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FINAL CLOSEOUT REPORT TO 7 – Ghazni–Gardez Road Design

AFGHANISTAN INFRASTRUCTURE REHABILITATION PROGRAM (AIRP)

CONTRACT NUMBER 306-I-00-06-00517-00



PHOTO: TO 07 TEAM, 10 JUL 07

Ghazni-Gardez Road design project

Project Start Date: 22 May 2007

Project Finish Date: 30 June 2009

DISCLAIMER

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CLOSEOUT REPORT FOR TASK ORDER 7 - GHAZNI-GARDEZ ROAD DESIGN

I TASK ORDER OVERVIEW

1.1 Background and Summary of Scope of Work

The Ghazni to Gardez Road, when complete, will provide a direct east-west link of approximately 92 kilometers between the two provincial capitals. In conjunction with completed works under the Rehabilitation of Economic Facilities and Services (REFS) program and planned Afghanistan Infrastructure and Rehabilitation Program (IRP) road construction, the Ghazni to Gardez road segment would link Khost (via Gardez) to the national highway Ring Road, further opening the eastern border provinces to the benefits associated with modern road access across Afghanistan and into the markets of Central Asia.

The overarching goal of the project was to improve and rehabilitate the roadway systems of Afghanistan, specifically the road between Ghazni and Gardez provinces in accordance with AASHTO and MPW standards to the greatest extent practicable, thereby increasing the efficiency of the transport system and facilitating the economic development of the region.



Ghazni-Gardez road existing bridge

The initial scope of this Task Order was for both the design and construction/rehabilitation of the Ghazni to Gardez Road, from the Gardez city circle in Paktya Province to the city of Ghazni on the Kabul-Kandahar Road. In January 2009, during the planning phase of the task order, LBG/B&V was notified of USAID's intent to considerably reduce the scope of the task order by eliminating the construction/rehabilitation requirements due to the non-permissive security environment and resultant increase in security prices, limited availability of qualified contractors and increases in construction prices.

Under the reduced scope (per Modification No.4 to the Task Order) LBG/B&V was responsible only for the design of the roadway - including preparation of construction drawings and specifications – to incorporate a new asphaltic concrete roadway, an asphalt concrete wearing surface, an asphalt concrete binder course and crushed aggregate base, the rehabilitation and re-construction of reinforced concrete bridges, box and pipe culverts, embankment construction, and roadway striping and signs. In conjunction with the design, LBG/B&V was responsible for a hydrological analysis necessary for the design, the aerial survey of the roadway (accomplished under Task Order 12), and the preparation a Bill of Quantities for the final design.



Specific objectives included providing planning, environmental assessments, surveys, design, capacity building, and procurement services for the Ghazni-Gardez Road project. LBG/B&V successfully completed and submitted the 90% design in May 2009.

1.2 Task Order Deliverables

Deliverables include the following:

- Project Assessment Report
- Alignment Study
- Design Progress Reports at 30%, 60%, and 75%
- 75% - 90% Design, Design Submittals will be subject to USAID approval
- Engineer's Estimate for the BOQ and implementation
- Recommendation for design QA/QC during construction
- Subcontractor Pre-qualification and selection results
- Complete Schedule of the Task Order Activities

Electronic copies of these documents are included in CDs/DVDs submitted with this report.

1.3 Milestones

The modified and de-scoped period of performance for this task order was from May 22, 2007 through July 31, 2009 (per Modification number 4). Below is a listing of major milestones scheduled and achieved for the work required by this task order.

Milestone	Achieved Date
Letter Contract	22 May 2007
Issue Task Order Contract	23 November 2007
Final planning meeting	30 April 2008
30 % Design submittal, USAID review and comment	10 November 2008
60 % Design submittal, USAID review and comment	10 December 2008
75%-90% Design Submittal	4 April 2009
Task Order Completion and Closeout (Mod 4)	5 August 2009

1.4 Task Order Modification History

A total of four modifications were issued during the life of the program. The following table summarizes these modifications.



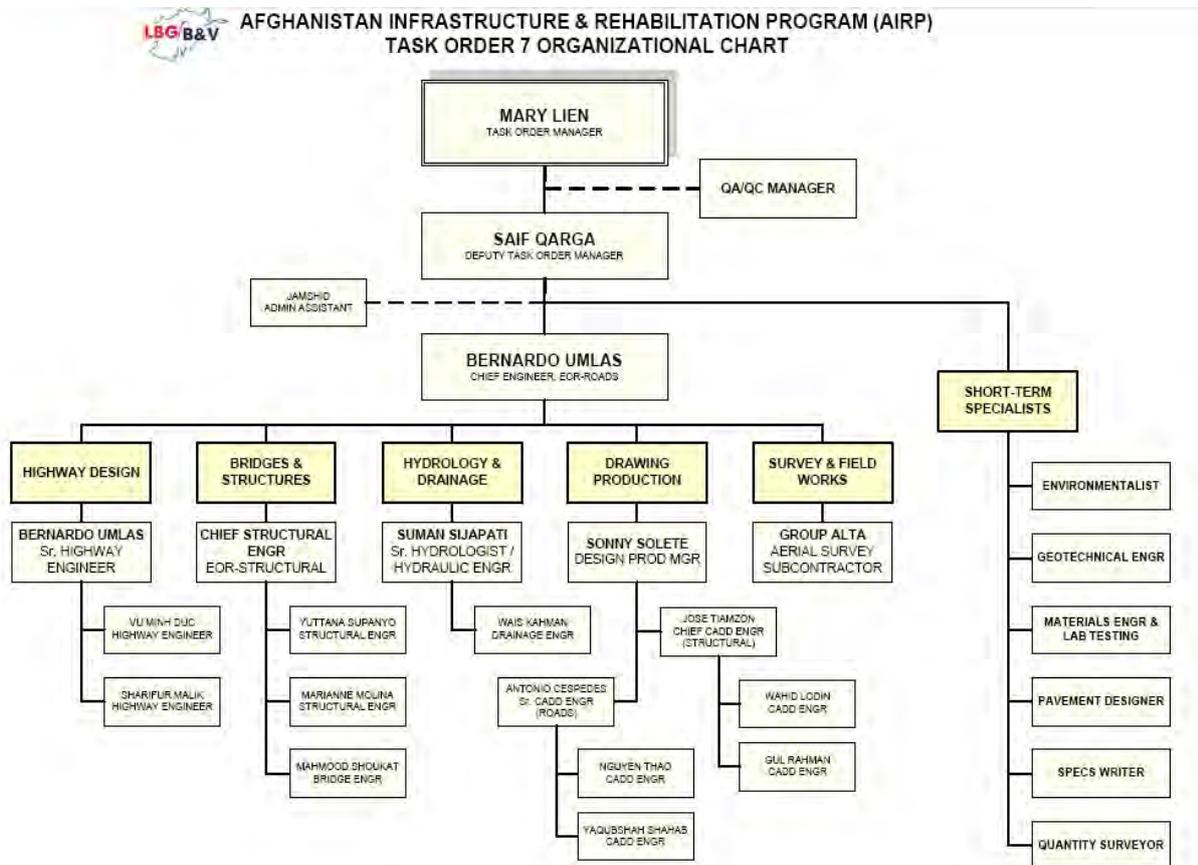
Modification Number	Date	Description of Scope of Modification
Letter Contract	22 May 2007	Design and construction of an all weather paved road from the city of Ghazni to the city of Gardez (National Highway) (Approximately 92.282 km)
Modification number 1	N/A	Changes to the re-definitization schedule
Modification number 2	N/A	Changes to the re-definitization schedule
Modification number 3	23 November 2007	Contract Award for Task Order No. 306-I-07-06-00517-02, Ghazni to Gardez Road
Modification number 4	5 August 2009	To issue a change order to de-scope the construction activities, decrease the total estimated cost, and reduce the period of performance

2 TASK ORDER EXECUTION

2.1 Task Order Organizational Structure and Management Details

An organizational chart of LBG/B&V staff for this Task Order is provided as follows:

Note: This is conceptual and changed throughout the performance of the TO.





2.1.1 Management

IQC and Chief of Party/Deputy Chief of Party responsibilities remained as per other Task Orders. Primary management supervision for this Task Order was the responsibility of the Task Order Manager.

2.1.2 Task Order Manager

The Task Order Manager was based in Kabul in order to provide immediate and full-time access to IRP. The Task Order Manager acted as the key point of contact for contractual, administrative and technical matters to this task order. In addition, the Task Order Manager had the overall authority for the task order implementation and responsibility for all related contract management, client coordination, correspondence, invoicing, mobilization of personnel, and other project management activities in coordination with the Deputy Task Order Manager, Design Manager, and AIRP management team.

2.1.3 Deputy Task Order Manager

The Deputy Task Order Manager was responsible for the day to day management of national/local project staff. In addition, he played a major role in all project coordination, liaison, reporting, communications, planning, and execution.

2.1.4 Chief Engineer

The Chief Engineer was responsible for the direct oversight of the design team, management, operations, and meeting design-production milestones. The Chief Engineer directly reported to the Task Order Manager for design progress on a weekly basis and conducted the scheduled design progress meetings. Apart from this, the Chief Engineer monitored the schedule and progress of the work and arranged site visits as necessary.

2.1.5 In-Country and Home Office Resources

The Task Order Manager who oversaw the design was principally based in Kabul. Financial, logistical, and IT support were also based in the main office in Kabul.

The IQC Manager and contractual support staff were based in the headquarters of the Louis Berger Group in Washington, DC. The preparation of invoices and cost reporting functions for the Task Order were also performed by staff at the Louis Berger Group office in Washington, DC.

2.2 Execution of Work

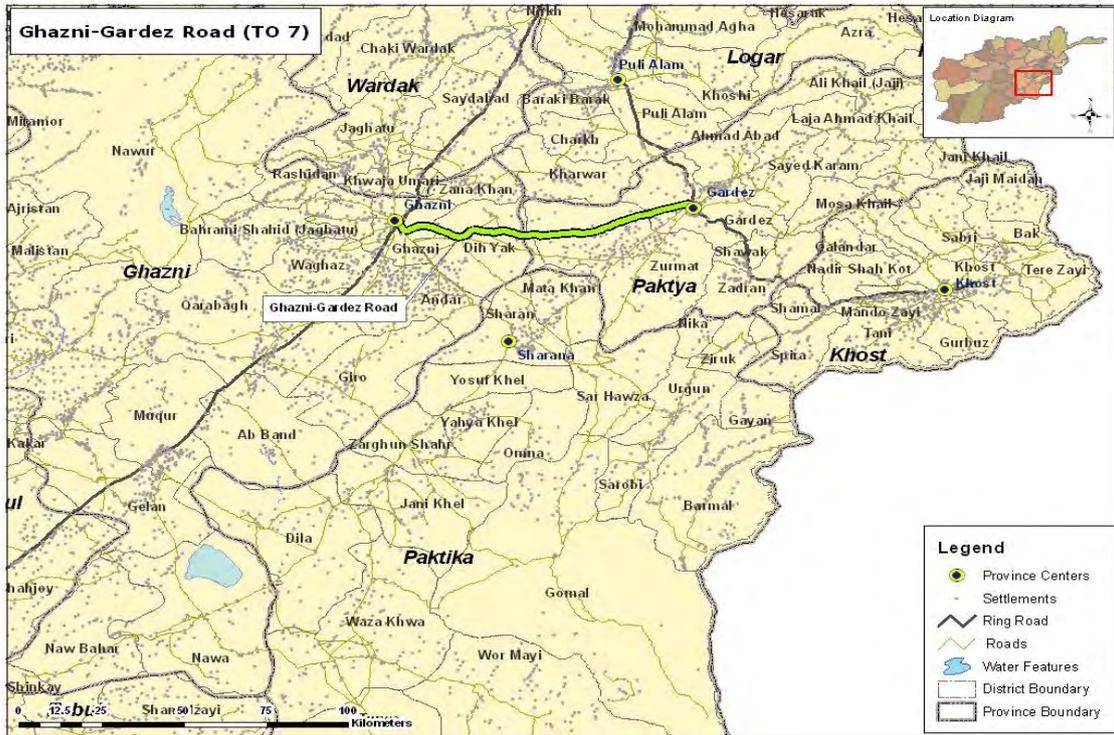
The execution of work was as follows:

2.2.1 Project Location

LBG/B&V established a temporary camp at Km 19 district of Sar Tasan for the purpose of managing and supporting all field activities. The design team was stationed in Kabul with frequent visits Ghazni-Gardez highway as required.



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2.2.2 Planning

The Contractor conducted a project assessment study to define the existing conditions and parameters for initiation of the design phase. A detailed route alignment survey was prepared and presented with the project assessment report, along with a recommendation for the preferred alignment based on selection criteria such as cost, security, and population served. In addition, the Contractor sent field engineering teams to the roadway to conduct preliminary studies on the current conditions of all structures and collected hydrological, hydraulic, and geotechnical data necessary for the design.

The Contractor performed site surveys, soil investigations, a hydrological study, and field topographic surveys to collect information necessary for preparation of detailed design drawings, plans and specifications. The planning phase was a short-term phase requiring only enough time to conduct field surveys to gain familiarity with the technical and environmental requirements for the project.

2.2.3 Design

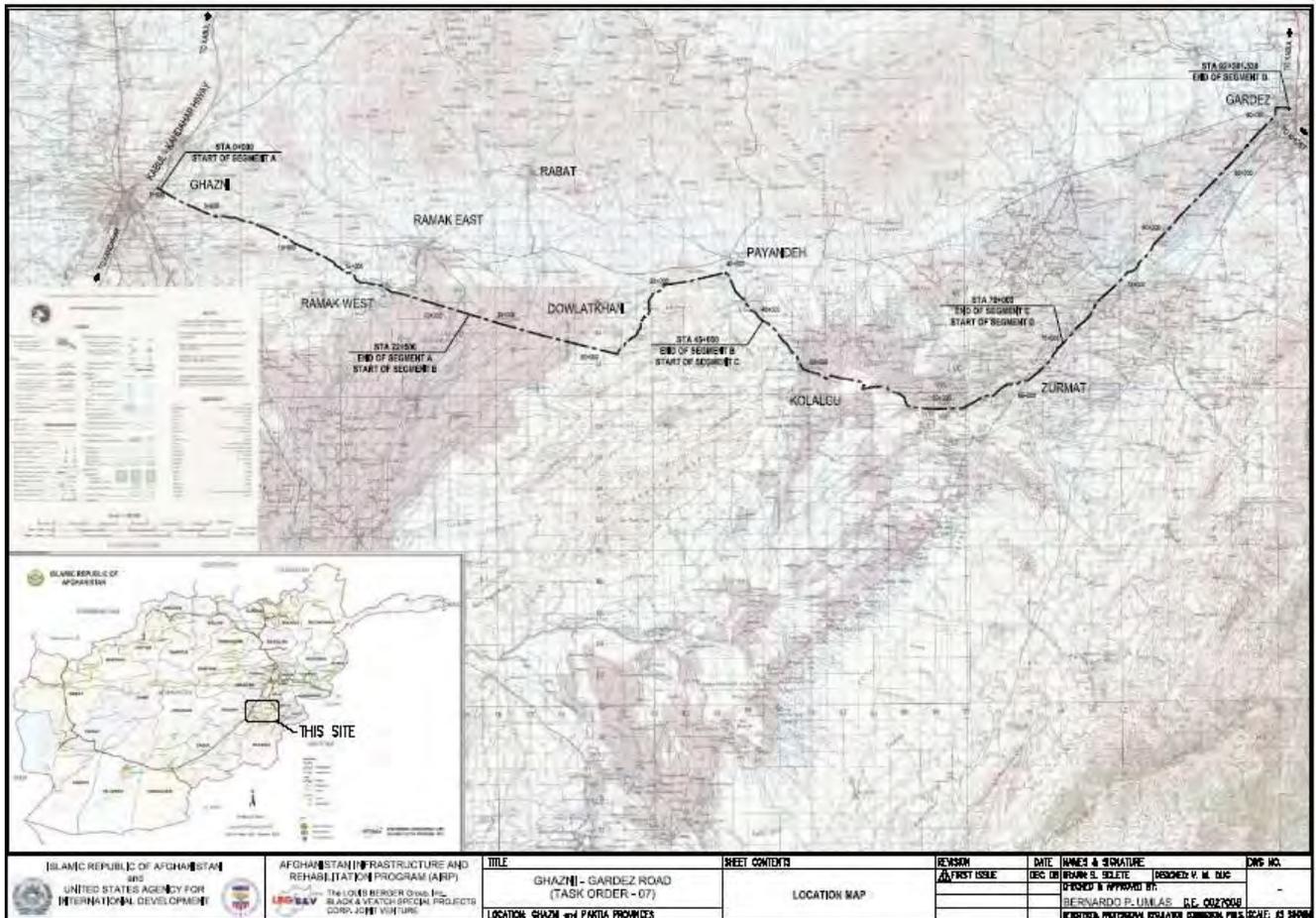
The Contractor prepared design drawings, plans, and specifications for the required reconstruction of the roadway and bridge structures. LBG/B&V provided design submittals at the 30%, 60% 75% and 90% design stages for the total rehabilitation of the road. Asphalt concrete pavement design was incorporated for the total change. Final determination was based on traffic studies with respect to traffic volume, estimated vehicle weights, and climatic conditions for this particular roadway. Drainage was design for 20-year storm events and a passable road for all seasons of the year. The design meets the requirements and recommendations specified by AASHTO 2002, HS20-44 loading conditions and incorporated the MPW Interim Design Standards.

The design of the road was divided in two segments as outlined.

- Segment A: 0+000 to 50+000 km, and
- Segment B: 50+000 to 92.538 km.



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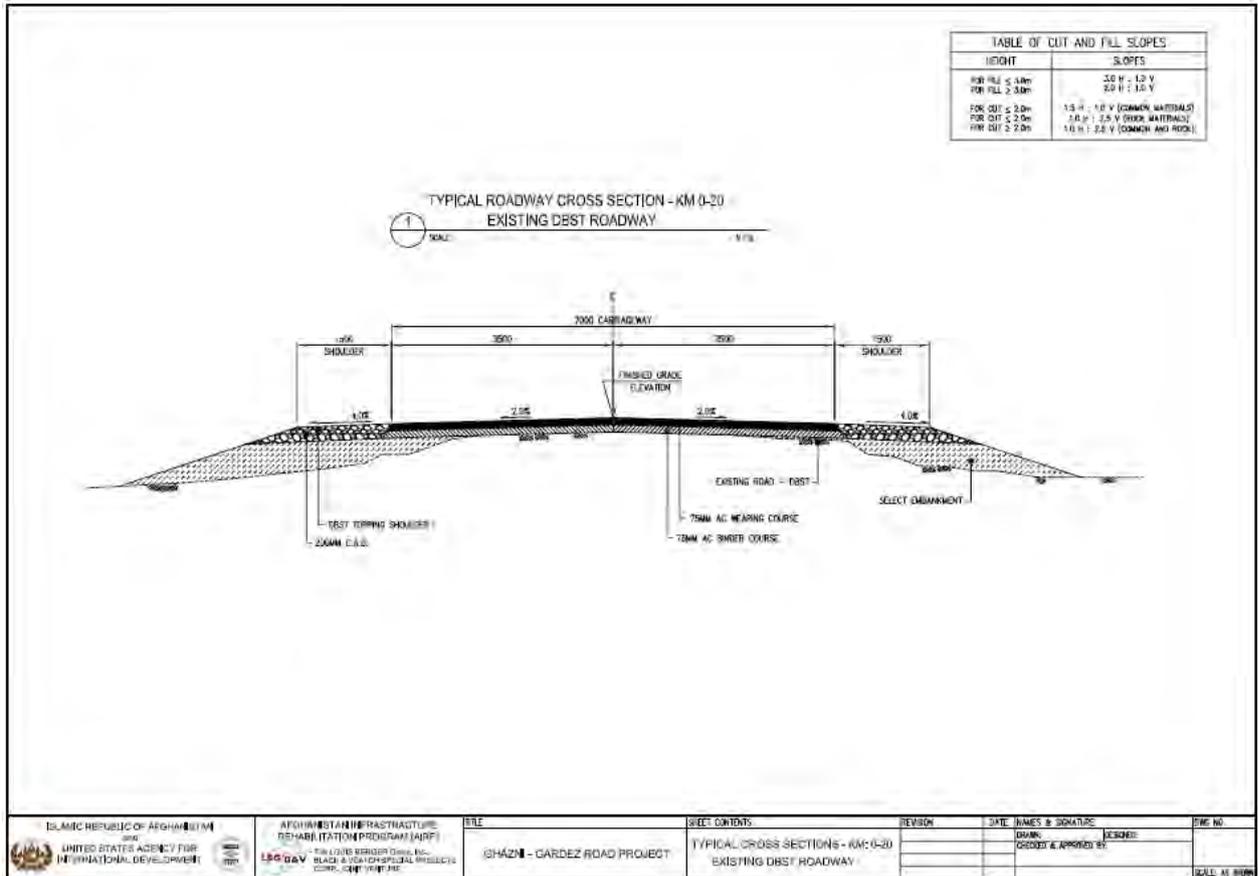
The 75%-90% design provided at completion of this task order included:

- Aerial survey and digital terrain model
- Geotechnical Assessment
- Environmental Assessment
- Horizontal and Vertical alignments - A full geometric design for the road section along the proposed road alignment, including a horizontal and vertical design.
- Asphalt concrete pavement design - Provision in the final design for an upgraded roadway surface of asphalt concrete pavement for the entire length of the road. Final determination of the design will be based on traffic studies with respect to traffic volume, estimated vehicle weights, and climatic conditions for this particular roadway. The design will meet the requirements and recommendations specified by AASHTO 2002, HS20-44 loading conditions and incorporate the MPW Interim Design Standards.
- Bridge Structural Design - For the design of this asphalt concrete road, the southern alignment is utilized. The design along this alignment includes the rehabilitation of two bridges, construction of a third new bridge; various culverts and causeways; and rehabilitation of several hundred other structures, including irrigation culverts, cross drainage structures, low water crossings, and stone masonry retaining walls and culvert headwalls. There are also several locations where new culverts and/or causeways will need to be designed to ensure the integrity of the reconstructed roadway.
- Drainage Structural Design - Drainage was designed for 20-year storm events and a passable road for all seasons of the year.



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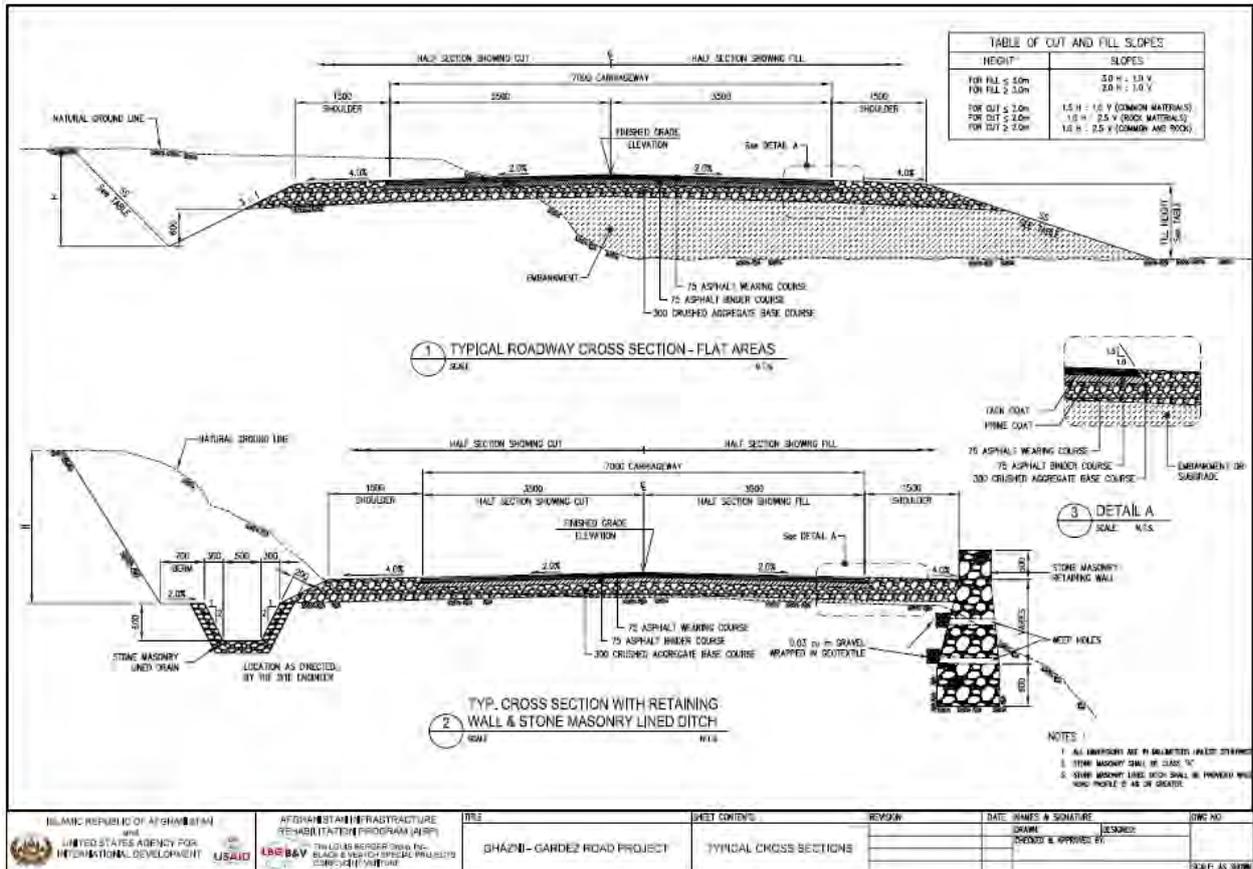
- Hydrological and Hydraulic Study & Analysis - A complete hydrological analysis of the surrounding watershed as well as the hydraulic design of all existing and proposed culverts and bridges along the alignment.



The modified objective of the project was to design an all weather road from the city of Ghazni to the city of Gardez. The works to be completed under this task order were:

- Aerial survey and digital terrain model,
- Horizontal and vertical alignments,
- Hydrological and hydraulic study,
- Asphalt concrete pavement design,
- Bridge structural design,
- Drainage structural design,
- Hydrological and hydraulic analysis,
- Design drawings and specifications, and
- Bill of quantities

The entire 92 km of the road was designed by LBG/B&V in Kabul, Afghanistan, with quality assurance reviews conducted by Home Office support located in Morristown, NJ, and Washington, DC.



2.2.4 Demining

Demining was part of the original task order scope of work; however, it was de-scoped along with the road construction/rehabilitation activities, therefore no demining or demining surveys were conducted under this task order.

2.2.5 Security

LBG/B&V utilized International Specialized Services (ISS) Limited, our eastern region security provider, for the design activities along the road alignment of the Ghazni-Gardez road. Site visits were conducted using personal security detail (PSD) escort services to and from the work site, static security at the temporary camp, and program management activities from the Tactical Operations Center (TOC) in Kabul.

2.3 Subcontracts and Major Procurements

Road Construction

From July 8, 2008 to July 23, 2008, LBG/B&V advertised to prequalify majority-owned Afghanistan construction firms for the construction of the Ghazni-Gardez Road. Copies of a prequalification notice were posted in the (1) in The Kabul Times, (2) in Anis Daily Newspaper and (3) Hewad daily, and also sent via e-mail directly to known prospective applicants describing procedures for downloading prequalification documents from the LBG/BV JV (AIRP) web site and noting a due date of September 30, 2008 for submission of completed applications. Prior to the date that prequalification applications were due, LBG/B&V conducted two pre-qualification seminars for interested contractors on September 13th and 14th 2008 to



review prequalification criteria and requirements for preparing and submitting prequalification documents. A total of 199 companies downloaded the prequalification application documents from the LBG/BV JV (AIRP) website; twenty (20) companies attended the prequalification seminar, and twenty-one (21) companies submitted prequalification applications. All of the documents presented by the 21 applicants were opened on November 11, 2008 and reviewed by a prequalification review committee that noted 4 applicants in their final report in December 2008 that prequalified to bid on the road Ghazni-Gardez road construction. On March 29, 2009, invitation letters were sent to the prequalified applicants inviting them to pick up bid documents.

Based on a 30% design of the roadway, a preliminary design and projected Bill of Quantities were prepared for solicitation of bids for the construction of the Ghazni-Gardez road.

A prequalification meeting was held to determine the professional, technical, and financial capabilities of the potential bidders for the construction of the Ghazni-Gardez Road.

LBG/B&V decided to do the bidding in two sections: for Segment A and for Segment B. The design of the road was divided in two segments as outlined.

- Segment A: 0+000 to 50+000 km, and
- Segment B: 50+000 to 92.538 km.

The bidding for the Ghazni to Gardez Road (both Sections A and B) was carried with bidders that were prequalified in December 2008 to bid on one or both sections of the Ghazni to Gardez Road. During the prequalification process a total of twenty-one (21) firms submitted applications. Of these, a total of four (4) firms were prequalified; all for only one of the two sections.

Three of the companies that picked up the bid documents submitted bids for both the Section A and the Section B subcontracts. On the dated that the bids were due, ALOPS sent an e-mail to LBG/B&V noting that they had decided to not to submit bids for either of the two subcontracts because of the security situation along the Ghazni Gardez road.

Temporary Camp Construction

LBG/B&V JV subcontracted with Afghan Bena Construction Company to set up a small temporary camp site near the city of Ghazni. Afghan Bena constructed this site and made it ready for use and occupancy. Afghan Bena's subcontract started on 1 December 2007 and ended on 1 February 2008.

Internet Services

LBG/B&V JV subcontracted with QUICKLINK Communications 23 April 2008 through 30 June 2009. QUICKLINK was responsible for providing internet services for our Remote Camp Site in Gardez through V-SAT technology.

Security Services

Task Order 7 utilized LBG/BV-AIRP security IQC Contract with ISS Security and Task Order 1 security for Kabul-based design activities and occasional PSDs to this site. Security delivery orders were issued for the following services:

- Security services for the LBG/B&V personnel
- Tactical Operations Center (TOC) with the Security subcontractor
- Physical security of the project office
- Escort security to and from the project work sites
- Escort services for LBG/B&V staff off the project work site



2.4 Task Order Budget and Expenditures

A summary of the final Task Order budget including all incurred costs and projections as of 31 July 2009 is provided in the table below:

Description	Budget Amount	Billed Thru Invoice # 49*	Remaining Budget Amount
A. Ghazni to Gardez Road			
1. Salaries & Wages	2,174,155	505,347.51	1,668,807
2. Overhead, Fringes, and Allowances	3,101,377	601,785.42	2,499,592
3. Other Direct Costs	2,108,507	1,834,577.77	273,929
4. Subcontracts	52,054,685	1,639,978.49	50,414,707
5. G&A	1,103,792	162,742.36	941,050
TOTAL COSTS	60,542,516	4,744,431.55	55,798,084
Fixed Fee			
7. Fixed Fee 4%	2,421,701	189,777.25	2,231,924
TOTAL COST-PLUS-FIXED-FEE	62,964,217	4,934,208.80	58,030,008
Supplemental Funds spent to date	7,000,000	4,934,208.80	2,065,791

* The amount billed thru invoice number 49 represents LBG/B&V's estimate at completion. This does not reflect the final cost of the task order to include adjustments for final direct rates, subcontractor claims, and program support costs.



Ghazni-Gardez road condition



2.4.1 Task Order Funding

The funding source for the Task Order budget was from USAID-Office of Infrastructure Engineering and Energy (OIEE) under the IQC 306-I-07-06-00517-00. This is a cost plus fixed fee completion task order. In accordance with the Special Requirements section of the task order, this task order is partially funded with “Supplemental FY-07” Funding. All funds spent under this task order were part of the supplemental funding.

2.5 Government Property Summary

A property disposition plan was submitted under Task Order 7 in November, 2009. This plan covered 155 pieces of equipment listed for transfer to other IRP Task Orders for continued use, with a total purchase value of \$1,336,276.97. Additionally, the plan also covered 2 pieces of damaged equipment listed for waiver of liability, with a total purchase value of \$460.00.

To date, USAID Disposition Instructions have not been received by IRP for the Task Order 7. After 120 days without a response, IRP went forward and completed the disposition plan as submitted. Transfer documents are available for review as required.



Ghazni-Gardez road condition

3 SECURITY

LBG/B&V operated under a program-wide security program that was managed and coordinated by the IRP Security Manager and his Kabul-based team. All aspects of security are managed and coordinated by the AIRP Security Manager and his Kabul based team. The Tactical Operations Center (TOC) was the central command center for the management and control for all eastern region security operations including. The TOC provided all incident reporting, liaison with ISAF, ANA and ANP, and monitoring of all road and air missions.

For work performed in Kabul, and for helicopter or road missions to and from Kabul, security was provided at the program level by SSSI that was subcontracted and paid under Task Order 1. For work performed along



the Ghazni-Gardez Road alignment, security was provided by ISS Limited that was subcontracted and paid for under Task Order 7.

4 SAFETY PROGRAMS/PLANS

LBG/B&V operated under a program-wide safety program that was managed by the IRP Health and Safety Coordinator.

5 QUALITY CONTROL PROGRAM/PLAN

LBG/B&V operated under a general AIRP-wide quality assurance/quality control program.

6 STATEMENT OF NO PATENTS, ROYALTIES OR CLASSIFIED MATERIALS

There were no patents, royalties or classified materials obtained or generated under the activities of this task order.

7 LESSONS LEARNED

The major lessons learned through the Task Order are outlined in the table below:

Issue	Lesson	Recommendation
De-scoping construction work	Task order for construction was awarded prior to design completed and field investigation, and ultimately de-scoped due to a non-permissive security environment with increased security prices, lack of qualified contractors, and increase in construction prices.	Feasibility study should be conducted prior to award of construction task order. Alternatively, task order can be awarded for preliminary design activities, project assessment, and solicitation of bids prior to awarding construction.
Value Engineering Assessment	Home office reviewed the 30%, 60% and 90% designs prior to the submittal to USAID; hiring third party VEA would be practical.	VEA recommended for future designs.
Ability to hire/retain qualified subcontractors	Very few subcontractors willing and capable of performing construction work in this remote and dangerous region of the county.	Build capacity of subcontractors within local market to provide construction services. Increase fee incentives (e.g. early completion bonus, etc.) for subcontractors to take high risk work in remote regions.
Task Order Administration/Modification	Task Order was not modified in a timely fashion when the task order scope of work changed.	Contractor and USAID should hold regular (e.g. monthly, bi-monthly) Contract Administration reviews to address changes in the scope of work and project implementation.
Excessive Security Prices	Prices for security services increased due to new regulations for security firms in Afghanistan and need for added manpower in active combat areas.	Require construction subcontractors to provide their own security services.



8 OUTSTANDING ISSUES

There are no outstanding issues related to the complete close of the Task Order. However, LBG/B&V has not submitted a final invoice pending the approval of LBG NICRA submission.

9 CONCLUSION

The Ghazni to Gardez road corridor poses numerous challenges from the remote mountainous terrain to anti-government element activity. Despite these challenges, LBG/B&V successfully completed a 90% design package to include drawings, plans and specifications. While the road construction remains incomplete to date, the design provided will allow USAID or another implementer to construct the road with minimal design effort and field verification.