6.2 Undertaking of Both Governments

(1) Undertaking of the Government of Japan

The Government of Japan intends to provide grant aid which covers the following steel materials. Refer to Table 6.2-1

1) Steel Girder

TABLE 6.2-1 STEEL MATERIALS SUPPLIED

Span Length	No. of Span	No. of Girder Per Bridge	Size of H-Beam Girder
12.0 m	1	4	700 x 300 x 13 x 24
16.0	1	4	700 x 300 x 13 x 24
17.0	2	4	700 x 300 x 13 x 24
18.0	2	4	792 x 300 x 13 x 24
19.0	6	4	800 x 300 x 14 x 26
20.0	7	4	890 x 299 x 15 x 23
21.0	2	4	900 x 300 x 16 x 28
22.0	3	4	900 x 300 x 16 x 28
23.0	5	4	912 x 300 x 18 x 24
25.0	7	5	900 x 300 x 16 x 28
Total	36		

2) Cross Beam

H-Beam ; 596 x 199 x 10 x 15
C-Beam ; 250 x 90 x 9
Plate ; 9 - 12mm in thickness

3) Shoe

Number of shoe ; 151 (Fix)
151 (Exp)

4) Drain Box

Number of box ; 96

5) Torque Wrench

Number of torque wrench ; 24

6) Steel Railing and Post for Bridge Approach

Per bridge ; 15.0m x 4 = 60m
Total ; 60 x 24 = 1440m

6.3 Implementation Schedule

There are several factors to be considered in proposing the implementation schedule, e.g.:

- Appraisal and Approval of the Project by the Government of Japan
- Exchange of Notes
- Construction Schedule

  Dry Season: from November to May
  Rainy Season: from June to October

- Budget Allocation

  1988: 20 million (Fixed)
  1989: 20 million (Amendable)

The Exchange of Notes between the Government of Japan and the Government of the Philippines is expected in the middle of April 1988.

The construction of substructures, especially the piers inside the rivers, shall be executed during the dry season, otherwise the use of cofferdams may be required. For the Project, the months of December and January were proposed as the best timing construction.

Taking into consideration the Project's magnitude, the tendering is scheduled to be held two times, one for two-span bridges in May 1988, and other for one-span bridges in July 1988. Consequently, construction will be commenced separately, in August and October 1988, respectively. The numbers of one-span and two-span bridges by Region is summarized in Table 6.3-1.

TABLE 6.3-1 ONE AND TWO-SPAN BRIDGES

Region	No. of 1-Span Bridges	No. of 2-Span Bridges	Total
II	-	2	2
IV-B	2	-	2
V	1	-	1
VI	-	2	2
VII	1	2	3
VIII	3	-	3
IX	1	3	4
X	4	-	4
XI	-	2	2
XII	-	1	1
Total	12	12	24

The proposed implementation schedule for Phase I Bridges is shown in Figure 6.3-1.

TABLE 6.3-1 PROPOSED IMPLEMENTATION SCHEDULE

Phase I Bridges

Activities \ Year		1987	1988														1989											1990
		F.Y 62					F.Y. 63											F.Y. 64										
		Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
Basic Design (Phase I)		F/R																										
Appraisal and Approval					A/C	E/N																						
Detailed Design of Superstructure																												
Tendering (Steel Materials)																												
Steel Materials	Fabrication																											
	Shipment																											
Detailed Design of Substructures and Access Roads																												
2-Span Bridges (12 Br.)	Tendering																											
	Construction of Substructures and Bridge Approaches																											
	Transportation and Erection of Steel Girder																											
	Construction of Deck Slabs and Accessories																											
1-Span Bridges (12 Br.)	Tendering																											
	Construction of Substructure and Bridge Approaches																											
	Transportation and Erection of Steel Girders																											
	Construction of Deck Slabs and Accesories																											

6.4 Fund Preparation

The fund to be prepared for the Project by the Government of the Philippines is about 44 million pesos. The Public Investment Program (PIP) of the Philippines includes the budget allocated for the Project as shown in Table 6.4-1.

TABLE 6.4-1 BUDGET ALLOCATED FOR THE PROJECT

In Thousand Constant Price

Project		1988	1989	1990	Total
Bridge Reconstruction	TP	20,000	20,000	96,000	136,000
	P	20,000	20,000	96,000	136,000
	S	0	0	0	0

NOTE: TP = Total Pesos
P = Peso Portion
S = Foreign Portion

The budget allocated for the Project for the fiscal 1988 and 1989 is 40 million pesos, and 4 million pesos are lacking.

The DPWH representatives indicated that the budget for fiscal 1988 was already fixed, but that for 1989 can be adjusted.

It is, therefore, recommended that the budget for 1989 be ammended in accordance with the construction cost estimated through the detailed design.

6.5 Design and Construction Supervision Plan

The Assistant Secretary for Planning is responsible for the execution of the Project under the instructions of the Secretary of the DPWH.

The Bureau of Design shall be in charge of design works for the Project including the following major works.

- Design and cost estimates of substructures
- Cost estimates of transport of steel materials and erection work
- Design and cost estimates of slab and wall
- Design and cost estimates of drainage system and calverts
- Design and cost estimates of river bank protection
- Design and cost estimates of bridge approaches

The Bureau of construction shall be in charge of tendering for the project including the following services.

- Preparation of constract documents such as price analysis, specification, pre-qualification formats, etc.
- Execution of tendering

The Regional Offices concerned shall be involved in the construction supervision of bridge construction in their respective regions. The regional directors/their representatives shall directly oversee the workmanship of construction by contractors.

Figure 6.5-1 shows the organizations for the execution of the Project.

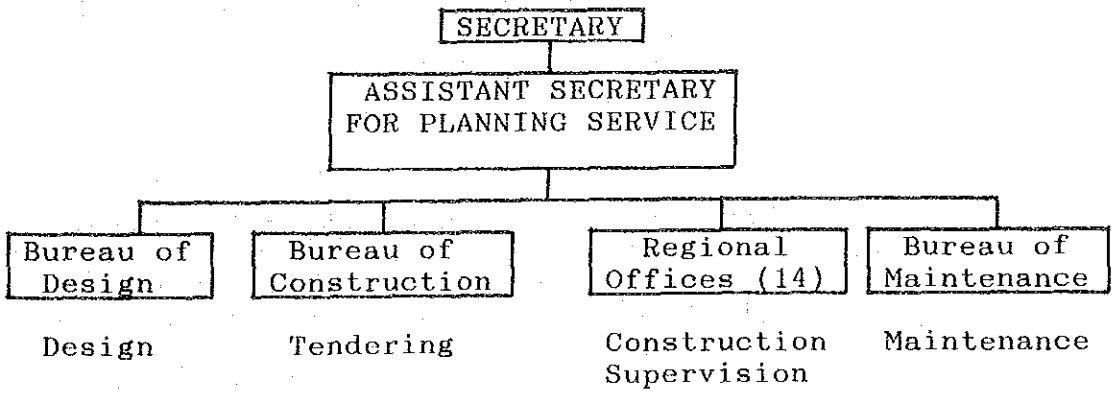

FIGURE 6.5-1 ORGANIZATION FOR EXECUTION OF THE PROJECT

6.6 Maintenance Plan

The Bureau of Maintenance is responsible for the maintenance of national roads and bridges in the Philippines.

There are four (4) categories of maintenance in the DPWH as follows:

- Routine Maintenance ---- day-to-day basis throughout the year
- Periodic Maintenance --- a recurrent time cycle of more than one year
- Emergency Maintenance -- unprogrammed activities required in the aftermath of slides, floods, etc.,
- Special Maintenance ---- outside the scope of normal maintenance operations.

In the Philippine Highway Maintenance Management System (PHMMS), there are 56 work activities at present, of which eight (8) activities are related to bridge maintenance, as shown in Table 6.6-1.

TABLE 6.6-1 MAINTENANCE ACTS FOR BRIDGES

Act No.	Activity
151	Cleaning of Bridges
152	Patching of (PC) Concrete Decks
153	Repair of Concrete Bridges
154	Repair of Steel Bridges
155	Repair of Bailey Bridges
157	Clearing Bridge Waterways
402	Initial Response to Emergencies - Bridges
65X	Bridge Repainting

Table 6.6-2 shows the Activity Standards adopted in PHMMS only for those items necessary for the maintenance of steel bridges. Since these activity standards are well established, timely application of these maintenance activities are highly recommended.

TABLE 6.6-2(1) MAINTENANCE OF BRIDGES

ACTIVITY STANDARD

Effective Date: 01 January 1985 MPWH - Highway Maintenance

ACT NO. 151 Name: Cleaning Bridges

DESCRIPTION: Use this activity for cleaning bridge deck wearing surface (including sidewalks), drains, rail posts and railings, wingwalls, joints, seats, tops of piers and lower chords of trusses, etc. Includes removal of unauthorized writing, but does not include painting for beautification purposes 1/.

PURPOSE: To prevent deterioration due to abrasion, corrosion, rutting and inadequate expansion and to provide safety to the travelling public.

AUTHORIZATION: District/City Engineer WORK CONTROL CATEGORY: Limited

SCHEDULING: Schedule each bridge at least once a year. Schedule prior to or during the rainy season so that rains flush the bridges. In addition to annual cleaning, schedule problem bridges as needed.

TYPICAL CREW:

1. Operator*
2*-4 Laborers

*If air compressor is used

TYPICAL WORK METHOD

1. Place safety devices.
2. Place scaffoldings if needed.
3. Perform required cleaning
4. Remove scaffolding if used.
5. Remove safety devices

TYPICAL EQUIPMENT:

No.	Code	Description
1	A1	Air compressor*
		Hand Tools
		Safety Devices

*Cleaning with compressed air is preferable to hand cleaning

TYPICAL MATERIALS:

Code	Description
	None

DAILY PRODUCTION RANGE:
12-24 linear meters of bridge cleaned

NOTES: 1/ Use Act. 209 for painting concrete parts for beautification purposes.

TABLE 6.6-2(2) MAINTENANCE OF BRIDGES

ACTIVITY STANDARD

Effective Date: 01 January 1985 MPWH - HIGHWAY MAINTENANCE

ACT. NO. 154 NAME: Repairs to Steel Bridges

DESCRIPTION: Use this activity for minor to moderate routine repairs to steel bridges (including composite bridges). Repairs to bituminous overlays on bridge deck are included. Concrete deck patching (Act. 152), repairs to approach pavement/surface repairs, involving structural analysis and emergency repairs are not included.

PURPOSE: To maintain bridges in as-constructed conditions.

AUTHORIZATION: District/City Engineer WORK CONTROL CATEGORY: Limited

SCHEDULING: Schedule repairs of hazardous conditions as soon as possible. Schedule repairs of non-hazardous defects/deficiencies as needed to maintain as-constructed conditions

TYPICAL CREW:

1. Foreman
2. Driver*

3-5 Laborers or Artisan (Maintenance Man)

*If service vehicle is used

TYPICAL EQUIPMENT:

No.	Code	Description
1	H1	Service Vehicle*
		Hand Tools
		Safety Devices

*For several work locations during the day

TYPICAL MATERIALS:

Code	Description
13/23	Gravel
12/22	Sand
14/24	Boulders
30	Bituminous Hot Mix
31	Bituminous Cold Mix
32	Emulsified Asphalt
41	Portland Cement
61	Lumber*
64	Bridge Paint

*Not to be reported

TYPICAL WORK METHOD

Work includes but not limited to:

1. Repair of:
   a. Deck wearing surface
   b. Joints
   c. Railings
   d. Sidewalks and Curbs
   e. Riprap and other erosion protection at abutments
2. Spot Painting of:
   a. Steel Members
3. Patching of:
   a. Abutment and Pier Surfaces

DAILY PRODUCTION RANGE:
1 - 3 bridges repaired

NOTE: 1/ Use Act. 71x for major repairs and repairs involving structural analysis.

2/ Use Act 209 for painting concrete parts for beautification purposes.

TABLE 6.6-2(3) MAINTENANCE OF BRIDGES

ACTIVITY STANDARD

Effective Date: MPWH - Highway Maintenance

ACT. NO. 157 NAME: Clearing Bridge Waterways

DESCPRITION: Use this activity for removing debris or sand and gravel bars from waterways at the immediate vicinity of the bridge. Clearing the waterway beyond the right-of-way limits not included.

PURPOSE: To keep clear the bridge opening to full flood capacity.

AUTHORIZATION: District/City Engineer WORK CONTROL CATEGORY: Unlimited

SCHEDULING: Schedule when siltation and sedimentation occur within the bridge structure. Schedule annual cleaning during the dry season or when the bed can support equipment.

TYPICAL CREW:

1	Foreman
1	Operator*
1	Driver
2*-5	Laborers

* When equipment is used

TYPICAL EQUIPMENT

No.	Code	Description
1	L2	Front-End Loader* or
1	L1	Crawler-Mounted Tractor*
1	H3	Dump Truck

* Used when bed will support equipment

TYPICAL MATERIALS

TYPICAL WORK METHOD:

1. Take cross-section of the riverbed within the bridge right-of-way.
2. Plot the finish elevation of the riverbed and measure the volume of be removed.
3. Bring in equipment and remove the debris or sand and gravel sedimentation.
4. Throw debris out of the riverbed.
5. Use excavated sand or gravel to fill low portion downstream or bring out of riverbed and throw where it will not cause sedimentation again, or if the material passes the specification for road surfacing same may be stockpiled within the road right-of-way for maintenance use.

DAILY PRODUCTION RANGE:

100 m^3 of sediment cleared.

NOTES: (1) Use Act. 402 for removal of debris during floods.
(2) This activity does not include clearing beyond the road right-of-way limits.

TABLE 6.6-2(4) MAINTENANCE OF BRIDGES

ACTIVITY STANDARD

Effective Date: 01 January 1985 MPWH-BO

ACT. NO. 65x NAME: Bridge Repainting

DESCRIPTION: Use this activity for complete repainting of steel member of bridges.

PURPOSE: To paint steel member of bridges for protection against erosion.

AUTHORIZATION: Regional Director WORK CONTROL CATEGORY: Project

SCHEDULING: Schedule after regional approval is received.

TYPICAL CREW:

1 Foreman
6-10* Laborers including artisans (maintenance men)
1 Driver

TYPICAL WORK METHOD:

1. Place safety devices.
2. Place scaffoldings, if needed.
3. Clean steel members, removing all corrosion.
4. Paint with primer immediately following cleaning
5. Apply final paint coat.
6. Remove safety devices.

* If no equipment is used

TYPICAL EQUIPMENT:

No.	Code	Description
1	X5	Sand Blasting Equipment
1	A1	Air Compressor
1	X4	Paint Outfit (Including paint spray gun)
		Hand Tools*
		Safety Devices
		Scaffoldings

* Includes steel brushes

TYPICAL MATERIALS:

Code	Description
64	Bridge Paint

DAILY PRODUCTION RANGE:

1 bridge painted every 5 to 10 days

NOTES: (1) Use the appropriate subgroup 15 - activity for spot repainting
(2) Use Act. 689 for transporting equipment and material to the job site.

6.7 Construction Cost

The construction cost be borne by the Govement of the Philippines was roughly estimated at 44 million pesos, as shown in Table 6.7-1.

TABLE 6.7-1 COST OF THE GOVERNMENT OF THE PHILIPPINES

Item	Quantity	Unit Cost	Cost
Abutment	48	252,000	12,100,000
Pier	12	317,000	3,800,000
In-Land Transportation and Erection of Steel Girder	970 t	690,000	6,700,000
P.C.C. Slab and Others	6360 m2	2,400	15,300,000
Bridge Approach	360 m	7,600	2,700,000
Culvert Box and Others	20	100,000	2,000,000
River Protection	9000 m2	150	1,400,000
Total			₱44,000,000

CHAPTER 7

EVALUATION OF THE PROJECT

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EVALUATION OF THE PROJECT

Traffic interruption due to the failure of old and weak bridges imposes direct and indirect constraints upon people's activities, as well as in the economic and development activities within the influence area of the bridges. This incidence creates the belief on the road unreliability which in turn, discourages, to a certain degree, the private sector's plans to invest in these areas.

The Project, when completed, is envisioned to provide basic transport access in rural areas with rich potential, especially improved transport facilities which will eliminate severe constraints to increase productivity and social advancement.

The effects of the Project, therefore, will be evaluated not only from their impact on traffic function, but also from the socio-economic point of view.

(1) Direct Effects

The direct effects that will be delivered from the Project accrue mainly from direct reductions in traffic costs to the road users. This includes vehicle operation, travel time, accidents and discomfort. And as for government's administration costs, maintenance and restoration cost savings and salvage value are expected.

The actual benefits of this project are as follows.

1) The problem of traffic closure in the rainy season will be solved.

2) Transportation time will be shortened.

3) The safe passing of the heavy construction equipments, heavy trucks, etc. will be ensured.

4) The function of rural road network will be improved.

5) The traffic safety will be considerably improved.

(2) Indirect Effects

The various indirect effects of the Project which can not be quantified were likewise assessed from the point of view of socio-economic impact. These effects are as follows.

1) Contributing to attaining a better life.
2) Activating social activities.
3) Generating greater opportunities for employment.
4) Minimizing disparities between localities.
5) Stabilizing commodity prices.
6) Developing agricultural and industrial productivity.
7) Promoting rich investment from private sector.

Overall, the Project will serve as an incentive for increased participation by the rural population in economic activities. Furthermore, it has an impact to bring the people living in isolated and remote areas into the mainstream of social and economic activities in the country.

CHAPTER 8

CONCLUSION AND RECOMMENDATION

CHAPTER 8

CONCLUSION AND RECOMMENDATION

8.1 CONCLUSION

The Project aimes to secure the transport in the areas, where often isolates during rainy seasons, by replacing old temporary and dilapidated bridges along rural roads by permanent steel structures.

In January 1987, the Philippine Government proposed the "Medium-Term Philippine Development Plan 1987-1992", which aims to increase the productivity in the rural areas and alleviate poverty. In the highway sector of the said Development Plan, an emphasis is put on the improvement of rural roads connecting the farm and the market. In line with this stress, replacement of old temporary and dilapidated bridges by permanent steel structures was taken as one of the most important strategies. This Project exactly coincides with the strategy of the Medium Plan. It is convinced that the Project shall promote the development of the rural areas, increase the employment oppotunities, and finally contribute to the continuous economic development. Therefore, to implement this project under the Japan's Grant Aid is considered to be quite worthwhile and appropriate.

8.2 Recommendation

Considering the present socio-economic situation of the Philippines, the development of rural areas and the increase of employment opportunities therein are the most urgent issues. Since this Project contributes greatly to improve this situation, its prompt implementation is required. Thus, it is agreed between both Philippine and Japanese Governments, that the replacement of all the proposed bridges for Phase I shall be completed within one year after the delivery of the steel materials.

To meet this requirement and complete the Project as per schedule, the proper undertakings of the Philippine Government are indispensable, and the following recommendations are given to achieve this goal.

(1) The necessary budget for this Project shall be promptly appropriated.

The construction cost to be prepared by the Philippine Government is approximately 44 million pesos. However, the Public Investment Program (PIP) of the Philippines indicates that the budget allocated for this project for the years of 1988 and 1989 is 40 million pesos each and is short by 4 million pesos. Therefore, the budget shall be ammended in accordance with the construction cost estimated through the detailed design.

(2) The proper organization shall be established for implementation of this project.

This Project shall be implemented under the jurisdiction of the Department of Public Works and Highways of the Philippine Government. The Assistant Secretary for Planning will be responsible for the implementation of this Project. The Bureau of Design, the Bureau of Construction, and Regional Offices shall be in charge of design work, tendering, and supervision, respectively. For proper implementation of this Project, the required number and level of engineers and man-power should be allocated.

(3) The implementation schedule of this Project shall be established considering the following timing of each item.

The construction schedule, especially the schedule for substructures which involves the piers inside the rivers shall be programmed in the months of December and January which are dry season in order to avoid the use of cofferdams. Therefore, tendering and construction shall be set considering the above.

The proposed bridges shall be classified by one-span and two-span bridges. The two-span bridges shall be tendered in May, 1988, and the construction shall be commenced in August, 1988. One-span bridge shall be tendered in July, 1988 and the construction shall be commenced in October, 1988.

(4) The detailed engineering shall be implemented considering the following items.

The detailed design of superstructures will be undertaken by the Japanese Consultants. The design and construction of substructures, bridge approaches and other structures shall be the responsibility of the DPWH.

The deisgn criteria to be adopted for the design of superstructures and substructures shall be the one which agreed between the DPWH and the Study Team. The design shall be undertaken in accordance with the agreed design criteria.

The locations of bridges are indicated in the proposed general views of bridges, but the final location of each bridge shall be determined by the DPWH considering their topographic conditions, flooding, alignment and construction methods. However, these change will not alter the length or type of superstructures.

APPENDIX I

MEMBERS AND ITINERARY

OF

THE BASIC DESIGN STUDY TEAM

LIST OF PERSONS MET

1. Member of the Study Team

Leader	:	Mr. Hiro-o Jin Head of Research Division, Planning and Development Department. Honshuu-Skikoku Bridge Authority
Steel Supply Planning	:	Mr. Toshiyuki Arimoto Chief of Operation Section, Iron and Steel Administration Division, Basic Industries Bureau, Ministry of International Trade and Industry
Project Coordinator	:	Mr. Juro Chikaraishi Second Basic Design Study Division, Grant Aid Planning and Survey Department, Japan International Cooperation Agency
Bridge Construction Planning	:	Mr. Tsuneo Bekki Katahira & Engineers Inc.
Bridge Designing	:	Mr. Nobuyuki Uchida Katahira & Engineers Inc.
Implementation Planning	:	Mr. Minoru Miura Katahira & Engineers Inc.
Cost Estimation	:	Mr. Sumio Akutso Katahira & Engineers Inc.

2. Itinerary

1.	24th November 1987 Tue.	- Arriving Manila
		- Meeting at Embassy of Japan, JICA
2.	25th November 1987 Wed.	- Meeting with DPWH
		- Explanation of Inception Report
		- Collection/Review of Data
3.	26th November 1987 The.	- Data Analysis,
		- Discussion among Study Team
4.	27th November 1987 Fri.	- Site Survey, Bridge No. 0401a, 0403a
5.	28th November 1987 Sat.	- Data Analysis,
		Discussion among Study Team
6.	29th November 1987 Sun.	- Review of Data
		- Selection of Phase I Bridges
7.	30th November 1987 Mon.	- Review of Data
		- Selection of Phase I Bridges
8.	1st December 1987 Tue.	- Technical Discussion with DPWH
		- Explanation of Phase I and Phase II Bridges
9.	2nd December 1987 Wed.	- Explanation of Phase I and Phase II Bridges
		- Discussion of Draft of Minutes
10.	3rd December 1987 Thu.	- Minutes signed
		- Meeting at Embassy of Japan, JICA
11.	4th December 1987 Fri.	- Messrs. Jin, Arimote and Chikaraishi, returned to Japan
12.	5th December 1987 Sat.	- Data Analysis
		- Preparation of General View of Bridges

13. 6th December 1987 Sun.	-	Data Analysis
	-	Preparation of General View of Bridges
14. 7th December 1987 Mon.	-	Data Analysis
	-	Basic Planning of Phase I Bridge
15. 8th December 1987 Tue.	-	Data Analysis
	-	Basic Planning of Phase I Bridge
16. 9th December 1987 Wed.	-	Data Analysis
	-	Basic Planning of Phase I Bridge
17.10th December 1987 Thu.	-	Basic Planning of Phase I Bridge
	-	Basic Planning of Phase II Bridge
18.11th December 1987 Fri.	-	Basic Planning of Phase I Bridge
	-	Basic Planning of Phase II Bridge
19.12th December 1987 Sat.	-	Basic Planning of Phase I Bridge
	-	Basic Planning of Phase II Bridge
	-	Identification of problems in Implementation of Phase I Bridges
20.13th December 1987 Sun.	-	Study of Construction Method of Phase I Bridges
	-	Rough Estimate of Construction Cost of Phase I Bridges
	-	Identification of problems in Impolementation of Phase II Bridges
21.14th December 1987 Mon.	-	Technical Discussion with DPWH
	-	Study of Construction Method of Phase I Bridges
	-	Rough Estimate of Construction Cost of Phase I Bridges
	-	Identification of problems in Impolementation of Phase II Bridges

22.15th December 1987 Tue. - Technical Discussion with DPWH

23.16th December 1987 Wed. - Technical Discussion with DPWH

- Guidance on Substructure Design and Pavement Design

24.17th December 1987 Thu. - Technical Discussion with DPWH

- Guidance on Substructure Design and Pavement Design

25.18th December 1987 Fri. - Study on Socio-Economic Impacts of Phase I Bridges

- Study on Maintenance System/ Organization for Phase I Bridges

26.19th December 1987 Sat. - Study on Socio-Economic Impacts of Phase I Bridges

- Study on Implementation Schedule of Phase I Bridges

- Study on Maintenance System/ Organization for Phase I Bridges

27.20th December 1987 Sun. - Study on Implementation Arrangement of Phase I Bridges

28.21st December 1987 Mon. - Technical Discussion with DPWH

29.22nd December 1987 Tue. - Meeting at Embassy of Japan, JICA

30.23rd December 1987 Wed. - Returned to Japan

List of Persons met

3. Persons whom the Study Team met are as follows

Name and Organization	Title
Japanese Embassy	
Mr. Yauaki Tanizaki	First Secretary
Mr. Koji Kaminaga	First Secretary
JICA PHILIPPINES OFFICE	
Mr. Katsuhiko Ohshima	Deputy Representative
Mr. Katsuhiko Ozawa	Staff
DPWH	
Mr. Toshiyuki Nakamura	JICA Expert (Highway, Traffic)
Mr. Fiorello R. Estuar	Undersecretary
Mr. Teodoro T. Encarnacion	Undersecretary
Mr. Jose F. Mabanta	Undersecretary
Mr. Manuel M. Bonoan	Asst. Secretary for Planning
Mr. Francisco N. Pascual	Director, Bureau of Design
Mr. Edmundor V. Mir	Director, Bureau of Construction
Mr. Linda M. Templo	Chief Civil Engineer DPD, Planning Service
Mr. Geronimo S. Alonzo	Chief Economist Engineer PMO -Feasibility Study
Mr. Crispin B. Banaga, Jr.	Chief Economist DPD, Planning Service
Mr. Paciano D. Tubal	Supvg. Civil Engineer Bureau of Construction
Mr. Carlos V. Rodriguez	Chief Civil Engineer Bureau of Design
Mr. Edwin C. Matanguihan	Supvg. Civil Engineer Bureau of Design
Mr. Rufino D. Valiente	Supvg. Civil Engineer Bureau of Design

APPENDIX 2

MINUTES OF DISCUSSIONS

MINUTES OF DISCUSSIONS
of
THE BASIC DESIGN STUDY ON THE PROJECT FOR CONSTRUCTING BRIDGES ALONG RURAL ROADS (PHASE I)
in
THE REPUBLIC OF THE PHILIPPINES

In response to the request by the Government of the Republic of the Philippines, the Government of Japan decided to conduct a basic design study on the project for constructing bridges along rural roads in the Philippines (Phase I) (hereinafter referred to as "the Project"). The Japan International Cooperation Agency (JICA) sent the Basic Design Study Team headed by Mr. Hiro-o JIN, Head, Research Division, Planning and Development Department, Honshu-Shikoku Bridge Authority, from November 24 to December 23, 1987.

The Japanese Team held a series of discussions and exchanged views on the Project with the authorities concerned of the Government of the Philippines.

As a result of the study and discussions, both parties mutually agreed to recommend to their respective Governments that the major points of understanding reached between them, attached herewith, should be examined toward the realization of the Project.

Manila December 3, 1987

Mr. HIRO-O JIN
Leader
Basic Design Study Team
JICA

MANUEL M. BONOAN
Assistant Secretary for Planning
Department of Public Works & highways

ATTACHMENT

1. The scope of the Japan's Grant Aid for the Project (Phase I) is to provide steel materials necessary for constructing bridges which are listed in Annex 1.

   Steel materials consist of:

   1. Steel Girder
   2. Cross Beam
   3. Shoe
   4. Drainage Box
   5. Torque Wrench
   6. Steel Railing and Post for the Bridge Approach

2. The Government agency in the Philippines responsible for the implementation of the Project is the Department of Public Works and Highways.

3. The bridges for Phase I are shown in Annex 1.

4. The candidate bridges for Phase II are shown in Annex 2.

5. The Team will convey to the Government of Japan, the desire of the Government of the Philippines that the former will provide necessary arrangements and steel materials necessary in implementing the Project within the scope of Japan's Grant Aid.

6. The Philippines side has understood the system of the Japan's Grant Aid and the necessity of engaging the services of a Japanese consulting firm for the implementation of the Project.

7. The Government of the Philippines will undertake to provide the necessary measures as listed in Annex 3 on condition that Japan's Grant Aid is extended to the Project.

8. The Government of the Philippines will provide the necessary budget and personnel for the proper and effective maintenance of the bridges to be constructed under the Japan's Grant Aid.

LIST OF BRIDGES FOR PHASE I

Bridges No.	Name of Bridges	L o c a t i o n
02.03	Baan Bridge # 2	Km. 246 + 171 Nueva Viscaya-Benguet Road Baan, Kayapa, Nueva Vizcaya
02.04	Diora Bridge	Km. 634 + 195 Dugo-San Vicente Road Sta. Ana, Cagayan
04.07b	Dipulao Bridge	Km. 2 + 706 Coron-Busuanga National Road Coron, Palawan
04.08b	Cogon Bridge	Km. 64 + 974 Odiongan (Tulay)-Looc Road Looc, Romblon
05.02	Patitinan Bridge	Km. 499 + 200 Sagnay-Tiwi-Albay Bdry. Road Patitinan, Sagnay, Camarines Sur
06.02	Cataan Bridge	Km. 65 + 930 Tiolas-Sinogbuhan Road San Joaquin, Iloilo
06.4	Guintas Bridge	Km. 106 + 500 Tapaz-Jamindan Road Jamindan, Capiz
07.03	Campanga Bridge	Km. 63 + 500 Carcar-Barili-Mantayupan Road Barili, Cebu
07.04	Camachiles Bridge	Km. 49 + 800 Toledo-Tabuelan-San Remegio Road Talavera, Toledo City
07.05	Lagnason Bridge	Km. 115 + 200 Anatalio Bacalso Avenue Lagunde, Oslob Cebu
08.01	Poray Bridge	Km. 1043 + 798 Jct. Buenavista-Lawa-an Road Parina, Balangiga, E. Samar
08.02	Iba Bridge	Km. 914 + 800 Basey-Magallanes Road Iba, Basey, Samar

LIST OF BRIDGES FOR PHASE I

Bridges No.	Name of Bridges	L o c a t i o n
08.05	Pinucawan Bridge	Km. 68 + 280 La Paz-Javier-Bito Road Javier, Leyte
09.01	Batungal Bridge	Km. 26 + 440 Isabela-Maluso Road Maluso, Basilan
09.02	Mangop Bridge	Km. 439 + 740 Sindangan-Liloy Road Zamboanga del Norte
09.03	Canawan Bridge	Km. 449 + 740 Sindangan-Liloy Road Zamboanga del Norte
09.04	Piangon Bridge	Km. 337 + 380 Dipolog-Sindangan National Road Sindangan, Zamboanga del Norte
10.02	Maradugao Bridge	Km. 1608 + 942 Maradugao-Camp Kibaritan Road Kalilangan, Bukidnon
10.03	Maundo Bridge	Km. 1386 + 957 Pulang Lupa-Patrocinto Road Sta. Josefa, Agusan del Sur
10.04	Sta. Irene Bridge	Km. 1282 + 110 Bayugan-Kalaitan-Tandag Road Sta. Irene, Agusan del Sur
10.05	Malubog Bridge	Km. 185 + 760 Labuyo-Tangub-Silanga Road Barangay 4, Tangub City
11.01	Lambunao Bridge	Km. 1267 + 027 Surigao Sur-Davao Coastal Road Lanuza, Surigao del Sur
11.03	Calabanit Bridge	Km. 1716 + 083 Davao del Sur-South Cotabato Coastal Road Glan, South Cotabato
12.03	Upian Bridge	Km. 239 + 002 Cotabato-Bukidnon Road Kimadzil, Carmen, North Cotabato

LIST OF BRIDGES FOR PHASE II

Bridges No.	Name of Bridges	L o c a t i o n
02.01	Sta. Cruz Bridge	Km. 640 + 747 Dugo-San Vicente Road Sta. Ana, Cagayan
02.02	Dumadata Bridge	Km. 339 + 770 Cordon-Diffun-Madella-Aurora Road Mangandingay, Cabarroguis Quirino
02.05	Diduyon Bridge	Km. 374 + 060 Cordon-Diffun-Madella-Aurora Road Maddela, Quirino
04.01a	Binambang Bridge	Km. 107 + 540 Balayan-Balibago-Calatagan Road Caloocan, Balayan, Batangas
04.03a	Leviste II Bridge	Km. 92 + 430 Talisay-Laurel-Agoncillo Road Laurel, Batangas
04.04b	Lumang Bayan Bridge	Km. 34 + 954 Mamburao-North Puerto Galera Road Orelan, Abra de Ilog Mindoro Occidental
04.05b	Olangoan Bridge	Km. 74 + 524 Puerto Princesa North Road Concepcion, Puerto Princesa City Palawan
04.06b	Bongabon Bridge	Km. 122 + 720 Calapan South-Bulalacao- San Jose Road Bongabon, Oriental Mindoro
05.03	Narangasan I Bridge	Km. 31 + 145 Jct. Tawad-Balud Road Milagros, Masbate
06.03	Iyang Bridge	Km. 109 + 962 Concepcion-San Dionisio National Road Concepcion, Iloilo
07.01	Banban Bridge	Km. 61 + 100 Pinamungahan-Aloguinsan- Mantalongon Road Pinamungahan, Cebu

LIST OF BRIDGES FOR PHASE II

Bridges No.	Name of Bridges	Location
07.02	Campacas Bridge	Km. 97 + 600 Dalaguete-Mantalongon Road Dalaguete, Cebu
08.03	Habay Bridge	Km. 1075 + 440 Liloan-San Francisco Road Habay, San Francisco, S. Leyte
08.04	Talisayan River Crossing	Km. 66 + 440 La Paz-Javier-Bito Road Talisayan, Javier, Leyte
09.05	Patunan Bridge	Km. 375 + 090 Dipolog-Sindangan Road Manukan, Zamboanga del Norte
10.01	Hayangabon I Bridge	Km. 1202 + 586 Surigao-Davao Coastal Road Hayangabon, Claver Surigao del Norte
11.04	Manay Bridge	Km. 1643 + 783 Davao Oriental-Surigao del Sur National Road Manay, Davao Oriental
12.01	Pikinit Bridge	Km. 136 + 936 Dobleston-Tukuran Road Caromatan, Lanao del Norte
12.02	Durugao Bridge	Km. 216 + 498 Awang-Upi-Lebak Road Durugao, South Upi, Maguindanao
12.04	Dangolaan Bridge	Km. 133 + 983 Dobleston-Tukuran Road Caromatan, Lanao del Norte
12.05	Sapakan Bridge	Km. 211 + 530 Dulawan-Marbel Road Sapakan, Maguindanao

The Government of the Republic of the Philippines will take necessary measures on the following matters:

1. To provide necessary data and information for basic design study.

2. To construct the bridges listed in Annex 1 within the period of 1 year after delivery of steel materials at designated port of entry provided under the Japan's Grant Aid.

3. To ensure prompt unloading and customs clearance at port of entry in the Philippines.

   - Tax exemption and customs clearances of the steel materials at the port of entry and prompt internal transportation therein of the steel materials provided under the Japan's Grant Aid.

4. To exempt Japanese nationals engaged on the Project from customs duties, internal tax and other fiscal levies which may be imposed in the Philippines with respect to the services to be rendered by said nationals.

5. To assume all the other expenses necessary for the construction of the bridges as well as for inland transportation of the bridge steel materials provided under the Japan's Grant Aid from the port of entry to each bridge site.

   - All necessary application for permits and their expenses as required by law in the Philippines.

6. To bear the following commissions to the Japanese foreign exchange bank/for the banking services based upon the Banking Arrangement.

   - Advising commission of Authorization to Pay
   - Payment commission

APPENDIX 3

LIST OF PROPOSED BRIDGES (ORIGINAL)

LIST OF PROPOSE BRIDGES

	Name of Project	Length	R e m a r k s
I	1. Malaya Bridge Tagudin, Cervantes Road Ilocos Sur, Km. 337 + 339	50 L.M.	Existing temporary bridge needs replacement
	2. Ellet Bridge Gurel - Bokod - Kabayan Baguias - Abatan Road, Benguet, Km. 324 + 730	25 L.M.	- do -
	3. Balacis Bridge Manila North Road Darat Sct. - Pinili - Nueva Era Road Ilocos Norte	50 L.M.	- do -
II	1. Lamo Bridge Daang Maharlika Jct. Lamo - Malasin Rd., Nueva Vizcaya	45 L.M.	Existing bridge totally washed out
	2. Cadcadin Bridge # 1 Bangag - Allacapan Magapit Road, Cagayan	30 L.M.	- do -
	3. Dumadata Bridge Cabarroguis, Quirino	30 L.M.	Existing Bridge needs replacement
III	1. Ligaya Bridge Km. 158 + 822 Tablang, Gabaldan - Quezon Road Nueva Ecija	25 L.M.	Existing bridge is in weak condition
	2. Pasong Inchic Bridge Nueva Ecija - Pangasian Rd. Nueva Ecija	50 L.M.	Existing bridge needs replacement
	3. Cabcaban Bridge Mariveles, Bataan	25 L.M.	- do -
IV-A	1. Sabang Bridge Km. 87 + 610 Calamba, Nagcarlan Road Laguna	25 L.M.	Existing Timber bridge Collapsed
	2. Casiguran Bridge Baler, Casiguran National Road, Aurora	55 L.M.	Existing bridge needs replacement

LIST OF PROPOSE BRIDGES

	Name of Project	Length	Remarks
VI-B	1. Dangalasan Bridge CSR Victoria, Calapan Oriental Mindoro Km. 14 + 000	35 L.M.	Existing bridge needs replacement
	2. Washington Bridge Odiongan, Tablas Island Romblon	35 L.M.	- do -
	3. Olargoan Bridge PPNR Road, Section Puerto Princesa City Km. 76 + 135	35 L.M.	- do -
V	1. Buguit Bridge Km. 312.848 Manila South Road Camarines Norte	30 L.M.	Replacement of the Super-structure
	2. Patitinan Bridge Km. 500.40 Sangay, Camarines Sur	20 L.M.	Replacement of a permanent bridge strongly recommended
	3. Narangan Bridge Tawad-Balud Road Masbate	45 L.M.	- do -
VI	1. Talus Bridge Bacolod-Muricia- Pandanon-Don Salvador Benedicto-Calatrava Road Negros Occidental	30 L.M.	Existing bridge needs replacement
	2. Nasali Bridge Odiongan-Sibalom- San Remigio-Leon Road Antique Km. 115.800	20 L.M.	- do -
	3. Gubaton Bridge Iloilo East Coast Capiz Road, Sara, Iloilo, Km. 95.60	25 L.M.	- do -
VII	1. Camachiles Bridge Km. 49.800, Toledo-Tabuelan	35 L.M.	- do -
	2. Jagonipa Bridge #88.86 Dumaguete South Rd. Negros Oriental	45 L.M.	Existing bridge needs replacement

LIST OF PROPOSE BRIDGES

	Name of Project	Length	Remarks
VII	3. Tangohoy Bridge Km. 39.192, Tagbilaran East Road Bohol II	45 L.M.	Reinforcement on girders and slabs are already exposed
VIII	1. Poray Bridge Km. 236 + 130 Eastern Samar	20 L.M.	Existing timber bridge needs replacement
	2. Biliran Bridge Km. 1132 + 661 Maasin, Southern Leyte	50 L.M.	- do -
	3. Iba Bridge Km. 914 + 800 Catbalogan, Samar	20 L.M.	- do -
IX	1. Sanga-Sanga Bridge Km. 8 + 180, Bonga-Panut Sanga-Sanga Road Tawi-Tawi	30 L.M.	- do -
	2. Batungal Bridge Km. 26.440 Isabela-Maluso Road Basilan	20 L.M.	- do -
	3. Bobongan Bridge #111 Liloy-Labason Road Zamboanga del Norte	40 L.M.	Existing bridge need replacement
X	1. Hayangabon Bridge #1 Surigao-Davao Coastal Road Surigao del Norte Km. 1202.596	40 L.M.	- do -
	2. Ticalaan Bridge Km. 1513 - 410, Jct. Ticalaan - Panganan Road Bukidnon	40 L.M.	- do -
	3. Maundo Timber Bridge Km. 1386 + 957.20 Agusan del Sur	50 L.M.	Existing temporary bridge replacement
XI	1. Lambunao Bridge Lanuza, Surigao del Sur	40 L.M.	Existing bridge already dilapidated
	2. Balidadon Bridge #111 Cortes, Surigao del Sur	35 L.M.	- do -

LIST OF PROPOSE BRIDGES

	Name of Project	Length	Remarks
XI	3. Carabatuan Creck Davao Oriental - Surigao Sur Road Davao Oriental	35 L.M.	No existing bridge
XII	1. Pikinit Bridge Km. 136 + 936 Dobleston-Tukuran Road Lanao del Norte	20 L.M.	Existing bridge is already dilapidated
	2. Darugao Bridge Km. 216 + 498 Awang-Upi-Lebak Road Maguindanao	40 L.M.	- do -
	3. Upian Bridge Km. 239 + 002 Cotabato	45 L.M.	- do -

APPENDIX 4

LIST OF PROPOSED BRIDGES (REVISED)

LIST OF PROPOSED BRIDGES ALONG RURAL ROADS
UNDER THE JAPANESE GRANT AID PROGRAM

Bridge No.	Name of Project	Length (m)	Existing Structures
01.01	ELLET BRIDGE Km. 327 + 500 Gurel-Bokod-Kabayan-Buguias Road Bokod-Kabayan Boundary Benguet	25	Bailey
01.02	BIMMILOG BRIDGE Km. 376 + 658 Narvacan-Sulvec Port Road Turod, Narvacan, Ilocos Sur	30	Timber Trestle
01.03	MALAYA BRIDGE Km. 376 + 570 Tagudin-Cervantes Road Cervantes, Ilocos Sur	50	Steel Truss
02.01	STA. CRUZ BRIDGE Km. 640 + 747 Dugo-San Vicente Road Sta. Ana, Cagayan	90	Timber
02.02	DUMADATA BRIDGE Km. 339 + 770 Cordon-Diffun-Maddela-Aurora Road Mangandingay, Cabarroguis Quirino	30	Bailey
02.03	BAAN BRIDGE # 2 Km. 246 + 171 Nueva Vizcaya-Benguet Road Baan, Kayapa, Nueva Vizcaya	45	Bailey
02.04	DIORA BRIDGE Km. 634 + 195 Dugo-San Vicente Road Sta. Ana, Cagayan	50	Timber
02.05	DIDUYON BRIDGE Km. 374 + 060 Cordon-Diffun-Maddela-Aurora Road Maddela, Quirino	30	Timber (Washed-out)
03.01	SEGUM BRIDGE Km. 153 + 798 Jct. Tablang-Gabaldon-Quezon Boundary Road Pinto, Gabaldon, Nueva Ecija	34	Timber
03.02	CALABASA BRIDGE Km. 157 + 269 Jct. Tabalang-Gabaldon-Quezon Boundary Road Calabasa, Gabaldon, Nueva Ecija	12	Timber

Bridge No.	Name of Project	Length (m)	Existing Structures
03.03	MALINAO BRIDGE Km. 166 + 631 Jct. Tablang-Gabaldon-Quezon Boundary Road Malinao, Gabaldon, Nueva Ecija	12	Timber
03.04	ASAN BRIDGE Km. 166 + 295 Jct. Tablang-Gabaldon-Quezon Boundary Road Gabaldon, Nueva Ecija	36	Timber
04.01a	BINAMBANG BRIDGE Km. 107 + 540 Balayan-Balibago-Calatagan Road Caloocan, Balayan, Batangas	80	Spillway
04.02a	MANGO BRIDGE Km. 26 + 700 San Mateo-Rodriquez (Montalban) Rd. Rodriquez, Rizal	40	RCDG defective super-structure
04.03a	LEVISTE II BRIDGE Km. 92 + 430 Talisay-Laurel-Agoncillo Road Laurel, Batangas	40	Timber Washed-out
04.04b	LUMANG BAYAN BRIDGE Km. 34 + 954 Mamburao-North Puerto Galera Road Orelan, Abra de Ilog Mindoro Occidental	60	Bailey
04.05b	OLANGOAN BRIDGE Km. 74 + 524 Puerto Princesa North Road Concepcion, Puerto Princesa City Palawan	36	Bailey
04.06b	BONGABON BRIDGE Km. 122 + 720 Calapan South-Bulalacao-San Jose Rd. Bongabon, Oriental Mindoro	351	Bailey with permanent substructure; 13 spans 27 lm.
04.07b	DIPULAO BRIDGE Km. 2 + 706 Coron-Busuanga National Road Coron, Palawan	30	Bailey
04.08b	COGON BRIDGE Km. 64 + 974 Odiongan (Tulay)-Looc Road Looc, Romblon	20	Bailey
05.01	DAGUIT BRIDGE Km. 312 + 848 Manila South Road Daguit, Labo, Camarines Norte	30	Steel I-Beam

Bridge No.	Name of Project	Length (m)	Existing Structures
05.02	PATITINAN BRIDGE Km. 499 + 200 Sagnay-Tiwi-Albay Bdry. Road Patitinan, Saganay, Camarines Sur	20	Bailey
05.03	NARANGASAN I BRIDGE Km. 31 + 145 Jct. Tawad-Balud Road Milagros, Masbate	45	Timber
06.01	TALUS BRIDGE Km. 41 + 150 Murcia-Don Salvador-Calatrava Road Murcia, Negros Occidental	40	Overflow
06.02	CATAAN BRIDGE Km. 65 + 930 Tiolas-Sinogbuhan Road San Joaquin, Iloilo	45	Bailey
06.03	IYANG BRIDGE Km. 109 + 962 Concepcion-San Dionisio National Rd. Concepcion, Iloilo	25	Timber
06.04	GUINTAS BRIDGE Km. 106 + 500 Tapaz-Jamindan Road Jamindan, Capiz	20	Bailey
06.05	TUMALALUD BRIDGE Km. 104 + 400 Jct. National Road-San Rafael Road Tumalalud, Dumarao, Capiz	30	Bailey with permanent substructure
07.01	BANBAN BRIDGE Km. 61 + 100 Pinamungahan-Aloguinsan-Mantalongon Rd. Pinamungahan, Cebu	30	Timber
07.02	CAMPACAS BRIDGE Km. 97 + 600 Dalaguete-Mantalongon Road Dalaguete, Cebu	25	Bailey
07.03	CAMPANGA BRIDGE Km. 63 + 500 Carcar-Barili-Mantayupan Road Barili, Cebu	15	Bailey
07.04	CAMACHILES BRIDGE Km. 49 + 800 Toledo-Tabuelan-San Remegio Road Talavera, Toledo City	35	Bailey
07.05	LAGNASON BRIDGE Km. 115 + 200 Anatalio Bacalso Avenue Lagunde, Oslob Cebu	35	Bailey

Bridge No.	Name of Project	Length (m)	Existing Structures
08.01	PORAY BRIDGE Km. 1043 + 798 Jct. Buenavista-Lawa-an Road Parina, Balangiga, E. Samar	20	Timber
08.02	IBA BRIDGE Km. 914 + 800 Basey-Magallanes Road Iba, Basey, Samar	22	Bailey
08.03	HABAY BRIDGE Km. 1075 + 448 Liloan-San Francisco Road Habay, San Francisco, S. Leyte	62	Bailey
08.04	TALISAYAN RIVER CROSSING Km. 66 + 800 La Paz - Javier-Bito Road Talisayan, Javier, Leyte	60	River Crossing
08.05	PINUCAWAN BRIDGE Km. 68 + 280 Lapaz-Javier-Bito Road Javier, Leyte	15	Timber
09.01	BATUNGAL BRIDGE Km. 26 + 440 Isabela-Maluso Road Maluso, Basilan	20	Timber
09.02	MANGOP BRIDGE Km. 439 + 740 Sindangan-Liloy Road Zamboanga del Norte	45	Timber
09.03	CANAWAN BRIDGE Km. 449 + 740 Sindangan-Liloy road Zamboanga del Norte	35	Timber
09.04	PIANGON BRIDGE Km. 337 + 380 Dipolog-Sindangan National Road Sindangan, Zambo del Norte	20	Bailey
09.05	PATUNAN BRIDGE Km. 375 + 090 Dipolog-Sindangan Road Manukan, Zamboanga del Norte	25	Bailey
10.01	HAYANGABON I BRIDGE Km. 1202 + 586 Surigao-Davao Coastal Road Hayangabon, Claver Surigao del Norte	40	Timber

Bridge No.	Name of Project	Length (m)	Existing Structures
10.02	MARADUGAO BRIDGE Km. 1608 + 942 Maradugao-Camp Kibaritan Road Kalilangan, Bukidnon	25	Bailey
10.03	MAUNDO BRIDGE Km. 1386 + 957 Pulang Lupa-Patrocinio Road Sta. Josefa, Agusan del Sur	20	Timber
10.04	STA. IRENE BRIDGE Km. 1282 + 110 Bayugan-Kalaitan-Tandag Road Sta. Irene, Agusan del Sur	20	Log
10.05	MALUBOG BRIDGE Km. 185 + 760 Labuyo-Tangub-Silanga Road Barangay 4, Tangub City	25	Timber
11.01	LAMBUNAO BRIDGE Km. 1267 + 027 Surigao Sur-Davao Coastal Road Lanuza, Surigao del Sur	40	Bailey
11.02	BALIBADON BRIDGE # 3 Km. 1296 + 814 Surigao Sur-Davao Coastal Road Balibadon, Cortes Surigao del Sur	36	Timber
11.03	CALABANIT BRIDGE Km. 1716 + 083 Davao del Sur-South Cotabato Coastal Road Glan, South Cotabato	40	Bailey
11.04	MANAY BRIDGE Km. 1643 + 783 Davao Oriental-Surigao del Sur National Road Manay, Davao Oriental	45	Bailey
11.05	CULAMAN I BRIDGE Km. 1650 + 758 Davao del Sur-South Cotabato Coastal Road (Malalag-Don Marcelino- Jose Abad Santos Section), Culaman Malita, Davao del Sur	72	Bailey
12.01	PIKINIT BRIDGE Km. 136 + 936 Dobleston-Tukuran Road Caromatan, Lanao del Norte	20	Bailey
12.02	DURUGAO BRIDGE Km. 216 + 498 Awang-Upi-Lebak Road Durugao, South Upi, Maguindanao	40	Bailey

Bridge No.	Name of Project	Length (m)	Existing Structures
12.03	UPIAN BRIDGE Km. 239 + 002 Cotabato-Bukidnon Road Kimadzil, Carmen, North Cotabato	45	Bailey
12.04	DANGOLAAN BRIDGE Km. 133 + 983 Dobleston-Tukuran Road Caromatan, Lanao del Norte	25	Timber
12.05	SAPAKAN BRIDGE Km. 211 + 530 Dulawan-Marbel Road Sapakan, Maguindanao	100	Bailey with permanent substructure
	T O T A L ----------	2,413	

APPENDIX 5

DATA OF BRIDGES

NAME OF BRIDGE : ELLET BRIDGE NO : 01.01

LOCATION	STATION	ROUTE	PROVINCE	REGION
	Km. 327 + 500	Gurel-Bokod-Kabayan-Buguias Road	Benguet	I
EXISTING CONDITION	LENGTH	TYPE	PRESENT CONDITION	
	24.40 LM	Bailey	Fair	
SOCIO-ECONOMIC AND TRAFFIC INFORMATION	POPULATION AFFECTED		MAIN PRODUCT	DEVELOPMENT PLAN
		486,989	Vegetables, Potato, Coffee, Beans and Edible Fruits	
	TRAFFIC VOLUME (ADT)	TRAFFIC COMPOSITION	TRIP PURPOSE	DESIGN TRAFFIC LOAD
	151	Cars, big bus and trucks	Business	10 tons
ENGINEERING INFORMATION	TOPOGRAPHIC CONDITION		GEOLOGICAL CONDITION	
	Rolling to Mountainous		Sand, gravel and boulders	
	RIVER/HYDROLOGICAL CONDITION		CONDITION OF ACCESS ROAD	
			Bad to Fair 6m PROPOSED WIDTH FOR IMPROVEMENT	
CONSTRUCTION INFORMATION	AVAILABILITY		TRANSPORTATION OF STEEL GIRDER	
	ERECTION EQUIPMENT	LOCAL MATERIAL	ROUTE ROAD	CONDITION
	Available at BOE in Trinidad, Bengued, RES, Banang, La Union	Construction Materials Available locally	The route will be along Baguio-Ambuclao-Nueva Vizcaya Road and connect with Gurel-Borod-Kabayan Road	Fair
PROPOSED BRIDGE TYPE	TOTAL LENGTH	SUPERSTRUCTURE	SUBSTRUCTURE	FOUNDATION
EVALUATION	PHASE 1,2	REASON;	No Data	

NAME OF BRIDGE : BIMMILOG BRIDGE NO : 01.02

LOCATION	STATION	ROUTE	PROVINCE	REGION
	Km. 376 + 658	Narvacan-Sulvec Port Road	Ilocos Sur	I
EXISTING CONDITION	LENGTH	TYPE	PRESENT CONDITION	
	30 LM	Timber Trestle	Bad	
SOCIO-ECONOMIC AND TRAFFIC INFORMATION	POPULATION AFFECTED		MAIN PRODUCT	DEVELOPMENT PLAN
		508,367	Tobacco, Rice	
	TRAFFIC VOLUME (ADT)	TRAFFIC COMPOSITION	TRIP PURPOSE	DESIGN TRAFFIC LOAD
	133	Jeeps, Cars Trucks and Motorcycles	Business	5 tons
ENGINEERING INFORMATION	TOPOGRAPHIC CONDITION		GEOLOGICAL CONDITION	
	Flat		Clay, Sand	
	RIVER/HYDROLOGICAL CONDITION		CONDITION OF ACCESS ROAD	
			Fair	
			6m	
			PROPOSED WIDTH FOR IMPROVEMENT	
CONSTRUCTION INFORMATION	AVAILABILITY		TRANSPORTATION OF STEEL GIRDER	
	ERECTION EQUIPMENT	LOCAL MATERIAL	ROUTE ROAD	CONDITION
	Available at BOE, Vigan, Ilocos Sur RES, Bauang, La Union	Available at the locality and nearby towns	Along Manila North Road and connects with Narvacan Sulvec Port Road	Good
PROPOSED BRIDGE TYPE	TOTAL LENGTH	SUPERSTRUCTURE	SUBSTRUCTURE	FOUNDATION
EVALUATION	PHASE 1,2	REASON;	No Data	

NAME OF BRIDGE : MALAYA BRIDGE NO : 01.03

LOCATION	STATION	ROUTE	PROVINCE	REGION
	Km. 376 + 570	Tagudin-Cervantes Road	Ilocos Sur	I
EXISTING CONDITION	LENGTH	TYPE	PRESENT CONDITION	
	48.78 LM	Steel Truss	Dilapidated Condition	
SOCIO-ECONOMIC AND TRAFFIC INFORMATION	POPULATION AFFECTED		MAIN PRODUCT	DEVELOPMENT PLAN
		508,367	Tobacco, Rice	
	TRAFFIC VOLUME (ADT)	TRAFFIC COMPOSITION	TRIP PURPOSE	DESIGN TRAFFIC LOAD
	237	Cars, Jeepneys, Small Bus and Big Bus	Business Visit/Pleasure	5 tons
ENGINEERING INFORMATION	TOPOGRAPHIC CONDITION		GEOLOGICAL CONDITION	
	RIVER/HYDROLOGICAL CONDITION		CONDITION OF ACCESS ROAD	
			PROPOSED WIDTH FOR IMPROVEMENT	
CONSTRUCTION INFORMATION	AVAILABILITY		TRANSPORTATION OF STEEL GIRDER	
	ERECTION EQUIPMENT	LOCAL MATERIAL	ROUTE ROAD	CONDITION
	Available at BOE Vigan, Ilocos Sur, RES, Bauang, La Union	Available at the locality and nearby towns	Along Manila North Road and connects with Tagudin-Cervantes	Good
PROPOSED BRIDGE TYPE	TOTAL LENGTH	SUPERSTRUCTURE	SUBSTRUCTURE	FOUNDATION
EVALUATION	PHASE 1,2	REASON;	No data	

NAME OF BRIDGE : STA. CRUZ BRIDGE NO : 02.01

LOCATION	STATION	ROUTE	PROVINCE	REGION
	Km. 640 + 747	Dugo-San Vicente Rd.	Cagayan	II
EXISTING CONDITION	LENGTH	TYPE	PRESENT CONDITION	
	90 LM	Timber	Dilapidated Temporary Bridge	
SOCIO-ECONOMIC AND TRAFFIC INFORMATION	POPULATION AFFECTED		MAIN PRODUCT	DEVELOPMENT PLAN
		842,586	Palay, Corn, Peanut, Veg. Fish and forest products	
	TRAFFIC VOLUME (ADT)	TRAFFIC COMPOSITION	TRIP PURPOSE	DESIGN TRAFFIC LOAD
	281			
ENGINEERING INFORMATION	TOPOGRAPHIC CONDITION		GEOLOGICAL CONDITION	
	Flat		Silty Clay	
	RIVER/HYDROLOGICAL CONDITION		CONDITION OF ACCESS ROAD	
	Maximum Flood Level = 100.20 M Ordinary Flood Level = 98.20 M High Tide Level = 97.70 M Low Tide Level = 96.50 M		Bad 6m PROPOSED WIDTH FOR IMPROVEMENT	
CONSTRUCTION INFORMATION	AVAILABILITY		TRANSPORTATION OF STEEL GIRDER	
	ERECTION EQUIPMENT	LOCAL MATERIAL	ROUTE ROAD	CONDITION
	Available in the locality	Available in the locality		
PROPOSED BRIDGE TYPE	TOTAL LENGTH	SUPERSTRUCTURE	SUBSTRUCTURE	FOUNDATION
	3 @ 30 = 90 m	Continous steel girder	T type Abutment Wall type pier	Pile
EVALUATION	PHASE 1,2	REASON; Long span, flood area, cofferdam		

NAME OF BRIDGE : DUMADATA BRIDGE NO : 02.02

LOCATION	STATION	ROUTE	PROVINCE	REGION
	Km. 339 + 770	Cordon-Diffun Maddela-Aurora Road	Quirino	II
EXISTING CONDITION	LENGTH	TYPE	PRESENT CONDITION	
	30 LM	Bailey	Fair	
SOCIO-ECONOMIC AND TRAFFIC INFORMATION	POPULATION AFFECTED		MAIN PRODUCT	DEVELOPMENT PLAN
		108,719	Palay, Corn, Peanut, Coffee Livestock and Mineral Products	
	TRAFFIC VOLUME (ADT)	TRAFFIC COMPOSITION	TRIP PURPOSE	DESIGN TRAFFIC LOAD
	261			5 tons
ENGINEERING INFORMATION	TOPOGRAPHIC CONDITION		GEOLOGICAL CONDITION	
	Flat		Sandy Clay	
	RIVER/HYDROLOGICAL CONDITION		CONDITION OF ACCESS ROAD	
	MFL = 100.50 m OFL = 98.50 m OWL = 95.04 m		Bad PROPOSED WIDTH FOR IMPROVEMENT	
CONSTRUCTION INFORMATION	AVAILABILITY		TRANSPORTATION OF STEEL GIRDER	
	ERECTION EQUIPMENT	LOCAL MATERIAL	ROUTE ROAD	CONDITION
	Available in the locality	Available in the locality		
PROPOSED BRIDGE TYPE	TOTAL LENGTH	SUPERSTRUCTURE	SUBSTRUCTURE	FOUNDATION
	17 + 17 = 34 m	H-Beam	. T type abutment . Wall type pier	Pile
EVALUATION	PHASE 1,2	REASON ;	Cofferdam	

NAME OF BRIDGE : BAAN BRIDGE #2 NO : 02.03

LOCATION	STATION	ROUTE	PROVINCE	REGION
	Km. 248 + 171	Nueva Vizcaya-Benguet Road	Nueva Vizcaya	II
EXISTING CONDITION	LENGTH	TYPE	PRESENT CONDITION	
	39.634 LM	Bailey	Dilapidated	
SOCIO-ECONOMIC AND TRAFFIC INFORMATION	POPULATION AFFECTED		MAIN PRODUCT	DEVELOPMENT PLAN
		300.862	Palay, legumes root crops	
	TRAFFIC VOLUME (ADT)	TRAFFIC COMPOSITION	TRIP PURPOSE	DESIGN TRAFFIC LOAD
				3 tons
ENGINEERING INFORMATION	TOPOGRAPHIC CONDITION		GEOLOGICAL CONDITION	
	Flat		Clayey gravel with shoulders	
	RIVER/HYDROLOGICAL CONDITION		CONDITION OF ACCESS ROAD	
	MFL = 281.0 m OWL = 216.0 m		Bad 6m PROPOSED WIDTH FOR IMPROVEMENT	
CONSTRUCTION INFORMATION	AVAILABILITY		TRANSPORTATION OF STEEL GIRDER	
	ERECTION EQUIPMENT	LOCAL MATERIAL	ROUTE ROAD	CONDITION
	Available in the locality	Available in the locality		
PROPOSED BRIDGE TYPE	TOTAL LENGTH	SUPERSTRUCTURE	SUBSTRUCTURE	FOUNDATION
	23 + 23 = 46 m	H-Beam	. T type abutment . Wall type pier	R.C. Pile
EVALUATION	PHASE 1,2	REASON ;	No Difficulty	

NAME OF BRIDGE : DIORA BRIDGE NO : 02.04

LOCATION	STATION	ROUTE	PROVINCE	REGION
	Km. 634 + 195	Dugo-San Vicente Road	Cagayan	II
EXISTING CONDITION	LENGTH	TYPE	PRESENT CONDITION	
	48 LM	Timber	Dilapidated temporary bridge	
SOCIO-ECONOMIC AND TRAFFIC INFORMATION	POPULATION AFFECTED		MAIN PRODUCT	DEVELOPMENT PLAN
		842,588	Palay, Corn, Peanut, Veg. Forest Products	
	TRAFFIC VOLUME (ADT)	TRAFFIC COMPOSITION	TRIP PURPOSE	DESIGN TRAFFIC LOAD
	281			5 tons
ENGINEERING INFORMATION	TOPOGRAPHIC CONDITION		GEOLOGICAL CONDITION	
	Flat		Gravel and Sand	
	RIVER/HYDROLOGICAL CONDITION		CONDITION OF ACCESS ROAD	
	MFL = 96.65 m OFL = 95.70 m HTL = 95.133 m LTL = 93.923 m		Bad 6m PROPOSED WIDTH FOR IMPROVEMENT	
CONSTRUCTION INFORMATION	AVAILABILITY		TRANSPORTATION OF STEEL GIRDER	
	ERECTION EQUIPMENT	LOCAL MATERIAL	ROUTE ROAD	CONDITION
	Available in the locality	Available in the locality		
PROPOSED BRIDGE TYPE	TOTAL LENGTH	SUPERSTRUCTURE	SUBSTRUCTURE	FOUNDATION
	25 + 25 = 50 m	H-Beam	. T type abutment . Wall type pier	R.C. Pile
EVALUATION	PHASE 1,2	REASON; No difficulty in construction		

NAME OF BRIDGE : DIDUYON BRIDGE NO : 02.05

LOCATION	STATION	ROUTE	PROVINCE	REGION
	Km. 373 + 060	Cordon-Diffun Maddela-Aurora Road	Quirino	II
EXISTING CONDITION	LENGTH	TYPE	PRESENT CONDITION	
	30 LM	Timber	Washed - Out	
SOCIO-ECONOMIC AND TRAFFIC INFORMATION	POPULATION AFFECTED		MAIN PRODUCT	DEVELOPMENT PLAN
		108.719	Palay, Corn, Rootcrops, Livestock and Mineral Products	
	TRAFFIC VOLUME (ADT)	TRAFFIC COMPOSITION	TRIP PURPOSE	DESIGN TRAFFIC LOAD
	261			
ENGINEERING INFORMATION	TOPOGRAPHIC CONDITION		GEOLOGICAL CONDITION	
	Flat		Clayey gravel with rocks boulders	
	RIVER/HYDROLOGICAL CONDITION		CONDITION OF ACCESS ROAD	
	MFL = 97.0 m OFL = 96.50 m OWL = 94.265 m		Bad 6m PROPOSED WIDTH FOR IMPROVEMENT	
CONSTRUCTION INFORMATION	AVAILABILITY		TRANSPORTATION OF STEEL GIRDER	
	ERECTION EQUIPMENT	LOCAL MATERIAL	ROUTE ROAD	CONDITION
	Available in the locality	Available in the locality		
PROPOSED BRIDGE TYPE	TOTAL LENGTH	SUPERSTRUCTURE	SUBSTRUCTURE	FOUNDATION
	Bridge type cannot be proposed because of flood area			
EVALUATION	PHASE 1,2	REASON; Bridge length cannot be decided		

NAME OF BRIDGE : SEGUM BRIDGE NO : 03.01

LOCATION	STATION	ROUTE	PROVINCE	REGION
	Km. 153 + 798	Jct. Tablang-Gabaldon-Quezon Bdry.Road	Nueva Ecija	III
EXISTING CONDITION	LENGTH	TYPE	PRESENT CONDITION	
	15.6 LM	Timber	Destroyed	
SOCIO-ECONOMIC AND TRAFFIC INFORMATION	POPULATION AFFECTED		MAIN PRODUCT	DEVELOPMENT PLAN
		1,069,409 (1980)	Agricultural and Marine Products	
	TRAFFIC VOLUME (ADT)	TRAFFIC COMPOSITION	TRIP PURPOSE	DESIGN TRAFFIC LOAD
		Bus/Jeepneys	Business	
ENGINEERING INFORMATION	TOPOGRAPHIC CONDITION		GEOLOGICAL CONDITION	
	Flat		Clay, gravel, boulders	
	RIVER/HYDROLOGICAL CONDITION		CONDITION OF ACCESS ROAD	
	Good Drainage Conditions		Bad 6m PROPOSED WIDTH FOR IMPROVEMENT	
CONSTRUCTION INFORMATION	AVAILABILITY		TRANSPORTATION OF STEEL GIRDER	
	ERECTION EQUIPMENT	LOCAL MATERIAL	ROUTE ROAD	CONDITION
	Available at DPWH Eng'g. District of Nueva Ecija	Available at DPWH Eng'g. District of Nueva Ecija	Manila North Road	Good
PROPOSED BRIDGE TYPE	TOTAL LENGTH	SUPERSTRUCTURE	SUBSTRUCTURE	FOUNDATION
	Topographic survey does not show the alignment of existing road and river			
EVALUATION	PHASE 1,2	REASON;		

NAME OF BRIDGE : CALABASA BRIDGE NO : 03.02

LOCATION	STATION	ROUTE	PROVINCE	REGION
	Km. 157 + 269	Jct. Tablang-Gabaldon-Quezon Bdry. Road	Nueva Ecija	III
EXISTING CONDITION	LENGTH	TYPE	PRESENT CONDITION	
	11.10 LM	Timber	Dilapidated Condtion	
SOCIO-ECONOMIC AND TRAFFIC INFORMATION	POPULATION AFFECTED		MAIN PRODUCT	DEVELOPMENT PLAN
		1,069,409 (1980)	Agricultural, Forestry and Marine Products	
	TRAFFIC VOLUME (ADT)	TRAFFIC COMPOSITION	TRIP PURPOSE	DESIGN TRAFFIC LOAD
		Bus and Jeepneys	Business	3 tons
ENGINEERING INFORMATION	TOPOGRAPHIC CONDITION		GEOLOGICAL CONDITION	
	Flat		Gravel with Clay	
	RIVER/HYDROLOGICAL CONDITION		CONDITION OF ACCESS ROAD	
	Good Drainage Condition		Bad 6m PROPOSED WIDTH FOR IMPROVEMENT	
CONSTRUCTION INFORMATION	AVAILABILITY		TRANSPORTATION OF STEEL GIRDER	
	ERECTION EQUIPMENT	LOCAL MATERIAL	ROUTE ROAD	CONDITION
	Available at DPWH Eng'g. District of Nueva Ecija	Available at DPWH Eng'g. District of Nueva Ecija	Manila North Road	Good
PROPOSED BRIDGE TYPE	TOTAL LENGTH	SUPERSTRUCTURE	SUBSTRUCTURE	FOUNDATION
	Topographic survey does not show the alignment of existing road and river			
EVALUATION	PHASE 1,2	REASON ;		

NAME OF BRIDGE : MALINAO BRIDGE NO : 03.03

LOCATION	STATION	ROUTE	PROVINCE	REGION
	Km. 166 + 631	Jct. Tablang-Gabaldon, Quezon Bdry. Road	Nueva Ecija	III
EXISTING CONDITION	LENGTH	TYPE	PRESENT CONDITION	
	15 LM	Timber	Destroyed	
SOCIO-ECONOMIC AND TRAFFIC INFORMATION	POPULATION AFFECTED		MAIN PRODUCT	DEVELOPMENT PLAN
		1,069,409 (1980)	Agricultural, Forestry and Marine Products	
	TRAFFIC VOLUME (ADT)	TRAFFIC COMPOSITION	TRIP PURPOSE	DESIGN TRAFFIC LOAD
		Bus and Jeepneys	Business	
ENGINEERING INFORMATION	TOPOGRAPHIC CONDITION		GEOLOGICAL CONDITION	
	Rolling		Gravel with clay boulders	
	RIVER/HYDROLOGICAL CONDITION		CONDITION OF ACCESS ROAD	
	Good Drainage Condition		Bad 6m PROPOSED WIDTH FOR IMPROVEMENT	
CONSTRUCTION INFORMATION	AVAILABILITY		TRANSPORTATION OF STEEL GIRDER	
	ERECTION EQUIPMENT	LOCAL MATERIAL	ROUTE ROAD	CONDITION
	Available at DPWH Eng'g. District of Nueva Ecija	Available at DPWH Eng'g. District of Nueva Ecija	North Manila Road	Good
PROPOSED BRIDGE TYPE	TOTAL LENGTH	SUPERSTRUCTURE	SUBSTRUCTURE	FOUNDATION
	Topographic survey does not show the alignment of existing road and river			
EVALUATION	PHASE 1,2	REASON;		

NAME OF BRIDGE : ASAN BRIDGE NO : 03.04

LOCATION	STATION	ROUTE	PROVINCE	REGION
	Km. 168 + 295	Jct. Tablang Gabaldon-Quezon Bdry. Road	Nueva Ecija	III
EXISTING CONDITION	LENGTH	TYPE	PRESENT CONDITION	
	36 LM	Timber	Destroyed	
SOCIO-ECONOMIC AND TRAFFIC INFORMATION	POPULATION AFFECTED		MAIN PRODUCT	DEVELOPMENT PLAN
		1,069,409 (1980)	Agricultural, Forestry and Marine Products	
	TRAFFIC VOLUME (ADT)	TRAFFIC COMPOSITION	TRIP PURPOSE	DESIGN TRAFFIC LOAD
		Bus and Jeepneys	Business	
ENGINEERING INFORMATION	TOPOGRAPHIC CONDITION		GEOLOGICAL CONDITION	
	Rolling		Gravel with Clay	
	RIVER/HYDROLOGICAL CONDITION		CONDITION OF ACCESS ROAD	
	Good Drainage Conditions		Bad 6m PROPOSED WIDTH FOR IMPROVEMENT	
CONSTRUCTION INFORMATION	AVAILABILITY		TRANSPORTATION OF STEEL GIRDER	
	ERECTION EQUIPMENT	LOCAL MATERIAL	ROUTE ROAD	CONDITION
	Available at DPWH Eng'g. District of Nueva Ecija	Available at DPWH Eng'g. District of Nueva Ecija	Manila North Road	Good
PROPOSED BRIDGE TYPE	TOTAL LENGTH	SUPERSTRUCTURE	SUBSTRUCTURE	FOUNDATION
	Topographic survey does not show the alignment of existing road and river			
EVALUATION	PHASE 1,2	REASON;		

NAME OF BRIDGE : BINAMBANG BRIDGE NO : 04.01a

LOCATION	STATION	ROUTE	PROVINCE	REGION
	Km. 107 + 540	Balayan-Balibago Calatagan Road	Batangas	IV-A
EXISTING CONDITION	LENGTH	TYPE	PRESENT CONDITION	
	80 LM	Spillway	Bad	
SOCIO-ECONOMIC AND TRAFFIC INFORMATION	POPULATION AFFECTED		MAIN PRODUCT	DEVELOPMENT PLAN
			Agricultural Products	
	TRAFFIC VOLUME (ADT)	TRAFFIC COMPOSITION	TRIP PURPOSE	DESIGN TRAFFIC LOAD
		Trucks - Bus Jeepneys, Cars	Business, School Visit/Pleasure	5 tons
ENGINEERING INFORMATION	TOPOGRAPHIC CONDITION		GEOLOGICAL CONDITION	
	Flat to Rolling		Sandy, Silty Gravel	
	RIVER/HYDROLOGICAL CONDITION		CONDITION OF ACCESS ROAD	
	MFL = 44.90 m OWL = 41.40 m		Fair 6m PROPOSED WIDTH FOR IMPROVEMENT	
CONSTRUCTION INFORMATION	AVAILABILITY		TRANSPORTATION OF STEEL GIRDER	
	ERECTION EQUIPMENT	LOCAL MATERIAL	ROUTE ROAD	CONDITION
	Available locally	Available locally	Balayan-Lian National Road	Fair
PROPOSED BRIDGE TYPE	TOTAL LENGTH	SUPERSTRUCTURE	SUBSTRUCTURE	FOUNDATION
	3@ 25 = 75 m	H-Beam Girder	. T type abutment . Wall type pier	Spread Footing
EVALUATION	PHASE 1,2	REASON; Flood water level shall be studied		

NAME OF BRIDGE : MANGO BRIDGE NO : 04.02a

LOCATION	STATION	ROUTE	PROVINCE	REGION
	Km. 26 + 700	San Mateo-Rodriguez Montalbon Road	Rizal	IV-A
EXISTING CONDITION	LENGTH	TYPE	PRESENT CONDITION	
	40 LM	RCDG	Defective Superstructure	
SOCIO-ECONOMIC AND TRAFFIC INFORMATION	POPULATION AFFECTED		MAIN PRODUCT	DEVELOPMENT PLAN
			Construction Material	
	TRAFFIC VOLUME (ADT)	TRAFFIC COMPOSITION	TRIP PURPOSE	DESIGN TRAFFIC LOAD
		Trucks, buses, jeeps, cars, tricycles	Business, Sch. Visit/Pleasure	15 tons
ENGINEERING INFORMATION	TOPOGRAPHIC CONDITION		GEOLOGICAL CONDITION	
	Flat		Gravel with Clay	
	RIVER/HYDROLOGICAL CONDITION		CONDITION OF ACCESS ROAD	
			Good 6.7 m PROPOSED WIDTH FOR IMPROVEMENT	
CONSTRUCTION INFORMATION	AVAILABILITY		TRANSPORTATION OF STEEL GIRDER	
	ERECTION EQUIPMENT	LOCAL MATERIAL	ROUTE ROAD	CONDITION
	Available locally	Available locally		Good
PROPOSED BRIDGE TYPE	TOTAL LENGTH	SUPERSTRUCTURE	SUBSTRUCTURE	FOUNDATION
EVALUATION	PHASE 1,2	REASON ; Widening only		

NAME OF BRIDGE : LEVISTE II BRIDGE NO : 04.03a

LOCATION	STATION	ROUTE	PROVINCE	REGION
	Km. 92 + 430	Talisay-Laurel-Agoncillo Road	Batangas	IV-A
EXISTING CONDITION	LENGTH	TYPE	PRESENT CONDITION	
	40	Timber	Washed - Out	
SOCIO-ECONOMIC AND TRAFFIC INFORMATION	POPULATION AFFECTED		MAIN PRODUCT	DEVELOPMENT PLAN
			Agricultural Products	
	TRAFFIC VOLUME (ADT)	TRAFFIC COMPOSITION	TRIP PURPOSE	DESIGN TRAFFIC LOAD
	520	Light and heavy vehicles	Business, School, Visit, Pleasure	
ENGINEERING INFORMATION	TOPOGRAPHIC CONDITION		GEOLOGICAL CONDITION	
	Rolling to Mountainous		Sandy Clay	
	RIVER/HYDROLOGICAL CONDITION		CONDITION OF ACCESS ROAD	
	MFL = 16.86 m OFL = 13.40 m		Bad to Fair 6m PROPOSED WIDTH FOR IMPROVEMENT	
CONSTRUCTION INFORMATION	AVAILABILITY		TRANSPORTATION OF STEEL GIRDER	
	ERECTION EQUIPMENT	LOCAL MATERIAL	ROUTE ROAD	CONDITION
	Available locally	Available locally		Fair
PROPOSED BRIDGE TYPE	TOTAL LENGTH	SUPERSTRUCTURE	SUBSTRUCTURE	FOUNDATION
	20+20+20+20 = 80m	H-Beam	. T type abutment . Wall type pier	Spread
EVALUATION	PHASE 1,2	REASON ; Maximum high flood water level shall be checked		

NAME OF BRIDGE : LUMANG BAYAN BRIDGE NO : 04.04b

LOCATION	STATION	ROUTE	PROVINCE	REGION
	Km. 34 + 954	Mamburao-North Puerto Galera Road	Occidental Mindoro	IV-B
EXISTING CONDITION	LENGTH	TYPE	PRESENT CONDITION	
	60 LM	Bailey	Under repair for light vehicle, reconstruction of bridge for heavy equip and cargo trucks to pass thru.	
SOCIO-ECONOMIC AND TRAFFIC INFORMATION	POPULATION AFFECTED		MAIN PRODUCT	DEVELOPMENT PLAN
		12,917 as of May 1980	Rice, Corn, Fish, Fruits and Vegetable, Coconut and livestock	Opening of Matabang port and the Abra de Ilog North Puerto Galera Road
	TRAFFIC VOLUME (ADT)	TRAFFIC COMPOSITION	TRIP PURPOSE	DESIGN TRAFFIC LOAD
	208	Jeepns, Trucks and Tricycles	Business, Visit Pleasure	5 tons
ENGINEERING INFORMATION	TOPOGRAPHIC CONDITION		GEOLOGICAL CONDITION	
	Rolling		Sand Clay	
	RIVER/HYDROLOGICAL CONDITION		CONDITION OF ACCESS ROAD	
	MFL = 21.17 m OWL = 17.02 m		Good 6m PROPOSED WIDTH FOR IMPROVEMENT	
CONSTRUCTION INFORMATION	AVAILABILITY		TRANSPORTATION OF STEEL GIRDER	
	ERECTION EQUIPMENT	LOCAL MATERIAL	ROUTE ROAD	CONDITION
	Available in the locality	Available in the locality	From Manila of Batangas port of Matabang port, Abra de Ilog	Good
PROPOSED BRIDGE TYPE	TOTAL LENGTH	SUPERSTRUCTURE	SUBSTRUCTURE	FOUNDATION
	3@30 = 90 m	Continous steel girder	. T type abutment . Wall type pier	Pile
EVALUATION	PHASE 1,2	REASON ; Flood Area		

NAME OF BRIDGE : OLANGOAN BRIDGE NO : 04.05b

LOCATION	STATION	ROUTE	PROVINCE	REGION
	Km. 74 + 524	Puerto Princesa North Road	Palawan	IV-B
EXISTING CONDITION	LENGTH	TYPE	PRESENT CONDITION	
	36.50 LM	Bailey	Under repair	
SOCIO-ECONOMIC AND TRAFFIC INFORMATION	POPULATION AFFECTED		MAIN PRODUCT	DEVELOPMENT PLAN
		88.614	Oil and Agri-cultural products	
	TRAFFIC VOLUME (ADT)	TRAFFIC COMPOSITION	TRIP PURPOSE	DESIGN TRAFFIC LOAD
		Bus, jeeps trucks and cars	Transporting people and agricultural products	5 tons
ENGINEERING INFORMATION	TOPOGRAPHIC CONDITION		GEOLOGICAL CONDITION	
	Mountainous		Sand and Clay	
	RIVER/HYDROLOGICAL CONDITION		CONDITION OF ACCESS ROAD	
			Fair 6m PROPOSED WIDTH FOR IMPROVEMENT	
CONSTRUCTION INFORMATION	AVAILABILITY		TRANSPORTATION OF STEEL GIRDER	
	ERECTION EQUIPMENT	LOCAL MATERIAL	ROUTE ROAD	CONDITION
	Available in the locality	Available in the locality	Puerto Princesa to Dangoan Bridge	Good
PROPOSED BRIDGE TYPE	TOTAL LENGTH	SUPERSTRUCTURE	SUBSTRUCTURE	FOUNDATION
	20 + 20 = 40 m	H-Beam	. T type abutment . Wall type pier	Pile
EVALUATION	PHASE 1,2	REASON ;	Cofferdam	

NAME OF BRIDGE : BONGABON BRIDGE NO : 04.06b

LOCATION	STATION	ROUTE	PROVINCE	REGION
	Km. 122 + 720	Calapan South Bulalacao-San Jose Road	Oriental Mindoro	IVB
EXISTING CONDITION	LENGTH	TYPE	PRESENT CONDITION	
	360.35 LM	Bailey with permanent substructure	Baileys panels out of alignment and is critical conditions, needs immediate reconstruction	
SOCIO-ECONOMIC AND TRAFFIC INFORMATION	POPULATION AFFECTED		MAIN PRODUCT	DEVELOPMENT PLAN
		446,938 As of 1980	Rice, Corn, Copra, Fruits, Vegetables	
	TRAFFIC VOLUME (ADT)	TRAFFIC COMPOSITION	TRIP PURPOSE	DESIGN TRAFFIC LOAD
	153 as of May 1986	Jeeps, Bus and Trucks	Business, Visit/Pleasure	8 tons
ENGINEERING INFORMATION	TOPOGRAPHIC CONDITION		GEOLOGICAL CONDITION	
	Mountainous		Silty Clay	
	RIVER/HYDROLOGICAL CONDITION		CONDITION OF ACCESS ROAD	
	MFL = 128.23 m OWL = 124.83 m		Fair 6m PROPOSED WIDTH FOR IMPROVEMENT	
CONSTRUCTION INFORMATION	AVAILABILITY		TRANSPORTATION OF STEEL GIRDER	
	ERECTION EQUIPMENT	LOCAL MATERIAL	ROUTE ROAD	CONDITION
	Available in the locality	Available in the locality	From Manila to Caloocan Wharf or from Manila to Dalapian Beach to Job-site	Fair
PROPOSED BRIDGE TYPE	TOTAL LENGTH	SUPERSTRUCTURE	SUBSTRUCTURE	FOUNDATION
	Depends on stability of substructure			
EVALUATION	PHASE 1,2	REASON ; Permanent substructure		

NAME OF BRIDGE : DIPULAO BRIDGE NO : 04.07b

LOCATION	STATION	ROUTE	PROVINCE	REGION
	Km. 2 + 706	Coron-Busuanga National Road	Palawan	IVB
EXISTING CONDITION	LENGTH	TYPE	PRESENT CONDITION	
	24.92 LM	Bailey	Dilapidated Condition	
SOCIO-ECONOMIC AND TRAFFIC INFORMATION	POPULATION AFFECTED		MAIN PRODUCT	DEVELOPMENT PLAN
		16,032 (May 1980)	Rice, Corn, Fish, Cattle and Rattan	
	TRAFFIC VOLUME (ADT)	TRAFFIC COMPOSITION	TRIP PURPOSE	DESIGN TRAFFIC LOAD
	50	Jeeps, Bus and Trucks	Business, Visit/Pleasure	5 tons
ENGINEERING INFORMATION	TOPOGRAPHIC CONDITION		GEOLOGICAL CONDITION	
	Rolling		Sand, Clay	
	RIVER/HYDROLOGICAL CONDITION		CONDITION OF ACCESS ROAD	
	MFE = 17.65 m OWL = 15.20 m		Fair 6m PROPOSED WIDTH FOR IMPROVEMENT	
CONSTRUCTION INFORMATION	AVAILABILITY		TRANSPORTATION OF STEEL GIRDER	
	ERECTION EQUIPMENT	LOCAL MATERIAL	ROUTE ROAD	CONDITION
	Not available in the locality	Available in the locality	From Manila to Coron wharf to jobsite	Fair
PROPOSED BRIDGE TYPE	TOTAL LENGTH	SUPERSTRUCTURE	SUBSTRUCTURE	FOUNDATION
	25 m	H-Beam (Skew)	T type abutment	Pile
EVALUATION	PHASE 1,2	REASON ; No difficulty		

NAME OF BRIDGE : COGON BRIOGE NO : 04.08b

LOCATION	STATION	ROUTE	PROVINCE	REGION
	Km. 64 + 974	Odiongan-Looc Road	Romblon	IVB
EXISTING CONDITION	LENGTH	TYPE	PRESENT CONDITION	
	18.9 LM	Bailey	Bailey component needs replacement	
SOCIO-ECONOMIC AND TRAFFIC INFORMATION	POPULATION AFFECTED		MAIN PRODUCT	DEVELOPMENT PLAN
		218,624	Rice, Corn, Copra and fish	
	TRAFFIC VOLUME (ADT)	TRAFFIC COMPOSITION	TRIP PURPOSE	DESIGN TRAFFIC LOAD
	60	Jeepney, bus, car, van, pick-up, dump truck	transporting people and agri-cultural products	5 tons
ENGINEERING INFORMATION	TOPOGRAPHIC CONDITION		GEOLOGICAL CONDITION	
	Mountainous		Clayey gravel with rocks	
	RIVER/HYDROLOGICAL CONDITION		CONDITION OF ACCESS ROAD	
	MFL = 18.50 m OWL = 16.00 m		Fair 6m PROPOSED WIDTH FOR IMPROVEMENT	
CONSTRUCTION INFORMATION	AVAILABILITY		TRANSPORTATION OF STEEL GIRDER	
	ERECTION EQUIPMENT	LOCAL MATERIAL	ROUTE ROAD	CONDITION
	Available in the locality	Available in the locality	From Manila to Odiongan Wharf to jobsite (Looc Road)	Fair
PROPOSED BRIDGE TYPE	TOTAL LENGTH	SUPERSTRUCTURE	SUBSTRUCTURE	FOUNDATION
	23 m	H-beam	T type abutment	Spread Footing
EVALUATION	PHASE 1,2	REASON;	No difficulty	

NAME OF BRIDGE : DAGUIT BRIDGE NO. 1 NO : 05.01

LOCATION	STATION	ROUTE	PROVINCE	REGION
	Km. 312 + 848	Manila South Rd.	Camarines Norte	V
EXISTING CONDITION	LENGTH	TYPE	PRESENT CONDITION	
	29.2 LM	Steel I-Beam	Good	
SOCIO-ECONOMIC AND TRAFFIC INFORMATION	POPULATION AFFECTED		MAIN PRODUCT	DEVELOPMENT PLAN
		1,200 household	Copra	
	TRAFFIC VOLUME (ADT)	TRAFFIC COMPOSITION	TRIP PURPOSE	DESIGN TRAFFIC LOAD
	1561	Cars, bus, trucks, jeep-neys, tricycles	Business, school visit/pleasure	20 tons
ENGINEERING INFORMATION	TOPOGRAPHIC CONDITION		GEOLOGICAL CONDITION	
	Flat		Clay, gravel and boulders	
	RIVER/HYDROLOGICAL CONDITION		CONDITION OF ACCESS ROAD	
	Dry Season = March to October Wet Season = November to Feb. MFL = 50.00 m OWL = 46.10 OFL = 49.50 m		Good 6.7m PROPOSED WIDTH FOR IMPROVEMENT	
CONSTRUCTION INFORMATION	AVAILABILITY		TRANSPORTATION OF STEEL GIRDER	
	ERECTION EQUIPMENT	LOCAL MATERIAL	ROUTE ROAD	CONDITION
	Crane, bull-dozer, concrete mixer	Reinforcing steel, cement, form lumber and course and fine aggregates	Manila South Road	Good
PROPOSED BRIDGE TYPE	TOTAL LENGTH	SUPERSTRUCTURE	SUBSTRUCTURE	FOUNDATION
EVALUATION	PHASE 1,2	REASON; Urgent replacement is not recommended		

NAME OF BRIDGE : PATITINAN BRIDGE NO : 05.02

LOCATION	STATION	ROUTE	PROVINCE	REGION
	Km. 499 + 200	Sagnay-Tiwi-Albay Bdry. Rd.	Camarines Sur	V
EXISTING CONDITION	LENGTH	TYPE	PRESENT CONDITION	
	15.60 LM	Bailey	Dilapidated Superstructure	
SOCIO-ECONOMIC AND TRAFFIC INFORMATION	POPULATION AFFECTED		MAIN PRODUCT	DEVELOPMENT PLAN
		100 Household	Copra	
	TRAFFIC VOLUME (ADT)	TRAFFIC COMPOSITION	TRIP PURPOSE	DESIGN TRAFFIC LOAD
	624	Bus, jeeps, trucks, cars	School, business visit/pleasure	7 tons
ENGINEERING INFORMATION	TOPOGRAPHIC CONDITION		GEOLOGICAL CONDITION	
	Mountainous		Gravel, rocks and boulders	
	RIVER/HYDROLOGICAL CONDITION		CONDITION OF ACCESS ROAD	
	MFL = 73.40 m OFL = 71.00 m OWL = 69.40 m		Good 6m PROPOSED WIDTH FOR IMPROVEMENT	
CONSTRUCTION INFORMATION	AVAILABILITY		TRANSPORTATION OF STEEL GIRDER	
	ERECTION EQUIPMENT	LOCAL MATERIAL	ROUTE ROAD	CONDITION
	Crane, bull-dozer concrete mixer	Reinforcing steel, cements, form, lumber and course and fine aggregates	Road from junction msr. Anayan to Tigaon-Concrete Road from junction Tigaon to Patitinan-All weather (gravel)	Good
PROPOSED BRIDGE TYPE	TOTAL LENGTH	SUPERSTRUCTURE	SUBSTRUCTURE	FOUNDATION
	20 m	H-beam	T type abutment	Spread Footing
EVALUATION	PHASE 1,2	REASON;	No difficulty	

NAME OF BRIDGE: NANGARASAN I BRIDGE NO : 05.03

LOCATION	STATION	ROUTE	PROVINCE	REGION
	Km. 31 + 145	Jct. Tawad-Balud Road	Masbate	V
EXISTING CONDITION	LENGTH	TYPE	PRESENT CONDITION	
	45 LM	Timber		
SOCIO-ECONOMIC AND TRAFFIC INFORMATION	POPULATION AFFECTED		MAIN PRODUCT	DEVELOPMENT PLAN
	TRAFFIC VOLUME (ADT)	TRAFFIC COMPOSITION	TRIP PURPOSE	DESIGN TRAFFIC LOAD
ENGINEERING INFORMATION	TOPOGRAPHIC CONDITION		GEOLOGICAL CONDITION	
	RIVER/HYDROLOGICAL CONDITION		CONDITION OF ACCESS ROAD	
			PROPOSED WIDTH FOR IMPROVEMENT	
CONSTRUCTION INFORMATION	AVAILABILITY		TRANSPORTATION OF STEEL GIRDER	
	ERECTION EQUIPMENT	LOCAL MATERIAL	ROUTE ROAD	CONDITION
PROPOSED BRIDGE TYPE	TOTAL LENGTH	SUPERSTRUCTURE	SUBSTRUCTURE	FOUNDATION
	2 @ 35 = 70 m	Continous Steel Girder	. T type abutment . Wall type pier	Pile
EVALUATION	PHASE 1,2	REASON; Bridge length shall be reviewed		

NAME OF BRIDGE : TALUS BRIDGE NO : 06.01

LOCATION	STATION	ROUTE	PROVINCE	REGION
	Km. 41 + 150	Along Murcia-Don Salvador Benedicto-Calatrava Rd.	Negros Occidental	VI
EXISTING CONDITION	LENGTH	TYPE	PRESENT CONDITION	
	40.58 LM	Bailey	Bad to Fair	
SOCIO-ECONOMIC AND TRAFFIC INFORMATION	POPULATION AFFECTED		MAIN PRODUCT	DEVELOPMENT PLAN
		17,300	Corn, Pineapple Lumber and Sugar Canes	
	TRAFFIC VOLUME (ADT)	TRAFFIC COMPOSITION	TRIP PURPOSE	DESIGN TRAFFIC LOAD
	2420 (1985 AADT)	Cars, Jeeps, Bus and Trucks	Business	10 tons
ENGINEERING INFORMATION	TOPOGRAPHIC CONDITION		GEOLOGICAL CONDITION	
	Mountainous		Silty, gravel with boulders	
	RIVER/HYDROLOGICAL CONDITION		CONDITION OF ACCESS ROAD	
	OWL = 173.50 m HFL = 178.50 m		Fair 6m PROPOSED WIDTH FOR IMPROVEMENT	
CONSTRUCTION INFORMATION	AVAILABILITY		TRANSPORTATION OF STEEL GIRDER	
	ERECTION EQUIPMENT	LOCAL MATERIAL	ROUTE ROAD	CONDITION
	Available locally	Available locally		
PROPOSED BRIDGE TYPE	TOTAL LENGTH	SUPERSTRUCTURE	SUBSTRUCTURE	FOUNDATION
EVALUATION	PHASE 1,2	REASON; Construction of bridge is only recommended		

NAME OF BRIDGE : CATA-AN BRIDGE NO : 06.02

LOCATION	STATION	ROUTE	PROVINCE	REGION
	Km. 65 + 930	Tiolas-Sinogbuhan Road	Iloilo	VI
EXISTING CONDITION	LENGTH	TYPE	PRESENT CONDITION	
	45.1 m	Bailey	Fair to Good	
SOCIO-ECONOMIC AND TRAFFIC INFORMATION	POPULATION AFFECTED		MAIN PRODUCT	DEVELOPMENT PLAN
			Marine and Agricultural Product	
	TRAFFIC VOLUME (ADT)	TRAFFIC COMPOSITION	TRIP PURPOSE	DESIGN TRAFFIC LOAD
	390	Buses, Trucks, Cars, Jeepneys and Tricycles	Business, Visit/Pleasure	3 tons
ENGINEERING INFORMATION	TOPOGRAPHIC CONDITION		GEOLOGICAL CONDITION	
	Rolling to Mountainous		Sand, clay, gravel and boulders	
	RIVER/HYDROLOGICAL CONDITION		CONDITION OF ACCESS ROAD	
	HFL = 10.16 LFL = 7.90		Fair to Good 6m PROPOSED WIDTH FOR IMPROVEMENT	
CONSTRUCTION INFORMATION	AVAILABILITY		TRANSPORTATION OF STEEL GIRDER	
	ERECTION EQUIPMENT	LOCAL MATERIAL	ROUTE ROAD	CONDITION
	Available locally	Available locally		Good Road and No sharp curve along the route
PROPOSED BRIDGE TYPE	TOTAL LENGTH	SUPERSTRUCTURE	SUBSTRUCTURE	FOUNDATION
	20 + 20 = 40 m	H-beam	. T type abutment . Wall type pier	Pile
EVALUATION	PHASE 1,2	REASON;	No difficulty	

NAME OF BRIDGE : IYANG BRIDGE NO : 06.03

LOCATION	STATION	ROUTE	PROVINCE	REGION
	Km. 109 + 962	Concepcion-San Dionisio National Road	Iloilo	VI
EXISTING CONDITION	LENGTH	TYPE	PRESENT CONDITION	
	25 LM	Timber	Dilapidated	
SOCIO-ECONOMIC AND TRAFFIC INFORMATION	POPULATION AFFECTED		MAIN PRODUCT	DEVELOPMENT PLAN
		1,759,428	Rice, Corn, Copra and Fish	Dev. of Fishing Industry and Irrigation
	TRAFFIC VOLUME (ADT)	TRAFFIC COMPOSITION	TRIP PURPOSE	DESIGN TRAFFIC LOAD
	526	Cars/Vans, Jeepneys, Buses, Trucks, others	Business, School, Visit/ Pleasure	3.5 tons
ENGINEERING INFORMATION	TOPOGRAPHIC CONDITION		GEOLOGICAL CONDITION	
	Flat		Gravel and Sandy clay	
	RIVER/HYDROLOGICAL CONDITION		CONDITION OF ACCESS ROAD	
	HWL = 1.720 m LWL = 1.088 m		Fair to Good 6m PROPOSED WIDTH FOR IMPROVEMENT	
CONSTRUCTION INFORMATION	AVAILABILITY		TRANSPORTATION OF STEEL GIRDER	
	ERECTION EQUIPMENT	LOCAL MATERIAL	ROUTE ROAD	CONDITION
	Available locally	Available locally	Iloilo City - Iloilo East Coast Road - Capiz Bdry.	Fair to Good
PROPOSED BRIDGE TYPE	TOTAL LENGTH	SUPERSTRUCTURE	SUBSTRUCTURE	FOUNDATION
	28 m	Steel Plate Girder	T type abutment	Pile
EVALUATION	PHASE 1,2	REASON; Swampy area, cofferdam		

NAME OF BRIDGE : GUINTAS BRIDGE NO : 06.04

LOCATION	STATION	ROUTE	PROVINCE	REGION
	Km. 106 + 500	Tapaz-Jamindan Road	Capiz	VI
EXISTING CONDITION	LENGTH	TYPE	PRESENT CONDITION	
	20 LM	Bailey	Destroyed	
SOCIO-ECONOMIC AND TRAFFIC INFORMATION	POPULATION AFFECTED		MAIN PRODUCT	DEVELOPMENT PLAN
		29,934	Agricultural	
	TRAFFIC VOLUME (ADT)	TRAFFIC COMPOSITION	TRIP PURPOSE	DESIGN TRAFFIC LOAD
	60 VPD	Light Weight Vehicles	Business-Visit/Pleasure	
ENGINEERING INFORMATION	TOPOGRAPHIC CONDITION		GEOLOGICAL CONDITION	
	Rolling		Clay with boulders	
	RIVER/HYDROLOGICAL CONDITION		CONDITION OF ACCESS ROAD	
	HFL = 20.92 LFL = 15.08		Bad 6m PROPOSED WIDTH FOR IMPROVEMENT	
CONSTRUCTION INFORMATION	AVAILABILITY		TRANSPORTATION OF STEEL GIRDER	
	ERECTION EQUIPMENT	LOCAL MATERIAL	ROUTE ROAD	CONDITION
	Available Locally	Available Locally	Roxas City-Ivisan-Sigman Guintas	Good
PROPOSED BRIDGE TYPE	TOTAL LENGTH	SUPERSTRUCTURE	SUBSTRUCTURE	FOUNDATION
	21 + 21 = 42 m	H-beam	T type abutment Wall type pier	Pile
EVALUATION	PHASE 1,2	REASON ;	No difficulty	

NAME OF BRIDGE : TUMALALUD BRIDGE NO : 06.05

LOCATION	STATION	ROUTE	PROVINCE	REGION
	Km. 104 + 400	JCT. National Rd. San Rafael Road	Capiz	VI
EXISTING CONDITION	LENGTH	TYPE	PRESENT CONDITION	
	30 LM	Bailey with Permanent Substructure	Superstructure - Fair, All substructure are existing and in good condition	
SOCIO-ECONOMIC AND TRAFFIC INFORMATION	POPULATION AFFECTED		MAIN PRODUCT	DEVELOPMENT PLAN
		33,986	Agricultural	
	TRAFFIC VOLUME (ADT)	TRAFFIC COMPOSITION	TRIP PURPOSE	DESIGN TRAFFIC LOAD
	92 VPD	Light Weight Vehicles	Business Visit/ Pleasure Military	7 tons
ENGINEERING INFORMATION	TOPOGRAPHIC CONDITION		GEOLOGICAL CONDITION	
	Flat		Sand and clay	
	RIVER/HYDROLOGICAL CONDITION		CONDITION OF ACCESS ROAD	
	HFL = 19.705 LFL = 11.757		Good 6m PROPOSED WIDTH FOR IMPROVEMENT	
CONSTRUCTION INFORMATION	AVAILABILITY		TRANSPORTATION OF STEEL GIRDER	
	ERECTION EQUIPMENT	LOCAL MATERIAL	ROUTE ROAD	CONDITION
	Available locally	Available locally	Roxas City-Ivisan-Cuartero	Good
PROPOSED BRIDGE TYPE	TOTAL LENGTH	SUPERSTRUCTURE	SUBSTRUCTURE	FOUNDATION
	Permanent substructure			
EVALUATION	PHASE 1,2	REASON; Urgent replacement is not recommended		

NAME OF BRIDGE : BANBAN BRIDGE NO : 07.01

LOCATION	STATION	ROUTE	PROVINCE	REGION
	Km. 61 + 100	Toledo-Pinamungahan National Road	Cebu	VII
EXISTING CONDITION	LENGTH	TYPE	PRESENT CONDITION	
	25.38 m	Timber	Dilapidated Condition	
SOCIO-ECONOMIC AND TRAFFIC INFORMATION	POPULATION AFFECTED		MAIN PRODUCT	DEVELOPMENT PLAN
			Coconut, Rice, Corn	
	TRAFFIC VOLUME (ADT)	TRAFFIC COMPOSITION	TRIP PURPOSE	DESIGN TRAFFIC LOAD
	97 (AADT)	Jeeps, Cars, Bus and Trucks	Transporting Farm Products	5 tons
ENGINEERING INFORMATION	TOPOGRAPHIC CONDITION		GEOLOGICAL CONDITION	
	Flat		Sandy clay	
	RIVER/HYDROLOGICAL CONDITION		CONDITION OF ACCESS ROAD	
	LWL = 2.652 m HWL = 4.100 m OWL = 1.520 m		Good 6m PROPOSED WIDTH FOR IMPROVEMENT	
CONSTRUCTION INFORMATION	AVAILABILITY		TRANSPORTATION OF STEEL GIRDER	
	ERECTION EQUIPMENT	LOCAL MATERIAL	ROUTE ROAD	CONDITION
	Available locally	Available locally		
PROPOSED BRIDGE TYPE	TOTAL LENGTH	SUPERSTRUCTURE	SUBSTRUCTURE	FOUNDATION
	30 m	Steel plate girder	T type abutment	Pile
EVALUATION	PHASE 1,2	REASON ; Flood area		

NAME OF BRIDGE : CAMPACAS BRIDGE NO : 07.02

LOCATION	STATION	ROUTE	PROVINCE	REGION
	Km. 97 + 600	Dalaguete-Mantalongon Road	Cebu	VII
EXISTING CONDITION	LENGTH	TYPE	PRESENT CONDITION	
	20.83 m	Bailey	Fair Condition	
SOCIO-ECONOMIC AND TRAFFIC INFORMATION	POPULATION AFFECTED		MAIN PRODUCT	DEVELOPMENT PLAN
			Coconut, Corn	
	TRAFFIC VOLUME (ADT)	TRAFFIC COMPOSITION	TRIP PURPOSE	DESIGN TRAFFIC LOAD
	34	Cars, Trucks and Jeeps	Business, Visit/Pleasure	5 tons
ENGINEERING INFORMATION	TOPOGRAPHIC CONDITION		GEOLOGICAL CONDITION	
	Flat		Clayey Gravel	
	RIVER/HYDROLOGICAL CONDITION		CONDITION OF ACCESS ROAD	
	LWL = 397.80 m HWL = 400.78 m OWL = 397.80 m		Good 6m PROPOSED WIDTH FOR IMPROVEMENT	
CONSTRUCTION INFORMATION	AVAILABILITY		TRANSPORTATION OF STEEL GIRDER	
	ERECTION EQUIPMENT	LOCAL MATERIAL	ROUTE ROAD	CONDITION
	Available in the locality	Available in the locality		
PROPOSED BRIDGE TYPE	TOTAL LENGTH	SUPERSTRUCTURE	SUBSTRUCTURE	FOUNDATION
	24 m	H-beam	T type abutment	Pile
EVALUATION	PHASE 1,2	REASON; Flood area		

NAME OF BRIDGE : CAMPANGA BRIDGE NO : 07.03

LOCATION	STATION	ROUTE	PROVINCE	REGION
	Km. 63 + 500	Carcar-Barili-Mantayupan Rd.	Cebu	VII
EXISTING CONDITION	LENGTH	TYPE	PRESENT CONDITION	
	9.21 m	Bailey	Dilapidated Condition	
SOCIO-ECONOMIC AND TRAFFIC INFORMATION	POPULATION AFFECTED		MAIN PRODUCT	DEVELOPMENT PLAN
			Coconut, Corn	
	TRAFFIC VOLUME (ADT)	TRAFFIC COMPOSITION	TRIP PURPOSE	DESIGN TRAFFIC LOAD
	89 (AADT)			3 tons
ENGINEERING INFORMATION	TOPOGRAPHIC CONDITION		GEOLOGICAL CONDITION	
	Flat		Silty Gravel	
	RIVER/HYDROLOGICAL CONDITION		CONDITION OF ACCESS ROAD	
	HWL = 48.56 m		Good 6m PROPOSED WIDTH FOR IMPROVEMENT	
CONSTRUCTION INFORMATION	AVAILABILITY		TRANSPORTATION OF STEEL GIRDER	
	ERECTION EQUIPMENT	LOCAL MATERIAL	ROUTE ROAD	CONDITION
	Available in the locality	Available in the locality		
PROPOSED BRIDGE TYPE	TOTAL LENGTH	SUPERSTRUCTURE	SUBSTRUCTURE	FOUNDATION
	12 m	H-beam	T type abutment	Pile
EVALUATION	PHASE 1,2	REASON; No difficulty		

NAME OF BRIDGE : CAMACHILES BRIDGE NO : 07.04

LOCATION	STATION	ROUTE	PROVINCE	REGION
	Km. 49 + 300	Toledo-Tabuelan San Remigio Rd.	Talavera, Toledo City	VII
EXISTING CONDITION	LENGTH	TYPE	PRESENT CONDITION	
	35 LM	Timber	Fair	
SOCIO-ECONOMIC AND TRAFFIC INFORMATION	POPULATION AFFECTED		MAIN PRODUCT	DEVELOPMENT PLAN
		5,438	Copra, Vegetables, Fruits, Corn, Fish, Silica	
	TRAFFIC VOLUME (ADT)	TRAFFIC COMPOSITION	TRIP PURPOSE	DESIGN TRAFFIC LOAD
	267	Cars, jeeps, pick-up, vans, bus, trucks, tricycles	Business, visit/ /pleasure, school	10 tons
ENGINEERING INFORMATION	TOPOGRAPHIC CONDITION		GEOLOGICAL CONDITION	
	Flat		Sand, gravel and boulders	
	RIVER/HYDROLOGICAL CONDITION		CONDITION OF ACCESS ROAD	
	HWL = 2.0 m OWL = 0.0 m CWE = 1.0 m		Good 6m PROPOSED WIDTH FOR IMPROVEMENT	
CONSTRUCTION INFORMATION	AVAILABILITY		TRANSPORTATION OF STEEL GIRDER	
	ERECTION EQUIPMENT	LOCAL MATERIAL	ROUTE ROAD	CONDITION
	Available in the locality	Available in the locality	Cebu City wharf to Naga-Uling Toledo City Rd.	Good
PROPOSED BRIDGE TYPE	TOTAL LENGTH	SUPERSTRUCTURE	SUBSTRUCTURE	FOUNDATION
	18 + 18 = 36 m	H-beam	T type abutment Wall type pier	Pile
EVALUATION	PHASE 1,2	REASON; No difficulty		

NAME OF BRIDGE : LAGNASON BRIDGE NO : 07.05

LOCATION	STATION	ROUTE	PROVINCE	REGION
	Km. 113 + 200	Lagunde, Oslob	Cebu	VII
EXISTING CONDITION	LENGTH	TYPE	PRESENT CONDITION	
	33.78 m	Timber	Fair to Bad	
SOCIO-ECONOMIC AND TRAFFIC INFORMATION	POPULATION AFFECTED		MAIN PRODUCT	DEVELOPMENT PLAN
			Coconut, Vegetables	
	TRAFFIC VOLUME (ADT)	TRAFFIC COMPOSITION	TRIP PURPOSE	DESIGN TRAFFIC LOAD
	50 (AADT)			5 tons
ENGINEERING INFORMATION	TOPOGRAPHIC CONDITION		GEOLOGICAL CONDITION	
	Flat		Sandy clay	
	RIVER/HYDROLOGICAL CONDITION		CONDITION OF ACCESS ROAD	
	MFL = 3.64 m OFL = 2.16 m		Good 6m PROPOSED WIDTH FOR IMPROVEMENT	
CONSTRUCTION INFORMATION	AVAILABILITY		TRANSPORTATION OF STEEL GIRDER	
	ERECTION EQUIPMENT	LOCAL MATERIAL	ROUTE ROAD	CONDITION
	Available in the locality	Available in the locality		Good
PROPOSED BRIDGE TYPE	TOTAL LENGTH	SUPERSTRUCTURE	SUBSTRUCTURE	FOUNDATION
	19 + 19 = 38 m	H-Beam	T type abutment Wall type pier	Pile
EVALUATION	PHASE 1,2	REASON; No difficulty		

NAME OF BRIDGE : PORAY BRIDGE NO : 08.01

LOCATION	STATION	ROUTE	PROVINCE	REGION
	Km. 1043 + 798	Giporlos-Balangiga	Eastern Samar	VIII
EXISTING CONDITION	LENGTH	TYPE	PRESENT CONDITION	
	18 LM	Timber Trestle	Bad	
SOCIO-ECONOMIC AND TRAFFIC INFORMATION	POPULATION AFFECTED		MAIN PRODUCT	DEVELOPMENT PLAN
	45	360,000	Coconuts and root crops	
	TRAFFIC VOLUME (ADT)	TRAFFIC COMPOSITION	TRIP PURPOSE	DESIGN TRAFFIC LOAD
	96	light	Business, Visit/Pleasure	5 tons
ENGINEERING INFORMATION	TOPOGRAPHIC CONDITION		GEOLOGICAL CONDITION	
	Flat to rolling		Sandy clay with gravel	
	RIVER/HYDROLOGICAL CONDITION		CONDITION OF ACCESS ROAD	
	MFL = 8.49 m HWL = 7.43 m LWL = 6.52 m		Bad to Fair 6m PROPOSED WIDTH FOR IMPROVEMENT	
CONSTRUCTION INFORMATION	AVAILABILITY		TRANSPORTATION OF STEEL GIRDER	
	ERECTION EQUIPMENT	LOCAL MATERIAL	ROUTE ROAD	CONDITION
	Available in rental	Available in the locality	Tacloban City-Wright-Taft-Borongan-Buena vista, Giporlos, Balangiga	Good
PROPOSED BRIDGE TYPE	TOTAL LENGTH	SUPERSTRUCTURE	SUBSTRUCTURE	FOUNDATION
	22 m	H-beam	T type abutment	Pile
EVALUATION	PHASE 1,2	REASON; No difficulty		

NAME OF BRIDGE : IBA BRIDGE NO : 08.02

LOCATION	STATION	ROUTE	PROVINCE	REGION
	Km. 914 + 800	Basey-Magallanes Road	Northern Samar	VIII
EXISTING CONDITION	LENGTH	TYPE	PRESENT CONDITION	
	21.65 LM	Bailey	Unpassable due to dilapidated steel members	
SOCIO-ECONOMIC AND TRAFFIC INFORMATION	POPULATION AFFECTED		MAIN PRODUCT	DEVELOPMENT PLAN
		36,760.00	Rice, Copra and marine products	
	TRAFFIC VOLUME (ADT)	TRAFFIC COMPOSITION	TRIP PURPOSE	DESIGN TRAFFIC LOAD
ENGINEERING INFORMATION	TOPOGRAPHIC CONDITION		GEOLOGICAL CONDITION	
	Flat		Sandy clay with gravel	
	RIVER/HYDROLOGICAL CONDITION		CONDITION OF ACCESS ROAD	
	MFL = 9.74 m OWL = 6.40 m		Fair 6m PROPOSED WIDTH FOR IMPROVEMENT	
CONSTRUCTION INFORMATION	AVAILABILITY		TRANSPORTATION OF STEEL GIRDER	
	ERECTION EQUIPMENT	LOCAL MATERIAL	ROUTE ROAD	CONDITION
	Available at Res, Pawing, Polo, Leyte	Aggregates at Babatngon, Leyte or Tacloban City Lumber-within the locality cement-Tacloban City	Tacloban City-Basey - Magallanes	Fair to Good
PROPOSED BRIDGE TYPE	TOTAL LENGTH	SUPERSTRUCTURE	SUBSTRUCTURE	FOUNDATION
EVALUATION	PHASE 1,2	REASON;		

NAME OF BRIDGE : HABAY BRIDGE NO : 08.03

LOCATION	STATION	ROUTE	PROVINCE	REGION
	Km. 2075 + 448	Liloan-San Francisco-Pintuyan Road	Southern Leyte	VIII
EXISTING CONDITION	LENGTH	TYPE	PRESENT CONDITION	
	61.45 LM	Bailey	Good	
SOCIO-ECONOMIC AND TRAFFIC INFORMATION	POPULATION AFFECTED		MAIN PRODUCT	DEVELOPMENT PLAN
		61034	Rice, copra, corn, banana, marine products	
	TRAFFIC VOLUME (ADT)	TRAFFIC COMPOSITION	TRIP PURPOSE	DESIGN TRAFFIC LOAD
		Jeepney, buses, motorcycles and trucks	Business, Visit/Pleasure	7 tons
ENGINEERING INFORMATION	TOPOGRAPHIC CONDITION		GEOLOGICAL CONDITION	
	Flat		Gravel with shoulders	
	RIVER/HYDROLOGICAL CONDITION		CONDITION OF ACCESS ROAD	
	EFL = 16.830 m HFL = 16.000 m		Bad to Fair 6m PROPOSED WIDTH FOR IMPROVEMENT	
CONSTRUCTION INFORMATION	AVAILABILITY		TRANSPORTATION OF STEEL GIRDER	
	ERECTION EQUIPMENT	LOCAL MATERIAL	ROUTE ROAD	CONDITION
	Available at Pawing, Palo Leyte	Aggregate bridge site lumber within the locality cement-Maasin, Southern Leyte	Tacloban-Mahaplag Sogod-Liloan or Maasin-Sogod-Liloan	Fair to Good
PROPOSED BRIDGE TYPE	TOTAL LENGTH	SUPERSTRUCTURE	SUBSTRUCTURE	FOUNDATION
	22+22+22 = 66m	H-beam	T type abutment Wall type pier	Pile
EVALUATION	PHASE 1,2	REASON ;	Flood area	

NAME OF BRIDGE : TALISAYAN RIVER CROSSING NO : 08.04

LOCATION	STATION	ROUTE	PROVINCE	REGION
	Km. 66 + 800	Lapaz-Javier Bito Road	Leyte	VIII
EXISTING CONDITION	LENGTH	TYPE	PRESENT CONDITION	
	51.4 LM from bank to bank	River Crossing		
SOCIO-ECONOMIC AND TRAFFIC INFORMATION	POPULATION AFFECTED		MAIN PRODUCT	DEVELOPMENT PLAN
		98,005	Rice, Banana Copra, Cassava Corn, Camote	
	TRAFFIC VOLUME(ADT)	TRAFFIC COMPOSITION	TRIP PURPOSE	DESIGN TRAFFIC LOAD
		Jeepneys, Bus Motorcyles, Trucks	Business	
ENGINEERING INFORMATION	TOPOGRAPHIC CONDITION		GEOLOGICAL CONDITION	
	Flat		Sand clay with gravel	
	RIVER/HYDROLOGICAL CONDITION		CONDITION OF ACCESS ROAD	
	HFL = 9.56 m OWL = 6.92 m		Fair 6m PROPOSED WIDTH FOR IMPROVEMENT	
CONSTRUCTION INFORMATION	AVAILABILITY		TRANSPORTATION OF STEEL GIRDER	
	ERECTION EQUIPMENT	LOCAL MATERIAL	ROUTE ROAD	CONDITION
	Available at Res, Pawing Palo, Leyte	Available in the locality	Tacloban-Palo Tanguan-Taloso Dulag-Mayorao McArthur-Bito Javier	Fair to Good
PROPOSED BRIDGE TYPE	TOTAL LENGTH	SUPERSTRUCTURE	SUBSTRUCTURE	FOUNDATION
	27 + 27 = 54 m	H-beam	T type abutment Wall type pier	Pile
EVALUATION	PHASE 1,2	REASON ; Flood area		

NAME OF BRIDGE : PINUKAWAN BRIDGE NO : 08-05

LOCATION	STATION	ROUTE	PROVINCE	REGION
	Km. 68 + 280	Lapaz-Javier Bito Road	Leyte	VIII
EXISTING CONDITION	LENGTH	TYPE	PRESENT CONDITION	
	13.70 LM	Timber Trestle	Bad	
SOCIO-ECONOMIC AND TRAFFIC INFORMATION	POPULATION AFFECTED		MAIN PRODUCT	DEVELOPMENT PLAN
		98,085	Rice, Corn Copra, Banana Cassava, Camote	
	TRAFFIC VOLUME (ADT)	TRAFFIC COMPOSITION	TRIP PURPOSE	DESIGN TRAFFIC LOAD
		Jeepney, Bus Motorcyles, Trucks	Business Visit/Pleasure	3 tons
ENGINEERING INFORMATION	TOPOGRAPHIC CONDITION		GEOLOGICAL CONDITION	
	Flat		Sand, clay and gravel	
	RIVER/HYDROLOGICAL CONDITION		CONDITION OF ACCESS ROAD	
	MFL = 9.44 m OWL = 7.80 m		Fair 6m PROPOSED WIDTH FOR IMPROVEMENT	
CONSTRUCTION INFORMATION	AVAILABILITY		TRANSPORTATION OF STEEL GIRDER	
	ERECTION EQUIPMENT	LOCAL MATERIAL	ROUTE ROAD	CONDITION
	Available at Res, Pawing, Palo, Leyte	Available in the locality	Tacloban City Palo-Tanuan Talosa-Dulag-Mayoga-McArthur Bito-Javier	Fair to Good
PROPOSED BRIDGE TYPE	TOTAL LENGTH	SUPERSTRUCTURE	SUBSTRUCTURE	FOUNDATION
	16 m	H-Beam	T type abutment	Pile
EVALUATION	PHASE 1,2	REASON;	No difficulty	

NAME OF BRIDGE : BATUNGAL BRIDGE NO : 09-01

LOCATION	STATION	ROUTE	PROVINCE	REGION
	Km. 26 + 440	Isabela-Maluso Road	Basilan	IX
EXISTING CONDITION	LENGTH	TYPE	PRESENT CONDITION	
	15.40 m	Timber	Bad - deteriorated substructure and superstructure	
SOCIO-ECONOMIC AND TRAFFIC INFORMATION	POPULATION AFFECTED		MAIN PRODUCT	DEVELOPMENT PLAN
		229,951	Copra, Lumber, Rubber	
	TRAFFIC VOLUME (ADT)	TRAFFIC COMPOSITION	TRIP PURPOSE	DESIGN TRAFFIC LOAD
	340	Cars Jeepneys Trucks	Business, school visit/pleasure	3 tons
ENGINEERING INFORMATION	TOPOGRAPHIC CONDITION		GEOLOGICAL CONDITION	
	Flat to rolling		Sandy clay with gravel	
	RIVER/HYDROLOGICAL CONDITION		CONDITION OF ACCESS ROAD	
	MFL = 4.30 m OFL = 3.60 m HWL = 2.80 m OWL = 2.10 m		Bad 6m PROPOSED WIDTH FOR IMPROVEMENT	
CONSTRUCTION INFORMATION	AVAILABILITY		TRANSPORTATION OF STEEL GIRDER	
	ERECTION EQUIPMENT	LOCAL MATERIAL	ROUTE ROAD	CONDITION
	Available locally	Available locally	Port Holland Maluso-Batungal	Bad to Fair
PROPOSED BRIDGE TYPE	TOTAL LENGTH	SUPERSTRUCTURE	SUBSTRUCTURE	FOUNDATION
	23 m	H-beam	T type abutment	Pile
EVALUATION	PHASE 1,2	REASON ; No difficulty		

NAME OF BRIDGE : MANGOP BRIDGE NO : 09-02

LOCATION	STATION	ROUTE	PROVINCE	REGION
	Km. 439 + 740	Sindangan Liloy Road	Zamboanga del Norte	IX
EXISTING CONDITION	LENGTH	TYPE	PRESENT CONDITION	
	45 LM	Timber	Bad - deteriorated substructure and superstructure	
SOCIO-ECONOMIC AND TRAFFIC INFORMATION	POPULATION AFFECTED		MAIN PRODUCT	DEVELOPMENT PLAN
		660,465	Copra, Corn; Rice	
	TRAFFIC VOLUME(ADT)	TRAFFIC COMPOSITION	TRIP PURPOSE	DESIGN TRAFFIC LOAD
	590	Cars, Jeepneys, Minibus, Bigbus, Trucks	Business School Visit/Pleasure	3 tons
ENGINEERING INFORMATION	TOPOGRAPHIC CONDITION		GEOLOGICAL CONDITION	
	Coastal Raod - Flat to Mountainous		Gravel and Sand	
	RIVER/HYDROLOGICAL CONDITION		CONDITION OF ACCESS ROAD	
	MFL = 2.104 m OFL = 0.81 m		Fair 6m PROPOSED WIDTH FOR IMPROVEMENT	
CONSTRUCTION INFORMATION	AVAILABILITY		TRANSPORTATION OF STEEL GIRDER	
	ERECTION EQUIPMENT	LOCAL MATERIAL	ROUTE ROAD	CONDITION
	Available locally	Available locally	Dipolog City Port to Sindangan-Liloy Road	Fair
PROPOSED BRIDGE TYPE	TOTAL LENGTH	SUPERSTRUCTURE	SUBSTRUCTURE	FOUNDATION
	17 + 17 = 34 m	H-beam	T type abutment Wall type pier	Pile
EVALUATION	PHASE 1,2	REASON; No difficulty		

NAME OF BRIDGE : CANAWAN BRIDGE NO : 09-03

LOCATION	STATION	ROUTE	PROVINCE	REGION
	Km. 44 + 740	Sindangan-Liloy Road	Zamboanga Del Norte	IX
EXISTING CONDITION	LENGTH	TYPE	PRESENT CONDITION	
	35.5 LM	Bailey	Bad - deteriorated substructure and superstructure	
SOCIO-ECONOMIC AND TRAFFIC INFORMATION	POPULATION AFFECTED		MAIN PRODUCT	DEVELOPMENT PLAN
		660,645	Copra, Corn, Rice	
	TRAFFIC VOLUME(ADT)	TRAFFIC COMPOSITION	TRIP PURPOSE	DESIGN TRAFFIC LOAD
	590	Cars, Jeepneys, Mini bus, Big bus, Trucks	Business, School Visit/Pleasure	5 tons
ENGINEERING INFORMATION	TOPOGRAPHIC CONDITION		GEOLOGICAL CONDITION	
	Flat to Rolling		Clayey gravel with boulders	
	RIVER/HYDROLOGICAL CONDITION		CONDITION OF ACCESS ROAD	
	MFL = 38.06 m OFL = 37.0 m OWL = 35.8 m		Fair 6m PROPOSED WIDTH FOR IMPROVEMENT	
CONSTRUCTION INFORMATION	AVAILABILITY		TRANSPORTATION OF STEEL GIRDER	
	ERECTION EQUIPMENT	LOCAL MATERIAL	ROUTE ROAD	CONDITION
	Available locally	Available locally	Dipolog City Port to Sindangan-Liloy Road	Fair
PROPOSED BRIDGE TYPE	TOTAL LENGTH	SUPERSTRUCTURE	SUBSTRUCTURE	FOUNDATION
	19 + 19 = 38 m	H-beam	T type abutment Wall type pier	Pile
EVALUATION	PHASE 1,2	REASON ;	No difficulty	

NAME OF BRIDGE : PIANGON BRIDGE NO : 09-04

LOCATION	STATION	ROUTE	PROVINCE	REGION
	km. 337 + 380	Dipolog-Sindangan Nat'l Road	Zamboanga Del Norte	IX
EXISTING CONDITION	LENGTH	TYPE	PRESENT CONDITION	
	25 LM	Bailey	Bad - deteriorated substructure	
SOCIO-ECONOMIC AND TRAFFIC INFORMATION	POPULATION AFFECTED		MAIN PRODUCT	DEVELOPMENT PLAN
		660,465	Rice, Corn, Copra	
	TRAFFIC VOLUME(ADT)	TRAFFIC COMPOSITION	TRIP PURPOSE	DESIGN TRAFFIC LOAD
	667	Cars, Jeepneys, Minibus, Bigbus, Trucks	Business, School Visit/Pleasure	7 tons
ENGINEERING INFORMATION	TOPOGRAPHIC CONDITION		GEOLOGICAL CONDITION	
	Flat		Sand Clay	
	RIVER/HYDROLOGICAL CONDITION		CONDITION OF ACCESS ROAD	
	MFL = 8.50 m OWL = 5.40 m		Fair 6m PROPOSED WIDTH FOR IMPROVEMENT	
CONSTRUCTION INFORMATION	AVAILABILITY		TRANSPORTATION OF STEEL GIRDER	
	ERECTION EQUIPMENT	LOCAL MATERIAL	ROUTE ROAD	CONDITION
	Available in the area	Availabale in the area	Dipolog City Port to Sindangan Road	Fair to Good
PROPOSED BRIDGE TYPE	TOTAL LENGTH	SUPERSTRUCTURE	SUBSTRUCTURE	FOUNDATION
	20 + 20 = 40 m	H-beam	T type abutment Wall type pier	Pile
EVALUATION	PHASE I,2	REASON; No difficulty		

NAME OF BRIDGE : PATUNAN BRIDGE NO : 09-05

LOCATION	STATION	ROUTE	PROVINCE	REGION
	Km. 375 + 090	Dipolog-Sindangan Road	Zamboanga Del Norte	IX
EXISTING CONDITION	LENGTH	TYPE	PRESENT CONDITION	
	25 LM	Bailey	Fair	
SOCIO-ECONOMIC AND TRAFFIC INFORMATION	POPULATION AFFECTED		MAIN PRODUCT	DEVELOPMENT PLAN
		660,465	Copra, Corn, Rice	
	TRAFFIC VOLUME(ADT)	TRAFFIC COMPOSITION	TRIP PURPOSE	DESIGN TRAFFIC LOAD
	667	Cars, Jeepneys Minibus, Bigbus, Trucks	Business, School Visit/Pleasure	7 tons
ENGINEERING INFORMATION	TOPOGRAPHIC CONDITION		GEOLOGICAL CONDITION	
	Flat		Sand Clay	
	RIVER/HYDROLOGICAL CONDITION		CONDITION OF ACCESS ROAD	
	MFL = 9.0 m OWL = 8.4 m		Fair 6m PROPOSED WIDTH FOR IMPROVEMENT	
CONSTRUCTION INFORMATION	AVAILABILITY		TRANSPORTATION OF STEEL GIRDER	
	ERECTION EQUIPMENT	LOCAL MATERIAL	ROUTE ROAD	CONDITION
	Available locally	Available locally	Dipolog City Port to Sindangan Road	Fair to Good
PROPOSED BRIDGE TYPE	TOTAL LENGTH	SUPERSTRUCTURE	SUBSTRUCTURE	FOUNDATION
	25 m	H-beam	T type abutment	Pile
EVALUATION	PHASE 1,2	REASON ; Permanent and timber trestle		

NAME OF BRIDGE : HAYANGABON BRIDGE NO : 10-01

LOCATION	STATION	ROUTE	PROVINCE	REGION
	Km. 1202 + 586	Surigao-Davao Coastal Road	Surigao del Norte	X
EXISTING CONDITION	LENGTH	TYPE	PRESENT CONDITION	
	40 LM	Timber	Dilapidated Condition	
SOCIO-ECONOMIC AND TRAFFIC INFORMATION	POPULATION AFFECTED		MAIN PRODUCT	DEVELOPMENT PLAN
		442,718	Rice, Coconuts, Fish, Mining	Mining Development
	TRAFFIC VOLUME(ADT)	TRAFFIC COMPOSITION	TRIP PURPOSE	DESIGN TRAFFIC LOAD
	55	Cars, Jeepneys, Minibus, Bigbus, Trucks	Business, School Visit/Pleasure	5 tons
ENGINEERING INFORMATION	TOPOGRAPHIC CONDITION		GEOLOGICAL CONDITION	
	Flat		Sand and gravel	
	RIVER/HYDROLOGICAL CONDITION		CONDITION OF ACCESS ROAD	
	MFL = 18.4 m OWL = 17.32 m		Fair 6m PROPOSED WIDTH FOR IMPROVEMENT	
CONSTRUCTION INFORMATION	AVAILABILITY		TRANSPORTATION OF STEEL GIRDER	
	ERECTION EQUIPMENT	LOCAL MATERIAL	ROUTE ROAD	CONDITION
	Available in the locality	Available in the locality		Fair
PROPOSED BRIDGE TYPE	TOTAL LENGTH	SUPERSTRUCTURE	SUBSTRUCTURE	FOUNDATION
	21 + 21 = 42 m	H-beam	T type abutment Wall type pier	Pile
EVALUATION	PHASE 1,2	REASON ; Cofferdam		

NAME OF BRIDGE : MARADUGAO BRIDGE NO : 10-02

LOCATION	STATION	ROUTE	PROVINCE	REGION
	Km. 1608 + 942	Maradugo-Camp Kibarutan Road	Bukidnon	X
EXISTING CONDITION	LENGTH	TYPE	PRESENT CONDITION	
	21 LM	Bailey	Dilapidated condition	
SOCIO-ECONOMIC AND TRAFFIC INFORMATION	POPULATION AFFECTED		MAIN PRODUCT	DEVELOPMENT PLAN
		803,437	Rice, Corn	
	TRAFFIC VOLUME (ADT)	TRAFFIC COMPOSITION	TRIP PURPOSE	DESIGN TRAFFIC LOAD
	1,319	Cars, Jeepneys, Trucks	Business, Visit/Pleasure	5 tons
ENGINEERING INFORMATION	TOPOGRAPHIC CONDITION		GEOLOGICAL CONDITION	
	Mountainous		Clayey gravel with boulders	
	RIVER/HYDROLOGICAL CONDITION		CONDITION OF ACCESS ROAD	
	MFL = 479.51 m OFL = 476.19 m		Fair 6m PROPOSED WIDTH FOR IMPROVEMENT	
CONSTRUCTION INFORMATION	AVAILABILITY		TRANSPORTATION OF STEEL GIRDER	
	ERECTION EQUIPMENT	LOCAL MATERIAL	ROUTE ROAD	CONDITION
	Available in the locality	Available in the locality		Fair
PROPOSED BRIDGE TYPE	TOTAL LENGTH	SUPERSTRUCTURE	SUBSTRUCTURE	FOUNDATION
	25 m	H-beam	T type abutment	Spread footing
EVALUATION	PHASE 1,2	REASON ;	No difficulty	

NAME OF BRIDGE : MAUNDO BRIDGE NO : 10-03

LOCATION	STATION	ROUTE	PROVINCE	REGION
	Km. 1386 + 957	Pulang Lupa-Patrocinio Road	Agusan Del Sur	X
EXISTING CONDITION	LENGTH	TYPE	PRESENT CONDITION	
	18 LM	Bailey	Dilapidated condition	
SOCIO-ECONOMIC AND TRAFFIC INFORMATION	POPULATION AFFECTED		MAIN PRODUCT	DEVELOPMENT PLAN
		447,017		
	TRAFFIC VOLUME (ADT)	TRAFFIC COMPOSITION	TRIP PURPOSE	DESIGN TRAFFIC LOAD
		Trucks, Jeepneys	Business	5 tons
ENGINEERING INFORMATION	TOPOGRAPHIC CONDITION		GEOLOGICAL CONDITION	
	Rolling		Clayey gravel with rocks	
	RIVER/HYDROLOGICAL CONDITION		CONDITION OF ACCESS ROAD	
	HFL = 49.00 OWL = 45.24		Fair 6m PROPOSED WIDTH FOR IMPROVEMENT	
CONSTRUCTION INFORMATION	AVAILABILITY		TRANSPORTATION OF STEEL GIRDER	
	ERECTION EQUIPMENT	LOCAL MATERIAL	ROUTE ROAD	CONDITION
	Available in the locality	Available in the locality		
PROPOSED BRIDGE TYPE	TOTAL LENGTH	SUPERSTRUCTURE	SUBSTRUCTURE	FOUNDATION
	22 m	H-beam	T type abutment	Pile
EVALUATION	PHASE 1,2	REASON ; No difficulty		

NAME OF BRIDGE : STA. IRENE BRIDGE NO : 10.04

LOCATION	STATION	ROUTE	PROVINCE	REGION
	Km. 1282 + 110	Bayugan-Kalaitan Tandag Road	Agusan del Sur	X
EXISTING CONDITION	LENGTH	TYPE	PRESENT CONDITION	
	20 LM	Log Bridge	Dilapidated Condition	
SOCIO-ECONOMIC AND TRAFFIC INFORMATION	POPULATION AFFECTED		MAIN PRODUCT	DEVELOPMENT PLAN
		477,017		
	TRAFFIC VOLUME (ADT)	TRAFFIC COMPOSITION	TRIP PURPOSE	DESIGN TRAFFIC LOAD
		Logging Trucks, Jeepneys	Business, Visit/Pleasure	
ENGINEERING INFORMATION	TOPOGRAPHIC CONDITION		GEOLOGICAL CONDITION	
	Mountainous		Silty Clay	
	RIVER/HYDROLOGICAL CONDITION		CONDITION OF ACCESS ROAD	
	MFL = 49.0 m OFL = 46.0 m OWL = 44.15 m		Bad 6m PROPOSED WIDTH FOR IMPROVEMENT	
CONSTRUCTION INFORMATION	AVAILABILITY		TRANSPORTATION OF STEEL GIRDER	
	ERECTION EQUIPMENT	LOCAL MATERIAL	ROUTE ROAD	CONDITION
	Available in the locality	Available in the locality		Fair
PROPOSED BRIDGE TYPE	TOTAL LENGTH	SUPERSTRUCTURE	SUBSTRUCTURE	FOUNDATION
	22 m	H-beam	T type abutment	Pile
EVALUATION	PHASE 1,2	REASON; No difficulty		

NAME OF BRIDGE : MALUBOG BRIDGE NO : 10.05

LOCATION	STATION	ROUTE	PROVINCE	REGION
	Km. 185 + 760	Labuyo-Tangub-Silanga Road	Cagayan de Oro	X
EXISTING CONDITION	LENGTH	TYPE	PRESENT CONDITION	
	25 LM	Timber	Dilapidated Condition	
SOCIO-ECONOMIC AND TRAFFIC INFORMATION	POPULATION AFFECTED		MAIN PRODUCT	DEVELOPMENT PLAN
		48,777	Coconuts	
	TRAFFIC VOLUME (ADT)	TRAFFIC COMPOSITION	TRIP PURPOSE	DESIGN TRAFFIC LOAD
	362	Car, Trucks, Minibus, Bigbus	Business, Visit/pleasure, School	5 tons
ENGINEERING INFORMATION	TOPOGRAPHIC CONDITION		GEOLOGICAL CONDITION	
	Rolling		Clayey gravel	
	RIVER/HYDROLOGICAL CONDITION		CONDITION OF ACCESS ROAD	
	MFL = 6.05 Average Water Level 2.17 m (Dry Season 2.41 m (Wet Season)		Fair 6m PROPOSED WIDTH FOR IMPROVEMENT	
CONSTRUCTION INFORMATION	AVAILABILITY		TRANSPORTATION OF STEEL GIRDER	
	ERECTION EQUIPMENT	LOCAL MATERIAL	ROUTE ROAD	CONDITION
	Available in the locality	Available in the locality		
PROPOSED BRIDGE TYPE	TOTAL LENGTH	SUPERSTRUCTURE	SUBSTRUCTURE	FOUNDATION
	23 m	H-beam	T type abutment	Pile
EVALUATION	PHASE 1,2	REASON; No difficulty		

NAME OF BRIDGE : LAMBUNAO BRIDGE NO : 11.01

LOCATION	STATION	ROUTE	PROVINCE	REGION
	Km. 1267 + 027	Surigao del Sur Davao Coastal Road	Surigao del Sur	XI
EXISTING CONDITION	LENGTH	TYPE	PRESENT CONDITION	
	40 LM	Bailey		
SOCIO-ECONOMIC AND TRAFFIC INFORMATION	POPULATION AFFECTED		MAIN PRODUCT	DEVELOPMENT PLAN
	TRAFFIC VOLUME (ADT)	TRAFFIC COMPOSITION	TRIP PURPOSE	DESIGN TRAFFIC LOAD
ENGINEERING INFORMATION	TOPOGRAPHIC CONDITION		GEOLOGICAL CONDITION	
	RIVER/HYDROLOGICAL CONDITION		CONDITION OF ACCESS ROAD	
			PROPOSED WIDTH FOR IMPROVEMENT	
CONSTRUCTION INFORMATION	AVAILABILITY		TRANSPORTATION OF STEEL GIRDER	
	ERECTION EQUIPMENT	LOCAL MATERIAL	ROUTE ROAD	CONDITION
PROPOSED BRIDGE TYPE	TOTAL LENGTH	SUPERSTRUCTURE	SUBSTRUCTURE	FOUNDATION
	19 + 19 = 38 m	H-beam	T type abutment Wall type pier	Pile
EVALUATION	PHASE 1,2	REASON ; No difficulty		

NAME OF BRIDGE : BALIBADON BRIDGE #3 NO : 11.02

LOCATION	STATION	ROUTE	PROVINCE	REGION
	Km. 1296 + 814	Surigao del Sur Davao Coastal Road	Surigao del Sur	XI
EXISTING CONDITION	LENGTH	TYPE	PRESENT CONDITION	
	36 LM	Timber		
SOCIO-ECONOMIC AND TRAFFIC INFORMATION	POPULATION AFFECTED		MAIN PRODUCT	DEVELOPMENT PLAN
	TRAFFIC VOLUME (ADT)	TRAFFIC COMPOSITION	TRIP PURPOSE	DESIGN TRAFFIC LOAD
ENGINEERING INFORMATION	TOPOGRAPHIC CONDITION		GEOLOGICAL CONDITION	
	RIVER/HYDROLOGICAL CONDITION		CONDITION OF ACCESS ROAD	
			PROPOSED WIDTH FOR IMPROVEMENT	
CONSTRUCTION INFORMATION	AVAILABILITY		TRANSPORTATION OF STEEL GIRDER	
	ERECTION EQUIPMENT	LOCAL MATERIAL	ROUTE ROAD	CONDITION
PROPOSED BRIDGE TYPE	TOTAL LENGTH	SUPERSTRUCTURE	SUBSTRUCTURE	FOUNDATION
EVALUATION	PHASE 1,2	REASON ; No data		

NAME OF BRIDGE : CALABANIT BRIDGE NO : 11.03

LOCATION	STATION	ROUTE	PROVINCE	REGION
	Km. 1716 + 033	Davao del Sur-South Cotabato	South Cotabato	XI
EXISTING CONDITION	LENGTH	TYPE	PRESENT CONDITION	
	36.80 LM	Bailey	Bad - deteriorated substructure and superstructure	
SOCIO-ECONOMIC AND TRAFFIC INFORMATION	POPULATION AFFECTED		MAIN PRODUCT	DEVELOPMENT PLAN
		924,570	Corn, copra, rice, root crops, vegetables and cotton	
	TRAFFIC VOLUME (ADT)	TRAFFIC COMPOSITION	TRIP PURPOSE	DESIGN TRAFFIC LOAD
	270	Trucks, cars, jeeps, tricycles and buses	Business, Visit/Pleasure	5 tons
ENGINEERING INFORMATION	TOPOGRAPHIC CONDITION		GEOLOGICAL CONDITION	
	Rolling to Mountainous		Clay	
	RIVER/HYDROLOGICAL CONDITION		CONDITION OF ACCESS ROAD	
	HWL = 96.02 m AWL = 95.20 m LWL = 94.80 m		Fair 6m PROPOSED WIDTH FOR IMPROVEMENT	
CONSTRUCTION INFORMATION	AVAILABILITY		TRANSPORTATION OF STEEL GIRDER	
	ERECTION EQUIPMENT	LOCAL MATERIAL	ROUTE ROAD	CONDITION
	Available locally	Available locally	Gen. Santos along Davao del Sur Coastal Road-Glan	Fair to Good
PROPOSED BRIDGE TYPE	TOTAL LENGTH	SUPERSTRUCTURE	SUBSTRUCTURE	FOUNDATION
	20 + 20 = 40 m	H-beam	T type abutment Wall type pier	Pile
EVALUATION	PHASE 1,2	REASON;	No difficulty	

NAME OF BRIDGE : MANAY BRIDGE NO : 11.04

LOCATION	STATION	ROUTE	PROVINCE	REGION
	Km. 1643 + 783	Davao Oriental-Surigao del Sur National Road	Davao Oriental	XI
EXISTING CONDITION	LENGTH	TYPE	PRESENT CONDITION	
	42.67 LM	Bailey on concrete abutments	Decaying wooden members and rusted bailey panels	
SOCIO-ECONOMIC AND TRAFFIC INFORMATION	POPULATION AFFECTED		MAIN PRODUCT	DEVELOPMENT PLAN
		339,931	Copra	
	TRAFFIC VOLUME (ADT)	TRAFFIC COMPOSITION	TRIP PURPOSE	DESIGN TRAFFIC LOAD
	450	Trucks, Jeeps and Motorcycles	Business, Visit/ Pleasure, School	5 tons
ENGINEERING INFORMATION	TOPOGRAPHIC CONDITION		GEOLOGICAL CONDITION	
	Mountainous		Gravel and Rocks	
	RIVER/HYDROLOGICAL CONDITION		CONDITION OF ACCESS ROAD	
	Dry Season - March to Sept. Wet Season - Oct. to Feb. HFL = 28.00 OWL = 26.00		Fair 6m PROPOSED WIDTH FOR IMPROVEMENT	
CONSTRUCTION INFORMATION	AVAILABILITY		TRANSPORTATION OF STEEL GIRDER	
	ERECTION EQUIPMENT	LOCAL MATERIAL	ROUTE ROAD	CONDITION
	Not Available in locality	Available in locality	Davao City-Banaybanay-Lupon-Mati-Tarragona-Manay	Fair to Bad
PROPOSED BRIDGE TYPE	TOTAL LENGTH	SUPERSTRUCTURE	SUBSTRUCTURE	FOUNDATION
	Permanent	Substructure		
EVALUATION	PHASE 1,2	REASON;	Permanent substructure	

NAME OF BRIDGE : CULAMAN I BRIDGE NO : 11.05

LOCATION	STATION	ROUTE	PROVINCE	REGION
	Km. 1650 + 758	Davao del Sur-South Cotabato Coastal Road	Davao del Sur	XI
EXISTING CONDITION	LENGTH	TYPE	PRESENT CONDITION	
	72 LM	Bailey		
SOCIO-ECONOMIC AND TRAFFIC INFORMATION	POPULATION AFFECTED		MAIN PRODUCT	DEVELOPMENT PLAN
	TRAFFIC VOLUME (ADT)	TRAFFIC COMPOSITION	TRIP PURPOSE	DESIGN TRAFFIC LOAD
ENGINEERING INFORMATION	TOPOGRAPHIC CONDITION		GEOLOGICAL CONDITION	
	RIVER/HYDROLOGICAL CONDITION		CONDITION OF ACCESS ROAD	
			PROPOSED WIDTH FOR IMPROVEMENT	
CONSTRUCTION INFORMATION	AVAILABILITY		TRANSPORTATION OF STEEL GIRDER	
	ERECTION EQUIPMENT	LOCAL MATERIAL	ROUTE ROAD	CONDITION
PROPOSED BRIDGE TYPE	TOTAL LENGTH	SUPERSTRUCTURE	SUBSTRUCTURE	FOUNDATION
EVALUATION	PHASE 1,2	REASON ; No data		

NAME OF BRIDGE : PIKINIT BRIDGE NO : 12.01

LOCATION	STATION	ROUTE	PROVINCE	REGION
	Km. 136 + 936	Dobleston-Tukuran Road	Lanao del Norte	XII
EXISTING CONDITION	LENGTH	TYPE	PRESENT CONDITION	
	20 LM	Bailey	Dilapidated temporary bridge	
SOCIO-ECONOMIC AND TRAFFIC INFORMATION	POPULATION AFFECTED		MAIN PRODUCT	DEVELOPMENT PLAN
		461,049	Agricultural and aqua-culture products	Expansion of Agri-Aqua culture industries
	TRAFFIC VOLUME (ADT)	TRAFFIC COMPOSITION	TRIP PURPOSE	DESIGN TRAFFIC LOAD
	76	Jeeps, cars, trucks, conc. equipment and farm equipment	Routine Business Trip	3 tons
ENGINEERING INFORMATION	TOPOGRAPHIC CONDITION		GEOLOGICAL CONDITION	
	Flood Rolling		Clayey soil with gravel and boulders	
	RIVER/HYDROLOGICAL CONDITION		CONDITION OF ACCESS ROAD	
	Dry Season - February to April 5.3 m rainfall Wet Season - May to Jan. 231 mm rainfall		Bad 6m PROPOSED WIDTH FOR IMPROVEMENT	
CONSTRUCTION INFORMATION	AVAILABILITY		TRANSPORTATION OF STEEL GIRDER	
	ERECTION EQUIPMENT	LOCAL MATERIAL	ROUTE ROAD	CONDITION
	Available in Iligan City	Available in Iligan City	Iligan-Kapatagan Caromatan via Butadon-Caromatan Road	Fair
PROPOSED BRIDGE TYPE	TOTAL LENGTH	SUPERSTRUCTURE	SUBSTRUCTURE	FOUNDATION
	21 m	H-beam	T type abutment	Pile
EVALUATION	PHASE 1,2	REASON ; Flood area		

NAME OF BRIDGE : DURUGAO BRIDGE NO : 12.02

LOCATION	STATION	ROUTE	PROVINCE	REGION
	Km. 216 + 498	Awang-Upi-Lebak	Maguindanao	XII
EXISTING CONDITION	LENGTH	TYPE	PRESENT CONDITION	
	40 LM	Bailey	Permanent Substructure Fair	
SOCIO-ECONOMIC AND TRAFFIC INFORMATION	POPULATION AFFECTED		MAIN PRODUCT	DEVELOPMENT PLAN
		536,546	Agricultural and Marine Products	Development of agricultural and fisheries industry
	TRAFFIC VOLUME (ADT)	TRAFFIC COMPOSITION	TRIP PURPOSE	DESIGN TRAFFIC LOAD
		Bus, PUJ, trucks, jeeps, cars and off the road vehicles	Commercial Agricultural and Military	5 tons
ENGINEERING INFORMATION	TOPOGRAPHIC CONDITION		GEOLOGICAL CONDITION	
	Mountainous		Clay, gravel and boulders	
	RIVER/HYDROLOGICAL CONDITION		CONDITION OF ACCESS ROAD	
			Fair 6m PROPOSED WIDTH FOR IMPROVEMENT	
CONSTRUCTION INFORMATION	AVAILABILITY		TRANSPORTATION OF STEEL GIRDER	
	ERECTION EQUIPMENT	LOCAL MATERIAL	ROUTE ROAD	CONDITION
	Available at RES, Awang, Dinang, Maguindanao	Available in Cotabato City	Cotabato City-North UPI-South UPI	Fair
PROPOSED BRIDGE TYPE	TOTAL LENGTH	SUPERSTRUCTURE	SUBSTRUCTURE	FOUNDATION
	Permanent	Substructure		
EVALUATION	PHASE 1,2	REASON ; Permanent Substructure		

NAME OF BRIDGE : UPIAN BRIDGE NO : 12.03

LOCATION	STATION	ROUTE	PROVINCE	REGION
	Km. 239 + 002	Cotabato-Bukidnon Road	North Cotabato	XII
EXISTING CONDITION	LENGTH	TYPE	PRESENT CONDITION	
	45 LM	Bailey	Dilapidated	
SOCIO-ECONOMIC AND TRAFFIC INFORMATION	POPULATION AFFECTED		MAIN PRODUCT	DEVELOPMENT PLAN
		564,599	Agricultural	Development of Agricultural and home industries
	TRAFFIC VOLUME (ADT)	TRAFFIC COMPOSITION	TRIP PURPOSE	DESIGN TRAFFIC LOAD
	124	Car, jeepneys and trucks	Business	5 tons
ENGINEERING INFORMATION	TOPOGRAPHIC CONDITION		GEOLOGICAL CONDITION	
	Rolling to Mountainous		Gravel and Boulders	
	RIVER/HYDROLOGICAL CONDITION		CONDITION OF ACCESS ROAD	
			Bad to Fair 6m PROPOSED WIDTH FOR IMPROVEMENT	
CONSTRUCTION INFORMATION	AVAILABILITY		TRANSPORTATION OF STEEL GIRDER	
	ERECTION EQUIPMENT	LOCAL MATERIAL	ROUTE ROAD	CONDITION
	Available in Cotabato or Davao City	Available in Cotabato or Davao City	Kayapa-Lumayong Carmen or Calinan-Mapamag-Upian Road	Fair
PROPOSED BRIDGE TYPE	TOTAL LENGTH	SUPERSTRUCTURE	SUBSTRUCTURE	FOUNDATION
	25 + 25 = 50 m	H-beam	T type abutment Wall type pier	Spread Footing
EVALUATION	PHASE 1,2	REASON;	No difficulty	

NAME OF BRIDGE : DANGOLAAN BRIDGE NO : 12.04

LOCATION	STATION	ROUTE	PROVINCE	REGION
	Km. 133 + 983	Dobleston-Tukuran Road	Lanao del Norte	XII
EXISTING CONDITION	LENGTH	TYPE	PRESENT CONDITION	
	25 LM	Timber	Dilapidated temporary bridge	
SOCIO-ECONOMIC AND TRAFFIC INFORMATION	POPULATION AFFECTED		MAIN PRODUCT	DEVELOPMENT PLAN
		461,049	Agricultural and aqua-culture products	Expansion of agr. and aqua culture industries
	TRAFFIC VOLUME (ADT)	TRAFFIC COMPOSITION	TRIP PURPOSE	DESIGN TRAFFIC LOAD
	76	PUJ, Cars, Trucks Const. Equip. and Farm Equip	Business	3 tons
ENGINEERING INFORMATION	TOPOGRAPHIC CONDITION		GEOLOGICAL CONDITION	
	Rolling		Clayey gravel	
	RIVER/HYDROLOGICAL CONDITION		CONDITION OF ACCESS ROAD	
	Dry Season - Feb. to April, 53 mm Wet Season - May to Jan. 231 mm		Fair 6m PROPOSED WIDTH FOR IMPROVEMENT	
CONSTRUCTION INFORMATION	AVAILABILITY		TRANSPORTATION OF STEEL GIRDER	
	ERECTION EQUIPMENT	LOCAL MATERIAL	ROUTE ROAD	CONDITION
	Available in Iligan City	Available in Iligan City	Iligan-Kapatagan-Caromatan via Butaon-Caromatan Road	Road
PROPOSED BRIDGE TYPE	TOTAL LENGTH	SUPERSTRUCTURE	SUBSTRUCTURE	FOUNDATION
	24 m	H-beam	T type abutment	Pile
EVALUATION	PHASE 1,2	REASON ; Flood area		

NAME OF BRIDGE : SAPAKAN BRIDGE NO : 12.05

LOCATION	STATION	ROUTE	PROVINCE	REGION
	Km. 211 + 530	Dulawan-Marbel Road	Maguindanao	XII
EXISTING CONDITION	LENGTH	TYPE	PRESENT CONDITION	
	100 LM	Bailey with permanent substructure	Good	
SOCIO-ECONOMIC AND TRAFFIC INFORMATION	POPULATION AFFECTED		MAIN PRODUCT	DEVELOPMENT PLAN
		536,546	Agricultural	Improve Agricultural Production and develop cottage industries
	TRAFFIC VOLUME (ADT)	TRAFFIC COMPOSITION	TRIP PURPOSE	DESIGN TRAFFIC LOAD
	686	Bus, PUJ, Trucks, Cars, Jeepneys	Business	10 tons
ENGINEERING INFORMATION	TOPOGRAPHIC CONDITION		GEOLOGICAL CONDITION	
	Flat to Rolling		Clayey	
	RIVER/HYDROLOGICAL CONDITION		CONDITION OF ACCESS ROAD	
	Dry Season-81 mm rainfall average for 3 months with May the hottest Wet Season-281 mm rainfall average with October the hottest		Fair to Good 6m PROPOSED WIDTH FOR IMPROVEMENT	
CONSTRUCTION INFORMATION	AVAILABILITY		TRANSPORTATION OF STEEL GIRDER	
	ERECTION EQUIPMENT	LOCAL MATERIAL	ROUTE ROAD	CONDITION
	Available in Cotabato City	Available in Cotabato City	Cotabato City-Maganoy-Sapakan	Good
PROPOSED BRIDGE TYPE	TOTAL LENGTH	SUPERSTRUCTURE	SUBSTRUCTURE	FOUNDATION
	Permanent substructure			
EVALUATION	PHASE 1,2	REASON ; Permanent substructure		