX (Texas Department of Transportation; SH 130/Trans-Texas Corridor Project)</i>			
	9:10 p.m.	Arrive and transit to hotel	Austin-Bergstrom International Airport
	Overnight		Embassy Suites Austin North 5901 North IH-35 Austin, TX 78723 Tel: (517) 454-8004 Fax: (512) 454-9047

Day	Time	Activity	Location
Wednesday, July 12	7:00-8:30 a.m.	Breakfast – briefing/ debriefing	Embassy Suites Austin North Lynx Room
	9:00 a.m.-5:00 p.m.	Working meetings and site visits with Texas DOT	Texas Turnpike Project Office 1421 Wells Branch Parkway Pflugerville, TX
	TBD	Dinner (group reservation or on your own)	TBD
	Overnight		Embassy Suites Austin North
Thursday, July 13	7:00-8:30 a.m.	Breakfast – briefing/ debriefing	Embassy Suites Austin North Lynx Room
	9:00 a.m.-2:30 p.m.	Working meetings and site visits with Texas DOT	Texas Turnpike Project Office
	3:30 p.m.	Arrive and check-in at airport; dinner on your own (airport or on-board)	Austin-Bergstrom International Airport
	5:46 p.m.	Depart Northwest Flight 974 to Minneapolis, MN	Austin-Bergstrom International Airport
	<i>Minneapolis-St. Paul, MN (Minnesota Department of Transportation; I-494 Project)</i>		
	8:35 p.m.	Arrive and transit to hotel	Minneapolis-St. Paul International Airport
	Overnight		Embassy Suites St. Paul 175 East 10 th Street St. Paul, MN 55101 P: 651-379-5062 F: 651-224-0313
Friday, July 14	7:00-8:00 a.m.	Breakfast – briefing/ debriefing	Embassy Suites St. Paul Grand Room
	8:30 a.m.-5:00 p.m.	Working meetings and field visits with Mn/DOT	Minnesota DOT 395 John Ireland Boulevard St. Paul, MN
	7:00 p.m.	Group dinner	TBD
	Overnight		Embassy Suites St. Paul
Saturday, July 15	8:00-10:00 a.m.	Breakfast – debriefing and next steps	Embassy Suites St. Paul Grand Room
	10:00 a.m.	Transit to airport	
	12:00 p.m. or later	Participants depart individually	Minneapolis-St. Paul International Airport

2. Participant Roster

State Participants

Richard (Rich) Allen

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John (J.D.) Ewald

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Bimla Rhinehart

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Management/Leadership Team Participants

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John Campbell (Scan Co-chair)
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James (Jim) Ware (Subject Matter Expert)
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Christopher (Chris) Porter (Scan Manager)
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cporter@camsys.com

3. General Information

Objectives

The purpose of this pilot domestic scan project is to identify, review, document, and disseminate innovative practices by transportation agencies throughout the United States in the field of right-of-way acquisition and utility relocation. The scan is being organized through NCHRP Project 20-68, U.S. Domestic Scan Pilot Program, and is cofunded by the American Association of State Highway and Transportation Officials (AASHTO) and by the Federal Highway Administration's (FHWA) Office of Real Estate Services. The scan group includes a total of 15 participants from state departments of transportation (DOT), FHWA, as well as a subject matter expert and consultant support staff. We will be visiting three states between Sunday, July 9 and Saturday, July 15th, 2006. Following the scan tour, participants and the management team will work together to document and share the findings of the scan with their peers and colleagues.

Logistics

Our site visit locations and hosts include:

- Orlando, FL – Florida DOT, District 5;
- Austin, TX – Texas DOT; and
- St. Paul, MN – Minnesota DOT.

Ground transport at the host sites in most cases will be by tour bus, with some smaller shuttle buses providing transport to and from airports. All local ground transport has been arranged in advance, with the exception of transit from your home to the airport and from the Orlando airport to the AmeriSuites hotel upon your arrival on Sunday.

Most meals will be arranged as a group. Breakfast will be provided at each hotel in conjunction with our daily briefing/debriefing meeting. Lunch will normally be an on-site working lunch catered at the host agency or conference room. For some dinners, including Sunday (arrival night), you will be free to make your own arrangements. Group meals are noted in the trip itinerary. On Tuesday and Thursday we will be traveling to the next location in the late afternoon/early evening, so we will need to eat in the airport or on the airplane.

Dress will be “business casual.” You are encouraged to check luggage if you so desire. Given the length of the tour and number of participants, some participants will be checking luggage, so it will not save time for others to have carry-ons. This is at your discretion.

Expenses

Airfare, hotel reservations, and group ground transit have been prepaid by Cambridge Systematics. Group meals also will be paid for by Cambridge Systematics. You will need a credit card to check in at the hotel, but your card will not be charged.

Participants will need to cover certain expenses, including taxi or other ground transportation to and from home airports as well as some individual meals, out of pocket. An expense report is included at the end of this briefing packet. Please track your expenses and submit this form, and you will be reimbursed for these expenses by Cambridge Systematics. Receipts are required for expenses over \$25 and are strongly encouraged for expenses less than this amount.

Meetings with Host Agencies

Our itinerary each day will include meetings with various host agency staff, as well as field visits. In Orlando, we will be meeting at our hotel, while in Austin and Minneapolis, we will be meeting at our host agencies' offices. Between 10 and 25 local agency staff are likely to be present for each discussion. FHWA Division Administrators as well as the FHWA right-of-way and utilities coordinators from each host state also have been invited to join us.

Participants will be responsible for taking the lead on discussing particular topics of interest, per responsibilities assigned at our April 13, 2006 conference call. Tour organizers will assist in facilitating meetings, including running meetings, asking amplifying questions, and keeping discussions on track. A list of discussion topics and questions is included in this briefing packet. You are highly encouraged to select from this list depending upon what is most interesting or relevant from each host agency, as well as to develop your own questions.

Scan Tour Documentation

Tour organizers will be taking notes at meetings and photographs of field visits. You also are encouraged to take your own notes, as well as to bring a camera if you so desire. The findings of the scan tour will be documented in a PowerPoint presentation and a final report (including an executive summary). The summary and presentation will be prepared within two months of the conclusion of the tour (mid-September 2006), with the report completed within approximately six months (January 2007).

Tour management will be soliciting the input of participants in creating this documentation. You are strongly encouraged to use these materials in sharing your experiences with others in your agency and at professional meetings and conferences.

Expectations of Participants

AASHTO and FHWA expect that the scan tour will provide a valuable learning experience for all participants, as well as supporting efforts to disseminate best practices in right-of-way acquisition and utility relocation nationwide. In return for sponsoring your participation, your involvement will be required in the following activities and products:

- Participating in an on-site premeeting on Sunday evening, as well as a postscan work session the following Saturday morning to discuss overall findings, key lessons learned, and follow-up writing tasks;
- Helping lead and/or actively contributing to discussions with tour site visit hosts, as well as participating in debriefing discussions following each day's activities;
- Providing input into products documenting the scan tour, including a final report as well as a PowerPoint presentation that will be made available for your use (your input will be used by the scan tour contractor to develop draft materials for your review);
- Committing to working within your own agency, region, and discipline to implement best practices as appropriate, as well as sharing findings and lessons learned from the tour within your professional networks;
- Preparing a personal "implementation plan" describing how you will help make use of and share these findings and lessons learned on a state, regional, and national level; and
- Evaluate the scan tour and associated activities to provide feedback to NCHRP that will inform further development of the domestic scan program.

4. Briefing/Debriefing Meeting Agendas

Pre-Tour Meeting Agenda

Sunday, July 9, 2006

7:30-9:00 p.m.

AmeriSuites Convention Center, Orlando, FL

Welcome (Campbell and Lauffer)

Introductions

Overview of Itinerary and Logistics

- Scheduled meetings and agencies
- Daily briefing/debriefing sessions
- Meals and accommodations
- Air and ground transport
- Expense reports and reimbursements

Review of Objectives

- Review of overall scan tour objectives
- Review of participants' objectives as discussed at April 13, 2006 conference call
- Any additional objectives of participants

Discussion Topics and Questions

- Review/assign roles and responsibilities for leading topics
- Identify key questions of interest

Monday's Agenda

- Who are we meeting with?
- What projects, issues, etc., are we discussing?
- Background information on projects
- Timing and logistics
- Tomorrow morning - meeting time and place

Questions

Daily Debriefing/Briefing Agenda

Tuesday–Friday, July 11-14

7:00 or 7:30 a.m. as noted on itinerary

Debriefing on Yesterday’s Visits

- What was good (examples of good practice)?
- What follow-up questions do you have?
- What is one key finding/message/lesson learned from yesterday’s meetings?
- Any logistical concerns?

Today’s Agenda

- Who are we meeting with?
- What projects, issues, etc., are we discussing?
- Background information on projects
- Timing and logistics
- Questions

Post-Tour Debriefing Agenda

Saturday, July 15, 8:00-10:00 a.m.

Embassy Suites, St. Paul, MN

Debriefing - Substance

- Was the tour a learning experience for you?
- What stood out as particularly noteworthy (examples of good practice)?
- Are there any particular practices you would not want to promote or emulate?
- What is the one key finding/message/lesson learned you would communicate from the tour?

Next Steps

- Expectations for personal implementation plan
- Expectations and timeline for development and review of scan products
- How do you see applying the tour findings within your own agency, region, or peer group?
- Are there upcoming conferences, meetings, etc., at which the findings should be presented? Are there volunteers to organize or give a presentation?
- Written evaluations
- NCHRP Domestic Scan Pilot Program evaluation

Debriefing - Logistics

- How well was the tour organized?
- Were accommodations, meals, meeting spaces, transport, etc., adequate?
- Any overall concerns or suggestions for next time?

Final Comments and Thank You

5. Discussion Topics and Questions

Questions are organized by the following topic areas. Participants volunteering at our April 13, 2006 conference call to take lead responsibility for each topic are listed.

- A. Project concepts, including public private partnerships and design-build (*Ewald*);
- B. Project development (to be determined);
- C. Appraisal and appraisal review (*Sherman*);
- D. Acquisition and advance acquisition (*Stout*);
- E. Relocation (to be determined); and
- F. Utilities (*Lovett*).

A. Project Concepts

- Has the state successfully used any form of Public Private Partnership (PPP) project implementation?
- What has been the format of the PPP project?
- If so has the project met the expectations of all parties?
- Are additional PPP projects contemplated?
- What impediments does your state have (e.g., legal, policy) that prevent use of PPP projects?
- Has the state used design-build with or without PPP principles?
- Do your design-build projects include R/W acquisition and/or utilities relocation by the design-build consultant?
- Do the design-build projects meet all expectations regarding R/W acquisition and utilities relocation?
- What have been the shortcomings?
- Are steps underway to create opportunities for design-build in your state, including addressing R/W and utilities practices?

Appendix F

*Evaluation and Personal Implementation
Plan Forms*

NCHRP 20-68, Pilot Domestic Scan Program: Evaluation Form

Scan Subject: Best Practices in Right-of-way Acquisition and Utility Relocation
Scan Dates: July 9-15, 2006

This evaluation form will assist NCHRP and FHWA in assessing the value of this pilot domestic scan and improving future domestic scans. Please return this form to: Chris Porter, Cambridge Systematics, Inc., cporter@camsys.com or 100 CambridgePark Drive, Suite 400, Cambridge, MA 02140. You are also encouraged to send comments at any time.

1. On a scale of 1 to 5, with 1 the lowest and 5 the highest, did the scan meet **your** expectations? If not, why?

1 2 3 4 5

2. On a scale of 1 to 5, with 1 the lowest and 5 the highest, do you feel that the **objectives of the scan** were met? If not, why?

1 2 3 4 5

3. Where the sites visited appropriate for the scan subject? If any were not, why not?

4. On a scale of 1 to 5, please rate how valuable you expect the information you obtained will be to helping you improve practices at your agency and/or within your profession. (1 = not valuable at all; 5 = extremely valuable)

1 2 3 4 5

5. On a scale of 1 to 5, please rate how useful you found the desk scan report for helping to identify key topics and issues, the best sites to visit, etc. What did you find most useful about the report? What would you have improved about it?

1 2 3 4 5

6. Was prescan communication (conference calls, briefing materials, and other communication with the tour organizers) adequate? If not, why? What suggestions do you have for improving prescan communication?

7. Were scan tour logistics (e.g., travel, lodging, meals, and meeting facilities) adequately arranged and carried out? What would you have improved about the logistics of this scan?

8. Which scan meetings or activities stood out as most valuable?

9. Which scan meetings or activities stood out as least valuable? Why? Did you feel that any were not a valuable use of time?

10. Do you have any other comments?

Name _____

Date _____

NCHRP 20-68, Pilot Domestic Scan Program: Personal Implementation Plan

Scan Subject: Best Practices in Right-of-way Acquisition and Utility Relocation

Scan Dates: July 9 – 15, 2006

Each participant is asked to complete this “personal implementation plan” after participating in the scan tour. You will be contacted six months after the tour dates to identify how successful you have been at pursuing these implementation activities. The personal implementation plan and follow-up evaluation will help NCHRP and FHWA evaluate the value and impacts of this pilot domestic scan program. After the follow-up evaluation, we will share information with other participants regarding any success stories or other findings you have obtained from working to implement innovations within your own agency.

Please return this form to: Chris Porter, Cambridge Systematics, Inc. (e-mail cporter@camsys.com; fax 617-354-1542; mailing address 100 CambridgePark Drive, Suite 400, Cambridge, MA 02140).

Name: _____

Agency: _____

What specific practices from the scan tour are you planning to implement or investigate within your agency?

1. Are there any upcoming meetings or conferences at which you can present findings, or can propose being placed on the agenda?

2. Are there any other ways in which you plan to implement, disseminate, or otherwise share the findings of the scan tour?

NCHRP 20-68, Pilot Domestic Scan Program: Six-Month Evaluation

Scan Subject: Best Practices in Right-of-way Acquisition and Utility Relocation

Scan Dates: July 9 – 15, 2006

As a participant in this scan tour you are requested to complete this evaluation six months after participating in the scan. The “personal implementation plan” that you completed immediately following the tour is attached so that you can evaluate how successful you have been at achieving your implementation objectives. Acknowledging that six months can be a very short timeframe, we are nevertheless interested in any activities that you have engaged in to implement the findings of the scan. We are also interested in your “lessons learned,” including not only things that have worked well, but also barriers or challenges (technical, financial, institutional, personal, etc.) that have limited your ability to implement the scan’s findings.

The information you provide will help NCHRP and FHWA evaluate the value and impacts of this pilot domestic scan program, and the evaluation findings will be incorporated into a final evaluation report for the project. In addition, we will share information regarding success stories and other findings with other participants. Please be assured that the sharing and reporting of information on any barriers or challenges encountered will be done in a sensitive manner so as not to embarrass any individuals or agencies.

Please return this form to: Chris Porter, Cambridge Systematics, Inc. (e-mail cporter@camsys.com; fax 617-354-1542; mailing address 100 CambridgePark Drive, Suite 400, Cambridge, MA 02140).

Name: _____

Agency: _____

1. What specific practices from the scan tour have you already attempted to implement within your agency?

2. Have you been successful, or do you anticipate success? Why or why not?

Appendix G

Responsibilities of the Tour Manager En Route

NCHRP 20-68, Domestic Scan Pilot Program

Participant Coordination

- Ensure that all participants clear airport ticketing and security.
- Ensure that all participants are informed of upcoming activities, start times, and locations (for internal meetings, host meetings, bus boardings, meals, etc.), including any changes compared to printed itinerary.
- Prior to the end of each day, provide instructions for the next morning, including: breakfast time and location (give people a “start talking” time if a meeting is to be held over breakfast); when to check-out; what to do with luggage; and what time the bus is leaving.
- Hold people to the schedule.
- Ensure that all participants have boarded the bus.
- For long bus tours, bring water and schedule or anticipate need for pit stops.
- Ensure that any of participants “special needs” are met (require assistance with baggage, can’t use stairs, extra time required, etc.).
- Diplomatically manage interpersonal conflicts, discontentment with tour arrangements, etc.

Facilities and Transport Coordination

- Verify itinerary with the bus company at least one day in advance, including pick-up time and location and final drop-off time.
- Exchange cell phone numbers with bus operator.
- Inform bus operator and meeting hosts of any delays.
- Upon arrival at hotel, verify that participants are prepaid; verify reservation and set-up for any meeting rooms that will be used.
- Pay attention to climate control, background noise, lighting, etc., in meeting facilities.
- Scope out group meal sites in advance, make reservations if necessary, and inform participants of plan. Ensure that accommodations can be made for any special dietary needs.

Host Meetings

- If host is not providing name tags, arrange for table tents for participants to identify name and agency.
- Distribute sign-in sheets to capture person, agency, title/position, phone, and e-mail.
- Take detailed notes.
- Take representative photographs of group, including hosts and participants at each meeting.
- Take a group photo at some point during the tour.
- Obtain copies of presentations and handout materials.
- Help steer meetings back on track if getting behind or off-topic (working with co-chairs as appropriate). Do not be afraid to assert your responsibility as tour manager to the local host.
- Afterwards, send thank-you notes to all meeting participants via e-mail, and formal thank-you letters to meeting hosts.