

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS & HIGHWAYS

Feasibility Study
on
The Rural Road Network Development Project

FINAL REPORT (Volume 20)
DRAWINGS FOR ROAD PROJECTS
IN
THE PROVINCE OF ALBAY

OCTOBER, 1990

JAPAN INTERNATIONAL COOPERATION AGENCY

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国際協力事業団

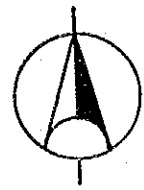
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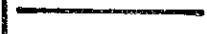





Drawing No.	Title
1	LOCATION MAP
2 to 9	TYPICAL ROAD SECTIONS
10 to 59	PRESENT CONDITION AND PROPOSED IMPROVEMENT

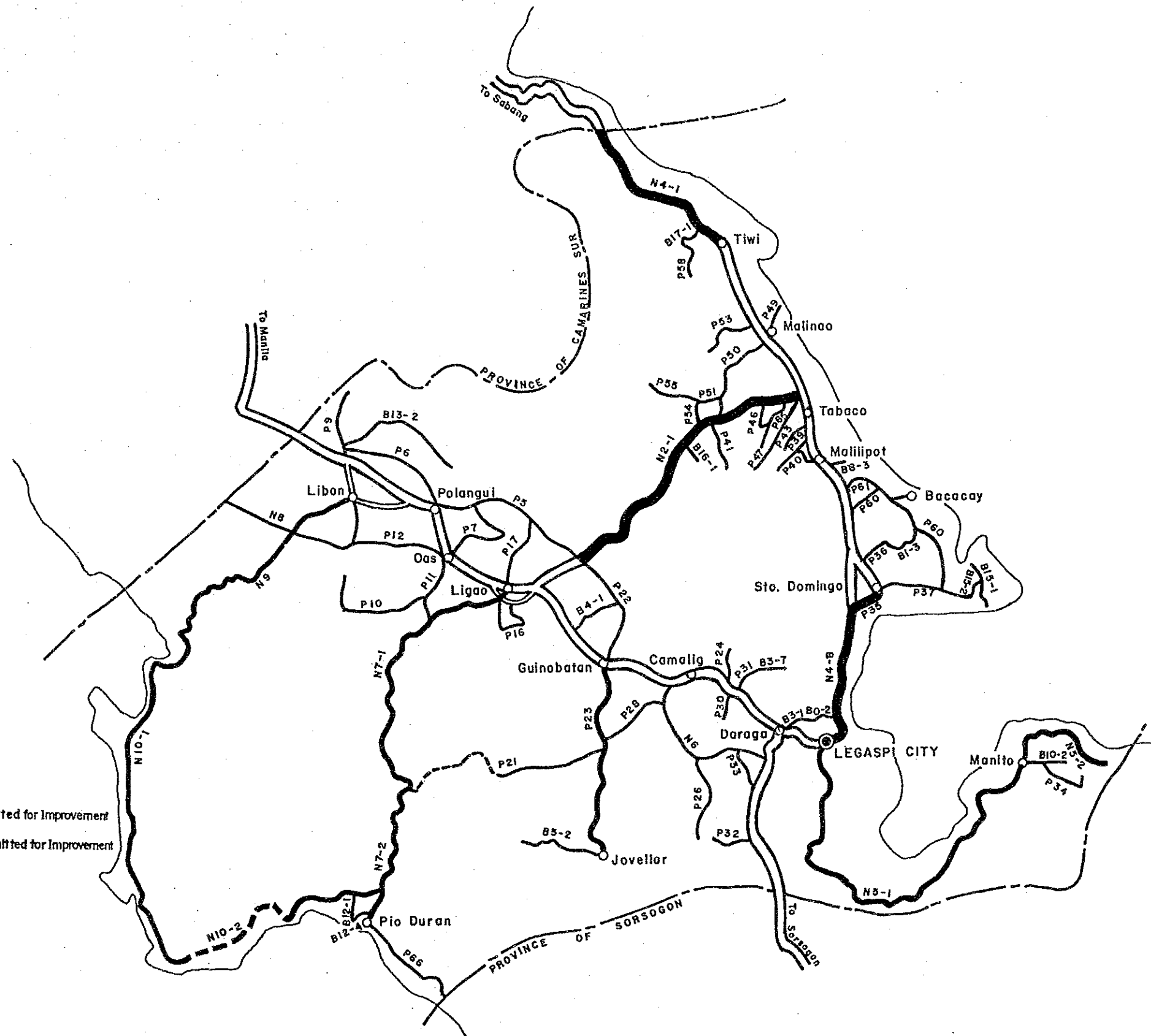
LIST OF ROADS

Road Class	Road No.	Drawing No.	Road Class	Road No.	Drawing No.	Road Class	Road No.	Drawing No.
Primary Major Road	N 2 - 1	10 & 11	Minor Road	P 22	35	Minor Road	P 55	48
	N 4 - 1	12		P 24	36		P 58	49
	N 4 - 8	13		P 26	36		P 60	49
Secondary Major Road	N 5 - 1	14, 15 & 16		P 28	37		P 61	50
	N 5 - 2	17		P 30	37		P 65	50
	N 7 - 1	18		P 31	38		P 66	51
	N 7 - 2	19		P 32	38		B 0 - 2	51
	N 9	20		P 33	39		B 1 - 3	52
	N 10 - 1	21		P 34	40		B 3 - 1	52
	N 10 - 2	22 & 23		P 35	41		B 3 - 7	53
P 23	24	P 36		41	B 4 - 1		54	
Minor Road	N 6	25		P 37	42		B 5 - 2	54
	N 8	26		P 39	43		B 8 - 3	55
	P 5	27		P 40	43		B 10 - 2	55
	P 6	28		P 41	44		B 12 - 1	56
	P 7	29		P 43	44		B 12 - 4	56
	P 9	30		P 46	45		B 13 - 2	57
	P 10	31		P 47	45		B 15 - 1	58
	P 11	32		P 49	46		B 15 - 2	58
	P 12	32		P 50	46		B 16 - 1	59
	P 16	33		P 51	47		B 17 - 1	59
	P 17	33		P 53	47			
	P 21	34		P 54	48			

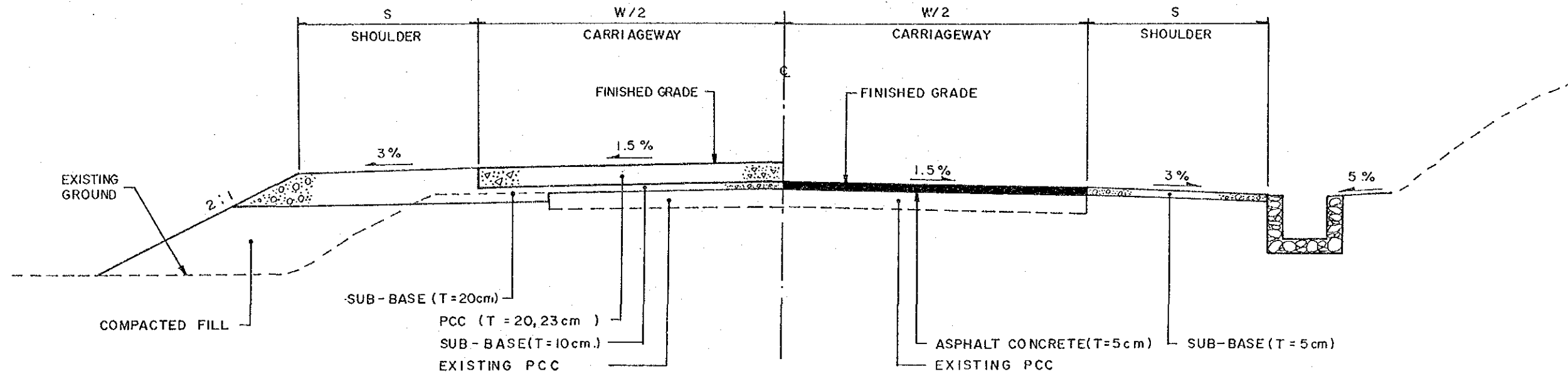


Legend:

-  Primary Major Roads for F/S
-  Secondary Major Roads for F/S
-  Minor Roads for F/S
-  Primary Major Road in Good Condition/Committed for Improvement
-  Secondary Major Roads in Good Condition/Committed for Improvement
-  Impassable / Non Existing Section
-  Provincial Capital
-  Municipality / City

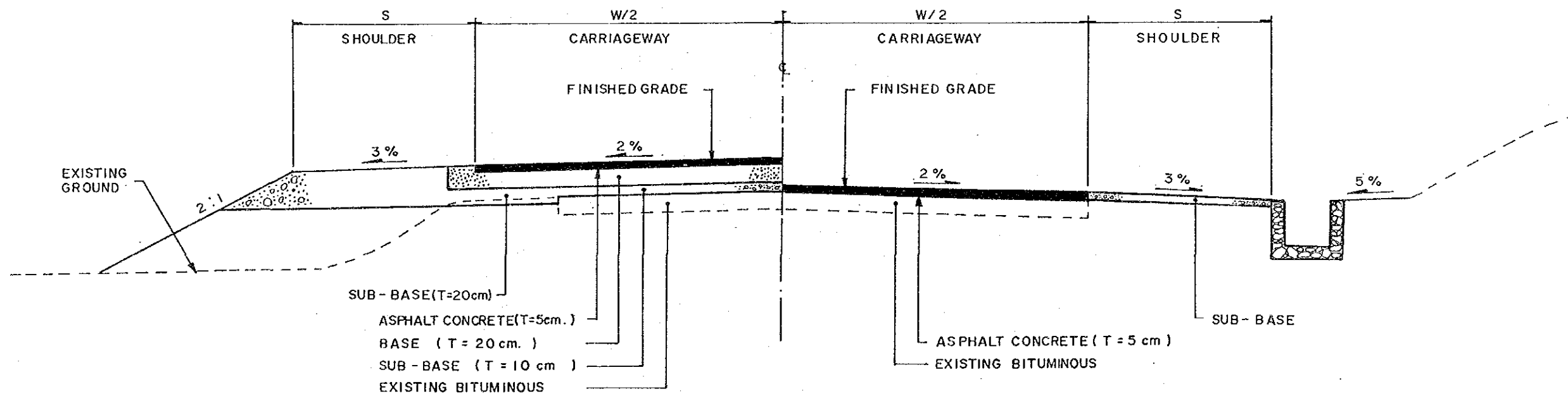


LOCATION OF F/S ROADS



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

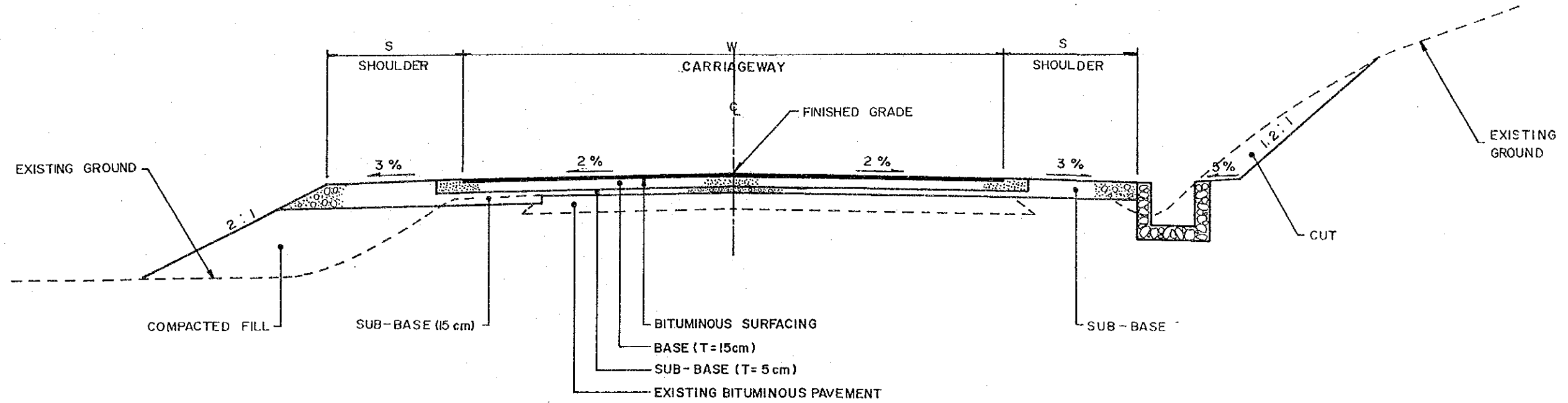
TYPE 1-2
 PROPOSED PAVEMENT : ASPHALT CONCRETE OVERLAY
 EXISTING PAVEMENT : PCC (BAD / VERY BAD)



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)

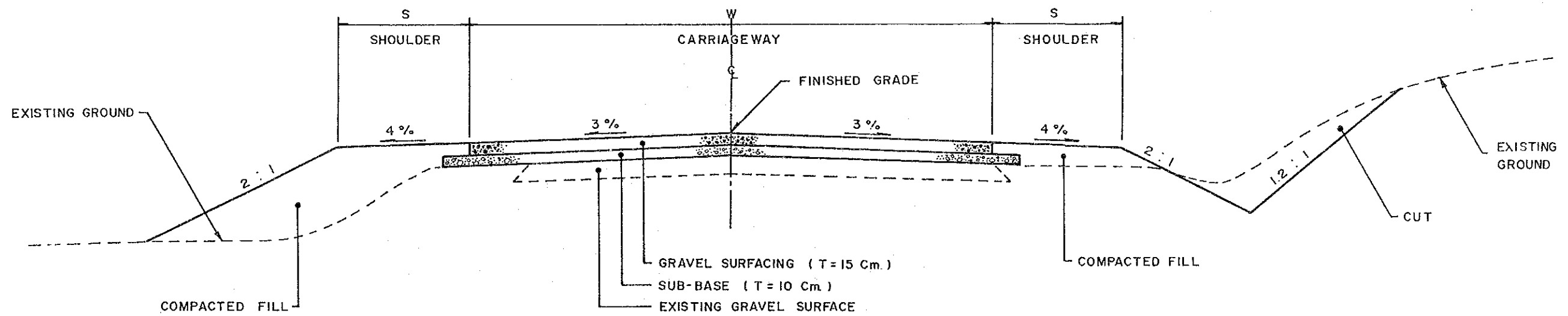
REHABILITATION (1)



TYPE I-5

PROPOSED PAVEMENT : BITUMINOUS MACADAM/DOUBLE BITUMINOUS SURFACE TREATMENT

EXISTING PAVEMENT : BITUMINOUS (BAD /VERY BAD)

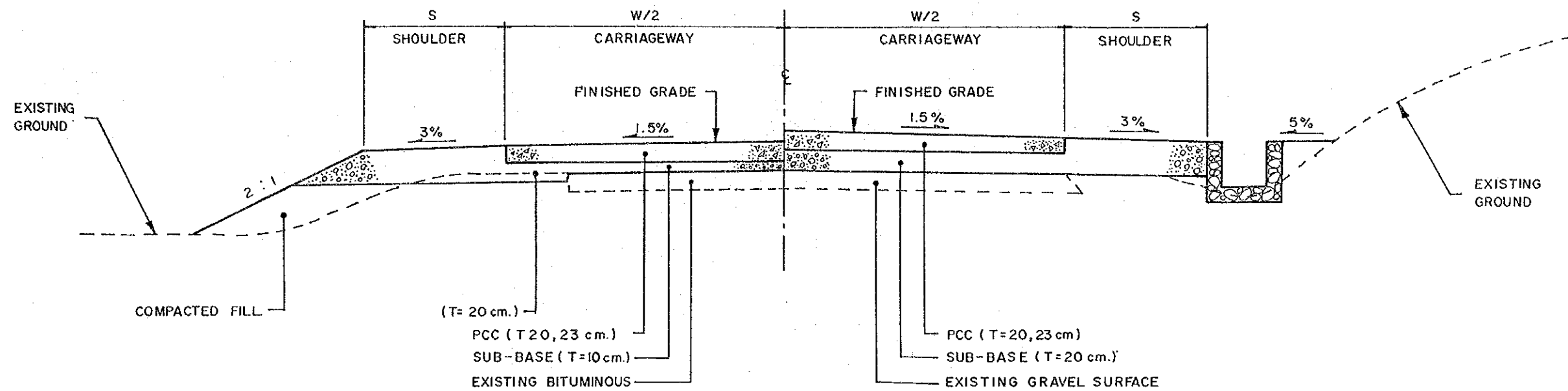


TYPE I-6

PROPOSED PAVEMENT : GRAVEL SURFACING

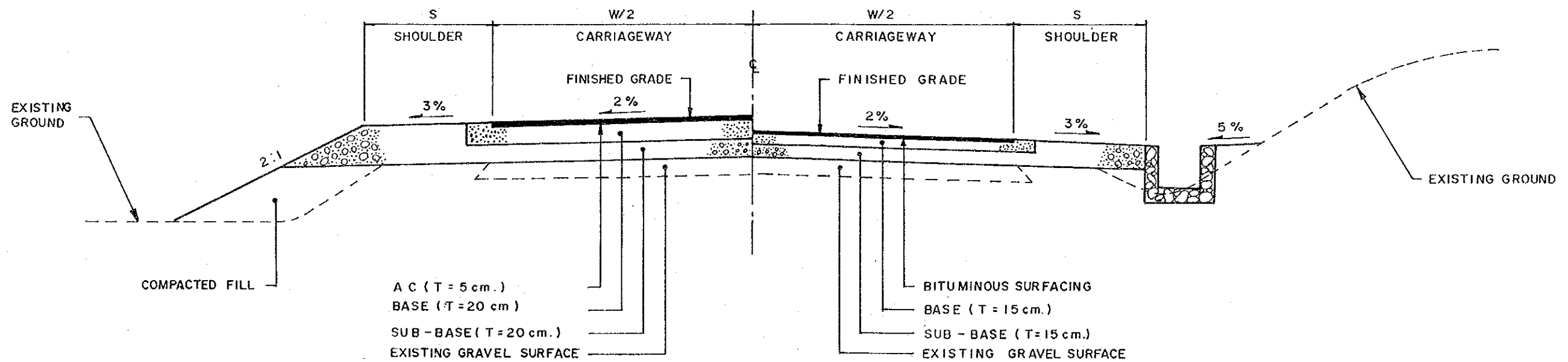
EXISTING PAVEMENT : GRAVEL SURFACING (BAD./VERY BAD)

REHABILITATION (2)



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

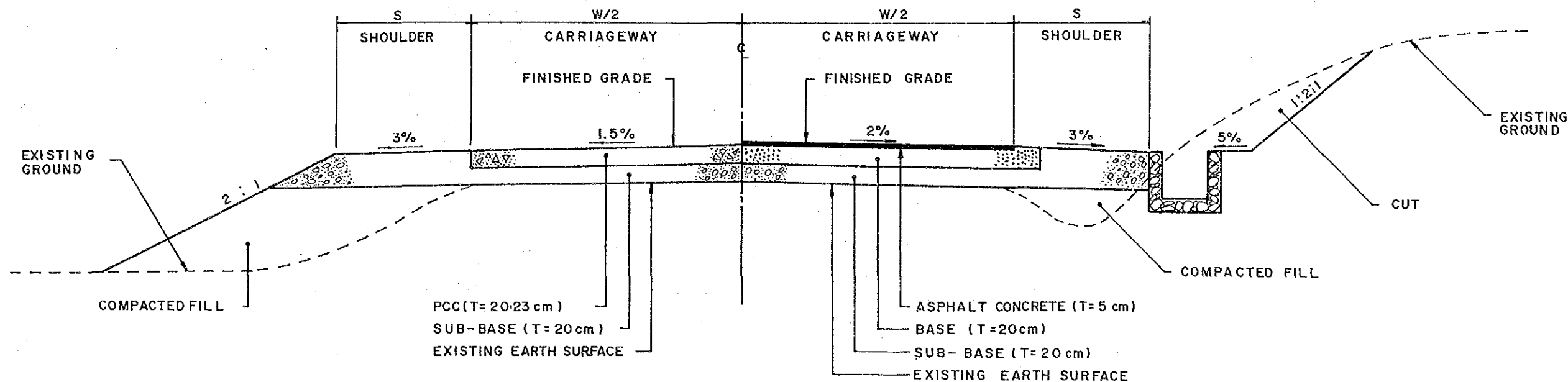
TYPE 2-2
 PROPOSED PAVEMENT : PCC
 EXISTING PAVEMENT : GRAVEL SURFACING (BAD/VERY BAD)



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 - I (I)

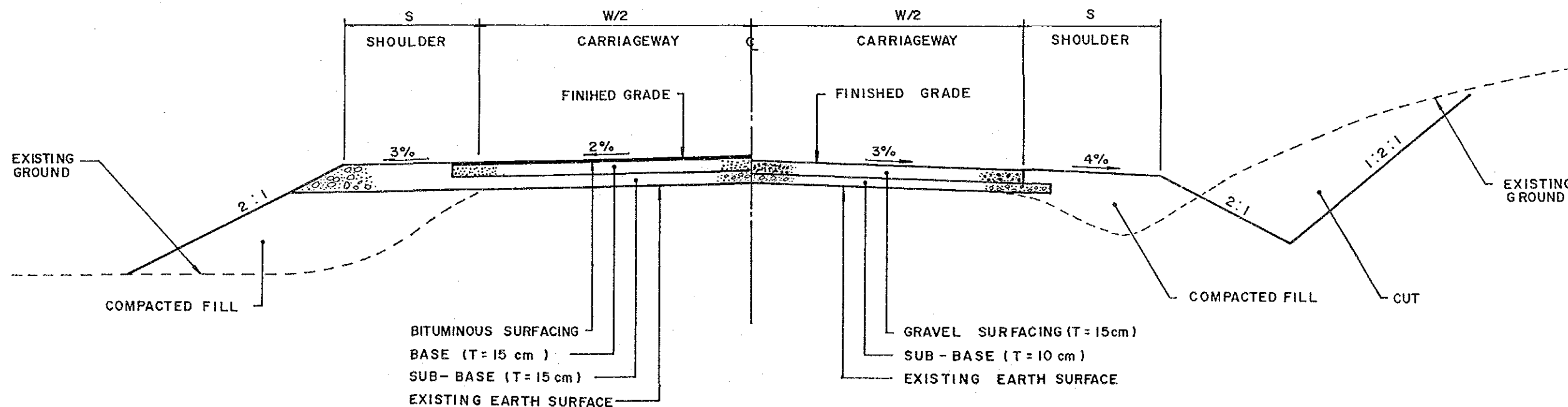


TYPE 2-5

PROPOSED PAVEMENT : PCC
EXISTING PAVEMENT : EARTH SURFACE

TYPE 2-6

PROPOSED PAVEMENT : ASPHALT CONCRETE
EXISTING PAVEMENT : EARTH SURFACE



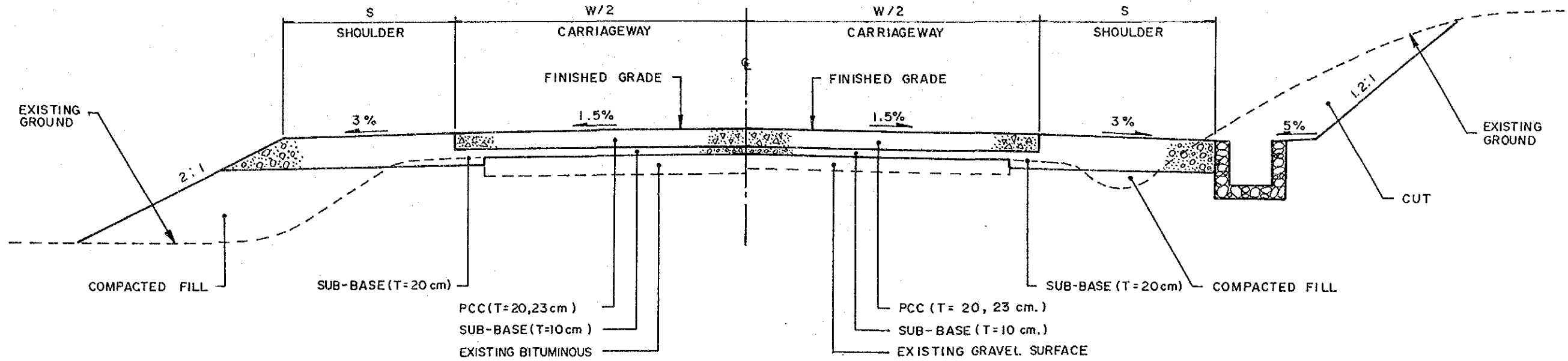
TYPE 2-7

PROPOSED PAVEMENT : BITUMINOUS MACADAM /
DOUBLE BITUMINOUS
SURFACE TREATMENT
EXISTING PAVEMENT : EARTH SURFACE

TYPE 2-8

PROPOSED PAVEMENT : GRAVEL SURFACING
EXISTING PAVEMENT : EARTH SURFACING

IMPROVEMENT - I (2)

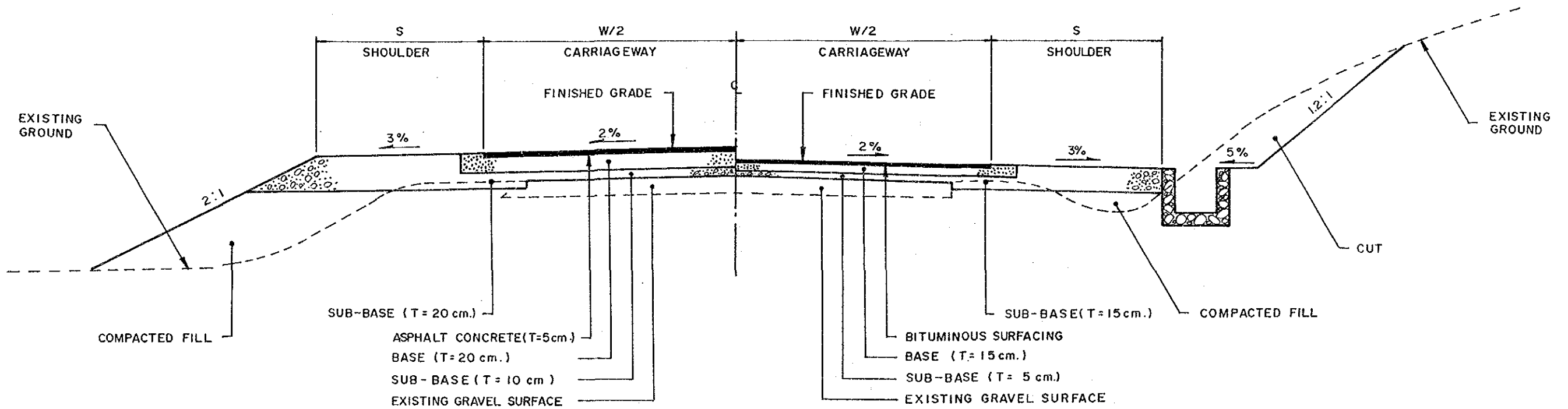


TYPE 3-1

PROPOSED PAVEMENT : PCC
EXISTING PAVEMENT : BITUMINOUS (Good/Fair)

TYPE 3-2

PROPOSED PAVEMENT : PCC
EXISTING PAVEMENT : GRAVEL SURFACING (Good/Fair)



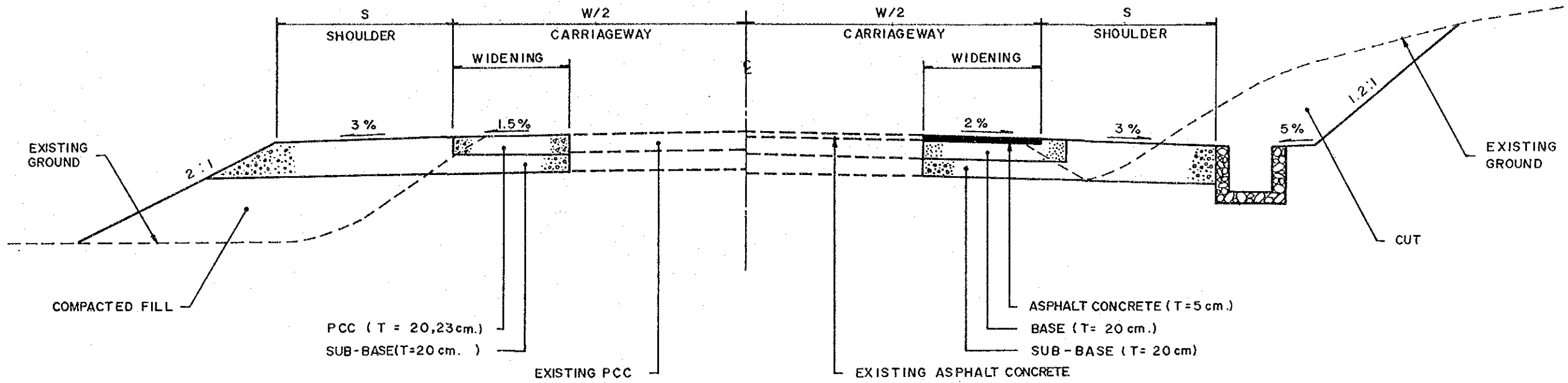
TYPE 3-3

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

TYPE 3-4

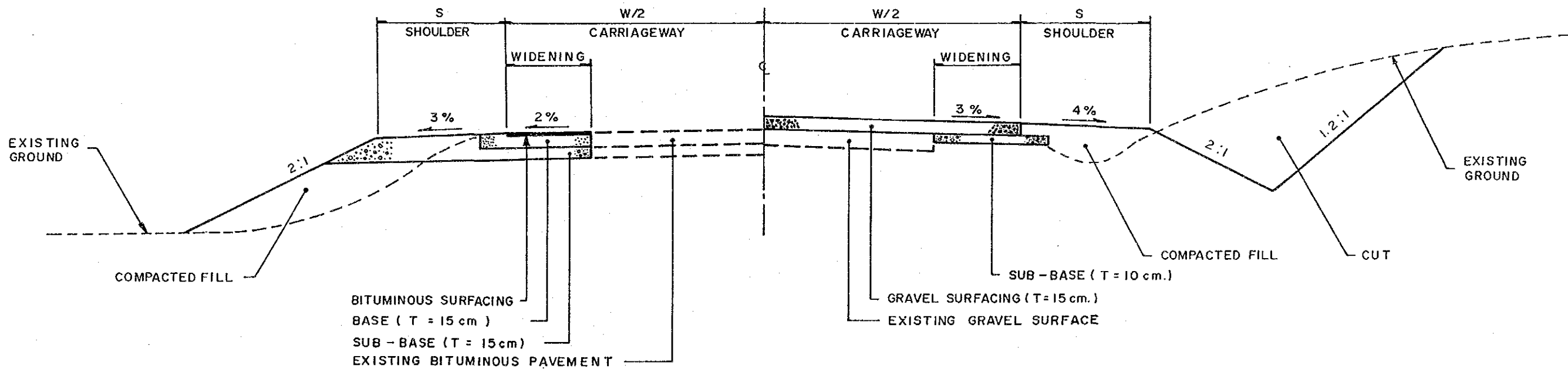
PROPOSED PAVEMENT : BITUMINOUS MACADAM/DOUBLE BITUMINOUS SURFACE TREATMENT
EXISTING PAVEMENT : GRAVEL SURFACING (Good/Fair)

IMPROVEMENT-2



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

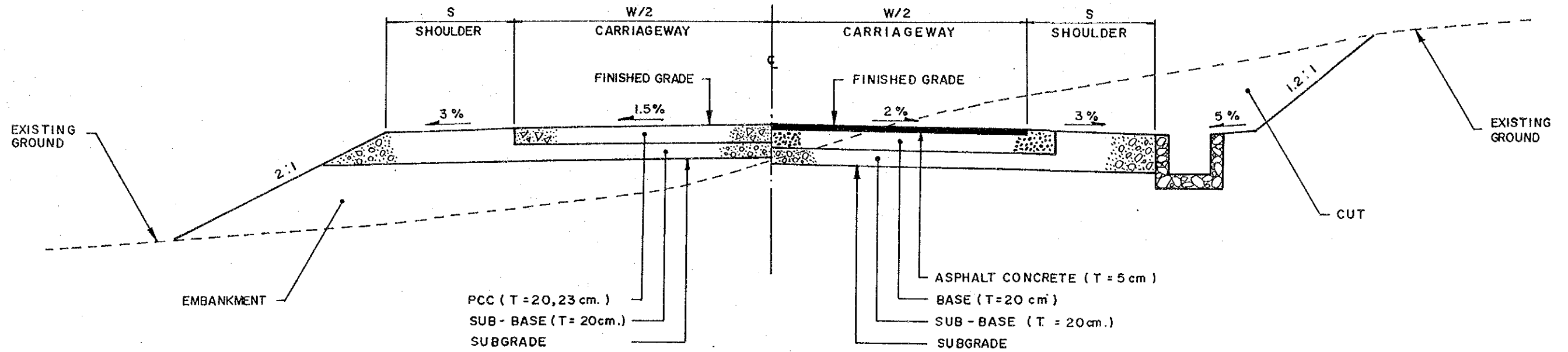
TYPE 4-2
PROPOSED PAVEMENT : ASPHALT CONCRETE
EXISTING PAVEMENT : ASPHALT CONCRETE



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

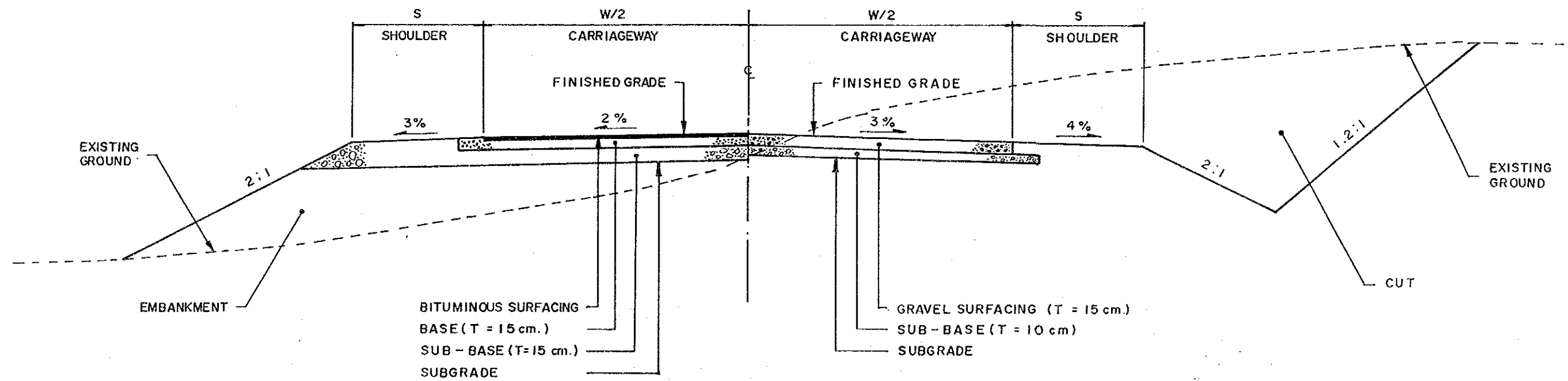
TYPE 4-4
PROPOSED PAVEMENT : GRAVEL SURFACING
EXISTING PAVEMENT : GRAVEL SURFACING

WIDENING



TYPE 5-1
PROPOSED PAVEMENT : PCC

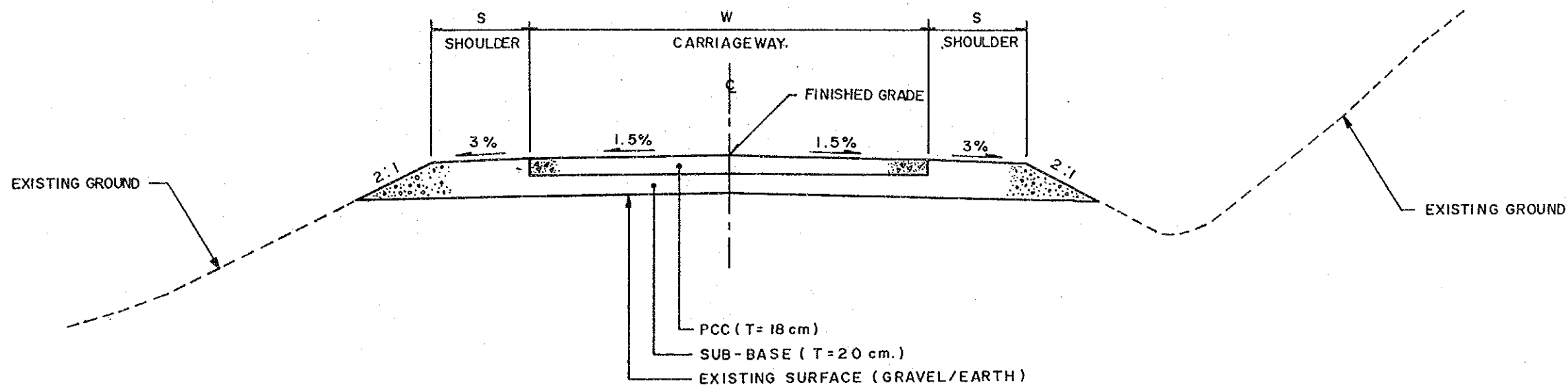
TYPE 5-2
PROPOSED PAVEMENT : ASPHALT CONCRETE



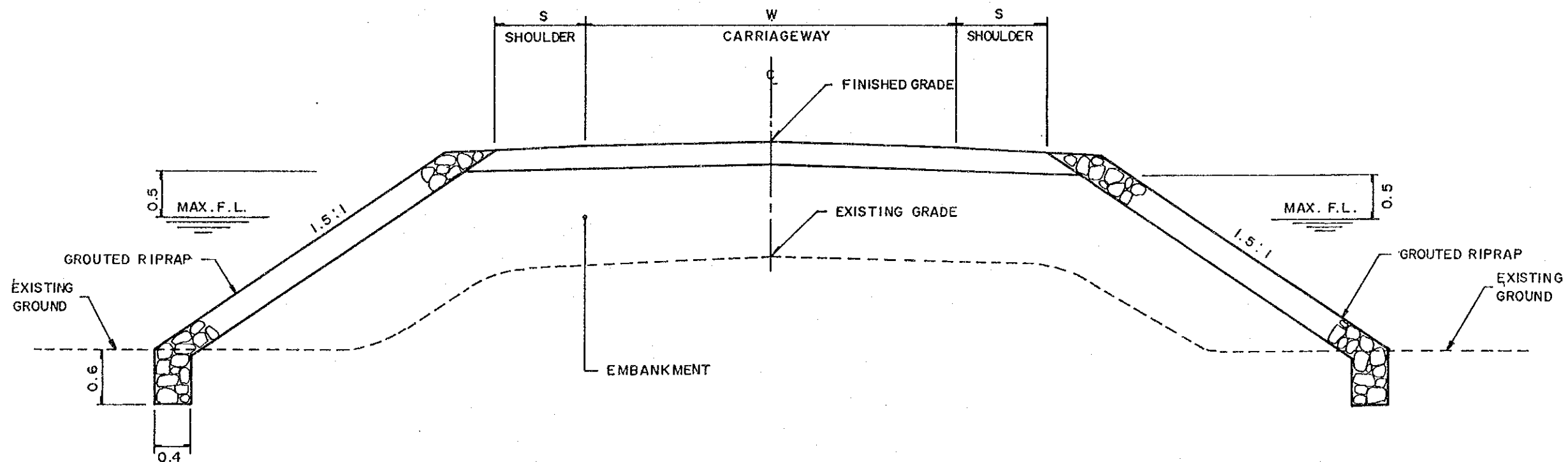
TYPE 5-3
PROPOSED PAVEMENT : BITUMINOUS MACADAM/
DOUBLE BITUMINOUS
SURFACE TREATMENT

TYPE 5-4
PROPOSED PAVEMENT : GRAVEL SURFACING

NEW CONSTRUCTION



TYPE 6
PCC PAVEMENT FOR STEEP GRADIENT SECTIONS



TYPE 7
GRADE RAISING SECTIONS IN FLOOD AREA

**THE FEASIBILITY STUDY ON THE RURAL ROAD NETWORK DEVELOPMENT PROJECT
IN THE REPUBLIC OF THE PHILIPPINES**

PRESENT CONDITION AND PROPOSED IMPROVEMENT

Scale

1:50,000

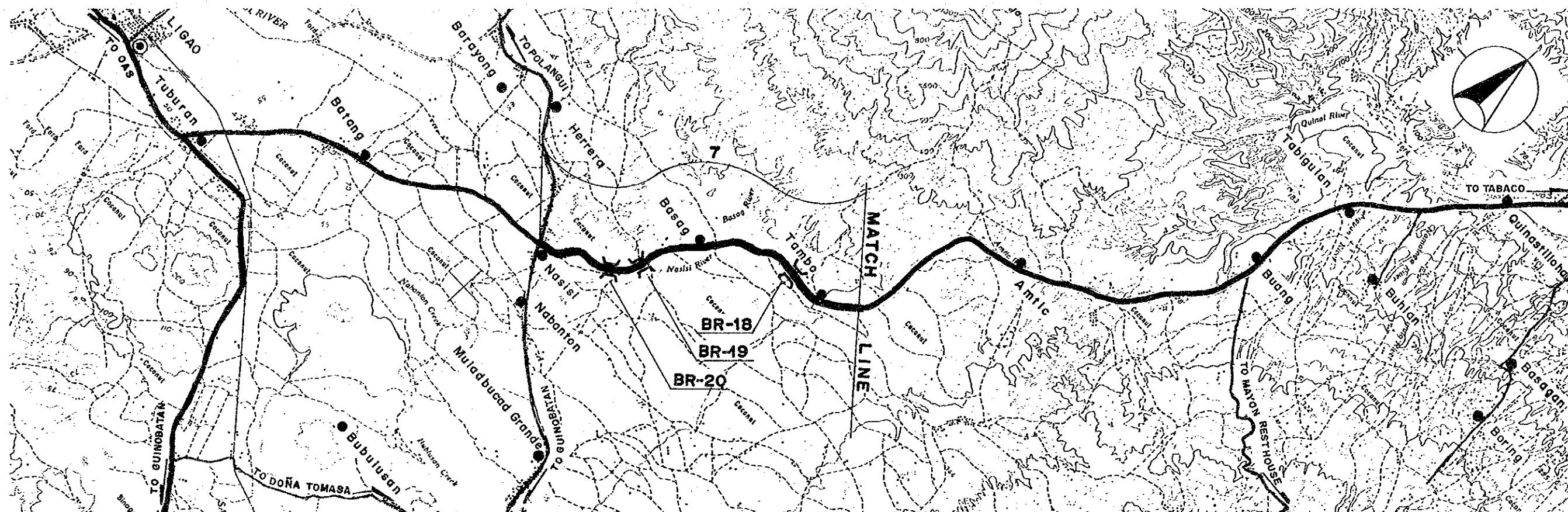
Drawing No.

11

Road No: N2-1

Road Name: TABACO-NASISI ROAD

Location : TABACO & LIGAO, ALBAY



Road Classification			
Total Length			
Sub-section No.	7		
Length (km)	5.1		
Terrain	Flat		
Existing Road Surface	6.0-GRV (Bad)		
Proposed Improvement			
Improvement Type	Impr.-1		
Surface Type	AC		
Carriageway Width(m)	6.7		
Shoulder Width (m)	2.0		
Ref. Typical Section	TYPE 2-3		
Special Treatment			
Steep Section Length	-		
Bridge No.	BR-18	BR-19	BR-20
Existing Type	Concrete	Concrete	Concrete
Length (m)	10	13	12
Proposed Type	-	-	-
Length (m)	-	-	-
No. of Spans	-	-	-

**THE FEASIBILITY STUDY ON THE RURAL ROAD NETWORK DEVELOPMENT PROJECT
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PRESENT CONDITION AND PROPOSED IMPROVEMENT

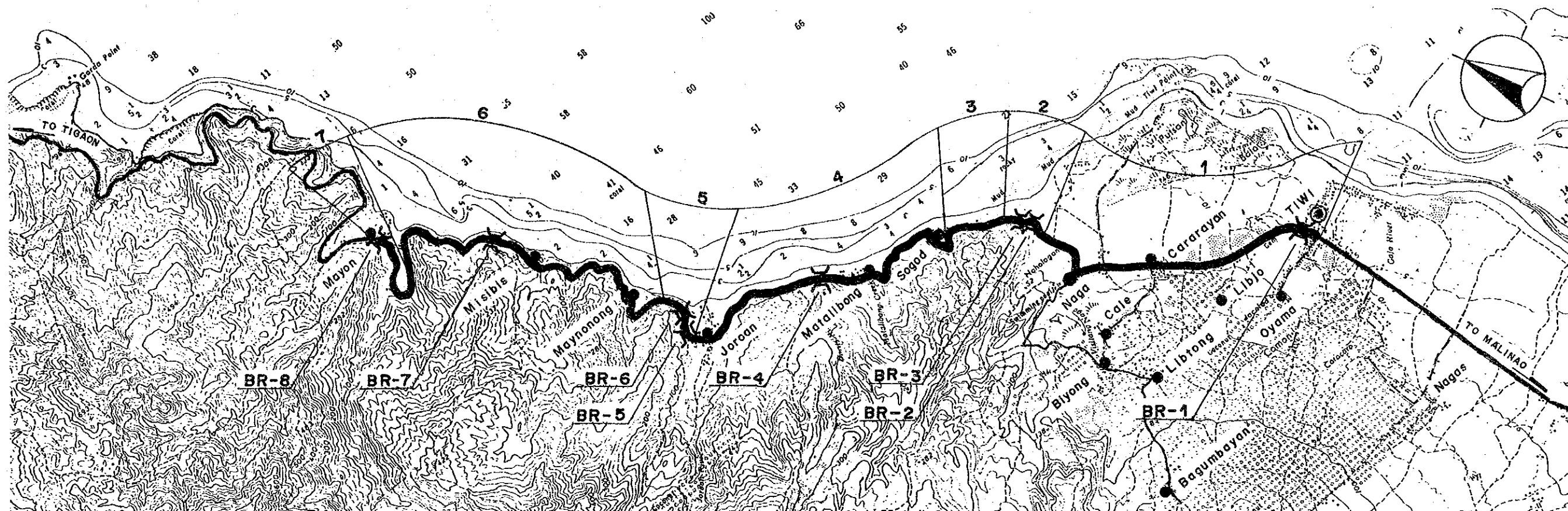
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Drawing No.

12

Road No: N4-1 Road Name: TIWI-CAM.SUR/ALBAY BDRY. RD.
Location: TIWI, ALBAY



Road Classification	Primary Major (National Road)							
Total Length	16.8 km							
Sub-section No.	1	2	3	4	5	6	7	
Length (km)	4.1	.6	.8	4.3	.7	4.8	1.5	
Terrain	Flat	Flat	Flat	Rolling	Flat	Rolling	Flat	
Existing Road Surface	6.8-PCC (Good)	6.0-GRV (Bad)	6.8-PCC (Good)	6.8-PCC (Good)	6.8-PCC (Good)	6.8-PCC (Good)	6.8-PCC (Good)	
Proposed Improvement								
Improvement Type	-	Impr.-1	-	-	-	-	-	
Surface Type	-	PCC	-	-	-	-	-	
Carriageway Width(m)	-	6.8	-	-	-	-	-	
Shoulder Width (m)	-	2.5	-	-	-	-	-	
Ref. Typical Section	-	TYPE 2-2	-	-	-	-	-	
Special Treatment								
Steep Section Length	-	-	-	300	100	200	-	
Bridge No.	BR-1	BR-2	BR-3	BR-4	BR-5	BR-6	BR-7	BR-8
Existing Type	Concrete	Timber	Timber	Concrete	Concrete	Concrete	Concrete	Concrete
Length (m)	6	7	13	30	12	31	6	27
Proposed Type	-	2cell-BC	2Lane-Br	-	-	-	-	-
Length (m)	-	7	13	-	-	-	-	-
No. of Spans	-	2	1	-	-	-	-	-

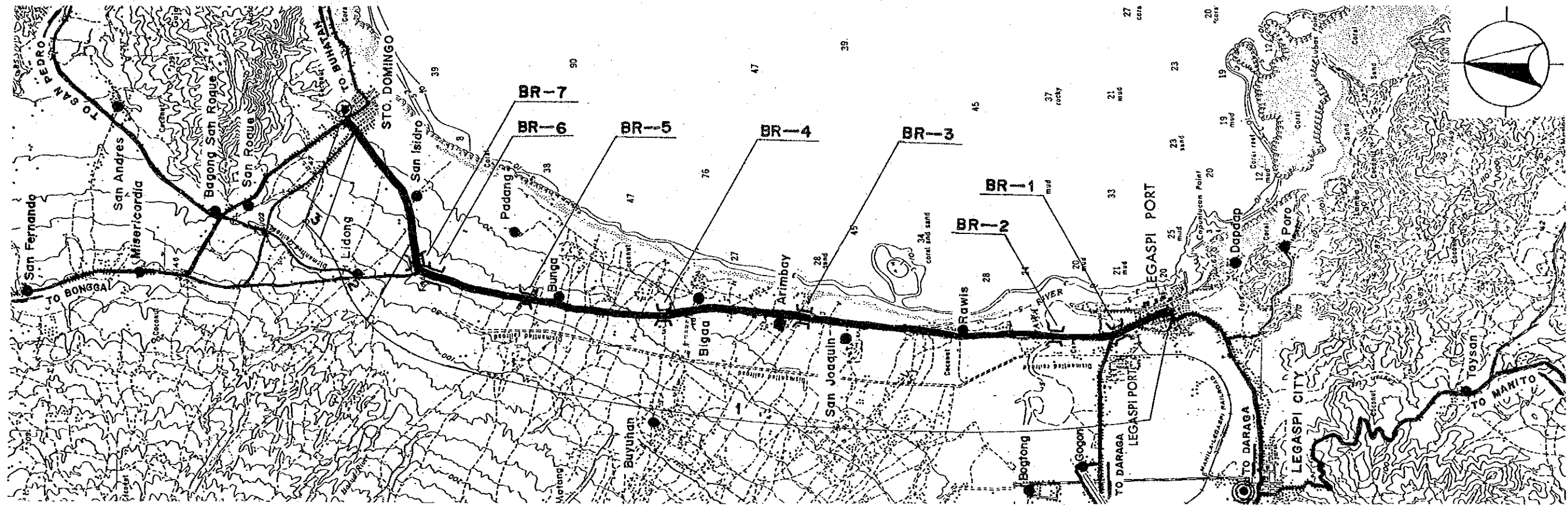
**THE FEASIBILITY STUDY ON THE RURAL ROAD NETWORK DEVELOPMENT PROJECT
IN THE REPUBLIC OF THE PHILIPPINES**

PRESENT CONDITION AND PROPOSED IMPROVEMENT

Scale
1:50,000

Drawing No.
13

Road No: N4-8 Road Name: LEGASPI CITY-STO. DOMINGO ROAD
Location: LEGASPI CITY & STO. DOMINGO, ALBAY



Road Classification	Primary Major (National Road)						
Total Length	11.5 km						
Sub-section No.	1	2	3				
Length (km)	9.5	1.5	.5				
Terrain	Flat	Flat	Flat				
Existing Road Surface	7.1-PCC (Good)	7.1-BTM (Fair)	7.1-PCC (Good)				
Proposed Improvement							
Improvement Type	-	-	-				
Surface Type	-	-	-				
Carriageway Width(m)	-	-	-				
Shoulder Width (m)	-	-	-				
Ref. Typical Section	-	-	-				
Bridge No.	BR-1	BR-2	BR-3	BR-4	BR-5	BR-6	BR-7
Existing Type	Concrete	Concrete	Spillway	Spillway	RCBC	Spillway	Ford-Cr.
Length (m)	11	132	40	48	11	175	-
Proposed Type	-	-	2Lane-Br	2Lane-Br	-	2Lane-Br	2Lane-Br
Length (m)	-	-	42	48	-	180	25
No. of Spans	-	-	2	2	-	8	1

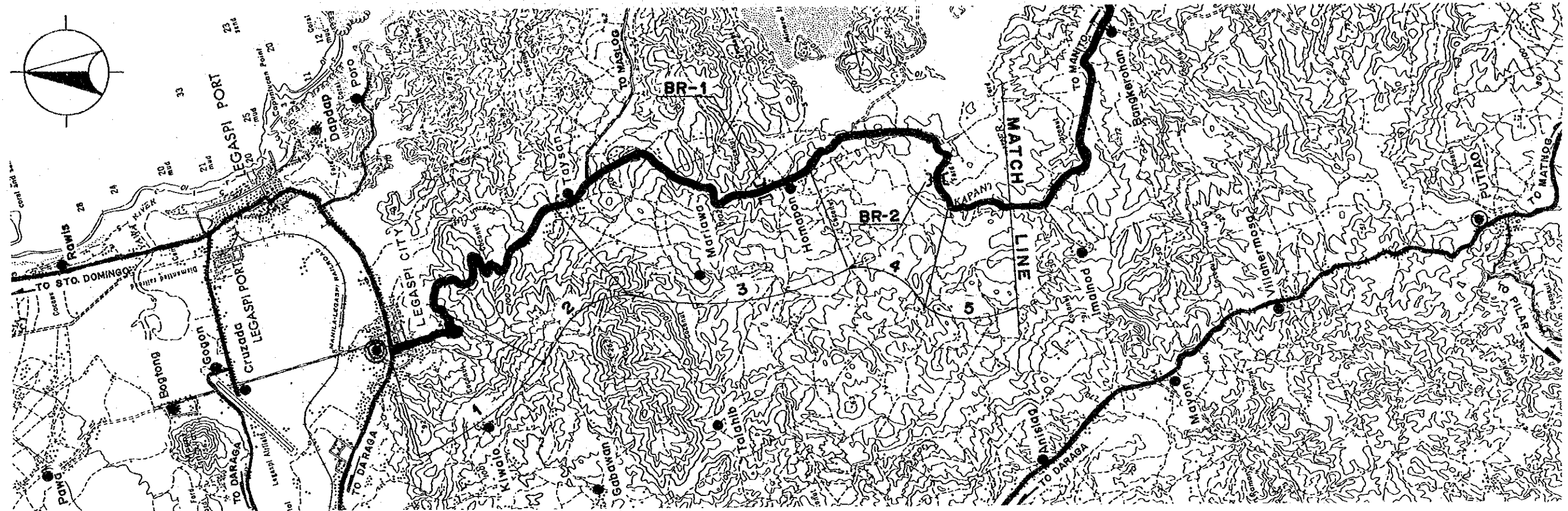
**THE FEASIBILITY STUDY ON THE RURAL ROAD NETWORK DEVELOPMENT PROJECT
IN THE REPUBLIC OF THE PHILIPPINES**

PRESENT CONDITION AND PROPOSED IMPROVEMENT

Scale
1:50,000

Drawing No.
14

Road No: N5-1 Road Name: LEGASPI CITY-MANITO ROAD
Location : LEGASPI CITY & MANITO, ALBAY



Road Classification	Secondary Major (National Road)				
Total Length	40.0 km				
Sub-section No.	1	2	3	4	5
Length (km)	1.0	2.9	3.7	2.6	2.8
Terrain	Flat	Rolling	Rolling	Rolling	Rolling
Existing Road Surface	6.1-PCC (Good)	6.1-PCC (Good)	6.1-PCC (Good)	6.1-PCC (Good)	6.1-PCC (Good)
Proposed Improvement					
Improvement Type	-	-	-	-	-
Surface Type	-	-	-	-	-
Carriageway Width(m)	-	-	-	-	-
Shoulder Width (m)	-	-	-	-	-
Ref. Typical Section	-	-	-	-	-
Special Treatment					
Steep Section Length	100	500	500	-	-
Slope Protection (Cut Slope)	-	-	-	-	-
(Embank't Slop)	-	-	-	-	50
Bridge No.	BR-1	BR-2			
Existing Type	RCBC	Concrete			
Length (m)	5	25			
Proposed Type	-	-			
Length (m)	-	-			
No. of Spans	-	-			

**THE FEASIBILITY STUDY ON THE RURAL ROAD NETWORK DEVELOPMENT PROJECT
IN THE REPUBLIC OF THE PHILIPPINES**

PRESENT CONDITION AND PROPOSED IMPROVEMENT

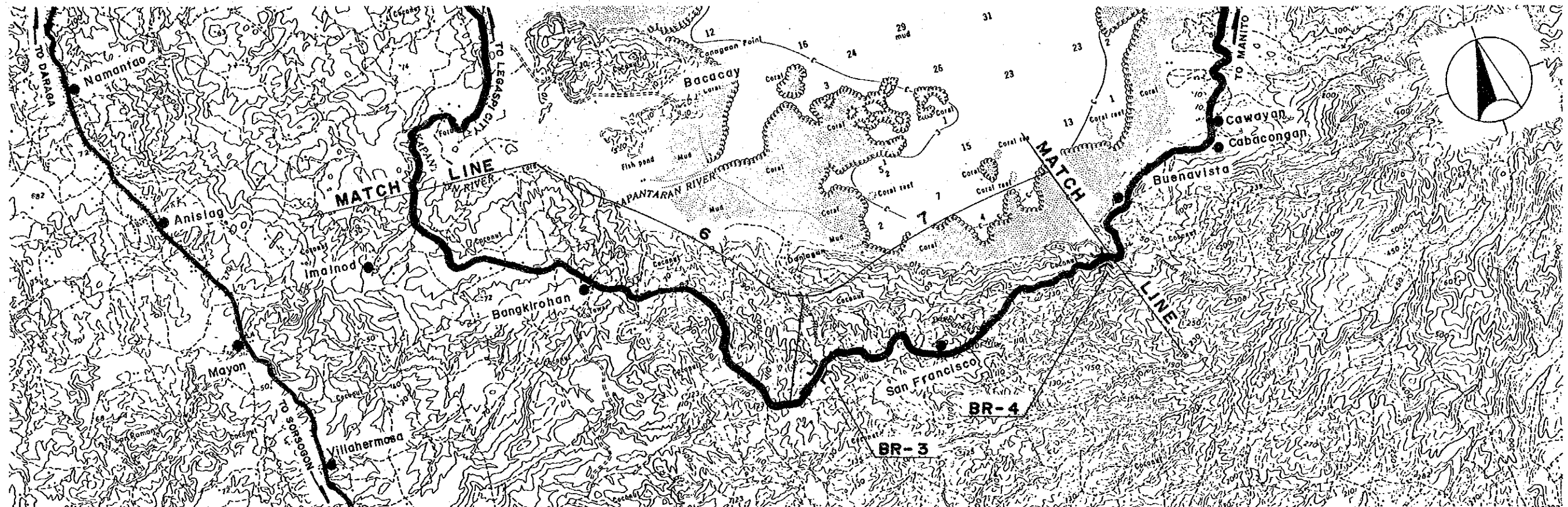
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Drawing No.

15

Road No: N5-1 Road Name: LEGASPI CITY-MANITO ROAD
Location : LEGASPI CITY & MANITO, ALBAY



Road Classification		
Total Length		
Sub-section No.	6	7
Length (km)	4.6	5.2
Terrain	Rolling	Rolling
Existing Road Surface	6.1-PCC (Good)	6.1-PCC (Good)
Proposed Improvement		
Improvement Type	-	-
Surface Type	-	-
Carriageway Width(m)	-	-
Shoulder Width (m)	-	-
Ref. Typical Section	-	-
Special Treatment		
Steep Section Length	-	-
Slope Protection (Cut Slope)	-	50
(Embank't Slop)	-	-
Bridge No.	BR-3	BR-4
Existing Type	Concrete	Concrete
Length (m)	22	22
Proposed Type	-	2Lane-Br
Length (m)	-	22
No. of Spans	-	1

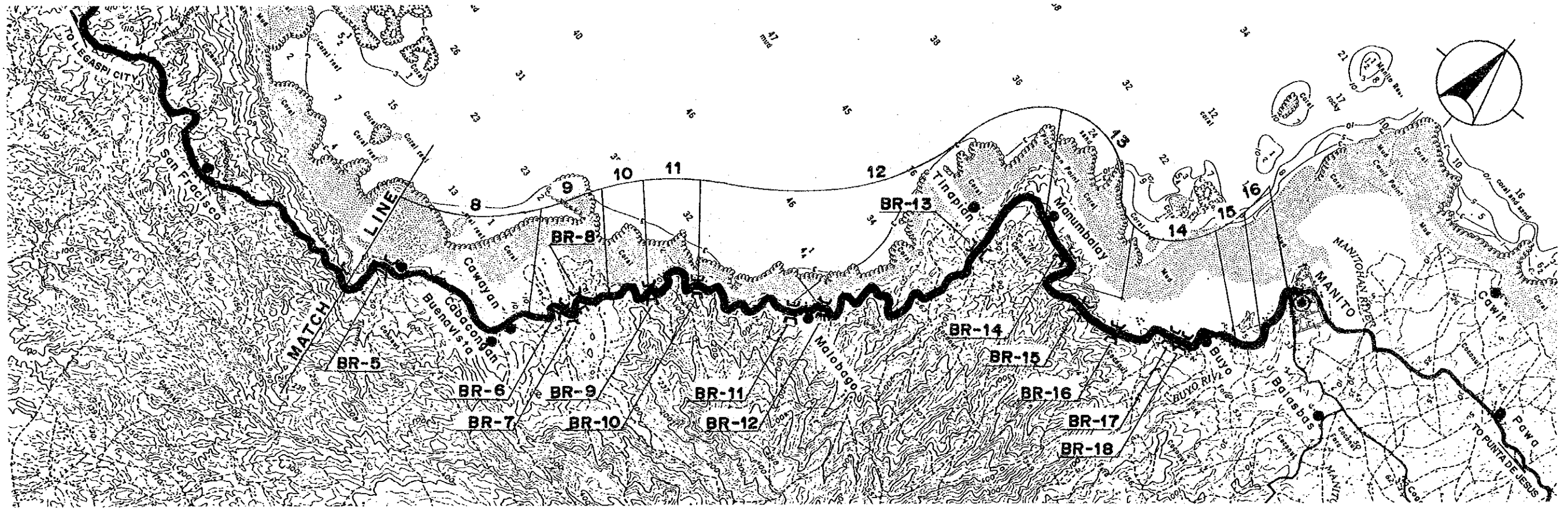
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IN THE REPUBLIC OF THE PHILIPPINES**

PRESENT CONDITION AND PROPOSED IMPROVEMENT

Scale
1:50,000

Drawing No.
16

Road No: N5-1 Road Name: LEGASPI CITY-MANITO ROAD
Location: LEGASPI CITY & MANITO, ALBAY



Road Classification																			
Total Length																			
Sub-section No.		8	9	10	11	12	13	14	15	16									
Length (km)		2.8	1.4	.7	1.0	6.3	1.0	3.1	.4	.5									
Terrain		Rolling	Rolling	Rolling	Rolling	Rolling	Rolling	Rolling	Rolling	Flat									
Existing Road Surface		6.1-PCC (Good)	4.0-BTM (Bad)	4.0-BTM (Fair)	4.0-BTM (Bad)	4.0-BTM (V.Bad)	4.0-BTM (V.Bad)	4.5-GRV (Bad)	4.0-BTM (Fair)	5.0-PCC (Fair)									
Proposed Improvement																			
Improvement Type		-	Rehabil.	Rehabil.	Rehabil.	Rehabil.	Rehabil.	Impr.-1	Rehabil.	Widening									
Surface Type		-	AC	AC	AC	AC	AC	AC	AC	PCC									
Carriageway Width(m)		-	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	2.5									
Ref. Typical Section		-	TYPE 1-3	TYPE 1-3	TYPE 1-3	TYPE 1-3	TYPE 1-3	TYPE 2-3	TYPE 1-3	TYPE 4-1									
Special Treatment																			
Steep Section Length		-	-	-	-	200	100	-	-	-									
Slope Protection (Cut Slope)		200	-	50	-	-	-	-	-	-									
(Embank't Slop)		-	-	50	-	20	-	-	-	-									
Bridge No.		BR-5	BR-6	BR-7	BR-8	BR-9	BR-10	BR-11	BR-12	BR-13	BR-14	BR-15	BR-16	BR-17	BR-18				
Existing Type		RCBC	Bailey	Bailey	Spillway	Spillway	Ford-Cr.	Ford-Cr.	Spillway	RCBC	Bailey	Spillway	Spillway	Steel	Steel				
Length (m)		6	16	12	12	10	-	-	12	11	13	8	13	16	22				
Proposed Type		-	2Lane-Br	2Lane-Br	2Lane-Br	2Lane-Br	2cell-BC	2Lane-Br	2Lane-Br	-	2Lane-Br	2Lane-Br	2Lane-Br	-	-				
Length (m)		-	16	13	12	10	7	13	13	-	13	9	13	-	-				
No. of Spans		-	1	1	1	1	2	1	1	-	1	1	1	-	-				

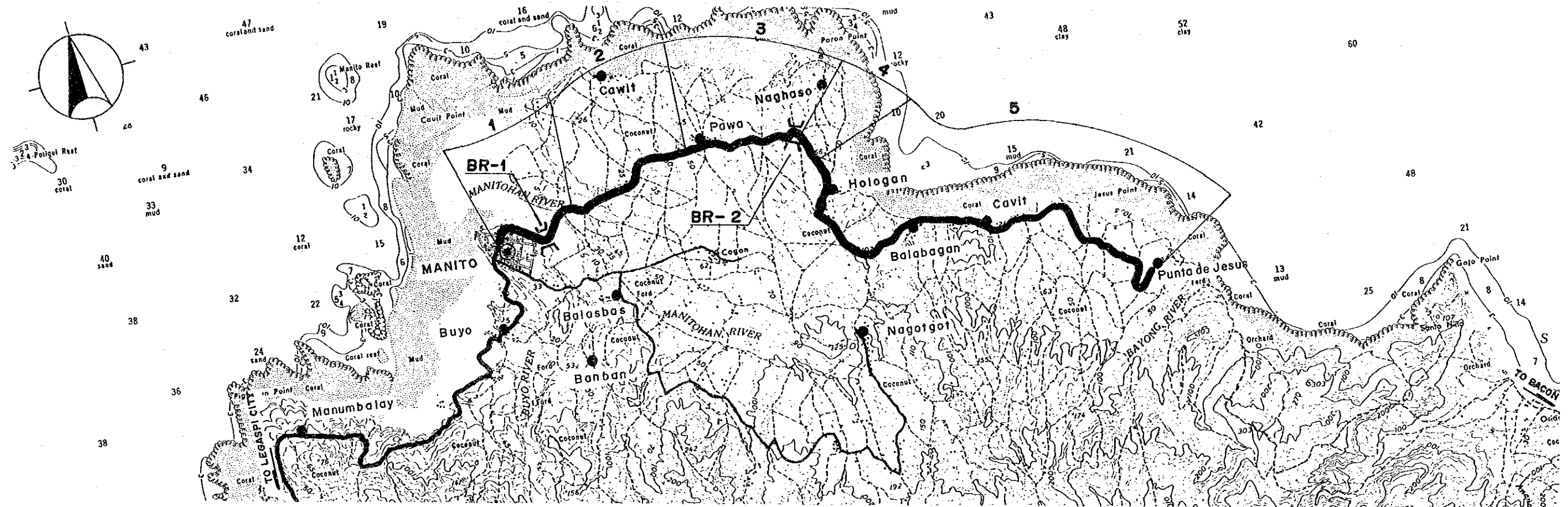
**THE FEASIBILITY STUDY ON THE RURAL ROAD NETWORK DEVELOPMENT PROJECT
IN THE REPUBLIC OF THE PHILIPPINES**

PRESENT CONDITION AND PROPOSED IMPROVEMENT

Scale
1: 50,000

Drawing No.
17

Road No: N5-2 Road Name: MANITO-PUNTA DE JESUS ROAD
Location : MANITO, ALBAY



Road Classification	Secondary Major (National Road)				
Total Length	8.5 km				
Sub-section No.	1	2	3	4	5
Length (km)	1.5	1.7	1.6	.4	3.3
Terrain	Rolling	Rolling	Rolling	Mt'nous	Rolling
Existing Road Surface:	4.5-GRV (V.Bad)	4.5-GRV (Bad)	4.5-GRV (V.Bad)	4.5-GRV (V.Bad)	4.5-GRV (V.Bad)
Proposed Improvement	Impr.-1	Impr.-1	Impr.-1	Impr.-1	Impr.-1
Improvement Type	Impr.-1	Impr.-1	Impr.-1	Impr.-1	Impr.-1
Surface Type	AC	AC	AC	AC	AC
Carriageway Width(m)	6.0	6.0	6.0	6.0	6.0
Shoulder Width (m)	1.5	1.5	1.5	1.0	1.5
Ref. Typical Section	TYPE 2-3	TYPE 2-3	TYPE 2-3	TYPE 2-3	TYPE 2-3
Special Treatment					
Steep Section Length	200	-	100	-	100
Bridge No.	BR-1	BR-2			
Existing Type	Concrete	Bailey			
Length (m)	75	21			
Proposed Type	-	2Lane-Br			
Length (m)	-	22			
No. of Spans	-	1			

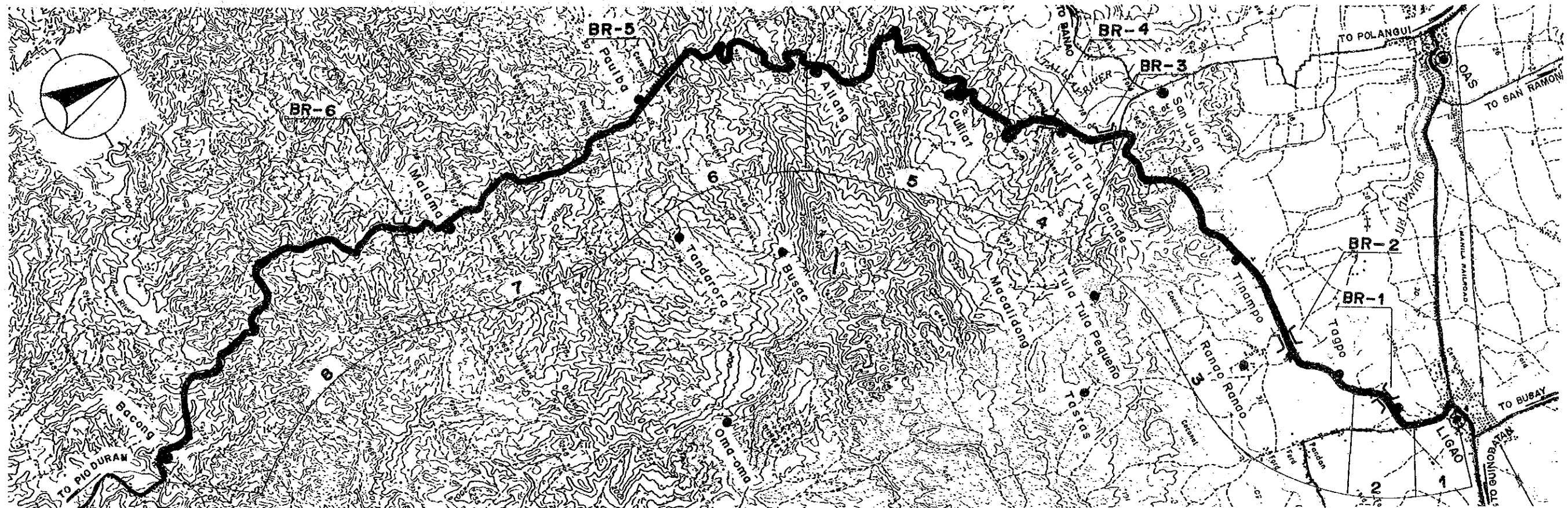
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PRESENT CONDITION AND PROPOSED IMPROVEMENT

Scale
1:50,000

Drawing No.
18

Road No: N7-1 Road Name: LIGAO-PALAPAS ROAD
Location : LIGAO, ALBAY



Road Classification	Secondary Major (National Road)							
Total Length	25.5 km							
Sub-section No.	1	2	3	4	5	6	7	8
Length (km)	.6	1.0	4.8	1.0	4.8	3.9	3.3	6.1
Terrain	Flat	Rolling	Rolling	Rolling	Rolling	Rolling	Rolling	Rolling
Existing Road Surface	6.0-PCC (Good)	6.0-BTM (Fair)	4.5-GRV (Bad)	6.0-BTM (Good)	6.0-PCC (Good)	6.0-PCC (Good)	6.0-PCC (Good)	6.0-GRV (Bad)
Proposed Improvement	-	-	Impr.-1	-	-	-	-	Impr.-1
Improvement Type	-	-	* BMP	-	-	-	-	* BMP
Surface Type	-	-	6.0	-	-	-	-	6.0
Carriageway Width(m)	-	-	1.0	-	-	-	-	1.0
Shoulder Width (m)	-	-	TYPE 2-4	-	-	-	-	TYPE 2-4
Ref. Typical Section	-	-	-	-	-	-	-	-
Special Treatment	-	-	1200	-	-	-	-	-
Flood Section Length	-	-	3.0	-	-	-	-	-
Height	-	100	100	100	100	300	300	300
Steep Section Length	-	-	-	-	-	-	-	-
Bridge No.	BR-1	BR-2	BR-3	BR-4	BR-5	BR-6		
Existing Type	Concrete	Timber	Concrete	Concrete	Concrete	Concrete		
Length (m)	32	51	6	20	46	16		
Proposed Type	-	2Lane-Br	-	-	-	-		
Length (m)	-	51	-	-	-	-		
No. of Spans	-	3	-	-	-	-		

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

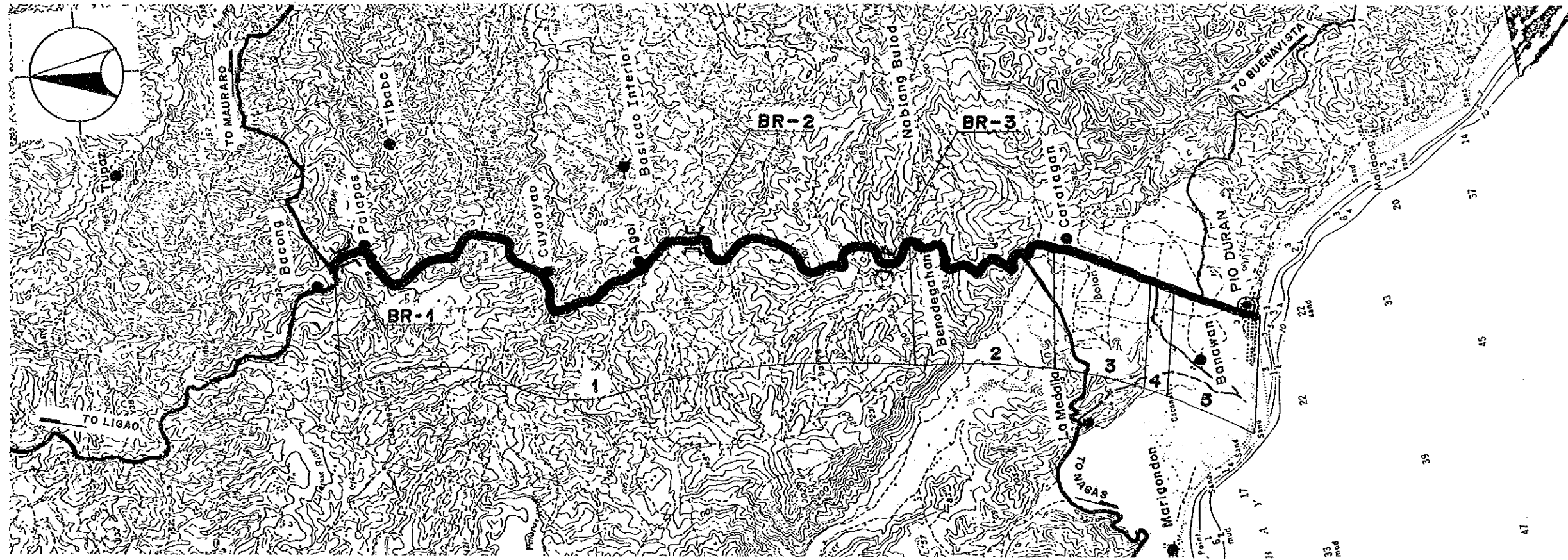
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PRESENT CONDITION AND PROPOSED IMPROVEMENT

Scale
1:50,000

Drawing No.
19

Road No: N7-2 Road Name: PALAPAS-PIO DURAN ROAD
Location : LIGAO & PIO DURAN, ALBAY



Road Classification	Secondary Major (National Road)				
Total Length	14.3 km				
Sub-section No.	1	2	3	4	5
Length (km)	8.3	2.3	1.1	.4	2.2
Terrain	Rolling	Flat	Rolling	Flat	Flat
Existing Road Surface	6.0-GRV (Bad)	7.0-GRV (Bad)	6.0-GRV (Bad)	6.0-PCC (Good)	7.0-BTM (Bad)
Proposed Improvement	Impr.-1	Impr.-1	Impr.-1	-	Rehabil.
Improvement Type					
Surface Type	* BMP	* BMP	* BMP	-	Overlay
Carriageway Width(m)	6.0	6.0	6.0	-	6.0
Shoulder Width (m)	1.0	1.5	1.0	-	2.0
Ref. Typical Section	TYPE 2-4	TYPE 2-4	TYPE 2-4	-	TYPE 1-4
Special Treatment					
Steep Section Length	500	-	300	-	-
Bridge No.	BR-1	BR-2	BR-3		
Existing Type	Spillway	Bailey	Bailey		
Length (m)	34	18	18		
Proposed Type	2Lane-Br	2Lane-Br	2Lane-Br		
Length (m)	34	18	18		
No. of Spans	2	1	1		

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

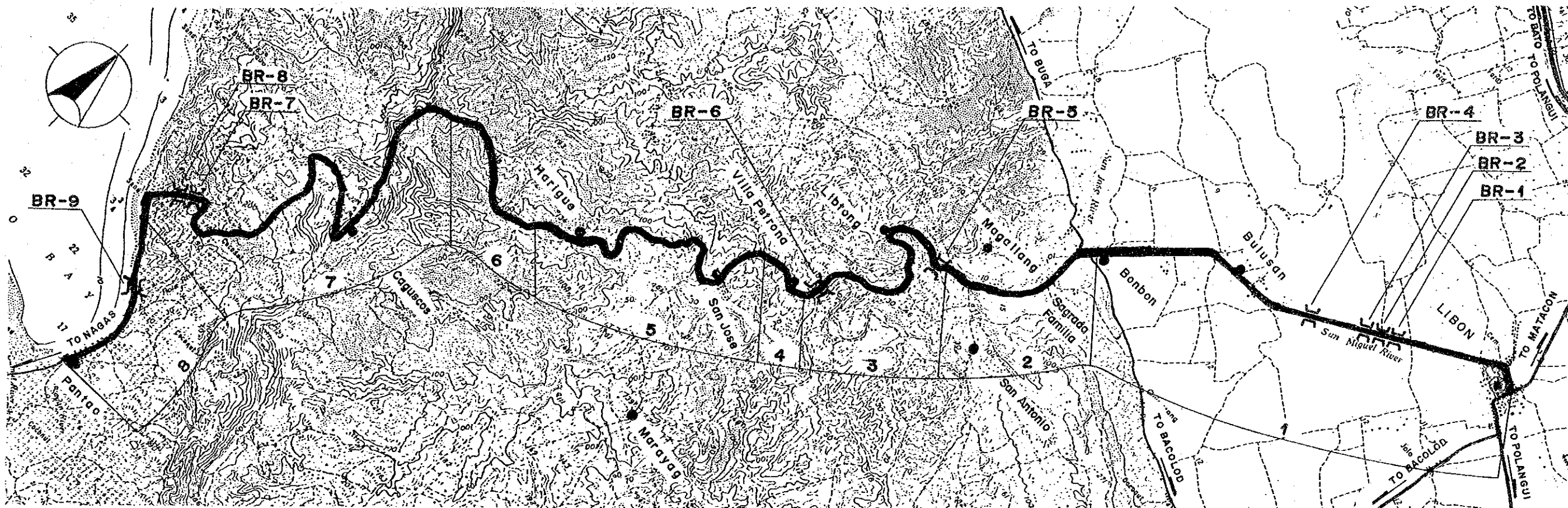
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PRESENT CONDITION AND PROPOSED IMPROVEMENT

Scale
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Drawing No.
20

Road No: N9 Road Name: LIBON-PANTAO ROAD
Location: LIBON, ALBAY



Road Classification	Secondary Major (National Road)								
Total Length	25.5 km								
Sub-section No.	1	2	3	4	5	6	7	8	
Length (km)	5.5	2.1	2.8	.5	3.6	2.0	6.8	2.2	
Terrain	Flat	Rolling	Rolling	Flat	Rolling	Mt'nous	Rolling	Rolling	
Existing Road Surface	6.7-PCC (Good)	5.0-GRV (V.Bad)	6.0-GRV (Bad)	6.1-PCC (Good)	5.5-GRV (Fair)	5.0-GRV (Fair)	5.0-GRV (Bad)	5.0-GRV (Fair)	
Proposed Improvement		Rehabil.	Rehabil.		Widening	Widening	Rehabil.	Widening	
Improvement Type		Gravel	Gravel		Gravel	Gravel	Gravel	Gravel	
Surface Type		6.0	6.0		6.0	6.0	6.0	6.0	
Carriageway Width(m)		.5	.5		.5	.5	.5	.5	
Shoulder Width (m)		TYPE 1-6	TYPE 1-6		TYPE 4-4	TYPE 4-4	TYPE 1-6	TYPE 4-4	
Ref. Typical Section						600	2040	660	
Special Treatment									
Steep Section Length									
Bridge No.	BR-1	BR-2	BR-3	BR-4	BR-5	BR-6	BR-7	BR-8	BR-9
Existing Type	Concrete	Concrete	Concrete	Concrete	Concrete	Bailey	Bailey	Bailey	Timber
Length (m)	29	30	29	25	47	6	15	15	12
Proposed Type	-	-	-	-	-	2cell-BC	2Lane-Br	2Lane-Br	2Lane-Br
Length (m)	-	-	-	-	-	7	16	16	13
No. of Spans	-	-	-	-	-	2	1	1	1

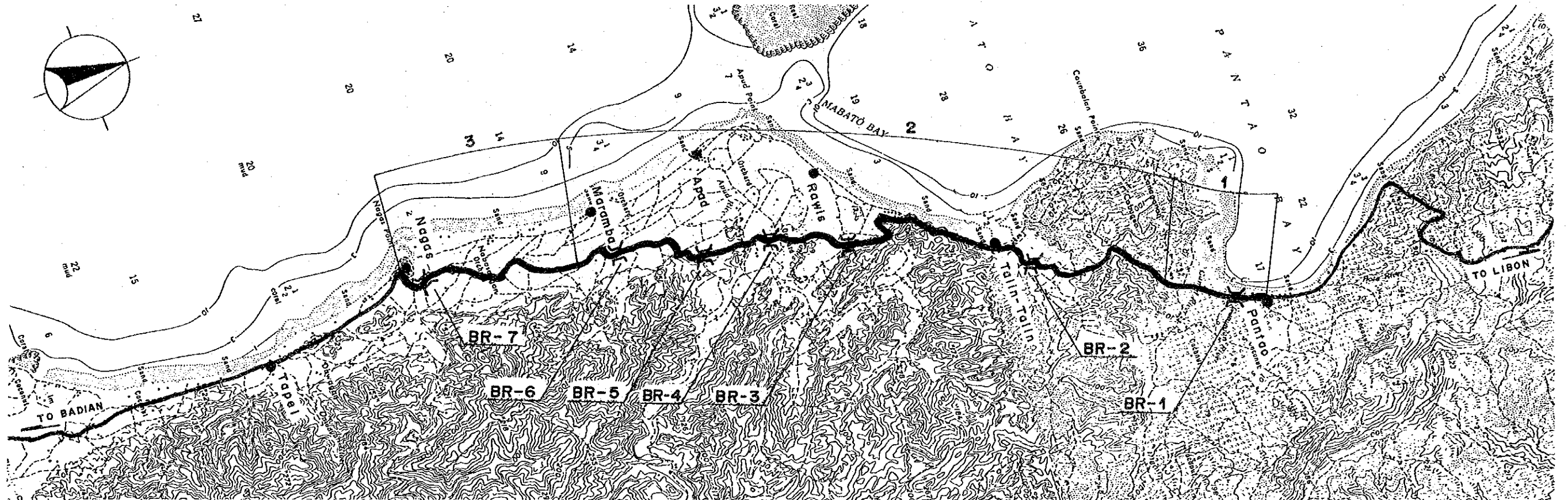
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PRESENT CONDITION AND PROPOSED IMPROVEMENT

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Drawing No.
21

Road No: N1Q-1 Road Name: PANTAO POB.-NAGAS ROAD
Location: LIBON & OAS, ALBAY



Road Classification	Secondary Major (National Road)						
Total Length	12.1 km						
Sub-section No.	1	2	3				
Length (km)	1.0	8.8	2.3				
Terrain	Flat	Rolling	Flat				
Existing Road Surface	4.5-GRV (Fair)	4.0-GRV (Fair)	4.0-GRV (Fair)				
Proposed Improvement	Widening	Widening	Widening				
Improvement Type	Widening	Widening	Widening				
Surface Type	Gravel	Gravel	Gravel				
Carriageway Width(m)	6.0	6.0	6.0				
Shoulder Width (m)	1.0	.5	1.0				
Ref. Typical Section	TYPE 4-4	TYPE 4-4	TYPE 4-4				
Special Treatment							
Flood Section Length	-	-	100				
Height	-	-	2.0				
Steep Section Length	200	1000	-				
Bridge No.	BR-1	BR-2	BR-3	BR-4	BR-5	BR-6	BR-7
Existing Type	Timber	Timber	Timber	Timber	Timber	Timber	Ford-Cr.
Length (m)	8	7	25	7	19	8	-
Proposed Type	2Lane-Br	2cell-BC	2Lane-Br	1cell-BC	2Lane-Br	2Lane-Br	2Lane-Br
Length (m)	9	8	25	4	19	9	70
No. of Spans	1	2	1	1	1	1	3

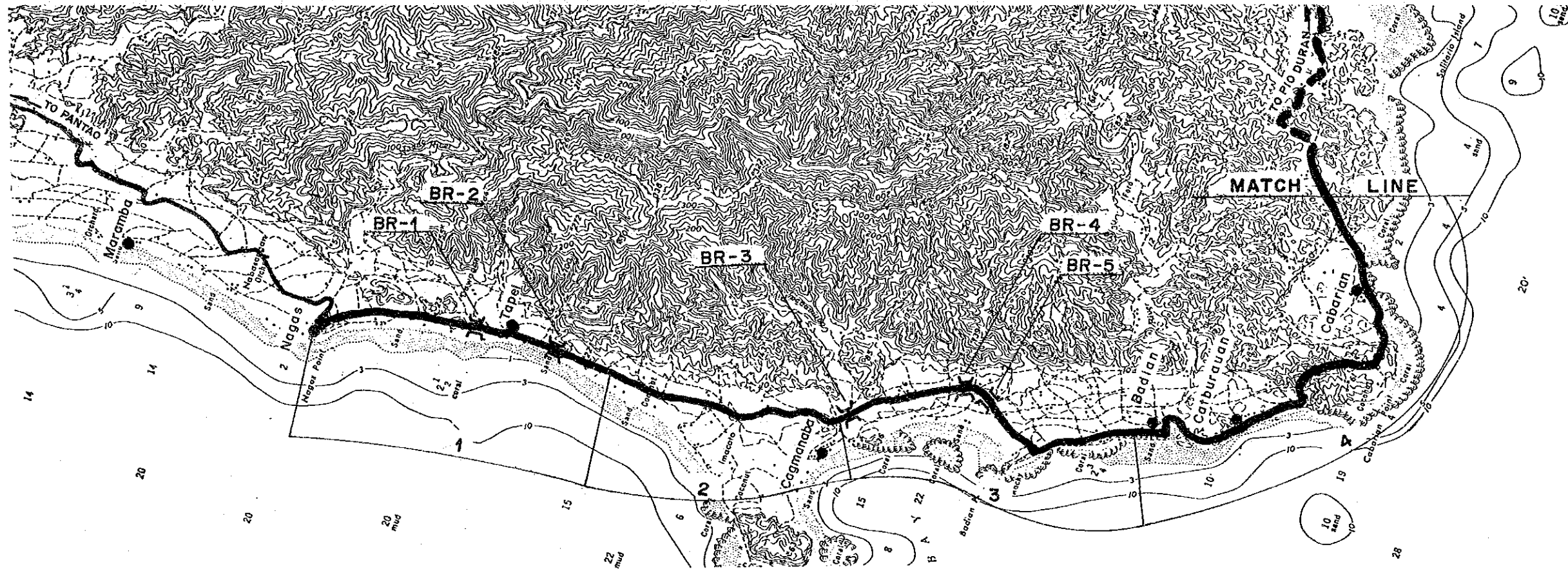
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Drawing No.
22

Road No: N10-2 Road Name: NAGAS-PIO DURAN ROAD
Location : OAS, LIGAO & PIO DURAN, ALBAY



Road Classification	Secondary Major (National Road)				
Total Length	32.0 km				
Sub-section No.	1	2	3	4	
Length (km)	3.0	2.7	3.7	8.0	
Terrain	Flat	Flat	Rolling	Rolling	
Existing Road Surface	4.0-GRV (Fair)	3.6-GRV (Bad)	3.2-EAR (V.Bad)	3.2-GRV (Impass)	
Proposed Improvement	Widening Rehabil. Impr.-1 Rehabil.				
Improvement Type	Gravel Gravel Gravel Gravel				
Surface Type	Gravel Gravel Gravel Gravel				
Carriageway Width(m)	6.0	6.0	6.0	6.0	
Shoulder Width (m)	1.0	1.0	.5	.5	
Ref. Typical Section	TYPE 4-4	TYPE 1-6	TYPE 2-8	TYPE 1-6	
Special Treatment					
Flood Section Length	1500	-	1000	-	
Height	2.0	-	.5	-	
Steep Section Length	-	-	-	-	
Bridge No.	BR-1	BR-2	BR-3	BR-4	BR-5
Existing Type	Timber	Timber	Timber	RCBC	Ford-Cr.
Length (m)	16	7	19	2	-
Proposed Type	2Lane-Br	2cell-BC	2Lane-Br	1cell-BC	2cell-BC
Length (m)	17	8	19	3	8
No. of Spans	1	2	1	1	2

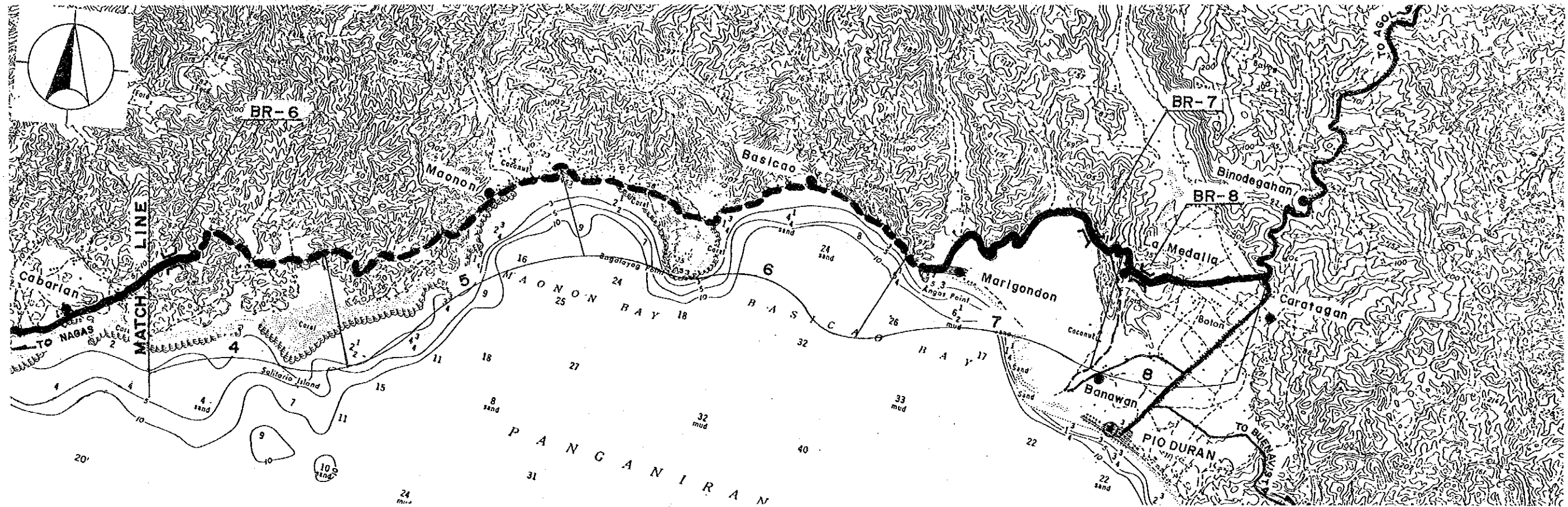
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PRESENT CONDITION AND PROPOSED IMPROVEMENT

Scale
1:50,000

Drawing No.
23

Road No: N10-2 Road Name: NAGAS-PIO DURAN ROAD
Location : OAS, LIGAO & PIO DURAN, ALBAY



Road Classification					
Total Length					
Sub-section No.	4	5	6	7	8
Length (km)	8.0	3.6	5.0	4.0	2.0
Terrain	Rolling	Rolling	Rolling	Rolling	Flat
Existing Road Surface	3.2-GRV (Impass)	3.2-GRV (Impass)	1.6-GRV (Impass)	4.0-GRV (Bad)	5.5-GRV (Bad)
Proposed Improvement	Rehabil.	Rehabil.	Rehabil.	Rehabil.	Rehabil.
Improvement Type	Gravel	Gravel	Gravel	Gravel	Gravel
Surface Type	6.0	6.0	6.0	6.0	6.0
Carriageway Width(m)	.5	.5	.5	.5	1.0
Shoulder Width (m)	TYPE 1-6 TYPE 1-6 TYPE 1-6 TYPE 1-6 TYPE 1-6				
Ref. Typical Section	Special Treatment				
Flood Section Length	-	-	-	-	-
Height	-	-	-	-	-
Steep Section Length	-	-	-	-	500
Bridge No.	BR-6	BR-7	BR-8		
Existing Type	Timber	Timber	Concrete		
Length (m)	6	4	42		
Proposed Type	2cell-BC	2cell-BC	-		
Length (m)	8	5	-		
No. of Spans	2	2	-		

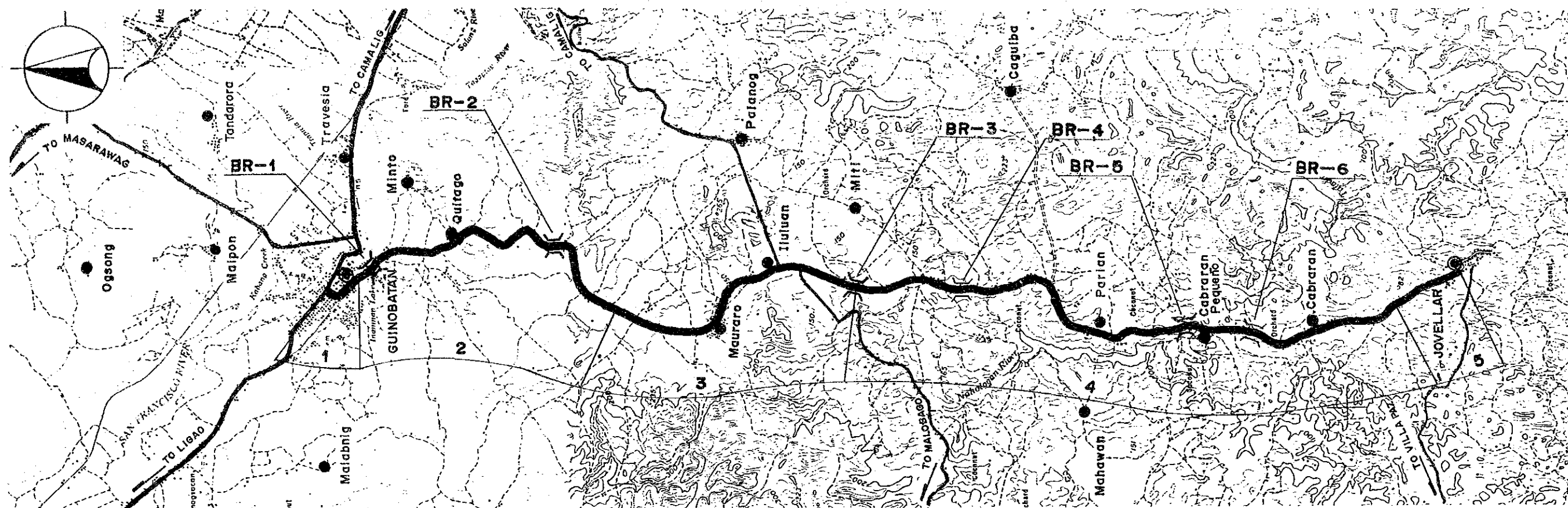
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PRESENT CONDITION AND PROPOSED IMPROVEMENT

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Drawing No.
24

Road No: P23 Road Name: GUINOBATAN POB.-JOVELLAR ROAD
Location: GUINOBATAN, CAMALIG & JOVELLAR, ALBAY



Road Classification	Secondary Major (Provincial Road)					
Total Length	16.3 km					
Sub-section No.	1	2	3	4	5	
Length (km)	.5	4.2	3.3	7.4	.9	
Terrain	Flat	Flat	Flat	Rolling	Mt'nous	
Existing Road Surface	4.5-BTM (Bad)	4.5-BTM (Fair)	4.6-BTM (V.Bad)	4.5-BTM (V.Bad)	5.0-PCC (Good)	
Proposed Improvement	Rehabil.	Widening	Rehabil.	Rehabil.	Rehabil.	
Improvement Type	* BMP	* BMP	* BMP	* BMP	PCC	
Surface Type	6.0	6.0	6.0	6.0	6.0	
Carriageway Width(m)	1.5	1.5	1.5	1.0	1.0	
Shoulder Width (m)	TYPE 1-5	TYPE 4-3	TYPE 1-5	TYPE 1-5	TYPE 1-1	
Ref. Typical Section						
Bridge No.	BR-1	BR-2	BR-3	BR-4	BR-5	BR-6
Existing Type	Concrete	Concrete	Concrete	Concrete	Concrete	Steel
Length (m)	8	6	7	8	12	37
Proposed Type	-	-	-	-	-	2Lane-Br
Length (m)	-	-	-	-	-	38
No. of Spans	-	-	-	-	-	2

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

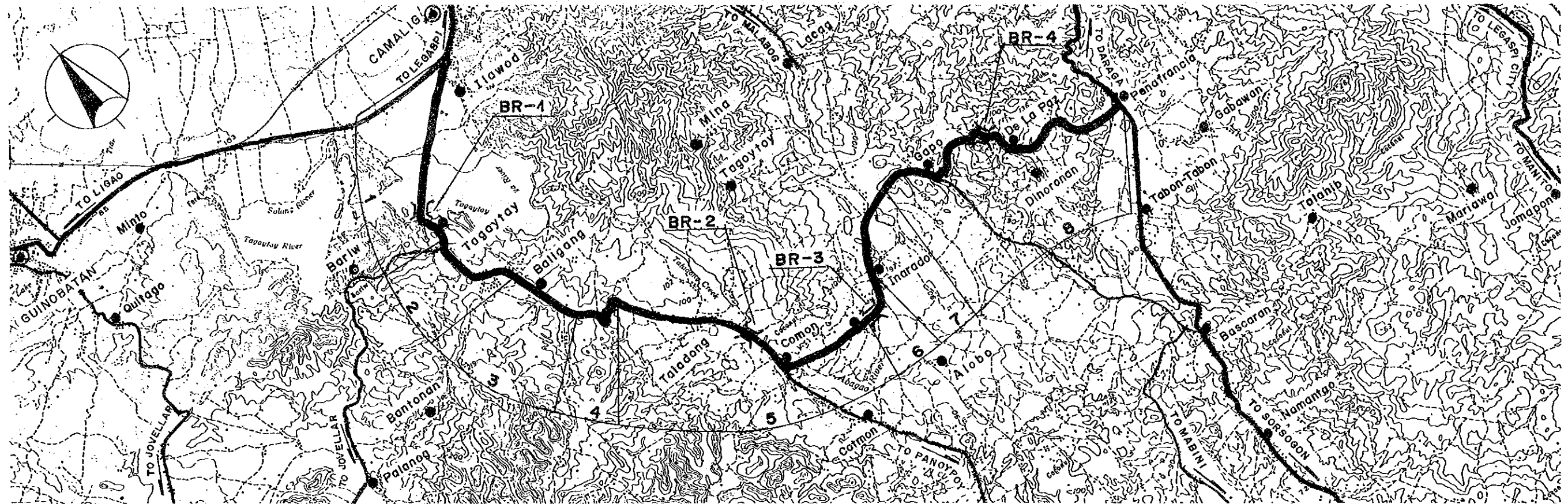
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Drawing No.
25

Road No: N6 Road Name: CAMALIG JCT.-PENAFRANCIA JCT. RD.
Location: CAMALIG & DARAGA, ALBAY



Road Classification	Minor Road (National Road)							
Total Length	15.2 km							
Sub-section No.	1	2	3	4	5	6	7	8
Length (km)	2.4	1.1	.9	1.5	2.9	.7	1.4	4.3
Terrain	Flat	Rolling	Flat	Rolling	Flat	Flat	Flat	Rolling
Existing Road Surface	5.0-BTM (Bad)	5.0-BTM (Fair)	5.0-BTM (Fair)	5.0-BTM (Bad)	5.0-BTM (Fair)	5.0-BTM (Fair)	5.0-BTM (Fair)	5.0-BTM (Bad)
Proposed Improvement	Rehabil.	Widening	Widening	Rehabil.	Widening	Widening	Widening	Rehabil.
Improvement Type								
Surface Type	* 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
Shoulder Width (m)	1.5	1.0	1.5	1.0	1.5	1.5	1.5	1.0
Ref. Typical Section	TYPE 1-5	TYPE 4-3	TYPE 4-3	TYPE 1-5	TYPE 4-3	TYPE 4-3	TYPE 4-3	TYPE 1-5
Special Treatment								
Flood Section Length	100	-	-	-	-	-	-	-
Height	1.0	-	-	-	-	-	-	-
Steep Section Length	100	100	-	-	-	-	-	100
Bridge No.	BR-1	BR-2	BR-3	BR-4				
Existing Type	Concrete	Spillway	Concrete	Concrete				
Length (m)	10	30	6	15				
Proposed Type	-	2Lane-Br	-	-				
Length (m)	-	30	-	-				
No. of Spans	-	2	-	-				

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

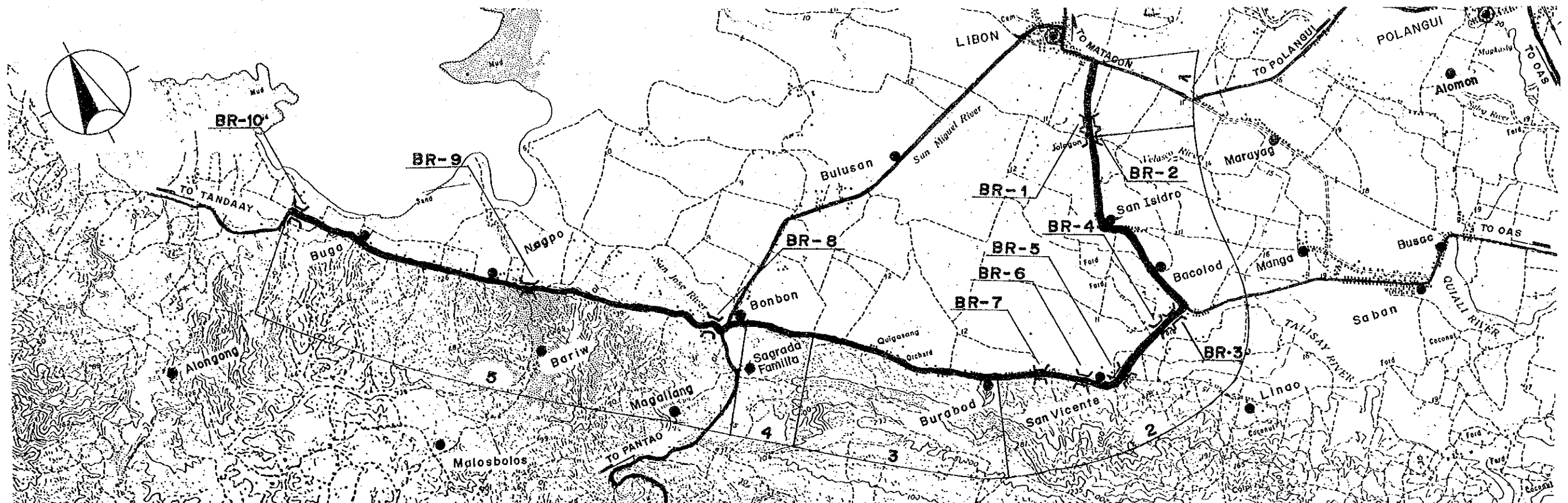
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Scale
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Drawing No.
26

Road No: N8 Road Name: LIBON JCT.-SAN VICENTE-BUGA RD.
Location : LIBON, ALBAY



Road Classification	Minor Road (National Road)									
Total Length	15.6 km									
Sub-section No.	1	2	3	4	5					
Length (km)	.8	5.4	2.3	.8	6.3					
Terrain	Flat	Flat	Rolling	Rolling	Flat					
Existing Road Surface	4.1-BTM (Fair)	4.1-BTM (Bad)	4.0-BTM (Bad)	4.0-BTM (Bad)	6.1-PCC (Good)					
Proposed Improvement	Widening Rehabil. Rehabil. Rehabil. -									
Improvement Type	* BMP * BMP * BMP * BMP -									
Surface Type	* BMP * BMP * BMP * BMP -									
Carriageway Width(m)	6.0	6.0	6.0	6.0	6.0					
Shoulder Width (m)	1.5	1.5	1.0	1.0	1.0					
Ref. Typical Section	TYPE 4-3	TYPE 1-5	TYPE 1-5	TYPE 1-5	TYPE 1-5					
Special Treatment										
Flood Section Length	-	500	200	-	-					
Height	-	5.0	2.0	-	-					
Steep Section Length	-	-	-	200	-					
Bridge No.	BR-1	BR-2	BR-3	BR-4	BR-5	BR-6	BR-7	BR-8	BR-9	BR-10
Existing Type	Bailey	Bailey	Steel	Bailey	Ford-Cr.	Spillway	Bailey	Steel	Concrete	Concrete
Length (m)	6	6	93	13	-	9	6	46	29	29
Proposed Type	2cell-BC	2cell-BC	-	2Lane-Br	2Lane-Sp	-	2cell-BC	-	-	-
Length (m)	7	7	-	13	11	-	7	-	-	-
No. of Spans	2	2	-	1	-	-	2	-	-	-

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

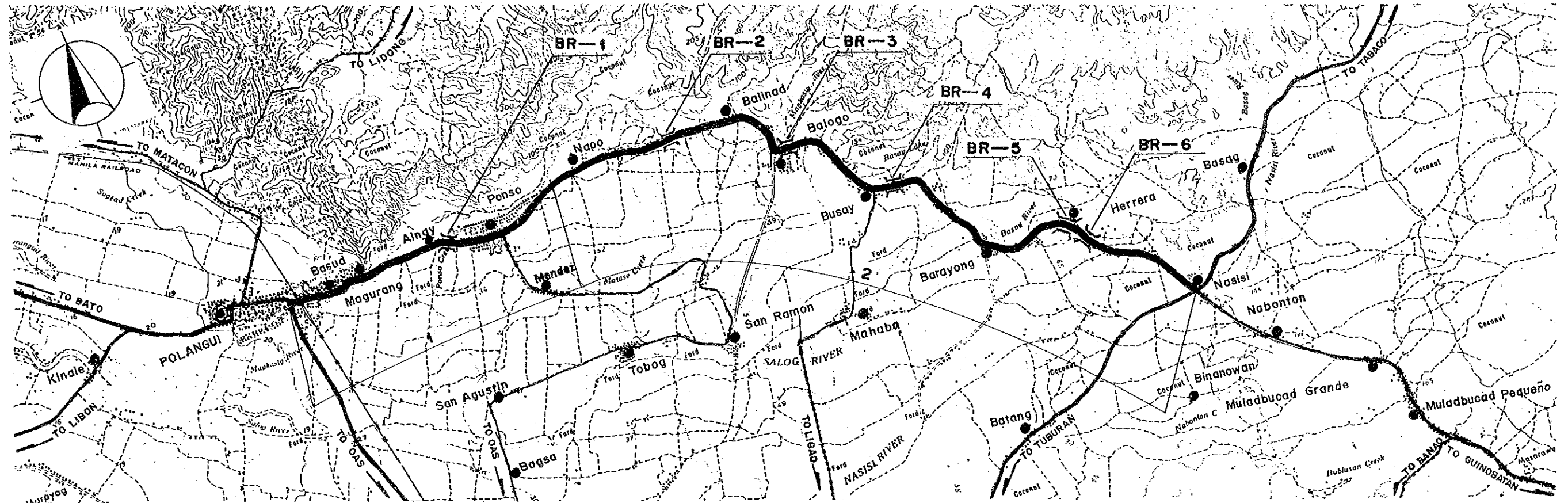
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Scale
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Drawing No.
27

Road No: P5 Road Name: POLANGUI-NASISI ROAD
Location : POLANGUI, OAS, & LIGAO, ALBAY



Road Classification	Minor Road (Provincial Road)					
Total Length	13.4 km					
Sub-section No.	1	2				
Length (km)	3.8	9.6				
Terrain	Flat	Flat				
Existing Road Surface	6.0-PCC (Good)	6.0-BTM (Bad)				
Proposed Improvement	-					
Improvement Type	- Rehabil.					
Surface Type	- Overlay					
Carriageway Width(m)	-					
Shoulder Width (m)	- 1.5					
Ref. Typical Section	- TYPE 1-4					
Bridge No.	BR-1	BR-2	BR-3	BR-4	BR-5	BR-6
Existing Type	Concrete	Concrete	Concrete	Concrete	Concrete	Concrete
Length (m)	12	10	22	30	6	22
Proposed Type	-	-	-	-	-	-
Length (m)	-	-	-	-	-	-
No. of Spans	-	-	-	-	-	-

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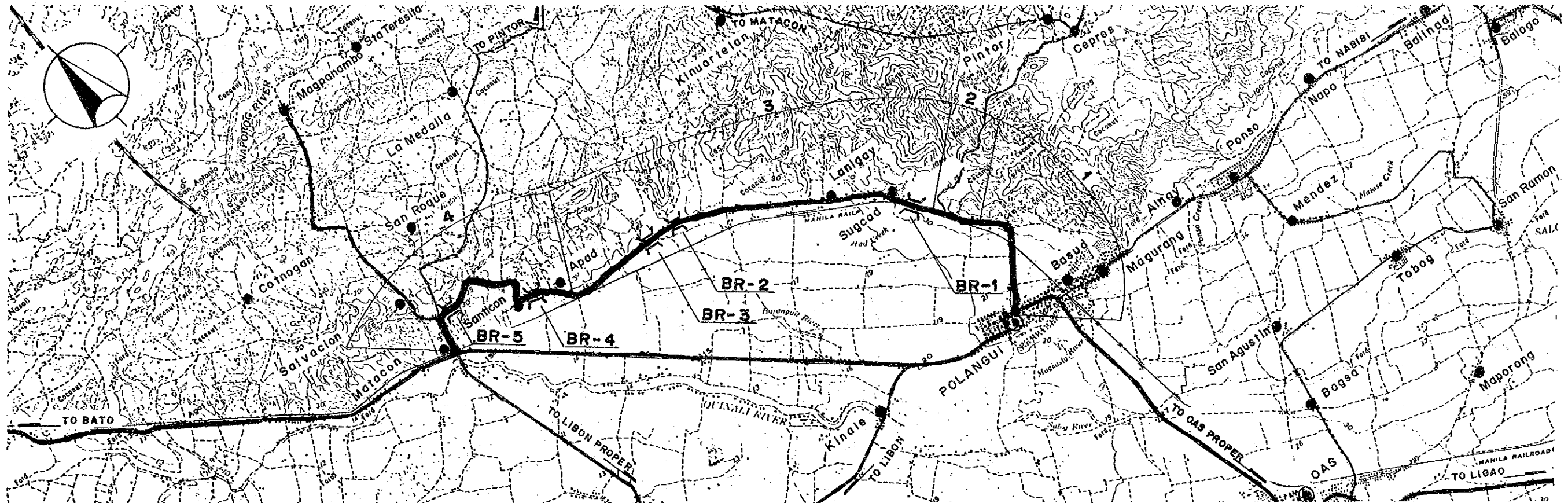
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Drawing No.

28

Road No: P6 Road Name: POLANGUI-SUGCAD-MATACON ROAD
Location: POLANGUI, ALBAY



Road Classification	Minor Road (Provincial Road)				
Total Length	8.3 km				
Sub-section No.	1	2	3	4	
Length (km)	1.4	.5	4.2	2.2	
Terrain	Flat	Flat	Flat	Rolling	
Existing Road Surface	7.0-BTM (Good)	5.0-BTM (Fair)	6.0-GRV (Fair)	6.0-GRV (Fair)	
Proposed Improvement					
Improvement Type	-	Widening	-	-	
Surface Type	-	* BMP	-	-	
Carriageway Width(m)	-	6.0	-	-	
Shoulder Width (m)	-	1.5	-	-	
Ref. Typical Section	-	TYPE 4-3	-	-	
Special Treatment					
Steep Section Length	-	-	-	500	
Bridge No.	BR-1	BR-2	BR-3	BR-4	BR-5
Existing Type	Spillway	Timber	Concrete	Timber	Timber
Length (m)	18	7	14	7	12
Proposed Type	-	2cell-BC	-	2cell-BC	2Lane-Br
Length (m)	-	7	-	7	13
No. of Spans	-	2	-	2	1

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

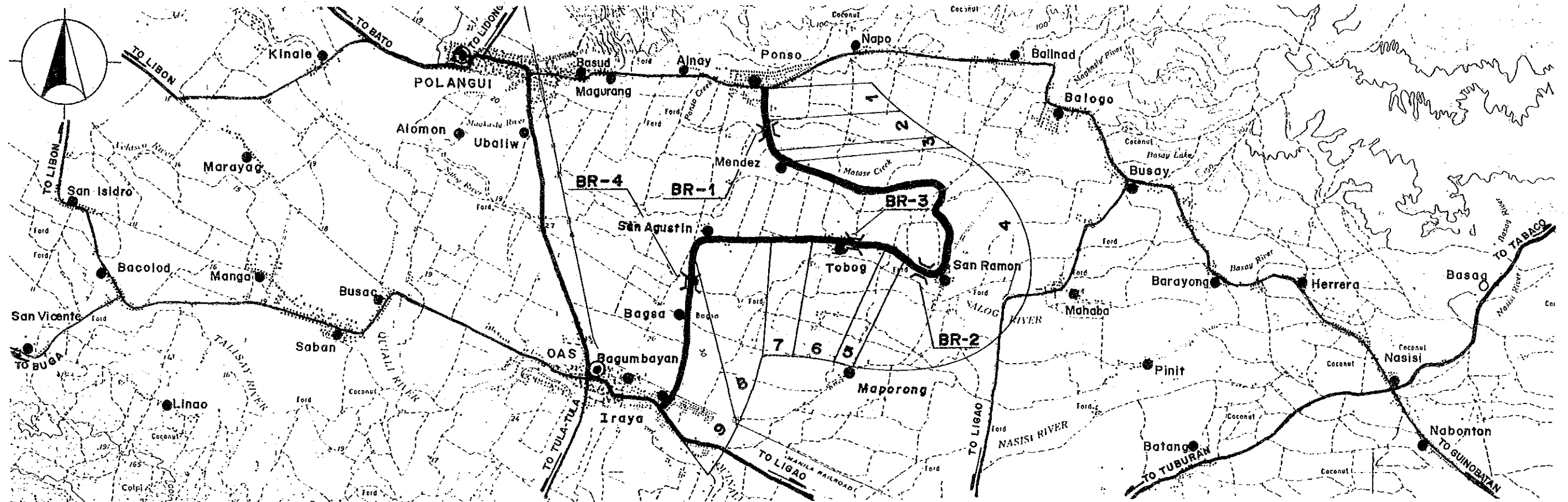
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Drawing No.
29

Road No: P7 Road Name: PONSO-SAN AGUSTIN-OAS ROAD
Location: POLANGUI & OAS, ALBAY



Road Classification	Minor Road (Provincial Road)								
Total Length	10.0 km								
Sub-section No.	1	2	3	4	5	6	7	8	9
Length (km)	.4	.4	.2	3.6	.3	.9	.5	1.3	2.4
Terrain	Flat	Flat	Flat	Flat	Flat	Flat	Flat	Flat	Flat
Existing Road Surface	3.0-BTM (Fair)	3.2-GRV (Fair)	3.0-PCC (Fair)	3.2-GRV (Bad)	3.0-BTM (Bad)	3.2-GRV (Bad)	3.0-BTM (V.Bad)	3.2-GRV (Bad)	3.0-BTM (Bad)
Proposed Improvement	Widening	Widening	Widening	Rehabil.	Rehabil.	Rehabil.	Rehabil.	Rehabil.	Rehabil.
Improvement Type	* BMP	Gravel	PCC	Gravel	* BMP	Gravel	* BMP	Gravel	* BMP
Surface Type									
Carriageway Width(m)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Shoulder Width (m)	1.5	1.0	1.5	1.0	1.5	1.0	1.5	1.0	1.5
Ref. Typical Section	TYPE 4-3	TYPE 4-4	TYPE 4-1	TYPE 1-6	TYPE 1-5	TYPE 1-6	TYPE 1-5	TYPE 1-6	TYPE 1-5
Bridge No.	BR-1	BR-2	BR-3	BR-4					
Existing Type	Concrete	Concrete	Timber	Timber					
Length (m)	14	13	18	18					
Proposed Type	-	-	2Lane-Br	2Lane-Br					
Length (m)	-	-	18	18					
No. of Spans	-	-	1	1					

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