

GOVERNMENT OF ANDHRA PRADESH
WATER RESOURCES DEPARTMENT



Name Of Work: FDR - Restoration of Yanamadurru Drain Right bank breaches at Km 0.800 in Nandamuru(V) and at Km 4.000 in Arulla(V), Tadepalligudem(M), West Godavari District.

Estimate Cost: Rs. 22,30,000/-

CIRCLE	-	IRRIGATION CIRCLE, ELURU
DIVISION	-	G.W. DIVISION, NIDADAVOLU
SUB-DIVISION	-	DELTA SUB-DIVISION, TADEPALLIGUDEM
SECTION	-	CANAL SECTION, SETTIPETA.

Report for FDR - Restoration of Yanamadurru Drain Right bank breaches.

Project Details

Name of Work: FDR - Restoration of Yanamadurru Drain Right bank breaches at Km 0.800 in Nandamuru(V) and at Km 4.000 in Arulla(V), Tadepalligudem(M), West Godavari District.

Estimated Cost: Rs. 22,30,000/-

Background

The Yanamadurru Drain is a major drainage system in the Godavari Western Delta with a catchment area of 900 square miles. Originating from the Nandamuru aqueduct, it stretches for 60.330 km and discharges into Upputeru near Pathapadu village. This drain frequently encounters intensive floods, causing significant damage and crop loss due to the inundation of adjoining valuable wetlands in the Tadepalligudem, Tanuku, Attili, Pentapadu, Ganapavaram, Palakoderu, Bhimavaram, and Mogaltur mandals.

Issue

The right bank of the Yanamadurru Drain at Km 0.800 in Nandamuru village and at Km 4.000 in Arulla village within the Tadepalligudem Mandal has been severely breached due to heavy rains from July 19 to July 22, 2024. These rains in the Yerrakalva catchment area resulted in substantial flooding downstream of the Nandamuru aqueduct. The increased water volume caused the banks at the specified locations to overtop, leading to significant breaches. Damages were reported in APFC form 20 on July 21 and July 22, 2024.

Inspection and Instructions

Following the breach, the issue was reported to the Executive Engineer, who inspected the site and directed the preparation of an estimate for the necessary restoration work. Consequently, an estimate has been prepared for the restoration work.

Proposed Restoration Work

The restoration work includes Homogeneous Embankment with gravel supported by country wood ballies and bamboo thatties. The following specifications are adopted in the estimate:

1. **Country Wood Ballies:** 100 to 150 mm diameter
2. **Bamboo Thatties**
3. **Labour Charges:** Provision for sharpening ballies
4. **Gravel**
5. **Providing Homogeneous Embankment**
6. **2T Roller Usage**
7. **Excavation:** In all kinds of soil
8. **Supply of empty cement bags**
9. **Labour Charges:** Provision for filling and stitching of cement bags

Additional Provisions

1. **GST:** 5.00%
2. **NAC:** 0.01%
3. **Seigniorages**
4. **Photographic Charges and Contingencies**

Estimate Preparation

The estimate is based on the current standard schedule rates for 2024-2025. For items without available rates, the rates as per the Superintending Engineer, Irrigation Circle, Eluru, (Memo No. SE/IC/Elr/DB/ATO: 4/F.SSR. Rates No. 2297SE Dt. 16.5.2014) are adopted.

Submission

This estimate is submitted to obtain the necessary **administrative approval** from the competent authority.

Summary of Estimated Costs

Item	Cost (Rs.)
Country Wood Ballies	57,600
Bamboo Thatties	28,800
Labour Charges: Provision for sharpening ballies	2,880
Gravel	13,95,869
Providing Homogeneous Embankment	2,46,032
2T Roller Usage	18,291
Excavation: In all kinds of soil	21,315
Supply of empty cement bags	56,000
Labour Charges: Provision for filling and stitching of cement bags	64,000
GST (5.00%)	1,01,883
NAC (0.01%)	2,038
Seigniorages	87,750
Photographic Charges & Contingencies	663
Total	22,30,000

This report and estimate are submitted for review and approval to facilitate the necessary restoration works and to prevent future breaches and mitigate flood risks in the affected areas.

Assistant Executive Engineer
Canal Section
Settipeta

Deputy Executive Engineer
Delta Sub Division
Tadepalligudem

Executive Engineer
G W Division
Nidadavolu

CHECK SLIP TO ACCOMPANY THE PROPOSALS FOR ADMINISTRATIVE SANCTION

- 1) Name of the Project/Source : **Godavari Western Delta System**
- 2) Overall Sanction given, if any : -----
- 3) Nomenclature of the present proposal classification of change and amount : **FDR - Restoration of Yanamadurru Drain Right bank breaches at Km 0.800 in Nandamuru(V) and at Km 4.000 in Arulla(V), Tadepalligudem(M), West Godavari District.**
Estimate Cost: Rs 22.30 Lakhs
- 4) Ayacut contemplated under the proposal : -----
- 5) Cost per acre / Cost benefit ratio : -----
- 6) Cumulative total of all sanctions given under the Schemes : -----
- 7) Details of Cumulative sanction given during the past 3 years in Major, Medium and Minor Irrigation : -----
- 8) Budget provision for the year under the relevant Head of Account : -----
- 9) Spill over commitment as on 1st April, of the Year under Head of Account : -----
- 10) Balance Budget Estimate for the year after the Sanction of the present proposal : -----

Assistant Executive Engineer
Canal Section
Settipeta

Deputy Executive Engineer
Delta Sub Division
Tadepalligudem

Executive Engineer
G W Division
Nidadavolu

A.P.F.C. FORM – 20

Report of Damages of Immovable government property to be sent to Account General

1. Department : **Water Resources Department**
2. Locality : **Nandamuru (V), Tadepalligudem (M), West Godavri (Dist.), 16°50'51"N 81°39'04"E**
- W Description of the property damaged : **Erosion of Yanamadurru drain right bank at Km 0.800 due to overtopping of flood water.**
- 4 Causes of the Damage : **Heavy rains from July 19 to July 21, 2024, in the Yerrakalva catchment area have resulted in significant flooding downstream of the Nandamuru aqueduct. The increased water volume in the Yanamadurru drain right bank at Km 0.800 has caused the banks to overtop and a breach to develop.**
- 5 Book value of the damages position of the property : **Rs 5.00 Lakh (approximately)**
- 6 a) It is proposed to replace or reconstruct the damaged property : **Proposed to reconstruct the damaged property**
b) If so, what is the estimated cost of the replacement or reconstruction : **Rs 20.00 Lakh (approximately for temporary restoration)**
- 7 If it is not proposed to replace of reconstruct the damaged position of the property, what is the amount to the written of the capital value of the damaged property in the account : **Not Applicable**
- 8 What action is being taken to effect the written off if any mentioned as being necessary in item No.7 above : **Not Applicable**
- 9 General Remarks : **Heavy rains from July 19 to July 21, 2024, in the Yerrakalva catchment area have resulted in significant flooding downstream of the Nandamuru aqueduct. The increased water volume in the Yanamadurru drain right bank at Km 0.800 has caused the banks to overtop and a breach to develop.**

Assistant Executive Engineer,
Irrigation Section,
Pentapadu.

Deputy Executive Engineer,
Delta Sub Division,
Tadepalligudem.

Executive Engineer,
GW Division,
Nidadavolu

Report of Damages of Immovable government property to be sent to Account General

1. Department : **Water Resources Department**
2. Locality : **Arulla (V), Tadepalligudem (M), West Godavri (Dist.), 16°49'36"N 81°38'14"E**
- W Description of the property damaged : **Erosion of Yanamadurru drain right bank at Km 4 due to overtopping of flood water.**
- 4 Causes of the Damage : **Heavy rains from July 19 to July 22, 2024, in the Yerrakalva catchment area have resulted in significant flooding downstream of the Nandamuru aqueduct. The increased water volume in the Yanamadurru drain right bank at Km 4.000 has caused the banks to overtop and a breach to develop.**
- 5 Book value of the damages position of the property : **Rs 3.00 Lakh (approximately)**
- 6 a) It is proposed to replace or reconstruct the damaged property : **Proposed to reconstruct the damaged property**
b) If so, what is the estimated cost of the replacement or reconstruction : **Rs 15.00 Lakh (approximately for temporary restoration)**
- 7 If it is not proposed to replace of reconstruct the damaged position of the property, what is the amount to the written of the capital value of the damaged property in the account : **Not Applicable**
- 8 What action is being taken to effect the written off if any mentioned as being necessary in item No.7 above : **Not Applicable**
- 9 General Remarks : **Heavy rains from July 19 to July 22, 2024, in the Yerrakalva catchment area have resulted in significant flooding downstream of the Nandamuru aqueduct. The increased water volume in the Yanamadurru drain right bank at Km 4.000 has caused the banks to overtop and a breach to develop.**

Assistant Executive Engineer,
Irrigation Section,
Pentapadu.

Deputy Executive Engineer,
Delta Sub Division,
Tadepalligudem.

Executive Engineer,
GW Division,
Nidadavolu

Abstract Estimate

Name of Work:-

FDR - Restoration of Yanamadurru Drain Right bank breaches at Km 0.800 in Nandamuru(V) and at Km 4.000 in Arulla(V), Tadepalligudem(M), West Godavari District.

S.No	Item Code	Qty	Unit	Item Description	Rate	Per	Amount
1	MAT-00177	1950.00	Cum	Gravel/Quarry spall	715.83	Cum	1395869
2	IRR-PMW-3-22	1950.00	Cum	Providing homogeneous embankment using soil from approved borrow area in layers of 25 to 30 cm before compaction including cost of all materials, machinery, labour, all operations such as excavation, sorting out, transportation, spreading soil in layer of specified thickness, breaking clods, sectioning, etc., complete with initial lead upto 1 km and all lifts	126.17	Cum	246032
3	IRR-PMW-3-24	1950.00	Cum	Providing homogeneous embankment using soil from approved borrow area in layers of 25 to 30 cm before compaction including cost of all materials, machinery, labour, all operations such as compacting to density control of not less than 90 percent or as stipulated using 2T roller etc., complete with initial lead upto 1 km and all lifts	9.38	Cum	18291
4	IRR-CAW-1-2	288.00	Cum	Excavation in all kinds of soil including boulders upto 0.30 m dia for field channels, seating of embankment for field channels etc., including dressing of bed and sides to required profile, cost of all materials, machinery, labour, placing the excavated stuff for formation of service road / embankment as directed etc., complete with lead upto 10 m and lift upto 3 m.	74.01	Cum	21315
5		1920.00	Rmt	Supply of casurina bullies of size 100 to 150 mm dia at middle of its length (including cost and conveyance to site of work etc complete) Vide Memo No. SE/IC/Elr/DB/ATO: 4/F.SSR. Rates No. 2297SE Dt. 16.5.2014	60.00	Rmt	115200
6		640.00	Sq.mt	Bamboo Thatties (including cost and conveyance to site of work etc complete) Vide Memo No. SE/IC/Elr/DB/ATO: 4/F.SSR. Rates No. 2297SE Dt. 16.5.2014	180.00	Sq.mt	115200
7		480.00	No	Labour charges for sharpening the edges of ballies remove the knots, driving to the required depth and attached the thatties with binding wire etc completed as directed by the Department. Vide Memo No. SE/IC/Elr/DB/ATO: 4/F.SSR. Rates No. 2297SE Dt. 16.5.2014	12.00	No	5760
8	MAT-00023	8000.00	0.00	Supply of empty cement bags including cost and conveyance and labour charges for filling with earth and stitching with country twine and convey with an average lead of 200 mts. Over the initial lead dumping and placing in position etc. completed for the finished item of work as directed by the department. Empty cement bag (SOR Material Item no.23 vide page No. 12)	7.00	0.00	56000
9		8000.00	0.00	Labour charges for filling the HDPE Cement Bags with sand/ earth/ gravel and stitching the bag with country twine etc., and placing the same in position within 100 m, by head load including cost of country twine and nails etc., but excluding the cost and conveyance of material etc., complete (As per SE/ IC/ ELURU Memo. No. SE/IC/Elr/DB/ATO.4/F.SSR Rates/ 2279SE Dated 16.05.2014 - S.L.No.8)	8.00	0.00	64000
Total Estimate contract value							2037666
10	L.S			Provision for seignorage charges		L.S	87750
11	L.S			Provision for GST (5%)		L.S	101883
12	L.S			provision for NAC @ 0.1%		L.S	2038
13	L.S			Photography, Xerox & Contingent Charges		L.S	663
Total Estimate value							2230000

Assistant Executive Engineer
Canal Section

Deputy Executive Engineer
Delta Sub Division

Executive Engineer
G W Division

S.No	Item Code	Qty	Unit	Item Description	Rate	Per	Amount
			Settipeta	Tadepalligudem			Nidadavolu

Name of the work : FDR - Restoration of Yanamadurru Drain Right bank breaches at Km 0.800 in Nandamuru(V) and at Km 4.000 in Arulla(V), Tadepalligudem(M), West Godavari District.

DETAILED ESTIMATE							
S No	Description of Item	No	L	B	D	Quantity	Unit
1	Gravel/Quarry spall	.					
	Yanamadurru right bank at Km 0.800						
	breach	1	15	10	3	450.00	
	bank height rise, both sides of breach	1	200	3.5	1	700.00	
	Yanamadurru right bank at Km 4.000						
	breach	1	18	10	2.5	450.00	
	bank height rise, both sides of breach	1	100	3.5	1	350.00	
					Total	1,950.00	
					Say	1950.00	Cum
2	Providing homogeneous embankment using soil from approved borrow area in layers of 25 to 30 cm before compaction including cost of all materials, machinery, labour, all operations such as excavation, sorting out, transportation, spreading soil in layer of specified thickness, breaking clods, sectioning,etc.,complete with initial lead upto 1 km and all lifts	.					
	Yanamadurru right bank at Km 0.800						
	breach	1	15	10	3	450.00	
	bank height rise, both sides of breach	1	200	3.5	1	700.00	
	Yanamadurru right bank at Km 4.000						
	breach	1	18	10	2.5	450.00	
	bank height rise, both sides of breach	1	100	3.5	1	350.00	
					Total	1,950.00	
					Say	1950.00	Cum
3	Providing homogeneous embankment using soil from approved borrow area in layers of 25 to 30 cm before compaction including cost of all materials, machinery, labour, all operations such as compactingto density control of not less than 90 percent or as stipulated using 2T roller etc., complete with initial lead upto 1 km and all lifts	.					
	Yanamadurru right bank at Km 0.800						
	breach	1	15	10	3	450.00	
	bank height rise, both sides of breach	1	200	3.5	1	700.00	
	Yanamadurru right bank at Km 4.000						
	breach	1	18	10	2.5	450.00	
	bank height rise, both sides of breach	1	100	3.5	1	350.00	
					Total	1,950.00	
					Say	1950.00	Cum

4	Excavation in all kinds of soil including boulders upto 0.30 m dia for field channels, seating of embankment for field channels etc., including dressing of bed and sides to required profile, cost of all materials, machinery, labour, placing the excavated stuff for formation of service road / embankment as directed etc., complete with lead upto 10 m and lift upto 3 m.	.					
	Yanamadurru right bank at Km 0.800	1	18	10	1	180.00	
	Yanamadurru right bank at Km 4.000	1	18	6	1	108.00	
					Total	288.00	
					Say	288.00	Cum
5	Supply of casurina bullies of size 100 to 150 mm dia at middle of its length (including cost and conveyance to site of work etc complete) Vide Memo No. SE/IC/Elr/DB/ATO: 4/F.SSR. Rates No. 2297SE Dt. 16.5.2014	.					
	Yanamadurru right bank at Km 0.800	240	4			960.00	
	Yanamadurru right bank at Km 4.000	240	4			960.00	
					Total	1,920.00	
					Say	1920.00	Rmt
6	Bamboo Thatties (including cost and conveyance to site of work etc complete) Vide Memo No. SE/IC/Elr/DB/ATO: 4/F.SSR. Rates No. 2297SE Dt. 16.5.2014	.					
	Yanamadurru right bank at Km 0.800	2	80		2	320.00	
	Yanamadurru right bank at Km 4.000	2	80		2	320.00	
					Total	640.00	
					Say	640.00	Sq.mt
7	Labour charges for sharpening the edges of ballies remove the knots, driving to the required depth and attached the thatties with binding wire etc completed as directed by the Department.Vide Memo No. SE/IC/Elr/DB/ATO: 4/F.SSR. Rates No. 2297SE Dt. 16.5.2014	.					
	Yanamadurru right bank at Km 0.800	240				240	
	Yanamadurru right bank at Km 4.000	240				240	
					Total	480	
					Say	480	No
8	Supply of empty cement bags including cost and conveyance and labour charges for filling with earth and stitching with country twine and convey with an average lead of 200 mts. Over the initial lead dumping and placing in position etc. completed for the finished item of work as directed by the department.Empty cement bag (SOR Material Item no.23 vide page No. 12)	.					
	Yanamadurru right bank at Km 0.800	4000				4,000	
	Yanamadurru right bank at Km 4.000	4000				4,000	
					Total	8,000	
					Say	8,000	No

9	Labour charges for filling the HDPE Cement Bags with sand/ earth/ gravel and stitching the bag with country twine etc., and placing the same in position within 100 m, by head load including cost of country twine and nails etc., but excluding the cost and conveyance of material etc., complete (As per SE/ IC/ ELURU Memo. No.SE/IC/Elr/DB/ATO.4/F.SSR Rates/ 2279SE Dated 16.05.2014 - S.L.No.8)	.					
	Yanamadurru right bank at Km 0.800	4000				4,000	
	Yanamadurru right bank at Km 4.000	4000				4,000	
	Total					8,000	
					Say	8,000	No

Assistant Executive Engineer
Canal Section
Settipeta

Deputy Executive Engineer
Delta Sub Division
Tadepalligudem

Executive Engineer
G W Division
Nidadavolu

Finished Item Unit Rates

Name of Work:-

FDR - Restoration of Yanamadurru Drain Right bank breaches at Km 0.800 in Nandamuru(V) and at Km 4.000 in Arulla(V), Tadepalligudem(M), West Godavari District.

S.No	Item Code	Item Description	Unit		Unit Rate
1	MAT-00177	Gravel/Quarry spall	Cum		158.50
		Add Lead Charges Gravel	1.00	557.33	
			Cum	(+)	557.33
		Total	Cum		715.83
2	IRR-PMW-3-22	Providing homogeneous embankment using soil from approved borrow area in layers of 25 to 30 cm before compaction including cost of all materials, machinery, labour, all operations such as excavation, sorting out, transportation, spreading soil in layer of specified thickness, breaking clods, sectioning,etc.,complete with initial lead upto 1 km and all lifts	Cum		126.17
		Total	Cum		126.17
3	IRR-PMW-3-24	Providing homogeneous embankment using soil from approved borrow area in layers of 25 to 30 cm before compaction including cost of all materials, machinery, labour, all operations such as compacting to density control of not less than 90 percent or as stipulated using 2T roller etc., complete with initial lead upto 1 km and all lifts	Cum		9.38
		Total	Cum		9.38
4	IRR-CAW-1-2	Excavation in all kinds of soil including boulders upto 0.30 m dia for field channels, seating of embankment for field channels etc., including dressing of bed and sides to required profile, cost of all materials, machinery, labour, placing the excavated stuff for formation of service road / embankment as directed etc., complete with lead upto 10 m and lift upto 3 m.	Cum		74.01
		Total	Cum		74.01
5		Supply of casurina bullies of size 100 to 150 mm dia at middle of its length (including cost and conveyance to site of work etc complete) Vide Memo No. SE/IC/Elr/DB/ATO: 4/F.SSR. Rates No. 2297SE Dt. 16.5.2014	Rmt		60.00
		Total	Rmt		60.00
6		Bamboo Thatties (including cost and conveyance to site of work etc complete) Vide Memo No. SE/IC/Elr/DB/ATO: 4/F.SSR. Rates No. 2297SE Dt. 16.5.2014	Cum		180.00
		Total	Cum		180.00

S.No	Item Code	Item Description	Unit	Unit Rate
7		Labour charges for sharpening the edges of ballies remove the knots, driving to the required depth and attached the thatties with binding wire etc completed as directed by the Department.Vide Memo No. SE/IC/Elr/DB/ATO: 4/F.SSR. Rates No. 2297SE Dt. 16.5.2014	No	12.00
		Total	No	12.00
8	MAT-00023	Supply of empty cement bags including cost and conveyance and labour charges for filling with earth and stitching with country twine and convey with an average lead of 200 mts. Over the initial lead dumping and placing in position etc. completed for the finished item of work as directed by the department.Empty cement bag (SOR Material Item no.23 vide page No. 12)	No	7.00
		Total	No	7.00
9		Labour charges for filling the HDPE Cement Bags with sand/ earth/ gravel and stitching the bag with country twine etc., and placing the same in position within 100 m, by head load including cost of country twine and nails etc., but excluding the cost and conveyance of material etc., complete (As per SE/ IC/ ELURU Memo. No.SE/IC/Elr/DB/ATO.4/F.SSR Rates/ 2279SE Dated 16.05.2014 - S.L.No.8)	No	8.00
		Total	No	8.00

Assistant Executive Engineer
Canal Section
Settipeta

Deputy Executive Engineer
Delta Sub Division
Tadepalligudem

Executive Engineer
G W Division
Nidadavolu

Seignorage Charges Detailed Estimate

Name Of Work:- FDR - Restoration of Yanamadurru Drain Right bank breaches at Km 0.800 in Nandamuru(V) and at Km 4.000 in Arulla(V), Tadepalligudem(M), West Godavari District.								
S. No.	Item Code	Qty	Description of item of Work			Unit Rate	Unit	Amount
1	MAT-00177	1950.00	Gravel/Quarry spall					
			Seignorage Charges on Gravel	1.00	45.00	45.00	Cum	87750.00
			Total:					87750.00
Grand Total:								87750.00

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Nidadavolu

LEAD CHART -2024-25.

Name Of Work:- FDR - Restoration of Yanamadurru Drain Right bank breaches at Km 0.800 in Nandamuru(V) and at Km 4.000 in Arulla(V), Tadepalligudem(M), West Godavari District.

Sl. No.	Name of the Material	Name of the quarry	Lead in KM	Total Conveyence Charges	Deduct initial Conveyence Charges	Net Conveyence Charges
1	Gravel	Chebrolu	35.00	557.33	0.00	557.33

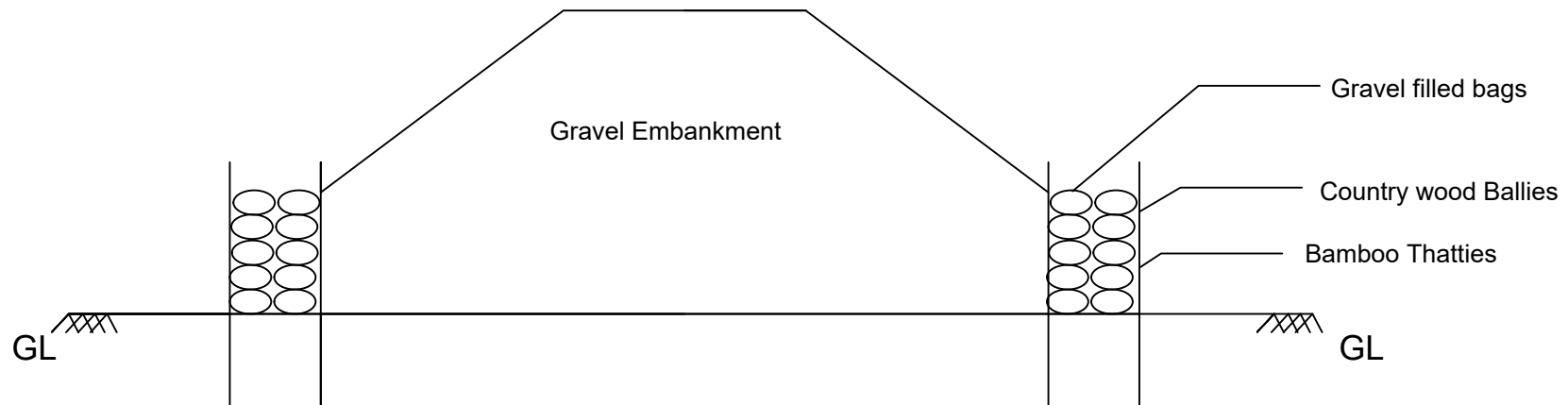
Certificates:

- 1) Certified that the leads provided are correct to the best of my knowledge.
- 2) Certified that the site is inspected by me.
- 3) Certified that the leads are verified by me.
- 4) Certified that the quarry proposed for materials are verified by me with regard to quality, quantity, workability adequacy and correctness of leads.

Assistant Executive Engineer
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Settipeta

Deputy Executive Engineer
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Proposed Resoration of Yanamadurru drain right bank at Km 0.800 and at Km 4.000

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Executive Engineer
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