Management Agreement (IMA) will be entered into upon by PRDP and the Provincial Government of Oriental Mindoro to guaranty its equity for the subproject and assume full-scale implementation and completion of subprojects in accordance to the approved plan and specifications and the commitment to ensure the project sustainability.

C.2 Project Implementation

The proposed subproject will be undertaken by contract by the lowest evaluated Contractor as a result of competitive bidding in accordance with the WB procurement guidelines.

Project implementation shall officially start seven days after the issuance of the Notice to Proceed to the winning contractor up to the scheduled project duration estimated to be completed within a period of 101 Calendar days.

C.3 Project monitoring and supervision

A Project Supervision Team shall be created through an Executive Order by the Governor, which shall be composed of competent and experienced local Engineers and staff, with experience in contract management and project supervision.

The responsibility of the team is to ensure that the contractor carries out the works timely, of good workmanship and quality and in accordance to the plans and specifications.

C.4 Operation and Maintenance scheme

To ensure the project's sustainability, the PGOM in coordination with the concerned Barangays shall provide in their respective budget the necessary annual funding and manpower requirements for the subproject's operation and maintenance.

Road Maintenance works are classified as Routine and Periodic. Routine Maintenance activities are done throughout the year and are labor intensive; Works normally includes repair of potholes,clearing of drainage canals, declogging of RCPC every six months, clearing and grubbing of shoulders three times a week and repair of grouted riprap canals every year. Given the intensity and character of these activities, it is appropriate that the responsibility falls in the provincial and barangay level. This will promote greater sense of responsibility and ownership of the project.

D. Social Safeguards Aspect

D. 1 Project Beneficiaries

The Barangay Bagong Silang, Macatoc, San Gabriel, Loyal and Antonino (five barangays) comprises the Municipality of Victoria are the target beneficiaries of the proposed farm-to -market road are mostly agricultural farmers. The total population is about 7,510 with a total households of 1,570 based on the NSO Census on Population of 2010.

All of the barangays covered are classified as agricultural area of which volume of citrus/ calamansi and other fruit bearing trees are derived from the area. Most of household means of income are derived from the agriculture. About 338.69 MT of calamansi, 236.59 MT of citrus, 78.05 MT of banana, 275.36 MT of rambutan, 469.62 of lanzones and 147.71 MT of coconut are the volume of agricultural products coming from the covered and influence barangays.

The concreting of the 2.7882 kilometer farm-to-market road was the priority project of the community during the conduct of barangay consultation. The barangay officials are also very supportive for the implementation of the proposed project as attested by Hon. Mayor Alfredo G. Ortega, Jr..

The beneficiaries confirmed that the proposed road section is their top priority infrastructure project and guarantee full support for the realization of the said project. The proposed road will serve as the main access of the barangays to connect with the provincial road and to the poblacion, where the market, social and medical services are available.

D. 2 Indigenous Cultural Community/Indigenous Peoples (ICC/IP)

The proposed road project is not within and will not traverse an ancestral domain or neither affects any Indigenous Peoples. The *Mangyan* tribe are known in the Province of Oriental Mindoro however, no identified/registered IPs will be affected within the proposed project site.

D. 3 Site and Right-of-Way Acquisition

The proposed site is an existing barangay road with a total length of **2.7882 kilometers**. The existing road width of 4 meters within the road alignment is not within the required width of PRDP.

To ensure the smooth implementation of the project, respective Barangay Officials and the local communities assure the right of way for the project. Landowners voluntarily donated the portion of their property within the right of way required by the program. The Local Government Unit will shoulder expenses for the notarization and resurvey of the affected lands as part of the agreement between the donor and donee.

The area is generally agricultural per municipal land use classification and category. Below is a table showing the name of landowners with the corresponding area affected or traversed by the existing FMR.

TABLE 12

Name of Landowners	Area Affected/Acquired (in Sq. m.)	Name of Barangay	Remarks
1. ANGELO CEASAR A. NUÑEZ	1,610.00	Macatoc	Donated
2. MARIA MADRIGAL	688.50	Bagong Silang	Donated
3. GREGORIO ILAGAN	1,595.00	Bagong Silang	Donated
4. BETTY VERGANIO	2,250.00	Bagong Silang	Donated
5. VICTOR ORTEGA	975.00	Bagong Silang	Donated
6. GREGORIO HORA	500.00	Bagong Silang	Donated
7.NORA DE CASTRO RAQUIDAN	715.00	Bagong Silang	Donated
8. RIZALINA ORNOS	573.50	Bagong Silang	Donated

9. LEONA MANGURALI	606.50	Bagong Silang	Donated
10. ELISA GATONG	339.00	Bagong Silang	Donated
11. ANGELES VERGARA	551.00	Bagong Silang	Donated
12. JOSELITO ESCALA	184.00	Bagong Silang	Donated
13. RAMIL ORNOS	484.50	Bagong Silang	Donated
14. RUEL VERGARA	385.50	Bagong Silang	Donated
15. VICTOR DIMAANO	579.50	Bagong Silang	Donated
16. NORMA VERGARA	284.50	Bagong Silang	Donated
17. ROBERTO SANSANO	1,250.00	Bagong Silang	Donated
18. JAIME POTE	610.00	Antonino	Donated
19. PERLITA LOPEZ CASABAR	1,305.00	Antonino	Donated
20. LEOFOLDO LIWANAG	412.50	Bagong Silang	Donated
21. RENATO IRASUSTA	750.00	Bagong Silang	Donated
22. NIEVES ILAGAN REOLA	1,020.00	Bagong Silang	Donated
23. GORGONIA MINA	2,196.00	Bagong Silang	Donated
24. LEONOR NUÑEZ	992.00	Bagong Silang	Donated
25. MARIA TUGADE TABANCAY	286.50	Bagong Silang	Donated
26. ROSALINA T. MAGBANUA	1,227.50	Bagong Silang	Donated
27. FELEPE NAGPALA	1,247.00	Bagong Silang	Donated
28. RODRIGO LUIS	1,235.00	Bagong Silang	Donated
29. EVELYN CAYABYAB	158.00	Bagong Silang	Donated
30. PRECILLA CANUMOY	331.00	Bagong Silang	Donated
31. FELOMINA BALANAG	5,822.50	Bagong Silang	Donated
32. JAIME SANSANO	276.00	Bagong Silng	Donated
33. RUPERTA DELA AUSTRIA	1,186.00	Bagong Silang	Donated
34. JAIME POSTILOS	65.50	Bagong Silang	Donated
TOTAL AREA	**32,692.00**		

D. 4 Damage to Standing Crops, Houses and/or Properties

Concreting of Bagong Silang - Macatoc FMR will affect cutting of several fruit trees *(e.g Calamansi, Mango, and Lanzones etc.)* planted in the area traversed by the FMR. The waiting shed located at Brgy. Antonino is the only structure that will affected by the said project. The waiting shed will be setback and restored in the same location and expenses to be incurred shall be shouldered by the PLGU on top of their equity for the proposed FMR sub-project.

D. 5 Physical Displacement of Persons

The proposed project will not result in the relocation of houses and will not displace any persons. During the road survey, there are no houses and other properties within the road right of way that would be affected by the project.

D. 6 Economic Displacement of Persons

There are about 31 Project Affected Persons (PAPs) in Brgy. Bagong Silang, 1 PAPs in Brgy. Macatoc and 2 PAP in Brgy. Antonino in terms of land acquired during the implementation of the project. However, they are not considered as economically displaced persons because the acquired right of way area for the road widening is

insignificant compared to their total landholdings and it will not reduce access and loss of their traditional livelihood sources.

E. Environmental Safeguards Aspect

E. 1 Natural Habitat

The proposed project site is not within an officially declared or proposed protected area of natural habitat. There are no identified important species present in the project site. Vegetations along the roadside are mostly shrubs and fruit trees.

E. 2 Physical Cultural Resources

There are no physical cultural resources present within the proposed road and its road influence area.

E. 3 Terrain, Soil Types and Rainfall

The topography of the proposed subproject site is relatively flat. The types of soil within the project area its capability and qualities are basically important in the planning of land use. There are three (3) types of soil classified as: Maranlig Clay, Luisiana Clay and Catanauan Silt Loam.

The annual rainfall for the municipality of Victoria has been recorded to be 1,930 mm with the months of October, November and December as the period where rain mostly occur while the months of March to April as the driest period. Relative humidity increases to 86.6% during the rainy months of October and November. Temperature records showed that highest temperature is 33^0 Centigrade occurring during the month of May while the lowest temperature of 22^0 Centigrade occurs in January. Prevailing wind comes from the northeast direction.

E. 4. Drainage Situations and Flooding Potential

Storm water runoff will increase as a result of a wider span of cleared area for the ROW and the increase of runoff coefficient. Flooding on the road surface is mitigated by the construction of drainage canal leading the runoff immediately outside of the roadway to the intercepting outlets. To minimize the increase of the quantity of flows on the receiving river, appropriate flooding measures such as planting of trees and vegetation on riverbanks.

E. 5 Impacts during Construction

(a) Temporary erosion and sediment control

Excavated materials will consist mainly of soil and are unlikely to generate significant sediments.

(b) *Construction noise mitigation*

There are houses along and nearby the construction site especially along the built up areas. The construction involves the operation of heavy equipment and will undoubtedly generate loud noise. As a mitigating measures work activities should be avoided during quiet periods of the day or during night time.

(c) Proper handling of construction wastes

The subproject will entail drainage excavation of which 3,495.41 cubic meters of soil to be disposed. Disposal site will be identified during implementation in coordination with the barangay officials and as approved by the Project Engineer. This will minimize the amount of site litters and will prevent the indiscriminate dumping of surpluses along the roadside. Assurances is made by the PLGU that these wastes will be collected and properly disposed of in accordance with the Contract between the contractor and PLGU.

(d) Safety

Safety of workers and the public must be given priority. Standard construction safety protocols must be observed, such as posting of road signs and provision of traffic personnel.

E. 6 Environmental and Social Management Plan

Name of Road	:	**Concreting of Bagong Silang - Macatoc FMR**
Location	:	**Bagong Silang & Macatoc, Victoria, Oriental Mindoro**
Implementing LGU	:	**PLGU of Oriental Mindoro**
Estimated number of Beneficiaries	:	**7,510 Population or 1,570 Households**
Type of Work	:	**Concreting of Road**
Estimated TPC	:	**PHP 20,610,078.11**

1. Site and Design Consideration

a. The Road does not encroach into or traverse any declared protected area of natural habitat.

b. The subproject will not displace, disfigure or render inoperable/inaccessible any monument or physical structure of known cultural and historical significance.

2. Environmental Issues and Mitigation Measures

Issue (Potential Impact)	Assessment (Sample assessments)	Mitigation Measure	Instrument of Implementation (POW, Contract, IDP, or O&M Plan)*
1. Temporary increase in sedimentation during construction	[ ] Topography of the road alignment necessitate massive earthmoving and cutting of clayey or loose topsoil. [ ] Cut materials will consist mainly of hard rocks and are unlikely to generate significant sediments. [x] Excavated materials will consist mainly of soil and are unlikely to generate significant sediments.	[ ] Earthmoving/ cutting of slopes to be done during dry months [x] Proper disposal and compaction of spoils [ ] No measures required	DED/POW; Contract
2. Potential contamination of surface and groundwater with oil/grease	[x] Waste oil and grease from equipment could contaminate surface water [ ] There will be no or insignificant amount of waste oil/grease	[x] Proper handling and disposal of waste oil and grease	Contract
3. Potential contamination with human waste	[x] Construction workers would be temporarily housed in a base camp [x] Workers would be mostly locals and are expected to go home to their respective houses after works	[x] Set up adequate latrine/toilet facility at the base camp	Contract
4. Potential disruption of traffic flow	[x] The access road and/or segments to be rehabilitated need is vital to daily activities of the residents and farmers and need to be kept open to traffic during construction [x] The construction will not affect daily movement of residents and farmers	[x] Keep the road open to traffic flow and minimize disruptions along the access road and/or construction area; Provide adequate warning signs and traffic personnel when necessary; [x] Undertake regular maintenance measures on the passable portions of the roads [ ] No measures needed	Contract

Issue (Potential Impact)	Assessment (Sample assessments)	Mitigation Measure	Instrument of Implementation (POW, Contract, IDP, or O&M Plan)*
5. Potential dust/mud nuisance during construction	Roads could become powdery during dry days and muddy during rainy days of the construction period [ ] Access road and/or the construction/ rehabilitation works passes through a populated area [x] Access road and/or construction/ rehabilitation does not pass through any populated area	[x] Undertake sprinkling of road (including access roads) during dry days, and filling up of potholes during rainy days, especially in residential areas [x]Set up speed limits for vehicles, especially within residential areas [ ] No measures needed	Contract
6. Landslide/ erosion of exposed road sides resulting in sedimentation of waterways	[ ] The road will traverse a mountainous area necessitating deep cuts on mountainsides, particularly between stations: [ ] The exposed slopes will likely consist of highly erodible loose materials [ ] The cut slopes will be hard materials that would resist erosion [ ] The road passes through a relatively benign terrain, cuts will be minimal [x] The rehabilitation work does not involve additional road cuts	[ ] Include slope protection works [ ] Bioengineering with geomat and cover crop [ ] Fast growing shrub species [ ] Riprap [ ] Gabions [ ] Terracing [ ] Concrete protection wall [ ] Others _____)	DED/POW
7. Inadequate drainage resulting in flooding or ponding	[x] The road will block runoff, resulting in flooding on one side of the road during rainy days. [ ] Drainage issues unlikely	[x] Installation of cross drain at stations 0 +880 (2 - 0.610m dia x 8.0m, at sta. 1 + 275 (2 – 0.45m dia. X 8.0 m), sta 1+823 (2-0.610m dia x 8.0m), at sta. 2 + 300 (1 – 0.45m dia. X 8.0m),Additional 3 pcs. of 0.610 m dia RCPC at Existing RCPC at Sta. 0 + 185 & Sta. 0 + 314.20	DED
8. Potential increase use of pesticides due to intensification of cash crop production in the area	[ ] There is an ongoing IPM program of DA in the service area(for verification) [ ] Farmers in the service area have not been trained on IPM [x] There is a proposed	[ ] DA to continue to support IPM program [ ] LGU to Coordinate with DA on IPM training [x] PAGO to Coordinate with MAGO on Bantay Peste Brigade Program	Capacity Building Plan O & M Plan; Capacity Building Plan

Issue (Potential Impact)	Assessment (Sample assessments)	Mitigation Measure	Instrument of Implementation (POW, Contract, IDP, or O&M Plan)*
	Bantay Peste Brigade Program		
9. Potential acceleration of denudation of the upland/hilly areas due to intensification of crop production	[ ] The proposed road will connect to the market an upland/hilly area where farmers are currently practicing erosive farming techniques. The road could help accelerate the denudation of the upland/hillsides rendering them unproductive in a few years. [x] The road connects only lowland farms to the market	[ ] DA to coordinate with LGU for the introduction of sustainable upland farming systems in the area [x] No measure required	
10. Potential increased in encroachments of human activities into the nearby public forest	[ ] The proposed road will improve human access to the nearby public forest, resulting in increased slash and burn cultivation, illegal logging and poaching. [ ] The proposed road does not improve access to a public forest	[ ] Coordinate with DENR for the enactment of ordinance deputizing the local community to enforce forestry laws [ ] No measure required	O&M Plan; Capacity Building Plan
11. Local employment	[x] Construction will provide local employment opportunities [ ] Construction does not provide any local employment opportunities	[x] Hiring priority shall be given to qualified local residents; Implement I-BUILD Manual on local hiring [ ] No measures required	Contract
12. Conversion of Land-use/natural habitat due to quarry	[ ] the proposed quarry site is within a private land and need to convert existing land-use [x] Quarry site is existing and proven as a good source of quarry materials	[x] Quarry materials will be procured to existing quarry sites: River Quarry at Brgy. Alcate around 9.40 kms away from the SP site (accredited qualified source by DPWH) [x] Regular monitoring done by DPWH not to over quarry.	Certification
13. Potential damage to existing road due to hauling of quarry materials	[x]Sources of Quarry materials is 9.40 km (Item201,Sand,Gravel and Boulders) Transportation of quarry materials from source to FMR will cause damage to existing FMR	[x] Regular maintenance and repair of existing road by the contractor	Contract

3. Responsible Units

The Provincial Government of Oriental Mindoro, which is the implementing body, is the one responsible that all the mitigating measures should be properly implemented and monitored during project execution.

F. Financial Aspect

FINANCIAL REQUIREMENTS

The total estimated subcomponent project cost is **Php. 20,610,078.11**. The estimated base cost (materials, equipment & labor) is **Php 15,728,081.58**. The indirect costs include Contractor's Profit (8%), OCM of contracted items (9%) of contracted items only), and VAT (12% of estimated base cost, OCM and profit only) is **Php 4,881,996.52**. The other costs amounting to **Php. 1,572,808.16** comprises of Feasibility Study, Detailed Engineering Design (5% of base cost) and Engineering Supervision costs (5% of base cost), which will be part of LGU equity but not included in the cost sharing.

F.1 Total Financial Cost and Parameters

The total financial cost of the project includes cost of project preparation and construction phase and is estimated at **Php 22,182,886.26**.

Project preparation cost includes cost of survey, preparation of detailed engineering design and feasibility study and other miscellaneous cost. This is estimated at 10% of the project base (direct) cost at Php **1,572,808.16**. Meanwhile, the cost of engineering control and supervision is at 5% of the base cost.

In accordance with the guidelines and policy of PRDP, the cost component or Estimated Project Cost (EPC) that shall be funded out as regards to equity sharing is limited to the base cost plus indirect cost covering Overhead, Contingencies and Miscellaneous Expenses (OCM), Contractor's profit and Taxes. The estimation of these indirect costs is based on the DPWH Order No. 72, Series of 2012. Based on that same Department Order Taxes is computed at 12% of the Direct Cost plus OCM plus Contractor's Profit.

Below summarizes the Entire Cost of the project reflecting all the above-mentioned cost parameters.

TABLE 13
Total Financial Cost

Cost Parameters	Percent of Base Cost	Amount
I. Project Preparation Phase	10%	Php 1,572,808.16
Survey		
Detailed Engineering Design		
Feasibility Study		