



## 1. Project Data

<b>Project ID</b> P090585	<b>Project Name</b> IN: Punjab State Road Sector Project
<b>Country</b> India	<b>Practice Area(Lead)</b> Transport & Digital Development

<b>L/C/TF Number(s)</b> IBRD-48430	<b>Closing Date (Original)</b> 05-Jun-2012	<b>Total Project Cost (USD)</b> 407,300,000.00
<b>Bank Approval Date</b> 05-Dec-2006	<b>Closing Date (Actual)</b> 05-Jun-2017	
	<b>IBRD/IDA (USD)</b>	<b>Grants (USD)</b>
Original Commitment	250,000,000.00	0.00
Revised Commitment	248,110,727.51	0.00
Actual	248,110,727.51	0.00

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## 2. Project Objectives and Components

### a. Objectives

The objective of the project was to improve operating conditions of state roads for road users in Punjab, in a sustainable way, thus helping to provide the business enabling environment necessary to support Punjab's economic development strategy (Loan Agreement page 5).

### b. Were the project objectives/key associated outcome targets revised during implementation?

No



**c. Will a split evaluation be undertaken?**

No

**d. Components**

The project had three components:

**Component 1: Road Upgrading, Rehabilitation, Maintenance and Other Works** (appraisal estimate US\$310.3 million, of which US\$241.4 million was Bank financing; actual cost not available). The project would fund: (a) civil works along plan roads comprising upgrading, rehabilitation and periodic maintenance of about 1,000 km; (b) technical assistance for the selection, design, and construction supervision; and (c) land acquisition, and the implementation of social and environmental safeguards. The works were divided into two phases:

Phase I: 150 km of upgradation, 200 km of rehabilitation and 350 km of maintenance. The upgradation and rehabilitation sections were selected based on the Strategic Options study.

Phase II: 210 km of upgradation, 40 km of rehabilitation, and improvement of 40 accident black-spots.

**Component 2: Institutional Strengthening** (appraisal estimate US\$11 million, of which US\$8.6 was Bank financing actual cost not available). This component would fund measures to modernize the sector and for improve sector efficiency, as well as road safety and HIV/AIDs awareness along the road. Sector modernization and efficiency measures would include funding for the development and implementation of:

(i) road asset management systems;

(ii) e -governance and e-procurement;

(iii) overall computerization of the Public Works Department (PWD);

(iv) technical assistance to finance the preparation, transaction, and administration of public private partnerships (PPP) contracts;

(v) technical assistance to support the Road Maintenance Fund (RMF) in planning for the entire road network.

**Component 3: Incremental Operating Costs** (appraisal estimate US\$12 million - no Bank financing; actual cost not available). This component would fund incremental operating costs incurred by PWD and Punjab Roads and Bridges Development Board (PRBDB) in the execution and implementation of the project.

**Revised Components:** In August 2012, the project was restructured (Level 2) to support the first five years of implementation of a ten-year network-based Output and Performance Based Road Contract (OPRC) to improve, rehabilitate, and maintain about 200 km of the state road network. The components were revised as follows:

Component 1: Road Upgrading, Rehabilitation, Maintenance and Other Works:

- **Introduction of the OPRC ten-year contract (2012–2022).** Under Phase II, the original project envisaged: (a) about 210 km of upgrading and about 40 km of rehabilitation, (b) improvement of about 40 accident black spots, and (c) maintenance through performance-based and regular contracting methods. However, as the original closing date approached, the World Bank and government of Punjab



agreed to drop the remaining conventional road upgrading and rehabilitation and focus instead on scaling up the innovative OPRC approach on about 200 km of the state road network to demonstrate the OPRC's feasibility and build the state's capacity in using this mechanism.

- **Construction of the Dehlon Bypass.**

- **Kharar-Banur-Tepla Corridor Improvement.** This corridor had suffered severe pavement damage from trucks that carried double the allowed axle loads from a quarry that opened after the road improvements works were completed. Therefore, a pavement overlay of about 22 km with an estimated cost of US\$3 million was added.

- **Road safety enhancements and black spot improvements works.** A total of 347 accident black spots had been identified throughout the state network, out of which about 90 had been addressed under the project, compared with 40 originally planned. Under the restructuring, an additional US\$12 million of road safety enhancements and black spot improvement works were added to address the accident black spots.

Component 2: Institutional Strengthening: Following activities were dropped:

- The technical assistance and covenants to operationalize the Road Maintenance Fund (RMF) was dropped from the project.
- At the time of the restructuring, it was noted that all PPP infrastructure projects were being developed and managed by the Punjab Infrastructure Development Board and were not under the mandate of the project implementing agency, the PRBDB. Therefore, the activity to support to PPP transactions was removed from the project scope.
- The State Police Department took over the computerization of the traffic fine collection system, therefore, this activity was dropped from the project.

#### e. **Comments on Project Cost, Financing, Borrower Contribution, and Dates**

##### **Project Cost**

The actual project cost was US\$407.3 million, significantly higher than the appraisal estimate of US\$333.4 million. The project underwent level 2 restructuring and the project scope was extended. This resulted in an increase in project costs by about US\$74 million. The Bank loan remained at US\$250 million, and the additional amount was to be contributed by the government of Punjab.

##### **Financing**

The actual loan amount was US\$248.1 million, slightly lower than the appraisal commitment of US\$250.0 million.

##### **Borrower Contribution**

The total actual borrower contribution was US\$159.2 million, significantly higher than the appraisal commitment of US\$83.4 million.

##### **Dates**

The project was approved by the Board on 12/05/2006 and effective on 04/02/2007 approximately 4



months later. The project was restructured (a level 2-restructuring) on 11/10/2014. The original closing date was 06/05/2012, and the actual closing date was 06/05/2017. The project experienced a 5-year delay, i.e. 60 months.

The level 2-restructuring extended the closing date to support the first five years of implementation of a ten-year program based on Output and Performance Based Road Contract (OPRC) to improve, rehabilitate, and maintain about 200 km of the state road network.

### 3. Relevance of Objectives

#### Rationale

At appraisal, the main road transport network in Punjab (that is, the Plan Roads included in the project) was severely deteriorated due to inadequate funding for maintenance and lack of capacity. The project was designed to support the government in addressing critical road capacity constraints, improving pavement conditions of the main network, and strengthening road maintenance management practices. The project objectives were aligned with the priority areas identified in India's Tenth Five-Year plan, which included addressing capacity and quality constraints in the transport sector by improving public sector performance and mobilizing private sector investment (including better cost recovery for roads).

The project objectives were consistent with the World Bank's India Country Assistance Strategy (for the period FY05-08) relevant at appraisal, which envisaged increased lending for infrastructure (particularly roads), to underpin both accelerated growth and improved service delivery. According to the strategy, the Bank's engagement in the transport sector would also contribute to empowerment of the poor and vulnerable groups by helping improved access to markets, jobs and services. For state highways, the strategy included guidelines for engagement contingent on: (i) commitment of the state to economic prioritization of road expenditures; including adoption of a sound multi-year program, and adequacy and stability of funding for road maintenance; (ii) commitment and capacity for responsible management of environmental and social impacts; and (iii) clarity of asset classification and ownership.

The project objectives continued to be relevant throughout project implementation. The project supported the first strategic engagement area of the World Bank's Country Partnership Strategy for the period FY13-17 under which improved transport connectivity would increase India's market integration thereby boosting India's economic growth. Under this strategic area, the Bank's engagement would focus on strengthening institutions, enhancing accountability, and building capacities among the various state and national highways agencies.

The relevance of the PDO is rated **substantial**.

#### Rating

Substantial



## 4. Achievement of Objectives (Efficacy)

### Objective 1

#### Objective

Improve operating conditions of state roads for road users in Punjab, thus helping to provide the business enabling environment necessary to support Punjab's economic development strategy.

#### Rationale

#### Outputs

- Phase I: All civil works implemented under Phase I of the project were completed in 2012. The project upgraded, rehabilitated, and maintained of about 711 km of roads, slightly higher than the original target of 700 km.
- Phase II: At restructuring, the target for Phase II conventional works of 250 km was dropped and replaced by the OPRC works of 166 km. In December 2012, an OPRC contract for 203.7 km of state roads was awarded with and expected completion date of December 2022.
- The construction of the Dehlon Bypass was completed.
- The ICR reports (para 17) that all road safety improvement works on the state highway network were completed. In total, the project financed road safety treatments for 5,715 minor junctions, 3,957 curves, 678 school zones, 1,108 villages, and about 200 black spots. No targets were set, except for black spot improvement under the first phase. The ICR reports that (para 17) that a total of 347 accident black spots had been identified throughout the state network, out of which about 90 were addressed under phase I of the project, compared with the original target of 40. For the second phase, additional finding of US\$12 million of road safety enhancements and black spot improvement works was provided but no targets were set.

#### Outcomes

- The project did not achieve the target of reduction in poor condition of the road network. The ICR reports (para 26) that the measurement of road condition was done only for the project roads and not the entire network as envisaged under this indicator. Due to project investments in road rehabilitation and maintenance, the project roads in poor condition declined from 67% (baseline in 2006) to 1.4% (in 2012). However, this improvement was not retained because of major backlogs of rehabilitation and periodic maintenance, and the percentage of roads in poor condition increased to 31.6 in 2017.
- The average speed on the network increased from 34.2 km/hour (baseline in 2006) to 47.6 km/hour in 2017, almost achieving the revised target of 48 km/hour and surpassing the original target of 45 km/hour.



- The reduction in vehicle operating costs (VOC) was partially achieved. At closure, VOC were not measured for the entire network. The ICR reports that, VOC was measured only for the upgraded, rehabilitated, and periodic maintenance roads and not the entire core network. For Phase I roads, at project closure, VOCs increased for the rehabilitated and periodic maintenance roads by 10% and 11%, respectively, over the baseline. The OPRC roads achieved a VOC reduction of nearly 24 percent in 2017, surpassing the 20 percent target.
- Road safety on the Plan Road network was not improved. The “number of fatal accidents” increased from 2,655 in 2005 to 5,077 in 2016. In 2017, there was 15% reduction– with about 4,278 fatal accidents.

### **Achievement of final outcome**

Although the results framework did not have indicators to capture the contribution of the project roads in helping to provide "the enabling environment to support Punjab's economic development", a substantial achievement of the objective would likely contribute to a business enabling environment and economic development.

**Rating**  
Modest

### **Objective 2**

#### **Objective**

Improve operating conditions of state roads for road users in Punjab in a sustainable way.

#### **Rationale**

#### **Outputs**

- At project restructuring in 2012, the operationalization of the Road Maintenance Fund was dropped as the Government of Pakistan (GOP) was going to use its own budgetary resources and centrally sponsored schemes for state roads maintenance. As discussed under objective 1, the condition of Phase I roads declined owing to the lack of maintenance. The ICR reports (para 30) that due to lack of data on actual post-2012 expenditures by the state for road improvements (upgrading, rehabilitation, and maintenance), it is difficult to determine whether the GoP's assertion in 2012 that they could perform adequate maintenance with existing sources of funds had been fulfilled. Therefore, the project did not result in improving state roads in a sustainable way.
- With the awarding of OPRC contract under Phase II, it is expected that the condition of the network will improve as under the OPRC, the contractor is responsible for the overall management of the roads,



including all the routine maintenance work, design and construction of required improvement works, and management of any necessary emergency works.

- PWD department was provided training on computerization and use of integrated systems for planning, management, financial accounting, and monitoring.
- The ICR reports (para 36) that the project enhanced the capacity of the technical staff of the PWD/PRBDB for carrying out road safety audits and identifying, planning, and executing remedial measures. The capacity was improved through training sessions as well as technical assistance by a road safety expert.
- A study on “Integrated Transport Policy and Strategy and Strategic Investment Plans for Punjab,” was completed on August 26, 2014. The recommendations of the study have not been implemented.

To strengthen the institutional capacity of the PWD, a portal-based Enterprise Resource Planning (ERP) system was completed and went live in May 2017. It contained the following modules:

- (a) Engineering and Project Management (EPM): To manage the life cycle of the PWD projects
- (b) Budget and Financial Management: To manage the financial functioning of the department; and by linking to the EPM module, it facilitates disbursements
- (c) Asset Management System
- (d) E-procurement: Provide support to the PWD in processing and awarding of electronic bids. The system is also connected to the e-procurement portal of the GoP.
- (e) Human Resource Management: This module was yet to be delivered to the PWD in fully functional form.

There were no outcomes under this objective.

**Rating**  
Modest

**Rationale**

The project development objective “improve operating conditions of state roads for road users in Punjab, in a sustainable way, thus helping to provide the business enabling environment necessary to support Punjab’s economic development strategy” is rated modest due to low achievement.

**Overall Efficacy Rating**  
Modest

**Primary reason**  
Low achievement

**5. Efficiency**



**Economic Efficiency:** At appraisal, economic analysis was conducted using the Highway Development and Management Model (HDM-4). The primary direct benefits of the proposed civil works were savings in road user costs which included: (a) vehicle operating cost savings; and (b) time savings to both vehicle occupants and commercial vehicles. The ex-ante Economic Rate of Return (ERR) for the roads selected for upgrading was 36.5%, for rehabilitation was 44.2%, and maintenance was 58.4% (PAD paras 38-39).

For Phase I roads, the ex-post ERR upgrading, rehabilitation, and periodic maintenance were 31.8%, 28.5%, and 50.4%, slightly lower than the appraisal values. This is mainly because of higher than estimated overall capital costs (due to increase in prices of raw material), delays in completion of some works, and lower than forecast traffic growth (ICR para 41).

For Phase II OPRC roads, ex-ante economic analysis was conducted in 2012 and ERR was estimated at 20 percent (for 5 years and 10 years periodic maintenance cycles) and 32% (for 4 years and 8 years periodic maintenance cycles). The ex-post ERR was considerably higher - 26.8% (for five and ten-year periodic maintenance cycles) and 33.9% (for 4 years and 8 years periodic maintenance cycles). This increase can be attributed mainly to the increased annual average daily traffic on the project roads (ICR para 42). The ICR (para 43) reports that the second year of the OPRC contract, work was delayed by about six months due to pending forest clearances for diversion of forest land. The third year works under the OPRC contract were delayed due to continuing problems in obtaining forest clearances and the resolution of a dispute with the contractor. Both issues were eventually resolved. As a result, instead of finishing all key upgrading and rehabilitation works within the first four years of the OPRC contract, the contractor completed them within five years.

The five-year closing date extension was done after the successful completion of the Phase I works to accommodate the new OPRC component within the same project through reallocation of the original loan funds and addition of more Government funds, without having to process an additional or a new loan (ICR para 43).

## Efficiency Rating

Substantial

a. If available, enter the Economic Rate of Return (ERR) and/or Financial Rate of Return (FRR) at appraisal and the re-estimated value at evaluation:

	Rate Available?	Point value (%)	*Coverage/Scope (%)
Appraisal		0	0 <input type="checkbox"/> Not Applicable
ICR Estimate		0	0 <input type="checkbox"/> Not Applicable

\* Refers to percent of total project cost for which ERR/FRR was calculated.



## 6. Outcome

The project objectives were substantially relevant both to World Bank and national strategies. The efficacy of the objective “improve operating conditions of state roads for road users in Punjab, in a sustainable way, thus helping to provide the business enabling environment necessary to support Punjab’s economic development strategy” is rated modest. The project efficiency is rated substantial. This gives an overall outcome rating of moderately unsatisfactory.

### a. Outcome Rating

Moderately Unsatisfactory

## 7. Risk to Development Outcome

The main risk to the project’s development outcome is inadequate funding and institutional capacity to properly maintain the assets created under the project.

**Financial Risk:** The creation of a dedicated Road Maintenance Fund (RMF) was dropped by the Government of Punjab. Instead, the Government decided to fund road maintenance through state budget and transfers from the Government of India. The state budget approved US\$60 million for the year 2012–2013 for the maintenance of state roads. However, since then there is no information on subsequent allocation for road maintenance, it is unclear what is the level of the government commitment for maintenance. Considering the condition of some of Phase I roads after the closing date of the project, lack of adequate funding for maintenance is a critical issue. Financial risk is therefore rated high.

**Institutional Risk:** The successful implementation of the Output and Performance Based Road Contract (OPRC) may contribute toward sector sustainability. However, this depends on the adoption and implementation of a strategic maintenance plan, adequate budgets, and adequate supervision by an external consultant or by a highly capable Government unit. The Punjab Roads and Bridges Development Board made the decision to perform the supervision without the support of a supervision consultant, which can be risky based on international experience (ICR para 77). Institutional risk is therefore rated substantial.

## 8. Assessment of Bank Performance

### a. Quality-at-Entry

The project design was based on the lessons learnt for previous seven state road projects in India which aimed at improving their core road networks and strengthen their road planning and management. The major lesson from Bank experience in the highway sector was that sector sustainability requires an adequate and assured flow of maintenance funding. The support to the Road Maintenance Fund (RMF) was therefore included in the project design. Another lesson was that road contracts in India are often delayed by the failure



to provide unencumbered construction sections. Agreed mechanisms and mitigation frameworks were included in the project (PAD para 23). Appropriate safeguards were identified.

However, the project design had the following shortcomings:

- The project development objectives were not well formulated, in that the outcome “in a sustainable way” was too vague.
- The project design lacked the relevant indicators to measure the final expected outcome of a business enabling environment and economic growth.
- At appraisal, the World Bank seriously misjudged the Government of Punjab’s willingness to implement an RMF. The legal covenants and project activities related to the fund were dropped at the time of the restructuring in 2012.

### **Quality-at-Entry Rating**

Moderately Satisfactory

#### **b. Quality of supervision**

The ICR reports (para 71) that regular supervision missions and technical visits, including frequent site visits, were conducted throughout the project’s implementation and that sufficient budget and staff resources were allocated. Team composition reflected the project supervision needs, including transport experts, engineers, and financial, procurement, environment, and social specialists. The aide memoires and ISRs were delayed in mid-2016. The project team was responsive to the governments needs and priorities in restructuring and changing the project’s scope, with an expanded performance-based activity and stronger focus on road safety.

The project team played an important role in piloting the OPRC contracts. The project team gave sufficient time to the government of Punjab to learn about and adjust to the OPRC approach, staying with the government through the restructuring of the project, and providing sustained technical guidance and support during the OPRC’s preparation and implementation, including facilitating specialized training abroad for PWD/PBRDB personnel.

However, there were some shortcomings during implementation:

- (a) The supervision team failed to insist on replacing the support for the RMF with other measures to promote financial sustainability of the road sector;
- (b) The team did not pay sufficient attention to institutional development issues following the 2012 restructuring; and
- (c) The team did not correct the deficiencies in the project development objectives and indicators (as discussed earlier).

### **Quality of Supervision Rating**

Moderately Satisfactory



## Overall Bank Performance Rating

Moderately Satisfactory

## 9. M&E Design, Implementation, & Utilization

### a. M&E Design

The M&E design included three outcome indicators to track the performance of the first objective “to improve operating conditions of state roads for road users in Punjab”. These included: (a) increased average vehicle speeds; (b) reduction in vehicle operating costs; (c) reduced total number of fatal accidents. However, there was no indicator to measure the second PDO “to improve operating conditions of state roads for road users in Punjab *in a sustainable way*”. The project design lacked the relevant indicators to measure the final expected outcome of a business enabling environment and economic growth. The indicator “improved effectiveness (or efficiency) of road agencies” was poorly specified in terms of subjective user satisfaction, rather than based on concrete, objective criteria that could be linked to the project’s specific institutional strengthening interventions. The indicator “user satisfaction” was likewise vague, in that its relevance to the project’s activities was unclear.

### b. M&E Implementation

While the project restructuring expanded the project’s scope by adding a new, large, and challenging OPRC component, no key indicators were added or dropped, and the target values for three PDO indicators “increase in average network speed,” “number of fatal accidents,” and “increase in user satisfaction” (with the quality of state roads)—were slightly revised to make them more ambitious.

The Punjab Roads and Bridges Development Board was responsible for the collection of M&E data. The ICR states (para 59) that the actual data collection and analysis for most of the indicators was carried out by consultants, who performed the work mostly in a methodologically sound manner. However, there were weaknesses - two indicators (the VOC and road condition) were measured only for project roads, not for the entire network as specified in the original Results Framework. Also, the indicator for full “funding of road maintenance” was not tracked during the life of the project.

### c. M&E Utilization

The ICR reports (para 61) that the M&E data was used to inform the project restructuring process in 2012, however, M&E was not necessarily utilized to readjust the project’s activities throughout project implementation.

## M&E Quality Rating



Modest

## 10. Other Issues

### a. Safeguards

#### At appraisal

The project was classified as an Environmental Category “A” and the following safeguards policies were triggered:

**Environmental Assessment (OP/BP/GP 4.01).** The project activities were expected to have a limited impact on forest area, water bodies, rivers, land resources, leading to land use changes, affecting resource utilization patterns during all stages of the project. The key environmental issues identified during the environmental screening were associated with activities such as repair of shoulder; strengthening and widening of carriageway; provision of ditches and drains; construction and repair of culverts; reconstruction and rehabilitation of bridges, and rehabilitation works. Mitigation measures were developed to minimize and mitigate impacts covering all stages of the project implementation. Corridor specific Environmental Management Plans (EMP) were prepared.

**Forests (OP/BP 4.36).** The roadside plantations in Punjab had been declared as protected forests and comprise 2.28% of the total forestland. This includes strips along roads, railways and canals. Compensatory afforestation and plantation would be carried out for the loss of trees due to widening and safety requirements.

**Physical Cultural Resources (OP 4.11).** Some structures with high historical value (such as kos minars) are located close to the roads. The potential of “chance finds” of archeological significance during excavation works was accounted for in the EMPs.

**Involuntary Resettlement (OP/BP 4.12).** Surveys done at appraisal indicated that most project roads were free of encroachers and would not require extensive resettlement. However, roads that were to be widened to four lanes and roads involving bypasses would require land acquisition and some resettlement. For the nearly 358 km of road covered under the Phase I, total land acquisition was expected to be approximately 31 ha. A total of 112 people from 24 households would be marginally/temporarily affected, however, none would be displaced by the project. On roads identified for upgrading during Phase I, the PAD (para 72) stated that 4,731 people from 1,233 households were expected to be affected, at least temporarily. However, only 197 households were expected to be displaced by the project. A Resettlement and Rehabilitation Policy Framework, with an entitlement matrix for different types of impacts/losses was prepared and disclosed to the public through a series of workshops. This framework would be applied to all subsequent phases of the project.

#### Restructuring

The ICR reports (page 12) that no additional safeguard policy was triggered due to the restructuring of the project.

#### Implementation experience



**Environmental safeguards.** There was lack of compliance by contractors with the Environmental Management Plans (EMPs) (ICR para 63). In 2009, the project team found that the drains constructed in urban areas were above the plinth level of the adjoining buildings, thereby blocking numerous commercial and residential entrances. This was due to: (a) weak monitoring and non-involvement of the nodal environment and social officers of the Punjab Roads and Bridges Development Board (PRBDB) for two upgrading works. The works were closed without proper clean-up/rehabilitation and closure reports on the EMP compliance; and (b) inadequate handling of the EMP and work-site safety management on the Output and Performance Based Road Contract (OPRC) works. The ICR reports (para 63) that although the PRBDB had in-house staff to address these issues, their services and support was not fully utilized. The World Bank project team intervened to facilitate an assessment of the problem, an analysis of engineering solutions, and implemented an action plan for remedying these issues.

In 2014 and 2015 there was weak monitoring and reporting by the PRBDB on environment, health, and safety dimensions of the OPRC contract. There were deficiencies in site visits, lack of records, and non-conformance reports on gaps in addressing contractual obligations with regards to environment, health, and safety aspects; lack of involvement of the nodal environment or social officers in the monitoring process; poor coordination between the PRBDB and the Field Division on environment, health, and safety; and absence of verification. The ICR reports (para 64) that these deficiencies were corrected by the end of 2015.

**Social safeguards.** The ICR reports (para 65) that resettlement plans were implemented adequately. However, there were some issues related to land acquisition for the Dehlon Bypass. In May 2017, one of the owners refused to accept the offered compensation and filed a case with the High Court. The plaintiff did not show up before the High Court for the January 31, 2018 hearing. Due to no-show, the hearing was rescheduled for the end of March 2018. In parallel, a complaint to the Grievance Redress Service (GRS) was submitted in December 2016. The Bank's team worked closely with the stakeholders to reach a resolution. In April 2017, the contractors attempted to start works on the plot in question. The Bank team immediately insisted that all works be stopped on the plot until the compensation issues were resolved. However, soon after the project closure on June 5, 2017, the contractor resumed works on the affected plot and completed construction of the Bypass. The TTL informed IEG that half of the co-owners have received compensation. However, the specific co-owner (who had filed the complaint) is pursuing matters through High Court and the matter has not been resolved. The TTL is following up on this issue.

The ICR reports (para 66) that there were two fatal workplace accidents in 2016 which were not reported to the Bank. The Bank's team learned about these accidents after a specific request was made to PRDB on February 2017. The Bank team held meetings with contractors, consultants, and the PRBDB to discuss requirements for construction zone safety and traffic management to ensure safety of road users, workers, and people living along project roads. The Bank team also undertook several site visits to the project roads, in which safety was reviewed and discussed.

The ICR does not report on the compliance with Forests and Physical Cultural Resources safeguards.



**b. Fiduciary Compliance**

**Financial management:** The ICR reports (para 68) that the financial management was adequate. However, there were some instances of insufficient cash flow from the government of Punjab to the PWD/PRBDB. This became an issue in 2009 and delays in transferring of both loan funds and the counterpart funds persisted through 2013. After 2014, the funds flow and counterpart funding problems abated. The TTL confirmed that audit reports were submitted on time with minor qualifications.

**Procurement:** The ICR reports (para 68) that procurement was carried out satisfactorily, with only minor issues that were resolved in a timely fashion. Due to weak capacity of Public Works Department and Punjab Roads and Bridges Development Boards staff, the procurement of the Output and Performance Based Road Contract (OPRC) contract was challenging and the Bank provided technical assistance on the preparation of bidding documents for the OPRC.

**c. Unintended impacts (Positive or Negative)**

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**d. Other**

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**11. Ratings**

Ratings	ICR	IEG	Reason for Disagreements/Comment
Outcome	Moderately Unsatisfactory	Moderately Unsatisfactory	---
Bank Performance	Moderately Satisfactory	Moderately Satisfactory	---
Quality of M&E	Modest	Modest	---
Quality of ICR		Modest	---

**12. Lessons**

The ICR (page 27 to 29) provided the following lessons (presented here with some minor modifications):

- The alignment of project components and activities with project development objectives is crucial to ensure that the outcomes are attributable to the project’s interventions. During restructuring, before dropping any components, activities or indicators, it is crucial to ensure that their absence will not cause an important gap in the ability to substantiate the achievement of the project development objectives, and if so, to replace the



discarded element with others, or to otherwise revise the Results Framework.

- Physical improvements are not enough to reduce overall crash rates. The project demonstrated that complementary activities such as safety enforcement and road user education are also important.
- Key lessons from the OPRC experience are:
  - 1 . During the design phase, solid ownership by the client agency and the Government are crucial to avoid delays and inefficiencies;
  - 2 . The time necessary to design and implement an OPRC contract needs to be realistically and carefully estimated, it can take longer than expected;
  - 3 . The OPRC has the best chances of success when there is an active private contracting market attracting skilled engineers;
  - 4 . It is important to carefully prepare the procurement phase to avoid rebidding. This can be done by adequately assessing the market conditions for such contracts. In addition, in countries where OPRCs are just being introduced, information sessions with private sector offers a good opportunity to discuss the requirements and risks associated with OPRC contracts;
  - 5 . The implementation of OPRC contracts requires a number of stakeholder — implementing agency, contractor, and supervision consultant. Therefore, a clear understanding and acceptance of each stakeholders role within the framework of OPRC contract during implementation is needed; and
  - 6 . OPRC contracts, that are designed and supervised by the same consultant has benefits as the consultant involved during the design stage is familiar with the contract modality during supervision.

### 13. Assessment Recommended?

No

### 14. Comments on Quality of ICR

The ICR provides a candid analysis of the issues that affected project implementation and offers an insightful analysis of shortcomings at project preparation stage that affected the project's outcomes. The ICR is results-oriented and the quality of evidence is good. It is internally consistent and in compliance with OPCS guidelines. Lessons on OPRC contracts are based on project experience.

However, there were important shortcomings, both in terms of content specific omissions and structural problems. In terms of the reports content there were three issues: in Annex 3 – Project Costs by Component, the ICR provides the figures in Rupees and not US dollars; secondly, the ICR does not report on the compliance with the Forests and Physical Cultural Resources safeguards; and thirdly, the ICR does not report whether the audit reports were submitted on time and if they were unqualified. On the structural side, the section on achievement of objectives is unclear and disorganized in linking the evidence to the purported outcomes. The explanation on the project's efficacy would have benefited from being more focused on actual



achievements and clearly linking these to the project theory of change and ultimately the PDO. Understanding the messages in the report was difficult, thus limiting its effectiveness in illustrating how the project performed.

**a. Quality of ICR Rating**  
Modest