



March 31, 2004

MEMORANDUM

TO: James A. Bever, Director, USAID/Afghanistan

FROM: Bruce N. Boyer, RIG/Manila /s/

SUBJECT: Second Review of the Road Project Financed by USAID/Afghanistan's Rehabilitation of Economic Facilities and Services (REFS) Program (RIG/M Memorandum 04-003)

This memorandum transmits our second information report on the subject review.¹ We considered USAID's comments on the draft report and have revised the memorandum accordingly. I appreciate the cooperation and courtesy extended to my staff during the review.

SUMMARY

USAID/Afghanistan reported that it accomplished its goal of completing Phase One of the Kabul to Kandahar highway by December 31, 2003. Specifically, it reported that all 389 kilometers of the Kabul to Kandahar highway had either been paved with a single layer of new asphalt up to 10 centimeters thick or that existing asphalt had been repaired.

USAID/Afghanistan and its prime contractor, Louis Berger Group, Inc. (LBGI), are now focused on completing the second and final phase (Phase Two) of the Kabul to Kandahar highway by the end of October 2004. According to LBGI's April 2003 design plans, Phase Two was to (1) add three layers of asphalt to the

¹ The first report, issued on November 13, 2003, was titled "Review of the Road Project Financed by USAID/Afghanistan's Rehabilitation of Economic Facilities and Services (REFS) Program" (RIG/M Memorandum 04-002).

layer paved in Phase One for a total of four layers totaling 31 centimeters thick, (2) widen the road to 12 meters including shoulders, and (3) install signage and road markings. However, in January 2004, LBGI changed the design for the completed road to have only three layers of asphalt 25 centimeters thick without sacrificing durability. Additionally, reconstruction of six bridges not completed in Phase One will be completed in Phase Two.

Although Phase Two reconstruction work will not begin in earnest until the spring of 2004, some work has already begun. As of February 23, 2004, LBGI reported that 93 kilometers of the Kabul to Kandahar highway have been paved with a second layer of asphalt 10 centimeters thick. In addition, other work continues. USAID and LBGI officials stated that they are on schedule to complete the Kabul to Kandahar highway by October 2004.

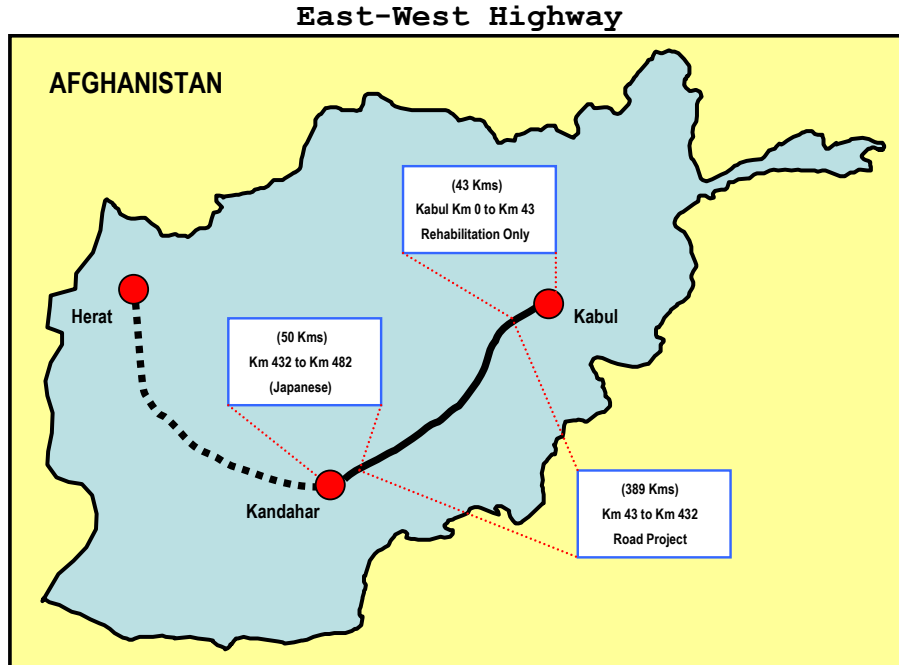
BACKGROUND

The Rehabilitation of Economic Facilities and Services (REFS) program is the largest and most visible program being implemented by USAID/Afghanistan. Its purpose is to promote economic recovery and political stability by repairing infrastructure. In September 2002, LBGI was awarded a \$143 million contract to implement the REFS program, including road reconstruction and other infrastructure activities, with the contract base period ending December 31, 2005. Since the award date, contract modifications have increased estimated costs to \$500 million.

Reconstruction of the Kabul to Kandahar segment (Road Project) of Afghanistan's major east-west highway is the largest activity being implemented to date under the REFS program. The east-west highway runs from Kabul to Herat and is approximately 1,200 kilometers long (see map on next page).

In April 2003, the U.S. government assumed responsibility for 389 kilometers of the Road Project starting 43 kilometers outside of Kabul and ending 50 kilometers before Kandahar.² After assuming responsibility for the Kabul to Kandahar segment, the U.S. government tasked USAID with reconstructing the 389 kilometer highway. In response, LBGI developed and USAID approved a two-phased strategy to accomplish this.

² The first 43 kilometers were already paved, and the last 50 kilometers were to be completed with Japanese resources.



A map of Afghanistan illustrating the east-west highway. USAID's segment of the Kabul to Kandahar highway project starts 43 kilometers west of Kabul and runs to within 50 kilometers of Kandahar.

The Phase One goal under the strategy included completing a nine-meter wide road (including two one-meter wide shoulders) that had at least one layer of asphalt 10 centimeters thick on the driving surface for all 389 kilometers by December 31, 2003. Phase Two envisioned completing the road by widening it to 12 meters (including two 2.5-meter wide shoulders), and adding three additional layers of asphalt for a total of four layers 31 centimeters thick by October 2004.

However, LBGI's implementation plan dated January 30, 2004, revised the road design of the completed road to only three layers of asphalt totaling 25 centimeters. LBGI made this change because load-bearing tests indicated that six centimeters of asphalt could be eliminated without compromising road durability. As a result of this change and as a result of the deletion of certain contingency costs, the road, which was estimated in May 2003 to cost as much as \$273 million is now estimated to cost \$229 million.

The OIG conducted fieldwork to report on the progress of the Road Project during January 2004. The results are described below.

REVIEW RESULTS

USAID/Afghanistan reported that LBGI met the Phase One goal of paving 328 kilometers of the 389 kilometer Road Project with at least one layer of new asphalt and repairing the remaining 61 kilometers by December 31, 2003, as planned. However, reconstruction of six bridges along the Kabul to Kandahar highway also included in Phase One was not completed by the end of December 2003, as planned. LBGI estimates that the bridges are over 50 percent complete, and cites security incidents and logistical problems for the delays in their completion.³

Although most Phase Two reconstruction will not begin until the spring of 2004, some work is already under way. For example, timeframes for completing Phase Two have been developed, and subcontractors have begun paving a second layer of asphalt. In fact, 93 of the 389 kilometers have reportedly already been paved with a second layer of asphalt. USAID and LBGI officials stated they were on schedule to complete the Kabul to Kandahar highway by October 2004.



A photograph of RIG/Manila auditors viewing one of six bridges under construction on the Kabul to Kandahar highway. A paved detour allows traffic to circumvent the construction area until the bridge is complete. This photograph was taken in January 2004 about 48 kilometers outside Kabul, Afghanistan.

³ During Phase One, LBGI paved temporary detours around these bridges to allow traffic to move without obstruction.

As with Phase One, the security situation in Afghanistan is the unknown that could most affect whether Phase Two can be completed on time.

Factors that May Affect USAID's Goal of
Completing the Road Project by October 2004

USAID's goal is to finish the Kabul to Kandahar Road Project by the end of October 2004. This entails completing the Phase Two work by adding new layers of asphalt; widening the shoulders; completing six bridges; and marking the highway with permanent dividers, borders, and signs.

Much of the groundwork for Phase Two is done. To be more specific, Phase Two will build on Phase One by using the same:

- Prime contractor and subcontractors.
- Heavy equipment, rock crushing plants, and asphalt mixing plants.
- Security equipment and personnel.
- Sources of gravel, stone, and other materials.

Consequently, Phase Two should experience fewer initial delays than were experienced in Phase One because LBGI will not have to find and procure services, equipment, and materials.

However, Mission and LBGI officials are most concerned about the threat of terrorist attacks that could affect their ability to complete the Road Project on time. For example, Phase One security incidents at times halted reconstruction, caused the destruction of equipment, and resulted in the deaths of a number of workers.

Thus, security risks in Phase Two should not be underestimated. Security incidents continue. For example, in February 2004, a LBGI helicopter pilot was killed by terrorists. To combat the threat, nearly 900 personnel from the Afghan Ministry of the Interior provide security along the Road Project. Further, USAID/Afghanistan has requested the assistance of military personnel from Provincial Reconstruction Teams to assist in providing security.⁴

⁴ These are teams of military personnel and civilian reconstruction advisors that provide security and coordinate small reconstruction projects in Afghanistan.

As discussed above, LBGI changed the design of the completed road to consist of three layers of asphalt totaling 25 centimeters. LBGI incorporated this road design change into its calendar year 2004 implementation plan, which it submitted to USAID/Afghanistan on January 30, 2004. That implementation plan contained the planned reconstruction outputs shown in Table 1 on the next page for Phase Two of the Road Project.

**Table 1: Phase Two Planned and Completed Outputs
(As of February 23, 2004)**

Reconstruction Outputs Per January 30, 2004 Implementation Plan	Planned	Completed
Paving a second 10-centimeter layer of asphalt (a second base layer)	389 kms	93 kms
Paving a third 5-centimeter layer of asphalt (a wearing course)	389 kms	0 kms
Widening the highway to have a 2.5 meter-wide shoulder on each side	389 kms	49 kms
Applying a single surface treatment to two meters of shoulder on each side	389 kms	0 kms
Completing six bridges	6	0

Although at the time of this review, winter weather had prevented most Phase Two operations from beginning, LBGI reported that 93 kilometers of the Kabul to Kandahar highway had already been paved with a second layer of asphalt as of February 23, 2004. Additionally, subcontractors have been able to do some work on widening highway shoulders, building culverts, and reconstructing bridges.

Management Comments and Our Evaluation

Mission Officials stated that contents of this memorandum were generally consistent with their knowledge of the project and Mission files. However, they commented that the road design had not been changed to reduce the number of layers of asphalt from four to three as the OIG reports. The officials claim that the road design still requires four layers of asphalt: two base layers, one binder course, and one wearing course. However, as noted on page three of this memorandum, LBGI's implementation plan dated January 30, 2004, revised the road design to delete the binder course. This reduction in the number of layers was

confirmed by LBGI's project manager, who stated that the current road design calls for two base layers and one wearing course layer. Consequently, we did not change the number of layers in this report from three to four, as suggested by the Mission, since both the January 2004 implementation plan and project manager comments seem to support three layers. There is, however, no disagreement as to the total thickness of asphalt required. Nevertheless, we suggest that the Mission discuss this apparent inconsistency in the number of layers of asphalt required with LBGI.