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# FINAL CLOSEOUT REPORT

TO 12 — Strategic Provincial Roads South and East Afghanistan

AFGHANISTAN INFRASTRUCTURE REHABILITATION PROGRAM (AIRP)

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



Project Start Date: 08 AUGUST 2007

Project Finish Date: 02 MAY 2008

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## FINAL REPORT TASK ORDER 12 - STRATEGIC PROVINCIAL ROADS SOUTH AND EASTERN AFGHANISTAN

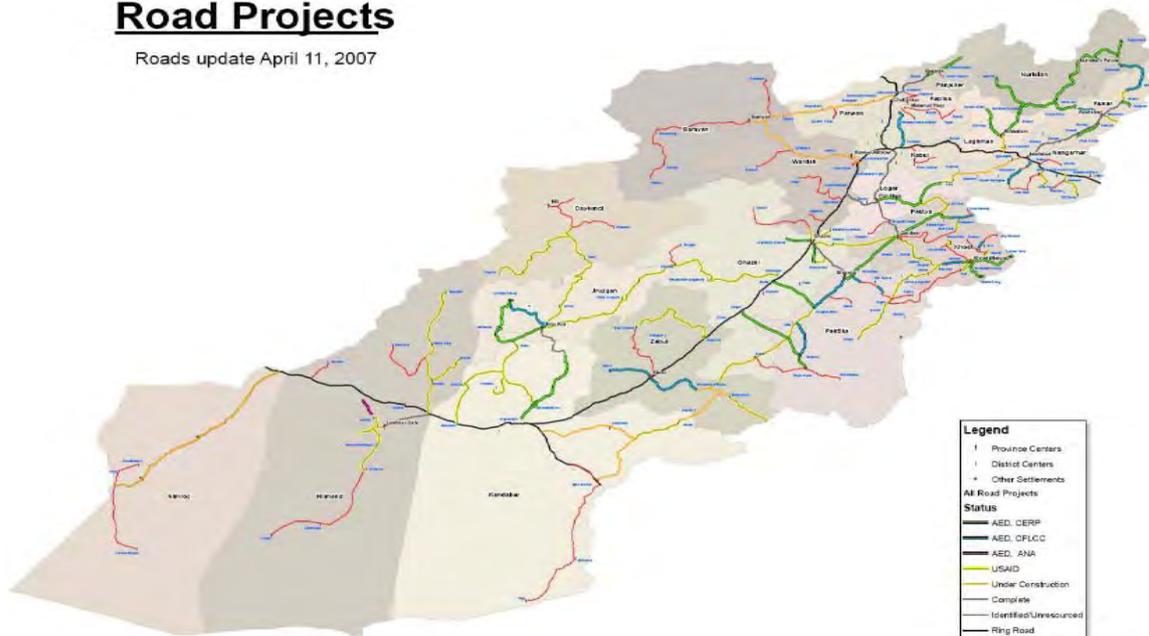
### I TASK ORDER OVERVIEW

#### 1.1 Background and Summary of Scope of Work

Task Order 12 (TO 12), Strategic Provincial Roads—South and Eastern Afghanistan (SPR-SEA), was designed to provide assessment, alignment layout, and planning documents for design-build construction contracts for a network of strategic provincial roads in southern and eastern Afghanistan. By strengthening transportation connectivity to remote areas through its investments, USAID planned to facilitate the efficient movement of goods, increase access to government and social services such as education and health care, decrease ethnic division between regions, develop the agriculture sector, and improve regional integration, security, and stability. In addition, USAID, through projects like this one, supported capacity building and other community programs and promote sustainability of appropriate technology objectives for local contractor development and community based maintenance programs.

### Road Projects

Roads update April 11, 2007



April 2007 - Afghanistan Road Network Prior to TO 12 Development

This task order was intended to improve regional integration, security, and stability by providing planning and survey data to support the future construction of 1,000 to 2,000 kilometers of gravel surfaced roads. The original contract called for an assessment of 1,627 kilometers of roadway followed by preliminary engineering (30%) designs for approximately 600 kilometers.<sup>1</sup> The only feasible way for these tasks to be completed in the timeframe specified and given the security conditions on the ground was through the use of aerial photogrammetry. This was the first use of photogrammetry used to develop a topographic survey for road design purposes in Afghanistan.

<sup>1</sup> The total kilometers of road included in the contract were estimates at the time of award. The actual total kilometers of road varied based on coordination with USAID to establish priority for the follow-on implementation program.



Accordingly, LBG/B&V and USAID developed innovative tactics, techniques, and procedures without prior experience producing a remarkable feat under this task order.

TO 12 was awarded to LBG/B&V on August 18, 2007 with a nine (9) month schedule which was aggressive considering the majority of the work would take place over the winter months. LBG/B&V subcontracted with the Symbion-Groupe Alta Joint Venture (S-GA) to provide Aerial Survey and Digital Terrain Modeling services necessary for the preparation of preliminary design drawings. S-GA mobilized airborne survey equipment (aircraft and cameras), aircraft crew and GPS base stations capable of capturing 140MB of data in one (1) flight hour of transmission line alignments or road corridors. Flight planning proved the most challenging factor during the implementation of this task order as even moderate weather conditions (clouds, haze, dust, etc.)



S-GA Aircraft – Cessna Conquest II, CE-441

would not permit the camera to capture aerial imagery. Additionally, all flights required coordination with ISAF to confirm that no military operations were being conducted in the planned flight path. Both conditions led to delays in the flight plan, and subsequently amount of aerial imagery that could be captured, as the aircraft was required to sit idle during these days.

Despite the flight plan challenges, LBG/B&V and USAID successfully utilized aerial photogrammetry for the first time in Afghanistan to develop planning, survey and design data to develop the SPR-SEA road portfolio for future construction.<sup>2</sup> LBG/B&V also utilized Symbion-Group Alta while in country to provide aerial imagery and survey data for the Tarakhil Power Plant, Ghazni-Gardez Road and Bamyan to Dushi Road alignments, among others.

## 1.2 Task Order Objectives and Deliverables

The objective of this task order was to help improve access to rural regions of southern and eastern Afghanistan so as to facilitate economic growth, social development, and stability operations. Development interventions centered on the rehabilitation and reconstruction of an estimated 1,500 to 2,000 kilometers of existing unmentioned provincial and district center roads. The task order scope of work included four (4) subtasks as follows;

- **Subtask 1 – (Approximately 1,627 km)<sup>3</sup>**
  - Planning and Assessment Report.
  - Demining Level 1 Report (600 km only)
  - Community Development

<sup>2</sup> LBG/B&V planning and design activities were cut short in May 2007 when the USAID Contracting Officer directed LBG/B&V to stop work and transfer all data to USAID and International Relief and Development (IRD). LBG/B&V has a claim pending for costs incurred prior to the stop work order.

<sup>3</sup> The original portfolio of roads to be reviewed under this task order included 1,627 kms of road. However, through close collaboration between USAID and LBG/B&V, the portfolio regularly changed based on priorities set by the USAID Contracting Officer's Technical Representative (COTR) in anticipation of the follow-on construction program. As such, Subtask 1 included security assessment, preliminary engineering, infrastructure assessment and cost estimate, and capital budgeting analysis for 1,818 kms of road. It also consisted of an office engineering study and CDOs field reports, with criteria mainly consisting of constructability and security.



- SPR-SEA Road Portfolio Development (600 km)
- **Subtask 2 – (Approximately 1,627 km) <sup>4</sup>**
  - Photogrammetry survey
- **Subtask 3 – (Approximately 600 km or 10-12 Roads) <sup>5</sup>**
  - GPS Ground Control Surveys
  - Digital Terrain Models
  - Field Engineering Reports
    - Existing road conditions survey
    - Bridge and major drainage structures inventory
    - Hydrologic Survey (major drainage only)
    - Geotechnical survey (CBR only)
- **Subtask 4 – (Approximately 600 km or 10-12 Roads)**
  - Preliminary Highway Design
    - Plan and profile drawings
    - Typical roadway cross-sections
    - Major drainage schedule and typical drawings
    - Causeway schedule and typical drawings
    - Bridge schedule
    - Preliminary bridge drawings
  - Field Survey Data
  - Construction Bid Items with Cost-Estimate
  - Construction Specifications
  - Tender packages for 30% Design-Build Contract
- **General Requirements**
  - Monthly Progress Reports, including financial, physical, and schedule (actual vs. projected)
  - Daily Security/Incident Reports

Electronic copies of these documents were provided to USAID and are included in the external hard disk that is submitted with this report.

### 1.3 Milestones

The scheduled period of performance for this task order was from August 18, 2007 to May 2, 2008, however, work continued until June 30, 2008. Below is a listing of major milestones scheduled and achieved for the work required by this task order:

Milestone	Achieved Date
Issue TO	18 August 2007
Completion of subtask 1-Mobilization and planning	18 Oct 2007

<sup>4</sup> A total of 40 roads were originally reviewed and 36 roads, totaling 2,071 kms, were selected for inclusion in Subtasks 2. As directed by USAID, the scope of work was later expanded for Subtask 2 through modifications to the subcontract agreement with Symbion-Groupe Alta JV (S-GA), our aerial survey provider, to include photogrammetry for 17 additional segments, some in support of other task order vehicles. These segments were added based on direction received from USAID and were outside of the TO 12 scope and therefore funded by the other task orders. While this did not affect the TO 12 budget it did impact the TO 12 schedule.

<sup>5</sup> In total, approximately 733 kms of roadway, more than the required 600 kms, were selected for Subtasks 3 and 4. A total of 223 kms were completed by LBG/B&V, while 510 km were turned over to IRD as directed by USAID.



Completion of subtask 2- Photogrammetry	26 June 2008
Completion of subtask 3- Field engineering and ground control surveys	30 June 2008 (Project Closeout)
Completion of subtask 4-Preliminary design	30 June 2008 (Project Closeout)

### 1.4 Task Order Modification History

During the period of performance the task order was modified twice as provided in the table below.

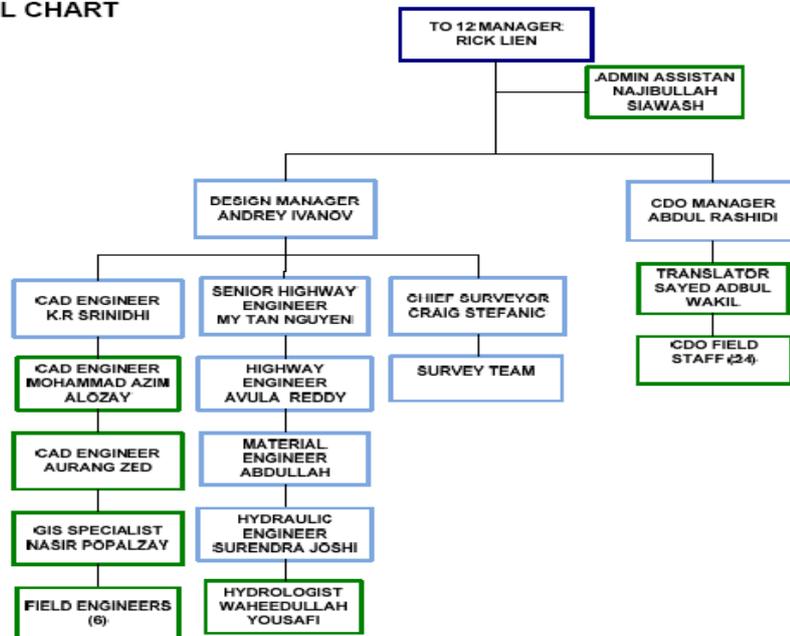
Date	Modification #	Description of Scope Modification
18 August 2007	Original TO 12	To help improve access to rural regions of southern and eastern Afghanistan so as to facilitate economic growth, social development and stability operations.
1 November 2007	Modification # 1	The purpose of this modification is to incrementally fund Task Order 12 from \$7,000,000.00 by \$3,779,809.00 to \$10,779,809.00. This modification fully funded the Task Order.
12 July 2009	Modification # 2	The purpose of this modification is to de-sub obligate the amount of \$5,000,000.00 from this task order leaving a sub obligation of \$5,779,809.00.

## 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 below:

**TO 12 ORGANIZATIONAL CHART**



Note: This is conceptual and changed throughout the life of the task order.



### **2.1.1 Management**

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

### **2.1.2 Task Order Manager**

The Task Order Manager was Rick Lien and following his departure, Hadi Rakin became the acting Task Order Manager. 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.

### **2.1.3 Community Development and Outreach Manager**

Community Development Officers (CDOs) coordinate local resources and mitigate potential conflicts with the local stakeholders. The CDO Manager was Abdul Rashidi. He was a native of Afghanistan who was responsible for the day to day management and coordination with the stakeholders and the survey team for carrying out the field assessment works. He played a major role in all project reporting, communications, planning, and execution.

### **2.1.4 Design Team**

The Design Manager was responsible for the oversight, management, operations, and production of the design team. The Design Manager reported to the AIRP Transport Sector Lead but answered to the Task Order Manager for all matters related to Task Order 12. The design engineer was located in Kabul but visited the project site as necessary. Design engineer controlled the survey data analysis and design production while building capacity with cooperating country national (CCN) design staff to include; highway engineers, hydraulic engineer, AutoCAD engineers, and supporting admin staff.



Field Engineers Conducting a Site Visit

### **2.1.5 In-country and home office resources**

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

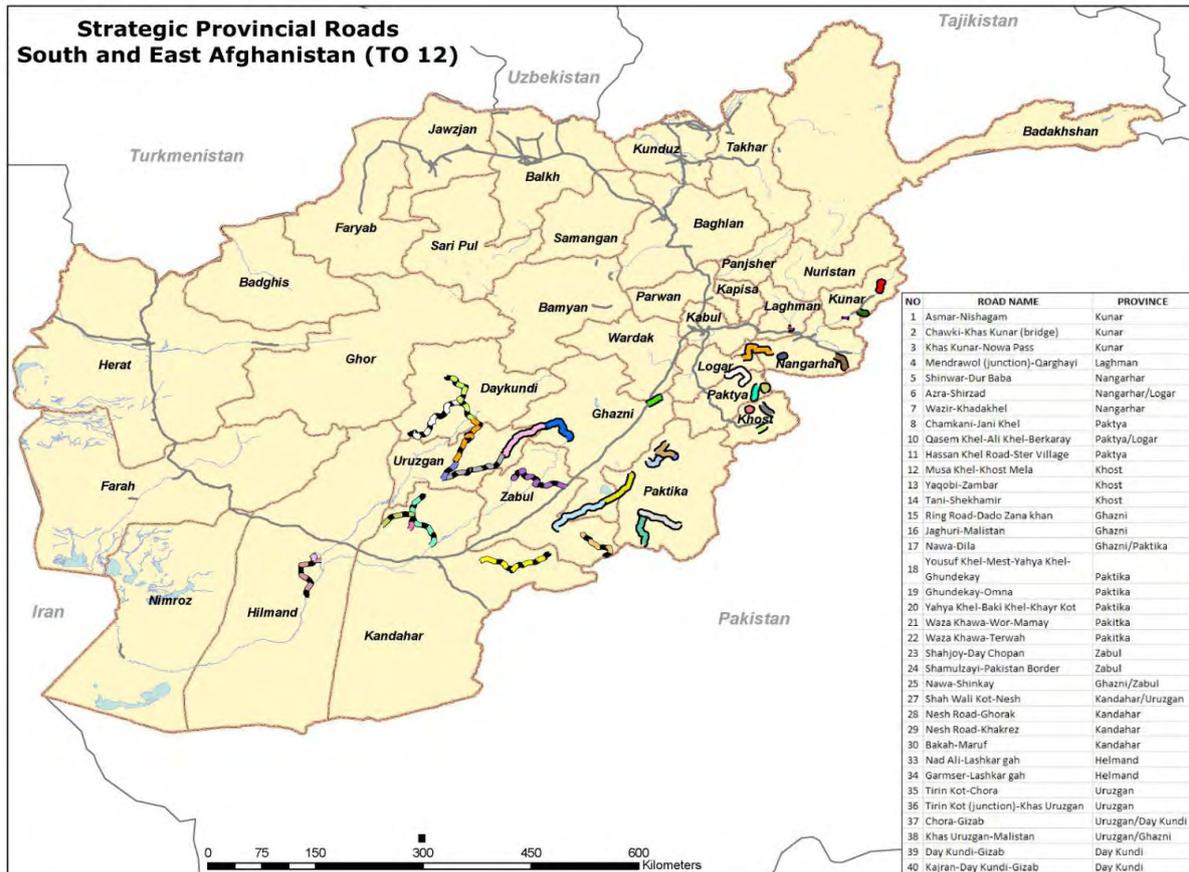


## 2.2 Execution of Work

The implementation of work was as follows:

### 2.2.1 Project Location

The project location is shown below.



Original portfolio of 40 road projects



TO 12 Engineers in the Project Office

### 2.2.2 Mobilization & Planning

This phase included mobilization of resources, community outreach, and comprehensive portfolio review prior to implementing field operations. LBG/B&V carried out office surveys, route reconnaissance/surveys, and engineering and planning studies to identify and recommend approximately 600 kilometers of road for immediate development.

A Project Office was established in Kabul to support planning, preliminary engineering and field operations.

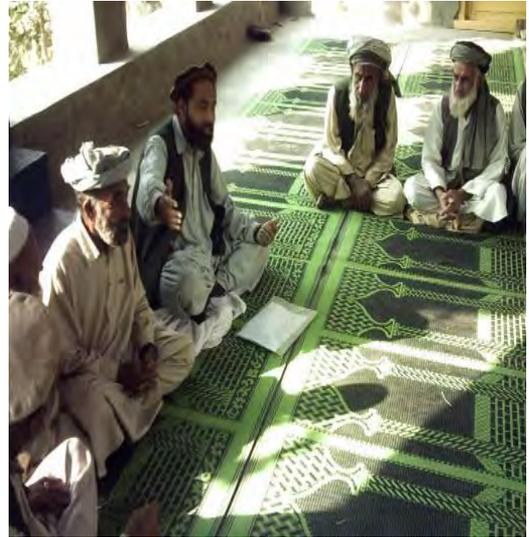


Professional technical and support personnel were mobilized to Kabul to set up all the necessary equipment, facilities, and design software. The personnel were accommodated in existing residences under ongoing IRP task orders.

### 2.2.3 Community Development

LBG/B&V executed a community development program in order to facilitate field investigations and follow-on construction work by other implementers by creating community development teams in every province and establishing numerous local contacts.

The CDOs met with local officials and the key community leaders to explain the intent of the SPR-SEA program and the benefits that the project will bring to the community. They ensure that the local population clearly understands the developmental and engineering nature of field activities and ensure that stakeholders do not misunderstand the intentions of the presence of the field engineering teams or of the follow-on survey teams. They emphasize that our presence is benevolent, non-combative, and non-threatening.



Meeting with Local Officials

These community development teams established local networks to support field engineering teams for long durations during their operations in the field. Small teams of two to three Afghan community development officers travel to each individual project area to coordinate with local officials and tribal leaders, establish logistical support, and determine the security threat.



S-GA Collecting Aerial Imagery

### 2.2.4 Demining Technical Survey

LBG/B&V conducted a Demining/UXO Level One Survey Report for the original portfolio of 40 roads under the SPR-SEA. The report included geographic information (e.g. region, towns, security environment, etc), demining history, UNMACA assessment, and recommendations. **No demining activities were completed under this task order as only an assessment report was required.**

### 2.2.5 Preliminary Engineering and Survey

While our subcontractor, Symbion-Groupe-Alta, collected aerial survey and photogrammetry data LBG/B&V commenced field engineering assessments, which include existing road condition survey, bridge and major drainage structures inventory, hydrologic survey (major drainage only) and geotechnical survey (CBR only).

### 2.2.6 Preliminary Design

Upon completion of the final survey and field engineering products, LBG/B&V began developing the preliminary 30% road design packages to include plan and profile drawings, typical roadway



cross-sections, major drainage schedules and typical drawings, causeway and bridge schedules, typical drawings, bill of quantities, and 30% design-build packages for the selected roads.

**2.2.4 Security**

LBG/B&V task order management and design staff located in Kabul were covered under the Task Order 1 security umbrella. Site visits were coordinated with the Tactical Operations Center in Kabul. Security requirements and costs were minimized under this task order through the utilization of aerial survey, Community Development and Outreach (CDO) teams, and the use of local engineers to conduct site visits.

**2.3 Subcontracts and Major Procurements**

LBG/B&V issued the following subcontracts to accomplish the targets outlined:

**2.3.1 Aerial Survey Service**

Aerial survey services were the only major item procured under TO 12. LBG/B&V awarded a fixed-unit price (with fixed-unit price option) subcontract to Symbion-Group Alta Joint Venture (S-GA) from September 19, 2007 to May 19, 2008. S-GA provided aerial survey and digital terrain modeling services necessary for the preparation of SPR-SEA design packages. LBG/B&V also modified S-GA’s subcontract to include aerial survey of the Tarakhil Power Plant, Ghazni-Gardez Road and Bamyan to Dushi Road alignments.



S-GA Cockpit and Photogrammetry Equipment

**2.4 Task Order Budget and Expenditures**

Task Order 12 was an incrementally funded, cost plus fixed fee Level of Effort (LOE) task order. A summary of the final Task Order budget including all incurred costs and projections through 30 June 2009 is provided below in Table 2.

Description	Budget	Paid thru Invoice # 23*	Remaining Budget
<u>Strategic Provincial Roads – SEA</u>	A	B	C = A - B
1. Salaries and Wages	\$1,235,825	\$279,415	\$956,410
2. Overhead, Fringes, and Allowances	\$2,171,405	\$461,473	\$1,709,932
3. Other Direct Costs	\$2,319,978	\$567,909	\$1,752,069
4. Subcontracts	\$4,353,658	\$2,371,143	\$1,982,515
5. G&A	\$284,334	\$86,518	\$197,816
<b>SUBTOTAL COSTS</b>	<b>\$10,365,200</b>	<b>\$3,766,459</b>	<b>\$6,598,741</b>
<b>Fixed Fee</b>			
6. Fixed Fee 4%	\$414,609	\$150,658	\$263,951
<b>TOTAL COST-PLUS-FIXED-FEE</b>	<b>\$10,779,809</b>	<b>\$3,917,117</b>	<b>\$6,862,692</b>



\*The amount billed thru invoice number 23 does not represent LBG/B&V's estimate at completion as it does not reflect the final cost of the task order to include; adjustments for final direct rates and claims.

## 2.5 Government Property Summary

A property disposition plan was submitted under Task Order 12 in May 2009. This plan covered 99 pieces of equipment listed for transfer to other IRP Task Orders for continued use and for return to USAID, with a total purchase value of \$151,092.57. To date, USAID has not provided disposition instructions for the Task Order 12 disposition plan. As all equipment was listed for transfer to other IRP Task Orders, TO 12 went forward and implemented the transfer and equipment listed for transfer to USAID has been handed over.

### 3 SECURITY

TO 12 did not have dedicated security resources as the work was conducted mostly from Kabul under the Task Order 1 security umbrella. LBG/B&V task order management and design staff located in Kabul were covered under the Task Order 1 security umbrella. Site visits were coordinated with the Tactical Operations Center in Kabul. Security requirements and costs were minimized under this task order through the utilization of aerial survey, Community Development and Outreach (CDO) teams, and the use of local engineers to conduct site visits.

LBG/B&V also conducted security assessments for all SPR-SEA road projects using a compilation of the information obtained from ISAF, Provincial Reconstruction Teams (PRTs), private security companies (USPI, SSSI, Global, etc.) and the Community Development Officers (CDO) reports. The security situation in South and East Afghanistan (SEA) remains volatile and unstable. There was a significant increase in security incidents in almost all of SEA provinces from the beginning of the 2007.

The CDOs continuously monitor the threat level using their sources of information to include local authorities, ANP, local militia and tribal leaders. The security information that they provide is extremely valuable and allows us to assess the probability of success for every project.

### 4 SAFETY PROGRAMS/PLANS

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

### 5 QUALITY CONTROL PROGRAM/PLAN

Quality Control and Quality Assurance were continuous processes during the lifetime of the project with specific reviews conducted at appropriate intervals to minimize rework and costly revisions to the project documents. LBG/B&V developed QC/QA plans from LBG corporate templates for the SPR-SEA Road Design Project.

### 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

Issue	Lesson	Recommendation
Conflicting CO and COTR Guidance	USAID COTR regularly changed guidance for Contractor priorities over the life of the task order without buy-in from the CO	COs, or a representative from OAA, should attend bi-weekly technical meetings to ensure guidance provided by COTRs is consistent with task order contract
Working past the period of performance	COTR provided direction to Contractor to continue working beyond the period of performance without task order modification or formal extension	Contractor and USAID should review project status 30 days and 15 days prior to the end of the period of performance to assess the need for project extensions and/or prepare to stop work. Additionally, Contractor should not continue work based on verbal direction from the COTR
Excusable Schedule Delays	Task Order experienced delays due to inclement weather and security (ISAF Cancellations)	Task Order schedules should include a reasonable estimate for delays. Additional excusable delays should be addressed periodically throughout the life of the task order
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
Claims Administration	LBG/B&V claim for costs incurred after the period of performance remains unresolved after more than three years	USAID and Contractors should clearly identify and agree on the process for filing and adjudicating claims within the IQC or task order contract
Deliverables Submission	Documentation of deliverables submitted was not transferred from COTR to COTR causing multiple resubmissions and lost data	USAID should ensure a mutual understanding of the process for deliverable submission and acceptance
Implementer Coordination	USAID intended for LBG/B&V's deliverables to be used by IRD in a follow-on program for the construction of the SPR-SEA	USAID, when dealing with multiple implementing partners, should regularly facilitate communication between all stakeholders and provide clear guidance regarding the roles and responsibilities of all parties



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## **8 OUTSTANDING ISSUES**

LBG/B&V worked and incurred costs beyond the period of performance of TO 12, in a good faith effort and in coordination with USAID's to meet task order objectives, with the understanding that the COTR and CO would process an extension to complete the work. However, upon submission of our invoices for costs incurred, USAID rejected them and instructed LBG/B&V to submit a claim. LBG/B&V submitted several claims at the direction of Contracting Officers in USAID/Kabul with no response or final decision. LBG/B&V was subsequently directed to submit claims to USAID/Washington. Despite several submissions and iterations of the claim, LBG/B&V's claim is still pending and costs are unpaid.

## **9 CONCLUSION**

TO 12 was the first project of its kind in Afghanistan and provided an innovative and cost effective way to obtain topographic survey data in Afghanistan's remote and dangerous locations. This was the first use of photogrammetry used to develop a topographic survey for road design purposes in Afghanistan. Accordingly, tactics, techniques, and procedures had to be developed without prior experience. LBG/B&V produced a remarkable feat under Task Order 12; this achievement was validated by the broad use of aerial photogrammetry in support of various IRP task orders (to include digital terrain model processing for the Bamyan-Doshi Road design and the Ghazni-Gardez Road).