REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS & HIGHWAYS

Pilot Study
for the
Rural Road Network Development Project

FINAL REPORT

DRAWINGS 2

(VOLUME V)

PROVINCE OF MASBATE

FEBRUARY, 1989

JAPAN INTERNATIONAL COOPERATION AGENCY

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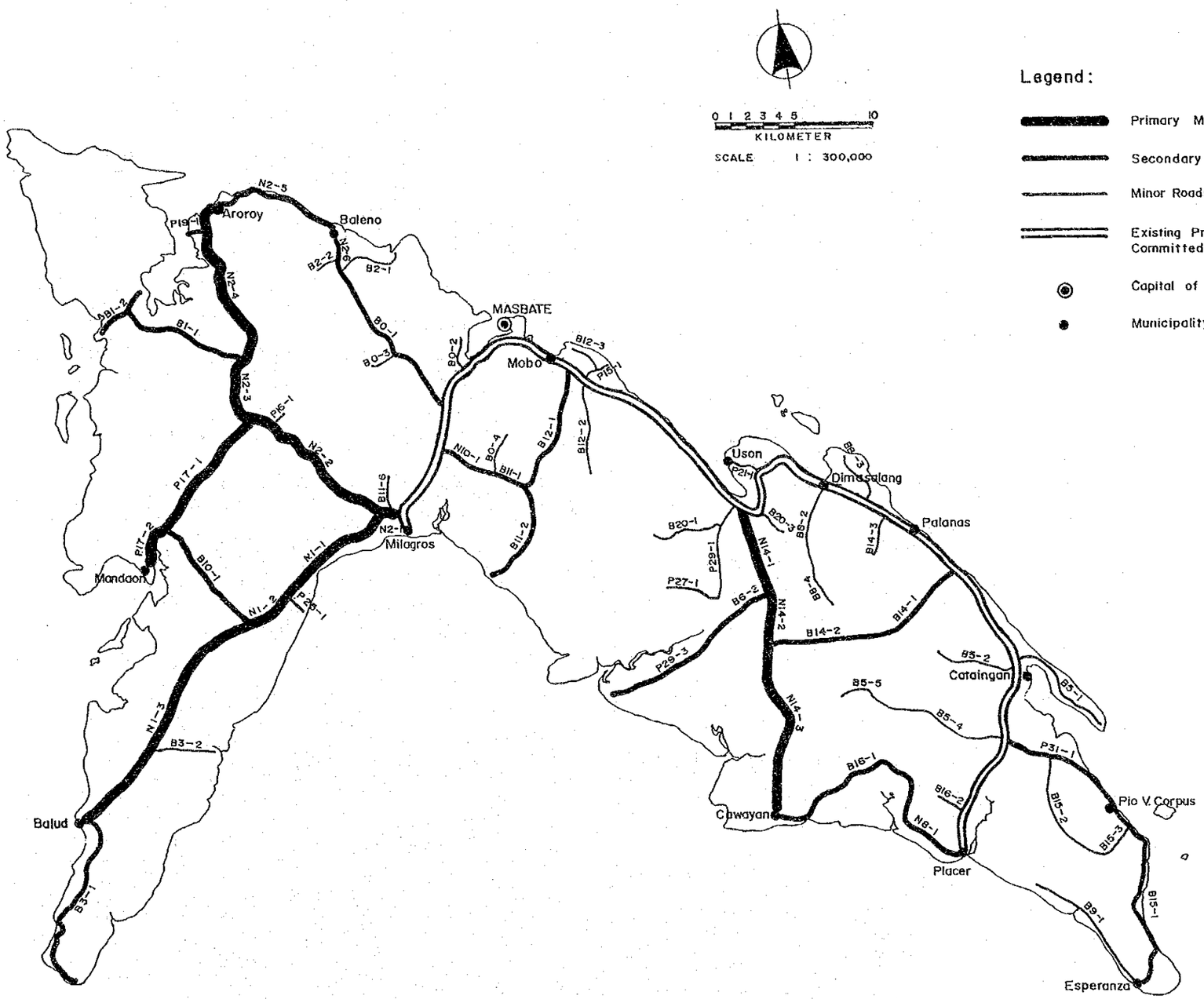
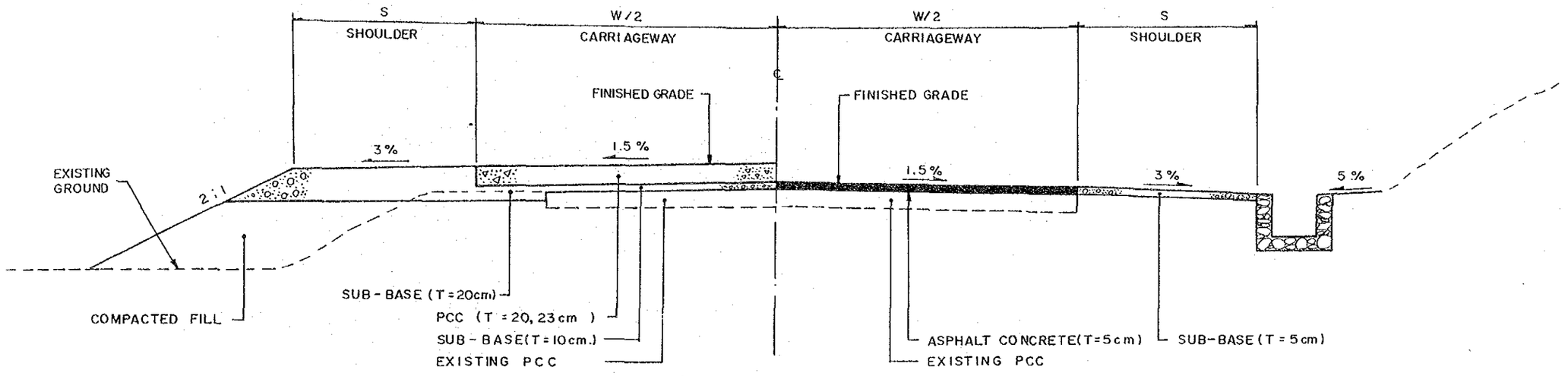
THE PILOT STUDY FOR THE RURAL ROAD NETWORK DEVELOPMENT PROJECT IN THE REPUBLIC OF THE PHILIPPINES	LOCATION MAP	Scale	Drawing No. 1



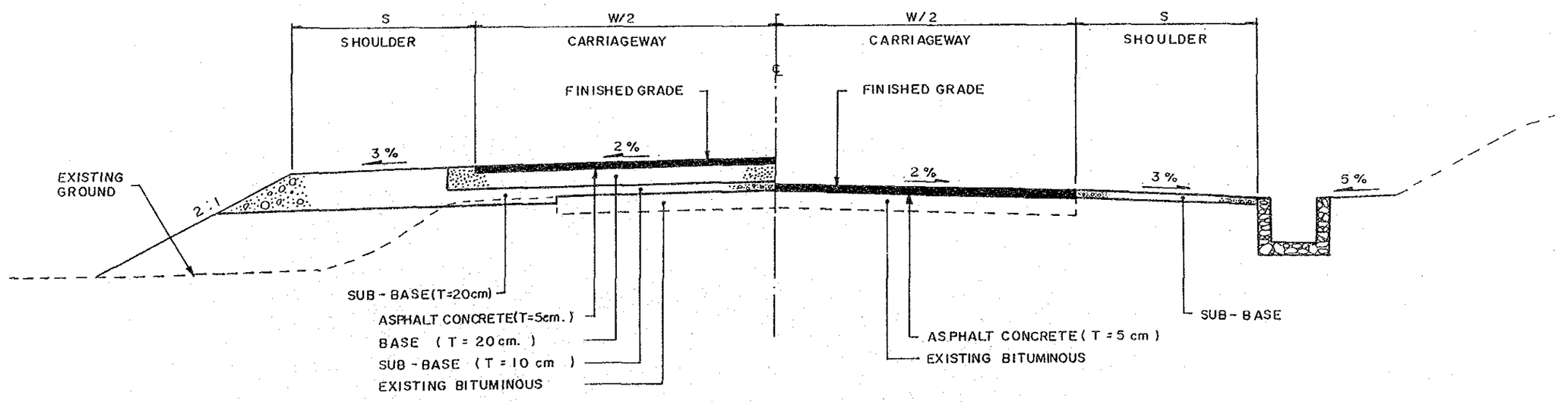
LOCATION OF F/S ROADS

THE PILOT STUDY FOR THE RURAL ROAD NETWORK DEVELOPMENT PROJECT IN THE REPUBLIC OF THE PHILIPPINES	TYPICAL ROAD SECTIONS (1)	Scale 1:50	Drawing No. 2



TYPE 1 - 1
PROPOSED PAVEMENT : PCC
EXISTING PAVEMENT : PCC (BAD / VERY BAD)

TYPE 1 - 2
PROPOSED PAVEMENT : ASPHALT CONCRETE OVERLAY
EXISTING PAVEMENT : PCC (BAD / VERY BAD)

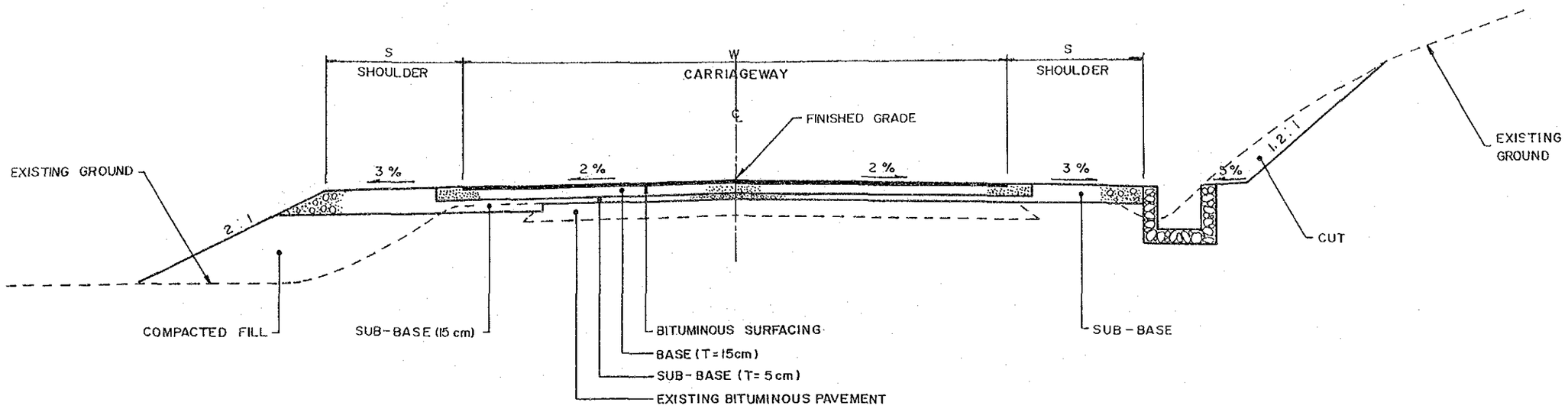


TYPE 1-3
PROPOSED PAVEMENT : ASPHALT CONCRETE
EXISTING PAVEMENT : BITUMINOUS(BAD/VERY BAD)

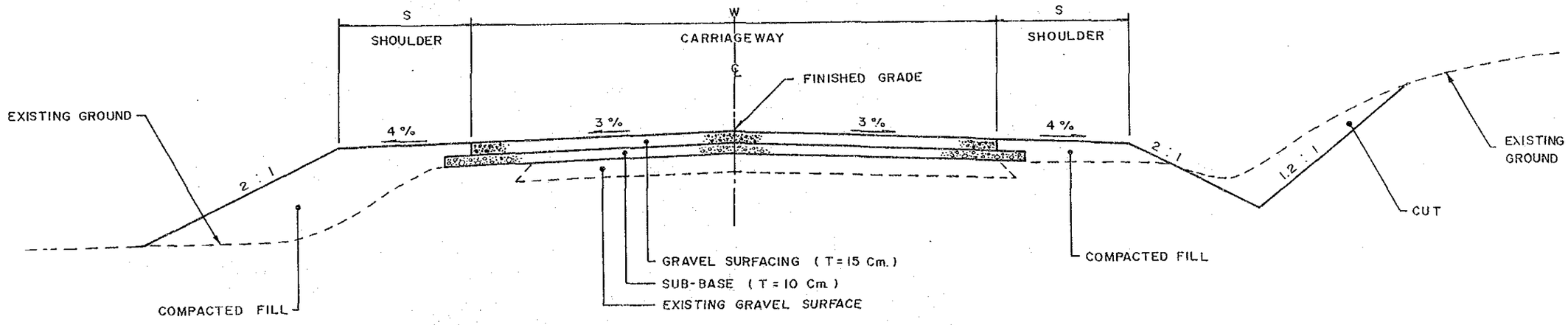
TYPE 1 - 4
PROPOSED PAVEMENT : ASPHALT CONCRETE OVERLAY
EXISTING PAVEMENT : BITUMINOUS (BAD/VERY BAD)

REHABILITATION (1)

THE PILOT STUDY FOR THE RURAL ROAD NETWORK DEVELOPMENT PROJECT IN THE REPUBLIC OF THE PHILIPPINES	TYPICAL ROAD SECTIONS (2)	Scale 1:50	Drawing No. 3



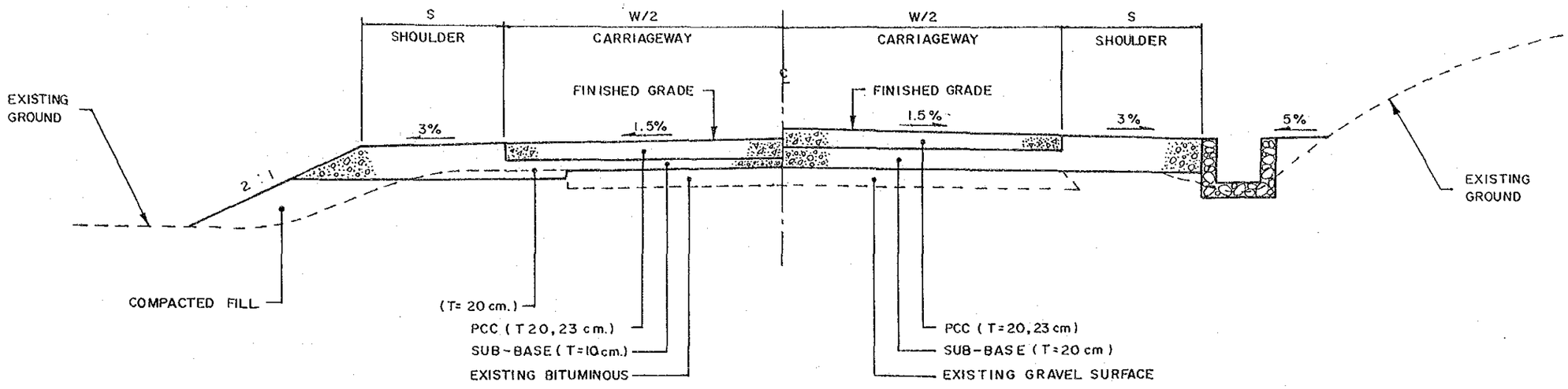
TYPE I-5
PROPOSED PAVEMENT : BITUMINOUS MACADAM/DOUBLE BITUMINOUS SURFACE TREATMENT
EXISTING PAVEMENT : BITUMINOUS (BAD/VERY BAD)



TYPE I-6
PROPOSED PAVEMENT : GRAVEL SURFACING
EXISTING PAVEMENT : GRAVEL SURFACING (BAD./VERY BAD)

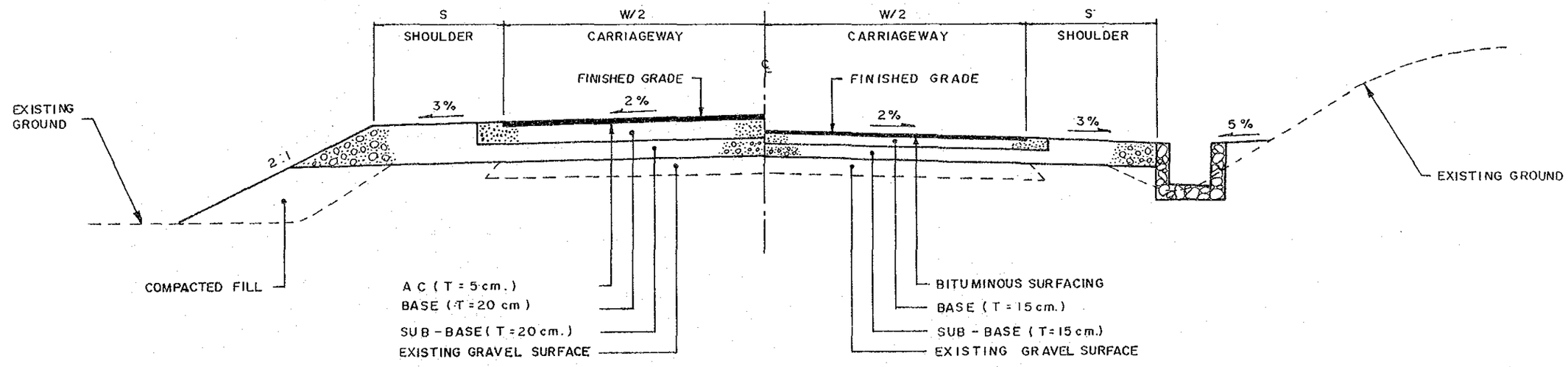
REHABILITATION (2)

THE PILOT STUDY FOR THE RURAL ROAD NETWORK DEVELOPMENT PROJECT IN THE REPUBLIC OF THE PHILIPPINES	TYPICAL ROAD SECTIONS (3)	Scale 1:50	Drawing No. 4



TYPE 2-1
PROPOSED PAVEMENT : PCC
EXISTING PAVEMENT : BITUMINOUS (BAD/VERY BAD)

TYPE 2-2
PROPOSED PAVEMENT : PCC
EXISTING PAVEMENT : GRAVEL SURFACING (BAD/ VERY BAD)

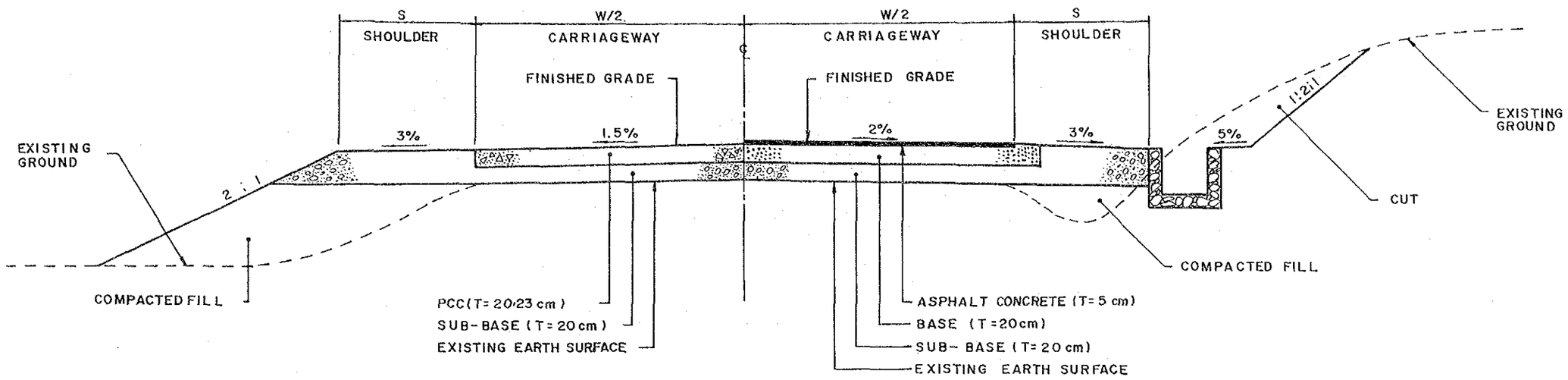


TYPE 2-3
PROPOSED PAVEMENT : ASPHALT CONCRETE
EXISTING PAVEMENT : GRAVEL SURFACING (BAD / VERY BAD)

TYPE 2-4
PROPOSED PAVEMENT : BITUMINOUS MACADAM / DOUBLE BITUMINOUS SURFACE TREATMENT
EXISTING PAVEMENT : GRAVEL SURFACING (BAD / VERY BAD)

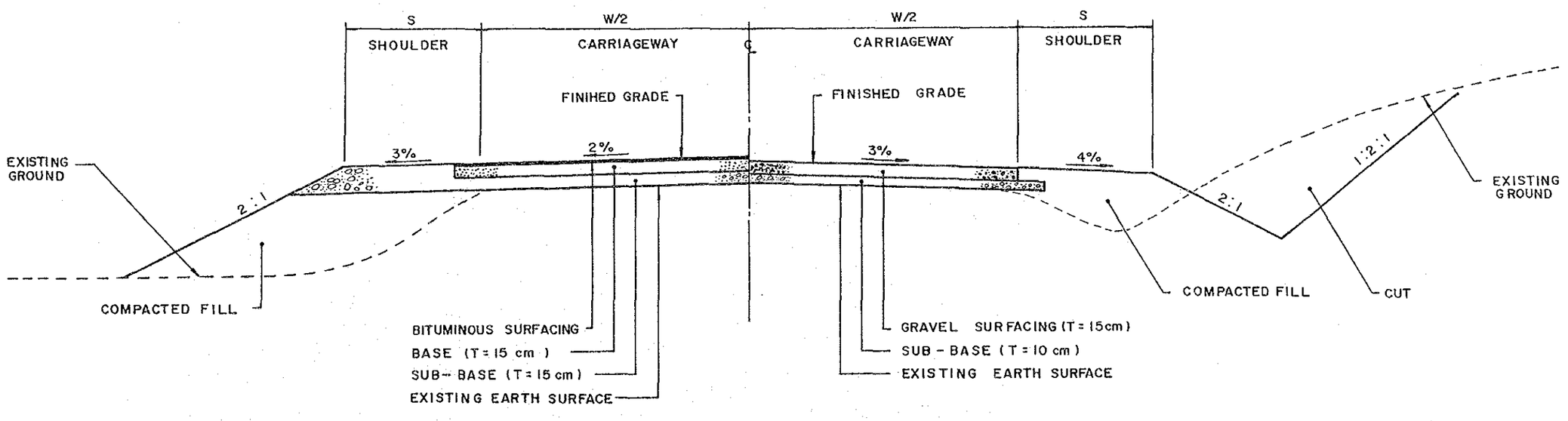
IMPROVEMENT-1 (1)

THE PILOT STUDY FOR THE RURAL ROAD NETWORK DEVELOPMENT PROJECT IN THE REPUBLIC OF THE PHILIPPINES	TYPICAL ROAD SECTIONS (4)	Scale 1:50	Drawing No. 6



TYPE 2-5
PROPOSED PAVEMENT : PCC
EXISTING PAVEMENT : EARTH SURFACE

TYPE 2-6
PROPOSED PAVEMENT : ASPHALT CONCRETE
EXISTING PAVEMENT : EARTH SURFACE

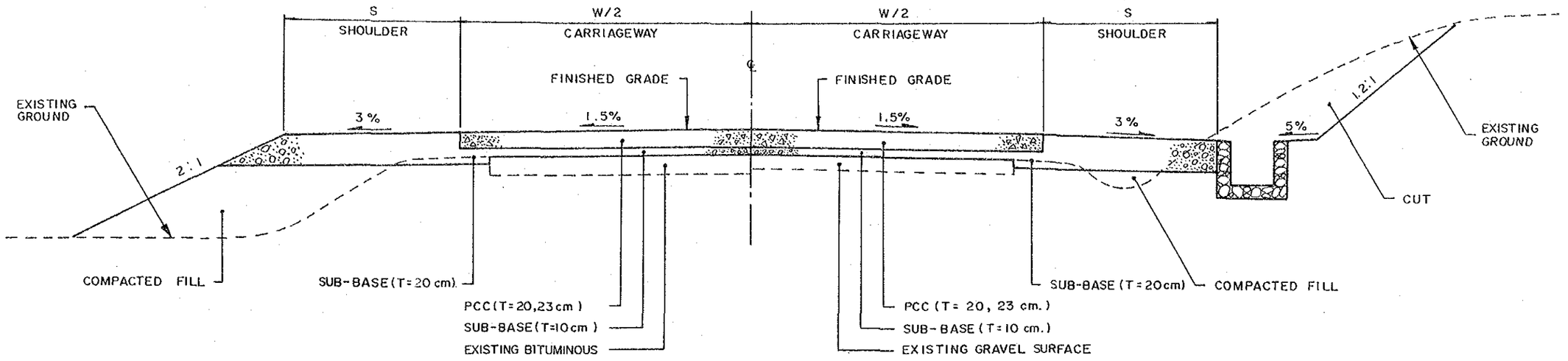


TYPE 2-7
PROPOSED PAVEMENT : BITUMINOUS MACADAM / DOUBLE BITUMINOUS SURFACE TREATMENT
EXISTING PAVEMENT : EARTH SURFACE

TYPE 2-8
PROPOSED PAVEMENT : GRAVEL SURFACING
EXISTING PAVEMENT : EARTH SURFACING

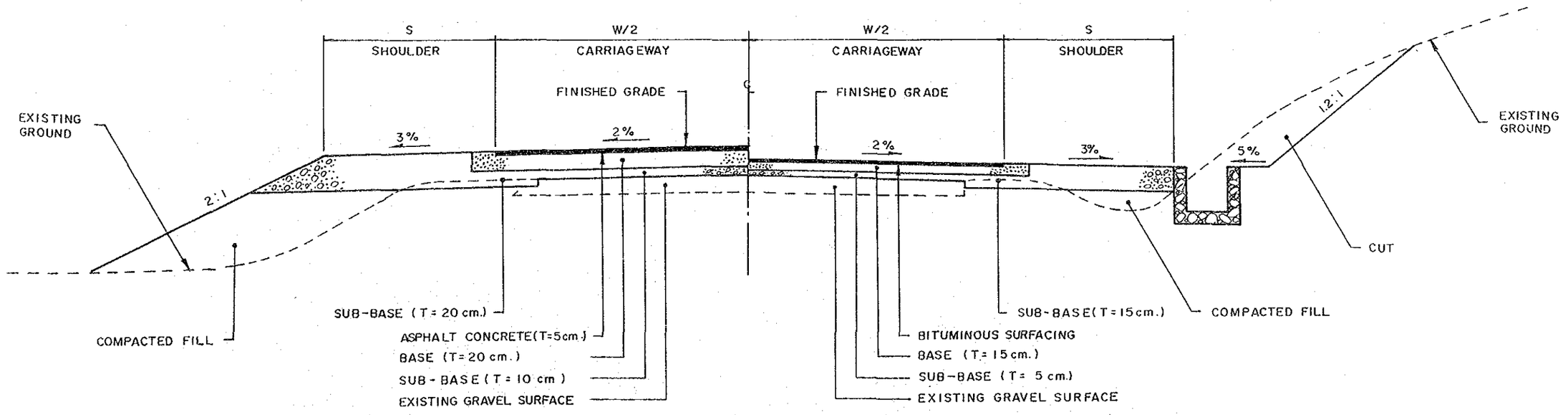
IMPROVEMENT - 1 (2)

THE PILOT STUDY FOR THE RURAL ROAD NETWORK DEVELOPMENT PROJECT IN THE REPUBLIC OF THE PHILIPPINES	TYPICAL ROAD SECTIONS (5)	Scale 1:50	Drawing No. 6



TYPE 3-1
PROPOSED PAVEMENT : PCC
EXISTING PAVEMENT : BITUMINOUS (Good/Fair)

TYPE 3-2
PROPOSED PAVEMENT : PCC
EXISTING PAVEMENT : GRAVEL SURFACING (Good/Fair)

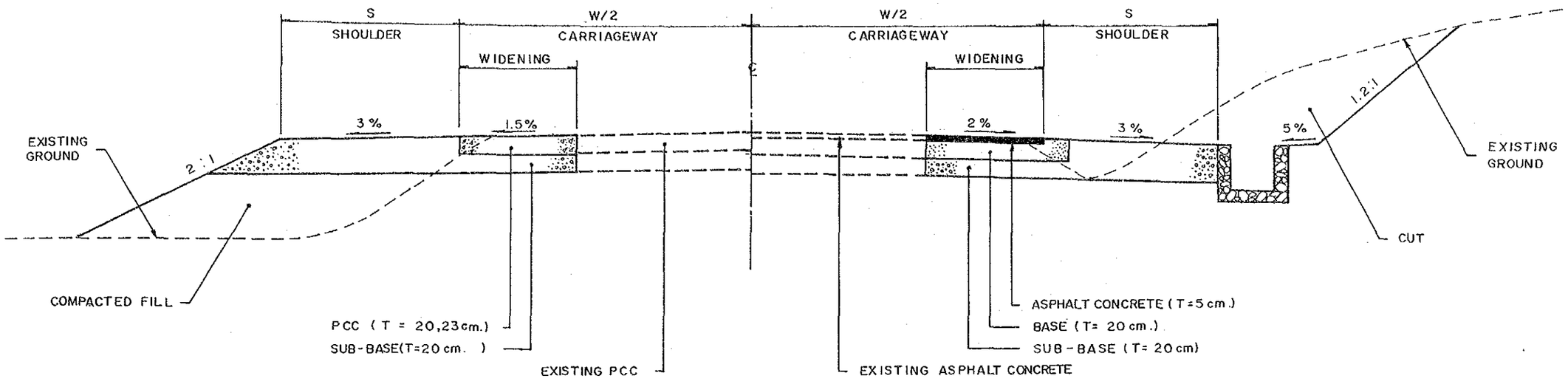


TYPE 3-3
PROPOSED PAVEMENT : ASPHALT CONCRETE
EXISTING PAVEMENT : GRAVEL SURFACING (Good/Fair)

TYPE 3-4
PROPOSED PAVEMENT : BITUMINOUS MACADAM/DOUBLE BITUMINOUS SURFACE TREATMENT
EXISTING PAVEMENT : GRAVEL SURFACING (Good/Fair)

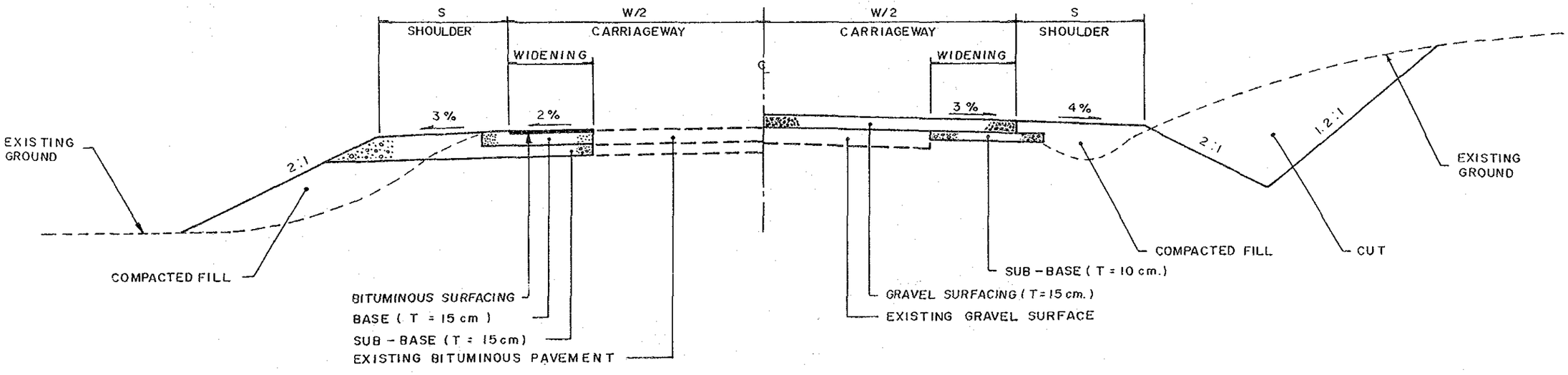
IMPROVEMENT-2

THE PILOT STUDY FOR THE RURAL ROAD NETWORK DEVELOPMENT PROJECT IN THE REPUBLIC OF THE PHILIPPINES	TYPICAL ROAD SECTIONS (6)	Scale 1:50	Drawing No. 7



TYPE 4 - 1
PROPOSED PAVEMENT : PCC
EXISTING PAVEMENT : PCC

TYPE 4 - 2
PROPOSED PAVEMENT : ASPHALT CONCRETE
EXISTING PAVEMENT : ASPHALT CONCRETE

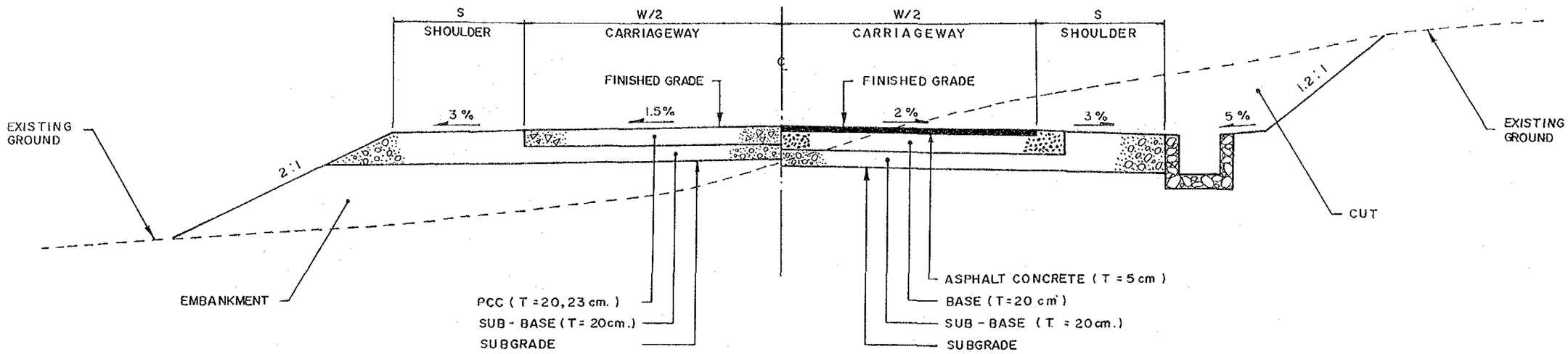


TYPE 4-3
PROPOSED PAVEMENT : BITUMINOUS MACADAM/ DOUBLE BITUMINOUS SURFACE TREATMENT
EXISTING PAVEMENT : BITUMINOUS

TYPE 4-4
PROPOSED PAVEMENT : GRAVEL SURFACING
EXISTING PAVEMENT : GRAVEL SURFACING

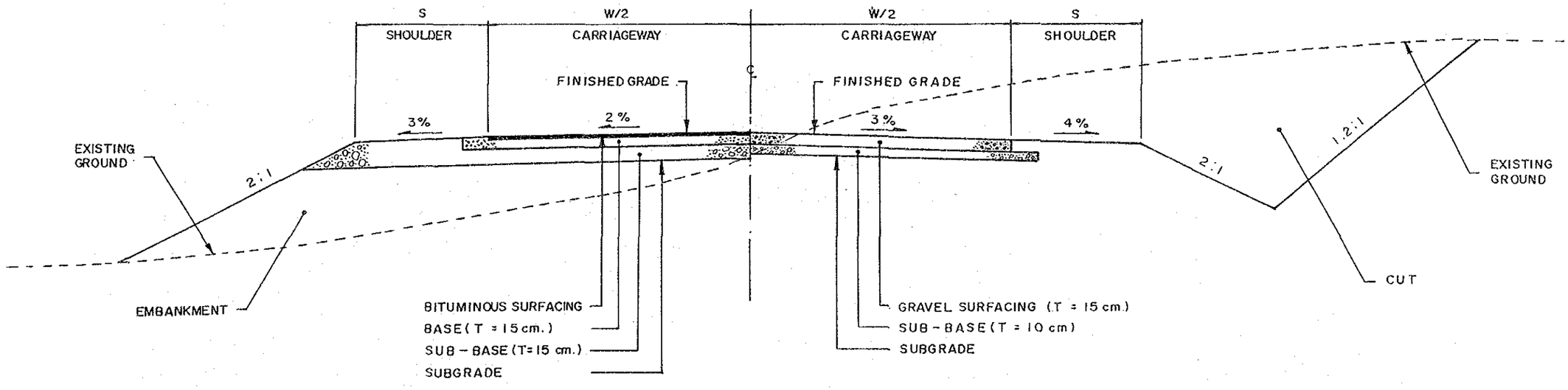
WIDENING

THE PILOT STUDY FOR THE RURAL ROAD NETWORK DEVELOPMENT PROJECT IN THE REPUBLIC OF THE PHILIPPINES	TYPICAL ROAD SECTIONS (7)	Scale 1:50	Drawing No. 8



TYPE 5 - 1
PROPOSED PAVEMENT : PCC

TYPE 5 - 2
PROPOSED PAVEMENT : ASPHALT CONCRETE

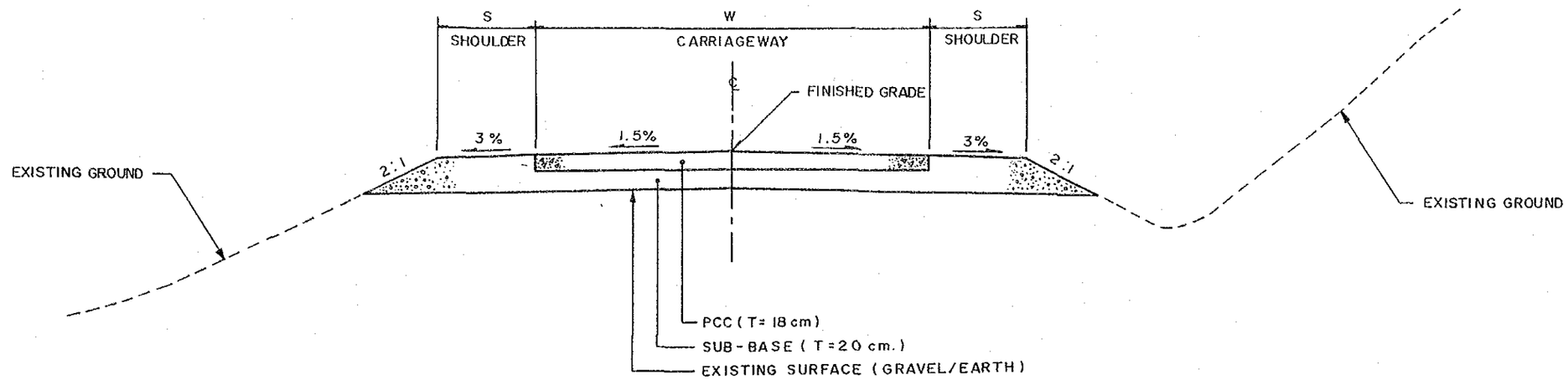


TYPE 5-3
PROPOSED PAVEMENT : BITUMINOUS MACADAM / DOUBLE BITUMINOUS SURFACE TREATMENT

TYPE 5 - 4
PROPOSED PAVEMENT : GRAVEL SURFACING

NEW CONSTRUCTION

THE PILOT STUDY FOR THE RURAL ROAD NETWORK DEVELOPMENT PROJECT IN THE REPUBLIC OF THE PHILIPPINES	TYPICAL ROAD SECTIONS (8)	Scale 1:50	Drawing No. 9



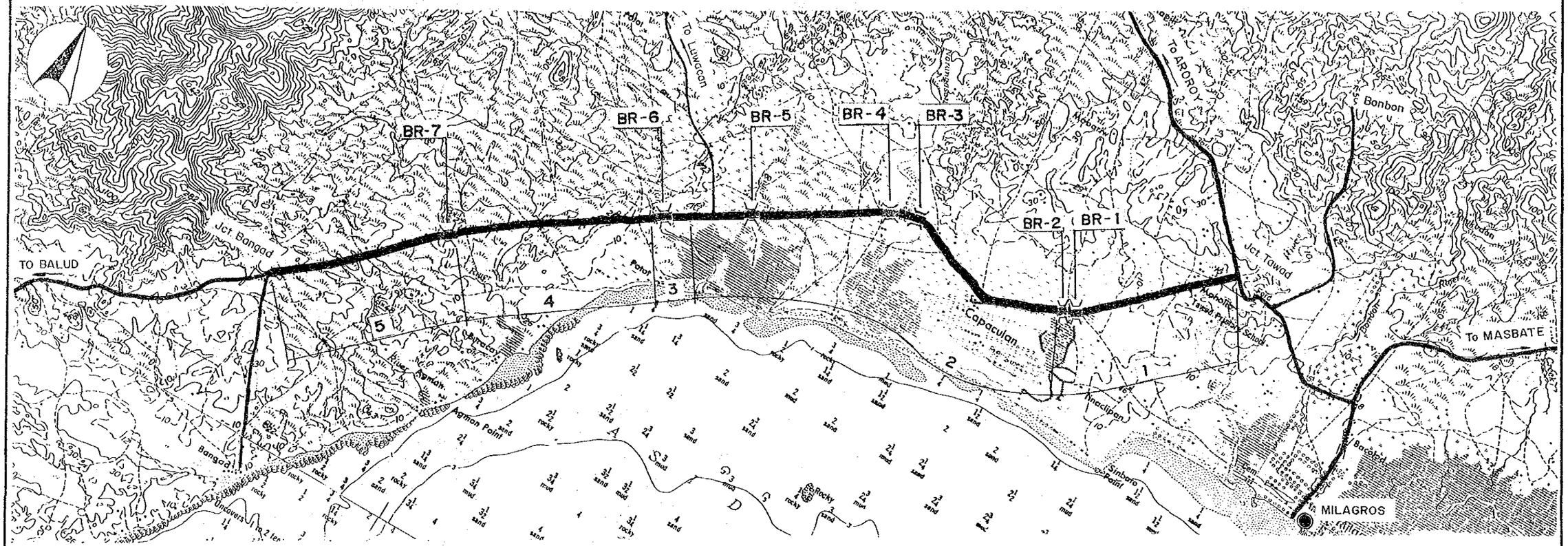
TYPE 6
PCC PAVEMENT FOR STEEP GRADIENT SECTIONS

TYPE 7
GRADE RAISING SECTIONS IN FLOOD AREA

THE PILOT STUDY FOR THE RURAL ROAD NETWORK DEVELOPMENT PROJECT IN THE REPUBLIC OF THE PHILIPPINES	PRESENT CONDITION AND PROPOSED IMPROVEMENT	Scale 1:50,000	Drawing No. 10

Road No: N1-1 Road Name: JCT. TAWAD-BALUD ROAD

Location : MILAGROS, MASBATE

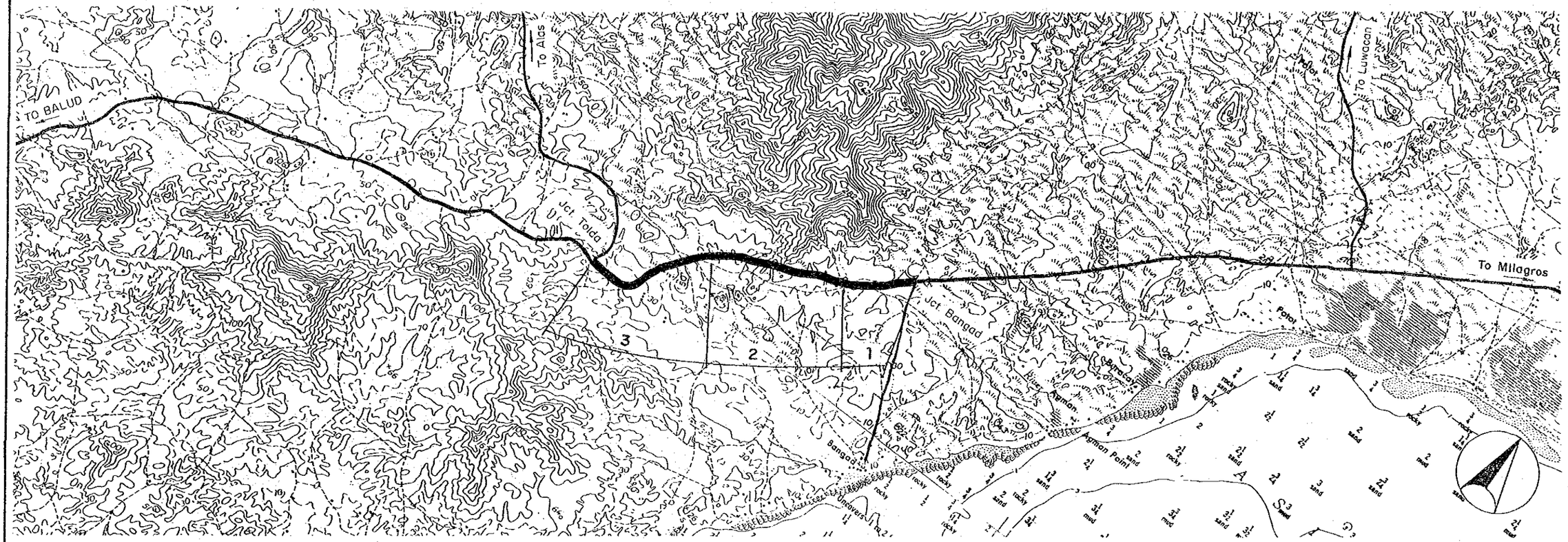


Road Classification	Primary Major (National Road)						
Total Length	12.9 km						
Sub-section No.	1	2	3	4	5		
Length (km)	2.3	5.1	.5	2.6	2.4		
Terrain	Flat	Flat	Flat	Flat	Flat		
Existing Road Surface	5.5-GRV (Fair)	5.5-GRV (Fair)	5.5-GRV (Bad)	5.5-GRV (Bad)	5.5-GRV (Bad)		
Proposed Improvement							
Improvement Type	-	-	Rehabil.	Rehabil.	Rehabil.		
Surface Type	-	-	Gravel	Gravel	Gravel		
Carriageway Width(m)	-	-	6.0	6.0	6.0		
Shoulder Width (m)	-	-	2.0	2.0	2.0		
Ref. Typical Section	-	-	TYPE 1-6	TYPE 1-6	TYPE 1-6		
Bridge No.	BR-1	BR-2	BR-3	BR-4	BR-5	BR-6	BR-7
Existing Type	Timber	Bailey	Bailey	Timber	Timber	Bailey	Concrete
Length (m)	10	10	43	10	20	34	36
Proposed Type	2Lane-Br	2Lane-Br	2Lane-Br	2Lane-Br	2Lane-Br	2Lane-Br	-
Length (m)	15	15	45	15	20	40	-
No. of Spans	1	1	3	1	1	2	-

THE PILOT STUDY FOR THE RURAL ROAD NETWORK DEVELOPMENT PROJECT IN THE REPUBLIC OF THE PHILIPPINES	PRESENT CONDITION AND PROPOSED IMPROVEMENT	Scale 1:50,000	Drawing No. 11

Road No: N1-2 Road Name: JCT. TAWAD-BALUD ROAD

Location : MILAGROS, MASBATE

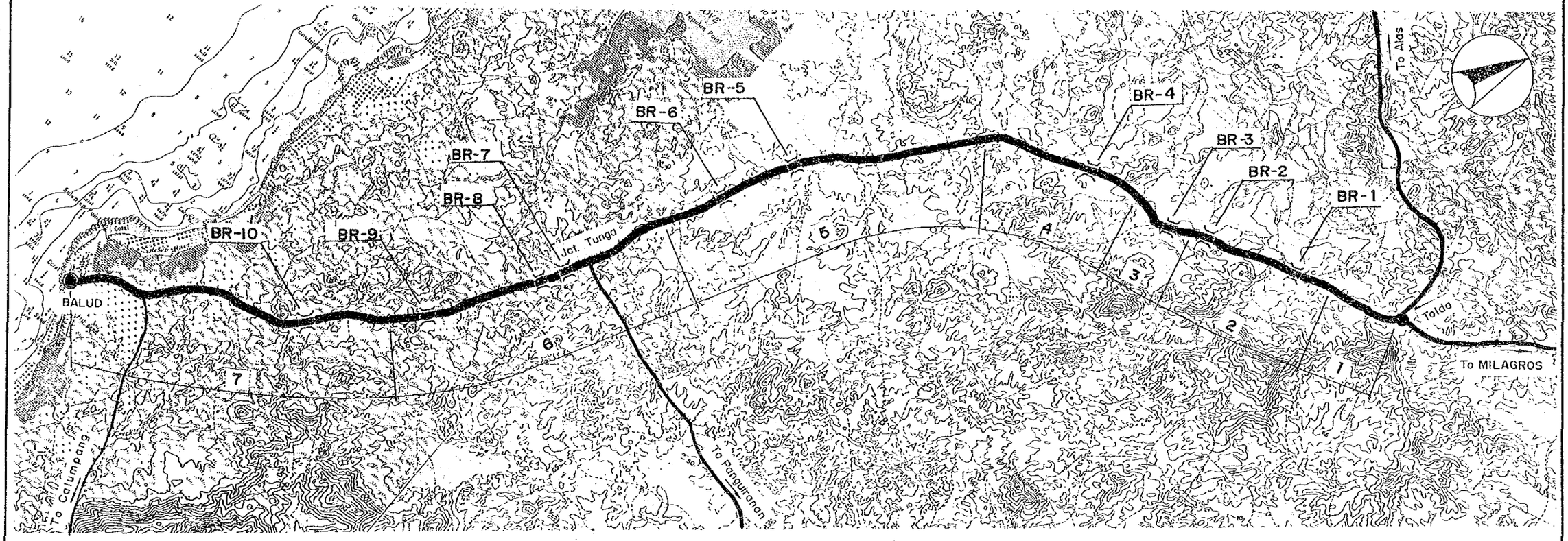


Road Classification	Primary Major (National Rd)		
Total Length	4.2 km		
Sub-section No.	1	2	3
Length (km)	.9	1.7	1.6
Terrain	Rolling	Rolling	Rolling
Existing Road Surface	4.5-GRV (Bad)	4.5-GRV (V.Bad)	4.5-GRV (V.Bad)
Proposed Improvement			
Improvement Type	Rehabil.	Rehabil.	Rehabil.
Surface Type	Gravel	Gravel	Gravel
Carriageway Width(m)	6.0	6.0	6.0
Shoulder Width (m)	1.5	1.5	1.5
Ref. Typical Section	TYPE 1-6	TYPE 1-6	TYPE 1-6
Special Treatment			
Steep Section Length	100	100	200

THE PILOT STUDY FOR THE RURAL ROAD NETWORK DEVELOPMENT PROJECT IN THE REPUBLIC OF THE PHILIPPINES	PRESENT CONDITION AND PROPOSED IMPROVEMENT	Scale 1:50,000	Drawing No. 12

Road No: N1-3 Road Name: JCT. TAWAD-BALUD ROAD

Location : MILAGROS & BALUD, MASBATE

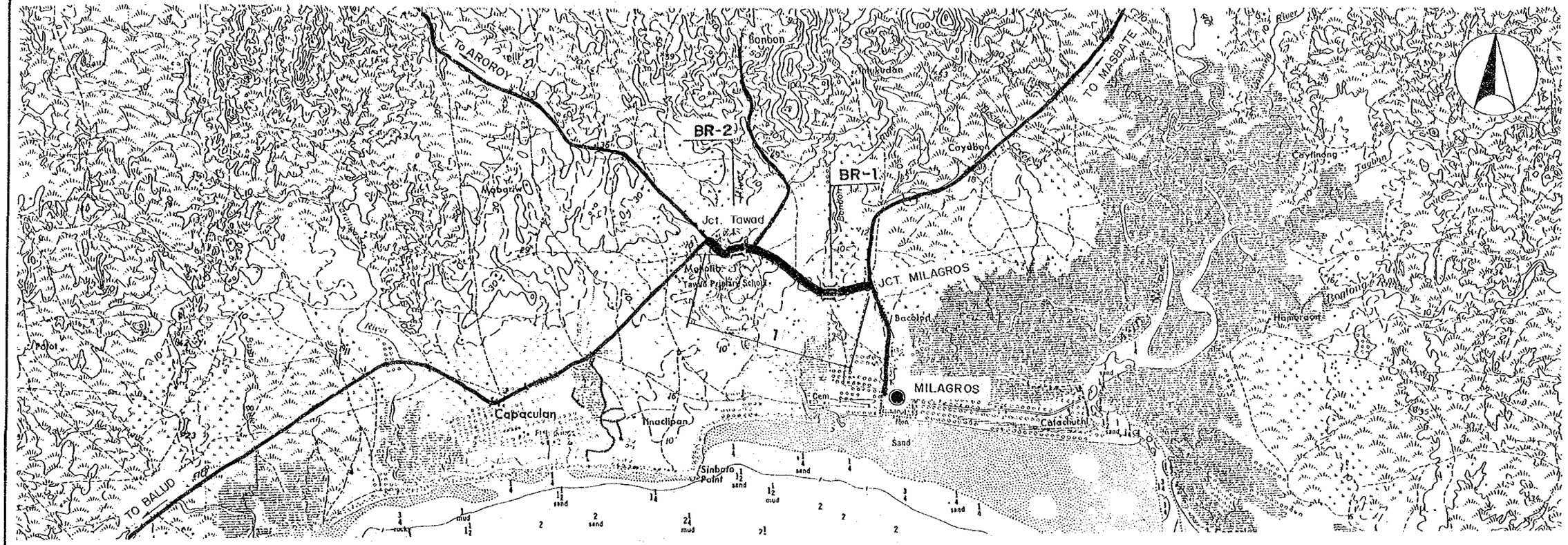


Road Classification	Primary Major (National Road)									
Total Length	26.0 km									
Sub-section No.	1	2	3	4	5	6	7			
Length (km)	1.4	2.6	1.1	2.9	6.2	5.6	6.2			
Terrain	Rolling	Rolling	Rolling	Rolling	Rolling	Rolling	Rolling			
Existing Road Surface	4.5-GRV (Bad)	4.5-GRV (Bad)	4.5-GRV (Bad)	4.5-EAR (Bad)	4.5-EAR (V.Bad)	4.5-EAR (V.Bad)	4.5-EAR (V.Bad)			
Proposed Improvement										
Improvement Type	Rehabil.	Rehabil.	Rehabil.	Impr.-1	Impr.-1	Impr.-1	Impr.-1			
Surface Type	Gravel	Gravel	Gravel	Gravel	Gravel	Gravel	Gravel			
Carriageway Width(m)	6.0	6.0	6.0	6.0	6.0	6.0	6.0			
Shoulder Width (m)	1.5	1.5	1.5	1.5	1.5	1.5	1.5			
Ref. Typical Section	TYPE 1-6	TYPE 1-6	TYPE 1-6	TYPE 2-8	TYPE 2-8	TYPE 2-8	TYPE 2-8			
Special Treatment										
Steep Section Length	-	100	100	100	100	100	-			
Bridge No.	BR-1	BR-2	BR-3	BR-4	BR-5	BR-6	BR-7	BR-8	BR-9	BR-10
Existing Type	Timber	Timber	Timber	Bailey	Timber	Spillway	Timber	Bailey	Bailey	Timber
Length (m)	10	20	10	20	20	-	10	10	10	10
Proposed Type	2Lane-Br	2Lane-Br	2Lane-Br	2Lane-Br	2Lane-Br	2Lane-Br	2Lane-Br	2Lane-Br	2Lane-Br	2Lane-Br
Length (m)	10	20	15	20	20	30	15	15	15	15
No. of Spans	1	1	1	1	1	2	1	1	1	1

THE PILOT STUDY FOR THE RURAL ROAD NETWORK DEVELOPMENT PROJECT IN THE REPUBLIC OF THE PHILIPPINES	PRESENT CONDITION AND PROPOSED IMPROVEMENT	Scale 1:50,000	Drawing No. 13

Road No: N2-1 Road Name: JCT. MILAGROS-BALENO-LAGTA

Location : MILAGROS, MASBATE



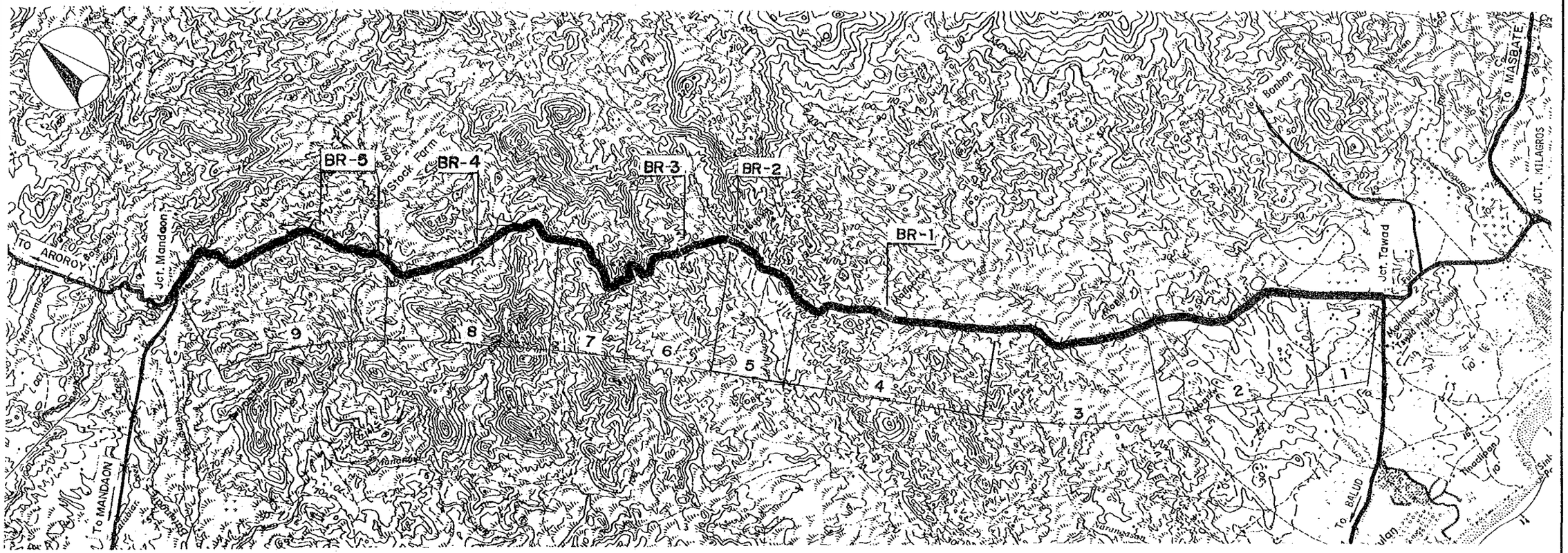
Road Classification	Primary Major Road (National Road)	
Total Length	2.5 km	
Sub-section No.	1	
Length (km)	2.5	
Terrain	Flat	
Existing Road Surface	6.0-GRV (Fair)	
Proposed Improvement		
Improvement Type	Impr.-2	
Surface Type	* BMP	
Carriageway Width(m)	6.0	
Shoulder Width (m)	2.0	
Ref. Typical Section	TYPE 3-4	
Bridge No.	BR-1	BR-2
Existing Type	Bailey	Spillway
Length (m)	15	-
Proposed Type	2Lane-Br	2Lane-Br
Length (m)	15	48
No. of Spans	1	3

* DBST can be applied instead depending on conditions of subgrade,axle load,drainage,etc.

THE PILOT STUDY FOR THE RURAL ROAD NETWORK DEVELOPMENT PROJECT IN THE REPUBLIC OF THE PHILIPPINES	PRESENT CONDITION AND PROPOSED IMPROVEMENT	Scale 1:50,000	Drawing No. 14

Road No: N2-2 Road Name: JCT. MILAGROS-BALENO-LAGTA

Location : MILAGROS & MANDAON, MASBATE



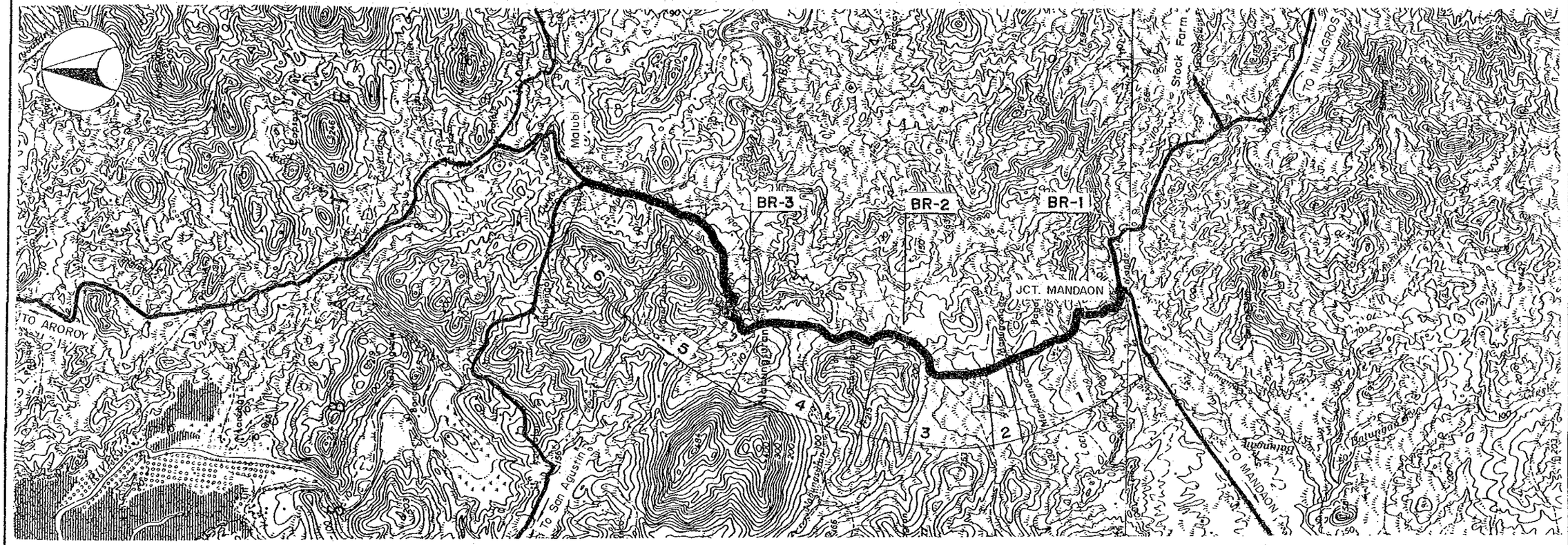
Road Classification	Primary Major (National Road)								
Total Length	18.3 km								
Sub-section No.	1	2	3	4	5	6	7	8	9
Length (km)	.9	2.2	1.9	2.5	1.1	1.6	1.2	2.3	4.6
Terrain	Flat	Flat	Rolling	Mt'nous	Rolling	Mt'nous	Mt'nous	Flat	Rolling
Existing Road Surface	6.0-GRV (Fair)	6.0-GRV (Fair)	6.0-GRV (Fair)	5.5-GRV (Fair)	5.0-GRV (Fair)	4.5-GRV (Bad)	5.0-GRV (Bad)	5.5-GRV (Bad)	4.5-GRV (V.Bad)
Proposed Improvement									
Improvement Type	Impr.-2	Impr.-2	Impr.-2	Impr.-2	Impr.-2	Impr.-1	Impr.-1	Impr.-1	Impr.-1
Surface Type	* BMP	* BMP	* BMP	* BMP	* BMP	* BMP	* BMP	* BMP	* BMP
Carriageway Width(m)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Shoulder Width (m)	2.0	2.0	1.5	1.0	1.5	1.0	1.0	2.0	1.5
Ref. Typical Section	TYPE 3-4	TYPE 3-4	TYPE 3-4	TYPE 3-4	TYPE 3-4	TYPE 2-4	TYPE 2-4	TYPE 2-4	TYPE 2-4
Bridge No.	BR-1	BR-2	BR-3	BR-4	BR-5				
Existing Type	Concrete	Bailey	Bailey	Timber	Timber				
Length (m)	5	12	12	12	11				
Proposed Type	-	2Lane-Br	2Lane-Br	2Lane-Br	2Lane-Br				
Length (m)	-	15	15	15	15				
No. of Spans	-	1	1	1	1				

* DBST can be applied instead depending on conditions of subgrade,axle load,drainage,etc.

THE PILOT STUDY FOR THE RURAL ROAD NETWORK DEVELOPMENT PROJECT IN THE REPUBLIC OF THE PHILIPPINES	PRESENT CONDITION AND PROPOSED IMPROVEMENT	Scale 1:50,000	Drawing No. 15

Road No: N2-3 Road Name: JCT. MILAGROS-BALENO-LAGTA

Location : MANDAON & AROROY, MASBATE



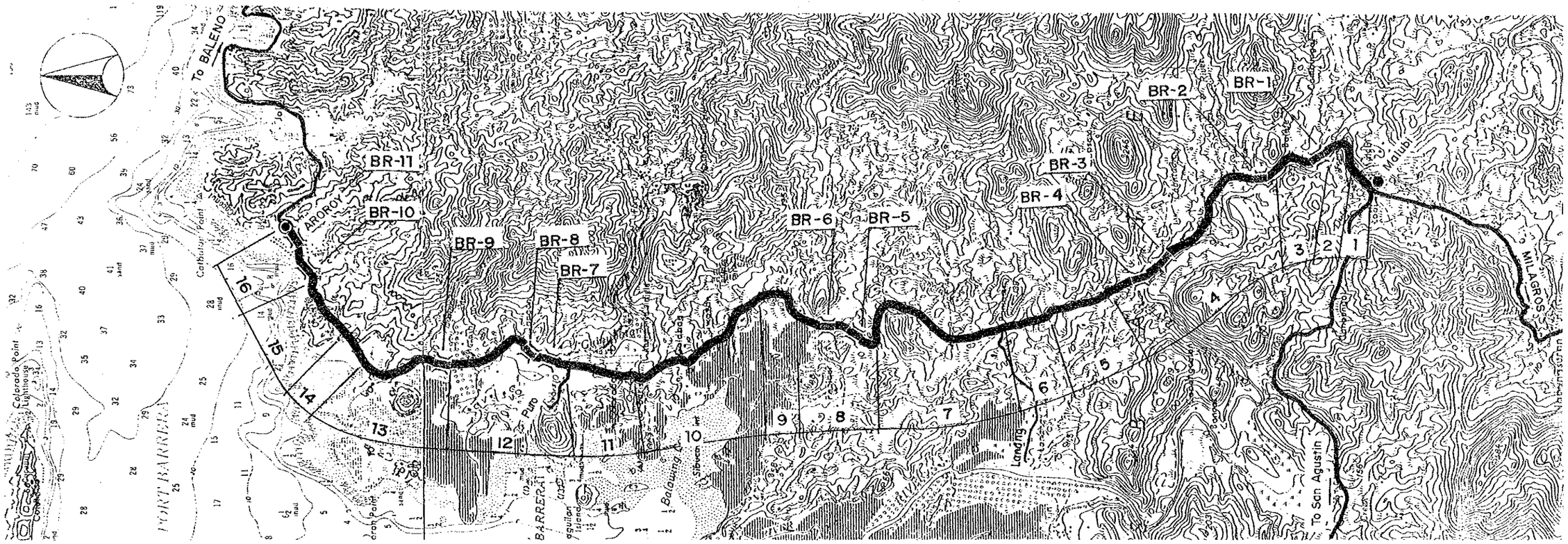
Road Classification	Primary Major (National Road)					
Total Length	9.1 km					
Sub-section No.	1	2	3	4	5	6
Length, (km)	1.8	.2	1.9	2.0	1.9	1.3
Terrain	Mt'nous	Rolling	Flat	Flat	Mt'nous	Rolling
Existing Road Surface	3.6-GRV (Bad)	3.6-GRV (Bad)	3.6-GRV (Bad)	3.2-GRV (V.Bad)	3.2-GRV (V.Bad)	3.2-GRV (V.Bad)
Proposed Improvement						
Improvement Type	Impr.-1	Impr.-1	Impr.-1	Impr.-1	Impr.-1	Impr.-1
Surface Type	* BMP	* BMP	* BMP	* BMP	* BMP	* BMP
Carriageway Width(m)	6.0	6.0	6.0	6.0	6.0	6.0
Shoulder Width (m)	1.0	1.5	2.0	2.0	1.0	1.5
Ref. Typical Section	TYPE 2-4	TYPE 2-4	TYPE 2-4	TYPE 2-4	TYPE 2-4	TYPE 2-4
Bridge No.	BR-1	BR-2	BR-3			
Existing Type	Timber	Timber	Timber			
Length (m)	6	6	20			
Proposed Type	2Lane-Br	2Lane-Br	2Lane-Br			
Length (m)	10	10	20			
No. of Spans	1	1	1			

* DBST can be applied instead depending on conditions of subgrade,axle load,drainage,etc.

THE PILOT STUDY FOR THE RURAL ROAD NETWORK DEVELOPMENT PROJECT IN THE REPUBLIC OF THE PHILIPPINES	PRESENT CONDITION AND PROPOSED IMPROVEMENT	Scale 1:50,000	Drawing No. 16

Road No: N2-4 Road Name: JCT. MILAGROS-BALENO-LAGTA

Location : ARoROY, MASBATE



Road Classification	Primary Major (National Road)															
Total Length	19.9 km															
Sub-section No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Length (km)	.5	.3	.8	3.2	1.2	.8	2.0	1.5	.5	2.0	.9	1.7	1.4	.5	1.1	1.5
Terrain	Flat	Rolling	Rolling	Flat	Flat	Rolling	Flat	Flat	Flat	Flat	Flat	Flat	Flat	Flat	Flat	Flat
Existing Road Surface	5.5-GRV (Fair)	4.5-GRV (Fair)	4.0-GRV (Fair)	4.5-GRV (Fair)	4.5-GRV (Fair)	4.5-GRV (Fair)	4.5-GRV (Fair)	4.5-GRV (Fair)	4.5-GRV (Fair)	4.5-GRV (Fair)	4.5-GRV (Fair)	4.5-GRV (Fair)	4.5-GRV (Fair)	4.5-GRV (Fair)	4.5-GRV (Fair)	4.5-GRV (Fair)
Proposed Improvement																
Improvement Type	Impr.-2	Impr.-2	Impr.-2	Impr.-2	Impr.-2	Impr.-2	Impr.-2	Impr.-2	Impr.-2	Impr.-2	Impr.-2	Impr.-2	Impr.-2	Impr.-2	Impr.-2	Impr.-2
Surface Type	* BMP	* BMP	* BMP	* BMP	* BMP	* BMP	* BMP	* BMP	* BMP	* BMP	* BMP	* BMP	* BMP	* BMP	* BMP	* BMP
Carriageway Width(m)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Shoulder Width (m)	2.0	1.5	1.5	2.0	2.0	1.5	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ref. Typical Section	TYPE 3-4	TYPE 3-4	TYPE 3-4	TYPE 3-4	TYPE 3-4	TYPE 3-4	TYPE 3-4	TYPE 3-4	TYPE 3-4	TYPE 3-4	TYPE 3-4	TYPE 3-4	TYPE 3-4	TYPE 3-4	TYPE 3-4	TYPE 3-4
Bridge No.	BR-1	BR-2	BR-3	BR-4	BR-5	BR-6	BR-7	BR-8	BR-9	BR-10	BR-11					
Existing Type	Spillway	Bailey	Timber	Bailey	Bailey	Timber	Timber	Bailey	Bailey	Spillway	Timber					
Length (m)	-	12	20	6	10	10	6	30	18	-	6					
Proposed Type	2Lane-Br	2Lane-Br	2Lane-Br	2Lane-Br	2Lane-Br	2Lane-Br	2Lane-Br	2Lane-Br	2Lane-Br	2Lane-Br	2Lane-Br					
Length (m)	100	15	20	10	15	15	10	30	20	10	10					
No. of Spans	6	1	1	1	1	1	1	2	1	1	1					

* DBST can be applied instead depending on conditions of subgrade,axle load,drainage,etc.

THE PILOT STUDY FOR THE RURAL ROAD NETWORK DEVELOPMENT PROJECT IN THE REPUBLIC OF THE PHILIPPINES

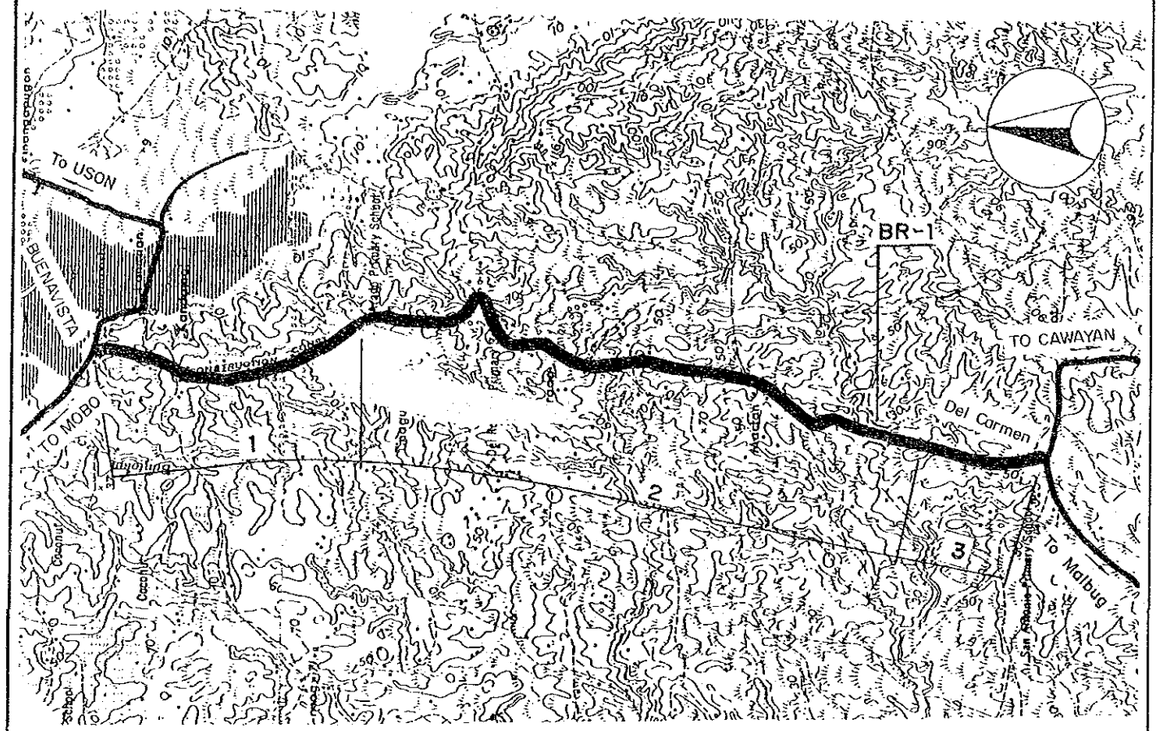
PRESENT CONDITION AND PROPOSED IMPROVEMENT

Scale: 1:50,000

Drawing No.: 17

Road No: N14-1 Road Name: BUENAVISTA-CAWAYAN ROAD

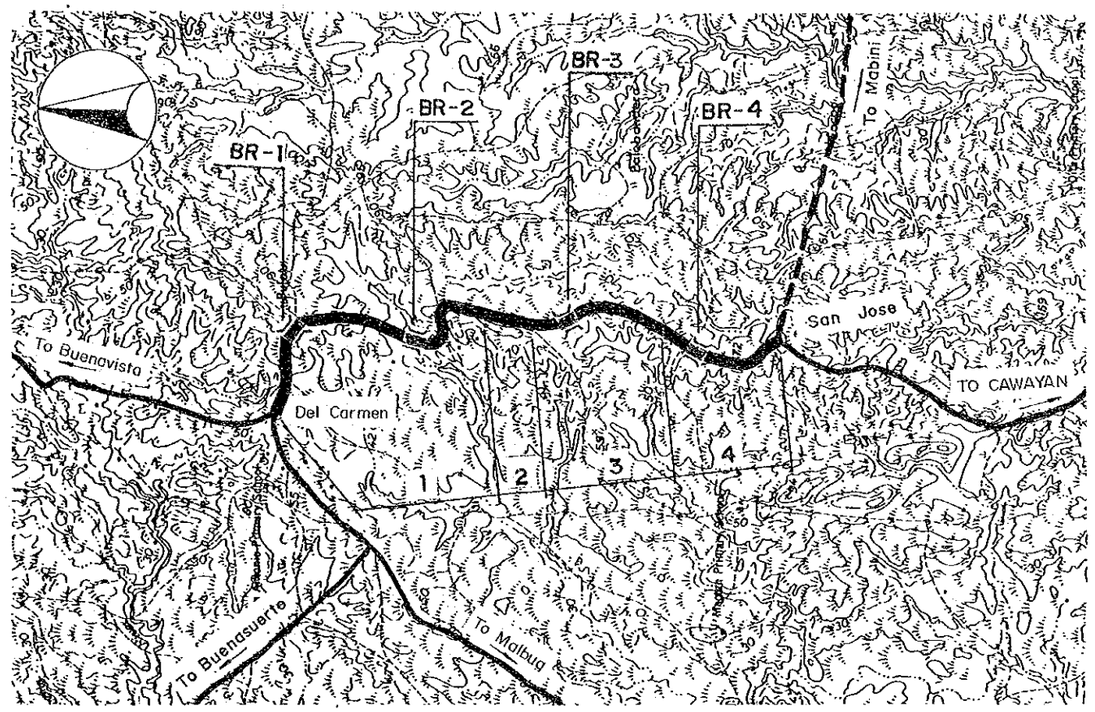
Location : USON, MASBATE



Road Classification	Primary Major (National Rd)		
Total Length	8.5 km		
Sub-section No.	1	2	3
Length (km)	2.2	5.3	1.0
Terrain	Rolling	Rolling	Rolling
Existing Road Surface	5.5-GRV (Bad)	5.5-GRV (V.Bad)	5.5-GRV (Bad)
Proposed Improvement			
Improvement Type	Rehabil.	Rehabil.	Rehabil.
Surface Type	Gravel	Gravel	Gravel
Carriageway Width(m)	6.0	6.0	6.0
Shoulder Width (m)	1.5	1.5	1.5
Ref. Typical Section	TYPE 1-6	TYPE 1-6	TYPE 1-6
Special Treatment			
Steep Section Length	-	100	-
Bridge No.	BR-1		
Existing Type	Concrete		
Length (m)	40		
Proposed Type	-		
Length (m)	-		
No. of Spans	-		

Road No: N14-2 Road Name: BUENAVISTA-CAWAYAN RD.

Location : USON & CAWAYAN, MASBATE

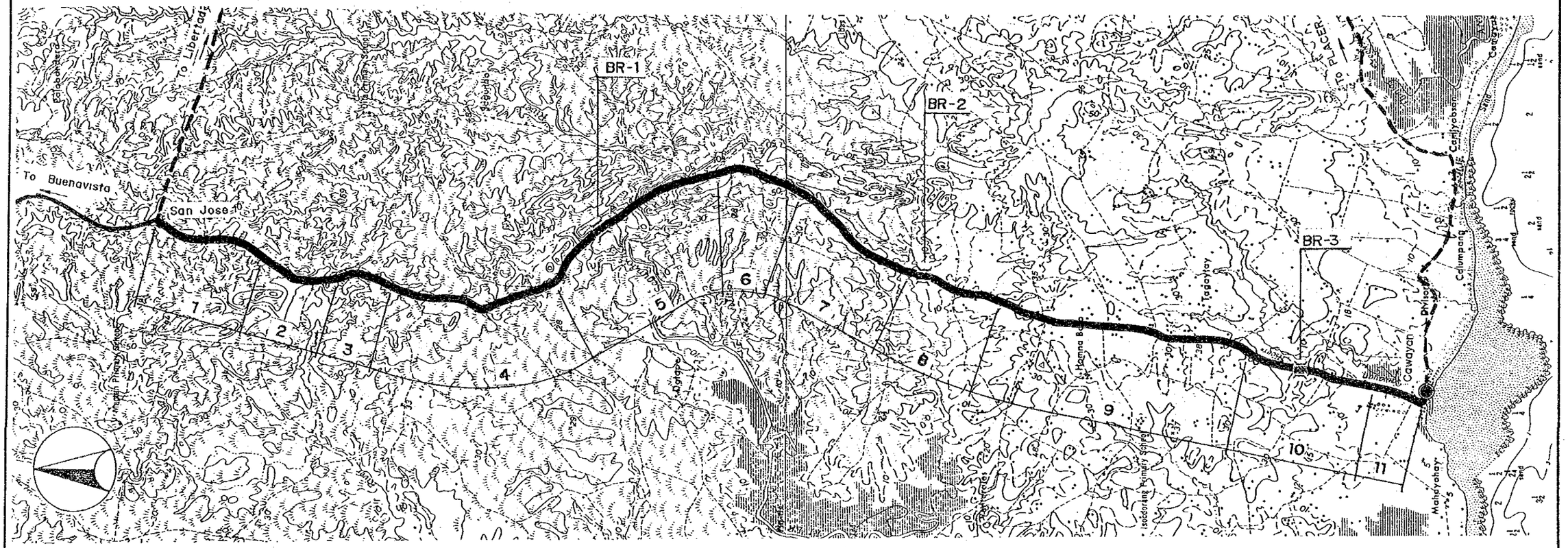


Road Classification	Primary Major (National Road)			
Total Length	5.4 km			
Sub-section No.	1	2	3	4
Length (km)	2.8	.4	1.2	1.0
Terrain	Rolling	Rolling	Rolling	Rolling
Existing Road Surface	5.5-GRV (V.Bad)	5.5-EAR (V.Bad)	5.5-EAR (V.Bad)	5.5-EAR (V.Bad)
Proposed Improvement				
Improvement Type	Rehabil.	Impr.-1	Impr.-1	Impr.-1
Surface Type	Gravel	Gravel	Gravel	Gravel
Carriageway Width(m)	6.0	6.0	6.0	6.0
Shoulder Width (m)	1.5	1.5	1.5	1.5
Ref. Typical Section	TYPE 1-6	TYPE 2-8	TYPE 2-8	TYPE 2-8
Special Treatment				
Steep Section Length	100	-	100	-
Bridge No.	BR-1	BR-2	BR-3	BR-4
Existing Type	Bailey	Bailey	Timber	Bailey
Length (m)	10	20	10	30
Proposed Type	2Lane-Br	2Lane-Br	2Lane-Br	2Lane-Br
Length (m)	10	20	10	30
No. of Spans	1	1	1	2

THE PILOT STUDY FOR THE RURAL ROAD NETWORK DEVELOPMENT PROJECT IN THE REPUBLIC OF THE PHILIPPINES	PRESENT CONDITION AND PROPOSED IMPROVEMENT	Scale 1:50,000	Drawing No. 18

Road No: N14-3 Road Name: BUENAVISTA-CAWAYAN-ROAD

Location : CAWAYAN, MASBATE



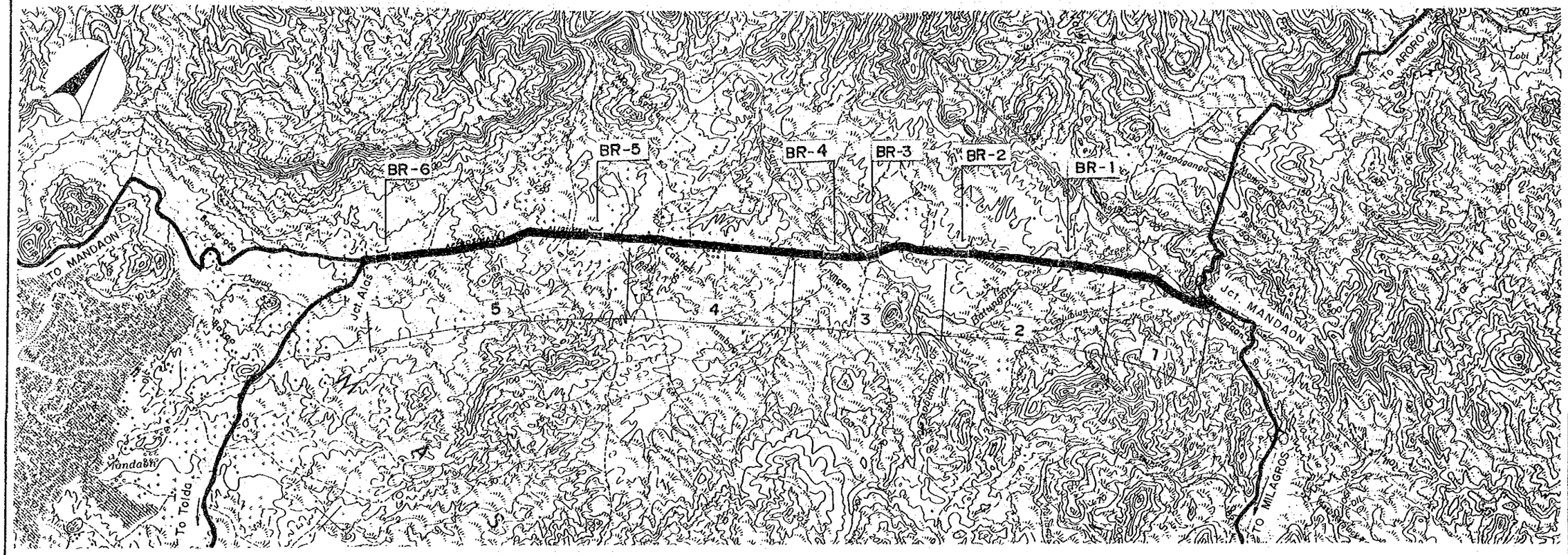
Road Classification	Primary Major (National Road)										
Total Length	18.9 km										
Sub-section No.	1	2	3	4	5	6	7	8	9	10	11
Length (km)	1.4	1.1	.7	2.3	2.7	1.2	1.9	1.3	3.7	1.8	.8
Terrain	Rolling	Rolling	Rolling	Rolling	Rolling	Rolling	Rolling	Flat	Rolling	Flat	Flat
Existing Road Surface	5.5-EAR (V.Bad)	5.5-EAR (V.Bad)	5.5-EAR (V.Bad)	4.5-EAR (V.Bad)	4.5-EAR (V.Bad)	4.5-EAR (V.Bad)	4.5-EAR (V.Bad)	4.5-EAR (V.Bad)	4.5-EAR (V.Bad)	4.0-EAR (V.Bad)	4.0-GRV (Bad)
Proposed Improvement											
Improvement Type	Impr.-1	Impr.-1	Impr.-1	Impr.-1	Impr.-1	Impr.-1	Impr.-1	Impr.-1	Impr.-1	Impr.-1	Rehabil.
Surface Type	Gravel	Gravel	Gravel	Gravel	Gravel	Gravel	Gravel	Gravel	Gravel	Gravel	Gravel
Carriageway Width(m)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Shoulder Width (m)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	2.0	1.5	2.0	2.0
Ref. Typical Section	TYPE 2-8	TYPE 2-8	TYPE 2-8	TYPE 2-8	TYPE 2-8	TYPE 2-8	TYPE 2-8	TYPE 2-8	TYPE 2-8	TYPE 2-8	TYPE 1-6
Special Treatment											
Steep Section Length	-	-	-	-	100	100	-	-	-	-	-

Bridge No.	BR-1	BR-2	BR-3
Existing Type	Spillway	Timber	Bailey
Length (m)	-	6	6
Proposed Type	2Lane-Br	2Lane-Br	2Lane-Br
Length (m)	48	10	10
No. of Spans	3	1	1

THE PILOT STUDY FOR THE RURAL ROAD NETWORK DEVELOPMENT PROJECT IN THE REPUBLIC OF THE PHILIPPINES	PRESENT CONDITION AND PROPOSED IMPROVEMENT	Scale 1:50,000	Drawing No. 19

Road No: P17-1 Road Name: JCT. MANDAON ROAD

Location : MANDAON, MASBATE

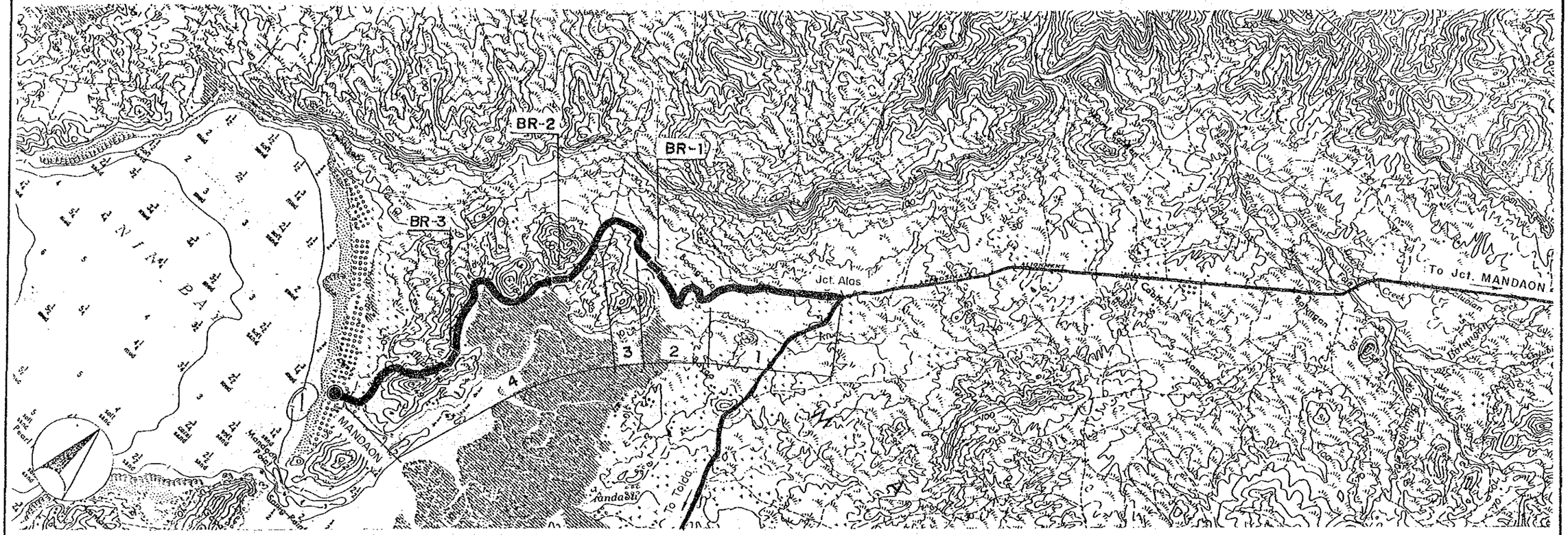


Road Classification	Primary Major (Provincial Road)					
Total Length	10.6 km					
Sub-section No.	1	2	3	4	5	
Length (km)	1.2	2.1	1.9	2.1	3.3	
Terrain	Flat	Flat	Rolling	Flat	Rolling	
Existing Road Surface	4.5-GRV (Bad)	4.5-GRV (V.Bad)	4.0-GRV (V.Bad)	4.5-GRV (V.Bad)	3.6-GRV (V.Bad)	
Proposed Improvement						
Improvement Type	Rehabil.	Rehabil.	Rehabil.	Rehabil.	Rehabil.	
Surface Type	Gravel	Gravel	Gravel	Gravel	Gravel	
Carriageway Width(m)	6.0	6.0	6.0	6.0	6.0	
Shoulder Width (m)	2.0	2.0	1.5	2.0	1.5	
Ref. Typical Section	TYPE 1-6	TYPE 1-6	TYPE 1-6	TYPE 1-6	TYPE 1-6	
Bridge No.	BR-1	BR-2	BR-3	BR-4	BR-5	BR-6
Existing Type	Timber	Timber	Spillway	Bailey	Timber	Timber
Length (m)	6	7	-	18	6	12
Proposed Type	2Lane-Br	2Lane-Br	2Lane-Br	2Lane-Br	2Lane-Br	2Lane-Br
Length (m)	10	10	30	20	10	15
No. of Spans	1	1	2	1	1	1

THE PILOT STUDY FOR THE RURAL ROAD NETWORK DEVELOPMENT PROJECT IN THE REPUBLIC OF THE PHILIPPINES	PRESENT CONDITION AND PROPOSED IMPROVEMENT	Scale 1:50,000	Drawing No. 20

Road No: P17-2 Road Name: JCT. MANDAON ROAD

Location : MANDAON, MASBATE

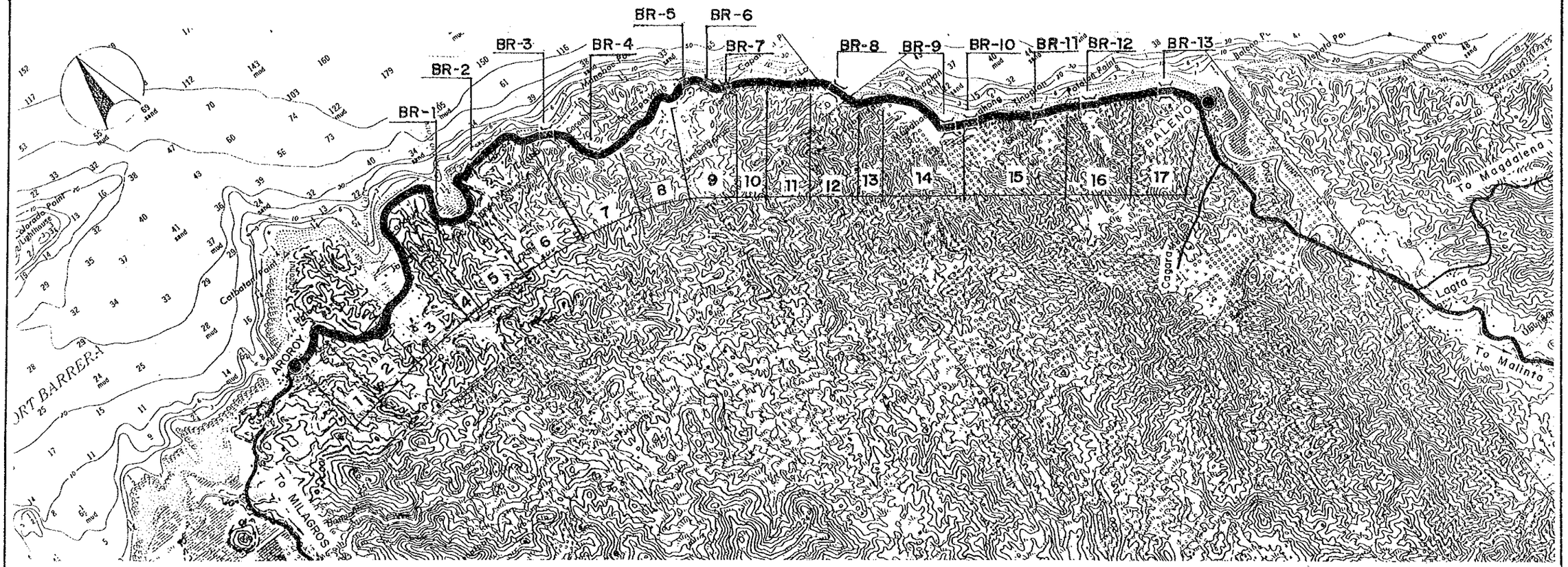


Road Classification	Primary Major (Provincial Road)			
Total Length	8.3 km			
Sub-section No.	1	2	3	4
Length (km)	1.7	1.5	.5	4.6
Terrain	Rolling	Flat	Rolling	Flat
Existing Road Surface	4.0-GRV (V.Bad)	4.0-GRV (V.Bad)	4.5-GRV (V.Bad)	4.5-GRV (V.Bad)
Proposed Improvement				
Improvement Type	Rehabil.	Rehabil.	Rehabil.	Rehabil.
Surface Type	Gravel	Gravel	Gravel	Gravel
Carriageway Width(m)	6.0	6.0	6.0	6.0
Shoulder Width (m)	1.5	2.0	1.5	2.0
Ref. Typical Section	TYPE 1-6	TYPE 1-6	TYPE 1-6	TYPE 1-6
Bridge No.	BR-1	BR-2	BR-3	
Existing Type	Timber	Timber	Timber	
Length (m)	12	12	7	
Proposed Type	2Lane-Br	2Lane-Br	2Lane-Br	
Length (m)	15	15	10	
No. of Spans	1	1	1	

THE PILOT STUDY FOR THE RURAL ROAD NETWORK DEVELOPMENT PROJECT IN THE REPUBLIC OF THE PHILIPPINES	PRESENT CONDITION AND PROPOSED IMPROVEMENT	Scale 1:50,000	Drawing No. 21

Road No: N2-5 Road Name: JCT. MILAGROS-BALENO-LAGTA

Location : AROROY & BALENO, MASBATE



Road Classification	Secondary Major (National Road)																
Total Length	16.3 km																
Sub-section No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Length (km)	.5	1.0	1.3	.4	1.5	1.4	1.3	.9	1.1	.4	.5	.7	.3	1.1	1.7	1.1	1.1
Terrain	Rolling	Mt'nous	Flat	Rolling	Flat	Flat	Flat	Rolling	Flat	Rolling	Flat	Rolling	Flat	Rolling	Flat	Rolling	Rolling
Existing Road Surface	4.0-GRV (Bad)	4.5-GRV (V.Bad)	4.0-GRV (Bad)	3.2-GRV (Bad)	4.0-GRV (Fair)	3.2-GRV (V.Bad)	3.2-GRV (Bad)	4.0-GRV (Bad)	4.0-GRV (Bad)	4.0-GRV (Bad)	4.0-GRV (Bad)	4.0-GRV (Bad)	4.0-GRV (Bad)	3.2-GRV (Bad)	4.5-GRV (Bad)	4.0-GRV (Bad)	4.0-GRV (Bad)
Proposed Improvement																	
Improvement Type	Rehabil.	Rehabil.	Rehabil.	Rehabil.	Widening	Rehabil.	Rehabil.	Rehabil.	Rehabil.	Rehabil.	Rehabil.	Rehabil.	Rehabil.	Rehabil.	Rehabil.	Rehabil.	Rehabil.
Surface Type	Gravel	Gravel	Gravel	Gravel	Gravel	Gravel	Gravel	Gravel	Gravel	Gravel	Gravel	Gravel	Gravel	Gravel	Gravel	Gravel	Gravel
Carriageway Width(m)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Shoulder Width (m)	.5	.5	1.0	.5	1.0	1.0	1.0	.5	1.0	.5	1.0	.5	1.0	.5	1.0	.5	.5
Ref. Typical Section	TYPE 1-6	TYPE 1-6	TYPE 1-6	TYPE 1-6	TYPE 4-4	TYPE 1-6	TYPE 1-6	TYPE 1-6	TYPE 1-6	TYPE 1-6	TYPE 1-6	TYPE 1-6	TYPE 1-6	TYPE 1-6	TYPE 1-6	TYPE 1-6	TYPE 1-6
Bridge No.	BR-1	BR-2	BR-3	BR-4	BR-5	BR-6	BR-7	BR-8	BR-9	BR-10	BR-11	BR-12	BR-13				
Existing Type	Bailey	Timber	Timber	Timber	Timber	Timber	Timber	Bailey	Timber	Timber	Bailey	Timber	Timber				
Length (m)	6	6	6	6	6	6	6	12	6	6	15	6	6				
Proposed Type	2Lane-Br	2Lane-Br	2Lane-Br	2Lane-Br	2Lane-Br	2Lane-Br	2Lane-Br	2Lane-Br	2Lane-Br	2Lane-Br	2Lane-Br	2Lane-Br	2Lane-Br				
Length (m)	10	10	10	10	10	10	10	20	10	10	20	10	10				
No. of Spans	1	1	1	1	1	1	1	1	1	1	1	1	1				

THE PILOT STUDY FOR THE RURAL ROAD NETWORK DEVELOPMENT PROJECT IN THE REPUBLIC OF THE PHILIPPINES

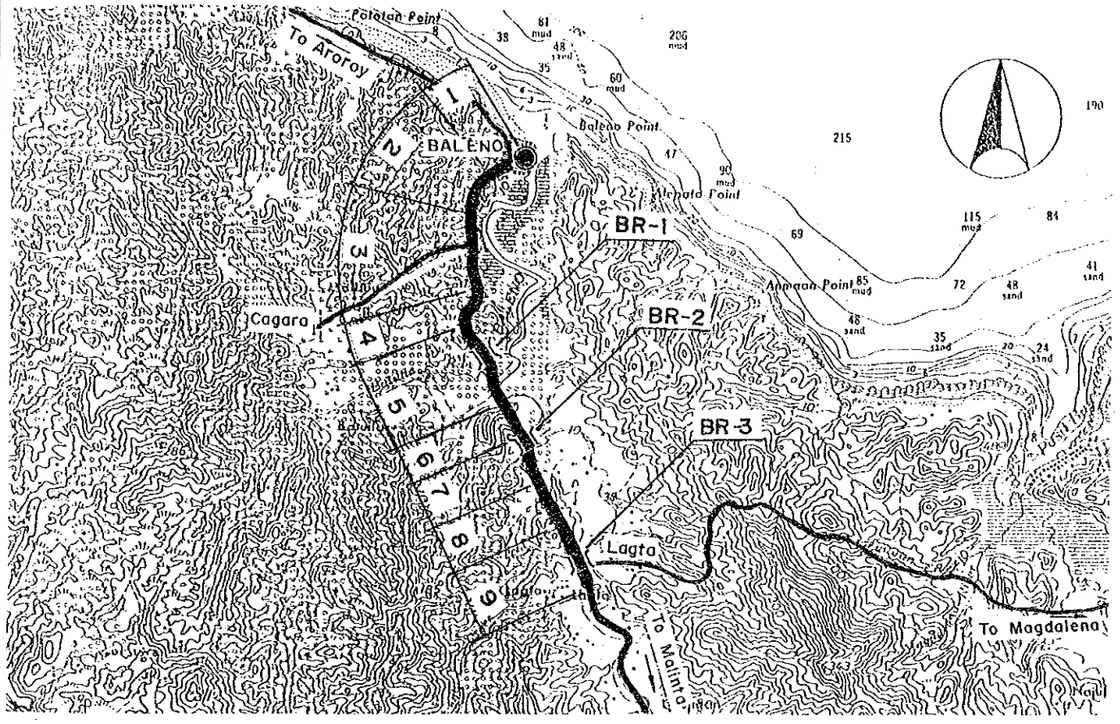
PRESENT CONDITION AND PROPOSED IMPROVEMENT

Scale: 1:50,000

Drawing No.: 22

Road No: N2-6 Road Name: JCT. MILAGROS-BALENO-LAGTA

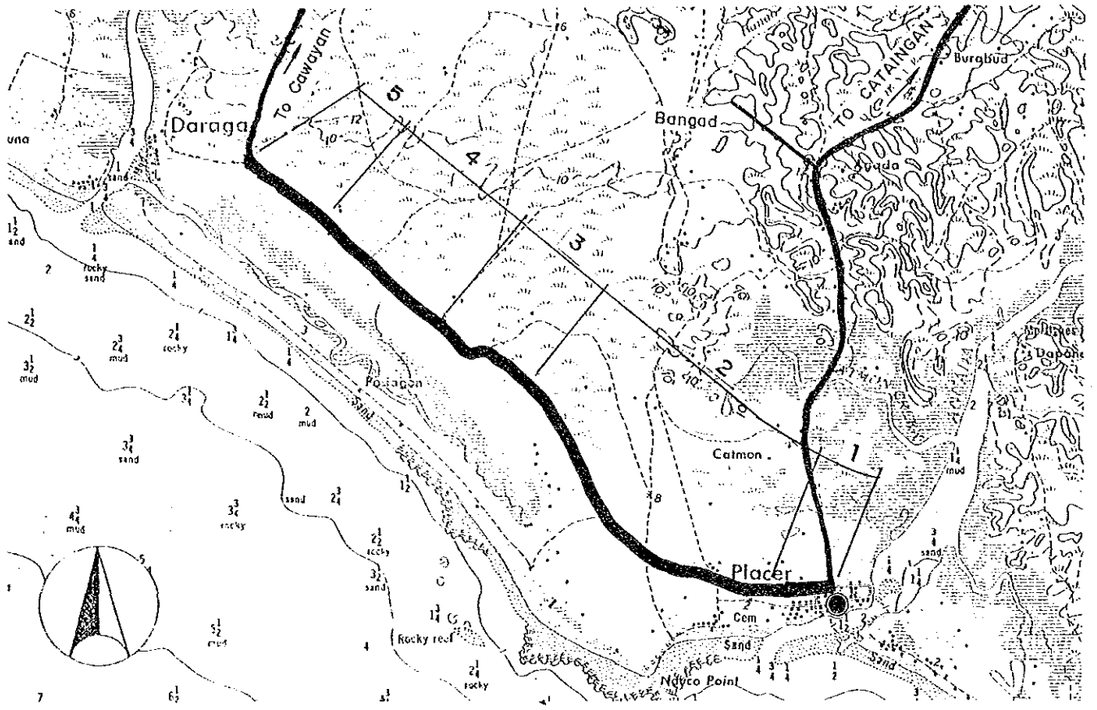
Location : BALENO, MASBATE



Road Classification	Secondary Major (National Road)								
Total Length	4.1 km								
Sub-section No.	1	2	3	4	5	6	7	8	9
Length (km)	.3	.4	.6	.3	.8	.3	.4	.4	.6
Terrain	Mt'nous	Rolling	Flat	Rolling	Flat	Rolling	Flat	Rolling	Flat
Existing Road Surface	4.5-GRV (Bad)	4.5-GRV (Bad)	4.0-GRV (Bad)	4.0-GRV (Bad)	4.0-GRV (V.Bad)	4.0-GRV (Bad)	4.0-GRV (Bad)	4.0-GRV (Bad)	4.0-GRV (Bad)
Proposed Improvement									
Improvement Type	Rehabil.	Rehabil.	Rehabil.	Rehabil.	Rehabil.	Rehabil.	Rehabil.	Rehabil.	Rehabil.
Surface Type	Gravel	Gravel	Gravel	Gravel	Gravel	Gravel	Gravel	Gravel	Gravel
Carriageway Width(m)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Shoulder Width (m)	.5	.5	1.0	.5	1.0	.5	1.0	.5	1.0
Ref. Typical Section	TYPE 1-6	TYPE 1-6	TYPE 1-6	TYPE 1-6	TYPE 1-6	TYPE 1-6	TYPE 1-6	TYPE 1-6	TYPE 1-6
Bridge No.	BR-1	BR-2	BR-3						
Existing Type	Spillway	Timber	Bailey						
Length (m)	-	6	12						
Proposed Type	2Lane-Br	2Lane-Br	2Lane-Br						
Length (m)	20	10	15						
No. of Spans	1	1	1						

Road No: N8-1 Road Name: JCT. PLACER-DARAGA

Location : PLACER, MASBATE

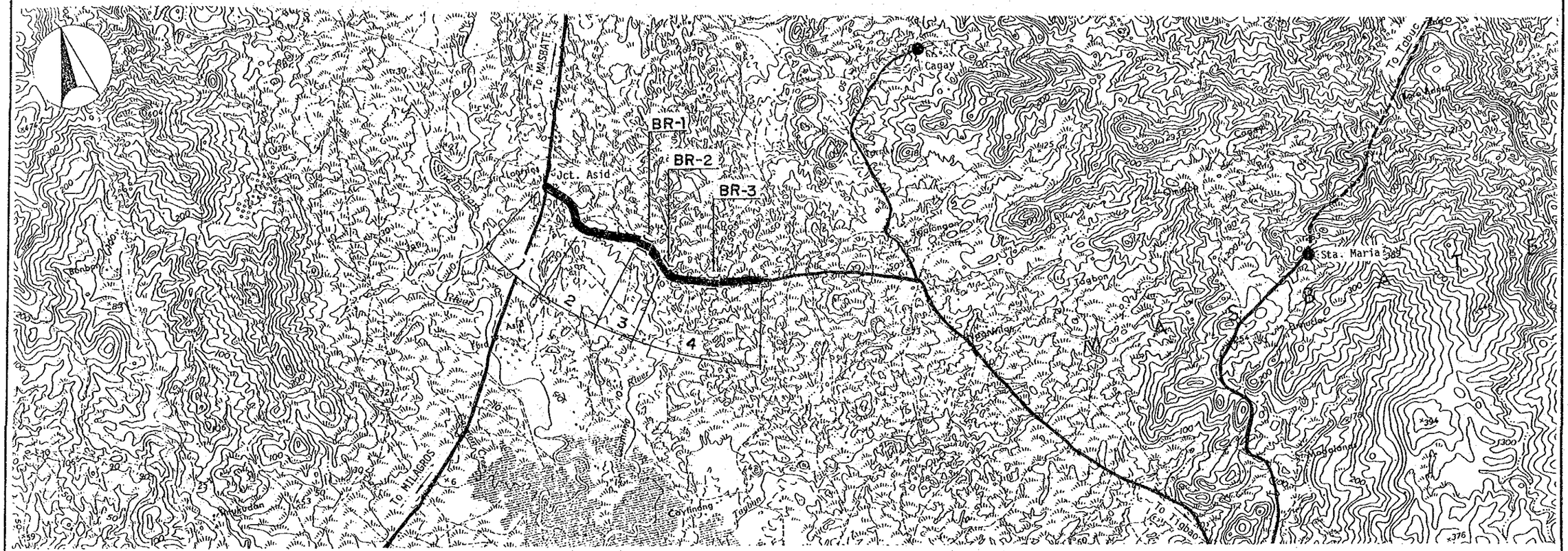


Road Classification	Secondary Major (National Road)				
Total Length	6.9 km				
Sub-section No.	1	2	3	4	5
Length (km)	.6	2.9	1.0	1.3	1.1
Terrain	Flat	Flat	Flat	Flat	Flat
Existing Road Surface	5.5-GRV (Fair)	4.5-GRV (Fair)	4.5-GRV (Fair)	4.5-GRV (Fair)	4.5-GRV (Fair)
Proposed Improvement					
Improvement Type	-	Widening	Widening	Widening	Widening
Surface Type	-	Gravel	Gravel	Gravel	Gravel
Carriageway Width(m)	-	6.0	6.0	6.0	6.0
Shoulder Width (m)	-	1.0	1.0	1.0	1.0
Ref. Typical Section	-	TYPE 4-4	TYPE 4-4	TYPE 4-4	TYPE 4-4

THE PILOT STUDY FOR THE RURAL ROAD NETWORK DEVELOPMENT PROJECT IN THE REPUBLIC OF THE PHILIPPINES	PRESENT CONDITION AND PROPOSED IMPROVEMENT	Scale 1:50,000	Drawing No. 23

Road No: N10-1 Road Name: JCT. ASID ROAD

Location : MILAGROS,MASBATE



Road Classification	Secondary Major (National Road)			
Total Length	3.0 km			
Sub-section No.	1	2	3	4
Length (km)	.6	.8	.3	1.3
Terrain	Flat	Rolling	Rolling	Rolling
Existing Road Surface	5.0-GRV (Bad)	4.5-GRV (V.Bad)	4.5-GRV (V.Bad)	4.5-GRV (V.Bad)
Proposed Improvement				
Improvement Type	Rehabil.	Rehabil.	Rehabil.	Rehabil.
Surface Type	Gravel	Gravel	Gravel	Gravel
Carriageway Width(m)	6.0	6.0	6.0	6.0
Shoulder Width (m)	1.0	.5	.5	.5
Ref. Typical Section	TYPE 1-6	TYPE 1-6	TYPE 1-6	TYPE 1-6
Special Treatment				
Steep Section Length	-	-	90	100
Bridge No.	BR-1	BR-2	BR-3	
Existing Type	Spillway	Spillway	Spillway	
Length (m)	-	-	-	
Proposed Type	2Lane-Br	2Lane-Br	2Lane-Br	
Length (m)	20	15	20	
No. of Spans	1	1	1	