

**The World Bank**

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT  
INTERNATIONAL DEVELOPMENT ASSOCIATION

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October 18, 2005

Dr. Subas Pani, IAS  
Chief Secretary,  
Government of Orissa  
Secretariat  
Bhubaneswar

Dear Dr. Pani:

***India: Proposed Orissa State Roads Project (P096023)***  
**Identification Mission, Sept 15-30, 2005**

We would like to thank you and the other officials of the Government of Orissa (GOO) and the Orissa Works Department (OWD) for the kind cooperation and support extended to the World Bank mission that visited Orissa from Sept 15-30, 2005 for the Identification Mission of the Proposed Orissa State Roads Project (OSRP). Attached for your information and perusal is the mission's finalized Aide Memoire (AM). We would like to take this opportunity to highlight some of the key issues raised in the AM.

*Project Preparation Progress and Key Actions.* We are encouraged to note that the project preparation is progressing very well and that OWD has carried out most of the key actions agreed during the April 2005 mission, including (i) the PIU has been established and staffed with key personnel; (ii) the Preparation Consultant (Package 1) has been selected and is expected to be mobilized by mid October 2005; (iii) a Task Force to prepare the Institutional Strengthening Action Plan (ISAP) has been established and a Facilitator-cum-Consultant for the ISAP has been selected; and (iv) the PIU has updated the Strategic Options Study (SOS) and developed a re-prioritized list of proposed project roads for further feasibility study and financing under the proposed project. In order to maintain project preparation progress and meet the target project appraisal date, a number of Key Actions for project preparation were discussed and agreed during the mission. These are listed in Table 1 of the attached AM.

*Project Preparation Financing.* As discussed and confirmed during this mission, the first package of preparation consultant (Package 1) will be financed from GOO's own resources. The remaining four packages of consultancies, which are detailed in Para 22 of the aide-memoire may be financed from the Project Preparation Facility (PPF) Advance, for which GOO will need to send a request to the World Bank through the Department of Economic Affairs (DEA).

*Project Scope.* The proposed OSRP will finance (a) upgrading and rehabilitation of about 1200 kilometers high-priority state roads; (b) long-term performance based maintenance contract for about 200 kilometers; (c) viability-gap funding for public-

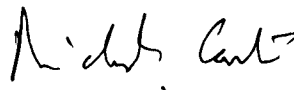
private partnership (PPP) scheme for about 200 km of high-traffic state roads, and (d) associated institutional and policy development component.

*Project Size.* The loan size for the proposed project is estimated at Rs.1000 Crore. The counterpart funding from GOO will be in the order of Rs.200 Crore. In addition, GOO may be eligible to receive a PHRD Grant from the Government of Japan as co-financing for capacity development elements of the proposed project. GOO will need to send a request to the Bank through DEA for processing the PHRD Grant.

We look forward to working with you and OWD officials in the preparation of this important project. If the actions agreed in the aide-memoire are carried out as planned, we expect that the proposed project could be ready for appraisal in May 2006.

With regards,

Yours sincerely,



Michael F. Carter  
Country Director, India

**Copy to:**

Er. Ratnakar Dash, Engineer-in-Chief-um-Secretary, Works Department, Government of Orissa, Secretariat, Bhubaneshwar  
Dr.U. Saratchandran, IAS, Principal Secretary, Finance Department, Government of Orissa, Secretariat, Bhubanenshwar  
Mr. Anirudh Tewari, Director, Department of Economic Affairs, Government of India, Ministry of Finance, New Delhi.

Mr. Subas Pani

October 18, 2005

Cleared with: Guang Chen, Sector Manager, Transport, SASEI.

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*Drafted by Binyam Reja, SASEI*

**INDIA: PROPOSED ORISSA STATE ROADS PROJECT (P096023)**  
**WORLD BANK IDENTIFICATION MISSION**  
**SEPTEMBER 19 -30, 2005**

**AIDE MEMOIRE**

**A. Introduction**

1. A World Bank mission comprising Binyam Reja (Sr. Transport Economist/Task Team Leader), A.K. Swaminathan (Sr. Transport Specialist), Rodrigo Archondo-Callao (Highway Engineer/Road Asset Management Specialist), Mohammad Hassan (Sr. Social Development Specialist), Sanjay Srivastava (Senior Environment Specialist), Manmohan Singh Bajaj (Procurement Specialist), and Ernst Huning (Institutional Specialist / Consultant) visited Orissa from Sept 19-30, 2005 for various periods for the identification mission of the proposed Orissa State Roads Project (OSRP). Mr. V.J. Ravishankar (Sr. Economist/Orissa State Coordinator) provided input to the mission on fiscal matters from the Bank's Delhi office.

2. The mission met with concerned officials of the Government of Orissa (GOO) and the senior management and staff of the Orissa Works Department (OWD), including its Project Implementation Unit (PIU). The mission carried out field visits to proposed project roads. Prior to coming to Orissa, the mission also met with officials from the Department of Economic Affairs (DEA) of Government of India (GOI)<sup>1</sup>. The Aide Memoire (AM) was discussed with concerned GOO officials in a meeting chaired by Secretary, OWD on Sept 30, 2005. The mission thanks GOO and OWD for their kind cooperation and active engagement during the mission.

**B. Summary of Project Preparation Progress and Key Actions Required**

3. The mission is pleased to note that project preparation is well on track and OWD has carried out most of the agreed key actions from the Initiation Mission. in April 2005. In this regard, the following actions have taken place: (i) PIU has been established and staffed with key personnel; (ii) Package 1 consultant to prepare Phase 1 roads has been selected and is expected to be mobilized by mid October 2005; (iii) a Task Force to prepare the Institutional Strengthening Action Plan (ISAP) has been established and a Facilitator-cum-Consultant for the ISAP has been selected; and (iv) the PIU has updated the Strategic Options Study (SOS) and developed a re-prioritized list of project roads for financing under the proposed project.

4. In order to keep project preparation on track and meet the target project appraisal date, the following key actions will need to be taken by OWD and GOO.

- a) Assign more staff to support the Executive Engineers of the PIU by 15 October 2005 (Para 11);
- b) Engage the services of Environment and Social Development advisors as nodal point persons in the PIU (financed through the PPF, if requested) by 30 October 2005 (Para 11);
- c) Send a PPF Advance and PHRD Grant request to the Bank via DEA by 15 October 2005(Para 24; Para 9);

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<sup>1</sup> List of people met is in Annex 1.

- d) Invite proposals for Asset Management System consultancy by 15 December 2005 (Para 19);
- e) Invite proposals for PPP Transaction Advisor services by 15 December 2005 (Para 7, Para 22b);
- f) Finalize draft TOR and EOI for Project Management Consultant by 15 December 2005 (Para 22, 23);
- Complete draft IS Action Plan (ISAP) via Task Force by 31 December 2005(Para 36); and
- g) Finalize draft TOR and EOI for ISAP implementation services by 31 January 2006 (Para 36).

### **C. Project Scope:**

The proposed OSRP will finance (a) upgrading and rehabilitation of about 1200 kilometers high-priority state roads; (b) long-term performance based maintenance contract for about 200 kilometers; (c) viability-gap funding for public-private partnership (PPP) scheme for about 200 km of high-traffic state roads, and (d) associated institutional and policy development component

#### ***Civil Works Component***

5. *Upgrading Subcomponent.* The proposed project will finance upgrading of about 1200 kilometers high-priority OWD roads, of which 825 kilometers have already been identified as Phase 1 roads, and will be further investigated by the preparation (Package 1) consultant. If found feasible, the consultant will prepare detailed project report and associated social and environment safeguard documents. The Phase 2 roads (about 400 kilometers) will be identified through the network analysis and prioritization to be carried out by the same preparation consultant. A separate consultant will carry out the detailed studies of Phase 2 roads and the supervision of all project road works.

6. *Periodic Maintenance Subcomponent.* The proposed project will finance a long-term performance based maintenance contract for Sampalpur-Rourkela Road (SH10, approx.185 kilometers). The state highway is one of the highest trafficked roads in the state and needs urgent periodic maintenance to protect it from further deterioration. It was originally improved about 10 years ago through financing from the Asian Development Bank. The road would also require strengthening to cater to the fast growing and heavy-load traffic on the road. The mission discussed with OWD the need to urgently carry out traffic count, axle load and road condition survey. While the road does not have any significant social and environmental issues, OWD will need to prepare a checklist on environmental and social issues on the road. Once these are cleared, OWD can go ahead and call for tender for Performance-based Maintenance Contract. The mission shared with the OWD the World Bank's Sample Bidding Document for the Procurement of Performance-Based Maintenance and Management of Roads. OWD may seek the assistance of a consultant to help it prepare the bidding document and evaluate the bids from potential contractors.

7. *Public Private Partnership (PPP) Subcomponent.* The proposed project will support GOO to finance the 'viability gap' for high-traffic state roads. OWD has identified a number of

candidate roads for financing under PPP, including four-laning of Cuttack-Paredeep Road, and major industrial and mining roads and a possible bypass highway from Cuttack to Bhubenswar. A 'PPP Transactions Advisor' will be engaged by OWD to assess the viability of the proposed roads for PPP and to assist OWD in putting together the transactions (Para 22b).

### ***Institutional Development & Policy Component***

8. This component will aim at improving the sector policies, functions, structures and capacities required for sustainable GOO effectiveness in road infrastructure development, financing and asset management. The project will primarily support: (a) implementation of a comprehensive, multi-stage Institutional Strengthening Action Plan (ISAP) addressing all key elements, processes and resources involved in the state's responsibilities for non-rural road assets; (b) as an upfront ISAP item, a Capacity Assessment and Action Plan(s) to rapidly increase OWD implementation and management capacity in core functions to effectively manage the increased resource allocations in the sector; (c) development of a sustainable Road Asset Management System; (d) finalization and implementation of the proposed state-level Roads Policy; (e) enhancement of structural and organizational arrangements for GOO roads functions; (f) preparation and implementation of measures to enhance Construction Industry capacity in Orissa to meet the sector's rapidly increasing demands; in that context, (g) a strategic GOO review of the role, capacity and viability of the Orissa Bridges & Construction Corporation (OB&CC); (h) development of a state-level Road Fund with autonomous management and capacities; (i) facilitation of more effective stakeholder involvement in sector planning and resource allocation decisions; and (j) development of GOO strategy and capacity for effective multi-modal Transport Sector planning and coordination.

### ***Project Size***

9. The loan size for the proposed project is estimated at Rs.1000 Crore. The counterpart funding from GOO will be in the order of Rs.200 Crore. In addition, the mission indicated that GOO could be eligible to apply a PHRD Grant (of up to US\$4 million maximum) from the Government of Japan as co-financing for capacity development elements of the proposed project. GOO will need to send a request to the Bank through DEA for processing the PHRD Grant.

### ***Project Implementation Unit***

10. Since early 2005, the OWD has established a PIU and progressively staffed it with key personnel, including the following:

- a) Chief Engineer, World Bank Project
- b) Three Executive Engineers, two Assistance Engineers, and one Junior Engineer,
- c) An Accounts officer,
- d) On deputation from other Departments, a Land Officer, and Forest Officer.

11. While the PIU is now fully functional, to meet the growing amount of PIU tasks ahead over the coming months it will require additional staffing. For this, it was agreed that OWD will assign two more assistant engineers to work with the PIU team; assign on deputation from another department a Tribal Welfare Officer; and hire from the market an environment specialist and a social development specialist as advisors to augment the capacity of the PIU related to environmental and social aspects. The advisors would need to be familiar with World Bank, as well as GOI/GOO environmental and social safeguard policies and their application in India projects, and be able to assist the PIU in monitoring the environmental and social aspects of the feasibility study to be prepared by the consultant. These advisors will work under the PIU

Director full-time during their contract period, which could be initially for 12 months. The advisors may be recruited by OWD following the WB guidelines for hiring individual consultants. The cost of the advisors can be financed through the PPF if required. OWD will need to prepare a TOR and select an advisor by comparing 3 CVs of potential candidates.

#### **D. Technical Aspects**

12. *Project Phasing.* The mission and OWD will continue with the phasing strategy agreed during the previous mission. As part of Phase 1 roads preparation, the consultants would need to start detailed designs of about 400 kilometers of roads based on the confirmation of the economic viability and having relatively less social and environmental impacts. The Phase 1 roads that have been identified (following site visits of the mission) for further investigation and confirmation of their economic viability are detailed in Annex 2.

13. *Strategic Options Studies (SOS).* The OWD based on its own field team investigations have put together a quick report highlighting various aspects of the state highways and ranking them on a multi-criteria basis. This has provided the basis of further investigation by the consultants for confirmation of Phase 1 roads, which will be taken up for further feasibility studies and detailed engineering by the project preparation consultants. In addition, the SOS, together with the network analysis to be conducted by the Package 1 consultant, will be used to prepare a Medium-term Expenditure Framework (MTEF) for roads. The MTEF will need to be ready by project appraisal.

14. *Field Visits.* The mission members undertook field trips to a series of Orissa State roads that are candidates to be included in the project. They were accompanied by the Chief Engineer, World Bank Project and other OWD staff from the PIU and the field offices. Detailed notes on the site visits are provided in Annex 3. The mission observed that almost all the roads are in poor to very poor condition of ride quality and most of the roads can be classified as single lane or intermediate lane roads. With regard to traffic, some roads have notably high motorized and non-motorized traffic (for example SH9A and SH10) but others appeared to have relatively low to moderate traffic during the field visits. The mission observed that in some regions of the State, there is a high to very high potential for future economic development due to the emerging mining sector and the opening of processing and manufacturing plants. These are expected to generate high traffic on the candidate roads. The Bank and the OWD team also felt that some roads which were not included in the original proposed Phase 1 had much better present traffic and potential and would need to be included. Accordingly, the Phase 1 roads have been reprioritized and the new list is attached in Annex 2.

15. *Economic Evaluation.* The mission recommends that traffic counts surveys be undertaken immediately to systematically assess the motorized and non-motorized traffic of each candidate road. Traffic projection studies should also be undertaken to assess the potential generated traffic that will materialize once the roads are improved, taking into account the planned mining and industrial development along the candidate road corridors. The mission recommends that a roughness survey should also be undertaken as soon as possible to be able to perform an economic pre-feasibility study of each candidate road in order to define priorities among candidate roads and confirm an acceptable economic justification of the project. The mission recommends that a series of alternative design options be evaluated to define a proper level of investment on each candidate road. The design alternatives could range from rehabilitating the existing pavement to widen a road to 7.0 m with paved shoulders. Annex 5 presents the mission observations regarding the economic evaluation of the project.

16. *Design and Engineering Standards.* As discussed during the previous mission and mentioned in the aide-memoire, it was felt that standards for pavement design for SH as recommended by the previous consultant seemed appropriate and could be adapted to the presently proposed roads based on traffic levels, axle loads, sub-grade conditions and existing pavement surface conditions. The option of trying out design methodology based on other codes, as tried out in Andhra Pradesh (AP), can also be looked into. Due to the very poor condition of pavement surface observed on the sample stretches traveled on by the mission, there may be a need to scarify the existing surface and build up the pavement along with the widening portions to prevent reflective cracking and differential settlements. Raising the roads wherever necessary due to high water table levels may also be required. Designs would need to provide for widening of roads and bridges, footpaths on bridges and built-up areas wherever required, side drains, truck lay byes, bus stops etc. The land acquisition, R&R and environmental impacts would need to be assessed based on upgrading the roads being finally taken up under the project to meet with the engineering needs of speed, safety, durability as per the relevant IRC codes and local requirements. The existing horizontal and vertical alignments may need some modifications at some critical spots to avoid sharp curves and/or accident black spots. Other aspects like lane marking, road signs, junction improvements with important major roads etc. would also need to be considered by the design consultant. Bypass options wherever the roads pass through heavily built up towns will need to be considered by the consultant in consultation with OWD.

17. Along all the above roads, road widening will have implications on shifting of various underground utilities and this needs to be assessed. Provisioning of village markets in tribal areas, bus and truck-byes need to be done at appropriate places based on public consultation.

18. *Road Asset Management System.* The mission discussed with OWD staff the project component related to the implementation of an Asset Management System (AMS) in Orissa and reviewed a possible TOR for this component. The mission indicated that for a successful implementation of an AMS, it will be necessary for OWD to identify a strong team of counterpart professionals who will work together with the consultants contracted to implement the system, once those consultants are on board. It is foreseen that at least 3 OWD professionals will need to be appointed as full time counterpart staff. These professionals will work with engineering, economics, transport planning, data collection, and information technology issues.

19. It is envisioned that the AMS component will involve: a) a study of OWD practices and network classification and referencing systems; b) creation of a Road Information System (RIS); c) equipment and network data collection to populate the RIS; d) creation of applications for managing pavements, bridges and routine maintenance; e) the production of a three year program of maintenance and improvement works on the core road network with two annual updates; and f) production of annual road condition and traffic reports and an OWD annual report. OWD will need to send a draft EOI and TOR for procuring the consultant services by 31 October 2005. These services will initially be funded out of the PPF Advance.

#### **E. Procurement aspects**

20. The mission discussed the draft GPN prepared by the PIU and offered its comments in line with the various detailed discussion on the scope of funding for the project. The GPN has now been finalized and submitted for publication in UNDB on-line.

21. **Package 1 - Phase 1 Preparation Consultant.** OWD has gone ahead and procured the services of Consulting Engineering Group (CEG) to help it prepare Phase 1 road of the project. The TOR for package 1 consultant was discussed and agreed with the Bank. Package 1 consultant



will be financed through GOO's own funding, and the procurement was carried out following GOO's own procurement guidelines and processes.

22. The mission confirmed the remaining package 2 to 5 consultancies, which were identified during the previous mission. These are:

- (a) Package 2 – **Project Management Consultancy (PMC)** for: (i) detailed design and detailed project report for Phase 2 roads, (ii) preparation of environment and social safeguard documents for Phase 2 roads, and (iii) supervision of Phase 1 and 2 Roads.
- (b) Package 3 – **Public Private Partnership (PPP) Transaction Advisor**. To ensure that the PPP schemes are prepared taking into account international and national practices and lessons, GOO will engage the services of a consulting firm to help it develop a conducive regulatory framework and well-designed PPP contracts. More specifically, these services will include (i) assessment of regulatory and policy framework for implementation of PPP schemes in state highways, (ii) identification and preparation of PPP schemes for state highways, (iii) assisting GOO with bidding process and finalization of concession agreements.
- (c) Package 4 – **Road Asset Management Consultancy**. Consultancy services to help OWD develop a Road Asset Management System, to be put in place by early in the proposed project. The consultancy services will cover: (i) undertaking road condition and traffic surveys of OWD road network, (ii) development of pavement and bridge management systems, (iii) determination of resource allocation method across road classes and activities, and (iv) preparation of a Medium-term Investment and Maintenance Expenditure Framework.
- (d) Package 5 – **Institutional Development**. Consultancy services to support (i) implementation and monitoring of ISAP; (ii) comprehensive preparations for establishment of a dedicated state Road Fund; (iii) capacity enhancement measures for state-level construction industry; (iv) strategic review of OBCC; (v) implementation of road user and stakeholder consultation / participation mechanisms; (vi) development of multi-modal Transport Sector Development framework and capacity; and (vii) development of a Road Safety enhancement strategy and action plan(s).

23. The draft EOI for Packages 2- 5 consultancy services was discussed in detail in the light of the proposed scope of the project and the packages to be designed for construction work. It was agreed that separate EOIs will be issued for each of the consultancy assignments, as and when the requirements are more or less firmed up. Regarding the Package 2, since the information at the present stage is not sufficient it was agreed that the EOI and SPN for Package 2 can be finalized only after the initial services of the Phase-1 consultants are completed and the prioritization of roads and contract packaging are decided, which is expected by end-Nov 2005. With respect to the other packages, EOIs and SPN can be issued once OWD finalizes the respective TORs and agreed with the Bank.

24. *Project Preparation Facility (PPF) Advance*. The consultancy services for Packages 2 to 5 will be financed under the proposed PPF advance and procured following Bank Guidelines. It is agreed that GOO will request the Bank through DEA for a PPF Advance in the amount of US\$3.5 million to finance expenditures related to Package 2 to 5 services. It is noted that the PPF Advance is to be used only for the preparation phase of these consultancies; the remaining services in these packages will be financed out of the loan during implementation.

25. *Procurement Capacity.* The mission requested for details pertaining to the procurement capacity assessment of the PIU as per the Bank for which a copy was provided by the mission. The PIU, however informed that they had done this questionnaire earlier and handed over a copy of the previous response sent to the Bank for review, (which they had furnished to the Bank in the year 2000-01, at the time of project preparation then). The mission clarified that as the information was nearly five years old, it will need to be updated.

26. The mission also advised that even if some of the staff had an earlier exposure to training on Bank procurement guidelines conducted by ASCI/ NIFM, the staff along with some additional staff proposed to be inducted for this project, should attend the coming sessions at ASCI during October 2005. OWD has nominated two people to attend this training. The cost of this training may be retroactively financed from the PPF Advance.

27. The mission shared with OWD and PIU officers the guidelines for procurement of goods, works and consultants services, copies of which were provided to the officials to enable them to understand the same ahead of the implementation phase of the project and to utilize the familiarity at the time of their training.

#### **F. Social Safeguard Management**

28. The mission discussed with PIU staff and the consultant team selected for preparing the project feasibility report, the social aspects of the project, particularly those relating to social safeguards including resettlement and rehabilitation (R&R) and indigenous (tribal) people. The mission explained the Bank's policy on involuntary resettlement and indigenous peoples and conveyed copies of the relevant Bank policy statements on both subjects.

29. The mission visited a number of proposed project roads, including Jagatpur-Kendrapara-Chandbali-Bhadrak, which is included in Phase 1. The carriage width on this road varied mostly between 3.5 – 5.5 meters and the right of way was found encroached at several places. The mission reiterated its earlier recommendation that PWD maintain the status quo of the existing land use of the right of way (ROW) for the road stretches proposed to be included under the project until a social impact assessment is carried out as part of the project preparation. It was strongly suggested that the strip maps to be prepared by divisional offices of PWD and the preparation consultant should identify the present utilization of ROW and indicate the extent of encroachment and existence of public utilities. The consultants should cross check these strip plans with revenue records and update them based on field level assessment. These plans will then be the basis for carrying out the census survey of potential affected people. Annex 6 provides a sample strip map.

30. The mission was informed that the draft Resettlement and Rehabilitation (R&R) policy (June 2004 version) has been referred to a sub-committee of legislators which is expected to report by mid October 2005, and that the policy might get cabinet approval by end October 2005. However, as a backup, the mission advised PWD to start developing an entitlement framework for project-affected persons drawing from the provisions of the draft state R&R policy.

31. The discussions with the state HIV/AIDS Cell revealed that a state level survey identified 10 districts (most of these are covered under the proposed road improvement) as highly vulnerable to HIV/AIDS, while there are another 11 districts rated moderately vulnerable but might become more vulnerable with an increase in road traffic. Activities being implemented are information and education campaigns, preparing visible messages on HIV/AIDS on the highways, identifying Peer educators and building their capacity to respond to HIV/AIDS issues, interventions at strategic locations (such as petrol pump, auto repair shops, eating places, check

gates) and installation of condom machines. The proposed project will include measures to support existing initiatives to mitigate the effects of HIV/AIDS on transport workers, including truckers and construction crew on site.

32. *Community Development Initiative in Project Road Corridors.* In addition to the Indigenous Peoples Development Plan (IPDP) that will be included as part of the project social safeguards, the mission discussed with GOO and OWD the possibility of including a small component to support community development initiatives in tribal areas of project corridors. This would also acknowledge that in many project locations, there will be limited direct local benefits from this project, even though the project investments will generate significant economic benefits for Orissa overall. The support would be community-driven, be based on existing GOO strategies in this field and may include such things as market infrastructure, schools, health facilities and/or access roads. OWD will engage an NGO to help the tribal communities identify viable local proposals and facilitate implementation. The design and details of this intervention will be further discussed and confirmed during the next mission.

#### **G. Environment Impact Management**

33. *Scope of work for environmental consultants, deliverables and time lines.* The mission noted that the environmental consultant, based on a reconnaissance survey, will prepare an environmental screening report categorizing various project roads, based on their environmental sensitivity. The reconnaissance survey should also include identification of specific environmental issues related to road sector in Orissa. Following the TORs and based on screening report, the consultant would: a) finalize scope of work and undertake specific Environmental Assessment of first year road projects; b) develop an environmental management framework; and c) develop a generic environmental management plan. The above deliverables will be completed before the finalization of detailed designs and appraisal of first year road project.

34. *Regulatory Clearances.* The mission recommends that the consultant and PIU team check with the State Department of Environment and Ministry of Environment and Forests, New Delhi regarding requirements for EA clearance for activities proposed under the project, and address it accordingly during the EA process. The mission during site visit also noted that a number of potential project roads going through forest areas, may require cutting of large old trees within the existing ROW. The preparation consultant should consider engineering solutions that could minimize adverse environmental impacts, and discuss this aspect during public consultations, as part of the EA study.

#### **H. Fiscal Context and roject Funding**

35. The fiscal situation of GOO has improved during the period 2000-05, resulting in overachievement of the deficit reduction target set by the Medium-Term Fiscal Plan (MTFP) (see Annex 4 for details). The Twelfth Finance Commission (TFC) recommendations have important implications for resources availability for road maintenance and development in Orissa. An annual Rs. 5.66 billion has been earmarked for maintenance and upgrading of state roads and bridges for 2006-10. With the TFC recommendation, the funding requirement for road maintenance will be adequate during the TFC period (2006-2010). However, GOO needs to consider a longer-term strategy to ensure adequate resources beyond the TFC period, including a dedicated Road Fund.

#### **I. Institutional Aspects**

36. The mission and GOO re-affirmed the scope of the Institutional Development strategy to be supported by the proposed Project and reached broad agreement on early priorities for action in the implementation of that strategy via the ISAP. The OWD has initiated an ISAP Task Force (TF) to develop a draft ISAP for GOO consideration, and will shortly mobilize a consultant Facilitator to advise and support the TF in this task. It was agreed that the draft ISAP should be finalized for GOO and IDA consideration by end-December 2005. Thereafter, taking into account the tentative project appraisal goal of April 2006, it was also agreed that OWD would by end January 2006 prepare draft TOR and EOI for the envisaged consultancy services and technical assistance for ISAP implementation support.

37. The mission provided comments on the August 2004 draft of a new Orissa Roads Policy, which should enable the OWD to finalize this for GOO endorsement before project appraisal. However, the GOO decision-making in major road infrastructure investments would benefit from more systematic inputs from multi-modal options and investment analysis, ensuring objective comparison of the relative feasibility and merits of (e.g.) road versus rail development options in particular proposals before final GOO decisions. The mission and GOO have agreed that action to establish a more integrated multi-modal Transport Infrastructure Development (TID) strategy, with appropriate technical support and inter-departmental TID coordination resources, should be included in the ISAP.

38. Although the overall outlook for road infrastructure funding in Orissa is improving considerably, the historical vulnerability and inadequacy of funding specifically for road maintenance – and the considerable state-wide backlog in planned road maintenance works – suggest that introduction of dedicated mechanisms in Orissa to remedy this are still appropriate. The mission has therefore recommended continued GOO commitment, in the ISAP context, to development of an autonomous Roads Fund for the state's future road maintenance needs.

39. The mission noted that the rapid escalation both in Orissa's road infrastructure demands and in available financing over the next 2-5 years appears likely to exceed the present OWD capacity for investment planning, project preparation and works management at the higher quality and performance standards involved. The mission has recommended that OWD should undertake a 'capacity assessment' to help identify realistic measures for early GOO action (including in the ISAP context) to strengthen OWD core functions and resources to meet these challenges. This issue should be addressed more closely between OWD and the Bank during the next mission and accordingly, it was agreed that the OWD would by mid-January 2006 prepare data on relevant workload, staffing and organizational factors, and identify possible options.

40. Similar pressures will rapidly highlight the present limitations and capacity constraints in the state-level construction industry, and GOO has therefore welcomed action during the proposed Project to enhance construction industry capacity. A potentially valuable factor in this context may be the Orissa Bridges & Construction Corporation (OBCC), subject to significant improvements in its operating arrangements and efficiency-based reforms in its business practices, organization and staffing. However, there is some GOO concern about its present capabilities and liabilities, and accordingly, GOO has proposed an early strategic review of OBCC to inform GOO decision-making on the Corporation's future. It was agreed that TOR for this Review would be developed by GOO by mid-December 2005, as part of the ISAP process.

41. As the project will include Public Private Partnership -based initiatives, the OWD will need to develop dedicated capacity to deal effectively with the new functions and responsibilities involved. While the proposed engagement of project-funded Transaction Advisor services will address this in the short-term, GOO has agreed that specialised internal capacity should also be established in parallel. Accordingly, a dedicated PPP cell and resources should be implemented

soon in OWD. The longer term location and functioning of this cell should later be reviewed in relation to other PPP-based cells and resources initiated elsewhere in GOO, to ensure the most coherent and effective overall capability and performance for GOO requirements

## J. Project Preparation Plan

42. **Project Timeline.** Table 1 below outlines the key actions to be completed before project appraisal and negotiations. Given the tight schedule, the mission encourages the OWD to maintain this schedule.

**Table 1: Key Actions Agreed for Project Preparation**

Tasks	Responsible entity	Target Date	Remarks
Package 1 Consultant Mobilized	OWD/Consultants	15-Oct-05	Contract to be Signed on 4 Oct 2005
ISAP Facilitator-cum-Consultant Mobilized	OWD/Consultant	15-Oct-05	
PIU Staff Strengthened	OWD	15-Oct-05	Two Assistant Engineers Added
PPF Advance & PHRD Grant request to World Bank	DEA	15-Oct-05	
EOI/SPN and TOR for Package 4 (AMS Consultant) submitted to the Bank	PIU	31-Oct-05	
Environment and Social Development Advisors Recruited	OWD	31-Oct-05	
EOI/SPN and TOR for Package 3 (PPP Transaction Advisor) submitted to the Bank	PIU	31-Oct-05	
Pre-feasibility report on Phase 1 roads prepared	Consultant	30-Nov-05	
SOS Refined to take into account Bank Comment. SOS Prepared for MDRs and ODRs	OWD/PIU	30-Nov-05	List of 3700 kilometers for Network Analysis Prepared
EOI/SPN and TOR for Package 2 (Project Management Consultant) submitted to the Bank	PIU	15-Dec-05	
Issue RFP for Package 3 and 4 Consultant Services	PIU	15-Dec-05	
First Draft ISAP Prepared	OWD	31-Dec-05	
<b>Next World Bank Preparation Mission</b>	<b>World Bank</b>	<b>Jan-06</b>	
Feasibility Report for Phase 1 Roads	Consultant	Jan-06	
TOR and EOI for Package 5 (ISAP Services) Submitted to the Bank	OWD	31-Jan-06	
Issue RFP for Package 2 Consultant Services	PIU	15-Feb-06	
<b>World Bank Pre-Appraisal Mission</b>	<b>World Bank</b>	<b>Mar-06</b>	
Procurement Capacity Assessment	World Bank	Mar-06	Started this mission
Financial Management Capacity Assessment	World Bank	Mar-06	Starting next mission
Issue RFP for Package 5 Consultant Services	PIU	15-Mar-06	
Medium-term Expenditure Framework Prepared	OWD/PIU	Apr-06	Appraisal Condition
Detailed Project Report for Year 1 Roads Completed	Consultant	Apr-06	Appraisal Condition
Environment and Social Safeguard Documents Prepared	Consultant	Apr-06	Appraisal Condition
Final Draft ISAP Prepared	Consultant/OWD	Apr-06	Appraisal Condition
Package 2 Consultant Hired	OWD	Apr-06	Loan Negotiations Condition
Package 3 and 4 Consultant Hired	OWD	Apr-06	Loan Negotiations Condition

Regulatory clearance for environment and social safeguard received from relevant authorities	OWD	May-06	Appraisal Condition
<b>Appraisal (Tentative)</b>	<b>World Bank</b>	<b>May-06</b>	<b>Appraisal Conditions must be met prior to appraisal mission</b>

**Table 1: Key Actions Agreed for Project Preparation  
[continued]**

<b>Tasks</b>	<b>Responsible entity</b>	<b>Target Date</b>	<b>Remarks</b>
ISAP Endorsed by GOO	GOO	Jun-06	Loan Negotiations Condition
Bids for First Year Contracts Invited	GOO	Jun-06	Loan Negotiations Condition
Loan Negotiations	World Bank/GOI/GOO	Jul-06	Negotiations condition must be met prior to invitation for Negotiations can be issued
Loan Approval	World Bank	Sep-06	

## **Annex 1: People Met During Mission**

Hon. Minister Shri A.U. Singh Deo, Minister, Works and Housing  
Dr. Subas Pani, IAS, Chief Secretary, Government of Orissa  
Er. Ratnakar Dash, Engineer-in-Chief –cum-Secretary, Works Department  
Dr.U. Saratchandran, IAS, Principal Secretary, Finance Department  
Mr. Anirudh Tewari, IAS, Director, Department of Economic Affairs, Ministry of Finance, GOI  
Mr. Soumya Chattopadhyay, Under Secretary, Department of Economic Affairs, MOF, GOI  
Mr. P.K. Misra, Special Secretary, Finance Department  
Mr. K. C. Badu, IAS, Special Secretary to the Govt. Finance Department  
Mr. G.C. Pathi, IAS, Principal Secretary, Industry Department  
Mr. L.N. Gupta, IAS, Chairman/MD, IDCO  
Er. A. B. Muni, Engineer-in-Chief (Civil), Works Department  
Mr. D. K. Das, Joint Secretary, Works Department  
Er. P. C. Samal, Chief Engineer (DPI&Roads), Works Department  
Er. S. Ray, Managing Director, OB&CC  
Er. N.K. Pradhan, Chief Engineer (World Bank Project), Works Department  
Dr. N. C. Pal, Executive Engineer, PIU, Works Department  
Er. S. Hota, Asst. Engineer, PIU, Works Department  
Er. B. B. Padhi, Executive Engineer, PIU, Works Department  
Er. A.K. Ray, Executive Engineer, PIU, Works Department



## **Annex 2: List of Phase 1 Roads**

a) Jagatpur-Kendarapar-Chandbali-Bhadrak	152 kilometers
b) Bhadrak-Anandpur-Karanja-Jashipur	142 kilometers
c) Khariar-Bhawanipatna-Muniguda-Rayagada-Kerada	213 kilometres
d) Berhampur-Rayagada Road	201 kilometres
e) Banrapal-Daspala	89 kilometres
f) Bhanjanagar-Aska	38 kilometers
g) Aska-Digapahandi	26 kilometers

### Annex 3: Field Visit Observations

1. **Site Visits.** The mission visited some of the roads which have been proposed for Bank financing.
2. Berhampur-Rayagada Road (SH-17 and SH-4). First 25 kilometers of the road are under improvement for the past year through an ongoing contract. Sections which have been completed seem to be deteriorating fast under the present rains. The quality of construction seems to be not up to very high standards. Contract for the next section up to about 40 kilometers is under finalization.
3. During the site visit it was observed that the traffic was very low to low. The road condition is poor in the first 40 kilometers and fair to good up for some distance up to 50 kilometers. In the remaining section up to Rayagada the road condition is poor to fair. The shoulders are non-existent to being in very poor condition all along the road. The road is predominantly single lane road. The first 25 kilometers is being widened to intermediate lanes and the stretch from 40 to 50 kilometers is two lanes. Some cross drainage structure are narrow. The road may require rising in a few stretches where it may be getting submerged. Berhampur may need a bypass, if the road is taken up under the project. Alignment could need improvement if taken up for upgrading. The initial sections of the road are in plains and pass through agricultural areas. After about 30 kilometers the road passes through rolling to hilly terrain and through forest lands.
4. Rayagada-Koraput Road (SH-4): The road is a mix of single lane and intermediate lane stretches in rolling to hilly terrain. Traffic is low. The road passes through forest land. The road condition is fair to poor. The alignment will need possible improvements in case it is taken up for upgrading.
5. Rupkona Junction – Bhawanipatna road (SH-44): The mission team visited 50 kilometers of the road. The team noticed that the traffic was very low to low. Road was mostly in poor condition and single-laned, passing through rolling terrain. The road condition is poor. The road geometrics are poor and will need improvement if take up for upgrading.
6. Rayagada-Kerada road (MDR): The first 8 kilometers are intermediate lane and the remaining 17 kilometers are single lane. The road is in fair to good condition in the first 8 kilometers. The rest of the road is in poor condition. Moderately well trafficked with a high proportion of trucks. There seems to be enough space for widening to two lanes without much of R&R and environmental impacts. This road connects to Andhra Pradesh where the road continues as a two-laned SH. This road is an alternative corridor for moving goods to Visakhapatnam port in AP. The road is in plain terrain.
7. Rayagada- Bhawanipatna-Khair (SH-45, SH6). This corridor is served by a two state highways, which are mostly single lane. Both roads are in poor condition. Traffic is moderate. The corridor is an important link to Raipur. There is one major Alumina plant that is at the last stages of construction and is due to be operational by the end of the year. The plant is expected to generate large number of traffic. In addition, there are several mining and industrial ventures coming up near by. There is enough space to widen the road without having significant social and environment impact.
8. Bangomunda-Bolingir (SH42). A mostly single-lane and poor condition, the road connects two major towns in eastern Orissa. Currently, it has low traffic. However, it is expected to be an important mining and industrial route, linking the mining area of the north with industries in the south. No Major environment and social issues were present.

9. Sonepur-Sampalbur (SH15). This road is in a relatively good condition, and many of its sections were recently improved by OWD. The quality of work on the improved sections was very good. There are some bridges that may require some widening and improvement, and sections that also require improvement. However, since this road is probably best improved by OWD using other resources, to maintain consistent type of improvement on the entire stretch.
10. Sampalpur-Rourkela Road (SH10, 185 kilometers). The state highway is one of the highest trafficked roads in the state and is need of an urgent periodic maintenance to protect it from further deterioration. It was originally improved about 10 years ago through financing from the Asian Development Bank. The road would currently require strengthening to cater to the fast growing and heavy-load traffic on the road. The road can be improved and maintained under a long-term performance-based maintenance contract, where the contractor will be hired to carry out the initial maintenance work, and continue to carry out routine maintenance and a final periodic maintenance during the same contract period, which can be 5 to 7 years.
11. Jagatpur-Kendrapara-Chandbali-Bhadrak. The carriage width on this road varied mostly between 3.5 – 5.5 meters and the right of way (ROW) was found encroached at several places. The mission reiterated its earlier recommendation that PWD maintain the status quo of the existing land use of the ROW for the road stretches proposed to be included under the project until a social impact assessment is carried out as part of the project preparation. It was strongly suggested that the strip plans prepared by divisional offices of PWD should identify the present utilization of ROW and indicate the extent of encroachment and existence of public utilities. The consultants undertaking social assessment will cross check these strip plans prepared by PWD with revenue records and update them based on field level assessment. These plans will then be the basis for carrying out the census survey of potential affected people.

#### Annex 4: Fiscal Context and Project Funding

1. The overall fiscal health of the Government of Orissa has experienced a significant and visible improvement during the period 2000-05. According to the latest figures provided by the Accountant General, the fiscal correction in 2004-05 has resulted in overachievement of the deficit reduction target set by the Medium-Term Fiscal Plan (MTFP) adopted by GOO in August 2004. The primary fiscal balance has been converted from a deficit of 6.5% of GSDP in 1999-00 into a surplus of 2.9% in 2004-05 -- a correction of 9.4 percentage points in five years; and a correction of over 4 percentage points between 2003-04 and 2004-05. Adjusting for one-time factors such as recovery of interest arrears, the deficit on current account (i.e., Revenue Deficit) has been reduced by 1.5 percentage point of GSDP: from 2.6% in 2003-04 to 1.1% in 2004-05. After increasing since the mid-nineties, the debt stock has now begun to decline, starting in 2003-04. Moreover, the state no longer faces liquidity constraints as it did until 2003. There was not a single day in 2004-05 when GOO was in overdraft with the Reserve Bank of India, in striking contrast to the pre-2004 period.
2. Orissa has institutionalized its fiscal adjustment effort by adopting the ***Fiscal Responsibility & Budget Management Act 2005***, enacted by the Orissa Legislative Assembly on April 5, 2005; it came into effect from June 14, 2005. The act stipulates that GOO shall achieve balance in its current account (i.e., Revenue Account) by 2008-09, and sets annual deficit reduction targets. It also mandates several measures for fiscal transparency including annual reporting of unpaid bills along with the cash based financial accounts. GOO is currently finalizing its updated 2005/06 MTFP, taking into account the recommendations of the Twelfth Finance Commission (TFC) and the fiscal correction parameters stipulated in the Orissa FR&BM Act.
3. The TFC recommendations, which have been accepted by the Government of India, have important implications for resources available for road maintenance in the states. In the case of Orissa, an annual central grant of Rs. 3.69 billion earmarked for maintenance of roads and bridges has been recommended during 2006-10, conditional on GOO allocating at least Rs. 1.7 billion in 2005-06 out of its own resources for 'Non-Plan Revenue Expenditure' on roads and bridges, and maintaining that level in real terms during subsequent years. The 2005-06 Budget has allocated this amount, which is entirely for non-salary maintenance. As a result, Orissa is expected to qualify for the TFC grant, which implies that budgetary allocation for non-salary maintenance of roads and bridges would jump from Rs. 1.7 billion in 2005-06 to Rs. 4.6 billion in 2006-07. The share of salary within recurring expenditures of PWD would decline from 32% in 2005-06 to 15% in 2006-07. There are two implications. *Firstly*, the State Roads project team need not worry about the availability of funds for maintenance, but rather would need to focus on GOO's capacity to make optimal use of the enhanced funding that would be available for road maintenance. *Secondly*, in order to sustain the improvement in systematic and regular maintenance of the road network, GOO needs to evolve a longer term strategy to ensure adequate resources beyond the period of the TFC, i.e., from 2010-11 onwards.
4. Revenues collected by the Transport Department by way of motor vehicle taxes amounted to an estimated Rs. 3.20 billion in 2004-05, and is budgeted at Rs. 3.80 billion in 2005-06. The TFC recommended level of state budget allocation for maintenance of roads and bridges is less than 50% of the revenue collected through this one tax instrument. One of the options that GOO may consider to address the need for a longer term strategy for financing road maintenance, to become prepared for the post-TFC years, is to enhance revenue collection from road users and to earmark a share of such revenues for road maintenance. The creation of an autonomous Roads Board, drawing in representatives of stakeholders outside of the government, could help to address both concerns: (a) it could help oversee a rational and

efficient system of road maintenance and (b) it would enable professional and accountable management of a Roads Fund, to channel earmarked revenues collected from road users towards covering the annual maintenance costs. Initially, the TFC grant could be channeled through such a Roads Fund.

5. The capital budget for roads and bridges grew to a peak of about Rs. 3 billion in 2002-03, and has since declined to a little less than Rs. 2 billion. This trend is similar to other components of capital expenditure in Orissa. The emphasis of GOO in the short-term has been on improving returns from the limited resources available for investment, by prioritizing to complete as many projects as possible. However, the strong fiscal correction achieved in 2004-05 now places GOO in a position to begin enhancing allocations for capital investment projects. According to the Pre-Appraisal Aide Memoire of OSEDL-II, the updated MTFP is expected to accommodate a rise in aggregate capital outlay from 2% of GSDP in 2005-06 to 2.5% in 2006-07, and rising further towards 3% by 2008-09. The bank financed State Roads Project would help GOO achieve these ambitious investment targets. The expected increase in resources available for capital investment, and the already improved liquidity position, suggest that the Finance Department would have no problems in allocating and releasing the required state counterpart funding for the project, and there may not be any need to 'ring-fence' the project funds from the overall expenditure management process in the state.

## Annex 5: Economic Evaluation

1. The mission had meetings with staff of the CEG Consulting Engineers Group Ltd. (Consultant) and PIU team to discuss the economic evaluation methodology that will be followed for the preparation of the feasibility studies of 825 kilometers of and the network economic evaluation of 3,700 kilometers belonging to the Orissa State network. The issues discussed are summarized below.

### *Feasibility Study*

2. The Consultant will perform the feasibility study of 825 kilometers belonging to the Orissa State network that will be defined by the Orissa Works Department (OWD) and will deliver the feasibility report three months after the 15 days mobilization period. On the first month of the contract, the Consultant will divide the network of 825 kilometers into homogeneous roads section (function of surface type, road, width, traffic and condition and with an average length of around 40 kilometers) and will characterize each road section by performing traffic counts, performing roughness measurements, and collecting other network data that could be useful to establish the relative importance of the homogeneous road sections. With this information, the Consultant will perform a preliminary economic evaluation of the 825 kilometers, using average road works costs, and will deliver to OWD and the World Bank the results of the preliminary economic evaluation one month and a half after the mobilization period in the form of Excel tables and the corresponding HDM-4 workspace files. The results of the preliminary economic evaluation will present at least the following information.

- Road section name
- Initial point
- Final point
- Surface type (Flexible/Rigid)
- Length (kilometers)
- Carriage width (m)
- Terrain class (Plain/Rolling/Hilly)
- Roughness (IRI)
- Surface distress class (Good/Fair/Poor)
- Need for raising platform (Yes/No)
- Total motorized AADT
- Total non-motorized AADT
- Motorized AADT Composition
- Non-motorized AADT composition
- PCU in 2006
- Potential for economic development to be used to do a preliminary estimate of the generated traffic (Low/Medium/High)
- For each road work being evaluated, for example, a) Rehabilitation of existing carriageway, b) Reconstruction to 5.5 m, c) Widening to 7.0 m with earth shoulders, or d) Widening to 7.0m with paved shoulders, the following will be presented.
  - o Road work total investment cost (Laks)
  - o Road work unit investment cost (Lakes/kilometers)
  - o Net present value (Lakes)
  - o Economic rate of return (%)
  - o Net present value per total investment cost ratio (ratio)
- For the road work with highest net present value and the corresponding:
  - o Road work total investment cost (Lakes)
  - o Road work unit investment cost (Lakes/kilometers)

- Net present value (Lakes)
  - Economic rate of return (%)
  - Net present value per total investment cost ratio (ratio)
3. The feasibility report to be deliver in three months after the 15 days mobilization period will be based on more precise data on road condition obtained from a detailed visual survey and complemented with deflection measurements resulting on more precise cost estimates per road section. The feasibility report will present environmental and social evaluations and will compare a series of design alternatives per road.
  4. The economic evaluation will be done considering the following parameters: a) discount rate 12 percent; b) evaluation period 20 years, c) economic costs equal to 90 percent of financial costs, d) same normal traffic growth rate for all the homogenous road sections do be defined by the Consultant per vehicle type over the evaluation period. The base alternative will consist of a do-minimum scenario of doing routine maintenance and a reconstruction when the road is in very bad condition after the 10<sup>th</sup> year of the evaluation period.
  5. The feasibility report will present a detailed study of the potential generated traffic on each road section evaluating the potential for economic development in the area of influence of the road. The report will present sensitivity and switching values analyses. The sensitivity analysis will consider an increase in costs of 20%, a decrease in benefits of 20%, an increase in costs of 20% plus a decrease in benefits of 20%, and the case of no generated traffic. The switching values analysis will estimate by how much the investment cost has to be increased or benefits will have to be decreased in order to yield a net present value equal to zero.
  6. The feasibility report will present the following information regarding the economic evaluation:
    - Introduction
    - Socio economic profile
    - Traffic survey analysis and forecast
    - Road characteristics
    - Vehicle fleet characteristic and unit road user costs (Rs per vehicle kilometers)
    - Alternative design standards and rehabilitation proposals
    - Cost estimates
    - Economic analysis with sensitivity and switching values analyses
    - Environmental screening
    - Final recommendations

### ***Network Study***

7. The Consultant will perform the economic network study of 3,700 kilometers belonging to the Orissa State network that will be defined by the Orissa Works Department (OWD) and will deliver the network report seven months after the 15 days mobilization period.
8. The economic evaluation methodology for the 3,700 kilometers will be similar as the preliminary economic evaluation being done on the 825 kilometers. For this purpose the Consultant will establish a network database per kilometers of the network in Excel presenting the different attributes of the network for each kilometer of the network (roughness, traffic, surface distress, etc.). Another Excel table will be created presenting the average characteristics of each homogeneous road section, to be defined by the Consultant,

and the corresponding economic evaluation results and other multi criteria analysis indicators.

9. The network evaluation will compare from one to four road works alternatives per road section and will schedule them in different years, for example, 2006, 2007, 2008 and 2009. The network evaluation will present the recommended work program under a no budget constraint scenario as well as the recommended work program optimized with HDM-4 for different budget constraint scenarios. The network evaluation will also present the consequences of budget constraints to the economy, the road agency, the road users and the infrastructure.



## **Annex 6: Social Impact Management**

1. The mission discussed with PIU staff and the consultant team selected for preparing the project feasibility report on the social aspects of the project particularly those relating to social safeguards including resettlement and rehabilitation (R&R) and indigenous people (referred as tribal). The mission explained the Bank's policy on involuntary resettlement and indigenous peoples and shared its operational policy (OP/BP) 4.12 on involuntary resettlement and OP/BP 4.10 on indigenous people.
2. The mission visited one of the proposed priority roads (Jagatpur-Kendrapara-Chandbali-Bhadrak) where the carriage width varied mostly between 3.5 – 5.5 meters. This road goes through one of the densely populated areas of the state and hence faces traffic congestion. At the same time, the right of way is encroached at several places. Any project interventions, in terms of widening the carriage width and providing shoulders and drainage will require a systematic assessment of adverse impacts of the project on the local population. The mission reiterated its earlier recommendation that PWD maintain the status quo of the existing land use of the right of way (ROW) for the road stretches proposed to be included under the project until a social impact assessment is carried out as part of the project preparation. The mission appreciated the efforts made by some of the divisional engineers to prepare strip plans identifying the ROW and carriage width. It was strongly suggested that these strip plans should also identify the present utilization of ROW and indicate the extent of encroachment and existence of public utilities. A typical format for collecting existing utilization of ROW and a typical strip plan have been shared and enclosed with this report (Attachments 1 & 2). The consultants undertaking social assessment will cross check the strip plans prepared by PWD with revenue records and update them based on field level assessment. PWD and Revenue Department (RD) will jointly verify these strip plans and attest by them. These plans will then be the basis for carrying out the census survey of potential affected people.
3. RD shared with the mission draft (June 2005 version) state level R&R policy covering all sectors (including linear projects) and requested to communicate Bank's comments and suggestions to improve the policy and its effectiveness. The mission was informed that the draft policy has been referred to a sub-committee of legislators which is expected to give its report by mid October 2005 and that the policy might get cabinet approval by end October, 2005. However, as a back up the mission advised that PWD start developing an entitlement framework for affected persons of the project mostly drawing from the provisions of the draft state policy.
4. The mission met with the PIU member, seconded from RD to work on land acquisition and the resultant resettlement. However, the discussions revealed that his primary responsibility is with the National Highways and that the work in PIU will be an addition to his regular work. The mission pointed out that the work on social issues and coordination with district authorities on land acquisition and resettlement under the project requires a full time engagement. Accordingly, the mission advised to relieve the designated person of his responsibilities with the Highways department and ensure his availability to work full time in PIU.
5. The mission had discussions with the state HIV/AIDS Cell and learnt that according to a survey carried in the state identified 10 districts (most of these are covered under the proposed road improvement) as highly vulnerable to HIV/AIDS while there are 11 districts which are moderately vulnerable but might become vulnerable with increase in road traffic. The state, through the Cell, has gained some experience of working with truckers and other road users to contain the spread of HIV/AIDS. The Cell is presently implementing two

projects working with more than 17,000 truckers on two road stretches. Two more stretches are being covered by NGOs but with no support from the Cell. Discussions with the Director of the HIV/AIDS Cell revealed that the Cell is interested in covering more road stretches to work with road users and has plans to cover all highways passing through the vulnerable districts to contain the spread of HIV/AIDS in the state. Activities being implemented are information and education campaign, preparing and putting visible messages on HIV/AIDS on the highways, identifying Peer educators and building their capacity to respond to HIV/AIDS issues, interventions at strategic locations (such as petrol pump, auto repair shops, eating places, check gates) and installation of condom machines.

**Attachment – 1:  
Format to collect information on the utilization of ROW**

Chainage	Road side		Existing ROW	Existing carriage width	Structures		land		Utilities	
	Left	Right			Distance from CL	Area within ROW	Distance from CL	Area within ROW	Distance from CL	Area within ROW

ROW- right of way, CL – central line

Attachment 2 - Typical Strip Map

