DETAILED IMPROVEMENT PLAN

Road Name: GOTU-MERTI **County:** ISIOLO **From:** 57+000 **To:** 58+000

Chain-age (kilometres) (metres)	57 + 0				57 + 100				57 + 200				57 + 300				57 + 400				57 + 500				57 + 600				57 + 700				57 + 800				57 + 900				58 + 0
Road form.: Subgrade	QG	QG	QG	QG	QG	QG	QG	QG	QG	QG	QG	QG	QG	QG	QG	QG	QG	QG	QG	QG	QG	QG	QG	QG	QG	QG	QG	QG	QG	QG	QG	QG	QG	QG	QG	QG	QG	QG	QG	QG	QG
Road form.: Cross section	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	A	A	A	A	A	A	A	A	A	A	A	A	E	E	E	E	E
Earth-works: Method: RES, ETL or FILL	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES
Earth-works: Choice of reshaping: L, T or E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
Earth-works: Volume of ETL or Fill (m3/m)																																									
Gra-vel: Total: Thickness (cm,comp.)																																									
Gra-vel: Source (quarry No.)																																									
Longitudinal gradient (in %)	1				-1				-1				-2				-2				0				-1				-1				1				-1				
Mitre drains: Total: Number left =					1								1				1								1								1								
Mitre drains: 8: Number right =	1																												1								1				
Catch water: Total: Length of drain left =																																									
Catch water: 0: Length of drain right =																																									
Culverts: Chainage (m) N = New line, Ex = Existing line														57+350 N																											
Culverts: CD = Cross drainage														CD																											
Culverts: AC/D = Access culvert/ drift																																									
Culverts: L/R = Left/ right																																									
Culverts: Length (m): Ø 450mm																																									
Culverts: Length (m): Ø 600mm																																									
Culverts: Length (m): Ø 900mm														8																											
Culverts: Ramp: Earth fill (m3)																																									
Culverts: Ramp: H. Concrete (m3)														IV																											
Head-walls: Inlet (Material/Type)														I																											
Head-walls: Outlet (Material/Type)														I																											
Scour Checks: HC = Material this sheet/ Spacing left (m) =																																									
Scour Checks: 0 = Total No. this sheet / Spacing right (m) =																																									
Additional Instruction as per Reference																																									

Chainage:	57+000	57+200	57+400	57+600	57+800	58+000

Free Clearance Width for Calculating areas

Input Measurements:	Aver. (m)	1 to 4 readings*)					Aver. (m)	1 to 4 readings				
Bush Clearing	11	11	0	0	0	m	11	11	0	0	0	m	11	11	0	0	0	m	11	11	0	0	0	m	11	11	0	0	0	m
Grass Cutting						m						m						m						m						m
Grubbing	11	11	0	0	0	m	11	11	0	0	0	m	11	11	0	0	0	m	11	11	0	0	0	m	11	11	0	0	0	m
Tree and stump removal	0					m	0					m	0					m	0					m	0					m

*) Note: The user is free to select the number of reading required according to the site conditions. (min. 1 max. 4 for each section).

Cross Section Sketch	-	-	-	-	-

Height of Cut / Differences in Levels for calculating volumes

Measurements for small cut to fill:	Aver. (m)	1 to 4 readings*)					Aver. (m)	1 to 4 readings*)				
Height of cut < 0.25m	0	0				cm	0					cm	0		0		0	cm	0		0		0	cm	0		0		0	cm
Height of cut > 0.25m	0	0				cm	0					cm	0		0		0	cm	0		0		0	cm	0		0		0	cm
For Reshaping :	**Difference in Level between Exist. Camber and Side Drain for calculating volumes**																													
Existing Roads	0					cm	0					cm	0					cm	0					cm	0					cm
Sloping						cm						cm						cm						cm						cm

*) Note: The user is free to select the number of reading required according to the site conditions. (min. 1 max. 4 for each section).

Quantities

Quantities:										Total this page
Bush Clearing	400	m2	400	m2	400	m2	400	m2	400	**2,000**
Grass Cutting		m2		m2		m2		m2		
Grubbing	0	m2	0	m2	0	m2	0	m2	0	**0**
Tree and stump removal	0	No.	0	No.	0	No.	0	No.	0	**0**

Quantities

										Total this page
Height of cut < 0.25m	0	m3 (insitu)	0	m3 (insitu)	0	m3 (insitu)	0	m3 (insitu)	0	**0**
Height of cut > 0.25m	0	m3 (insitu)	0	m3 (insitu)	0	m3 (insitu)	0	m3 (insitu)	0	**0**
Embankment/Fill		m3 (insitu)		m3 (insitu)		m3 (insitu)		m3 (insitu)		**0**
Drains full re-construction	242	m3 (insitu)	242	m3 (insitu)	242	m3 (insitu)	242	m3 (insitu)	242	**1,208**
Reshaping by Labour		m3 (insitu)		m3 (insitu)		m3 (insitu)		m3 (insitu)		
By Towed Grader/Labour		m3 (insitu)		m3 (insitu)		m3 (insitu)		m3 (insitu)		
By Equipment Based Method		m3 (insitu)		m3 (insitu)		m3 (insitu)		m3 (insitu)		

Data Collected by: **Name:** …… **Date:** ……**Signature:** ……

DETAILED IMPROVEMENT PLAN

Road Name: GOTU-MERTI **County:** ISIOLO **From:** 58+000 **To:** 59+000

Chain-age	(kilometres)		58 + 0				58 + 100				58 + 200				58 + 300				58 + 400				58 + 500				58 + 600				58 + 700				58 + 800				58 + 900				59 + 0
	(metres)																																								
Road form.	Subgrade		QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS
	Cross section		E	E	E	E	A	A	A	A	A	A	A	A	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	A	A	A	A	A	A	A	A	E	E	E	E
Earth-works	Method: RES, ETL or FILL		RES	RES	RES	RES	RES	RES	RES	RES	ETL	ETL	ETL	ETL	ETL	ETL	ETL	ETL	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES
	Choice of reshaping: L, T or E		E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
	Volume of ETL or Fill (m3/m)																																								
Gra-vel	Total	Thickness (cm,comp.)																																							
		Source (quarry No.)																																							
Longitudinal gradient (in %)			1				0				0				1				0				-3				-1				-1				0				0			
Mitre drains	Total	Number left =	1								1								1								1								1							
	10	Number right =					1								1								1								1								1			
Catch water	Total	Length of drain left =																																							
	0	Length of drain right =																																							
Culverts	N	Chainage (m) = New line																																							
	Ex	= Existing line																																							
	CD	= Cross drainage																																							
	AC/D	= Access culvert/ drift																																							
	L/R	= Left/ right																																							
	Length (m)	Ø 450mm																																							
		Ø 600mm																																							
		Ø 900mm																																							
	Ramp	Earth fill (m3)																																							
		H. Concrete (m3)																																							
Head-walls	Inlet (Material/Type)																																								
	Outlet (Material/Type)																																								
Scour Checks	HC	= Material this sheet/ Spacing left (m) =																																							
	0	Spacing right (m) = =Total No. this sheet																																							
Additional Instruction as per Reference																																								

Chainage:	58+000	58+200	58+400	58+600	58+800	59+000
Input Measurements:	**Free Clearance Width for Calculating areas**					
	Aver. (m) / 1 to 4 readings*)				Aver. (m) / 1 to 4 readings	
Bush Clearing	11 / 11 0 0 0 m	11 / 11 0 0 0 m	11 / 11 0 0 0 m	11 / 11 0 0 0 m	11 / 11 0 0 0 m	
Grass Cutting	/ m	/ m	/ m	/ m	/ m	
Grubbing	11 / 11 0 0 0 m	11 / 11 0 0 0 m	11 / 11 0 0 0 m	11 / 11 0 0 0 m	11 / 11 0 0 0 m	
Tree and stump removal	0 / m	0 / m	0 / 0 m	0 / m	0 / m	
*) Note: The user is free to select the number of reading required according to the site conditions. (min. 1 max. 4 for each section).						
Cross Section Sketch	-	-	-	-	-	
Measurements for small cut to fill:	**Height of Cut / Differences in Levels for calculating volumes**					
	Aver. (m) / 1 to 4 readings*)				Aver. (m) / 1 to 4 readings*)	
Height of cut < 0.25m	0 / 0 cm	0 / cm	0 / 0 0 cm	0 / 0 0 cm	0 / 0 0 cm	
Height of cut > 0.25m	0 / 0 cm	0 / cm	0 / 0 0 cm	0 / 0 0 cm	0 / 0 0 cm	
For Reshaping :	**Difference in Level between Exist. Camber and Side Drain for calculating volumes**					
Existing Roads	0 / cm	0 / cm	0 / cm	0 / cm	0 / cm	
Sloping	/ cm	/ cm	/ cm	/ cm	/ cm	
*) Note: The user is free to select the number of reading required according to the site conditions. (min. 1 max. 4 for each section).						

Quantities:	Quantities									Total this page
Bush Clearing	400	m2	400	m2	400	m2	400	m2	400	**2,000**
Grass Cutting		m2		m2		m2		m2		
Grubbing	0	m2	0	m2	0	m2	0	m2	0	**0**
Tree and stump removal	0	No.	0	No.	0	No.	0	No.	0	**0**

	Quantities									Total this page
Height of cut < 0.25m	0	m3 (insitu)	0	m3 (insitu)	0	m3 (insitu)	0	m3 (insitu)	0	**0**
Height of cut > 0.25m	0	m3 (insitu)	324	m3 (insitu)	0	m3 (insitu)	0	m3 (insitu)	0	**324**
Embankment/Fill		m3 (insitu)		m3 (insitu)		m3 (insitu)		m3 (insitu)		**0**
Drains full re-construction	242	m3 (insitu)	242	m3 (insitu)	242	m3 (insitu)	242	m3 (insitu)	242	**1,208**
Reshaping by Labour		m3 (insitu)		m3 (insitu)		m3 (insitu)		m3 (insitu)		
By Towed Grader/Labour		m3 (insitu)		m3 (insitu)		m3 (insitu)		m3 (insitu)		
By Equipment Based Method		m3 (insitu)		m3 (insitu)		m3 (insitu)		m3 (insitu)		

Data Collected by: **Name:** …… **Date:** ……**Signature:** ……

DETAILED IMPROVEMENT PLAN

Road Name: GOTU-MERTI **County:** ISIOLO **From:** 59+000 **To:** 60+000

Chain-age	(kilometres)		59 + 0				59 + 100				59 + 200				59 + 300				59 + 400				59 + 500				59 + 600				59 + 700				59 + 800				59 + 900				60 + 0
	(metres)																																								
Road form.	Subgrade		QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS
	Cross section		A	A	A	A	E	E	E	E	A	A	A	A	A	A	A	A	A	A	A	A	E	E	E	E	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Earth-works	Method: RES, ETL or FILL		RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES
	Choice of reshaping: L, T or E		E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
	Volume of ETL or Fill (m3/m)																																								
Gra-vel	Total	Thickness (cm,comp.)																																							
		Source (quarry No.)																																							
Longitudinal gradient (in %)			-1				1				-1				-1				-2				-1				-1				-1				-2				-1			
Mitre drains	Total	Number left =																																							
	1	Number right =	1																																						
Catch water	Total	Length of drain left =																																							
	0	Length of drain right =																																							
Culverts	N	Chainage (m) = New line																								59+580N														59+960N			
	Ex	= Existing line																																							
	CD	= Cross drainage																								CD														CD			
	AC/D	= Access culvert/ drift																																							
	L/R	= Left/ right																																							
	Length (m)	Ø 450mm																																							
		Ø 600mm																																							
		Ø 900mm																								8														8			
	Ramp	Earth fill (m3)																																							
		H. Concrete (m3)																								IV														IV			
Head-walls	Inlet (Material/Type)																									I														I			
	Outlet (Material/Type)																									I														I			
Scour Checks	HC	= Material this sheet/ Spacing left (m) =																																								
	0	Spacing right (m) = =Total No. this sheet																																							
Additional Instruction as per Reference																																								

Chainage:	59+000	59+200	59+400	59+600	59+800	60+000

Input Measurements: — Free Clearance Width for Calculating areas

	Aver. (m)	1 to 4 readings*)					Aver. (m)	1 to 4 readings				
Bush Clearing	11	11	0	0	0	m	11	11	0	0	0	m	11	11	0	0	0	m	11	11	0	0	0	m	11	11	0	0	0	m
Grass Cutting						m						m						m						m						m
Grubbing	11	11	0	0	0	m	11	11	0	0	0	m	11	11	0	0	0	m	11	11	0	0	0	m	11	11	0	0	0	m
Tree and stump removal	0					m	0					m	0					m	0					m	0					m

*) Note: The user is free to select the number of reading required according to the site conditions. (min. 1 max. 4 for each section).

Cross Section Sketch - - - -

Measurements for small cut to fill: — Height of Cut / Differences in Levels for calculating volumes

	Aver. (m)	1 to 4 readings*)					Aver. (m)	1 to 4 readings*)					Aver. (m)	1 to 4 readings*)					Aver. (m)	1 to 4 readings*)					Aver. (m)	1 to 4 readings*)				
Height of cut < 0.25m	0	0				cm	0					cm	0		0		0	cm	0		0		0	cm	0		0		0	cm
Height of cut > 0.25m	0	0				cm	0					cm	0		0		0	cm	0		0		0	cm	0		0		0	cm
For Reshaping :	**Difference in Level between Exist. Camber and Side Drain for calculating volumes**																													
Existing Roads	0					cm	0					cm	0					cm	0					cm	0					cm
Sloping						cm						cm						cm						cm						cm

*) Note: The user is free to select the number of reading required according to the site conditions. (min. 1 max. 4 for each section).

Quantities:

	Quantities									Total this page
Bush Clearing	400	m2	400	m2	400	m2	400	m2	400	**2,000**
Grass Cutting		m2		m2		m2		m2		
Grubbing	0	m2	0	m2	0	m2	0	m2	0	**0**
Tree and stump removal	0	No.	0	No.	0	No.	0	No.	0	**0**

	Quantities									Total this page
Height of cut < 0.25m	0	m3 (insitu)	0	m3 (insitu)	0	m3 (insitu)	0	m3 (insitu)	0	**0**
Height of cut > 0.25m	0	m3 (insitu)	0	m3 (insitu)	0	m3 (insitu)	0	m3 (insitu)	0	**0**
Embankment/Fill		m3 (insitu)		m3 (insitu)		m3 (insitu)		m3 (insitu)		**0**
Drains full re-construction	242	m3 (insitu)	242	m3 (insitu)	242	m3 (insitu)	242	m3 (insitu)	242	**1,208**
Reshaping by Labour		m3 (insitu)		m3 (insitu)		m3 (insitu)		m3 (insitu)		
By Towed Grader/Labour		m3 (insitu)		m3 (insitu)		m3 (insitu)		m3 (insitu)		
By Equipment Based Method		m3 (insitu)		m3 (insitu)		m3 (insitu)		m3 (insitu)		

Data Collected by: **Name:** …… **Date:** ……**Signature:** ……

DETAILED IMPROVEMENT PLAN

Road Name: GOTU-MERTI **County:** ISIOLO **From:** 60+000 **To:** 61+000

Chain-age		(kilometres)	60 +				60 +				60 +				60 +				60 +				60 +				60 +				60 +				60 +				60 +				61 +
		(metres)	0				100				200				300				400				500				600				700				800				900				0
Road form.		Subgrade	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS
		Cross section	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	E	E	E	E	A	A	A	A	E	E	E	E	A	A	A	A	A	A	A	A	A	A	A
Earth-works		Method: RES, ETL or FILL	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES
		Choice of reshaping: L, T or E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
		Volume of ETL or Fill (m3/m)																																							
Gra-vel	Total	Thickness (cm,comp.)																																							
		Source (quarry No.)																																							
		Longitudinal gradient (in %)	0				-1				-1				-1				-1				-1				-1				-1				-1				0				
Mitre drains	Total	Number left =																	1				1				1								1								
	5	Number right =																													1												
Catch water	Total	Length of drain left =																																							
	0	Length of drain right =																																							
Culverts		Chainage (m) = New line																																	60+810 N		60+810 EX		60+830 EX				
	N																																										
	Ex	= Existing line																																									
	CD	= Cross drainage																																	CD								
	AC/D	= Access culvert/ drift																																									
	L/R	= Left/ right																																									
	Length (m)	Ø 450mm																																									
		Ø 600mm																																									
		Ø 900mm																																	16								
	Ramp	Earth fill (m3)																																									
		H. Concrete (m3)																																	IV								
Head-walls		Inlet (Material/Type)																																	I								
		Outlet (Material/Type)																																	I								
Scour Checks	HC	= Material this sheet/ Spacing left (m) =																																									
	0	Spacing right (m) = =Total No. this sheet																																									
Additional Instruction as per Reference																																										

Chainage:	60+000	60+200	60+400	60+600	60+800	61+000

Input Measurements: — Free Clearance Width for Calculating areas

	60+000 Aver. (m)	60+000 1 to 4 readings*)	60+200	60+400	60+600	60+800 Aver. (m)	60+800 1 to 4 readings	61+000
Bush Clearing	10	10 0 0 0	10 10 0 0 0	8 8 0 0 0	8 8 0 0 0	10	10 0 0 0	
Grass Cutting								
Grubbing	10	10 0 0 0	10 10 0 0 0	8 8 0 0 0	8 8 0 0 0	10	10 0 0 0	
Tree and stump removal	0		0	0	0	0		

*) Note: The user is free to select the number of reading required according to the site conditions. (min. 1 max. 4 for each section).

Cross Section Sketch - - - - -

Measurements for small cut to fill: — Height of Cut / Differences in Levels for calculating volumes

	60+000 Aver. (m)	60+000 1 to 4 readings*)	60+200	60+400	60+600	60+800 Aver. (m)	60+800 1 to 4 readings*)	61+000
Height of cut < 0.25m	0	0	0	0 0 0	0 0 0	0	0 0	
Height of cut > 0.25m	0	0	0	0 0 0	0 0 0	0	0 0	

For Reshaping : — Difference in Level between Exist. Camber and Side Drain for calculating volumes

Existing Roads	0	0				0		
Sloping								

*) Note: The user is free to select the number of reading required according to the site conditions. (min. 1 max. 4 for each section).

Quantities: — Quantities

	60+000	60+200	60+400	60+600	60+800	Total this page
Bush Clearing	600 m2	600 m2	1,000 m2	1,000 m2	600 m2	**3,800**
Grass Cutting	m2	m2	m2	m2	m2	
Grubbing	200 m2	200 m2	600 m2	600 m2	200 m2	**1,800**
Tree and stump removal	0 No.	0 No.	0 No.	0 No.	0 No.	**0**

Quantities

	60+000	60+200	60+400	60+600	60+800	Total this page
Height of cut < 0.25m	0 m3 (insitu)	0 m3 (insitu)	0 m3 (insitu)	0 m3 (insitu)	0 m3 (insitu)	**0**
Height of cut > 0.25m	0 m3 (insitu)	0 m3 (insitu)	0 m3 (insitu)	0 m3 (insitu)	0 m3 (insitu)	**0**
Embankment/Fill	m3 (insitu)	m3 (insitu)	m3 (insitu)	m3 (insitu)	m3 (insitu)	**0**
Drains full re-construction	242 m3 (insitu)	242 m3 (insitu)	242 m3 (insitu)	242 m3 (insitu)	242 m3 (insitu)	**1,208**
Reshaping by Labour	m3 (insitu)	m3 (insitu)	m3 (insitu)	m3 (insitu)	m3 (insitu)	
By Towed Grader/Labour	m3 (insitu)	m3 (insitu)	m3 (insitu)	m3 (insitu)	m3 (insitu)	
By Equipment Based Method	m3 (insitu)	m3 (insitu)	m3 (insitu)	m3 (insitu)	m3 (insitu)	

Data Collected by: **Name:** …… **Date:** ……**Signature:** ……

DETAILED IMPROVEMENT PLAN

Road Name: GOTU-MERTI **County:** ISIOLO **From:** 61+000 **To:** 62+000

Chain-age	(kilometres)		61 + 0				61 + 100				61 + 200				61 + 300				61 + 400				61 + 500				61 + 600				61 + 700				61 + 800				61 + 900				62 + 0
	(metres)		0				0				0				0				0				0				0				0				0				0				0
Road form.	Subgrade		QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS
	Cross section		A	A	A	A	A	A	A	A	A	A	A	A	E	E	E	E	A	A	A	A	E	E	E	E	E	E	E	E	A	A	A	A	A	A	A	A	A	A	A
Earth-works	Method: RES, ETL or FILL		RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES
	Choice of reshaping: L, T or E		E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
	Volume of ETL or Fill (m3/m)																																								
Gra-vel	Total	Thickness (cm,comp.)																																							
		Source (quarry No.)																																							
Longitudinal gradient (in %)			0				0				0				-1				-1				-1				0				-1				-2				-1			
Mitre drains	Total 5	Number left =	1								1								1								1								1							
		Number right =																																							
Catch water	Total 0	Length of drain left =																																							
		Length of drain right =																																							
Culverts	N = New line	Chainage (m)	61+030 EX	61+030 N																																			61+900 N			
	Ex = Existing line																																								
	CD	= Cross drainage		CD																																		CD			
	AC/D	= Access culvert/ drift																																							
	L/R	= Left/ right																																							
	Length (m)	Ø 450mm																																							
		Ø 600mm																																							
		Ø 900mm		16																																			8			
	Ramp	Earth fill (m3)																																							
		H. Concrete (m3)		IV																																			IV			
Head-walls	Inlet (Material/Type)			I																																		I			
	Outlet (Material/Type)			I																																		I			
Scour Checks	HC	= Material this sheet/ Spacing left (m) =																																							
	0	Spacing right (m) = =Total No. this sheet																																							
Additional Instruction as per Reference																																								

Chainage:	61+000	61+200	61+400	61+600	61+800	62+000

Free Clearance Width for Calculating areas

Input Measurements:	Aver. (m)	1 to 4 readings*)					Aver. (m)	1 to 4 readings				
Bush Clearing	11	11	0	0	0	m	11	11	0	0	0	m	11	11	0	0	0	m	11	11	0	0	0	m	11	11	0	0	0	m
Grass Cutting						m						m						m						m						m
Grubbing	11	11	0	0	0	m	11	11	0	0	0	m	11	11	0	0	0	m	11	11	0	0	0	m	11	11	0	0	0	m
Tree and stump removal	0					m	0					m	0					m	0					m	0					m

*) Note: The user is free to select the number of reading required according to the site conditions. (min. 1 max. 4 for each section).

Cross Section Sketch	-	-	-	-	-

Height of Cut / Differences in Levels for calculating volumes

Measurements for small cut to fill:	Aver. (m)	1 to 4 readings*)					Aver. (m)	1 to 4 readings*)				
Height of cut < 0.25m	0	0				cm	0					cm	0		0		0	cm	0		0		0	cm	0		0		0	cm
Height of cut > 0.25m	0	0				cm	0					cm	0		0		0	cm	0		0		0	cm	0		0		0	cm
For Reshaping :	**Difference in Level between Exist. Camber and Side Drain for calculating volumes**																													
Existing Roads	0					cm	0					cm	0					cm	0					cm	0					cm
Sloping						cm						cm						cm						cm						cm

*) Note: The user is free to select the number of reading required according to the site conditions. (min. 1 max. 4 for each section).

Quantities

Quantities:										Total this page
Bush Clearing	400	m2	400	m2	400	m2	400	m2	400	**2,000**
Grass Cutting		m2		m2		m2		m2		
Grubbing	0	m2	0	m2	0	m2	0	m2	0	**0**
Tree and stump removal	0	No.	0	No.	0	No.	0	No.	0	**0**

Quantities

										Total this page
Height of cut < 0.25m	0	m3 (insitu)	0	m3 (insitu)	0	m3 (insitu)	0	m3 (insitu)	0	**0**
Height of cut > 0.25m	0	m3 (insitu)	0	m3 (insitu)	0	m3 (insitu)	0	m3 (insitu)	0	**0**
Embankment/Fill		m3 (insitu)		m3 (insitu)		m3 (insitu)		m3 (insitu)		**0**
Drains full re-construction	242	m3 (insitu)	242	m3 (insitu)	242	m3 (insitu)	242	m3 (insitu)	242	**1,208**
Reshaping by Labour		m3 (insitu)		m3 (insitu)		m3 (insitu)		m3 (insitu)		
By Towed Grader/Labour		m3 (insitu)		m3 (insitu)		m3 (insitu)		m3 (insitu)		
By Equipment Based Method		m3 (insitu)		m3 (insitu)		m3 (insitu)		m3 (insitu)		

Data Collected by: **Name:** …… **Date:** ……**Signature:** ……

DETAILED IMPROVEMENT PLAN

Page: 13

Road Name: GOTU-MERTI **County** ISIOLO **From:** 62+000 **To:** 63+000

Section	Item																																								
Chain-age	(kilometres) (metres)	62 + 0				62 + 100				62 + 200				62 + 300				62 + 400				62 + 500				62 + 600				62 + 700				62 + 800				62 + 900			63 + 0
Road form.	Subgrade	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS
Road form.	Cross section	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	E	E	E	E	A	A	A	A	E	E	E	E	E	E	E	E	E	E	E	E
Earth-works	Method: RES, ETL or FILL	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES
Earth-works	Choice of reshaping: L, T or E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
Earth-works	Volume of ETL or Fill (m3/m)																																								
Gra-vel Total	Thickness (cm,comp.)																																								
Gra-vel	Source (quarry No.)																																								
	Longitudinal gradient (in %)	0				-2				-2				0				-1				0				1				-1				0				0			
Mitre drains Total	Number left =	1								1								1				1								1								1			
Mitre drains 10	Number right =					1								1												1								1							
Catch water Total	Length of drain left =																																								
Catch water 0	Length of drain right =																																								
Culverts N / Ex	Chainage (m) = New line = Existing line																																					62+900 N			
Culverts CD	= Cross drainage																																					CD			
Culverts AC/D	= Access culvert/ drift																																								
Culverts L/R	= Left/ right																																								
Culverts Length (m)	Ø 450mm																																								
Culverts Length (m)	Ø 600mm																																								
Culverts Length (m)	Ø 900mm																																					8			
Culverts Ramp	Earth fill (m3)																																								
Culverts Ramp	H. Concrete (m3)																																					IV			
Head-walls	Inlet (Material/Type)																																					I			
Head-walls	Outlet (Material/Type)																																					I			
Scour Checks HC	= Material this sheet/ Spacing left (m) =																																								
Scour Checks 0	Spacing right (m) = =Total No. this sheet																																								
	Additional Instruction as per Reference																																								

Chainage:	**62+000**						**62+200**						**62+400**						**62+600**						**62+800**						**62+000**
Input Measurements:	Aver. (m)	1 to 4 readings*)											**Free Clearance Width for Calculating areas**												Aver. (m)	1 to 4 readings				
Bush Clearing	11	11	0	0	0	m	11	11	0	0	0	m	11	11	0	0	0	m	11	11	0	0	0	m	11	11	0	0	0	m
Grass Cutting						m						m						m						m						m
Grubbing	11	11	0	0	0	m	11	11	0	0	0	m	11	11	0	0	0	m	11	11	0	0	0	m	11	11	0	0	0	m
Tree and stump removal	0					m	0					m	0					m	0					m	0					m
*) Note: The user is free to select the number of reading required according to the site conditions. (min. 1 max. 4 for each section).																														
Cross Section Sketch	-						-						-						-						-					
Measurements for small cut to fill:	Aver. (m)	1 to 4 readings*)											**Height of Cut / Differences in Levels for calculating volumes**												Aver. (m)	1 to 4 readings*)				
Height of cut < 0.25m	0	0				cm	0					cm	0		0		0	cm	0		0		0	cm	0		0		0	cm
Height of cut > 0.25m	0	0				cm	0					cm	0		0		0	cm	0		0		0	cm	0		0		0	cm
For Reshaping :	**Difference in Level between Exist. Camber and Side Drain for calculating volumes**																													
Existing Roads	0					cm	0					cm	0					cm	0					cm	0					cm
Sloping						cm						cm						cm						cm						cm
*) Note: The user is free to select the number of reading required according to the site conditions. (min. 1 max. 4 for each section).																														

Quantities:	**Quantities**								**Total this page**
Bush Clearing	400	m2	400	m2	400	m2	400	m2	400	**2,000**
Grass Cutting		m2		m2		m2		m2		
Grubbing	0	m2	0	m2	0	m2	0	m2	0	**0**
Tree and stump removal	0	No.	0	No.	0	No.	0	No.	0	**0**
	Quantities								**Total this page**
Height of cut < 0.25m	0	m3 (insitu)	0	m3 (insitu)	0	m3 (insitu)	0	m3 (insitu)	0	**0**
Height of cut > 0.25m	0	m3 (insitu)	0	m3 (insitu)	0	m3 (insitu)	0	m3 (insitu)	0	**0**
Embankment/Fill		m3 (insitu)		m3 (insitu)		m3 (insitu)		m3 (insitu)		**0**
Drains full re-construction	242	m3 (insitu)	242	m3 (insitu)	242	m3 (insitu)	242	m3 (insitu)	242	**1,208**
Reshaping by Labour		m3 (insitu)		m3 (insitu)		m3 (insitu)		m3 (insitu)		
By Towed Grader/Labour		m3 (insitu)		m3 (insitu)		m3 (insitu)		m3 (insitu)		
By Equipment Based Method		m3 (insitu)		m3 (insitu)		m3 (insitu)		m3 (insitu)		

Data Collected by: **Name:** …… **Date:** ……**Signature:** ……

DETAILED IMPROVEMENT PLAN

Road Name: GOTU-MERTI **County:** ISIOLO **From:** 63+000 **To:** 64+000

Chain-age	(kilometres)		63 + 0				63 + 100				63 + 200				63 + 300				63 + 400				63 + 500				63 + 600				63 + 700				63 + 800				63 + 900				64 + 0
	(metres)																																									
Road form.	Subgrade		QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS	QS
	Cross section		E	E	E	E	A	A	A	A	E	E	E	E	A	A	A	A	A	A	A	A	E	E	E	E	A	A	A	A	A	A	A	A	E	E	E	E	A	A	A	A	A
Earth-works	Method: RES, ETL or FILL		RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES
	Choice of reshaping: L, T or E		E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
	Volume of ETL or Fill (m3/m)																																								
Gra-vel	Total	Thickness (cm,comp.)																																							
		Source (quarry No.)																																							
Longitudinal gradient (in %)			-1				-1				2				0				-1				-1				-1				0				0				0				
Mitre drains	Total 2	Number left =	1								1																															
		Number right =																																								
Catch water	Total 0	Length of drain left =																																							
		Length of drain right =																																							
Culverts	N	Chainage (m) = New line																																							
	Ex	= Existing line																																							
	CD	= Cross drainage																																							
	AC/D	= Access culvert/ drift																																							
	L/R	= Left/ right																																							
	Length (m)	Ø 450mm																																							
		Ø 600mm																																							
		Ø 900mm																																							
	Ramp	Earth fill (m3)																																							
		H. Concrete (m3)																																							
Head-walls	Inlet (Material/Type)																																								
	Outlet (Material/Type)																																								
Scour Checks	HC	= Material this sheet/ Spacing left (m) =																																							
	0	Spacing right (m) = =Total No. this sheet																																							
Additional Instruction as per Reference																																								

Chainage:	63+000	63+200	63+400	63+600	63+800	64+000

Input Measurements: — **Free Clearance Width for Calculating areas**

	63+000 Aver. (m)	63+000 1 to 4 readings*)	63+200	63+400	63+600	63+800 Aver. (m)	63+800 1 to 4 readings	64+000
Bush Clearing	11	11 0 0 0	11 11 0 0 0	11 11 0 0 0	11 11 0 0 0	11	11 0 0 0	m
Grass Cutting								m
Grubbing	11	11 0 0 0	11 11 0 0 0	11 11 0 0 0	11 11 0 0 0	11	11 0 0 0	m
Tree and stump removal	0		0	0	0	0		m

*) Note: The user is free to select the number of reading required according to the site conditions. (min. 1 max. 4 for each section).

Cross Section Sketch	-	-	-	-	-

Measurements for small cut to fill: — **Height of Cut / Differences in Levels for calculating volumes**

	63+000 Aver. (m)	63+000 1 to 4 readings*)	63+200	63+400	63+600	63+800 Aver. (m)	63+800 1 to 4 readings*)	64+000
Height of cut < 0.25m	0	0	0	0	0	0	0	cm
Height of cut > 0.25m	0	0	0	0	0	0	0	cm

For Reshaping : — **Difference in Level between Exist. Camber and Side Drain for calculating volumes**

	63+000	63+200	63+400	63+600	63+800	64+000
Existing Roads	0	0	0	0	0	cm
Sloping						cm

*) Note: The user is free to select the number of reading required according to the site conditions. (min. 1 max. 4 for each section).

Quantities: — **Quantities**

	63+000	63+200	63+400	63+600	63+800	Total this page
Bush Clearing	400 m2	400 m2	400 m2	400 m2	400 m2	**2,000**
Grass Cutting	m2	m2	m2	m2	m2	
Grubbing	0 m2	0 m2	0 m2	0 m2	0 m2	**0**
Tree and stump removal	0 No.	0 No.	0 No.	0 No.	0 No.	**0**

Quantities

	63+000	63+200	63+400	63+600	63+800	Total this page
Height of cut < 0.25m	0 m3 (insitu)	0 m3 (insitu)	0 m3 (insitu)	0 m3 (insitu)	0 m3 (insitu)	**0**
Height of cut > 0.25m	0 m3 (insitu)	0 m3 (insitu)	0 m3 (insitu)	0 m3 (insitu)	0 m3 (insitu)	**0**
Embankment/Fill	m3 (insitu)	m3 (insitu)	m3 (insitu)	m3 (insitu)	m3 (insitu)	**0**
Drains full re-construction	242 m3 (insitu)	242 m3 (insitu)	242 m3 (insitu)	242 m3 (insitu)	242 m3 (insitu)	**1,208**
Reshaping by Labour	m3 (insitu)	m3 (insitu)	m3 (insitu)	m3 (insitu)	m3 (insitu)	
By Towed Grader/Labour	m3 (insitu)	m3 (insitu)	m3 (insitu)	m3 (insitu)	m3 (insitu)	
By Equipment Based Method	m3 (insitu)	m3 (insitu)	m3 (insitu)	m3 (insitu)	m3 (insitu)	

Data Collected by: **Name:** …… **Date:** ……**Signature:** ……

DETAILED IMPROVEMENT PLAN

Road Name: GOTU-MERTI **County:** ISIOLO **From:** 64+000 **To:** 65+000

Chain-age	(kilometres)		64 + 0				64 + 100				64 + 200				64 + 300				64 + 400				64 + 500				64 + 600				64 + 700				64 + 800				64 + 900				65 + 0
	(metres)																																									
Road form.	Subgrade		CS	CS	CS	CS	CS	CS	CS	CS	CS	CS	CS	CS	CS	CS	CS	CS	CS	CS	CS	CS	CS	CS	CS	CS	CS	CS	CS	CS	CS	CS	CS	CS	CS	CS	CS	CS	CS	CS	CS
	Cross section		A	A	A	A	A	A	A	A	E	E	E	E	A	A	A	A	E	E	E	E	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Earth-works	Method: RES, ETL or FILL		RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES
	Choice of reshaping: L, T or E		E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
	Volume of ETL or Fill (m3/m)																																								
Gra-vel	Total	Thickness (cm,comp.)																																							
		Source (quarry No.)																																							
Longitudinal gradient (in %)			0				0				-1				-1				-2				0				-1				-1				-1				2			
Mitre drains	Total	Number left =					1																																		
	6	Number right =	1								1								1								1								1							
Catch water	Total	Length of drain left =																																							
	0	Length of drain right =																																							
Culverts	N	Chainage (m) = New line																																							
	Ex	= Existing line																	64+450 N																						
	CD	= Cross drainage																	CD																						
	AC/D	= Access culvert/ drift																																							
	L/R	= Left/ right																																							
	Length (m)	Ø 450mm																																							
		Ø 600mm																																							
		Ø 900mm																	8																						
	Ramp	Earth fill (m3)																																							
		H. Concrete (m3)																	IV																						
Head-walls	Inlet (Material/Type)																		I																						
	Outlet (Material/Type)																		I																						
Scour Checks	HC	= Material this sheet/ Spacing left (m) =																																							
	0	Spacing right (m) = =Total No. this sheet																																							
Additional Instruction as per Reference																			EXISTING DRIFT																						

Chainage:	64+000						64+200						64+400						64+600						64+800						65+000
Input Measurements:	Aver. (m)	1 to 4 readings*)					**Free Clearance Width for Calculating areas**																		Aver. (m)	1 to 4 readings					
Bush Clearing	10	10	0	0	0	m	11	11	0	0	0	m	11	11	0	0	0	m	11	11	0	0	0	m	11	11	0	0	0	m	
Grass Cutting						m						m						m						m						m	
Grubbing	10	10	0	0	0	m	11	11	0	0	0	m	11	11	0	0	0	m	11	11	0	0	0	m	11	11	0	0	0	m	
Tree and stump removal	1	1				m	0					m	0					m	0					m	0					m	
*) Note: The user is free to select the number of reading required according to the site conditions. (min. 1 max. 4 for each section).																															
Cross Section Sketch	-						-						-						-						-						
Measurements for small cut to fill:	Aver. (m)	1 to 4 readings*)					**Height of Cut / Differences in Levels for calculating volumes**																		Aver. (m)	1 to 4 readings*)					
Height of cut < 0.25m	0	0				cm	0					cm	0		0		0	cm	0		0		0	cm	0		0		0	cm	
Height of cut > 0.25m	0	0				cm	0					cm	0		0		0	cm	0		0		0	cm	0		0		0	cm	
For Reshaping :	**Difference in Level between Exist. Camber and Side Drain for calculating volumes**																														
Existing Roads	0					cm	0					cm	0					cm	0					cm	0					cm	
Sloping						cm						cm						cm						cm						cm	
*) Note: The user is free to select the number of reading required according to the site conditions. (min. 1 max. 4 for each section).																															

Quantities:	Quantities									Total this page
Bush Clearing	600	m2	400	m2	400	m2		m2		**1,400**
Grass Cutting		m2		m2		m2		m2		
Grubbing	200	m2	0	m2	0	m2		m2		**200**
Tree and stump removal	1	No.	0	No.	0	No.	0	No.	0	**1**

	Quantities									Total this page
Height of cut < 0.25m	0	m3 (insitu)	0	m3 (insitu)	0	m3 (insitu)	0	m3 (insitu)	0	**0**
Height of cut > 0.25m	0	m3 (insitu)	0	m3 (insitu)	0	m3 (insitu)	0	m3 (insitu)	0	**0**
Embankment/Fill		m3 (insitu)		m3 (insitu)		m3 (insitu)		m3 (insitu)		**0**
Drains full re-construction	242	m3 (insitu)	242	m3 (insitu)	242	m3 (insitu)		m3 (insitu)		**725**
Reshaping by Labour		m3 (insitu)		m3 (insitu)		m3 (insitu)		m3 (insitu)		
By Towed Grader/Labour		m3 (insitu)		m3 (insitu)		m3 (insitu)		m3 (insitu)		
By Equipment Based Method		m3 (insitu)		m3 (insitu)		m3 (insitu)		m3 (insitu)		

Data Collected by: **Name:** …… **Date:** ……**Signature:** ……