

GOVERNMENT OF RAJASTHAN

PUBLIC WORKS DEPARTMENT



DETAILED ESTIMATE

UNDER

STATE PLAN

FOR

Name of Road :- Widening and Strengthening of Mahngi To Dudhli mode via Bhawani, Bhawani Khurd, Saipur, Andhi, Sriramnagar, Virasna, Gaonli, Newal, Maksudanpura, Chawandiya Road Km 0/0 to 40/0 (Total 40 Kms.).

Job No. :- 30/5054/RR/P/800/SC/ST/GN/2021-22

Estimated cost :- Rs. 60.00 Crore

Name of Circle :- PWD Rural Circle - Jaipur

Name of Division :- PWD Division - Bassi

Name of Sub Division :- PWD Sub Dn - North Jaipur

EXECUTIVE ENGINEER
P.W.D. DIVISION - BASSI, JAIPUR

TECHNICAL REPORT

1 Name of Work : Widening and Strengthening of Mahngi To Dudhli mode via Bhawani, Bhawani Khurd, Saipur, Andhi, Sriramnagar, Virasna, Gaonli, Newar, Maksudanpura, Chawandiya Road Km 0/0 to 40/0 (Total 40 Kms.).

2 District : Jaipur

3 Location : Km 0/0 (Mahngi) to Km 40/0 (Dudhli mod)

4 Important towns /villages covered :	Name of Town / Village	Chainage	Population
	1 Mahangi	4/400 to 4/600	1978
	2 Bhawani	9/650 to 9/965	869
	3 Bhawani khurd	10/120 to 10/520	1355
	4 Saipur	12/150 to 12/765	1561
	5 Andhi	14/700 to 15/425	7304
	6 Sri Ramnagar	17/990 to 18/590	906
	7 Birasana	20/075 to 20/375	2426
	8 Gaonli	24/700 to 24/980	2339
	9 Newar	27/900 to 28/010	1929
	10 Chawandiya	36/600 to 37/170	4655
	TOTAL		25322

5 Proposed Length of road : 40.00 Km.

6 Assembly Constituencies : Jamwa Ramgarh

7 Name of MLA : Hon'ble Sh Gopal Lal Meena

8 Parliamentary Constituencies : Dausa

9 Name of MP :

10 Existing width (Mtr.) : 3.00 Mtr.

11 Proposed width : Ch. Km. 0/0 to Km. 40/00 - 7.00 mtr,

12 Traffic Details :	CVPD (as per Traffic Census in jan, 2021)	613
	PCU	7061
	Growth Rate	5.00%

13 Reasonis for leaving the adjoining :
reaches :

14 If the proposal is for less than 10 : N.A.
Km then give specific justification

15 Necessity of work

: This is a very important road in Jamwa Ramgarh block. This Road connect directely Bassi NH 21 to Alwar Thanagaji Via Andhi, Pratapgarh & also cross the NH148 Dausa To Manoharpur (Delhi Road).. Two NH connected this road therefore like treated NH after completion.

16 Reference of A&F Sanction

: Dy. Sect. PWD, Rajasthan, Jaipur letter No. F.7 (79)/ A&F/ 2021-22/sec II/ D-49 dated 03.05.21 for Rs. 6000 Lacs
Job No :- 30/5054/RR/P/800/Sc/ST/GN/2021-22

17 Pavement Design

: A. Flexible Deslgned

Flexible pavement designed as per IRC - 37-2018 with initial traffic 613 CVPD (MSa - 10) with growth rate of 5%, and design period of 15 years.

18 Proposals

The Proposal for the reach 0/0 to 40/0 (District Jaipur) are as follows :-

Km 0/0 to 40/0 (Mahangi to Dudhali Mod) - Two lane with GSB Shoulder

S. No	Type of work	Length (In Mtr)	Remark
1	BT work With New road And Raising Portion	40000.00	GSB - 200mm WMM - 250mm DBM - 70mm BC - 40mm
	Total :-	40000.00	

19 Specification

: (A) Flexible Pavement

- (i) GSB - 200mm
- (ii) Base Coarse : WMM 250mm
- (iii) DBM - 70mm
- (iv) BC - 40mm

(B) Shoulders

- (i) 1.0 mtr wide and 150mm thick GSB Shoulder on Both sides of road

(C) Road Furnishing

- (i) Semi-reflectors cautionary, mandatory and informatory sign board as per specification of MoRTH.
- (ii) Erecting typical Citizen's information Board as per approved drawing & specification of MoRTH.
- (iii) Marking Centre Line and stop lines etc. on road as per IRC pattern with thermoplastic paint

20 BSR

: PWD Rural Circle, Jaipur Road BSR April, 2019 and NH BSR 2019 With Corrigendum.

21 Estimated Cost

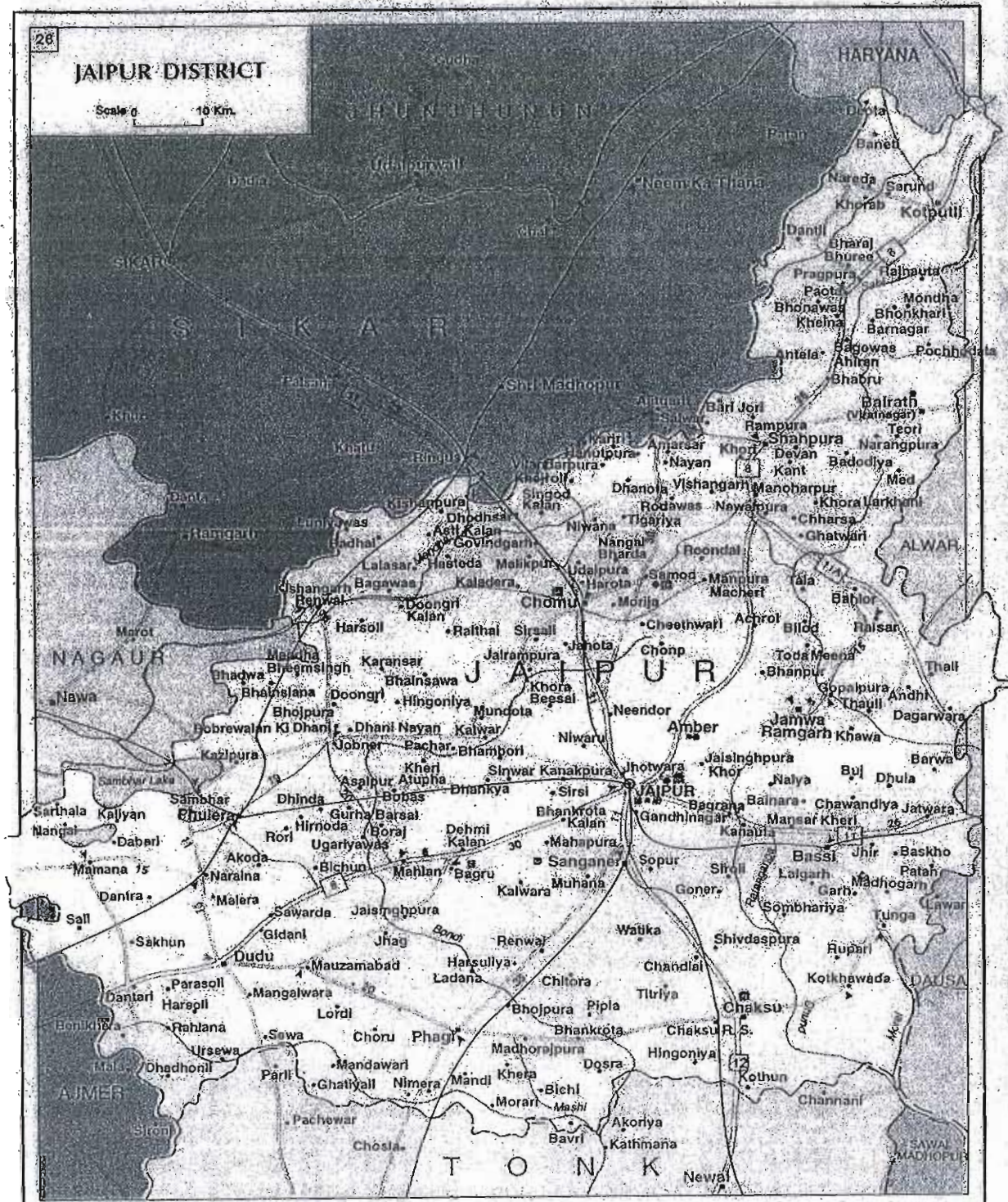
: Rs. 60.00 Crore


Assistant Engineer
PWD Sub Dn. – North
Jaipur


Executive Engineer
P.W.D. Dn- Bassi,
Jaipur

Name of Work :-Widening and Strengthening of Mahngi To Dudhli mode via Bhawani, Bhawani Khurd, Saipur, Andhi, Sriramnagar, Virasna, Gaonli, Newal, Maksudanpura, Chawandiya Road Km 0/0 to 40/0 (Total 40 Kms.).

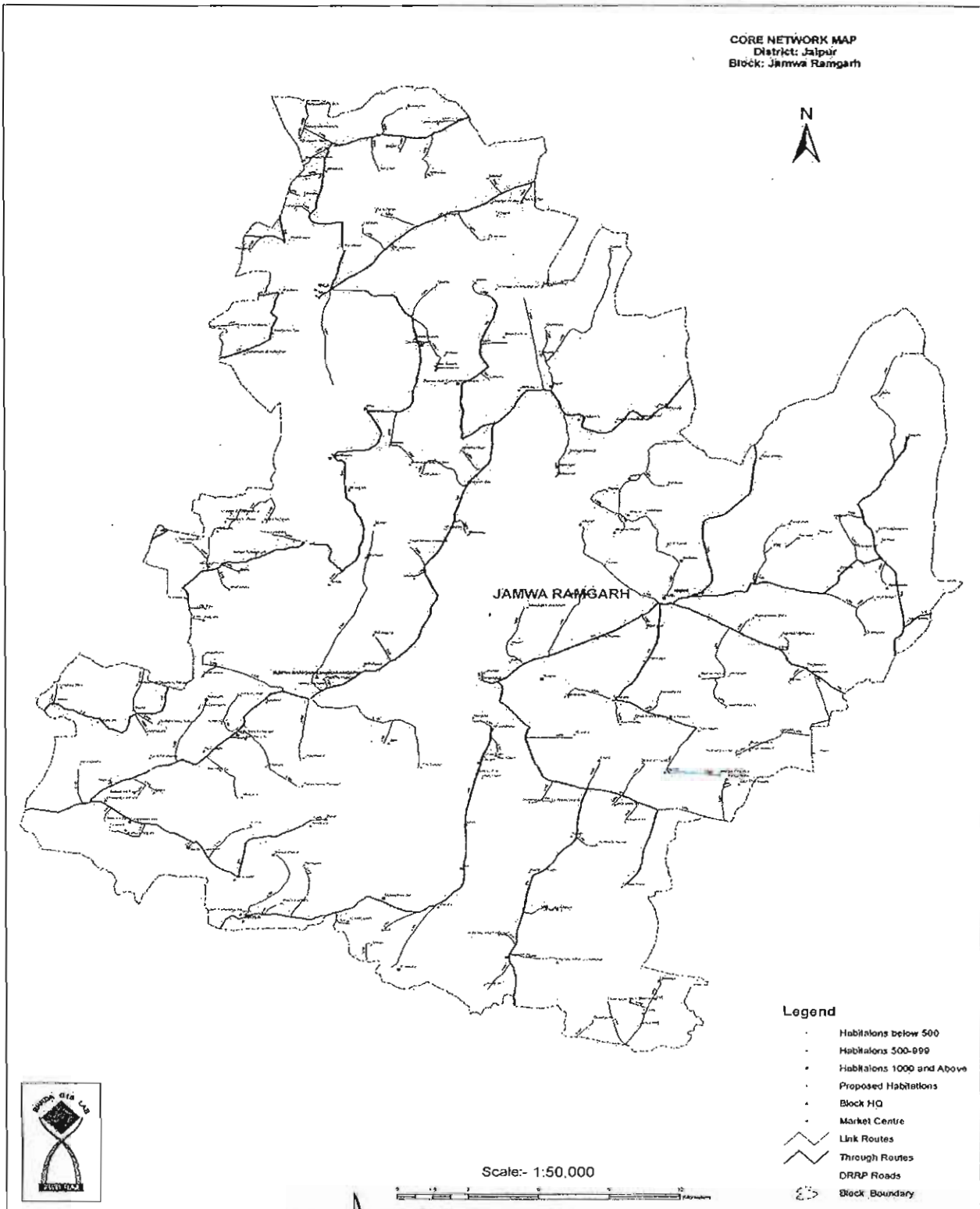
DISTRICT MAP



[Signature]
Assistant Engineer
PWD Sub Dn. – North
Jaipur

Executive Engineer
P.W.D. Dn- Bassi,
Jaipur

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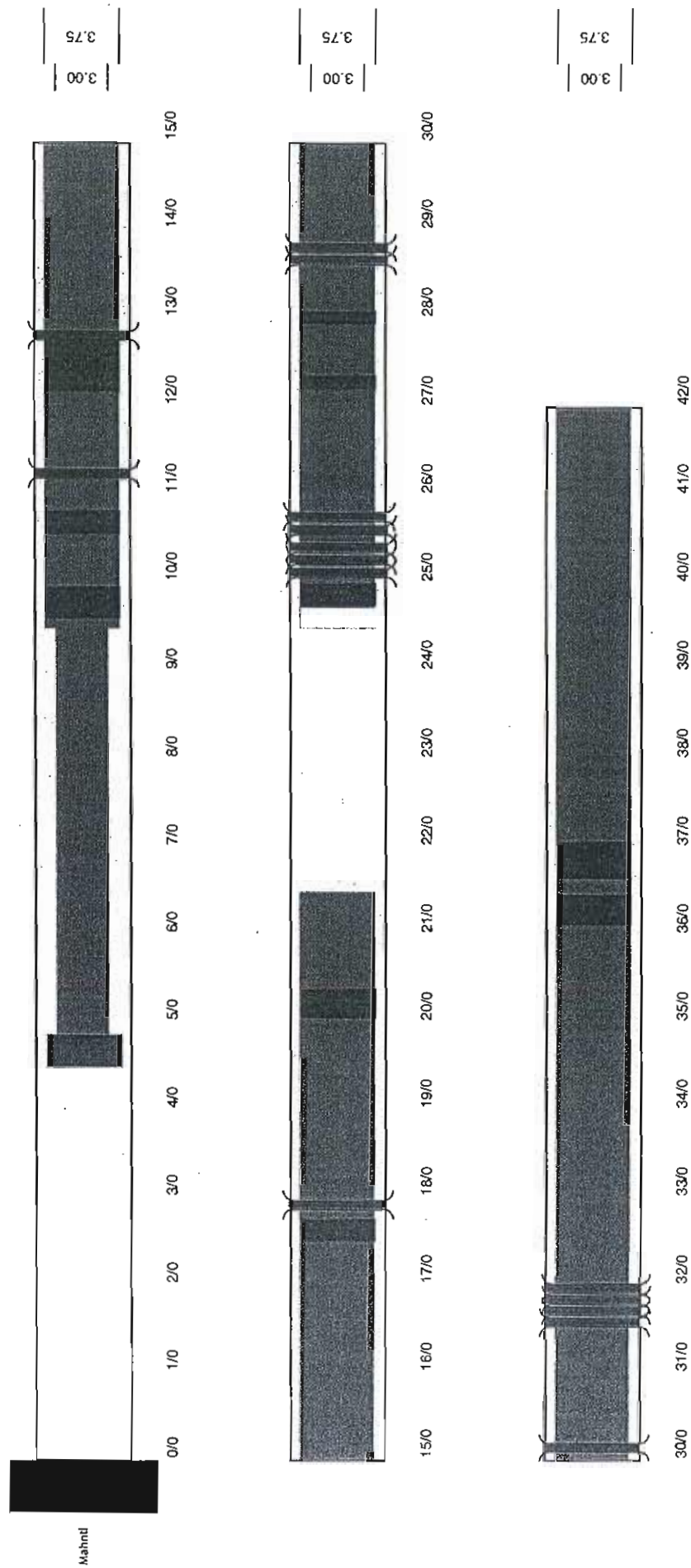


Assistant Engineer
PWD Sub Dn. – North
Jaipur

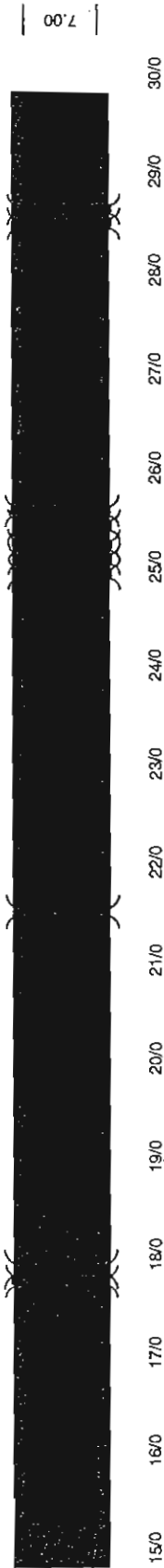
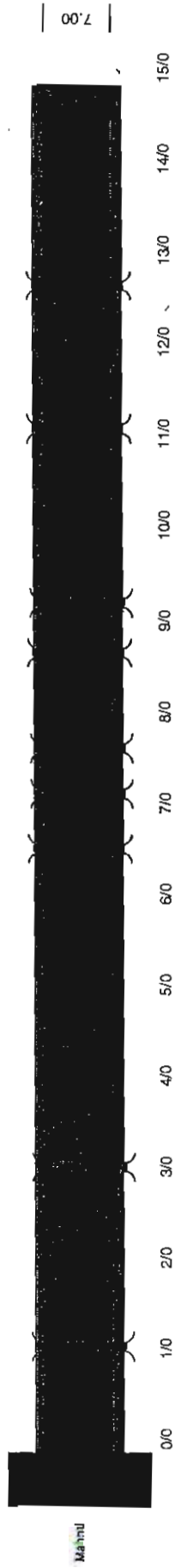
Executive Engineer
P.W.D. Dn- Bassi,
Jaipur

Name of Work :- Widening and Strengthening of Mahngi To Dudhli mode via Bhawani, Bhawani Khurd, Saipur, Andhi, Sriramnagar, Virasna, Gaonli, Newal, Maksudanpura, Chawandiya Road Km 0/0 to 40/0 (Total 40 Kms.).

INDEX MAP (Not to Scale)



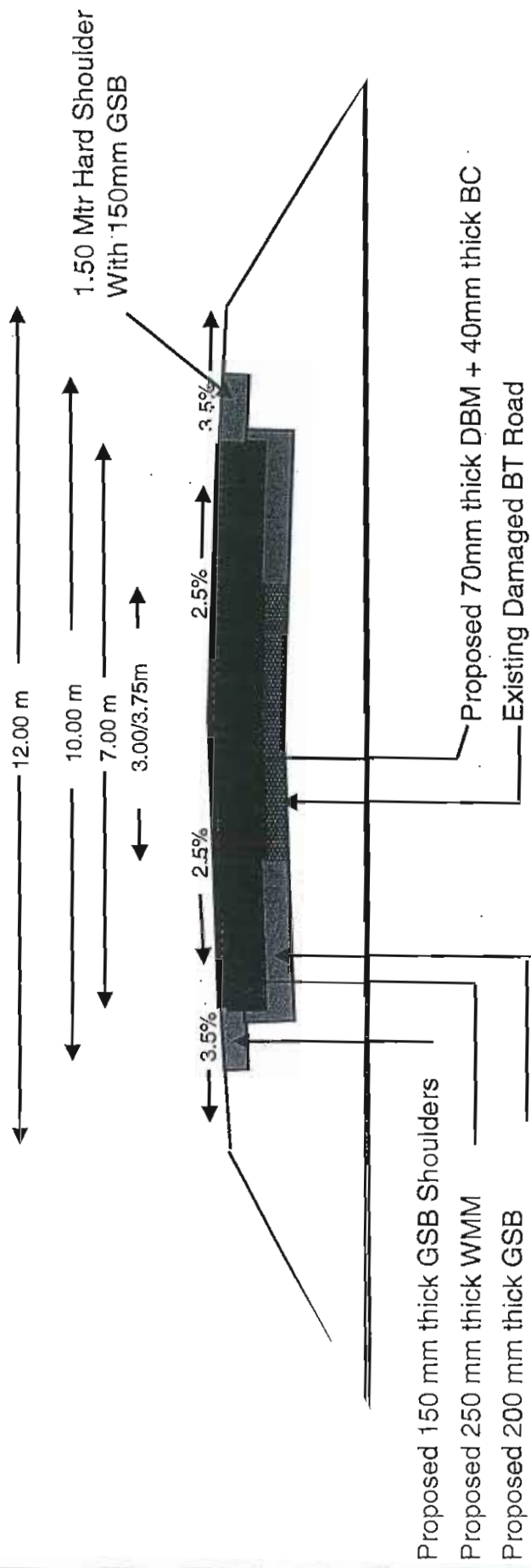
PROPOSED



- INDEX :-
- Proposed BT
 - Existing Dmged BT
 - Proposed / Good C.C.
 - Existing Dmged C.C.
 - GSB Shoulder
 - HPC / FCW

(Signature)
 Assistant Engineer
 PWD Sub Dn. - North
 Jaipur

Executive Engineer
 P.W.D. Dn- Bassi,
 Jaipur



TYPICAL CROSS SECTION FOR BT ROAD (FOR WIDENING PORTION)

[Signature]

Assistant Engineer
PWD Sub Dn. - North
Jaipur

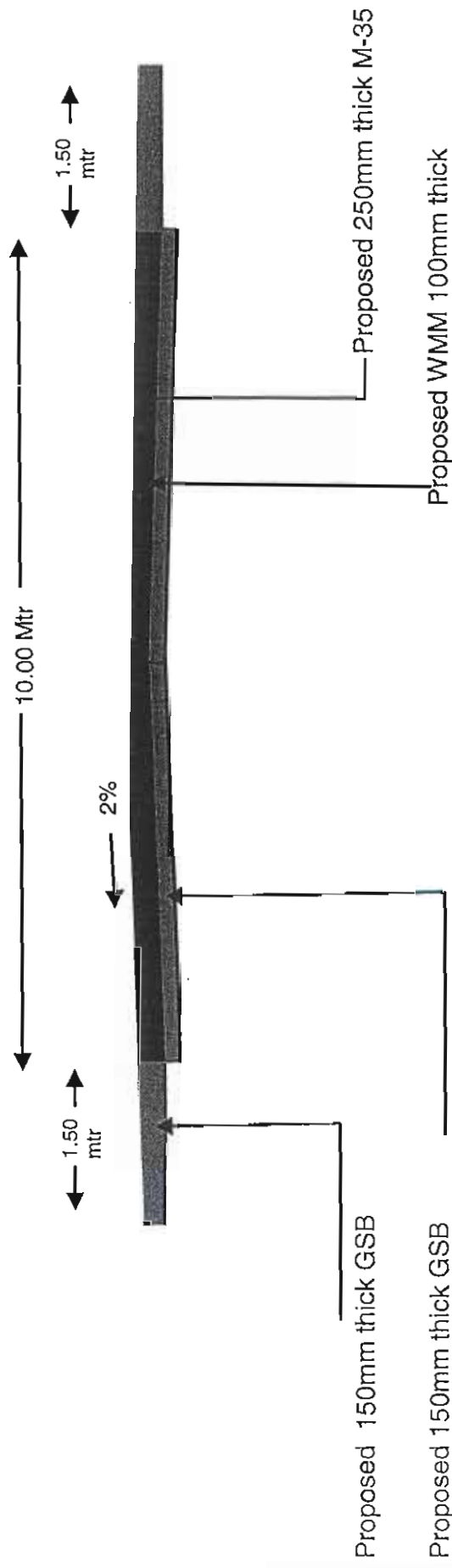
Executive Engineer
P.W.D. Dn- Bassi,
Jaipur

[illegible]

[Signature]

**Executive Engineer
P.W.D. Dn- Bassi,
Jaipur**

Name of Work :- Widening and Strengthening of Mahngi To Dudhli mode via Bhawani Khurd, Saipur, Andh
Sriramnagar, Virasna, Gaonli, Newal, Maksudanpura, Chawandiya Road Km 0/0 to 40/0 (Total 40 Kms.).

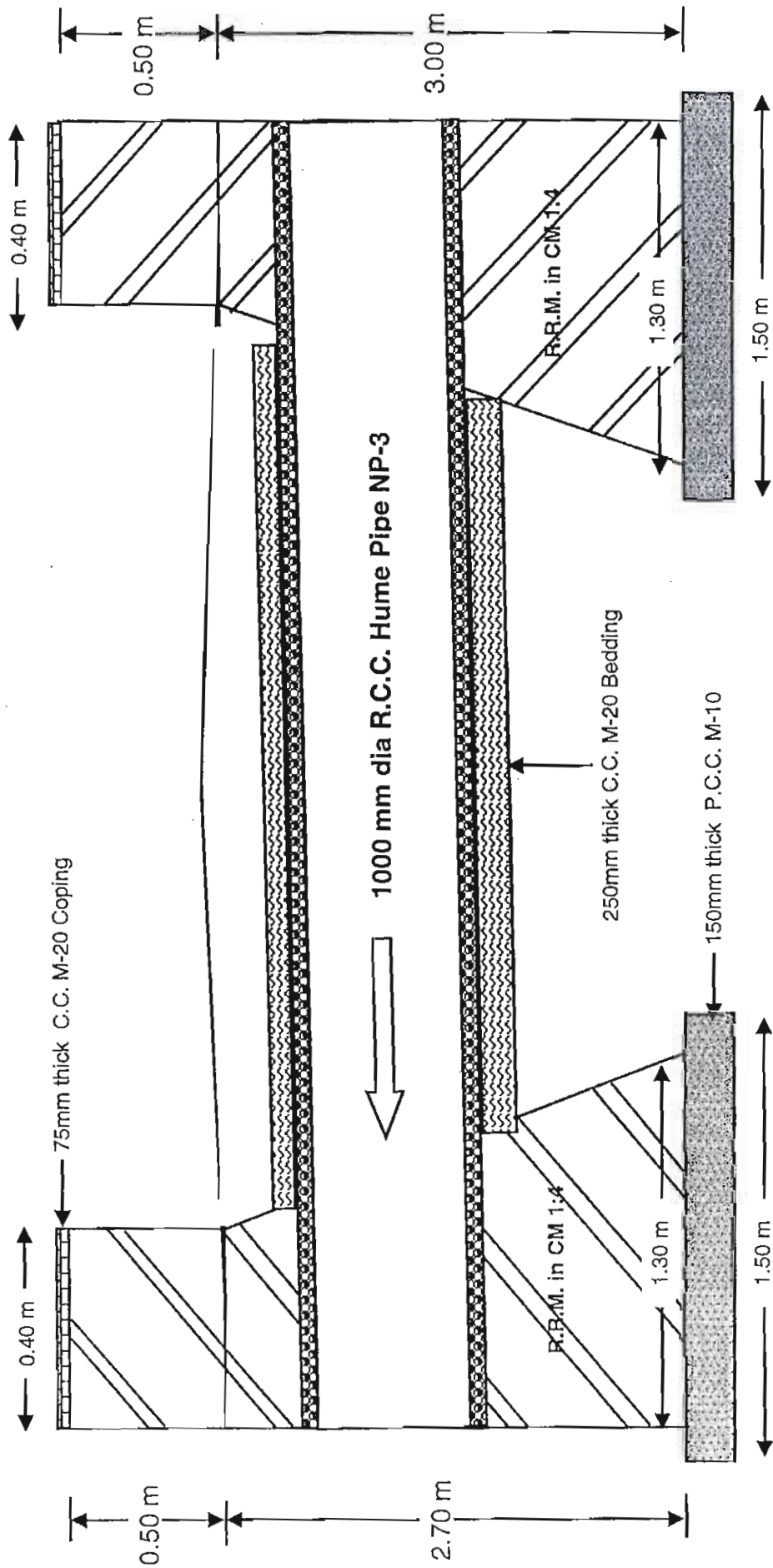


TYPICAL X- SECTION OF C.C. PAVEMENT

Assistant Engineer
PWD Sub Dn. – North
Jaipur

Executive Engineer
P.W.D. Dn- Bassi,
Jaipur

12.50 m



TYPICAL X - SECTION OF R.C.C. HUME PIPE CULVERT

Assistant Engineer
PWD Sub Dn. – North

Executive Engineer
P.W.D. Dn- Bassi,

Name of Work : Name of Work :-Widening and Strengthening of Mahngi To Dudhli mode via Bhawani, Bhawani Khurd, Saipur, Andhi, Sriramnagar, Virasna, Gaonli, Newal, Maksudanpura, Chawandiya Road Km 0/0 to 40/0 (Total 40 Kms.).

CERTIFICATE FOR CORRECTNESS OF ESTIMATE

Certified that I/We have checked Estimate of above work as per Rates based on Rural Circle, Jaipur Road BSR June 2019 Road work, The rates, nomenclature & calculations checked by me and found correct.



Assistant Engineer
PWD Sub Dn. – North
Jaipur



Executive Engineer
P.W.D. Dn- Bassi,
Jaipur

SCOPE OF WORK

Name of Work :- Widening and Strengthening of Mahngi To Dudhli mode via Bhawani, Bhawani Khurd, Sajpur, Anahli, Srimannagar, Virasna, Gaonli, Newal, Maksudanpura, Chawandiyas Road Km 0.0 to 40.0 (Total 40 Kms.).

S. No.	Challange		Length	Existing Surface Type	Existing Work				Proposed Work										Box culvert 2.0x2.0	Box culvert 2.5x2.0	Remark	
					Track	BT 3.0 mtr	BT 3.75 mtr	Existing CC 3.75 mtr	FCW CC	New BT 7.0	Widening 3.00 to 7.00	Widening 3.75 to 7.00	Raising/ Cutting	New CC 7.0	Widening CC 7.0	HPC	New FCW	VENTED CAUSEWAY AY				Widening FCW CC
1	0	to	1800	Track	1800.00						1800.00									1800 1775	1100 1350	
2	1800	to	2000	Track	200.00									200								
3	2000	to	2120	Track	120.00						120.00									2075		
4	2120	to	2650	Track	530.00									530								
5	2650	to	3250	Track	600.00						600.00									2900	3150	
6	3250	to	3800	Track	550.00									550								
7	3800	to	4400	Track	600.00						600.00											
8	4400	to	4500	Track	100.00									100								
	4500	to	4530	cc					30									30				nahangi
9	4530	to	4680	CC				150														
10	4680	to	4750	BT		70								70								
11	4750	to	5000	BT		250					250.00									4975		
12	5000	to	5350	BT		350																
13	5350	to	6100	BT		750																
14	6100	to	7025	BT		925					925.00											
15	7025	to	7275	BT		250																
16	7275	to	8375	BT		1100					1100.00									7875		
17	8375	to	8435	CC					80									80				
18	8435	to	8450	BT		15					15.00											
19	8450	to	8600	BT		150																
20	8600	to	8725	BT		125					125.00											
21	8725	to	8755	BT		30												30				
22	8755	to	9250	BT		495					495.00											
23	9250	to	9550	BT		300								300								
24	9550	to	9650	BT		100																
25	9650	to	9715	BT			65				100.00											
26	9715	to	9965	CC				250			65.00											
27	9965	to	10130	BT			165															Bhawari
28	10130	to	10225	BT			85															9965 Canal
29	10225	to	10385	CC				160														Bhawari Khurd
30	10385	to	11230	BT			845					845										
31	11230	to	11280	CC					80									80				

S. No.	Chainage		Existing Surface Type	Existing Work				Proposed Work								Box culvert 2022.0	Box culvert 2022.0	Remark
				Track	BT 3.0 mtr	BT 3.75 mtr	Exsting CC 3.75 mtr	FOW CC	New BT 7.0	Widening 3.00 to 7.00	Widening 3.75 to 7.00	Raising/ Curbing	New CC 7.0	Widening CC 7.0	HPC	New/ FOW	VENTED CAUSEWAY	Widening FOW CC
32	11200	to 11950	BT			660						660			11400= 2x1000			
33	11950	to 12500	CC				550							550				Sdgur
34	12500	to 12750	BT			250							250					
35	12750	to 12765	CC					15										
36	12765	to 13375	BT			610						610					15	
37	13375	to 14625	BT			1250				1250.00								13375
38	14625	to 15425	BT			800							800					
39	15425	to 16075	BT			650				650.00					1			
40	16075	to 17500	BT			1425						1425						16075
41	17500	to 17600	BT			100							100					
42	17600	to 17740	CC				140							140				
43	17740	to 17865	BT			225							225					
44	17865	to 17895	Stone FOW				30									30		
45	17895	to 18250	BT			255							255		18250= 1x1000			
46	18250	to 19600	BT			1350						1350			18415 = 1x1000			
47	19600	to 20180	BT			590							590		20100= 1x1000			
48	20180	to 20380	CC				190							190				
49	20380	to 21675	BT			1285				1285.00								
50	21675	to 22700	TRACK	1025					1025.00								21725	
51	22700	to 22820	TRACK	120									120					
52	22820	to 23950	TRACK	1130					1130.00								22575	
53	23950	to 24350	TRACK	400														23150
54	24350	to 24625	TRACK	275					275.00								400	
55	24625	to 24800	CC				275							275				
56	24800	to 24980	BT			90							90					
57	24980	to 25020	CC					30									30	
58	25020	to 25150	BT			130								130				
59	25150	to 25180	CC					30										1
60	25180	to 25280	BT			110							110					
61	25280	to 25320	CC					30										1
62	25320	to 25470	BT			150							150					
63	25470	to 25530	CC					80									80	
64	25530	to 25580	BT			130						130						

S. No.	Chainage		Length	Existing Surface Type	Existing Work				Proposed Work										Box culvert 2.0x2.0	Box culvert 1.5x1.5	Box culvert 2x2x2.0	Remark
	Track	BT 3.0 mtr			BT 3.75 mtr	Existing CC 3.75 mtr	FCW CC	New BT 7.0	Widening 3.0 to 7.0	Widening 3.75 to 7.0	Raising/Cutting	New CC 7.0	Widening CC 7.0	HPC	New FCW	VENTED CAUSEWAY AY	Widening FCW/CC					
65	25660	to	25675	15.00	CC					15							15					
66	25675	to	25800	125.00	BT		125					125.00										
67	25800	to	26050	250.00	BT		250							250								
68	26050	to	26240	190.00	BT		190					190.00								NEWAR		
69	26240	to	26470	230.00	BT		230							230								
70	26470	to	27243	773.00	BT		773							773								
71	27243	to	27318	75.00	CC				75							75						
72	27318	to	27525	207.00	BT		207						207.00									
73	27525	to	27625	100.00	BT		100							100								
74	27625	to	27775	150.00	BT		150						150.00			205						
75	27775	to	27980	205.00	CC				205													
76	27980	to	28600	620.00	BT		620							620								
77	28600	to	28630	30.00	CC				30													
78	28630	to	28740	110.00	BT		110						110.00									
79	28740	to	28800	160.00	CC				160							160				NEWAR		
80	28800	to	29750	850.00	BT		850						850.00									
81	29750	to	29780	30.00	CC					30				30								
82	29780	to	30050	270.00	BT		270						270.00					28760				
83	30050	to	30100	50.00	CC					50												
84	30100	to	31360	1260.00	BT								1260.00									
85	31360	to	31380	30.00	CC					30				30					31370			
86	31380	to	31450	60.00	BT		60							60								
87	31450	to	31480	30.00	CC					30				30					31460			
88	31480	to	31780	310.00	BT		310							310								
89	31780	to	31820	30.00	CC					30				30								
90	31820	to	31870	50.00	BT		50							50						Chawandi ya		
91	31870	to	31900	30.00	CC					30				30								
92	31900	to	32045	145.00	BT									145								
93	32045	to	32525	480.00	CC				480							480						
94	32525	to	32575	50.00	BT		50								50							
95	32575	to	34065	3480.00	BT		3460							3480								
96	34065	to	34400	335.00	CC				335													
97	34400	to	35515	1115.00	BT		115						115.00									
98	35515	to	37085	570.00	CC				570							570						
99	37085	to	37700	615.00	BT		615						615.00									

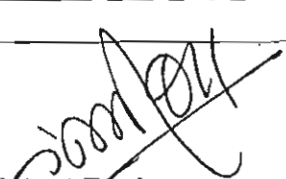
S. No.	Chainage		Length	Existing Surface Type	Existing Work					Proposed Work										Box culvert 2.0x2.0	Box culvert 2.0x2.0	Box culvert 1.5x1.5	Box culvert 2.0x2.0	Remark																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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2000/1/22/2

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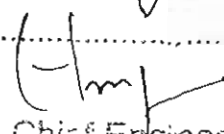
GENERAL ABSTRACT

S. No.	Item	Amount
1	Part : A : Road Work	268239037.00
2	Part: B : Cement Concrete Pavement	136685621.00
3	Part: C : Road Furniture	9678902.00
4	Part: D :HPC	1619394.00
5	Part: E :Flush Causeway	6480439.00
6	Part: F :Protection Wall	6666867.00
8	Part: G :Vented Causeway(90 Row) Banganga River	40941677.00
9	Part: H :Vented Causeway(60 Row)	19565016.00
10	Part: I :Vented Causeway(30 Row)	6385422.00
11	Part : J :RCC BOX Culvert 1.5x1.5	12075351.00
12	Part : K : RCC BOX Culvert 2.0X2.0	7447849.00
13	Part : L : RCC BOX Culvert 2x2.0X2.0	3286396.00
Total :-		519071971.00
Add. : 1% for Q.C. Charges :-		5190720.00
Add. : 1.5% for Contingency Charges		7786080.00
Add. : 13% for Prorata Charges		67479356.00
Add For Utility Shifting		500000.00
Total		600028127.00
Say		Rs. 60.00 Crore


Assistant Engineer
PWD Sub Dn. – North
Jaipur


Executive Engineer
P.W.D. Dn- Bassi,
Jaipur


Superintending Engineer
PWD Rural Circle,
Jaipur

No. <u>264</u>	Dated <u>25/05/21</u>
Technically Sanctioned for Rs. <u>6000.00</u> Lacs	
In words <u>Six thousand lacs only.</u>	
	
Addl. Chief Engineer PWD Zone II Jaipur	

ABSTRACT

Name of Work :-Widening and Strengthening of Mahngi To Dudhli mode via Bhawani, Bhawani Khurd, Saipur, Andhi, Sriramnagar, Virasna, Gaonli, Newal, Maksudanpura, Chawandiya Road Km 0/0 to 40/0 (Total 40 Kms.).

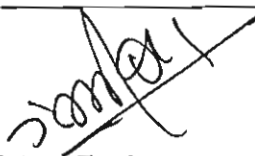
Part : A : Road Work

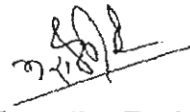
S. No.	BSR No.	Item	Qty.	Unit	Rate	Amount
1	2.2 II B	Clearing and grubbing road land including uprooting wild vegetation, grass, bushes, shrubs, saplings and trees of girth upto 300 mm, removal of stumps of such trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned, upto a lead of 1000 m including removal and disposal of top organic soil not exceeding 150 mm in thickness as per MoRTH Specification Clause 201.By Mechanical Means In area of non-thorny jungle	25.20	P.Hect	12402.00	312530.00
2	2.14 (II) A	Dismantling of flexible pavements and disposal of dismantled materials upto a lead of 100 m, stacking serviceable and unserviceable materials separately as per MoRTH Specification Clause 202 By Mechanical Means Bituminous Courses	1090.50	P.Cum.	157.00	171209.00
3	3.5 (II)	Excavation for roadway in soil by mechanical means including cutting and pushing the earth to site of embankment upto a distance of 100 m, including trimming bottom and side slopes in accordance with requirements of lines, grades and cross-sections.	30727.44	P.Cum.	24.00	737459.00
	3.4.1	Construction of embankment with approved material obtained from borrow pits with a lift upto 1.5 m, transporting to site, spreading, grading to required slope and compacting to meet requirement of Tables 300-1 and 300-2 with a lead upto 1000 m as per MoRTH Specification Clause 305.3	168862.67	P.Cum	118.00	19925795.00

S. No.	BSR No.	Item	Qty.	Unit	Rate	Amount
	3.8 (ii)	Excavation for roadway in ordinary rock by deploying a dozer D-50 including cutting and pushing the cut earth to site of embankment upto a distance of 100 m (average lead 50 m), trimming bottom and side slopes in accordance with the requirements of lines, grades and cross-sections with lift upto 1.5 m.	18050.28	P.Cum	30.00✓	541508.00
	3.9 i	Excavation for roadway in hard rock (requiring blasting) by drilling, blasting and breaking, trimming of bottom and side slopes in accordance with requirements of lines, grades and cross-sections, loading and disposal of cut rock with a lift upto 1.5 m and leads upto 1000 m as per MoRTH Specification Clause 301.3.5	1805.00	P.Cum	175.00✓	315875.00
4	4.2 (i)	Providing laying spreading and compacting specified graded sand, gravel (crushed stone) as per Table 400-1,400-2 or any other course material as per design mix, as per CBR in sub base course including premixing the material at OMC in wet mix plant, carriage of mixed material spreading in uniform layers with motor grader F.E loader on a prepared base and compacting with vibratory roller to achieve desired density (as per I.S.2720) including all material, labor, machinery, lighting guarding, barricading and maintenance of diversion complete.[MoRTH specification : Clause 401]. By mechanical means.For Grading-I Material	36206.02	P.Cum	802.00✓	29037230.00
5	4.1 (A) (iii)	Construction of granular sub-base by providing well graded material, spreading in uniform layers with Tractor Mount Grader on prepared surface, mixing by mix in place method with rotavator at OMC, and compacting with smooth wheel roller to achieve the desired density, complete as per MoRTH Specification Clause 401 For Grading III Material	9356.10	P.Cum	415.00✓	3882782.00

S. No.	BSR No.	Item	Qty.	Unit	Rate	Amount
6	4.44 (18.3)	Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the material with water at OMC in mechanical mixer (Pug Mill), carriage of mixed material by tipper to site, laying in uniform layers in sub-base/base course on a well prepared sub-base and compacting with smooth wheel roller of 80 to 100kN weight to achieve the desired density including lighting, barricading and maintenance of diversion, etc as per Tables 400-12 & 400-13 and MoRTH Specification Clause 406 By Mechanical Means with ^{21.20 30} 24 km lead	50621.33	P.Cum	1240.00	62770443.00
7	5.1 (0)	Providing and applying primer coat with bitumen emulsion (SS-1) on prepared surface of granular base(WBM/WMM) including cleaning of road surface and spraying primer at the rate of 0.70-1.0 kg/sqm using mechanical means as per MoRTH Specification Clause 502	218309.00	P.Sqm	23.00	5021107.00
8	5.2 (0)	Providing and applying tack coat with Bitumen emulsion (RS-1) using emulsion distributor at the rate of 0.20 to 0.30 kg per sqm on the prepared bituminous surface cleaned with Hydraulic broom as per MoRTH Specification Clause 503.	218309.00	P.Sqm	7.00	1528163.00
9	16.16	Providing and laying dense graded bituminous macadam with 100-120 TPH batch type HMP producing an average output of 75 tones per hour using crushed aggregates of specified grading, premixed with bituminous binder @ 4.0 to 4.5 per cent by weight of total mix and filler, transporting the hot mix to work site, laying with a hydrostatic paver finisher with sensor control to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRTH Specifications Clause 505 complete in all respects Grading - II (19 mm (Nominal Size)))Bitumen (VG-30)	15281.63	P.Cum	5663.00	86539871.00

S. No.	BSR No.	Item	Qty.	Unit	Rate	Amount
10	16.17.5	Providing and laying bituminous concrete with 100-120 TPH batch type hot mix plant producing an average output of 75 tonnes per hour using crushed aggregates of specified grading, premixed with bituminous binder @ 5.4 to 5.6 per cent of mix and filler, transporting the hot mix to work site, laying with a hydrostatic paver finisher with sensor control to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRTH Specifications Clause 507 complete in all respects for Grading-II(13 mm nominal size) Bitumen (VG-30)	8732.36	P.Cum	6551.00	57205690.00
11	9.3 (E)	Providing and laying reinforced cement concrete pipe NP3 for culverts on first class bedding of granular material in single row including fixing collar with cement mortar 1:2 but excluding excavation, protection works, backfilling, concrete and masonry works in head walls and parapets Clause 2905. 300 mm dia	375.00	P.Rmt	665.00	249375.00
Total A :-						268239037.00


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ABSTRACT

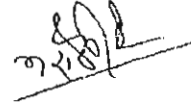
Name of Work :-Widening and Strengthening of Mahngi To Dudhli mode via Bhawani, Bhawani Khurd, Saipur, Andhi, Sriramnagar, Virasna, Gaonli, Newal, Maksudanpura, Chawandiya Road Km 0/0 to 40/0 (Total 40 Kms.).

Part : B : Cement Concrete Pavement

S. No.	BSR No.	Item	Qty.	Unit	Rate	Amount
1	3.5 (iii)	Excavation for roadwork in soil with hydraulic excavator of 0.9 cum bucket capacity including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross-sections, and transporting to the embankment location with a lift upto 1.5 m and lead upto 1000 m as per MoRTH Specification Clause 301.3	6625.00	P.Cum	31.00	205375.00
2	4.2 (i)	Providing laying spreading and compacting specified graded sand, gravel (crushed stone) as per Table 400-1,400-2 or any other course material as per design mix, as per CBR in sub base course including premixing the material at OMC in wet mix plant, carriage of mixed material spreading in uniform layers with motor grader F.E loader on a prepared base and compacting with vibratory roller to achieve desired density (as per I.S.2720) including all material, labor, machinery, lighting guarding, barricading and maintenance of diversion complete.[MoRTH specification : Clause 401]. By mechanical means.For Grading-I Material	5758.47	P.Cum	802.00	4618293.00
3	4.1 (A) (iii)	Construction of granular sub-base by providing well graded material, spreading in uniform layers with Tractor Mount Grader on prepared surface, mixing by mix in place method with rotavator at OMC, and compacting with smooth wheel roller to achieve the desired density, complete as per MoRTH Specification Clause 401 For Grading III Material	2982.90	P.Cum	415.00	1237904.00
4	4.60	Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the material with water at OMC in mechanical mixer (Pug Mill), carriage of mixed material by tipper to site, laying in uniform layers in sub-base/base course on a well prepared sub-base and compacting with smooth wheel roller of 80 to 100kN weight to achieve the desired density including lighting, barricading and maintenance of diversion, etc as per Tables 400-12 & 400-13 and MoRTH Specification Clause 406 By Mechanical Means with 24 km lead	8679.85	P.Cum	1240.00	10763014.00
5	2.15	Dismantling of cement concrete pavements by mechanical means using pneumatic tools breaking to pieces not exceeding 0.02 cum in volume and stock piling at designated locations and disposal of dismantled materials upto a lead of 1000 m, stacking serviceable and unserviceable materials separately	105.00	P.Cum	605.00	63525.00

S. No.	BSR No.	Item	Qty.	Unit	Rate	Amount
6	6.5	Construction of un-reinforced, dowel jointed, plain cement concrete pavement over a prepared sub base with 43 grade cement @ 400 kg per cum, coarse and fine aggregate conforming to IS 383, maximum size of coarse aggregate not exceeding 25 mm, mixed in a batching and mixing plant as per approved mix design, transported to site, laid with a slip form paver, spread, compacted and finished in a continuous operation including provision of contraction, expansion, construction and longitudinal joints, joint filler, separation membrane, sealant primer, joint sealant, debonding strip, dowel bar, tie rod, admixtures as approved, curing compound, finishing to lines and grades as per drawing as per MoRTH Specification Clause 602 should have minimum Flexural strength of 4.5 Mpa M - 40 grade concrete	17400.25	P.Cum	6880.00	119713720.00
7	9.3 (E)	Providing and laying reinforced cement concrete pipe NP3 for culverts on first class bedding of granular material in single row including fixing collar with cement mortar 1:2 but excluding excavation, protection works, backfilling, concrete and masonry works in head walls and parapets Clause 2905. 300 mm dia	126.00	P.Rmt	665.00	83790.00
					Total A :-	136685621.00


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ABSTRACT

Name of Work :- Widening and Strengthening of Mahngi To Dudhli mode via Bhawani, Bhawani Khurd, Saipur, Andhi, Sriramnagar, Virasna, Gaonli, Newal, Maksudanpura, Chawandiya Road Km 0/0 to 40/0 (Total 40 Kms.).

Part : C : Furniture Work

S. No.	BSR No.	Description of Item	Quantity	Unit	Rate (Rs)	Amount (Rs)
1	2	3	4	5	6	7
1	10.1	Reinforced cement concrete M15 grade kilometre stone/local stone of standard design as per IRC:8 fixing in position including painting and printing, etc as per drawing and MoRTH Specification Clause 801				
1.1	(i)	5th Kilometre Stone (precast)	8	Each	2427.00	19416.00
1.2	(ii)	Ordinary Kilometer Stone (Precast)	33	Each	1439.00	47487.00
1.3	(iii)	200 m stone (precast)	160	Each	339.00	54240.00
2	10.2 (A) (i)	Providing and fixing of retro-reflectorised cautionary, mandatory and informatory sign as per IRC:67 made of encapsulated lens type reflective sheeting vide Clause 801.3.1 fixed over aluminium sheeting, 1.5 mm thick supported on a mild steel angle iron post 75 mm x 75 mm x 6 mm firmly fixed to the ground by means of properly designed foundation with M15 grade cement concrete 450 mm x 450 mm x 600 mm, 600 mm below ground level as per drawings and MoRTH Specification Clause 801. 900 mm equilateral triangle	50	Each	4772.00	238600.00
3	10.3 A i	Providing and erecting direction and place identification retro-reflectorised sign as per IRC:67 made of encapsulated lens type reflective sheeting vide Clause 801.3.1. fixed over aluminium sheeting, 2 mm thick with area not exceeding 0.9 sqm supported on a mild steel single angle iron post 75 x 75 x 6 mm firmly fixed to the ground by means of properly designed foundation with M-15 grade cement concrete 450 x 450 x 600 mm, 600 mm below ground level as per approved drawing and MoRTH Specification Clause 801. Direction and Place Identification signs upto 0.9 sqm size board	27.00	P.Sqm	10968.00	296136.00

ABSTRACT

Name of Work :-Widening and Strengthening of Mahngi To Dudhli mode via Bhawani, Bhawani Khurd, Saipur, Andhi, Sriramnagar, Virasna, Gaonli, Newal, Maksudanpura, Chawandiya Road Km 0/0 to 40/0 (Total 40 Kms.).

Part : C : Furniture Work

S. No.	BSR No.	Description of Item	Quantity	Unit	Rate (Rs)	Amount (Rs)
1	2	3	4	5	6	7
4	10.22	Providing and fixing Mukhya Mantri Sadak Yojana/ Mahatma Gandhi Rajya Sadak Yojana informatory sign board with logo for roads funded by State road fund having M.S. Definition plate of 1.60 mm thickness frame to steel hollow dsection of 75mm x 75mm, 2.5m long stove enamelled paint with hold fast including paint logo as per approved design and colours. The logo shall be made out of 1.6mm thick circular plate duly framed with MS angle 25x25x5 mm on back and fix on 1200mm x 150mm rectangular steel base plate 1.6mm thick, the base of circular shall be plain at the junction of base plate. The size of definition plate shall be 1500x600mm and embedding the posts by M-15 cement concrete block 45 cm x 45 cm x 60 cm, 60 cm below ground level including lettering / writing and painting etc. complete in all respect.as per MoRTH Specification Clause 801.	1	Each	7774.00	7774.00
5	10.25	Providing and Erecting typical Citizen's information Board as per approved drawing & specification made of two MS sheet of 1.6 mm thick each of size 900mm x 750mm stiffend by angle iron 25mmx25mm x 3mm all around the plate & plates fixed on frame of 75mm dia pipe of 12 SWG sheet (vertical post 3050 mm with angle holdfasts and horizontal member 900mm) to be joined by embedded in cement concrete M-15 grade of block of 600mmx 600mm x 750 mm size below ground level as per enclosed drawings & as directed by Engineering incharge. All MS will be stove anmeled on both side lettering. Figuring and border will be with ready mixed synthethic enamel paint of superior quality in required shade and colour etc complete in all respect. All sections of framed post and steel tube will be painted with primer and two coat of epoxy paint as per drawing and as per Specification.	2	Each	8451.00	16902.00
6	10.20	Marking Centre Line and stop lines etc. on road as per IRC pattern with thermoplastic paint of approved quality and make with 8% glass beads laid on the road surface at temperature 160" C with a special applicator machine complete with a special applicator machine complete with labour material and traffic diversion arrangements.	6850.99	P.Sqm	507.00	3473452.00

ABSTRACT

Name of Work :-Widening and Strengthening of Mahngi To Dudhli mode via Bhawani, Bhawani Khurd, Saipur, Andhi, Sriramnagar, Virasna, Gaonli, Newal, Maksudanpura, Chawandiya Road Km 0/0 to 40/0 (Total 40 Kms.).

Part : C : Furniture Work

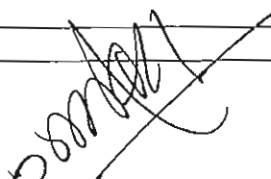
S. No.	BSR No.	Description of Item	Quantity	Unit	Rate (Rs)	Amount (Rs)
1	2	3	4	5	6	7
7	16.71	Construction of Foundation / Inauguration Pedastal in 23 cm thick Brick masonry in CM 1:4 of size 1.20m x 1.80m above ground level with adequate foundation including providing and fixing of Granite stone of size 0.75m x0.60m with engraving letters and figures,cement plaster,white washing etc. complete as per direction of Engineer in charge.	2.00	Each	9470.00	18940.00
8	8.37 NH	Supply of Chevron sign of size 75x60 cm made out of aluminum sheet 2 mm thick with fixing provision on M.S. angle iron post 50x50x6 mm 3 M long screwed with stainless steel nut bolts of 8 M dia, plate is covered by high intensity grade yellow retro-reflective sheeting and black screen printed arrow on Retro Reflective Sheet, complete in all respect. Comp. in all respect duly post painted in alternate band of Black/White synthetic enamel paint & hold fast at bottomFixing of sign board having two posts including excavation cement concrete 1:5:10(30X30X60 cms.) and transportation complete of size. :60x75 cm, 90x60 cm, 75x45 cm, & 60x45 cm.	182.00	Each	5865.00	1067430.00
9	8.38.2 NH	Fixing of sign board having two posts including excavationcement concrete 1:5:10(30X30X60 cms.) and transportation complete of size. :60x75 cm, 90x60 cm, 75x45 cm, & 60x45 cm	182.00	Each	565.00	102830.00
10	16.63	Supplying of Cat's Eye made of aluminium alloy size 75x100x22 mm having 21 biconvex lenses embedded in circular disk of ABS plastic on each side.	3500.00	Each	220.00	770000.00
11	16.79	Labour charges for fixing of Cat's Eye as per MoRTH specification excluding cost of Cat's Eye.	3500.00	Each	7.00	24500.00
12	16.61	P & F Delinator with 30 cm. outer dia RCC hume pipe NP-2 (As per IS-458/ 1971) pipe 1. OM. Long 40 cm embedded in cement concrete (1:4:8) block of size 50x50x40 cm. including excavation upto 40 cm depth. The inside of pipe shall be filled with C.C. (1:4:8) stone grit max size 20 mm or less upto the top with semi circular humping. The pipes shall be painted white/black with enamel paint with red dots two Nos. on each side	200.00	Each	479.00	95800.00

ABSTRACT

Name of Work :-Widening and Strengthening of Mahngi To Dudhli mode via Bhawani, Bhawani Khurd, Saipur, Andhi, Sriramnagar, Virasna, Gaonli, Newal, Maksudanpura, Chawandiya Road Km 0/0 to 40/0 (Total 40 Kms.).

Part : C : Furniture Work

S. No.	BSR No.	Description of Item	Quantity	Unit	Rate (Rs)	Amount (Rs)
1	2	3	6	5	7	8
13	15.13	White washing two coats on parapet walls and tree trunks including preparation of surface by cleaning scraping etc. as per MoRTH specifications Clause 800	375	P.Sqm	10.00	3750.00
14	8.58 NH	Fabrication & assembling of over head gantry & cantilever type structure as per drawing & design including steel work in built up tubular trusses , cutting / hoisting, bolting & fixing in position & applying coat of red oxide paint including special type of nut, bolts(Bolt up to 750 mm) and washers complete & finishing with grey enamel paint .	14000	P.Kg	105.00	1470000.00
15	8.59 NH	Supply of High Intensity retro reflecting Type IV sign plate made out of 2.0 mm thick aluminum sheet face to be fully covered with blue / green high intensity grade retro reflective sheet and logo/ matters, boarder made of with similar type of white sheeting after etching treatment of aluminum sheet , the back side is to be painted with epoxy grey paint. The plate is to be fixed on 40x40x5 mm angle iron frame with help of aluminum rivets.	60	P.Sqm	13342.00	800520.00
16	8.47 NH	Providing and erecting a "W" metal beam crash barrier comprising of 3 mm thick corrugated sheet metal beam rail, 70 cm above road/ ground level, fixed on CRC rolled channel vertical post, 150 x 75 x 5 mm spaced 2 mm centre to centre, 1.8 m high, 1.1 m below ground / road level, all steel parts and fitments to be galvanized by hot dip process, all fittings to conform to IS: 1367 and IS: 1364 , metal beam rail to be fixed on the vertical post with a spacer of channel section 150 x 75 x 5 mm, 330 mm long complete as per MoRTH specification Clause 811.3.	375	P.Rmt	3123.00	1171125.00
				Total Part : C :		9678902.00


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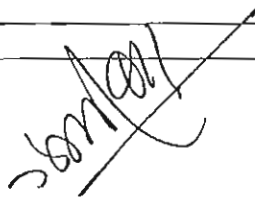

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ABSTRACT

Name of Work :- Widening and Strengthening of Mahngi To Dudhli mode via Bhawani, Bhawani Khurd, Saipur, Andhi, Sriramnagar, Virasna, Gaonli, Newal, Maksudanpura, Chawandiya Road Km 0/0 to 40/0 (Total 40 Kms.).

Part : D : HPC 1000mm Dia Single Row

S. No.	BSR No.	Item	Qty.	Unit	Rate	Amount
1	11.1 (i) (i)	Earthwork in excavation for structures as per drawing and MoRTH specifications Clause 304.1 including setting out, construction of shoring and bracing, removal of stumps and other deleterious material and disposal upto a lead of 50 m, dressing of sides and bottom and backfilling in trenches with excavated suitable material Ordinary soil Upto 3 m depth	421.87	P.Cum	155.00	65390.00
2	11.4 (i) (i)	Providing concrete for plain/reinforced concrete in open foundations complete as per drawings and MoRTH specifications Clause 1702, 1703, 2102 & 2104 P.C.C grade M 10 Nominal mix 1:3:6	23.62	P.Cum	2677.00	63231.00
3	11.6 (iii) (ii)	Stone masonry work in cement mortar in foundation complete as per drawing and MoRTH specifications Clauses 1402, 1405, 2102 & 2104. Random Rubble Masonry In cement mortar 1:4	267.24	P.Cum	2593.00	692953.00
4	11.4 (iii) (i)	Providing concrete for plain/reinforced concrete in open foundations complete as per drawings and MoRTH specifications Clause 1702, 1703, 2102 & 2104 P.C.C. grade M 20 Nominal mix (1:2:4).	75.14	P.Cum	3045.00	228801.00
5	14.1	Providing and laying boulder apron for bed protection with stone boulders of minimum size and weight as per Clause 5.3.7.2 of IRC:89, no fragment weighing less than 25 kg laid dry complete as per drawing and MoRTH specifications Clause 2503.2	59.04	P.Cum	695.00	41033.00
6	9.4 (B)	Providing and laying reinforced cement concrete pipe NP4 for culverts on first class bedding of granular material in single row including fixing collar with cement mortar 1:2 but excluding excavation, protection works, backfilling, concrete and masonry works in head walls and parapets Clause 2905. 1000 mm dia mm dia	100.00	P.Rmt	4929.00	492900.00
7	12.2 A	Plastering with cement mortar (1:4), 20 mm thick on Stone work.	158.12	P.Sqm	132.00	20872.00
8	12.13 (b)	Providing PCC M-20 architectural coping on the top of wing wall, return wall etc. complete as per drawing and MoRTH specification Clauses 1313, 1411 and 2206.6. 75 mm thick.	44.28	P.Sqm	321.00	14214.00
					Total D :-	1619394.00


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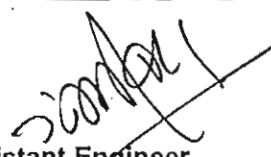
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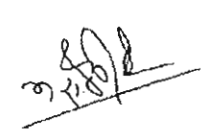
Name of Work :- Widening and Strengthening of Mahngi To Dudhli mode via Bhawani, Bhawani Khurd, Saipur, Andhi, Sriramnagar, Virasna, Gaonli, Newal, Maksudanpura, Chawandiya Road Km 0/0 to 40/0 (Total 40 Kms.).

Part : E : Flush Causeway

S. No.	BSR No.	Item	Qty.	Unit	Rate	Amount
1	11.1 (i) (i)	Earthwork in excavation for structures as per drawing and MoRTH specifications Clause 304.1 including setting out, construction of shoring and bracing, removal of stumps and other deleterious material and disposal upto a lead of 50 m, dressing of sides and bottom and backfilling in trenches with excavated suitable material Ordinary soil Upto 3 m depth	809.60	P.Cum	155.00	125488.00
2	11.4 (i) (i)	Providing concrete for plain/reinforced concrete in open foundations complete as per drawings and MoRTH specifications Clause 1702, 1703, 2102 & 2104 P.C.C grade M 10 Nominal mix 1:3:6	75.90	P.Cum	2677.00	203184.00
3	11.8 (iii) (i)	Stone masonry work in cement mortar in foundation complete as per drawing and MoRTH specifications Clauses 1402, 1405, 2102 & 2104. Random Rubble Masonry In cement mortar 1:4	480.50	P.Cum	2593.00	1245937.00
4	4.2 (i)	Providing laying spreading and compacting specified graded sand, gravel (crushed stone) as per Table 400-1, 400-2 or any other course material as per design mix, as per CBR in sub base course including premixing the material at OMC in wet mix plant, carriage of mixed material spreading in uniform layers with motor grader F.E loader on a prepared base and compacting with vibratory roller to achieve desired density (as per I.S.2720) including all material, labor, machinery, lighting guarding, barricading and maintenance of diversion complete. [MoRTH specification : Clause 401]. By mechanical means. For Grading-I Material	195.15	P.Cum	802.00	156510.00
5	4.7	Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the material with water at OMC in mechanical mixer (Pug Mill), carriage of mixed material by tipper to site, laying in uniform layers in sub-base/base course on a well prepared sub-base and compacting with smooth wheel roller of 80 to 100kN weight to achieve the desired density including lighting, barricading and maintenance of diversion, etc as per Tables 400-12 & 400-13 and MoRTH Specification Clause 406 By Mechanical Means with 24 km lead	130.10	P.Cum	1240.00	161324.00

S. No.	BSR No.	Item	Qty.	Unit	Rate	Amount
6	6.5	Construction of un-reinforced, dowel jointed, plain cement concrete pavement over a prepared sub base with 43 grade cement @ 400 kg per cum, coarse and fine aggregate conforming to IS 383, maximum size of coarse aggregate not exceeding 25 mm, mixed in a batching and mixing plant as per approved mix design, transported to site, laid with a slip form paver, spread, compacted and finished in a continuous operation including provision of contraction, expansion, construction and longitudinal joints, joint filler, separation membrane, sealant primer, joint sealant, debonding strip, dowel bar, tie rod, admixtures as approved, curing compound, finishing to lines and grades as per drawing as per MoRTH Specification Clause 602 should have minimum Flexural strength of 4.5 Mpa M - 40 grade concrete	662.40	P.Cum	6880.00	4557312.00
7	12.2A	Plastering with cement mortar (1:4), 20 mm thick on Stone work.	152.00	P.Sqm	132.00	20064.00
8	16.54	Supply & Fixing of flood gauge (water Gauge) as per I.R.C. 67 standard 200 cm long fixed on angle iron posts 50x50x6 mm, 2.6 M. long.	6.00	Each	1770.00	10620.00
					Total E :-	6480439.00


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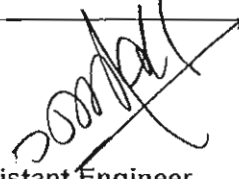

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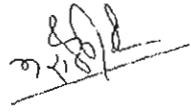
ABSTRACT

Name of Work :- Widening and Strengthening of Mahngi To Dudhli mode via Bhawani, Bhawani Khurd, Saipur, Andhi, Sriramnagar, Virasna, Gaonli, Newal, Maksudanpura, Chawandiya Road Km 0/0 to 40/0 (Total 40 Kms.).

Part : F : Protection Wall

S. No.	BSR No.	Item	Qty.	Unit	Rate	Amount
1	11.1 (i) (i)	Earthwork in excavation for structures as per drawing and MoRTH specifications Clause 304.1 including setting out, construction of shoring and bracing, removal of stumps and other deleterious material and disposal upto a lead of 50 m, dressing of sides and bottom and backfilling in trenches with excavated suitable material Ordinary soil Upto 3 m depth	2103.75	P.Cum	155.00	326081.00
2	11.4 (i) (i)	Providing concrete for plain/reinforced concrete in open foundations complete as per drawings and MoRTH specifications Clause 1702, 1703, 2102 & 2104 P.C.C grade M 10 Nominal mix 1:3:6	210.38	P.Cum	2677.00	563187.00
3	11.6 (iii) (ii)	Stone masonry work in cement mortar in foundation complete as per drawing and MoRTH specifications Clauses 1402, 1405, 2102 & 2104. Random Rubble Masonry In cement mortar 1:6	2524.50	P.Cum	2152.00	5432724.00
4	12.2A	Plastering with cement mortar (1:4), 20 mm thick on Stone work.	1402.50	P.Sqm	132.00	185130.00
5	12.13 (b)	Providing PCC M-20 architectural coping on the top of wing wall, return wall etc. complete as per drawing and MoRTH specification Clauses 1313, 1411 and 2206.6. 75 mm thick.	420.75	P.Sqm	321.00	135061.00
6	12.9	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 100 mm dia AC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing and MoRTH specification Clauses 1409, 2204.4, 2206.4 & 2706	374.00	Each	66.00	24684.00
					Total F :-	6666867.00


Assistant Engineer
PWD Sub Dn. – North
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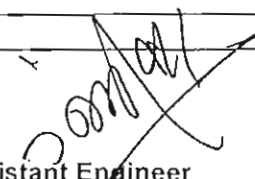
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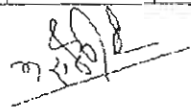
Name of Work :-Widening and Strengthening of Mahngi To Dudhli mode via Bhawani, Bhawani Khurd, Saipur, Andhi, Sriramnagar, Virasna, Gaonli, Newal, Maksudanpura, Chawandiya Road Km 0/0 to 40/0 (Total 40 Kms.).

Part : H : Vented Causeway

S. No.	BSR No.	Item	Qty.	Unit	Rate	Amount
1	11.1 (i) (i)	Earthwork in excavation for structures as per drawing and MoRTH specifications Clause 304.1 including setting out, construction of shoring and bracing, removal of stumps and other deleterious material and disposal upto a lead of 50 m, dressing of sides and bottom and backfilling in trenches with excavated suitable material Ordinary soil Upto 3 m depth	3371.24	P.Cum	155.00	522542.00
2	11.4 (i) (i)	Providing concrete for plain/reinforced concrete in open foundations complete as per drawings and MoRTH specifications Clause 1702, 1703, 2102 & 2104 P.C.C grade M 10 Nominal mix 1:3:6	276.81	P.Cum	2677.00	741020.00
3	11.6 (iii) (ii)	Stone masonry work in cement mortar in foundation complete as per drawing and MoRTH specifications Clauses 1402, 1405, 2102 & 2104. Random Rubble Masonry In cement mortar 1:4	3113.69	P.Cum	2593.00	8073798.00
4	11.4 (iii) (i)	Providing concrete for plain/reinforced concrete in open foundations complete as per drawings and MoRTH specifications Clause 1702, 1703, 2102 & 2104 P.C.C. grade M 20 Nominal mix (1:2:4).	3380.84	P.Cum	3045.00	10294658.00
5	14.1	Providing and laying boulder apron for bed protection with stone boulders of minimum size and weight as per Clause 5.3.7.2 of IRC:89, no fragment weighing less than 25 kg laid dry complete as per drawing and MoRTH specifications Clause 2503.2	540.00	P.Cum	695.00	375300.00
6	9.4 (A)	Providing and laying reinforced cement concrete pipe NP4 for culverts on first class bedding of granular material in single row including fixing collar with cement mortar 1:2 but excluding excavation, protection works, backfilling, concrete and masonry works in head walls and parapets Clause 2905. 1200 mm dia mm dia	1125.00	P.Rmt	7117.00	8006625.00
7	12.2A	Plastering with cement mortar (1:4), 20 mm thick on Stone work.	1857.48	P.Sqm	132.00	245187.00
8	12.13 (b)	Providing PCC M-20 architectural coping on the top of wing wall, return wall etc. complete as per drawing and MoRTH specification Clauses 1313, 1411 and 2206.6. 75 mm thick.	404.50	P.Sqm	321.00	129845.00

S. No.	BSR No.	Item	Qty.	Unit	Rate	Amount
9	8.5	Construction of un-reinforced, dowel jointed, plain cement concrete pavement over a prepared sub base with 43 grade cement @ 400 kg per cum, coarse and fine aggregate conforming to IS 383, maximum size of coarse aggregate not exceeding 25 mm, mixed in a batching and mixing plant as per approved mix design, transported to site, laid with a slip form paver, spread, compacted and finished in a continuous operation including provision of contraction, expansion, construction and longitudinal joints, joint filler, separation membrane, sealant primer, joint sealant, debonding strip, dowel bar, tie rod, admixtures as approved, curing compound, finishing to lines and grades as per drawing as per MoRTH Specification Clause 602 should have minimum Flexural strength of 4.5 Mpa M - 40 grade concrete	1202.00	P.Cum	6880.00	8269760.00
10	12.9	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 100 mm dia AC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing and MoRTH specification Clauses 1409, 2204.4, 2206.4 & 2706	600.00	Each	66.00	39600.00
11	14.6	Providing and laying filter material underneath pitching in slopes complete as per drawing and MoRTH specifications Clause 2504.2.2	525.00	P.Cum	638.00	334950.00
12	14.5.1	Providing and laying pitching on slopes laid over prepared filter media as per drawing and MoRTH specifications Clause 2504.2.1	770.00	P.Cum	695.00	535150.00
13	14.1	Construction of toe walls for protection of slopes as per drawing and MoRTH specifications Clause 2507.1 Random rubble masonry in case of stone pitching laid with cement mortar (1:5)	1050.00	P.Cum	2903.00	3048150.00
14	16.54	Supply & Fixing of flood gauge (water Gauge) as per I.R.C. 67 standard 200 cm long fixed on angle iron posts 50x50x6 mm, 2.6 M. long.	2.00	Each	1770.00	3540.00
15	7.7	Construction of RCC guide posts of 250 mm dia M25 grade cast-in-situ with 20 mm nominal size aggregate, true to line and grade, tolerance of vertical RCC posts not to exceed 1 in 500 as per drawing and MoRTH Specification Clause 1700 & 1600	528.00	Each	609.00	321552.00
					Total H :-	40941677.00


 Assistant Engineer
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 Jaipur

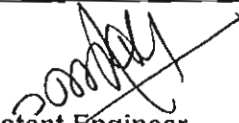
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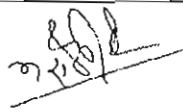
Name of Work :- Widening and Strengthening of Mahngi To Dudhli mode via Bhawani, Bhawani Khurd, Saipur, Andhi, Sriramnagar, Virasna, Gaonli, Newal, Maksudanpura, Chawandiya Road Km 0/0 to 40/0 (Total 40 Kms.).

Part : H : Vented Causeway(60 mtr.)

S. No.	BSR No.	Item	Qty.	Unit	Rate	Amount
1	11.1 (0) (0)	Earthwork in excavation for structures as per drawing and MoRTH specifications Clause 304.1 including setting out, construction of shoring and bracing, removal of stumps and other deleterious material and disposal upto a lead of 50 m, dressing of sides and bottom and backfilling in trenches with excavated suitable material Ordinary soil Upto 3 m depth	1071.00	P.Cum	155.00	166005.00
2	11.4 (0) (0)	Providing concrete for plain/reinforced concrete in open foundations complete as per drawings and MoRTH specifications Clause 1702, 1703, 2102 & 2104 P.C.C grade M 10 Nominal mix 1:3:6	327.24	P.Cum	2677.00	876021.00
3	11.8 (00) (0)	Stone masonry work in cement mortar in foundation complete as per drawing and MoRTH specifications Clauses 1402, 1405, 2102 & 2104. Random Rubble Masonry In cement mortar 1:4	2998.35	P.Cum	2593.00	7774722.00
4	11.4 (00) (0)	Providing concrete for plain/reinforced concrete in open foundations complete as per drawings and MoRTH specifications Clause 1702, 1703, 2102 & 2104 P.C.C. grade M 20 Nominal mix (1:2:4).	1662.60	P.Cum	3045.00	5062617.00
5	14.1	Providing and laying boulder apron for bed protection with stone boulders of minimum size and weight as per Clause 5.3.7.2 of IRC:89, no fragment weighing less than 25 kg laid dry complete as per drawing and MoRTH specifications Clause 2503.2	243.00	P.Cum	695.00	168885.00
6	9.4 (A)	Providing and laying reinforced cement concrete pipe NP4 for culverts on first class bedding of granular material in single row including fixing collar with cement mortar 1:2 but excluding excavation, protection works, backfilling, concrete and masonry works in head walls and parapets Clause 2905. 1200 mm dia mm dia	187.50	P.Rmt	7117.00	1334438.00
7	12.2A	Plastering with cement mortar (1:4), 20 mm thick on Stone work.	1187.62	P.Sqm	132.00	156766.00

S. No.	BSR No.	Item	Qty.	Unit	Rate	Amount
8	8.5	Construction of un-reinforced, dowel jointed, plain cement concrete pavement over a prepared sub base with 43 grade cement @ 400 kg per cum, coarse and fine aggregate conforming to IS 383, maximum size of coarse aggregate not exceeding 25 mm, mixed in a batching and mixing plant as per approved mix design, transported to site, laid with a slip form paver, spread, compacted and finished in a continuous operation including provision of contraction, expansion, construction and longitudinal joints, joint filler, separation membrane, sealant primer, joint sealant, debonding strip, dowel bar, tie rod, admixtures as approved, curing compound, finishing to lines and grades as per drawing as per MoRTH Specification Clause 602 should have minimum Flexural strength of 4.5 Mpa M - 40 grade concrete	562.50	P.Cum	6880.00	3870000.00
9		Supply & Fixing of flood gauge (water Gauge) as per I.R.C. 67 standard 200 cm long fixed on angle iron posts 50x50x6 mm, 2.6 M. long.	6.00	Each	1770.00	10620.00
10	7.7	Construction of RCC guide posts of 250 mm dia M25 grade cast-in-situ with 20 mm nominal size aggregate, true to line and grade, tolerance of vertical RCC posts not to exceed 1 in 500 as per drawing and MoRTH Specification Clause 1700 & 1600	238.00	Each	609.00	144942.00
					Total H :-	19565016.00


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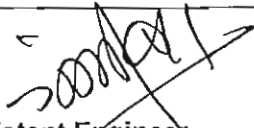
ABSTRACT

Name of Work :- Widening and Strengthening of Mahngi To Dudhli mode via Bhawani, Bhawani Khurd, Saipur, Andhi, Sriramnagar, Virasna, Gaonli, Newal, Maksudanpura, Chawandiya Road, Km 0/0 to 40/0 (Total 40 Kms.).

Part : H : Vented Causeway(30 mtr.)

S. No.	BSR No.	Item	Qty.	Unit	Rate	Amount
1	11.1 (i) (i)	Earthwork in excavation for structures as per drawing and MoRTH specifications Clause 304.1 including setting out, construction of shoring and bracing, removal of stumps and other deleterious material and disposal upto a lead of 50 m, dressing of sides and bottom and backfilling in trenches with excavated suitable material Ordinary soil Upto 3 m depth	357.00	P.Cum	155.00	55335.00
2	11.4 (i) (i)	Providing concrete for plain/reinforced concrete in open foundations complete as per drawings and MoRTH specifications Clause 1702, 1703, 2102 & 2104 P.C.C grade M 10 Nominal mix 1:3:6	74.34	P.Cum	2677.00	199008.00
3	11.8 (iii) (i)	Stone masonry work in cement mortar in foundation complete as per drawing and MoRTH specifications Clauses 1402, 1405, 2102 & 2104. Random Rubble Masonry In cement mortar 1:4	629.07	P.Cum	2593.00	1631179.00
4	11.4 (iii) (i)	Providing concrete for plain/reinforced concrete in open foundations complete as per drawings and MoRTH specifications Clause 1702, 1703, 2102 & 2104 P.C.C. grade M 20 Nominal mix (1:2:4).	708.40	P.Cum	3045.00	2157078.00
5	14.1	Providing and laying boulder apron for bed protection with stone boulders of minimum size and weight as per Clause 5.3.7.2 of IRC:89, no fragment weighing less than 25 kg laid dry complete as per drawing and MoRTH specifications Clause 2503.2	81.00	P.Cum	695.00	56295.00
6	9.4 (A)	Providing and laying reinforced cement concrete pipe NP4 for culverts on first class bedding of granular material in single row including fixing collar with cement mortar 1:2 but excluding excavation, protection works, backfilling, concrete and masonry works in head walls and parapets Clause 2905. 1200 mm dia mm dia	125.00	P.Rmt	7117.00	889625.00
7	12.2A	Plastering with cement mortar (1:4), 20 mm thick on Stone work.	391.75	P.Sqm	132.00	51711.00

S. No.	BSR No.	Item	Qty.	Unit	Rate	Amount
8	6.5	Construction of un-reinforced, dowel jointed, plain cement concrete pavement over a prepared sub base with 43 grade cement @ 400 kg per cum, coarse and fine aggregate conforming to IS 383, maximum size of coarse aggregate not exceeding 25 mm, mixed in a batching and mixing plant as per approved mix design, transported to site, laid with a slip form paver, spread, compacted and finished in a continuous operation including provision of contraction, expansion, construction and longitudinal joints, joint filler, separation membrane, sealant primer, joint sealant, debonding strip, dowel bar, tie rod, admixtures as approved, curing compound, finishing to lines and grades as per drawing as per MoRTH Specification Clause 602 should have minimum Flexural strength of 4.5 Mpa M - 40 grade concrete	187.50	P.Cum	6880.00	1290000.00
9		Supply & Fixing of flood gauge (water Gauge) as per I.R.C. 67 standard 200 cm long fixed on angle iron posts 50x50x6 mm, 2.6 M. long.	4.00	Each	1770.00	7080.00
10	7.7	Construction of RCC guide posts of 250 mm dia M25 grade cast-in-situ with 20 mm nominal size aggregate, true to line and grade, tolerance of vertical RCC posts not to exceed 1 in 500 as per drawing and MoRTH Specification Clause 1700 & 1600	79.00	Each	609.00	48111.00
					Total H :-	6385422.00


 Assistant Engineer
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 Jaipur


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ABSTRACT

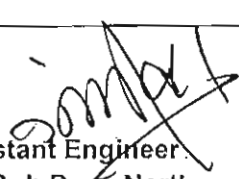
Name of Work :- Widening and Strengthening of Mahngi To Dudhli mode via Bhawani, Bhawani Khurd, Saipur, Andhi, Sriramnagar, Virasna, Gaonli, Newal, Maksudanpura, Chawandiya Road Km 0/0 to 40/0 (Total 40 Kms.).

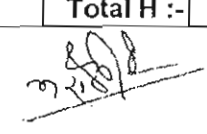
Part : I : BOX Culvert 1.5X1.5

For 12 Nos

S. No.	BSR No.	Item	Qty.	Unit	Rate	Amount
1	11.1 (i) (i)	Earthwork in excavation for structures as per drawing and MoRTH specifications Clause 304.1 including setting out, construction of shoring and bracing, removal of stumps and other deleterious material and disposal upto a lead of 50 m, dressing of sides and bottom and backfilling in trenches with excavated suitable material Ordinary soil Upto 3 m depth	2962.44	P.Cum	155.00	459178.00
	11.4 I	Providing concrete for plain/reinforced concrete in open foundations complete as per drawings and MoRTH specifications Clause 1702, 1703, 2102 & 2104 P.C.C grade M 10 Nominal mix 1:3:6	415.90	P.Cum	2677.00	1113362.00
2	11.4 (ii) (ii)	Providing concrete for plain/reinforced concrete in open foundations complete as per drawings and MoRTH specifications Clause 1702, 1703, 2102 & 2104 P.C.C grade M 15 Nominal mix 1:2.5:5	97.96	P.Cum	2887.00	282799.00
3	12.5 IV	Plain/reinforced cement concrete in substructure complete as per drawings and MoRTH specification Clauses 1700 and 2200 R.C.C. grade M 25	793.91	P.Cum	3874.00	3075592.00
4	13.1 III	Providing and laying reinforced cement concrete in superstructure as per drawing and MoRTH specifications Clauses 1700, 2302 and 2304 R.C.C. Grade M 30	433.69	P.Cum	4494.00	1949012.00
5	11.8	Supplying, fitting and placing TMT bar reinforcement in foundation complete as per drawings and MoRTH specifications Clauses 1009, 1600 and 2102	61.20	P.Tonne	52152.00	3191702.00
6	12.11	Providing and laying filter media with granular crushed aggregates as per specification to a thickness of not less than 600 mm with smaller size towards the soil and bigger size towards the wall and providing over the entire surface behind abutment, wing wall, return wall to the full height, compacted to firm condition complete as per drawing and MoRTH specification Clause 2204.6 & 2504.2.2	505.18	P.Cum	655.00	330892.00

S. No.	BSR No.	Item	Qty.	Unit	Rate	Amount
8	12.10.1	Backfilling behind abutment, wing wall and return wall complete as per drawings & MoRTH specification Clause 304.3.7 & 2204.6 Granular material	2049.77	P.Cum	430.00	881400.00
9	12.9	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 100 mm dia AC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing and MoRTH specification Clauses 1409, 2204.4, 2206.4 & 2706	600.00	Each	66.00	39600.00
	16.38	Expansion joint 25 mm wide and depth 200 to 300 mm using 25 mm thick bitumen impregnated board/SILFLEX (Capcel HD 100) confirming manufactures specifications, dowel bars 25mm M.S. rod 500 mm long @ 200 mm C/C with pvc sleeve as per IRC 58 (1988) including required steel bar (16 mm dia.) chairs, making holes in board, placing whole assembly in groove including cost of sealing compound.	120.00	P.Rmt.	1089.00	130680.00
	13.1	Drainage spouts complete as per drawing and MoRTH specifications Clause 2705	24.00	Each	910.00	21840.00
	14.10	Construction of flexible apron 1 m thick comprising of loose stone boulders weighing not less then 25 kg beyond curtain wall	224.64	P.Cum	705.00	158371.00
	14.8	Providing and laying of dry rubble flooring complete as per drawings and MoRTH specifications Clause 2506	239.62	P.Cum	1325.00	317491.00
	14.51	Providing and laying pitching on slopes laid over prepared filter media as per drawing and MoRTH specifications Clause 2504.2.1 Stone/Boulder	177.60	P.Cum	695.00	123432.00
					Total H :-	12075351.00


Assistant Engineer
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Jaipur

ABSTRACT

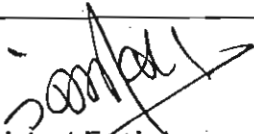
Name of Work :-Widening and Strengthening of Mahngi To Dudhli mode via Bhawani, Bhawani Khurd, Saipur, Andhi, Sriramnagar, Virasna, Gaonli, Newal, Maksudanpura, Chawandiya Road Km 0/0 to 40/0 (Total 40 Kms.).

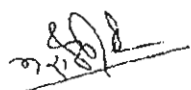
Part : J : BOX Culvert 2.0X2.0

FOR 6 Nos

S. No.	BSR No.	Item	Qty.	Unit	Rate	Amount
1	11.1 (0) 0	Earthwork in excavation for structures as per drawing and MoRTH specifications Clause 304.1 including setting out, construction of shoring and bracing, removal of stumps and other deleterious material and disposal upto a lead of 50 m, dressing of sides and bottom and backfilling in trenches with excavated suitable material Ordinary soil Upto 3 m depth	1862.67	P.Cum	155.00	288714.00
	11.4 I	Providing concrete for plain/reinforced concrete in open foundations complete as per drawings and MoRTH specifications Clause 1702, 1703, 2102 & 2104 P.C.C grade M 10 Nominal mix 1:3:6	226.51	P.Cum	2677.00	606358.00
2	11.4 (0) 0	Providing concrete for plain/reinforced concrete in open foundations complete as per drawings and MoRTH specifications Clause 1702, 1703, 2102 & 2104 P.C.C grade M 15 Nominal mix 1:2.5:5	53.13	P.Cum	2887.00	153372.00
3	12.5 IV	Plain/reinforced cement concrete in substructure complete as per drawings and MoRTH specification Clauses 1700 and 2200 R.C.C. grade M 25	480.91	P.Cum	3874.00	1863027.00
4	13.1 III	Providing and laying reinforced cement concrete in superstructure as per drawing and MoRTH specifications Clauses 1700, 2302 and 2304 R.C.C. Grade M 30	236.84	P.Cum	4494.00	1064350.00
5	11.9	Supplying, fitting and placing TMT bar reinforcement in foundation complete as per drawings and MoRTH specifications Clauses 1009, 1600 and 2102	48.60	P.Tonne	52152.00	2534587.00
6	12.11	Providing and laying filter media with granular crushed aggregates as per specification to a thickness of not less than 600 mm with smaller size towards the soil and bigger size towards the wall and providing over the entire surface behind abutment, wing wall, return wall to the full height, compacted to firm condition complete as per drawing and MoRTH specification Clause 2204.6 & 2504.2.2	276.70	P.Cum	655.00	181236.00
8	12.10 I	Backfilling behind abutment, wing wall and return wall complete as per drawings & MoRTH specification Clause 304.3.7 & 2204.6 Granular material	794.81	P.Cum	430.00	341767.00

S. No.	BSR No.	Item	Qty.	Unit	Rate	Amount
9	12.9	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 100 mm dia AC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing and MoRTH specification Clauses 1409, 2204.4, 2206.4 & 2706	300.00	Each	66.00	19800.00
	16.38	Expansion joint 25 mm wide and depth 200 to 300 mm using 25 mm thick bitumen impregnated board/SILFLEX (Capcel HD 100) confirming manufactures specifications, dowel bars 25mm M.S. rod 500 mm long @ 200 mm C/C with pvc sleeve as per IRC 58 (1988) including required steel bar (16 mm dia.) chairs, making holes in board, placing whole assembly in groove including cost of sealing compound.	60.00	P.Rmt.	1089.00	65340.00
	13.1	Drainage spouts complete as per drawing and MoRTH specifications Clause 2705	12.00	Each	910.00	10920.00
	14.10	Construction of flexible apron 1 m thick comprising of loose stone boulders weighing not less then 25 kg beyond curtain wall	118.80	P.Cum	705.00	83754.00
	14.8	Providing and laying of dry rubble flooring complete as per drawings and MoRTH specifications Clause 2506	126.72	P.Cum	1325.00	167904.00
	14.51	Providing and laying pitching on slopes laid over prepared filter media as per drawing and MoRTH specifications Clause 2504.2.1 Stone/Boulder	96.00	P.Cum	695.00	66720.00
					Total H :-	7447849.00


 Assistant Engineer
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 Jaipur


 Executive Engineer
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 Jaipur

ABSTRACT

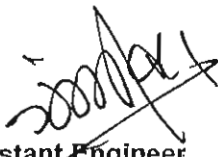
Name of Work :- Widening and Strengthening of Mahngi To Dudhli mode via Bhawani, Bhawani Khurd, Saipur, Andhi, Sriramnagar, Virasna, Gaonli, Newal, Maksudanpura, Chawandiya Road Km 0/0 to 40/0 (Total 40 Kms.).

Part : K: BOX Culvert 2X2.0X2.0

FOR 2 Nos

S. No.	BSR No.	Item	Qty.	Unit	Rate	Amount
1	11.1 (i)	Earthwork in excavation for structures as per drawing and MoRTH specifications Clause 304.1 including setting out, construction of shoring and bracing, removal of stumps and other deleterious material and disposal upto a lead of 50 m, dressing of sides and bottom and backfilling in trenches with excavated suitable material Ordinary soil Upto 3 m depth	1006.31	P.Cum	155.00	155978.00
	11.4 I	Providing concrete for plain/reinforced concrete in open foundations complete as per drawings and MoRTH specifications Clause 1702, 1703, 2102 & 2104 P.C.C grade M 10 Nominal mix 1:3:6	94.41	P.Cum	2677.00	252735.00
2	11.4 (ii) 11.4	Providing concrete for plain/reinforced concrete in open foundations complete as per drawings and MoRTH specifications Clause 1702, 1703, 2102 & 2104 P.C.C grade M 15 Nominal mix 1:2.5:5	23.55	P.Cum	2887.00	67982.00
3	12.5 IV	Plain/reinforced cement concrete in substructure complete as per drawings and MoRTH specification Clauses 1700 and 2200 R.C.C. grade M 25	241.87	P.Cum	3874.00	937014.00
4	13.1 III	Providing and laying reinforced cement concrete in superstructure as per drawing and MoRTH specifications Clauses 1700, 2302 and 2304 R.C.C. Grade M 30	86.81	P.Cum	4494.00	390111.00
5	14.2 14.2	Supplying, fitting and placing TMT bar reinforcement in foundation complete as per drawings and MoRTH specifications Clauses 1009, 1600 and 2102	21.18	P.Tonne	52152.00	1104788.00
6	12.11	Providing and laying filter media with granular crushed aggregates as per specification to a thickness of not less than 600 mm with smaller size towards the soil and bigger size towards the wall and providing over the entire surface behind abutment, wing wall, return wall to the full height, compacted to firm condition complete as per drawing and MoRTH specification Clause 2204.6 & 2504.2.2	116.82	P.Cum	655.00	76520.00
8	12.10 I	Backfilling behind abutment, wing wall and return wall complete as per drawings & MoRTH specification Clause 304.3.7 & 2204.6 Granular material	340.68	P.Cum	430.00	146491.00

S. No.	BSR No.	Item	Qty.	Unit	Rate	Amount
9	12.9	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 100 mm dia AC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing and MoRTH specification Clauses 1409, 2204.4, 2206.4 & 2706	152.00	Each	66.00	10032.00
	18.38	Expansion joint 25 mm wide and depth 200 to 300 mm using 25 mm thick bitumen impregnated board/SILFLEX (Capcel HD 100) confirming manufactures specifications, dowel bars 25mm M.S. rod 500 mm long @ 200 mm C/C with pvc sleeve as per IRC 58 (1988) including required steel bar (16 mm dia.) chairs, making holes in board, placing whole assembly in groove including cost of sealing compound.	20.00	P.Rmt.	1089.00	21780.00
	13.1	Drainage spouts complete as per drawing and MoRTH specifications Clause 2705	4.00	Each	910.00	3640.00
	14.10	Construction of flexible apron 1 m thick comprising of loose stone boulders weighing not less then 25 kg beyond curtain wall	43.56	P.Cum	705.00	30710.00
	14.8	Providing and laying of dry rubble flooring complete as per drawings and MoRTH specifications Clause 2506	50.09	P.Cum	1325.00	66375.00
	14.51	Providing and laying pitching on slopes laid over prepared filter media as per drawing and MoRTH specifications Clause 2504.2.1 Stone/Boulder	32.00	P.Cum	695.00	22240.00
					Total H :-	3286396.00


 Assistant Engineer
 PWD Sub Dn. – North
 Jaipur


 Executive Engineer
 P.W.D. Dn- Bassi,
 Jaipur

DETAILS

Name of Work :- Widening and Strengthening of Mahngi To Dudhli mode via Bhawani, Bhawani Khurd, Saipur, Andhi, Siramnagar, Virasna, Gaonli, Newal, Maksudanpura, Chawandiya Road Km 0/0 to 40/0 (Total 40 Kms.).

Part : A : Road Work

S. No.	BSR No.	Item	N	L	B	H	Qty.
1	2.2 II B	Clearing and grubbing road land including uprooting wild vegetation, grass, bushes, shrubs, saplings and trees of girth upto 300 mm, removal of stumps of such trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned, upto a lead of 1000 m including removal and disposal of top organic soil not exceeding 150 mm in thickness as per MoRTH Specification Clause 201.By Mechanical Means In area of non-thorny jungle	2	42000.00	3.00		252000.00 Sgm. Or 25.20 Hect
2	2.14 (III A)	Dismantling of flexible pavements and disposal of dismantled materials upto a lead of 100 m, stacking serviceable and unserviceable materials separately as per MoRTH Specification Clause 202 By Mechanical Means Bituminous Courses Damaged BT	1	4910.00	3.00	0.02	147.30 Cum
			1	25152.00	3.75	0.02	943.20 Cum
						Total	1090.50 Cum

S. No.	BSR No.	Item	N	L	B	H	Qty.
3	3.5 (iii)	Excavation for roadway in soil by mechanical means including cutting and pushing the earth to site of embankment upto a distance of 100 m, including trimming bottom and side slopes in accordance with requirements of lines, grades and cross-sections.					
		Widening 3.0 to 7.0	2	3390.00	2.000	0.30	4068.00 Cum
		Widening 3.75 to 7.0	2	10484.00	2.000	0.30	12580.80 Cum
		As Per Enclosed Sheet					14078.64
						Total	30727.44 Cum
	3.3	Construction of embankment with approved materials deposited at site obtained from roadway cutting and excavation from drain and foundation or other structures graded and compacted to meet requirement of Tables 300-1 and 300-2 as per MoRTH Specification Clause 305.3					
		Qty As per E/W sheet					164505.00 Cum
		On Berms raising portion + New Construction	2	x 17313.00	(1.80 + 2.40)	x 0.41	29812.99 Cum
					2		
		On Berms without raising portion	2	x 13874.00	(1.80 + 2.00)	x 0.10	5272.12 Cum
		Deduction Excavation on Berms			2		-30727.44 Cum
						G Total	168862.67 Cum
	3.5 (ii)	Excavation for roadway in ordinary rock by deploying a dozer D-50 including cutting and pushing the cut earth to site of embankment upto a distance of 100 m (average lead 50 m), trimming bottom and side slopes in accordance with the requirements of lines, grades and cross-sections with lift upto 1.5 m					
		Qty As per E/W sheet					18050.28 Cum

S. No.	BSR No.	Item	N	L	B	H	Qty.
	391	Excavation for roadway in hard rock (requiring blasting) by drilling, blasting and breaking, trimming of bottom and side slopes in accordance with requirements of lines, grades and cross-sections, loading and disposal of cut rock with a lift upto 1.5 m and leads upto 1000 m as per MoRTH Specification Clause 301.3.5					1805.00
4	4.2(i)	Providing laying spreading and compacting specified graded sand, gravel (crushed stone) as per Table 400-1,400-2 or any other course material as per design mix, as per CBR in sub base course including premixing the material at OMC in wet mix plant, carriage of mixed material spreading in uniform layers with motor grader F.E loader on a prepared base and compacting with vibratory roller to achieve desired density (as per I.S.2720) including all material, labor, machinery, lighting guarding, barricading and maintenance of diversion complete.[MoRTH specification : Clause 401]: By mechanical means.For Grading-I Material					
		Widening 3.0 to 7.0	2	3390.00	2.000	0.20	2712.00 Cum
		Widening 3.75 to 7.0	2	10484.00	1.625	0.20	6814.60 Cum
		For Raising	1	11763.00	7.500	0.200	17644.50 Cum
		New Construction	1	5550.00	7.500	0.200	8325.00 Cum
							Total 35496.10 Cum
		Add 2% For Ramp, Curve ,Junction					709.92 Cum
							G Total 36206.02 Cum

S. No.	BSR No.	Item	N	L	B	H	Qty.
5	4.1 (A) (iii)	Construction of granular sub-base by providing well graded material, spreading in uniform layers with Tractor Mount Grader on prepared surface, mixing by mix in place method with rotavator at OMC, and compacting with smooth wheel roller to achieve the desired density, complete as per MoRTH Specification Clause 401 For Grading III Material	2	31187.00	1.000	0.150	9356.10 Cum
		Shoulder					9356.10 Cum
6	4.7	Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the material with water at OMC in mechanical mixer (Pug Mill), carriage of mixed material by tipper to site, laying in uniform layers in sub-base/base course on a well prepared sub-base and compacting with smooth wheel roller of 80 to 100kN weight to achieve the desired density including lighting, barricading and maintenance of diversion, etc as per Tables 400-12 & 400-13 and MoRTH Specification Clause 406 By Mechanical Means with 21 km lead					
		Widening 3.0 to 7.0 in Hoda	2	3390.00	2.000	0.10	1356.00 Cum
		Widening 3.75 to 7.0 in Hoda	2	10484.00	1.625	0.10	3407.30 Cum
		For Raising+New Construction	1	17313.00	7.000	0.250	30297.75 Cum
		For widening Portion Top	1	13874.00	7.000	0.150	14567.70 Cum
							49628.75 Cum
		Add 2% For Ramp, Curve ,Junction					992.58 Cum
							50621.33 Cum

S. No.	BSR No.	Item	N	L	B	H	Qty.
7	5.1 (i)	Providing and applying primer coat with bitumen emulsion (SS-1) on prepared surface of granular base(WBM/WMM) including cleaning of road surface and spraying primer at the rate of 0.70-1.0 kg/sqm using mechanical means as per MoRTH Specification Clause 502 For BT Portion	1	31187.00	7.00		218309.00 Sqm
						Total	218309.00 Sqm
		Add 2% For Ramp, Curve ,Junction					4366.18 Sqm
						G Total	222675.18 Sqm
8	5.2 (v)	Providing and applying tack coat with Bitumen emulsion (RS-1) using emulsion distributor at the rate of 0.20 to 0.30 kg per sqm on the prepared bituminous surface cleaned with Hydraulic broom as per MoRTH Specification Clause 503. For BT Portion	1	31187.00	7.00		218309.00 Sqm
						Total	218309.00 Sqm
		Add 2% For Ramp, Curve ,Junction					4366.18 Sqm
						G Total	222675.18 Sqm

S. No.	BSR No.	Item	N	L	B	H	Qty.	
							Total	8732.36 Cum
		Add 2% For Ramp, Curve ,Junction						174.65 Cum
							G Total	8907.01 Cum
11	9.3 (E)	Providing and laying reinforced cement concrete pipe NP3 for culverts on first class bedding of granular material in single row including fixing collar with cement mortar 1:2 but excluding excavation, protection works, backfilling, concrete and masonry works in head walls and parapets Clause 2905. 300 mm dia						
		For Utility pipe under pavement	30	5	2.50			375.00 Rmt
							Total	375.00 Rmt


 Assistant Engineer
 PWD Sub Dn. - North
 Jaipur

DETAILS

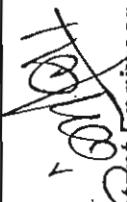
Name of Work :- Widening and Strengthening of Mahngi To Dudhli mode via Bhawani, Bhawani Khurd, Saipur, Andhi, Sriramnagar, Virasna, Gaonli, Newal, Maksudanpura, Chawandiya Road Km 0/0 to 40/0 (Total 40 Kms.).

Part : B : Cement Concrete Pavement

S. No.	BSR No.	Item	N	L	B	H	Qty.
1	3.5 (iii)	Excavation for roadwork in soil with hydraulic excavator of 0.9 cum bucket capacity including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross-sections, and transporting to the embankment location with a lift upto 1.5 m and lead upto 1000 m as per MoRTH Specification Clause 301.3					
		For Widening	2	3898.00	2.000	0.25	3898.00 Cum
		For New CC Portion on BT Road	2	4545.00	2.000	0.15	2727.00 Cum
						Total	6625.00 Cum
2	4.2 (i)	Providing laying spreading and compacting specified graded sand, gravel (crushed stone) as per Table 400-1,400-2 or any other course material as per design mix, as per CBR in sub base course including premixing the material at OMC in wet mix plant, carriage of mixed material spreading in uniform layers with motor grader F.E loader on a prepared base and compacting with vibratory roller to achieve desired density (as per I.S.2720) including all material, labor, machinery, lighting guarding, barricading and maintenance of diversion complete. [MoRTH specification : Clause 401]. By mechanical means. For Grading-I Material					

S. No.	BSR No.	Item	N	L	B	H	Qty.
		For Widening	2	3898.00	1.625	0.15	1900.28 Cum
		For New CC Portion on BT Road	2	4545.00	1.625	0.15	2215.69 Cum
		For New CC Portion on Track	1	1500.00	7.300	0.15	1642.50 Cum
						Total	5758.47 Cum
3	4.1 (A) (iii)	Construction of granular sub-base by providing well graded material, spreading in uniform layers with Tractor Mount Grader on prepared surface, mixing by mix in place method with rotavator at OMC, and compacting with smooth wheel roller to achieve the desired density, complete as per MoRTH Specification Clause 401 For Grading III Material					
		Shoulder	2	9943.00	1.000	0.150	2982.90 Cum
						Total	2982.90 Cum
4	4.7	Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the material with water at OMC in mechanical mixer (Pug Mill), carriage of mixed material by tipper to site, laying in uniform layers in sub-base/base course on a well prepared sub-base and compacting with smooth wheel roller of 80 to 100kN weight to achieve the desired density including lighting, barricading and maintenance of diversion, etc as per Tables 400-12 & 400-13 and MoRTH Specification Clause 406 By Mechanical Means with 21 km lead					
		For Widening	2	3898.00	1.625	0.10	1266.85 Cum
		For New CC Portion on BT Road	2	4545.00	7.000	0.10	6363.00 Cum
		For New CC Portion on Track	1	1500.00	7.000	0.10	1050.00 Cum
						Total	8679.85 Cum
5	2.15	Dismantling of cement concrete pavements by mechanical means using pneumatic tools breaking to pieces not exceeding 0.02 cum in volume and stock piling at designated locations and disposal of dismantled materials upto a lead of 1000 m, stacking serviceable and unserviceable materials separately	1	7.50	70.000	0.20	105.00 Cum

S. No.	BSR No.	Item	N	L	B	H	Qty.
6	6.5	Construction of un-reinforced, dowel jointed, plain cement concrete pavement over a prepared sub base with 43 grade cement @ 400 kg per cum, coarse and fine aggregate conforming to IS 383, maximum size of coarse aggregate not exceeding 25 mm, mixed in a batching and mixing plant as per approved mix design, transported to site, laid with a slip form paver, spread, compacted and finished in a continuous operation including provision of contraction, expansion, construction and longitudinal joints, joint filler, separation membrane, sealant primer, joint sealant, debonding strip, dowel bar, tie rod, admixtures as approved, curing compound, finishing to lines and grades as per drawing as per MoRTH Specification Clause 602 should have minimum Flexural strength of 4.5 Mpa M - 40 grade concrete					
		For Widening	1	3898.00	7.000	0.25	6821.50 Cum
		For New CC Portion on BT Road	1	4545.00	7.000	0.25	7953.75 Cum
		For New CC Portion on Track	1	1500.00	7.000	0.25	2625.00 Cum
						Total	17400.25 Cum
7	9.3 (E)	Providing and laying reinforced cement concrete pipe NP3 for culverts on first class bedding of granular material in single row including fixing collar with cement mortar 1:2 but excluding excavation, protection works, backfilling, concrete and masonry works in head walls and parapets Clause 2905. 300 mm dia					
		For Utility under CC pavement	18	1	7.00		126.00 Rmt
						Total	126.00 Rmt


 Assistant Engineer
 PWD Sub Dn: - North
 Jaipur

DETAILS

Name of Work :- Widening and Strengthening of Mahngi To Dudhli mode via Bhawani, Bhawani Khurd, Saipur, Andhi, Sriramnagar, Virasna, Gaonli, Newal, Maksudanpura, Chawandiya Road Km 0/0 to 40/0 (Total 40 Kms.).

Part : C : Furniture Work

S. No.	BSR No.	Description of Item	Measurement	Unit	Quantity
1	2	3	4	5	6
1	10.10	Reinforced cement concrete M15 grade kilometre stone/local stone of standard design as per IRC:8 fixing in position including painting and printing, etc as per drawing and MoRTH Specification Clause 801			
1.1	(i)	5th Kilometre Stone (precast)		Nos	8
1.2	(ii)	Ordinary Kilometer Stone (Precast)		Nos	33
1.3	(iii)	200 m stone (precast)		Nos	160
2	10.2 (A) (i)	Providing and fixing of retro-reflectorised cautionary, mandatory and informatory sign as per IRC:67 made of encapsulated lens type reflective sheeting vide Clause 801.3.1 fixed over aluminium sheeting, 1.5 mm thick supported on a mild steel angle iron post 75 mm x 75 mm x 6 mm firmly fixed to the ground by means of properly designed foundation with M15 grade cement concrete 450 mm x 450 mm x 600 mm, 600 mm below ground level as per drawings and MoRTH Specification Clause 801. 900 mm equilateral triangle		Nos	50

DETAILS

Name of Work :- Widening and Strengthening of Mahngi To Dudhli mode via Bhawani, Bhawani Khurd, Saipur, Andhi, Sriramnagar, Virasna, Gaonli, Newal, Maksudanpura, Chawandiya Road Km 0/0 to 40/0 (Total 40 Kms.).

Part : C : Furniture Work

S. No.	BSR No.	Description of Item	Measurement	Unit	Quantity
1	2	3	4	5	6
3	103A1	Providing and erecting direction and place identification retro-reflectoris sign as per IRC:67 made of encapsulated lens type reflective sheeting vide Clause 801.3.1. fixed over aluminium sheeting, 2 mm thick with area not exceeding 0.9 sqm supported on a mild steel single angle iron post 75 x 75 x 6 mm firmly fixed to the ground by means of properly designed foundation with M-15 grade cement concrete 450 x 450 x 600 mm, 600 mm below ground level as per approved drawing and MoRTH Specification Clause 801. Direction and Place Identification signs upto 0.9 sqm size board	25 1.20 0.90	P.Sqm	27.00
4	1022	Providing and fixing Mukhya Mantri Sadak Yojana/ Mahatma Gandhi Rajya Sadak Yojana informatory sign board with logo for roads funded by State road fund having M.S. Definition plate of 1.60 mm thickness frame to steel hollow dsection of 75mm x 75mm, 2.5m long stove enamelled paint with hold fast including paint logo as per approved design and colours. The logo shall be made out of 1.6mm thick circular plate duly framed with MS angle 25x25x5 mm on back and fix on 1200mm x 150mm rectangular steel base plate 1.6mm thick, the base of circular shall be plain at the junction of base plate. The size of definition plate shall be 1500x600mm and embedding the posts by M-15 cement concrete block 45 cm x 45 cm x 60 cm, 60 cm below ground level including lettering / writing and painting etc. complete in all respect as per MoRTH Specification Clause 801.		Nos	2

DETAILS

Name of Work :- Widening and Strengthening of Mahngi To Dudhli mode via Bhawani, Bhawani Khurd, Saipur, Andhi, Sriramnagar, Virasna, Gaonli, Newal, Maksudanpura, Chawandiya Road Km 0/0 to 40/0 (Total 40 Kms.).

Part : C : Furniture Work

S. No.	BSR No.	Description of Item	Measurement	Unit	Quantity
1	2	3	4	5	6
5	10.25	Providing and Erecting typical Citizen's Information Board as per approved drawing & specification made of two MS sheet of 1.6 mm thick each of size 900mm x 750mm stiffend by angle iron 25mmx25mm x 3mm all around the plate & plates fixed on frame of 75mm dia pipe of 12 SWG sheet (vertical post 3050 mm with angle holdfasts and horizontal member 900mm) to be joined by embedded in cement concrete M-15 grade of block of 600mmx 600mm x 750 mm size below ground level as per enclosed drawings & as directed by Engineering incharge. All MS will be stove annealed on both side lettering. Figuring and border will be with ready mixed synthetic enamel paint of superior quality in required shade and colour etc complete in all respect. All sections of framed post and steel tube will be painted with primer and two coat of epoxy paint as per drawing and as per Specification.		Nos	2
6	10.2	Marking Centre Line and stop lines etc. on road as per IRC pattern with thermoplastic paint of approved quality and make with 8% glass beads laid on the road surface at temperature 160° C with a special applicator machine complete with a special applicator machine complete with labour material and traffic diversion arrangements.			
		Edge Line	2 1.00 31187.00 0.100 1	P.Sqm	6237.40
		Centre line	1 1.00 31187.00 0.100 0.33	P.Sqm	514.59
		Zebra Corrsing	10 12 2.75 0.300	P.Sqm	99.00
			Total	P.Sqm	6850.99

DETAILS

Name of Work :- Widening and Strengthening of Mahngi To Dudhli mode via Bhawani, Bhawani Khurd, Saipur, Andhi, Sriramnagar, Virasna, Gaonli, Newal, Maksudanpura, Chawandiya Road Km 0/0 to 40/0 (Total 40 Kms.).

Part : C : Furniture Work

S. No.	BSR No.	Description of Item	Measurement	Unit	Quantity
1	2	3	4	5	6
7	16.76	Construction of Foundation / Inauguration Pedestal in 23 cm thick Brick masonry in CM 1:4 of size 1.20m x 1.80m above ground level with adequate foundation including providing and fixing of Granite stone of size 0.75m x 0.60m with engraving letters and figures, cement plaster, white washing etc. complete as per direction of Engineer in charge.			
8	8.37 NH	Supply of Chevron sign of size 75x60 cm made out of aluminum sheet 2 mm thick with fixing provision on M.S. angle iron post 50x50x6 mm 3 M long screwed with stainless steel nut bolts of 8 M dia, plate is covered by high intensity grade yellow retro-reflective sheeting and black screen printed arrow on Retro Reflective Sheet, complete in all respect. Comp. in all respect duly post painted in alternate band of Black/White synthetic enamel paint & hold fast at bottom		Nos	182
9	8.38.2 NH	Fixing of sign board having two posts including excavation cement concrete 1:5:10 (30X30X60 cms.) and transportation complete of size : 60x75 cm, 90x60 cm, 75x45 cm, & 60x45 cm		Nos	182
10	16.63	Supplying of Cat's Eye made of aluminium alloy size 75x100x22 mm having 21 biconvex lenses embedded in circular disk of ABS plastic on each side.		Nos	3500
11	16.79	Labour charges for fixing of Cat's Eye as per MoRTH specification, excluding cost of Cat's Eye.		Nos	3500

DETAILS

Name of Work :- Widening and Strengthening of Mahngi To Dudhli mode via Bhawani, Bhawani Khurd, Saipur, Andhi, Sriramnagar, Virasna, Gaonli, Newal, Maksudanpura, Chawandiya Road Km 0/0 to 40/0 (Total 40 Kms.).

Part : C : Furniture Work

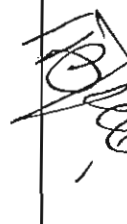
S. No.	BSR No.	Description of Item	Measurement	Unit	Quantity
1	2				
12	16.61	P & F Delinator with 30 cm. outer dia RCC hume pipe NP-2 (As per IS-458/ 1971) pipe 1. OM. Long 40 cm embedded in cement concrete (1:4:8) block of size 50x50x40 cm. including excavation upto 40 cm depth. The inside of pipe shall be filled with C.C. (1:4:8) stone grit max size 20 mm or less upto the top with semi circular humping. The pipes shall be painted white/black with enamel paint with red dots two Nos. on each side		Nos	200
13	15.13	White washing two coats on parapet walls and tree trunks including preparation of surface by cleaning scraping etc. as per MoRTH specifications Clause 800		P Sqm	500
14	8.58 NH	Fabrication & assembling of over head gantry & cantilever type structure as per drawing & design including steel work in built up tubular trusses , cutting / hoisting, bolting & fixing in position & applying coat of red oxide paint including special type of nut, bolts(Bolt up to 750 mm) and washers complete & finishing with grey enamel paint .			
		over head gantry	4.00 2500.00	Kg	10000.00
		cantilever type	4.00 1000.00	Kg	4000.00
			Total	Kg	14000.00

DETAILS

Name of Work :- Widening and Strengthening of Mahngi To Dudhli mode via Bhawani, Bhawani Khurd, Saipur, Andhi, Sriramnagar, Virasna, Gaonli, Newal, Maksudanpura, Chawandiya Road Km 0/0 to 40/0 (Total 40 Kms.).

Part : C : Furniture Work

S. No.	BSR No.	Description of Item	Measurement	Unit	Quantity
15	8.59 NH	Supply of High Intensity retro reflecting Type IV sign plate made out of 2.0 mm thick aluminum sheet face to be fully covered with blue / green high intensity grade retro reflective sheet and logo/ matters, boarder made of with similar type of white sheeting after etching treatment of aluminum sheet , the back side is to be painted with epoxy grey paint. The plate is to be fixed on 40x40x5 mm angle iron frame with help of aluminum rivets.	4.00 12.00 1.00	Sqm	48.00
		over head gantry	4.00 2.00 1.50	Sqm	12.00
		cantilever type	Total	Sqm	60.00
16	8.47 NH	Providing and erecting a "W" metal beam crash barrier comprising of 3 mm thick corrugated sheet metal beam rail, 70 cm above road/ ground level, fixed on CRC rolled channel vertical post, 150 x 75 x 5 mm spaced 2 mm centre to centre, 1.8 m high, 1.1 m below ground / road level, all steel parts and fitments to be galvanized by hot dip process, all fittings to conform to IS: 1367 and IS: 1364 , metal beam rail to be fixed on the vertical post with a spacer of channel section 150 x 75 x 5 mm, 330 mm long complete as per MoRTH specification Clause 811.3.	25.00 15.00	P Rmt	375.00


 Assistant Engineer
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DETAILS

Name of Work :- Widening and Strengthening of Mahngi To Dudhli mode via Bhawani, Bhawani Khurd, Saipur, Andhi, Sriramnagar, Virasna, Gaonli, Newal, Maksudanpura, Chawandiya Road Km 0/0 to 40/0 (Total 40 Kms.).

CH:

8 Nos.

Part : D : HPC 1000mm dia Single Row

Sl. No.	BSR No	Description of Item				Measurement	Quantity	Unit
1	11.1 (i)	Earthwork in excavation for structures as per drawing and MoRTH specifications Clause 304.1 including setting out, construction of shoring and bracing, removal of stumps and other deleterious material and disposal upto a lead of 50 m, dressing of sides and bottom and backfilling in trenches with excavated suitable material Ordinary soil Upto 3 m depth	8 x	2	x 6.15	x 1.60	x 1.55	244.03
			8 x	1	x 9.50	x 1.80	x 1.30	177.84
							Total :	421.87 P. Cum
2	11.4 (i)	Providing concrete for plain/reinforced concrete in open foundations complete as per drawings and MoRTH specifications Clause 1702, 1703, 2102 & 2104 P.C.C grade M 10 Nominal mix 1:3:6	8 x	2	x 6.15	x 1.60	x 0.15	23.62
							Total :	23.62 P. Cum
3	11.6 (iii)	Stone masonry work in cement mortar in foundation complete as per drawing and MoRTH specifications Clauses 1402, 1405, 2102 & 2104. Random Rubble Masonry In cement mortar 1:4	8 x	2	x 6.15	(1.40 + 0.40)	x 3.00	265.68
						2		
			8 x	2	x 6.15	(0.40 + 0.40)	x 0.45	17.71
						2		
		Deduction for Pipe	8 x	1x2	x 3.14	1.23 x	x 0.85	-16.15
					4			
							Total :	267.24 P. Cum

DETAILS

Name of Work :- Widening and Strengthening of Mahngi To Dudhli mode via Bhawani, Bhawani Khurd, Saipur, Andhi, Sriramnagar, Virasna, Gaonli, Newal, Maksudanpura, Chawandiya Road Km 0/0 to 40/0 (Total 40 Kms.).

CH:

8 Nos.

Part : D : HPC 1000mm dia Single Row

S1. No.	BSR No.	Description of Item			Measurement	Quantity	Unit
4	11.4 (iii) (i)	Providing concrete for plain/reinforced concrete in open foundations complete as per drawings and MoRTH specifications Clause 1702, 1703, 2102 & 2104 P.C.C. grade M 20 Nominal mix (1:2:4).	8	x	1 x 1.80 (11.30 + 10.90) x 0.80	127.87	
		Haunching			2		
		Deduction for pipe	8	x	3.14 (11.30 + 10.90) x 1.23	-52.73	
			8	x	2		
		Total :				75.14	P.Cum
5	14.1	Providing and laying boulder apron for bed protection with stone boulders of minimum size and weight as per Clause 5.3.7.2 of IRC:89, no fragment weighing less than 25 kg laid dry complete as per drawing and MoRTH specifications Clause 2503.2	8	x	2 x 6.15 x 2.00 0.30	59.04	P.Cum
6	9.4 (ii)	Providing and laying reinforced cement concrete pipe NP4 for culverts on first class bedding of granular material in single row including fixing collar with cement mortar 1:2 but excluding excavation, protection works, backfilling, concrete and masonry works in head walls and parapets Clause 2905. 1000 mm dia mm dia	8	x	5 x 2.50 x 1.00	100.00	P.Rmt
					Total :	100.00	

DETAILS

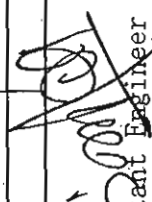
Name of Work :- Widening and Strengthening of Mahngi To Dudhli mode via Bhawani, Bhawani Khurd, Saipur, Andhi, Sriramnagar, Virasna, Gaonli, Newal, Maksudanpura, Chawandiya Road Km 0/0 to 40/0 (Total 40 Kms.).

CH:

8 Nos.

Part : D : HPC 1000mm dia Single Row

Sl. No.	BSR No	Description of Item				Measurement	Quantity	Unit
7	12.2A	Plastering with cement mortar (1:4), 20 mm thick on Stone work.	8	x	2	x	6.15 x 1.80	177.12
		Deduction for Pipes	8	x	2	x	$2 \times 3.14/4 \times (1.23)^2 = 2.375$	-19.00
							Net Qty.	158.12
							Total :	158.12 P. Sqm
8	12.13 (b)	Providing PCC M-20 architectural coping on the top of wing wall, return wall etc. complete as per drawing and MoRTH specification Clauses 1313, 1411 and 2206.6. 75 mm thick.	8	x	2	x	6.15 x 0.45	44.28
							Total :	44.28 P. Sqm


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DETAILS

Name of Work :- Widening and Strengthening of Mahngi To Dudhli mode via Bhawani, Bhawani Khurd, Saipur, Andhi, Sriramnagar, Virasna, Gaonli, Newal, Maksudanpura, Chawandiya Road Km 0/0 to 40/0 (Total 40 Kms.).

CH:

8 Nos.

Part : E : Flush Causeway

Sl. No.	BSR No	Description of Item					Measurement	Quantity	Unit
1	11.1 (i) (i)	Earthwork in excavation for structures as per drawing and MoRTH specifications Clause 304.1 including setting out, construction of shoring and bracing, removal of stumps and other deleterious material and disposal upto a lead of 50 m, dressing of sides and bottom and backfilling in trenches with excavated suitable material Ordinary soil Upto 3 m depth							
		New Flush Causeway	2	x	2	x	30.00 x 1.10	x 1.60	211.20
		Widening Of Flush Causeway	2	x	1	x	170.00 x 1.10	x 1.60	598.40
								Total :	809.60 P.Cum
2	11.4 (i) (i)	Providing concrete for plain/reinforced concrete in open foundations complete as per drawings and MoRTH specifications Clause 1702, 1703, 2102 & 2104 P.C.C grade M 10 Nominal mix 1:3:6	2	x	2	x	30.00 x 1.10	x 0.15	19.80
			2	x	1	x	170.00 x 1.10	x 0.15	56.10
								Total :	75.90 P.Cum
3	11.6 (iii) (ii)	Stone masonry work in cement mortar in foundation complete as per drawing and MoRTH specifications Clauses 1402, 1405, 2102 & 2104. Random Rubble Masonry In cement mortar 1:4	2	x	2	x	30.00 (0.90 + 0.40)	x 1.50	117.00
							2		
			2	x	1	x	170.00 (0.90 + 0.40)	x 1.50	331.50
							2		
			2	x	2	x	100.00 (0.40 + 0.00)	x 0.40	32.00

DETAILS

Name of Work :- Widening and Strengthening of Mahngi To Dudhli mode via Bhawani, Bhawani Khurd, Saipur, Andhi, Sriramnagar, Virasna, Gaonli, Newal, Maksudanpura, Chawandiya Road Km 0/0 to 40/0 (Total 40 Kms.).

CH:

8 Nos.

Part : E : Flush Causeway

Sl. No.	BSR No.	Description of Item			Measurement	Quantity	Unit
1	2						
					2		
						Total :	P. Cum
						480.50	P. Cum
4	4.2 (1)	Providing laying spreading and compacting specified graded sand, gravel (crushed stone) as per Table 400-1, 400-2 or any other course material as per design mix, as per CBR in sub base course including premixing the material at OMC in wet mix plant, carriage of mixed material spreading in uniform layers with motor grader F.E loader on a prepared base and compacting with vibratory roller to achieve desired density (as per I.S.2720) including all material, labor, machinery, lighting guarding, barricading and maintenance of diversion complete. [MoRTH specification : Clause 401]. By mechanical means. For Grading-I Material	1	x			
		New Flush Causeway	1	x	2	x 30.00	100.80
		Widening Of Flush Causeway	1	x	2	x 170.00	94.35
		Total :					195.15
5	4.7	Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the material with water at OMC in mechanical mixer (Pug Mill), carriage of mixed material by tipper to site, laying in uniform layers in sub-base/base course on a well prepared sub-base and compacting with smooth wheel roller of 80 to 100kN weight to achieve the desired density including lighting, barricading and maintenance of diversion, etc as per Tables 400-12 & 400-13 and MoRTH Specification Clause 406 By Mechanical Means with 21 km lead					
		New Flush Causeway	1	x	2	x 30.00	67.20

DETAILS

Name of Work :- Widening and Strengthening of Mahngi To Dudhli mode via Bhawani, Bhawani Khurd, Saipur, Andhi, Sriramnagar, Virasna, Gaonli, Newal, Maksudanpura, Chawandiya Road Km 0/0 to 40/0 (Total 40 Kms.).

CH:

8 Nos.

Part : E : Flush Causeway

S.I. No.	BSR No	Description of Item	1	x	2	x	170.00	x	1.85	x	0.10	Quantity	Unit
		Widening Of Flush Causeway	1	x	2	x	170.00	x	1.85	x	0.10	62.90	
		Total :										130.10	P.Cum
6	6.5	Construction of un-reinforced, dowel jointed, plain cement concrete pavement over a prepared sub base with 43 grade cement @ 400 kg per cum, coarse and fine aggregate conforming to IS 383, maximum size of coarse aggregate not exceeding 25 mm, mixed in a batching and mixing plant as per approved mix design, transported to site, laid with a slip form paver, spread, compacted and finished in a continuous operation including provision of contraction, expansion, construction and longitudinal joints, joint filler, separation membrane, sealant primer, joint sealant, debonding strip, dowel bar, tie rod, admixtures as approved, curing compound, finishing to lines and grades as per drawing as per MoRTH Specification Clause 602 should have minimum Flexural strength of 4.5 Mpa M - 40 grade concrete											
		New Flush Causeway	1	x	2	x	30.00	x	11.20	x	0.15	100.80	
			2	x	1	x	30.00	x	12.00	x	0.10	72.00	
		Widening Of Flush Causeway	1	x	1	x	170.00	x	11.20	x	0.15	285.60	
			1	x	1	x	170.00	x	12.00	x	0.10	204.00	
		Total :										662.40	P.Cum
7	12.20	Plastering with cement mortar (1:4), 20 mm thick on Stone work.	2	x	4	x	10.00	x	0.20			16.00	
			2	x	2	x	170.00	x	0.20			136.00	

DETAILS

Name of Work :- Widening and Strengthening of Mahngi To Dudhli mode via Bhawani, Bhawani Khurd, Saipur, Andhi, Sriramnagar, Virasna, Gaonli, Newal, Maksudanpura, Chawandiya Road Km 0/0 to 40/0 (Total 40 Kms.).

CH:

8 Nos.

Part : E : Flush Causeway

S.L. No.	BSR No	Description of Item			Measurement	Quantity	Unit
						Net Qty.	152.00.
						Total :	P. Sqm 152.00
8	16.5	Supply & Fixing of flood gauge (water Gauge) as per I.R.C. 67 standard 200 cm long fixed on angle iron posts 50x50x6 mm.....2.6 M. long.					
9	7.7	Construction of RCC guide posts of 250 mm dia M25 grade cast-in-situ with 20 mm nominal size aggregate, true to line and grade, tolerance of vertical RCC posts not to exceed 1 in 500 as per drawing and MoRTH Specification Clause 1700 & 1600	2	230.00	0.66 Nos	6.00	Each

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DETAILS

Name of Work :- Widening and Strengthening of Mahngi To Dudhli mode via Bhawani, Bhawani Khurd, Saipur, Andhi, Srirammagar, Virasna, Gaonli, Newal, Maksudanpura, Chawandiya Road Km 0/0 to 40/0 (Total 40 Kms.).

As Per Enclosed Sheet

CH:

Part : F : Protection Wall

935.00

Sl. No.	BSR No.	Description of Item				Measurement	Quantity	Unit
1	11.1 (i)	Earthwork in excavation for structures as per drawing and MoRTH specifications Clause 304.1 including setting out, construction of shoring and bracing, removal of stumps and other deleterious material and disposal upto a lead of 50 m, dressing of sides and bottom and backfilling in trenches with excavated suitable material Ordinary soil Upto 3 m depth	1	x	1	x 935.00 x 1.50	x 1.50 2103.75 Total : 2103.75	P.Cum
2	11.4 (i)	Providing concrete for plain/reinforced concrete in open foundations complete as per drawings and MoRTH specifications Clause 1702, 1703, 2102 & 2104 P.C.C grade M 10 Nominal mix 1:3:6	1	x	1	x 935.00 x 1.50	x 0.15 210.38 Total : 210.38	P.Cum
3	11.6 (iii)	Stone masonry work in cement mortar in foundation complete as per drawing and MoRTH specifications Clauses 1402, 1405, 2102 & 2104. Random Rubble Masonry In cement mortar 1:6	1	x	1	x 935.00 (1.40 + 0.40) 2	x 3.00 2524.50 Total : 2524.50	P.Cum

DETAILS

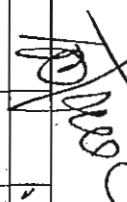
Name of Work :- Widening and Strengthening of Mahngi To Dudhli mode via Bhawani, Bhawani Khurd, Saipur, Andhi, Sriramnagar, Virasna, Gaonli, Newal, Maksudanpura, Chawandiya Road Km 0/0 to 40/0 (Total 40 Kms.).

CH:

As Per Enclosed Sheet

Part : F : Protection Wall

Sl. No.	BSR No.	Description of Item			Measurement	Quantity	Unit
1	2				4	5	935.00
4	12.2A	Plastering with cement mortar (1:4), 20 mm thick on Stone work.	1	x	1 x	1402.50	
					935.00 x	1.50	
						Net Qty. 1402.50	
						Total : 1402.50	P.Sqm
5	12.13 (b)	Providing PCC M-20 architectural coping on the top of wing wall, return wall etc. complete as per drawing and MoRTH specification Clauses 1313, 1411 and 2206.6. 75 mm thick.	1	x	1 x	420.75	
					935.00 x	0.45	
						Total : 420.75	P.Sqm
6	12.9	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 100 mm dia AC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing and MoRTH specification Clauses 1409, 2204.4, 2206.4 & 2706	2	x	0.2 x	374.00	Nos
					935.00 x	1.00	


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DETAILS

Name of Work :- Widening and Strengthening of Mahngi To Dudhli mode via Bhawani, Bhawani Khurd, Saipur, Andhi, Sriramnagar, Virasna, Gaonli, Newal, Maksudanpura, Chawandiya Road Km 0/0 to 40/0 (Total 40 Kms.).

Part : F : Protection Wall

Sl. No.	Chainage	Length
1	3/800 to 4/300 One Side Hilly	100.00
3	5/250 to 5/350 R/S nalla	50.00
4	7/150 to 7/175 One Side Down	50.00
	8/375 to 8/400 and 8/425 to 8/450 Both Side Nalla	100.00
	9/0 to 9/350 R/S nalla	100.00
	12/025 to 12/150 R/S Pond	125.00
	20/100 to 20/200 R/S Pond	100.00
	21/725 to 22/225 Nalla	100.00
	23/100 to 23/350 R/S Pond	100.00
	25/000 to 25/500	100.00
	25/525 to 25/650 Pond	75.00
	31/550 to 31/750 R/S Pond	150.00
	34/475 to 34/775 Pond R/S Pond	100.00
	ToTal	1250.00
		1250.00

DETAILS

Name of Work :- Widening and Strengthening of Mahngi To Dudhli mode via Bhawani, Bhawani Khurd, Saipur, Andhi, Sriramnagar, Virasna, Gaonli, Newal, Maksudanpura, Chawandiya Road Km 0/0 to 40/0 (Total 40 Kms.).

CH: 13/700 to 14/800 River Main Stream 14/4000 to 14/800

1 Nos.

Part : H : Vented Causeway

Sl. No.	BSR No.	Description of Item				Measurement	Quantity	Unit
1	11.1 (0)	Earthwork in excavation for structures as per drawing and MoRTH specifications Clause 304.1 including setting out, construction of shoring and bracing, removal of stumps and other deleterious material and disposal upto a lead of 50 m, dressing of sides and bottom and backfilling in trenches with excavated suitable material	1	x	1	x 400.00 x 1.60	x 2.00	1280.00
		Ordinary soil Upto 3 m depth	1	x	1	x 400.00 x 1.80	x 2.50	1800.00
		Apron	1	x	1	x 404.00 x 0.60	x 0.60	145.44
			1	x	1	x 405.00 x 0.60	x 0.60	145.80
							Total :	3371.24
								P.Cum
2	11.4 (0)	Providing concrete for plain/reinforced concrete in open foundations complete as per drawings and MoRTH specifications Clause 1702, 1703, 2102 & 2104 P.C.C grade M 10 Nominal mix 1:3:6	1	x	1	x 400.00 x 1.60	x 0.15	96.00
			1	x	1	x 400.00 x 1.80	x 0.15	108.00
			1	x	1	x 404.00 x 0.60	x 0.15	36.36
			1	x	1	x 405.00 x 0.60	x 0.15	36.45
							Total :	276.81
								P.Cum

DETAILS

Name of Work :- Widening and Strengthening of Mahngi To Dudhli mode via Bhawani, Bhawani Khurd, Saipur, Andhi, Sriramnagar, Virasna, Gaonli, Newal, Maksudanpura, Chawandiya Road Km 0/0 to 40/0 (Total 40 Kms.).

CH: 13700 to 14800 River Main Stream 14/4000 to 14/800

1 Nos.

Part : H : Vented Causeway

[illegible]

DETAILS

Name of Work :- Widening and Strengthening of Mahngi To Dudhli mode via Bhawani, Bhawani Khurd, Saipur, Andhi, Sriramnagar, Virasna, Gaonli, Newal, Maksudanpura, Chawandiya Road Km 0/0 to 40/0 (Total 40 Kms.).

CH: 13/700 to 14/800 River Main Stream 14/4000 to 14/800

1 Nos.

Part : H : Vented Causeway

Sl. No.	BSR No	Description of Item			Measurement	Quantity	Unit
5	14.1	Providing and laying boulder apron for bed protection with stone boulders of minimum size and weight as per Clause 5.3.7.2 of IRC:89, no fragment weighing less than 25 kg laid dry complete as per drawing and MoRTH specifications Clause 2503.2	1	x	1 x 400.00 x 2.00	x 0.30	240.00
			1	x	1 x 400.00 x 2.50	x 0.30	300.00
						Total :	540.00
							P.Cum
6	5.4 (A)	Providing and laying reinforced cement concrete pipe NP4 for culverts on first class bedding of granular material in single row including fixing collar with cement mortar 1:2 but excluding excavation, protection works, backfilling, concrete and masonry works in head walls and parapets Clause 2905. 1200 mm dia mm dia	1	x	5 x 90.00 x 2.50		1125.00
							P.Rmt
7	12.2A	Plastering with cement mortar (1:4), 20 mm thick on Stone work.	1	x	2 x 400.00 x 1.50		1200.00
			1	x	4 x 125.00 x 0.50		250.00
		Deduction for Pipes	100	x	3.14 (1.00 + 1.00)	x 1.45	-82.52
					4		
		Drain	70	x	4 x 2.50 x 0.70	x 1.00	490.00
						Net Qty.	1857.48
						Total :	1857.48
							P.Sqm

DETAILS

Name of Work :- Widening and Strengthening of Mahngi To Dudhli mode via Bhawani, Bhawani Khurd, Saipur, Andhi, Sriramnagar, Virasna, Geonli, Newal, Maksudanpura, Chawandiya Road Km 0/0 to 40/0 (Total 40 Kms.).

CH: 13/700 to 14/800 River Main Stream 14/4000 to 14/800

1 Nos.

Part : H : Vented Causeway

Sl. No.	BSR No	Description of Item				Measurement	Quantity	Unit
1	2							
8	12.13 (b)	Providing PCC M-20 architectural coping on the top of wing wall, return wall etc. complete as per drawing and MoRTH specification Clauses 1313, 1411 and 2206.6. 75 mm thick.	1	x	1	x 404.00 x 0.50	x 1.00	202.00
			1	x	1	x 405.00 x 0.50	x 1.00	202.50
							Total :	404.50 P.Sqm
9	6.5	Construction of un-reinforced, dowel jointed, plain cement concrete pavement over a prepared sub base with 43 grade cement @ 400 kg per cum, coarse and fine aggregate conforming to IS 383, maximum size of coarse aggregate not exceeding 25 mm, mixed in a batching and mixing plant as per approved mix design, transported to site, laid with a slip form paver, spread, compacted and finished in a continuous operation including provision of contraction, expansion, construction and longitudinal joints, joint filler, separation membrane, sealant primer, joint sealant, debonding strip, dowel bar, tie rod, admixtures as approved, curing compound, finishing to lines and grades as per drawing as per MoRTH Specification Clause 602 should have minimum Flexural strength of 4.5 Mpa M - 40 grade concrete	1	x	1	x 400.00 x 11.70	x 0.15	702.00
			1	x	1	x 400.00 x 12.50	x 0.10	500.00
							Total :	1202.00 P.Sqm

DETAILS

Name of Work :- Widening and Strengthening of Mahngi To Dudhli mode via Bhawani, Bhawani Khurd, Saipur, Andhi, Sriramnagar, Virasna, Gaonli, Newal, Maksudanpura, Chawandiya Road Km 0/0 to 40/0 (Total 40 Kms.).

CH: 13/700 to 14/800 River Main Stream 14/4000 to 14/800

1 Nos.

Part : H : Vented Causeway

Sl. No.	BSR No	Description of Item				Measurement	Quantity	Unit
10	12.9	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 100 mm dia AC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing and MoRTH specification Clauses 1409, 2204.4, 2206.4 & 2706						
							600.00	Each
11	14.6	Providing and laying filter material underneath pitching in slopes complete as per drawing and MoRTH specifications Clause 2504.2.2						
			1	x	2	x 700.00 x 2.50	x 0.15	
							525.00	P.Cum
						Total :	525.00	P.Cum
12	14.5	Providing and laying pitching on slopes laid over prepared filter media as per drawing and MoRTH specifications Clause 2504.2.1						
			1	x	2	x 700.00 x 2.50	x 0.22	
							770.00	P.Cum
						Total :	770.00	P.Cum

DETAILS

Name of Work :- Widening and Strengthening of Mahngi To Dudhli mode via Bhawani, Bhawani Khurd, Saipur, Andhi, Sriramnagar, Virasna, Gaonli, Newal, Maksudanpura, Chawandiya Road Km 0/0 to 40/0 (Total 40 Kms.).

CH: 13/700 to 14/800 River Main Stream 14/4000 to 14/800

1 Nos.

Part : H : Vented Causeway.

Sl. No.	BSR No	Description of Item					Measurement		Quantity	Unit
1	2								5	6
13	14.11	Construction of toe walls for protection of slopes as per drawing and MoRTH specifications Clause 2507.1 Random rubble masonry in case of stone pitching laid with cement mortar (1:5)								
			1	x	4	x	700.00	x 0.50	x 0.75	1050.00
									Total :	1050.00
										P.Cum
14	16.54	Supply & Fixing of flood gauge (water Gauge) as per I.R.C. 67 standard 200 cm long fixed on angle iron posts 50x50x6 mm, 2.6 M. long.								
									2.00	Each
15	7.7	Construction of RCC guide posts of 250 mm dia M25 grade cast in-situ with 20 mm nominal size aggregate, true to line and grade, tolerance of vertical RCC posts not to exceed 1 in 500 as per drawing and MoRTH Specification Clause 1700 & 1600	2		400.00		0.66		528.00	Nos

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DETAILS

Name of Work :- Widening and Strengthening of Mahngi To Dudhli mode via Bhawani, Bhawani Khurd, Saipur, Andhi, Sriramnagar, Virasna, Gaonli, Newal, Maksudanpura, Chawandiya Road Km 0/0 to 40/0 (Total 40 Kms.).

CH:

3 Nos.

Part : H : Vented Causeway(60 Mtr)

Sl. No.	BSR No	Description of Item			Measurement	Quantity	Unit
1	11.1 (1)	Earthwork in excavation for structures as per drawing and MoRTH specifications Clause 304.1 including setting out, construction of shoring and bracing, removal of stumps and other deleterious material and disposal upto a lead of 50 m, dressing of sides and bottom and backfilling in trenches with excavated suitable material	3	x	1		
		Ordinary soil Upto 3 m depth	3	x	1	x 60.00 x 1.35	x 1.80 437.40
			3	x	1	x 60.00 x 1.40	x 2.00 504.00
		Apron	3	x	1	x 60.00 x 0.60	x 0.60 64.80
			3	x	1	x 60.00 x 0.60	x 0.60 64.80
						Total : 1071.00	P.Cum
2	11.4 (1)	Providing concrete for plain/reinforced concrete in open foundations complete as per drawings and MoRTH specifications Clause 1702, 1703, 2102 & 2104 P.C.C grade M 10 Nominal mix 1:3:6	3	x	3	x 60.00 x 1.35	x 0.15 109.35
			3	x	3	x 60.00 x 1.40	x 0.15 113.40
			3	x	3	x 64.00 x 0.60	x 0.15 51.84
			3	x	3	x 65.00 x 0.60	x 0.15 52.65
						Total : 327.24	P.Cum

DETAILS

Name of Work :- Widening and Strengthening of Mahngi To Dudhli mode via Bhawani, Bhawani Khurd, Saipur, Andhi, Sriramnagar, Virasna, Gaonli, Newal, Maksudanpura, Chawandiya Road Km 0/0 to 40/0 (Total 40 Kms.).

CH:

3 Nos.

Part : H : Vented Causeway(60 Mtr)

Sl. No.	BSR No	Description of Item					Measurement	Quantity	Unit
3	11.6 (III) (ii)	Stone masonry work in cement mortar in foundation complete as per drawing and MoRTH specifications Clauses 1402, 1405, 2102 & 2104. Random Rubble Masonry in cement mortar 1:4	3	x	3	x	60.00 (1.25 + 0.40) x 3.05	1358.78	
							2		
			3	x	3	x	60.00 (1.30 + 0.40) x 3.25	1491.75	
							2		
		Flange	3	x	4	x	20.00 x 0.40	96.00	
			3	x	1	x	64.00 x 0.50	72.00	
			1	x	1	x	65.00 x 0.50	24.38	
		Deduction for Pipe	6	x	1x5	x	3.14 x 1.45 x 0.90	-44.56	
							4		
								Total : 2998.35	P. Cum
4	11.4 (III) (i)	Providing concrete for plain/reinforced concrete in open foundations complete as per drawings and MoRTH specifications Clause 1702, 1703, 2102 & 2104 P.C.C. grade M 20 Nominal mix (1:2:4).							
		Haunching	3	x	3	x	10.00 (12.50 + 12.50) x 1.60	1800.00	
							2		
		Deduction for pipe	15	x	3.14	x	(11.30 + 10.90) x 1.45	-137.40	
					4		2		
		Total :						1662.60	P Cum

DETAILS

Name of Work :- Widening and Strengthening of Mahngi To Dudhli mode via Bhawani, Bhawani Khurd, Saipur, Andhi, Sriramnagar, Virasna, Gaonli, Newal, Maksudanpura, Chawandiya Road Km 0/0 to 40/0 (Total 40 Kms.).

CH:

3 Nos.

Part : H : Vented Causeway(60 Mtr)

Sl. No.	BSR No	Description of Item			Measurement					Quantity	Unit		
5	14.1	Providing and laying boulder apron for bed protection with stone boulders of minimum size and weight as per Clause 5.3.7.2 of IRC:89, no fragment weighing less than 25 kg laid dry complete as per drawing and MoRTH specifications Clause 2503.2	3	x	1	x	60.00	x	2.00	x	0.30	108.00	
			3	x	1	x	60.00	x	2.50	x	0.30	135.00	
										Total :	243.00	P.Cum	
6	9.4 (A)	Providing and laying reinforced cement concrete pipe NP4 for culverts on first class bedding of granular material in single row including fixing collar with cement mortar 1:2 but excluding excavation, protection works, backfilling, concrete and masonry works in head walls and parapets Clause 2905. 1200 mm dia mm dia	3	x	5	x	5.00	x	2.50			187.50	P.Rmt
7	12.2A	Plastering with cement mortar (1:4), 20 mm thick on Stone work.	6	x	2	x	60.00	x	1.50			1080.00	
			3	x	4	x	20.00	x	0.50			120.00	
		Deduction for Pipes	15	x	3.14	x	(1.00 + 1.00)	x	1.45	x	1.45	-12.38	
					4		2						
										Net Qty.	1187.62		
										Total :	1187.62	P.Sqrm	

DETAILS

Name of Work :- Widening and Strengthening of Mahngi To Dudhli mode via Bhawani, Bhawani Khurd, Saipur, Andhi, Sriramnagar, Virasna, Gaonli, Newal, Maksudanpura, Chawandiya Road Km 0/0 to 40/0 (Total 40 Kms.).

CH:

3 Nos.

Part : H : Vented Causeway(60 Mtr)

Sl. No.	BSR No	Description of Item			Measurement	Quantity	Unit					
1	2											
8	6.5	Construction of un-reinforced, dowel jointed, plain cement concrete pavement over a prepared sub base with 43 grade cement @ 400 kg per cum, coarse and fine aggregate conforming to IS 383, maximum size of coarse aggregate not exceeding 25 mm, mixed in a batching and mixing plant as per approved mix design, transported to site, laid with a slip form paver, spread, compacted and finished in a continuous operation including provision of contraction, expansion, construction and longitudinal joints, joint filler, separation membrane, sealant, primer, joint sealant, debonding strip, dowel bar, tie rod, admixtures as approved, curing compound, finishing to lines and grades as per drawing as per MoRTH Specification Clause 602 should have minimum Flexural strength of 4.5 Mpa M - 40 grade concrete	3	x	1	x 60.00	x 12.50	x 0.25	562.50	Total : 562.50	P.Sqm	
9	16.54	Supply & Fixing of flood gauge (water Gauge) as per I.R.C. 67 standard 200 cm long fixed on angle iron posts 50x50x6 mm, 2.6 M. long.									6.00	Each

DETAILS

Name of Work :- Widening and Strengthening of Mahngi To Dudhli mode via Bhawani, Bhawani Khurd, Saipur, Andhi, Sriramnagar, Virasna, Gaonli, Newal, Maksudanpura, Chawandiya Road Km 0/0 to 40/0 (Total 40 Kms.).

CH:

3 Nos.

Part : H : Vented Causeway(60 Mtr)

Sl. No.	BSR No	Description of Item	Measurement	Quantity	Unit
10	7.7	Construction of RCC guide posts of 250 mm dia M25 grade cast in-situ with 20 mm nominal size aggregate, true to line and grade, tolerance of vertical RCC posts not to exceed 1 in 500 as per drawing and MoRTH Specification Clause 1700 & 1600	180.00	238.00	Nos



Assistant Engineer
 PWD Sub Dn. - North
 Jaipur

DETAILS

Name of Work :- Widening and Strengthening of Mahngi To Dudhli mode via Bhawani, Bhawani Khurd, Saipur, Andhi, Sriramnagar, Virasna, Gaonli, Newal, Maksudanpura, Chawandiya Road Km 0/0 to 40/0 (Total 40 Kms.).

CH:

2 Nos.

Part : H : Vented Causeway(30 Mtr)

Sl. No.	BSR No	Description of Item				Measurement	Quantity	Unit
1	11.1 (0) (0)	Earthwork in excavation for structures as per drawing and MoRTH specifications Clause 304.1 including setting out, construction of shoring and bracing, removal of stumps and other deleterious material and disposal upto a lead of 50 m, dressing of sides and bottom and backfilling in trenches with excavated suitable material	2	x	1	x 30.00	x 1.35	x 1.80
		Ordinary soil Upto 3 m depth	2	x	1	x 30.00	x 1.40	x 2.00
		Apron	2	x	1	x 30.00	x 0.60	x 0.60
			2	x	1	x 30.00	x 0.60	x 0.60
							Total :	357.00
								P.Cum
2	11.4 (0) (0)	Providing concrete for plain/reinforced concrete in open foundations complete as per drawings and MoRTH specifications Clause 1702, 1703, 2102 & 2104 P.C.C grade M 10 Nominal mix 1:3:6	2	x	2	x 30.00	x 1.35	x 0.15
			2	x	2	x 30.00	x 1.40	x 0.15
			2	x	2	x 34.00	x 0.60	x 0.15
			2	x	2	x 35.00	x 0.60	x 0.15
							Total :	74.34
								P.Cum

DETAILS

Name of Work :- Widening and Strengthening of Mahngi To Dudhli mode via Bhawani, Bhawani Khurd, Saipur, Andhi, Sriramnagar, Virasna, Gaonli, Newal, Maksudanpura, Chawandiya Road Km 0/0 to 40/0 (Total 40 Kms.).

CH:

2 Nos.

Part : H : Vented Causeway(30 Mtr)

Sl. No.	BSR No	Description of Item				Measurement	Quantity	Unit
3	11.6 (III) (iv)	Stone masonry work in cement mortar in foundation complete as per drawing and MoRTH specifications Clauses 1402, 1405, 2102 & 2104. Random Rubble Masonry In cement mortar 1:4	2	x	2	x 30.00 (1.25 + 0.40)	x 2.85	282.15
						2		
			2	x	2	x 30.00 (1.30 + 0.40)	x 3.00	306.00
						2		
		Flange	2	x	4	x 10.00 x 0.40	x 1.00	32.00
			2	x	1	x 34.00 x 0.50	x 0.75	25.50
			1	x	1	x 35.00 x 0.50	x 0.75	13.13
		Deduction for Pipe	4	x	1x5	x 3.14 1.45 x	x 0.90	-29.71
						4		
							Total :	629.07
								P.Cum
4	11.4 (III) (i)	Providing concrete for plain/reinforced concrete in open foundations complete as per drawings and MoRTH specifications Clause 1702, 1703, 2102 & 2104 P.C.C. grade M 20 Nominal mix (1:2:4).	2	x	2	x 10.00 (12.50 + 12.50)	x 1.60	800.00
		Haunching				2		
		Deduction for pipe	10	x	3.14	(11.30 + 10.90)	x 1.45	-91.60
					4	2		
		Total :						708.40
								P.Cum

DETAILS

Name of Work :- Widening and Strengthening of Mahngi To Dudhli mode via Bhawani, Bhawani Khurd, Saipur, Andhi, Sriiramnagar, Virasna, Geonli, Newal, Maksudanpura, Chawandiya Road Km 0/0 to 40/0 (Total 40 Kms.).

CH:

2 Nos.

Part : H : Vented Causeway(30 Mtr)

Sl. No.	BSR No	Description of Item			Measurement					Quantity	Unit		
5	14.1	Providing and laying boulder apron for bed protection with stone boulders of minimum size and weight as per Clause 5.3.7.2 of IRC:89, no fragment weighing less than 25 kg laid dry complete as per drawing and MoRTH specifications Clause 2503.2	2	x	1	x	30.00	x	2.00	x	0.30	36.00	
			2	x	1	x	30.00	x	2.50	x	0.30	45.00	
											Total :	81.00	P.Cum
6	14.1 (A)	Providing and laying reinforced cement concrete pipe NP4 for culverts on first class bedding of granular material in single row including fixing collar with cement mortar 1:2 but excluding excavation, protection works, backfilling, concrete and masonry works in head walls and parapets Clause 2905. 1200 mm dia mm dia	2	x	5	x	5.00	x	2.50			125.00	P.Rmt
7	12.2A	Plastering with cement mortar (1:4), 20 mm thick on Stone work.	4	x	2	x	30.00	x	1.50			360.00	
			2	x	4	x	10.00	x	0.50			40.00	
		Deduction for Pipes	10	x	3.14	x	(1.00 + 1.00)	x	1.45	x	1.45	-8.25	
					4		2						
											Net Qty.	391.75	
											Total :	391.75	P.Sqm

DETAILS

Name of Work :- Widening and Strengthening of Mahngi To Dudhli mode via Bhawani, Bhawani Khurd, Saipur, Andhi, Sriramnagar, Virasna, Gaonli, Newal, Maksudanpura, Chawandiya Road Km 0/0 to 40/0 (Total 40 Kms.).

CH:

2 Nos.

Part : H : Vented Causeway(30 Mtr)

Sl. No.	BSR No	Description of Item			Measurement	Quantity	Unit				
1	2					5					
8	6.5	Construction of un-reinforced, dowel jointed, plain cement concrete pavement over a prepared sub base with 43 grade cement @ 400 kg per cum, coarse and fine aggregate conforming to IS 383, maximum size of coarse aggregate not exceeding 25 mm, mixed in a batching and mixing plant as per approved mix design, transported to site, laid with a slip form paver, spread, compacted and finished in a continuous operation including provision of contraction, expansion, construction and longitudinal joints, joint filler, separation membrane, sealant primer, joint sealant, debonding strip, dowel bar, tie rod, admixtures as approved, curing compound, finishing to lines and grades as per drawing as per MoRTH Specification Clause 602, should have minimum Flexural strength of 4.5 Mpa M - 40 grade concrete	2	x	1	x 30.00	x 12.50	x 0.25	187.50		
								Total :	187.50	P. Sqm	
9	16.54	Supply & Fixing of flood gauge (water Gauge) as per I.R.C. 67 standard 200 cm long fixed on angle iron posts 50x50x6 mm, 2.6 M. long.								4.00	Each

DETAILS

Name of Work :- Widening and Strengthening of Mahngi To Dudhli mode via Bhawani, Bhawani Khurd, Saipur, Andhi, Sriramnagar, Virasna, Gaonli, Newal, Maksudanpura, Chawandiya Road Km 0/0 to 40/0 (Total 40 Kms.).

CH:

2 Nos.

Part : H : Vented Causeway(30 Mtr)

Sl. No.	BSR No.	Description of Item	Measurement	Quantity	Unit
10	7.7	Construction of RCC guide posts of 250 mm dia M25 grade cast in-situ with 20 mm nominal size aggregate, true to line and grade, tolerance of vertical RCC posts not to exceed 1 in 500 as per drawing and MoRTH Specification Clause 1700 & 1600	0.66	79.00	Nos

Handwritten signature and initials

SIZE - (1x1.5x1.5)											
Sr. No.	Discription	Side	Complete d Work	Nos.	Length	Width	Height	Quantity	Unit	Grade	Remark
1	PCC	BHS	1	1	12.9866	2.2000	0.1500	4.286	Cum	M-15	
2	Raft	BHS	1	1	12.0000	2.0000	0.2500	6.000	Cum	M-30	
3	Raft Shear Key	BHS	1	2	0.7750	2.0000	0.9500	2.945	Cum	M-30	
4	Bottom Haunch	BHS	1	2	12.0000	0.3250	0.1500	1.170	Cum	M-30	
5	Wall	BHS	1	2	12.0000	0.2500	1.8100	10.860	Cum	M-30	
6	Top Haunch	BHS	1	2	12.0000	0.3250	0.1500	1.170	Cum	M-30	
7	Top Slab	BHS	1	1	12.0000	2.0000	0.2500	6.000	Cum	M-30	
8	Parapet	BHS	1	2	2.0000	0.4500	0.9800	1.764	Cum	M-25	
9	PCC (R/T Wall)	LHS	1	2	4.3000	3.4000	0.1000	2.924	Cum	M-15	
10	RAFT (R/T Wall)	LHS	1	2	4.2000	3.2000	0.3000	8.064	Cum	M-30	
11	RAFT TRAPEZOIDAL (R/T Wall)	LHS	1	2	4.2000	2.0000	0.1500	2.520	Cum	M-30	
12	WALL (R/T Wall)	LHS	1	2	4.2000	0.4000	2.6120	8.776	Cum	M-30	
13	BRACKET (R/T Wall)	LHS	1	2	4.2000	0.4000	0.2000	0.672	Cum	M-30	
14	VERTICAL ABOVE BRACKET (R/T Wall)	LHS	1	2	4.2000	0.5000	0.5000	2.100	Cum	M-30	
15	PARAPET (R/T Wall)	LHS	1	2	4.2000	0.4500	0.9000	3.402	Cum	M-25	
16	PCC (R/T Wall)	RHS	1	2	3.8000	2.9500	0.1000	2.242	Cum	M-15	
17	RAFT (R/T Wall)	RHS	1	2	3.7000	2.7500	0.3000	6.105	Cum	M-30	
18	RAFT TRAPEZOIDAL (R/T Wall)	RHS	1	2	3.7000	1.7250	0.1000	1.277	Cum	M-30	
19	WALL (R/T Wall)	RHS	1	2	3.7000	0.3500	2.3390	6.058	Cum	M-30	
20	BRACKET (R/T Wall)	RHS	1	2	3.7000	0.4000	0.2000	0.592	Cum	M-30	
21	VERTICAL ABOVE BRACKET (R/T Wall)	RHS	1	2	3.7000	0.5000	0.5000	1.850	Cum	M-30	
22	PARAPET (R/T Wall)	RHS	1	2	3.7000	0.4500	0.9000	2.997	Cum	M-25	
23	PCC (Curtain Wall)	U/S	1	1	10.4000	1.5000	0.1000	1.560	Cum	PCC Curtain Wall	
24	1ST LIFT (Curtain Wall)	U/S	1	1	10.2000	1.3000	0.8000	10.608	Cum	PCC Curtain Wall	
25	2ND LIFT (Curtain Wall)	U/S	1	1	10.2000	0.4500	0.7500	3.443	Cum	PCC Curtain Wall	
26	3RD LIFT (Curtain Wall)	U/S	1	1	10.2000	0.2000	0.4500	0.918	Cum	PCC Curtain Wall	
27	PCC (Curtain Wall)	D/S	1	1	9.6000	1.8500	0.1000	1.776	Cum	PCC Curtain Wall	
28	1ST LIFT (Curtain Wall)	D/S	1	1	9.4000	1.8500	0.5500	8.531	Cum	PCC Curtain Wall	
29	2ND LIFT (Curtain Wall)	D/S	1	1	9.4000	0.7500	0.7500	5.288	Cum	PCC Curtain Wall	
30	3RD LIFT (Curtain Wall)	D/S	1	1	9.4000	0.4500	0.7500	3.173	Cum	PCC Curtain Wall	
31	4TH LIFT (Curtain Wall)	D/S	1	1	9.4000	0.2000	0.4500	0.846	Cum	PCC Curtain Wall	
32	PCC (Toe Wall)	LHS	1	2	5.6790	0.7500	0.1000	0.795	Cum	M-15	
33	Raft (Toe Wall)	LHS	1	2	5.6790	0.5000	0.1500	0.852	Cum	M-15	
34	Wall (Toe Wall)	LHS	1	2	5.6790	0.2000	0.5000	1.136	Cum	M-15	
35	Wall above CT wall (Toe Wall)	LHS	1	2	1.2500	0.2000	0.3000	0.150	Cum	M-15	
36	PCC (Toe Wall)	RHS	1	2	5.1040	0.7000	0.1000	0.715	Cum	M-15	
37	Raft (Toe Wall)	RHS	1	2	5.1040	0.5000	0.1500	0.766	Cum	M-15	
38	Wall (Toe Wall)	RHS	1	2	5.1040	0.2000	0.5000	1.021	Cum	M-15	
39	Wall above CT wall (Toe Wall)	RHS	1	2	1.2500	0.2000	0.3000	0.150	Cum	M-15	
40	Excavation Box	BHS	1	1	12.200	2.200	1.300	34.892	Cum	Excavation	
41	Excavation RT WALL	LHS	1	2	4.300	3.400	2.400	70.176	Cum	Excavation	
42	Excavation RT WALL	RHS	1	2	3.800	2.950	2.400	53.808	Cum	Excavation	
43	Excavation Curtain WALL	LHS	1	1	10.400	1.500	2.100	32.760	Cum	Excavation	
44	Excavation Curtain WALL	RHS	1	1	9.600	1.850	2.600	46.176	Cum	Excavation	
45	Excavation Toe WALL	BHS	1	4	5.392	0.700	0.600	9.058	Cum	Excavation	
46	Filter Media (Box)	BHS	1	2	11.100	0.600	1.710	22.777	Cum	Filter Media	
47	Filter Media (RT Wall)	LHS	1	2	3.600	0.600	2.200	9.504	Cum	Filter Media	
48	Filter Media (RT Wall)	RHS	1	2	3.100	0.600	2.639	9.817	Cum	Filter Media	
49	Backfilling	BHS	1	2	4.200	8.300	2.450	170.814	Cum	Backfilling	
50	Flexible Apron PCC	BHS	1	2	10.5500	3.000	0.1500	9.495	Cum	M-15	

51	Flexible Apron	BHS	1	2	10.4000	3.000	0.3000	18.720	Cum	Flexible Apron	
52	Floor Apron PCC	BHS	1	2	10.5500	3.2000	0.1500	10.128	Cum	M-15	
53	Floor Apron	BHS	1	2	10.4000	3.2000	0.3000	19.968	Cum	Floor Apron	
54	Weep Holes	BHS	1					80.000	Nos.	Weep Holes	
55	Expansion Joint	BHS	1					10.000	RMT	Expansion Joint	
56	Drainage Spout	BHS	1					2.000	Nos.	Drainage Spout	
57	Stone Pitching	BHS	1					14.800	Cum	Stone Pitching	
58	Steel (Box)	BHS	1					3.400	MT	Steel	
59	Steel (RT Wall)	BHS	1					1.700	MT	Steel	

SUMMARY-

Sr. No.	Item	Total Qty.
1	Excavation	246.870
2	M-15	34.658
3	M-25	8.163
4	M-30	66.159
5	PCC Curtain Wall	36.141
6	Steel	5.100
7	Filter Media	42.098
8	Backfilling	170.814
9	Weep Holes	50.000
10	Expansion Joint	10.000
11	Drainage Spout	2.000
12	Flexible Apron	18.720
13	Floor Apron	19.968
14	Stone Pitching	14.800

Handwritten signature/initials

SIZE - (1X2.0X2.0)											
Sr. No.	Discription	Side	Complete d Work	Nos.	Length	Width	Height	Quantity	Unit	Grade	Remark
1	PCC	BHS	1	1	12.945	2.800	0.150	5.437	Cum	M-15	
2	Raft	BHS	1	1	12.000	2.600	0.300	9.360	Cum	M-30	
3	Raft Shear Key	BHS	1	2	0.750	2.600	0.900	3.510	Cum	M-30	
4	Bottom Haunch	BHS	1	2	12.000	0.375	0.150	1.350	Cum	M-30	
5	Wall	BHS	1	2	12.000	0.300	1.825	13.140	Cum	M-30	
6	Top Haunch	BHS	1	2	12.000	0.375	0.150	1.350	Cum	M-30	
7	Top Slab	BHS	1	1	12.000	2.600	0.300	9.360	Cum	M-30	
8	Parapet	BHS	1	2	2.600	0.450	0.980	2.293	Cum	M-25	
9	PCC (R/T Wall)	LHS	1	2	4.000	3.400	0.100	2.720	Cum	M-15	
10	RAFT (R/T Wall)	LHS	1	2	3.900	3.200	0.300	7.488	Cum	M-30	
11	RAFT TRAPEZOIDAL (R/T Wall)	LHS	1	2	3.900	2.000	0.150	2.340	Cum	M-30	
12	WALL (R/T Wall)	LHS	1	2	3.900	0.400	2.422	7.557	Cum	M-30	
13	BRACKET (R/T Wall)	LHS	1	2	3.900	0.400	0.200	0.624	Cum	M-30	
14	VERTICAL ABOVE BRACKET (R/T Wall)	LHS	1	2	3.900	0.500	0.500	1.950	Cum	M-30	
15	PARAPET (R/T Wall)	LHS	1	2	3.900	0.450	0.900	3.159	Cum	M-25	
16	PCC (R/T Wall)	RHS	1	2	4.300	3.400	0.100	2.924	Cum	M-15	
17	RAFT (R/T Wall)	RHS	1	2	4.200	3.200	0.300	8.064	Cum	M-30	
18	RAFT TRAPEZOIDAL (R/T Wall)	RHS	1	2	4.200	2.000	0.150	2.520	Cum	M-30	
19	WALL (R/T Wall)	RHS	1	2	4.200	0.400	2.609	8.766	Cum	M-30	
20	BRACKET (R/T Wall)	RHS	1	2	4.200	0.400	0.200	0.672	Cum	M-30	
21	VERTICAL ABOVE BRACKET (R/T Wall)	RHS	1	2	4.200	0.500	0.500	2.100	Cum	M-30	
22	PARAPET (R/T Wall)	RHS	1	2	4.200	0.450	0.900	3.402	Cum	M-25	
23	PCC (Curtain Wall)	U/S	1	1	10.400	1.500	0.100	1.560	Cum	PCC Curtain Wall	
24	1ST LIFT (Curtain Wall)	U/S	1	1	10.200	1.300	0.800	10.608	Cum	PCC Curtain Wall	
25	2ND LIFT (Curtain Wall)	U/S	1	1	10.200	0.450	0.750	3.443	Cum	PCC Curtain Wall	
26	3RD LIFT (Curtain Wall)	U/S	1	1	10.200	0.200	0.450	0.918	Cum	PCC Curtain Wall	
27	PCC (Curtain Wall)	D/S	1	1	11.200	1.850	0.100	2.072	Cum	PCC Curtain Wall	
28	1ST LIFT (Curtain Wall)	D/S	1	1	11.000	1.650	0.550	9.983	Cum	PCC Curtain Wall	
29	2ND LIFT (Curtain Wall)	D/S	1	1	11.000	0.750	0.750	6.188	Cum	PCC Curtain Wall	
30	3RD LIFT (Curtain Wall)	D/S	1	1	11.000	0.450	0.750	3.713	Cum	PCC Curtain Wall	
31	4TH LIFT (Curtain Wall)	D/S	1	1	11.000	0.200	0.450	0.990	Cum	PCC Curtain Wall	
32	PCC (Toe Wall)	LHS	1	2	5.586	0.700	0.100	0.782	Cum	M-15	
33	Raft (Toe Wall)	LHS	1	2	5.586	0.500	0.150	0.838	Cum	M-15	
34	Wall (Toe Wall)	LHS	1	2	5.586	0.200	0.500	1.117	Cum	M-15	
35	Wall above CT wall (Toe Wall)	LHS	1	2	1.250	0.200	0.300	0.150	Cum	M-15	
36	PCC (Toe Wall)	RHS	1	2	5.906	0.700	0.100	0.827	Cum	M-15	
37	Raft (Toe Wall)	RHS	1	2	5.906	0.500	0.150	0.886	Cum	M-15	
38	Wall (Toe Wall)	RHS	1	2	5.906	0.200	0.500	1.181	Cum	M-15	
39	Wall above CT wall (Toe Wall)	RHS	1	2	1.250	0.200	0.300	0.150	Cum	M-15	
40	Excavation Box	BHS	1	1	12.200	2.800	1.800	61.488	Cum	Excavation	
41	Excavation RT WALL	LHS	1	2	4.000	3.400	2.700	73.431	Cum	Excavation	
42	Excavation RT WALL	RHS	1	2	4.300	3.400	2.710	79.241	Cum	Excavation	
43	Excavation Curtain WALL	LHS	1	1	10.400	1.500	2.100	32.760	Cum	Excavation	
44	Excavation Curtain WALL	RHS	1	1	11.200	1.850	2.600	53.872	Cum	Excavation	
45	Excavation Toe WALL	BHS	1	4	5.746	0.700	0.600	9.653	Cum	Excavation	
46	Filter Media	BHS	1	2	11.000	0.600	1.725	22.770	Cum	Filter Media	
47	Filter Media (RT Wall)	LHS	1	2	3.300	0.600	2.722	10.779	Cum	Filter Media	
48	Filter Media (RT Wall)	RHS	1	2	3.600	0.600	2.909	12.567	Cum	Filter Media	
49	Backfilling	BHS	1	2	4.2000	8.300	1.900	132.468	Cum	Backfilling	
50	Flexible Apron PCC	BHS	1	2	11.1500	3.0000	0.1500	10.035	Cum	M-15	
51	Flexible Apron	BHS	1	2	11.0000	3.0000	0.3000	19.800	Cum	Flexible Apron	
52	Floor Apron PCC	BHS	1	2	11.1500	3.2000	0.1500	10.704	Cum	M-15	
53	Floor Apron	BHS	1	2	11.0000	3.2000	0.3000	21.120	Cum	Floor Apron	
54	Weep Holes	BHS	1					76.000	Nos.	Weep Holes	
55	Expansion Joint	BHS	1					10.000	Nos.	Expansion Joint	
56	Drainage Spout	BHS	1					2.000	Nos.	Drainage Spout	
57	Stone Pitching	BHS	1					16.000	Cum	Stone Pitching	
58	Steel (Box)	BHS	1					6.3	MT	Steel	
59	Steel (RT Wall)	BHS	1					1.8	MT	Steel	

SUMMARY-

Sr. No.	Item	Total Qty.
---------	------	------------

1	Excavation	310.445
2	M-15	37.751
3	M-25	8.854
4	M-30	80.151
5	PCC Curtain Wall	39.473
6	Steel	8.100
7	Filler Media	46.116
8	Backfilling	132.468
9	Weep Holes	50.000
10	Expansion Joint	10.000
11	Drainage Spout	2.000
12	Flexible Apron	19.800
13	Floor Apron	21.120
14	Stone Pitching	16.000

Samuel
AK

SIZE - (2X2.0X2.0)

Sr. No.	Discription	Side	Complete d Work	Nos.	Length	Width	Height	Quantity	Unit	Grade	Remark
1	PCC	BHS	1	1	12.945	5.100	0.150	9.903	Cum	M-15	
2	Raft	BHS	1	1	12.000	4.900	0.300	17.640	Cum	M-30	
3	Raft Shear Key	BHS	1	2	0.750	4.900	0.900	6.615	Cum	M-30	
4	Bottom Haunch	BHS	1	2	12.000	0.375	0.150	1.350	Cum	M-30	
5	Intermediate haunch	BHS	1	1	12.000	0.450	0.150	0.810	Cum	M-30	
6	Wall	BHS	1	3	12.000	0.300	2.214	23.911	Cum	M-30	
7	Top Haunch	BHS	1	2	12.000	0.375	0.150	1.350	Cum	M-30	
8	Intermediate haunch	BHS	1	1	12.000	0.375	0.150	0.675	Cum	M-30	
9	Top Slab	BHS	1	1	12.000	4.900	0.300	17.640	Cum	M-30	
10	Parapet	BHS	1	2	4.900	0.450	0.980	4.322	Cum	M-25	
11	PCC (R/T Wall)	LHS	1	2	4.700	3.650	0.100	3.431	Cum	M-15	
12	RAFT (R/T Wall)	LHS	1	2	4.600	3.450	0.300	9.522	Cum	M-30	
13	RAFT TRAPEZOIDAL (R/T Wall)	LHS	1	2	4.600	2.075	0.200	3.818	Cum	M-30	
14	WALL (R/T Wall)	LHS	1	2	4.600	0.350	2.819	9.077	Cum	M-30	
15	BRACKET (R/T Wall)	LHS	1	2	4.600	0.400	0.200	0.736	Cum	M-30	
16	VERTICAL ABOVE BRACKET (R/T Wall)	LHS	1	2	4.600	0.500	0.500	2.300	Cum	M-30	
17	PARAPET (R/T Wall)	LHS	1	2	4.600	0.450	0.900	3.726	Cum	M-25	
18	PCC (R/T Wall)	RHS	1	2	4.700	3.650	0.100	3.431	Cum	M-15	
19	RAFT (R/T Wall)	RHS	1	2	4.600	3.450	0.300	9.522	Cum	M-30	
20	RAFT TRAPEZOIDAL (R/T Wall)	RHS	1	2	4.600	2.075	0.200	3.818	Cum	M-30	
21	WALL (R/T Wall)	RHS	1	2	4.600	0.350	2.831	9.116	Cum	M-30	
22	BRACKET (R/T Wall)	RHS	1	2	4.600	0.400	0.200	0.736	Cum	M-30	
23	VERTICAL ABOVE BRACKET (R/T Wall)	RHS	1	2	4.600	0.500	0.500	2.300	Cum	M-30	
24	PARAPET (R/T Wall)	RHS	1	2	4.600	0.450	0.900	3.726	Cum	M-25	
25	PCC (Curtain Wall)	U/S	1	1	11.800	1.500	0.100	1.770	Cum	PCC Curtain Wall	
26	1ST LIFT (Curtain Wall)	U/S	1	1	11.600	1.300	0.800	12.064	Cum	PCC Curtain Wall	
27	2ND LIFT (Curtain Wall)	U/S	1	1	11.600	0.450	0.750	3.915	Cum	PCC Curtain Wall	
28	3RD LIFT (Curtain Wall)	U/S	1	1	11.600	0.200	0.450	1.044	Cum	PCG Curtain Wall	
29	PCC (Curtain Wall)	D/S	1	1	12.000	1.850	0.100	2.220	Cum	PCC Curtain Wall	
30	1ST LIFT (Curtain Wall)	D/S	1	1	11.800	1.650	0.550	10.709	Cum	PCC Curtain Wall	
31	2ND LIFT (Curtain Wall)	D/S	1	1	11.800	0.750	0.750	6.638	Cum	PCC Curtain Wall	
32	3RD LIFT (Curtain Wall)	D/S	1	1	11.800	0.450	0.750	3.983	Cum	PCC Curtain Wall	
33	4TH LIFT (Curtain Wall)	D/S	1	1	11.800	0.200	0.450	1.062	Cum	PCC Curtain Wall	
34	PCC (Toe Wall)	LHS	1	2	6.557	0.700	0.100	0.918	Cum	M-15	
35	Raft (Toe Wall)	LHS	1	2	6.557	0.500	0.150	0.984	Cum	M-15	
36	Wall (Toe Wall)	LHS	1	2	6.557	0.200	0.500	1.311	Cum	M-15	
37	Wall above CT wall (Toe Wall)	LHS	1	2	1.250	0.200	0.300	0.150	Cum	M-15	
38	PCC (Toe Wall)	RHS	1	2	6.578	0.700	0.100	0.921	Cum	M-15	
39	Raft (Toe Wall)	RHS	1	2	6.578	0.500	0.150	0.987	Cum	M-15	
40	Wall (Toe Wall)	RHS	1	2	6.578	0.200	0.500	1.316	Cum	M-15	
41	Wall above CT wall (Toe Wall)	RHS	1	2	1.250	0.200	0.300	0.150	Cum	M-15	
42	Excavation Box	BHS	1	1	12.2	5.1	2.800	174.216	Cum	Excavation	
43	Excavation RT WALL	LHS	1	2	4.700	3.650	3.250	111.508	Cum	Excavation	
44	Excavation RT WALL	RHS	1	2	4.700	3.650	3.250	111.508	Cum	Excavation	
45	Excavation Curtain WALL	LHS	1	1	11.800	1.500	2.100	37.170	Cum	Excavation	
46	Excavation Curtain WALL	RHS	1	1	12.000	1.850	2.600	57.720	Cum	Excavation	
47	Excavation Toe WALL	BHS	1	4	6.568	0.700	0.600	11.033	Cum	Excavation	
48	Filter Media	BHS	1	2	11.200	0.600	2.114	28.412	Cum	Filter Media	
49	Filter Media (RT Wall)	LHS	1	2	4.000	0.600	3.119	14.971	Cum	Filter Media	
50	Filter Media (RT Wall)	RHS	1	2	4.000	0.600	3.131	15.029	Cum	Filter Media	
51	Backfilling	BHS	1	2	4.6000	8.050	2.300	170.338	Cum	Backfilling	
52	Flexible Apron PCC	BHS	1	2	12.2500	3.0000	0.1500	11.025	Cum	M-15	
53	Flexible Apron	BHS	1	2	12.1000	3.0000	0.3000	21.780	Cum	Flexible Apron	
54	Floor Apron PCC	BHS	1	2	12.2500	3.4500	0.1500	12.679	Cum	M-15	
55	Floor Apron	BHS	1	2	12.1000	3.4500	0.3000	25.047	Cum	Floor Apron	
56	Weep Holes	BHS	1					76.000	Nos.	Weep Holes	
57	Expansion Joint	BHS	1					10.000	RMT	Expansion Joint	
58	Drainage Spout	BHS	1					2.000	Nos.	Drainage Spout	
59	Stone Pitching	BHS	1					16.000	Cum	Stone Pitching	
60	Steel (Box)	BHS	1					7.092	MT	Steel	
61	Steel (RT Wall)	BHS	1					3.500	MT	Steel	

SUMMARY-

Sr. No.	Item	Total Qty.
1	Excavation	503.154
2	M-15	47.205
3	M-25	11.774
4	M-30	120.936
5	PCC Curtain Wall	43.404
6	Steel	10.592
7	Filter Media	58.412
8	Backfilling	170.338
9	Weep Holes	76.000
10	Expansion Joint	10.000
11	Drainage Spout	2.000
12	Flexible Apron	21.780
13	Floor Apron	25.047
14	Stone Pitching	16.000

sample

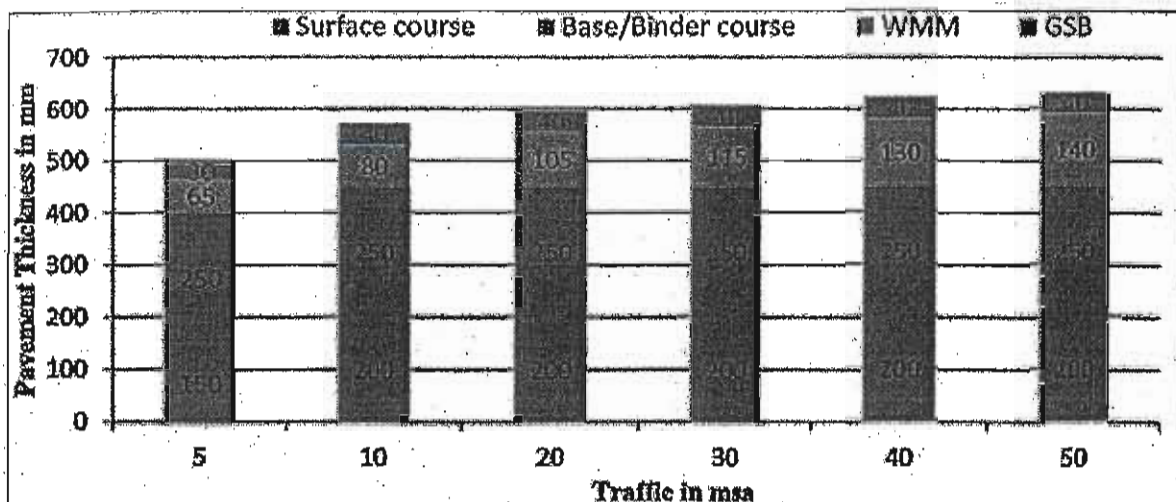


Fig. 12.1 Catalogue for Pavement with Bituminous Surface Course with Granular Base and Sub-base - Effective CBR 5% (Plate-1)

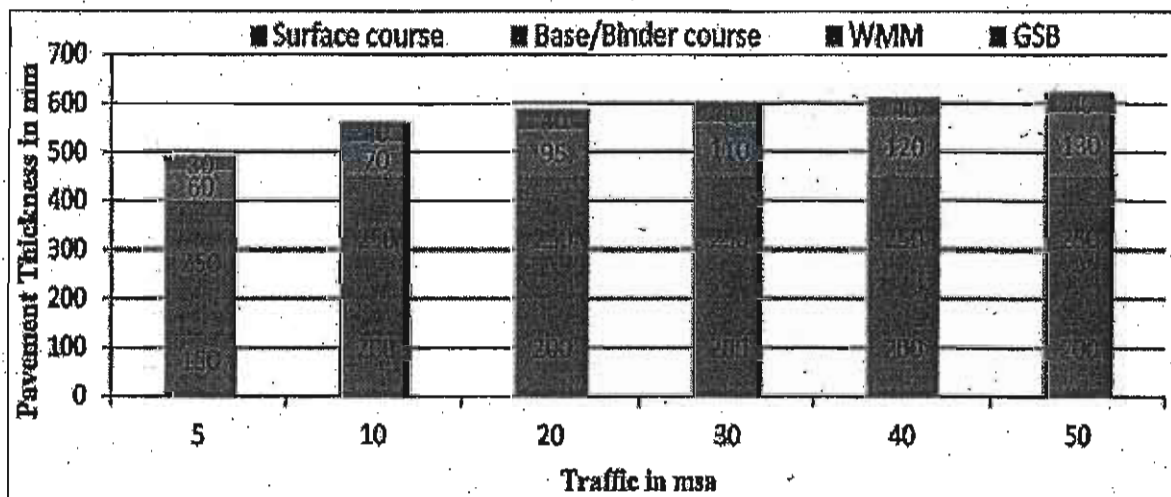


Fig. 12.2 Catalogue for Pavement with Bituminous Surface Course with Granular Base and Sub-base - Effective CBR 6% (Plate-2)

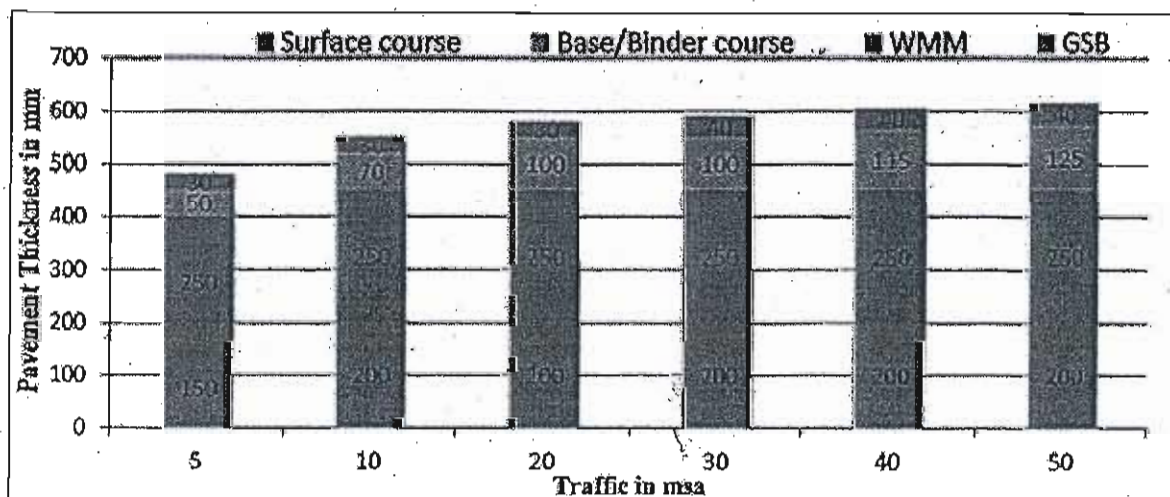


Fig. 12.3 Catalogue for Pavement with Bituminous Surface Course with Granular Base and Sub-base - Effective CBR 7% (Plate-3)

CONCRETE PAVEMENT DESIGN

(As per IRC : 58-2011)

Name of Work :- Widening and Strengthening of Mahngl To Dudhli mode via Bhawani, Bhawani Khurd, Saipur, Andhi, Sriramnagar, Virasna, Gaonli, Newal, Maksudanpura, Chawandiya Road Km 0/0 to 40/0 (Total 40 Kms.).

Step - Design Parameters:

(a) Location of Pavement	:	Rajasthan
Class of Road	:	VR
Concrete Grade (f_{ck}) =	:	M-35
Charaterstic strength of Concrete Grade (f_{ck}) =	:	35.00 N/mm ²
(b) Flexural Strength of Concrete (f_{cr}) =	:	41.00 kg/cm ²
(c) Effective Modulus of Subgrade reaction of untreated granular layer sub base (K)	:	7.00 kg/cm ³
(d) Modulus of elasticity of Concrete (E)	:	300000 kg/cm ²
(e) Poisson's Ratio of Concrete (m)	:	0.15
(f) Coefficient of thermal expansion of concrete (α) :	:	0.00001 /°C
(g) Design Tyre Pressure	:	8 kg/cm ²
(h) Contraction Joint spacing (L)	:	4.50 metres
(i) Lane Width (W)	:	7.00 metres
(a) Present Traffic Intensity	:	644 CVPD
Design Life	:	30 Years
Traffic Growth rate (r) =	:	0.05
(j) Axle load spectrum as per axle load survey	:	

Single axle loads		Tandem axle loads	
Axle load class (t)	% of axle loads	Axle load class (t)	% of axle loads
19-21	0.000	34-38	0.000
17-19	0.000	30-34	0.000
15-17	0.000	26-30	0.000
13-15	0.000	22-26	0.000
11-13	50.000	18-22	5.000
9-11	20.000	14-18	2.000
Less than 9	10.000	Less than 14	13.000
Total =	80.000	Total =	20.000

DESIGN

Cummulative repetitions in design life =

$$C = [365 \times A \times \{(1+r)^n - 1\}] / r$$

$$C = [365 \times 644 \times \{(1 + 0.05)^{30} - 1\}] / 0.05 \quad 15617115.49 \text{ Commercial vehicles}$$

Design Traffic = 25% of total repetition of commercial vehicles

$$= 25\% \text{ of } 15617115 \quad 3904278.874$$

Total repetitions of sinle axle & tandom axle loads are as follows :

Single axle loads		Tandem axle loads	
Axle load class (t)	% of axle loads	Axle load class (t)	% of axle loads
20	0	36	0
18	0	32	0
16	0	28	0
14	0	24	0
12	195214	20	195214
10	546599	16	78086
Less than 10	390428	Less than 16	507556

Step - Load stress for edge region :

Step - Select tentative design thickness of pavement slab

h	25.00 cms.
Road Classification	VR
Load Safety factor (LSF) =	1.20
Modulus of Rupture =	41.00 kg/cm ²
$l = [Eh^3 / \{12(1-m^2)K\}]^{1/4} =$	86.92 cms.
$b = (1.60 a^2 + h^2)^{1/2} - 0.675h$	14.51 cms.
$sl_e = 0.529 P/h^2 [1 + 0.54m] [4 \log_{10} l/b - \log_{10} b - 0.4048]$	

Axle load (AL) tonnes	Design load (AL x LSF)	Stress from Chart (kg/cm ²)	Stress Ratio (SR)	Expected repetition (n)	Fatigue life (N)	Fatigue life Consumed = (5) / (6)
1	2	3	4	5	6	7
Single axle						
20.00	24.00	36.15	0.880	0	13	0.0000
18.00	21.60	32.53	0.790	0	157	0.0000
16.00	19.20	28.92	0.710	0	1452	0.0000
14.00	16.80	25.30	0.620	0	17733	0.0000
12.00	14.40	21.69	0.530	195214	229127	0.8520
10.00	12.00	18.07	0.440	546599	Unlimited	0.0000
Tandem axle						
36.00	43.20	28.67	0.700	0	1917	0.0000
32.00	38.40	25.49	0.620	0	17733	0.0000
28.00	33.60	22.30	0.540	0	166533	0.0000
24.00	28.80	19.12	0.470	0	5202474	0.0000
20.00	24.00	15.93	0.390	195214	Unlimited	0.0000
16.00	19.20	12.74	0.310	78086	Unlimited	0.0000
Cummulative fatigue life consumed =						0.8520

The Design is safe from fatigue considerations

Step - Temperature stress for edge region :

(a) for Rajasthan Region Dt =	14.3 °C
(b) $l = [Eh^3 / \{12(1-m^2)K\}]^{1/4} =$	86.92 cms.
for $L/l =$	5.177
$C_L =$	0.755
for $W/l =$	8.053
$C_W =$	1.000
$C_{max} =$	1.000
$sl_e = (EaDt/2) \cdot C =$	21.450 kg/cm ²

Step - Residual Concrete Strength for Supporting Traffic Loads

$f_L = f_R - sl_e$	19.550 kg/cm ²
Total of temperature warping stress and the highest axle load stress =	41.00
Which is less than 41 kg/cm ² the maximum load stress at highest axle load	
Hence o.k.	

Step - Corner Load stress

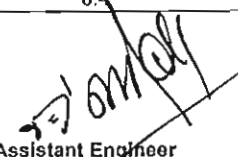
Radius of relative stiffness (l)	
$l = [Eh^3 / \{12(1-m^2)K\}]^{1/4} =$	86.92 cms.
98th Percentile load =	12 tonnes
Wheel load (P) =	6 tonnes
Radius of area of contact of wheel (a) =	
C/C distance between two tyres =	31 cms
$a = [0.8521 \times (P/q \times 3.14) + (S/3.14) \times (P/(0.5227 \times q)^4)]^{1/2}$	24.03 cms
$sl_c = 3P/h^2 [1 - (a/2)^{1/2}]^{1/2} / l]$	
$sl_c =$	19.47 kg/cm ²
$< f_R$ O.K.	

Note : (1) Approximate 'k' - Value Corresponding to BR values for Homogeneous Soil Sub grade

CBR Value %	5	7	10	20	50	100
k'- Value Kg/Cm ³	4.20	4.80	5.50	6.90	14.00	22.00

(2) 'k' - Value Over Granular and Cement Treated Sub Base

k' - Value of Subgrade (Kg/Cm ³)	Effective 'k' (Kg/Cm ³) over			Effective 'k' (Kg/Cm ³) over		
	150	225	300	100	150	200
2.8	3.9	4.4	5.3	7.6	10.8	14.1
5.6	6.3	7.5	8.8	12.7	17.3	22.5
8.4	9.2	10.2	11.9	-	-	-


Assistant Engineer
PWD Sub Dn. - North
Jaipur


Executive Engineer
P.W.D. Dn- Bassi,
Jaipur

Name of Work :- Widening and Strengthening of Mahngi To Dudhli mode via Bhawani, Bhawani Khurd, Saipur, Andhi, Sriramnagar, Virasna, Gaonli, Newal, Maksudanpura, Chawandiya Road Km 0/0 to 40/0 (Total 40 Kms.).

Design of Flexible Pavement

(As per IRC:37-2018)

1 Design Datas :-

(i) P = Number of commercial vehicles per day at last count in January 2021

(a) LCV (Light Commercial Vehicles)	=	225
(b) Bus	=	18
(c) Trucks	=	90
(d) Agriculture Tractor Trailor unit (out of 520 vehicles 50% considered laden)	=	260
(e) Multiaxled Vehicles, Truck Trailors Combination etc.	=	20
Total Commercial Vehicles Per Day	=	613 CVPD

(ii) r = Annual growth rate of Commercial traffic (as per IRC:37-2018 para 4.2.2)	=	5.00 %
(iii) x = Number of years between the last count of traffic and the year of completion of construction	=	1 Year
(iv) n = Design life in Years (as per IRC:37-2018 para 4.3.2 for State Highways)	=	15 Years
(v) F = Vehicle Damage Factor (as per IRC:37-2018 para 4.4.6 for traffic volume >1500)	=	3.90
(vi) D = Lane Distribution Factor (as per IRC:37-2018 para 4.5.1 II for Two lane carriageway)	=	0.50
(vii) A = Initial traffic in the year of completion of construction in terms of CVPD		

$$A = P (1 + r)^x = 613 (1 + 0.05)^1 = 644 \text{ CVPD}$$

(viii) CBR Value of the Sub Grade = 6.10 %

2 Design traffic (N) :-

$$N = \frac{365 \times [(1+r)^n - 1]}{r} \times A \times D \times F$$

$$N = \frac{365 \times [(1+0.05)^{15} - 1]}{0.05} \times 644 \times 0.50 \times 3.90 = 9.89 \text{ msa}$$

3 Crust thickness of existing road :-

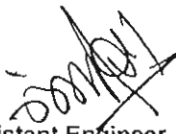
(i) GSB/Soling	=	150 mm
(ii) WBM	=	150 mm
Total Existing Crust	=	300 mm

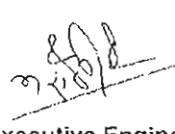
Not countable for new built because of badly damaged.

4 Design of Flexible Pavement :-

(In the light of IRC:37-2018, Pavement Design Catalogue for CBR 6.10% & Traffic 9.89 msa)

(i) Total Pavement Thickness	=	560 mm
(i) Granular Sub Base	=	200 mm
(ii) Base Course WMM	=	250 mm
(iii) D.B.M.	=	70 mm
(iv) B.C.	=	40 mm


Assistant Engineer
PWD Sub Dn. - North
Jaipur


Executive Engineer
P.W.D. Dn- Bassi,
Jaipur

TRAFFIC CENSUS WEEKLY TRAFFIC SUMMARY

Name of Work :- Widening and Strengthening of Mahngi To Dudhli mode via Bhawani, Bhawani Khurd, Saipur, Andhi, Sriramnagar, Virasna, Gaonli, Newal, Maksudanpura, Chawandi Road Km 0/0 to 40/0 (Total 40 Kms.).

Date 01-02-2021 : 01-09-2021 Day : 7 Day's Road No. : VR
 Km. of Count Station : 41
 Place of Count Station : Near NH21
 District : Jaipur

Up Side & Down Side

Day				Vehicle Class										
From		To		Fast/Power Driven Vehicles						Slow Vehicles				
Date	Hours	Date	Hours	Car, Jeep, Vans, Three Wheelers	Two Wheelers (Motor Cycle/ Scooter)	LCV (Light Commercial Vehicles)	Buses	Two Axle, Truck, Tanker	Multi Axled Vehicles/ Trallor	Agricultrre Tractor with Trailer	Cycle/ Cycle Rickshaw	Bullock Cart/ Other Animal Drawn Specity (If any)	Other Vehicles Specity (If any)	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
02-01-2021	6.00 AM	03-01-2021	6.00 AM	1455	3000	225	18	90	20	520	350	215	0	5893
03-01-2021	6.00 AM	04-01-2021	6.00 AM	1600	3150	245	17	105	22	550	360	195	0	6244
04-01-2021	6.00 AM	05-01-2021	6.00 AM	1505	3000	200	20	85	26	495	290	221	0	5842
05-01-2021	6.00 AM	06-01-2021	6.00 AM	1345	2950	220	18	95	18	505	385	201	0	5737
06-01-2021	6.00 AM	07-01-2021	6.00 AM	1421	2900	225	16	87	21	535	315	225	0	5745
07-01-2021	6.00 AM	08-01-2021	6.00 AM	1652	2855	230	18	90	20	515	321	150	0	5851
08-01-2021	6.00 AM	09-01-2021	6.00 AM	1495	2965	228	18	80	16	520	301	195	0	5818
Total for the Week				10473	20820	1573	125	632	143	3640	2322	1402	0	41130
Average Daily Traffic for the Week				1496	2974	225	18	90	20	520	332	200	0	5875
PCU Factor				1.00	0.50	1.50	3.00	3.00	4.50	3.00	0.50	8.00	0.00	
Average Daily Traffic for PCU				1496	1487	338	54	270	90	1560	166	1600	0	7061
Total CVPD						225	18	90	20	260				613

Signature

TEST RESULT OF MATERIAL (SOIL)

S. No.	Material	Location	Source of material	Gradation				OMC	MDD	Soaked CBR %	Atterberg Limits			Soil Group	Remark
				4.75mm	2MM	425 Mic	75 Mic				LL	PL	PI		
1	2	3	4	5		6	7	8	9	10	11	12	13	14	15
1	Soil	3/100	Name of Work	100	93	96	32.50	8.90	1.65	6.10%	21.50	14.30	7.20		
2	Soil	10/200		100	93	95	31.80	7.98	1.66	6.25%	21.40	14.25	7.15		
3	Soil	15/500		100	93	93	32.30	8.10	1.62	6.50%	21.45	14.28	7.20		
4	Soil	24/900		100	93	96	32.50	8.50	1.62	6.20%	21.35	14.30	7.18		

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Widening & Strengthening Mahangi to Dudhali mod (NH-21)

Chainage	Volume Report			
	Area(Fill)	Area(Cut)	Volume(Fill)	Volume(Cut)
0	1.287	0.132		
25	2.717	0.000	50.048	1.649
50	2.189	0.005	61.323	0.057
75	0.754	0.098	36.792	1.278
100	1.670	0.004	30.302	1.266
125	0.200	3.687	23.377	46.134
150	0.000	7.615	2.502	141.279
175	1.014	0.044	12.672	95.743
200	6.499	0.000	93.909	0.553
225	6.298	0.000	159.958	0.000
250	1.829	0.002	101.588	0.023
275	0.000	6.591	22.867	82.405
300	0.000	10.870	0.000	218.255
325	0.000	2.575	0.000	168.063
350	2.313	0.000	28.908	32.190
375	1.194	0.162	43.833	2.024
400	2.117	0.098	41.385	3.244
425	1.151	0.232	40.849	4.120
450	0.667	3.423	22.726	45.687
475	0.000	9.896	8.336	166.486
500	0.000	11.619	0.000	268.937
525	0.724	1.467	9.050	163.571
550	7.369	0.000	101.158	18.334
575	21.293	0.000	358.268	0.000
600	42.506	0.000	797.489	0.000
625	52.244	0.000	1184.383	0.000
650	42.726	0.000	1187.135	0.000
675	22.592	0.000	816.478	0.000
700	12.439	0.000	437.889	0.000
725	1.105	3.346	169.304	41.826
750	0.000	10.812	13.811	176.979
775	0.000	2.855	0.000	170.837
800	1.337	0.155	16.713	37.619
825	0.948	0.000	28.566	1.935
850	2.457	0.373	42.567	4.660
875	0.716	0.182	39.662	6.941
900	3.245	0.000	49.514	2.281
925	2.806	0.000	75.640	0.000
950	1.288	0.458	51.174	5.730
975	1.957	0.029	40.557	6.086
1000	7.074	0.000	112.888	0.357
1025	11.492	0.000	232.075	0.000
1050	18.302	0.000	372.423	0.000

Widening & Strengthening Mahangi to Dudhali mod (NH-21)

Chainage	Area(Fill)	Volume Report		Volume(Cut)
		Area(Cut)	Volume(Fill)	
1075	22.562	0.000	510.805	0.000
1100	24.667	0.000	590.358	0.000
1125	14.942	0.000	495.113	0.000
1150	3.971	0.000	236.415	0.000
1175	5.861	0.380	122.894	4.754
1200	0.676	0.182	81.706	7.034
1225	1.581	0.213	28.205	4.940
1250	4.773	0.000	79.418	2.659
1275	12.864	0.000	220.455	0.000
1300	22.692	0.000	444.443	0.000
1325	32.553	0.000	690.554	0.000
1350	51.444	0.000	1049.960	0.000
1375	46.938	0.000	1229.781	0.000
1400	32.259	0.000	989.961	0.000
1425	14.039	0.000	578.720	0.000
1450	0.535	3.638	182.169	45.480
1475	0.000	17.798	6.682	267.961
1500	0.000	19.466	0.000	465.807
1525	0.000	18.366	0.000	472.896
1550	0.000	8.291	0.000	333.204
1575	0.215	0.211	2.686	106.274
1600	23.357	0.000	294.643	2.641
1625	27.158	0.000	631.429	0.000
1650	20.943	0.000	601.259	0.000
1675	13.512	0.000	430.683	0.000
1700	4.624	0.000	226.690	0.000
1725	1.140	0.342	72.040	4.277
1750	13.501	0.000	183.010	4.277
1775	22.164	0.000	445.810	0.000
1800	30.376	0.000	656.752	0.000
1825	15.587	0.000	574.547	0.000
1850	19.196	0.000	434.796	0.000
1875	20.042	0.000	490.476	0.000
1900	18.145	0.000	477.336	0.000
1925	9.840	0.000	349.817	0.000
1950	0.475	1.052	128.938	13.150
1975	0.000	5.387	5.935	80.486
2000	0.000	5.030	0.000	130.208
2025	0.000	5.643	0.000	133.407
2050	0.041	4.831	0.513	130.923
2075	0.234	2.825	3.431	95.705
2100	0.000	12.497	2.919	191.535
2125	0.000	12.093	0.000	307.379

Widening & Strengthening Mahangi to Dudhali mod (NH-21)

Chainage	Area(Fill)	Volume Report		Volume(Cut)
		Area(Cut)	Volume(Fill)	
2150	0.000	9.296	0.000	267.357
2175	0.000	5.943	0.000	190.486
2200	0.355	2.216	4.432	101.987
2225	0.724	0.185	13.486	30.013
2250	4.111	0.000	60.443	2.315
2275	8.205	0.000	153.952	0.000
2300	16.056	0.000	303.261	0.000
2325	23.360	0.000	492.702	0.000
2350	33.805	0.000	714.562	0.000
2375	38.886	0.000	908.633	0.000
2400	36.876	0.000	947.029	0.000
2425	40.344	0.000	965.252	0.000
2450	36.405	0.000	959.357	0.000
2475	34.890	0.000	891.178	0.000
2500	48.582	0.000	1043.396	0.000
2525	44.148	0.000	1159.122	0.000
2550	28.558	0.000	908.823	0.000
2575	8.593	0.000	464.390	0.000
2600	0.447	0.172	112.996	2.147
2625	0.000	1.484	5.584	20.698
2650	0.000	8.413	0.000	123.716
2675	0.110	6.234	1.370	183.096
2700	0.000	4.548	1.370	134.782
2725	1.695	7.188	21.187	146.703
2750	0.000	14.836	21.187	275.301
2775	0.000	24.930	0.000	497.070
2800	0.000	26.013	0.000	636.783
2825	0.000	15.590	0.000	520.042
2850	0.000	2.935	0.000	231.574
2875	3.238	0.572	40.480	43.848
2900	5.555	0.199	109.920	9.647
2925	0.000	4.150	69.440	54.371
2950	0.000	23.981	0.000	351.646
2975	0.000	25.589	0.000	619.632
3000	0.000	18.465	0.000	550.675
3025	0.000	12.500	0.000	387.056
3050	0.000	2.069	0.000	182.111
3075	0.217	0.242	2.714	28.894
3100	11.184	0.517	142.512	9.494
3125	32.271	0.000	543.184	6.465
3150	34.510	0.000	834.759	0.000
3175	30.201	0.000	808.885	0.000
3200	15.664	0.000	573.307	0.000

Widening & Strengthening Mahangi to Dudhali mod (NH-21)

Chainage	Volume Report			
	Area(Fill)	Area(Cut)	Volume(Fill)	Volume(Cut)
3225	11.609	0.000	340.908	0.000
3250	8.270	0.000	248.488	0.000
3275	3.078	0.000	141.850	0.000
3300	1.101	0.028	52.235	0.349
3325	0.045	0.324	14.316	4.395
3350	0.000	1.960	0.557	28.548
3375	0.002	5.780	0.030	96.753
3400	0.000	5.518	0.030	141.224
3425	0.000	5.022	0.000	131.743
3450	0.000	4.318	0.000	116.746
3475	0.000	5.810	0.000	126.608
3500	0.000	5.833	0.000	145.550
3525	0.000	0.929	0.000	84.532
3550	0.149	0.068	1.863	12.467
3575	1.061	0.003	15.122	0.888
3600	0.751	0.011	22.641	0.169
3625	0.002	0.478	9.405	6.104
3650	0.000	1.962	0.023	30.499
3675	0.226	0.074	2.822	25.459
3700	0.329	0.539	6.930	7.665
3725	0.142	1.175	5.876	21.420
3750	0.000	2.054	1.769	40.355
3775	0.000	4.398	0.000	80.645
3800	1.355	0.184	16.938	57.271
3825	2.285	0.000	45.505	2.296
3850	0.122	2.395	30.098	29.942
3875	0.000	2.398	1.531	59.913
3900	0.108	0.247	1.351	33.053
3925	8.799	0.000	111.342	3.082
3950	10.817	0.000	245.203	0.000
3975	12.072	0.000	286.111	0.000
4000	2.824	0.000	186.202	0.000
4025	1.341	2.025	52.063	25.318
4050	0.420	3.695	22.010	71.499
4075	0.000	7.681	5.251	142.199
4100	0.000	11.716	0.000	242.474
4125	0.000	14.276	0.000	324.909
4150	0.015	0.502	0.186	184.727
4175	9.728	0.000	121.790	6.274
4200	16.199	0.000	324.097	0.000
4225	9.078	0.000	315.965	0.000
4250	6.371	0.000	193.106	0.000
4275	1.261	0.081	95.395	1.007

Widening & Strengthening Mahangi to Dudhali mod (NH-21)

Chainage	Area(Fill)	Volume Report		Volume(Cut)
		Area(Cut)	Volume(Fill)	
4300	0.580	0.244	23.013	4.056
4325	0.392	0.728	12.154	12.144
4350	8.395	0.000	109.837	9.096
4375	13.733	0.000	276.604	0.000
4400	0.328	0.361	175.762	4.511
4425	0.365	0.116	8.659	5.962
4450	0.000	0.578	4.565	8.676
4475	0.915	0.030	11.433	7.600
4500	26.454	0.000	342.104	0.375
4525	6.668	0.000	414.018	0.000
4550	0.000	0.671	83.347	8.393
4575	0.003	0.192	0.036	10.788
4600	0.020	0.253	0.287	5.560
4625	0.017	0.307	0.463	7.005
4650	0.675	0.093	8.649	5.003
4675	0.000	0.616	8.437	8.867
4700	0.492	0.063	6.150	8.487
4725	2.775	0.000	40.833	0.783
4750	6.356	0.000	114.131	0.000
4775	5.940	0.000	153.703	0.000
4800	5.882	0.000	147.777	0.000
4825	2.920	0.000	110.023	0.000
4850	2.725	0.000	70.564	0.000
4875	0.938	0.018	45.789	0.224
4900	4.006	0.000	61.804	0.224
4925	7.275	0.000	141.020	0.000
4950	7.634	0.000	186.373	0.000
4975	9.932	0.000	219.576	0.000
5000	0.577	2.531	131.356	31.638
5025	0.000	27.354	7.209	373.558
5050	0.000	35.099	0.000	780.663
5075	0.000	34.662	0.000	872.011
5100	0.000	10.605	0.000	565.835
5125	0.000	17.866	0.000	355.896
5150	3.690	0.000	46.120	223.330
5175	29.408	0.000	413.724	0.000
5200	32.724	0.000	776.659	0.000
5225	30.867	0.000	794.897	0.000
5250	22.071	0.000	661.730	0.000
5275	23.190	0.000	565.759	0.000
5300	16.406	0.000	494.944	0.000
5325	3.697	0.175	251.285	2.192
5350	0.089	1.428	47.321	20.041

Widening & Strengthening Mahangi to Dudhali mod (NH-21)

Chainage	Area(Fill)	Volume Report		Volume(Cut)
		Area(Cut)	Volume(Fill)	
5375	0.988	0.492	13.460	23.997
5400	0.002	0.444	12.373	11.700
5425	0.000	2.008	0.021	30.653
5450	0.000	3.278	0.000	66.075
5475	1.312	0.857	16.398	51.692
5500	1.179	1.708	31.141	32.069
5525	0.012	0.536	14.889	28.056
5550	0.018	0.337	0.373	10.916
5575	0.078	0.096	1.207	5.410
5600	0.624	0.043	8.779	1.733
5625	1.175	0.072	22.484	1.434
5650	1.839	0.000	37.677	0.901
5675	0.000	1.268	22.991	15.848
5700	0.000	1.125	0.000	29.916
5725	0.171	0.300	2.143	17.823
5750	0.060	0.284	2.895	7.299
5775	2.000	0.050	25.754	4.168
5800	3.126	0.000	64.077	0.623
5825	4.131	0.000	90.707	0.000
5850	5.733	0.000	123.296	0.000
5875	6.330	0.000	150.791	0.000
5900	7.244	0.000	169.677	0.000
5975	3.220	0.000	392.385	0.000
6000	0.734	0.041	49.426	0.508
6025	0.490	0.777	15.310	10.219
6050	0.192	0.093	8.535	10.868
6075	0.358	0.122	6.879	2.685
6100	0.198	0.436	6.951	6.977
6125	1.953	0.000	26.891	5.449
6150	2.135	0.000	51.103	0.000
6175	0.190	0.279	29.061	3.485
6200	0.016	2.065	2.575	29.296
6225	0.043	1.610	0.746	45.937
6250	2.108	0.000	26.895	20.126
6275	0.531	0.140	32.984	1.748
6300	0.697	0.000	15.347	1.748
6325	0.108	0.272	10.062	3.401
6350	0.000	1.839	1.348	26.394
6375	0.313	0.047	3.908	23.583
6400	11.819	0.000	151.645	0.590
6425	33.374	0.000	564.917	0.000
6450	13.824	0.000	589.986	0.000
6475	7.768	0.000	269.903	0.000

Widening & Strengthening Mahangi to Dudhali mod (NH-21)

Chainage	Area(Fill)	Volume Report		Volume(Cut)
		Area(Cut)	Volume(Fill)	
6500	0.195	0.470	99.537	5.880
6525	6.800	0.000	87.440	5.880
6550	20.126	0.000	336.573	0.000
6560	25.907	0.000	230.164	0.000
6575	18.404	0.000	332.334	0.000
6600	18.948	0.000	466.905	0.000
6625	6.874	0.000	322.776	0.000
6650	0.346	0.051	90.247	0.637
6675	0.658	0.001	12.551	0.645
6700	2.063	0.000	34.018	0.007
6725	0.627	0.010	33.628	0.128
6750	0.442	0.007	13.368	0.211
6775	0.000	2.224	5.531	27.883
6800	0.343	0.357	4.287	32.267
6825	1.536	0.000	23.483	4.467
6850	1.209	0.006	34.312	0.074
6875	0.189	0.083	17.484	1.116
6900	4.300	0.000	56.122	1.042
6925	3.873	0.000	102.171	0.000
6950	3.668	0.000	94.269	0.000
6975	0.824	0.030	56.148	0.372
7000	1.090	0.167	23.923	2.465
7025	0.229	0.038	16.491	2.568
7050	8.712	0.000	111.758	0.475
7075	13.936	0.000	283.092	0.000
7100	9.625	0.000	294.515	0.000
7125	14.317	0.000	299.283	0.000
7150	2.034	0.092	204.396	1.146
7175	0.000	17.696	25.431	222.343
7200	0.000	24.264	0.000	524.502
7225	0.000	24.095	0.000	604.494
7250	0.000	22.191	0.000	578.574
7275	0.694	0.021	8.670	277.645
7300	5.472	0.000	77.067	0.260
7325	0.000	5.953	68.397	74.407
7350	0.560	0.518	6.998	80.883
7375	5.132	0.000	71.143	6.476
7400	0.138	0.983	65.868	12.293
7425	1.516	3.431	20.674	55.178
7450	1.911	0.008	42.844	42.986
7475	1.340	0.000	40.649	0.102
7500	0.720	0.000	25.758	0.000
7525	3.478	0.000	52.481	0.000

Widening & Strengthening Mahangi to Dudhali mod (NH-21)

Chainage	Area(Fill)	Volume Report		Volume(Cut)
		Area(Cut)	Volume(Fill)	
7550	0.997	0.320	55.939	3.998
7575	0.572	1.393	19.616	21.405
7600	1.379	0.000	24.398	17.407
7625	8.299	0.000	120.979	0.000
7650	18.369	0.000	333.350	0.000
7675	29.932	0.000	603.769	0.000
7700	9.069	0.000	487.523	0.000
7725	1.961	0.003	137.883	0.042
7750	1.551	0.194	43.906	2.462
7775	0.416	3.014	24.591	40.101
7800	0.320	4.199	9.200	90.163
7825	0.256	1.008	7.198	65.087
7850	0.554	0.944	10.127	24.409
7875	0.610	0.833	14.555	22.216
7900	3.528	0.000	51.723	10.411
7925	2.394	0.014	74.025	0.175
7950	0.086	0.383	31.007	4.961
7975	1.526	0.000	20.155	4.785
8000	1.691	0.000	40.212	0.000
8025	3.810	0.000	68.766	0.000
8050	1.030	0.202	60.511	2.524
8075	0.761	0.009	22.397	2.641
8100	1.924	0.026	33.567	0.441
8125	0.476	0.156	29.998	2.276
8150	0.464	0.028	11.752	2.298
8175	0.835	0.078	16.246	1.323
8200	1.577	0.159	30.152	2.959
8225	3.714	0.000	66.140	1.982
8250	0.809	1.452	56.536	18.147
8275	6.570	0.000	92.235	18.147
8300	3.474	0.000	125.551	0.000
8325	1.412	0.110	61.069	1.377
8350	3.481	0.421	61.162	6.637
8375	3.314	0.352	84.936	9.660
8400	0.399	0.523	46.411	10.936
8425	4.091	0.000	56.134	6.536
8450	0.202	1.615	53.664	20.184
8475	0.000	12.005	2.522	170.247
8500	0.000	41.763	0.000	672.103
8525	0.000	29.873	0.000	895.451
8550	0.000	19.447	0.000	616.496
8575	0.000	8.694	0.000	351.764
8600	0.326	0.158	4.069	110.651

Widening & Strengthening Mahangi to Dudhali mod (NH-21)

Chainage	Area(Fill)	Volume Report		Volume(Cut)
		Area(Cut)	Volume(Fill)	
8625	2.576	0.000	36.271	1.972
8650	1.618	0.000	52.423	0.000
8675	1.087	0.000	33.812	0.000
8700	0.514	0.000	20.020	0.000
8725	0.057	0.463	7.140	5.784
8750	3.325	0.000	42.274	5.784
8775	0.000	6.813	41.564	85.159
8800	0.147	0.104	1.832	86.464
8825	0.200	0.116	4.328	2.753
8850	0.000	1.034	2.496	14.375
8875	0.013	0.168	0.160	15.029
8900	0.356	0.061	4.607	2.868
8925	0.034	0.618	4.876	8.491
8950	0.765	0.840	9.989	18.224
8975	0.208	2.867	12.159	46.338
9000	0.000	6.715	2.599	119.782
9025	0.036	7.550	0.456	178.315
9050	1.371	0.505	17.588	100.685
9075	0.000	2.343	17.132	35.592
9100	5.784	0.000	72.294	29.282
9125	0.000	1.608	72.294	20.098
9150	0.000	7.235	0.000	110.537
9175	0.230	1.443	2.879	108.479
9200	0.167	1.975	4.965	42.730
9225	0.000	1.858	2.086	47.921
9250	0.365	0.307	4.562	27.066
9275	0.000	1.786	4.562	26.160
9300	0.099	0.679	1.241	30.807
9325	0.818	0.128	11.461	10.083
9350	0.000	11.400	10.220	144.098
9375	0.000	6.610	0.000	225.119
9400	0.004	0.733	0.045	91.788
9425	0.000	3.792	0.045	56.574
9450	2.727	0.001	34.092	47.422
9475	3.465	0.000	77.404	0.016
9500	2.469	0.000	74.171	0.000
9525	1.012	0.000	43.507	0.000
9550	0.000	1.301	12.648	16.268
9575	0.109	0.078	1.357	17.248
9600	0.109	0.078	2.714	1.960
9625	0.109	0.078	2.714	1.960
9650	0.109	0.078	2.714	1.960

Widening & Strengthening Mahangi to Dudhali mod (NH-21)

Chainage	Area(Fill)	Volume Report		Volume(Cut)
		Area(Cut)	Volume(Fill)	
9650	0.393	0.841		
9675	0.819	0.285	15.145	14.079
9700	0.331	0.664	14.370	11.866
9725	0.002	2.545	4.159	40.106
9750	2.230	0.000	27.890	31.807
9775	0.691	0.071	36.502	0.893
9800	0.307	0.081	12.472	1.907
9825	0.036	0.198	4.291	3.490
9850	0.004	0.613	0.498	10.135
9875	0.830	0.002	10.423	7.680
9900	0.141	0.573	12.135	7.178
9925	0.313	0.062	5.670	7.933
9950	0.036	0.108	4.358	2.131
9975	2.150	1.356	27.318	18.300
10000	3.318	0.056	68.342	17.639
10025	0.425	1.026	46.781	13.524
10050	3.274	0.604	46.241	20.378
10075	1.080	0.276	54.428	11.002
10100	1.405	0.157	31.066	5.418
10125	1.839	0.309	40.548	5.823
10150	0.073	1.121	23.897	17.872
10175	1.829	0.041	23.777	14.523
10200	0.000	0.669	22.862	8.873
10225	0.793	0.000	9.914	8.363
10250	0.254	0.091	13.094	1.139
10275	0.080	0.423	4.178	6.429
10300	0.000	1.282	0.998	21.315
10325	0.022	0.189	0.276	18.392
10350	0.043	0.391	0.815	7.254
10375	0.000	0.701	0.539	13.648
10400	0.000	0.909	0.000	20.124
10425	0.000	0.760	0.000	20.866
10450	0.780	0.015	9.755	9.686
10475	0.258	0.027	12.976	0.517
10500	0.227	0.187	6.057	2.673
10525	0.003	0.522	2.875	8.863
10550	0.158	0.091	2.012	7.662
10575	0.928	0.000	13.575	1.138
10600	1.602	0.000	31.632	0.000
10625	1.106	0.020	33.856	0.248
10650	0.988	0.041	26.177	0.756
10675	1.361	0.052	29.366	1.153
10700	2.731	0.534	51.154	7.324

Widening & Strengthening Mahangi to Dudhali mod (NH-21)

Chainage	Volume Report			
	Area(Fill)	Area(Cut)	Volume(Fill)	Volume(Cut)
10725	0.963	0.676	46.172	15.128
10750	1.062	0.330	25.304	12.578
10775	1.518	0.250	32.246	7.249
10800	1.132	0.484	33.122	9.164
10825	0.990	0.553	26.516	12.953
10850	0.807	0.120	22.454	8.407
10875	1.483	0.035	28.616	1.938
10900	0.725	0.100	27.599	1.690
10925	0.421	0.256	14.326	4.447
10950	0.527	0.214	11.846	5.876
10975	0.869	0.000	17.444	2.679
11000	0.873	0.201	21.775	2.516
11025	0.626	0.084	18.739	3.561
11050	1.656	0.039	28.518	1.536
11075	0.825	0.377	31.013	5.208
11100	2.475	0.000	41.258	4.717
11125	2.811	0.000	66.084	0.000
11150	1.838	0.554	58.119	6.920
11175	1.051	1.976	36.118	31.615
11200	1.703	2.529	34.427	56.307
11225	0.522	0.644	27.805	39.664
11250	16.075	0.000	207.462	8.051
11275	40.225	0.000	703.754	0.000
11300	3.425	0.000	545.625	0.000
11325	0.231	0.046	45.701	0.574
11350	1.684	0.000	23.932	0.574
11375	9.278	0.000	137.017	0.000
11400	9.192	0.000	230.876	0.000
11425	2.352	0.019	144.303	0.240
11450	0.396	0.057	34.345	0.956
11475	1.640	0.000	25.444	0.716
11500	0.597	0.346	27.957	4.330
11525	0.862	0.080	18.232	5.324
11550	1.675	0.000	31.707	0.995
11575	0.937	0.354	32.648	4.431
11600	1.880	0.000	35.213	4.431
11625	1.332	0.059	40.152	0.735
11650	1.361	0.000	33.663	0.735
11675	0.948	0.003	28.862	0.034
11700	0.718	0.041	20.829	0.544
11725	1.396	0.016	26.426	0.707
11750	0.977	0.209	29.664	2.814
11775	0.347	0.734	16.553	11.791

Widening & Strengthening Mahangi to Dudhali mod (NH-21)

Chainage	Area(Fill)	Volume Report		Volume(Cut)
		Area(Cut)	Volume(Fill)	
11800	0.172	1.155	6.488	23.610
11825	0.339	0.577	6.392	21.647
11850	0.073	1.238	5.151	22.692
11875	0.082	1.117	1.928	29.446
11900	0.515	0.662	7.455	22.238
11925	0.364	0.727	10.981	17.359
11950	0.241	0.726	7.559	18.158
11975	0.286	0.140	6.594	10.823
12000	1.638	0.142	24.055	3.531
12025	1.340	0.035	37.225	2.221
12050	0.927	0.182	28.336	2.720
12075	0.919	0.589	23.079	9.637
12100	0.719	0.401	20.483	12.367
12125	0.126	1.063	10.565	18.293
12150	0.300	0.125	5.324	14.845
12175	2.465	0.000	34.568	1.563
12200	2.352	0.201	60.218	2.516
12225	2.991	0.000	66.783	2.516
12250	2.863	0.000	73.168	0.000
12275	4.252	0.000	88.935	0.000
12300	0.000	0.788	53.150	9.852
12325	0.000	1.531	0.000	28.992
12350	2.136	0.000	26.706	19.140
12375	4.102	0.000	77.976	0.000
12400	7.110	0.000	140.146	0.000
12425	4.861	0.000	149.635	0.000
12450	2.603	0.000	93.291	0.000
12475	3.383	0.008	74.822	0.094
12488	9.247	0.000	82.095	0.049
12500	5.802	0.000	90.289	0.000
12525	1.165	0.287	87.086	3.588
12550	1.126	0.565	28.636	10.649
12575	0.025	0.281	14.384	10.578
12600	0.443	0.441	5.850	9.035
12625	0.176	0.691	7.736	14.157
12650	0.005	0.446	2.261	14.220
12675	0.178	0.086	2.290	6.660
12700	0.810	0.000	12.357	1.082
12725	0.578	0.221	17.350	2.768
12750	0.164	0.931	9.280	14.405
12775	0.546	0.839	8.887	22.122
12800	1.118	1.285	20.811	26.542
12825	2.034	0.000	39.409	16.059

Widening & Strengthening Mahangi to Dudhali mod (NH-21)

Chainage	Area(Fill)	Volume Report		Volume(Cut)
		Area(Cut)	Volume(Fill)	
12850	2.407	0.000	55.519	0.000
12875	1.889	0.000	53.704	0.002
12900	0.283	0.199	27.151	2.494
12925	0.766	0.546	13.118	9.313
12950	1.333	0.030	26.246	7.202
12975	1.418	0.000	34.391	0.381
13000	1.530	0.012	36.849	0.148
13025	3.725	0.002	65.689	0.176
13050	3.295	0.168	87.747	2.131
13075	2.397	0.019	71.145	2.338
13100	2.634	0.000	62.890	0.235
13125	1.282	0.015	48.959	0.188
13150	1.234	0.020	31.457	0.440
13175	1.259	0.069	31.170	1.115
13200	1.927	0.000	39.828	0.863
13225	1.721	0.001	45.599	0.016
13250	1.542	0.002	40.787	0.040
13275	1.366	0.028	36.350	0.369
13300	1.400	0.000	34.580	0.346
13325	2.218	0.000	45.226	0.000
13350	1.305	3.396	44.042	42.446
13375	5.311	2.077	82.701	68.405
13400	6.345	0.094	145.698	27.136
13425	5.845	0.339	152.373	5.410
13450	2.399	0.049	103.048	4.847
13475	6.910	0.109	116.370	1.971
13500	7.953	0.062	185.792	2.131
13525	8.027	0.008	199.750	0.870
13550	8.941	0.000	212.100	0.098
13575	7.699	0.083	208.001	1.041
13600	4.000	0.000	146.237	1.041
13625	2.641	0.294	83.010	3.672
13650	3.104	0.025	71.817	3.984
13675	7.900	0.000	137.559	0.312
13700	5.202	0.000	163.774	0.000
13725	5.537	0.000	134.234	0.000
13750	5.036	0.000	132.158	0.000
13775	5.450	0.000	131.065	0.000
13800	5.319	0.425	134.608	5.308
13825	5.820	0.000	139.230	5.308
13850	4.126	1.952	124.322	24.406
13875	3.772	0.018	98.728	24.626
13900	3.953	0.000	96.557	0.220

Widening & Strengthening Mahangi to Dudhali mod (NH-21)

Chainage	Area(Fill)	Volume Report		Volume(Cut)
		Area(Cut)	Volume(Fill)	
13925	4.641	0.000	107.422	0.000
13950	4.552	0.000	114.914	0.001
13975	4.174	0.000	109.069	0.001
14000	3.551	0.167	96.552	2.085
14025	4.431	0.007	99.770	2.174
14050	4.358	0.000	109.861	0.089
14075	4.063	0.000	105.262	0.000
14100	4.340	0.000	105.041	0.000
14125	3.370	0.125	96.376	1.557
14150	3.842	0.079	90.149	2.539
14175	4.203	0.000	100.563	0.982
14200	1.576	0.000	72.240	0.000
14225	3.586	0.026	64.531	0.326
14250	5.587	0.000	114.667	0.326
14275	5.926	0.000	143.915	0.000
14300	5.354	0.000	141.000	0.000
14325	5.178	0.275	131.649	3.432
14350	5.410	0.000	132.350	3.432
14375	5.944	0.000	141.924	0.000
14400	4.203	0.000	126.832	0.000
14425	3.435	0.000	95.470	0.000
14450	3.449	0.007	86.049	0.094
14475	4.441	0.000	98.621	0.094
14500	6.153	0.000	132.427	0.000
14525	4.765	0.000	136.485	0.000
14550	3.391	0.152	101.957	1.898
14575	3.383	0.000	84.676	1.898
14600	4.553	0.000	99.194	0.000
14625	2.994	0.000	94.336	0.000
14650	3.063	0.000	75.718	0.000
14675	3.161	0.026	77.804	0.324
14700	1.304	0.000	55.817	0.324
14725	1.770	0.000	38.434	0.000
14750	1.651	0.000	42.767	0.000
14775	1.882	0.000	44.167	0.000
14800	0.167	0.304	25.615	3.799
14825	4.867	0.000	62.919	3.799
14850	5.370	0.000	127.965	0.000
14875	2.250	0.000	95.253	0.000
14900	0.387	0.122	32.960	1.524
14925	0.262	0.140	8.115	3.280
14950	0.217	0.769	5.994	11.371
14975	0.098	0.388	3.943	14.468

Widening & Strengthening Mahangi to Dudhali mod (NH-21)

Chainage	Area(Fill)	Volume Report		Volume(Cut)
		Area(Cut)	Volume(Fill)	
15000	0.267	0.374	4.559	9.524
15025	0.382	0.410	8.106	9.794
15050	4.109	0.018	56.134	5.343
15075	7.250	0.000	141.990	0.220
15100	9.232	0.000	206.025	0.000
15125	6.618	0.000	198.120	0.000
15150	4.922	0.000	144.249	0.000
15175	3.975	0.001	111.216	0.012
15200	2.631	0.000	82.577	0.012
15225	3.229	0.000	73.246	0.000
15250	1.753	0.000	62.278	0.000
15275	0.957	0.012	33.883	0.153
15300	0.116	0.107	13.416	1.486
15325	0.141	0.165	3.214	3.392
15350	0.001	0.980	1.781	14.305
15375	0.007	0.489	0.101	18.354
15400	0.059	0.237	0.824	9.067
15425	0.143	0.129	2.528	4.573
15450	2.540	0.000	33.533	1.614
15475	3.907	0.000	80.577	0.000
15500	3.188	0.000	88.683	0.000
15525	2.311	0.000	68.738	0.000
15550	1.638	0.017	49.365	0.215
15575	0.571	0.040	27.622	0.711
15600	0.000	0.441	7.144	6.013
15625	0.001	0.292	0.015	9.169
15650	0.556	0.090	6.965	4.779
15675	1.115	0.059	20.889	1.869
15700	1.661	0.000	34.706	0.742
15725	1.492	0.000	39.411	0.000
15750	0.435	0.068	24.079	0.846
15775	0.826	0.191	15.762	3.234
15800	0.973	0.187	22.488	4.726
15825	1.067	0.000	25.504	2.338
15850	1.287	0.003	29.435	0.034
15875	4.082	0.000	67.113	0.034
15900	1.558	0.000	70.501	0.000
15925	0.891	0.018	30.615	0.223
15950	0.176	0.556	13.336	7.171
15975	0.973	0.008	14.359	7.052
16000	2.361	0.000	41.667	0.103
16025	1.364	0.000	46.563	0.000
16050	2.151	0.000	43.945	0.000

Widening & Strengthening Mahangi to Dudhali mod (NH-21)

Chainage	Volume Report			
	Area(Fill)	Area(Cut)	Volume(Fill)	Volume(Cut)
16075	6.945	0.170	113.708	2.129
16100	1.350	0.024	103.690	2.430
16125	1.342	0.001	33.653	0.317
16150	2.255	0.129	44.966	1.631
16175	0.925	0.432	39.749	7.019
16200	1.128	0.843	25.661	15.941
16225	1.593	0.416	34.007	15.733
16250	1.375	0.458	37.096	10.923
16275	1.629	0.041	37.547	6.237
16300	1.353	0.085	37.277	1.568
16325	1.978	0.001	41.637	1.068
16350	1.093	0.356	38.387	4.455
16375	1.087	0.682	27.258	12.975
16400	1.412	0.053	31.249	9.197
16425	1.328	0.142	34.258	2.437
16450	1.896	0.000	40.299	1.773
16475	3.743	0.068	70.489	0.858
16500	4.830	0.164	107.174	2.904
16525	2.646	0.280	93.451	5.543
16550	2.510	0.090	64.447	4.623
16575	2.831	0.016	66.763	1.335
16600	2.704	0.000	69.183	0.206
16625	2.392	0.000	63.692	0.000
16650	2.424	0.000	60.193	0.000
16675	2.868	0.000	66.149	0.000
16700	2.107	0.000	62.187	0.000
16725	2.181	0.000	53.595	0.000
16750	1.109	0.060	41.117	0.748
16775	2.478	0.000	44.830	0.748
16800	3.293	0.000	72.138	0.000
16825	4.140	0.000	92.909	0.000
16850	4.373	0.000	106.412	0.000
16875	3.794	0.000	102.094	0.000
16900	7.798	0.000	144.905	0.000
16925	3.236	0.000	137.925	0.000
16950	2.870	0.000	76.318	0.000
16975	2.056	0.028	61.568	0.355
17000	1.701	0.194	46.962	2.780
17025	2.487	0.001	52.358	2.438
17050	2.018	0.007	56.316	0.100
17075	2.543	0.000	57.004	0.086
17100	2.479	0.000	62.775	0.000
17125	0.851	0.164	41.633	2.045

Widening & Strengthening Mahangi to Dudhali mod (NH-21)

Chainage	Volume Report			
	Area(Fill)	Area(Cut)	Volume(Fill)	Volume(Cut)
17150	0.943	0.129	22.427	3.656
17175	1.464	0.010	30.083	1.738
17200	1.779	0.004	40.527	0.183
17225	1.465	0.022	40.541	0.329
17250	1.475	0.007	36.751	0.364
17275	0.930	0.066	30.069	0.912
17300	1.235	0.000	27.070	0.825
17325	1.033	0.147	28.358	1.835
17350	0.805	0.530	22.978	8.456
17375	2.731	0.262	44.204	9.903
17400	3.053	0.208	72.303	5.877
17425	2.724	0.444	72.212	8.145
17450	1.181	0.682	48.816	14.074
17475	1.303	0.253	31.049	11.692
17500	1.365	0.482	33.340	9.189
17525	0.603	0.960	24.598	18.031
17550	0.183	0.075	9.833	12.939
17575	0.525	0.234	8.855	3.853
17600	0.420	0.236	11.817	5.868
17625	0.483	0.292	11.292	6.595
17650	0.346	0.483	10.365	9.679
17675	0.143	0.668	6.120	14.378
17700	0.071	0.480	2.687	14.343
17725	0.285	0.142	4.454	7.768
17750	2.084	0.000	29.607	1.771
17775	1.796	0.000	48.498	0.000
17800	1.432	0.004	40.352	0.046
17825	0.292	0.144	21.554	1.848
17850	0.093	0.084	4.818	2.847
17875	1.708	0.000	22.515	1.044
17900	1.807	0.000	43.945	0.000
17925	2.759	0.000	57.086	0.000
17950	5.450	0.000	102.611	0.000
17975	12.300	0.000	221.867	0.000
18000	4.859	0.000	214.487	0.000
18025	0.893	0.295	71.905	3.694
18050	0.160	0.440	13.164	9.190
18075	0.000	1.372	1.998	22.652
18100	0.000	1.339	0.000	33.888
18125	0.000	1.497	0.000	35.441
18150	0.049	0.907	0.610	30.041
18175	0.001	0.468	0.625	17.177
18200	0.673	0.017	8.431	6.062

Widening & Strengthening Mahangi to Dudhali mod (NH-21)

Chainage	Volume Report			
	Area(Fill)	Area(Cut)	Volume(Fill)	Volume(Cut)
18225	0.304	0.477	12.217	6.175
18250	0.560	0.050	10.807	6.589
18275	0.789	0.013	16.869	0.788
18300	1.036	0.008	22.813	0.258
18325	1.852	0.000	36.104	0.100
18350	2.305	0.000	51.972	0.000
18375	2.270	0.000	57.187	0.000
18400	1.668	0.000	49.214	0.000
18425	1.376	0.093	38.045	1.164
18450	1.745	0.000	39.010	1.164
18475	1.010	0.000	34.432	0.000
18500	1.430	0.000	30.498	0.000
18525	1.983	0.000	42.658	0.000
18550	1.506	0.050	43.609	0.626
18575	1.196	0.059	33.782	1.360
18600	1.872	0.003	38.353	0.776
18625	1.106	0.000	37.226	0.046
18650	0.643	0.158	21.864	1.975
18675	0.850	0.030	18.658	2.346
18700	0.644	0.156	18.670	2.320
18725	1.071	0.204	21.441	4.492
18750	1.861	0.008	36.652	2.648
18775	1.103	0.016	37.051	0.305
18800	1.761	0.021	35.808	0.471
18825	1.683	0.044	43.054	0.822
18850	3.017	0.000	58.753	0.555
18875	3.365	0.000	79.780	0.000
18900	3.278	0.000	83.040	0.000
18925	3.950	0.000	90.344	0.000
18950	0.856	0.248	60.073	3.104
18975	1.083	0.288	24.246	6.704
19000	1.927	0.266	37.625	6.919
19025	2.681	0.000	57.593	3.320
19050	5.052	0.000	96.656	0.000
19075	5.317	0.000	129.607	0.000
19100	4.252	0.000	119.613	0.000
19125	3.181	0.018	92.912	0.221
19150	2.993	0.023	77.173	0.502
19175	2.632	0.103	70.313	1.566
19200	1.733	0.355	54.559	5.716
19225	3.676	0.000	67.604	4.431
19250	2.882	0.115	81.968	1.433
19275	1.353	0.595	52.938	8.868

Widening & Strengthening Mahangi to Dudhali mod (NH-21)

Chainage	Volume Report			
	Area(Fill)	Area(Cut)	Volume(Fill)	Volume(Cut)
19300	0.745	0.448	26.226	13.041
19325	0.923	0.280	20.850	9.109
19350	2.322	0.000	40.561	3.504
19375	2.811	0.059	64.156	0.736
19400	2.446	0.000	65.713	0.734
19425	11.095	0.000	169.265	0.000
19450	0.205	0.203	141.250	2.543
19475	0.849	0.222	13.173	5.320
19500	0.472	0.117	16.510	4.243
19525	0.289	0.236	9.518	4.418
19550	3.432	0.114	46.520	4.376
19575	3.206	0.000	82.974	1.424
19600	3.259	0.000	80.804	0.000
19625	3.150	0.000	80.108	0.000
19650	0.421	0.114	44.642	1.429
19675	0.064	0.181	6.061	3.696
19700	0.000	0.706	0.795	11.090
19725	0.079	0.231	0.986	11.713
19750	1.537	0.000	20.195	2.891
19775	1.575	0.021	38.901	0.260
19800	3.105	0.001	58.498	0.271
19825	0.936	0.013	50.510	0.177
19850	1.027	0.013	24.542	0.333
19875	0.659	0.041	21.078	0.677
19900	0.237	0.335	11.199	4.700
19925	0.000	1.119	2.960	18.177
19950	0.017	0.455	0.216	19.674
19975	0.839	0.171	10.700	7.828
20000	2.925	0.000	47.046	2.141
20025	3.271	0.000	77.448	0.000
20050	3.840	0.000	88.891	0.000
20075	5.577	0.000	117.713	0.000
20100	2.974	0.012	106.883	0.146
20125	0.539	0.044	43.909	0.694
20150	0.754	0.277	16.157	4.005
20175	0.000	0.848	9.423	14.055
20200	0.441	0.181	5.512	12.860
20225	0.241	0.369	8.525	6.875
20250	0.038	0.640	3.483	12.618
20275	0.108	0.222	1.819	10.785
20300	0.333	0.323	5.512	6.817
20325	0.193	0.216	6.571	6.743
20350	0.001	0.826	2.425	13.030

Widening & Strengthening Mahangi to Dudhali mod (NH-21)

Chainage	Area(Fill)	Volume Report		Volume(Cut)
		Area(Cut)	Volume(Fill)	
20375	0.076	0.357	0.968	14.791
20400	0.163	3.805	2.987	52.026
20425	0.232	3.965	4.933	97.120
20450	0.001	4.729	2.907	108.675
20475	0.000	5.650	0.009	129.740
20500	0.000	6.075	0.000	146.569
20525	0.005	6.696	0.068	159.644
20550	0.000	3.546	0.068	128.027
20575	0.000	0.586	0.000	51.654
20600	0.014	0.361	0.175	11.843
20625	0.517	0.085	6.636	5.581
20650	1.256	0.001	22.163	1.086
20675	1.923	0.010	39.741	0.144
20700	0.978	0.000	36.261	0.125
20725	0.046	0.159	12.792	1.990
20750	0.271	0.128	3.960	3.592
20775	0.199	0.320	5.871	5.606
20800	0.213	0.147	5.146	5.847
20825	0.353	0.057	7.072	2.551
20850	0.550	0.008	11.278	0.809
20875	0.609	0.033	14.488	0.509
20900	0.241	0.105	10.631	1.725
20925	0.535	0.169	9.705	3.432
20950	0.326	0.247	10.772	5.200
20975	0.482	0.128	10.108	4.684
21000	0.993	0.191	18.442	3.982
21025	1.584	0.280	32.216	5.889
21050	0.951	1.079	31.689	16.987
21075	1.364	0.289	28.935	17.091
21100	1.936	0.000	41.252	3.609
21125	1.864	0.004	47.500	0.047
21150	1.826	0.000	46.118	0.047
21175	1.189	0.020	37.687	0.250
21200	1.281	0.166	30.884	2.324
21225	1.509	3.335	34.880	43.759
21250	1.631	3.551	39.246	86.073
21275	1.276	3.734	36.336	91.067
21300	0.922	4.213	27.479	99.341
21325	1.134	2.744	25.708	86.961
21350	0.780	2.913	23.925	70.709
21375	2.167	0.000	36.833	36.409
21400	2.451	0.008	57.731	0.098
21425	1.995	0.000	55.577	0.098

Widening & Strengthening Mahangi to Dudhali mod (NH-21)

Chainage	Area(Fill)	Volume Report		Volume(Cut)
		Area(Cut)	Volume(Fill)	
21450	2.734	0.000	59.112	0.000
21475	1.950	0.016	58.553	0.195
21500	2.806	0.000	59.446	0.195
21525	1.797	0.080	57.529	1.006
21550	1.880	0.000	45.961	1.006
21575	2.147	0.000	50.345	0.000
21600	3.273	0.000	67.754	0.000
21625	2.702	0.000	74.691	0.000
21650	3.090	0.000	72.401	0.000
21675	2.225	0.000	66.430	0.000
21700	1.508	0.133	46.659	1.659
21725	1.723	0.000	40.391	1.659
21750	0.986	0.061	33.866	0.759
21775	2.803	0.000	47.366	0.759
21800	1.044	0.107	48.088	1.337
21825	1.359	0.033	30.039	1.745
21850	1.296	0.025	33.191	0.723
21875	2.297	0.000	44.914	0.315
21900	1.844	0.000	51.765	0.000
21925	2.827	0.000	58.393	0.000
21950	1.696	0.369	56.546	4.609
21975	4.332	0.000	75.349	4.609
22000	3.518	0.000	98.117	0.000
22025	1.615	0.000	64.161	0.000
22050	2.597	0.000	52.647	0.000
22075	1.283	0.000	48.492	0.000
22100	1.474	0.000	34.457	0.000
22125	1.589	0.000	38.291	0.000
22150	1.142	0.050	34.144	0.628
22175	1.318	0.000	30.747	0.628
22200	0.709	0.312	25.338	3.905
22225	1.003	0.005	21.410	3.970
22250	0.610	0.150	20.166	1.944
22275	1.284	0.000	23.680	1.879
22300	3.384	0.000	58.353	0.000
22325	3.585	0.000	87.104	0.000
22350	2.461	0.000	75.572	0.000
22375	2.799	0.000	65.752	0.000
22400	2.282	0.000	63.508	0.000
22425	3.488	0.000	72.124	0.000
22450	4.214	0.000	96.276	0.000
22475	2.002	0.000	77.697	0.000
22500	3.090	0.000	63.648	0.000

Widening & Strengthening Mahangi to Dudhali mod (NH-21)

Chainage	Area(Fill)	Volume Report		Volume(Cut)
		Area(Cut)	Volume(Fill)	
22525	3.261	0.000	79.388	0.000
22550	3.235	0.000	81.198	0.000
22575	2.000	0.062	65.430	0.777
22586	7.204	0.000	50.622	0.342
22600	1.422	0.042	60.380	0.294
22625	1.011	0.196	30.411	2.977
22650	0.939	0.292	24.374	6.099
22675	0.962	1.359	23.751	20.635
22700	1.164	0.156	26.575	18.943
22725	0.538	0.226	21.281	4.786
22750	0.549	0.658	13.590	11.051
22775	0.381	0.538	11.630	14.949
22800	0.000	1.670	4.766	27.607
22825	0.193	0.986	2.413	33.210
22850	0.447	0.697	8.005	21.038
22875	0.600	0.005	13.087	8.775
22900	2.399	0.000	37.485	0.066
22925	1.514	0.000	48.916	0.000
22950	0.034	0.162	19.356	2.022
22975	2.307	0.000	29.263	2.022
23000	0.315	1.017	32.771	12.712
23025	0.189	1.179	6.305	27.452
23050	0.259	0.952	5.602	26.641
23075	0.400	2.780	8.240	46.649
23100	0.000	4.547	5.006	91.590
23125	0.000	5.417	0.000	124.548
23150	0.000	8.726	0.000	176.776
23175	0.874	0.518	10.928	115.550
23200	7.167	0.000	100.519	6.481
23225	7.131	0.000	178.727	0.000
23250	0.812	0.000	99.287	0.000
23275	9.327	0.000	126.737	0.000
23300	12.474	0.000	272.504	0.000
23325	11.424	0.000	298.718	0.000
23350	13.164	0.000	307.346	0.000
23375	9.541	0.000	283.806	0.000
23400	10.331	0.000	248.397	0.000
23425	3.938	0.000	178.359	0.000
23450	7.149	0.000	138.585	0.000
23475	6.756	0.000	173.818	0.000
23500	6.311	0.000	163.341	0.000
23525	9.832	0.000	201.782	0.000
23550	8.717	0.000	231.857	0.000

Widening & Strengthening Mahangi to Dudhali mod (NH-21)

Chainage	Area(Fill)	Volume Report		Volume(Cut)
		Area(Cut)	Volume(Fill)	
23575	8.922	0.000	220.483	0.000
23600	6.067	0.000	187.358	0.000
23625	5.959	0.000	150.327	0.000
23650	11.188	0.000	214.339	0.000
23675	9.099	0.000	253.588	0.000
23700	13.092	0.000	277.387	0.000
23725	9.513	0.000	282.565	0.000
23750	7.286	0.000	209.989	0.000
23775	5.125	0.000	155.135	0.000
23800	3.216	0.000	104.264	0.000
23825	5.178	0.000	104.929	0.000
23850	3.640	0.000	110.232	0.000
23875	4.497	0.000	101.712	0.000
23900	4.039	0.000	106.695	0.000
23925	1.239	0.414	65.978	5.179
23950	5.480	0.446	83.994	10.753
23975	1.944	0.054	92.803	6.247
24000	15.034	0.000	212.220	0.672
24025	10.164	0.000	314.972	0.000
24050	7.742	0.000	223.823	0.000
24075	7.185	0.000	186.580	0.000
24100	2.285	0.000	118.372	0.000
24125	1.044	0.511	41.618	6.393
24150	7.772	0.000	110.205	6.393
24175	30.354	0.000	476.577	0.000
24200	35.908	0.000	828.281	0.000
24225	28.951	0.000	810.737	0.000
24250	25.744	0.000	683.685	0.000
24275	21.201	0.000	586.819	0.000
24300	21.315	0.000	531.453	0.000
24325	22.808	0.000	551.541	0.000
24350	27.110	0.000	623.981	0.000
24375	32.322	0.000	742.906	0.000
24400	22.250	0.000	682.160	0.000
24425	0.000	7.826	278.136	97.822
24450	10.624	0.000	132.809	97.822
24475	15.005	0.000	320.371	0.000
24500	17.077	0.000	401.034	0.000
24525	11.930	0.000	362.588	0.000
24550	8.864	0.000	259.918	0.000
24575	1.624	0.203	131.096	2.536
24600	0.000	3.592	20.300	47.440
24625	0.240	1.963	2.996	69.437

Widening & Strengthening Mahangi to Dudhali mod (NH-21)

Chainage	Volume Report			
	Area(Fill)	Area(Cut)	Volume(Fill)	Volume(Cut)
24650	0.884	0.423	14.042	29.824
24675	1.341	0.036	27.809	5.739
24700	3.498	0.000	60.483	0.449
24725	2.511	0.000	75.109	0.000
24750	0.481	0.013	37.397	0.166
24775	1.624	0.957	26.314	12.125
24800	0.000	1.225	20.306	27.275
24825	0.000	1.851	0.000	38.448
24850	0.000	0.786	0.000	32.962
24875	0.381	0.127	4.759	11.421
24900	0.354	0.067	9.184	2.434
24925	0.400	0.045	9.425	1.402
24950	0.660	0.025	13.256	0.870
24975	2.649	0.000	41.371	0.311
25000	3.469	0.000	76.476	0.000
25025	6.705	0.000	127.172	0.000
25050	17.602	0.000	303.830	0.000
25061	24.472	0.000	231.403	0.000
25072	18.437	0.000	235.997	0.000
25075	15.615	0.000	51.077	0.000
25100	5.283	0.000	261.225	0.000
25125	3.949	0.000	115.401	0.000
25150	12.995	0.000	211.798	0.000
25156	22.239	0.000	105.702	0.000
25161	10.768	0.000	82.519	0.000
25175	6.383	0.000	120.061	0.000
25200	24.883	0.000	390.832	0.000
25212	21.417	0.000	277.804	0.000
25225	14.429	0.000	233.001	0.000
25250	2.293	0.000	209.024	0.000
25275	0.560	0.015	35.657	0.184
25300	0.065	0.252	7.808	3.328
25325	3.695	0.000	46.998	3.145
25350	8.603	0.000	153.721	0.000
25365	23.953	0.000	244.170	0.000
25375	14.171	0.000	190.620	0.000
25400	11.852	0.000	325.281	0.000
25425	9.262	0.000	263.923	0.000
25450	9.779	0.000	238.012	0.000
25475	3.232	0.000	162.633	0.000
25500	4.955	0.000	102.340	0.000
25525	14.918	0.000	248.418	0.000
25550	44.881	0.000	747.489	0.000

Widening & Strengthening Mahangi to Dudhali mod (NH-21)

Chainage	Area(Fill)	Volume Report		Volume(Cut)
		Area(Cut)	Volume(Fill)	
25575	16.647	0.000	769.104	0.000
25600	3.967	0.000	257.682	0.000
25625	0.093	2.362	50.752	29.528
25650	0.491	1.276	7.298	45.479
25675	0.503	0.283	12.421	19.491
25700	1.939	0.000	30.524	3.540
25716	0.959	0.021	23.184	0.171
25725	6.842	0.000	35.102	0.096
25750	0.021	0.674	85.779	8.431
25775	0.000	0.472	0.256	14.337
25800	0.000	1.617	0.000	26.118
25825	2.570	1.145	32.124	34.519
25850	0.591	0.993	39.512	26.720
25875	0.488	0.316	13.494	16.364
25900	1.276	0.331	22.058	8.090
25925	1.702	0.175	37.222	6.319
25950	1.819	0.038	44.006	2.655
25975	0.795	0.632	32.670	8.372
26000	1.132	0.152	24.088	9.794
26025	1.545	0.053	33.468	2.561
26050	0.867	0.413	30.156	5.831
26075	0.701	0.801	19.605	15.180
26100	0.000	1.496	8.762	28.715
26125	0.323	0.815	4.043	28.887
26150	1.030	1.029	16.918	23.050
26175	0.861	0.558	23.642	19.843
26200	1.291	0.032	26.901	7.376
26225	1.781	0.000	38.396	0.396
26250	1.922	0.000	46.287	0.000
26275	1.281	0.000	40.034	0.000
26300	1.758	0.000	37.989	0.000
26325	1.313	0.024	38.398	0.303
26350	0.000	2.115	16.417	26.746
26375	0.274	1.031	3.429	39.329
26400	0.132	0.155	5.076	14.827
26425	1.322	0.000	18.167	1.941
26450	0.763	0.000	26.064	0.005
26475	0.947	0.057	21.380	0.714
26500	1.199	0.070	26.818	1.585
26525	1.175	0.000	29.663	0.876
26550	0.176	0.169	16.880	2.111
26560	0.000	6.138	0.880	31.535
26567	16.941	0.578	59.293	23.507

Widening & Strengthening Mahangi to Dudhali mod (NH-21)

Chainage	Volume Report			
	Area(Fill)	Area(Cut)	Volume(Fill)	Volume(Cut)
26575	0.202	0.135	68.570	2.853
26600	1.129	0.000	16.629	1.687
26625	1.598	0.000	34.088	0.000
26650	2.427	0.000	50.320	0.000
26675	3.827	0.000	78.182	0.000
26700	3.059	0.000	86.079	0.000
26725	1.670	0.000	59.117	0.000
26750	3.316	0.237	62.332	2.957
26775	5.259	0.000	107.198	2.957
26800	5.227	0.035	131.084	0.437
26825	5.464	0.000	133.636	0.440
26850	5.159	0.003	132.786	0.038
26875	2.660	0.000	97.746	0.035
26900	3.893	0.000	81.921	0.000
26925	3.654	0.000	94.346	0.000
26950	6.789	0.000	130.546	0.000
26975	5.076	0.000	148.319	0.000
27000	3.118	0.000	102.433	0.000
27025	1.340	0.008	55.727	0.103
27050	2.304	0.008	45.542	0.201
27075	2.108	0.000	55.143	0.098
27100	2.400	0.000	56.350	0.000
27125	2.430	0.004	60.377	0.051
27150	3.035	0.000	68.311	0.051
27175	3.262	0.000	78.705	0.000
27200	6.877	0.011	126.734	0.137
27225	4.143	0.000	137.753	0.137
27250	0.297	0.401	55.506	5.012
27275	1.140	0.126	17.961	6.594
27300	1.459	0.375	32.480	6.274
27325	1.809	0.226	40.843	7.516
27350	0.236	0.682	25.559	11.346
27375	0.882	0.322	13.976	12.551
27400	1.196	0.382	25.970	8.807
27425	0.532	0.190	21.595	7.159
27450	1.130	0.001	20.771	2.393
27475	1.054	0.301	27.299	3.778
27500	2.629	0.259	46.039	7.004
27525	3.345	0.364	74.670	7.796
27550	2.952	0.304	78.710	8.353
27575	1.804	0.435	59.448	9.236
27600	2.195	0.045	49.988	5.999
27625	1.983	0.067	52.234	1.399

Widening & Strengthening Mahangi to Dudhali mod (NH-21)

Chainage	Area(Fill)	Volume Report		Volume(Cut)
		Area(Cut)	Volume(Fill)	
27650	0.698	1.137	33.514	15.050
27675	1.410	0.410	26.352	19.343
27700	0.600	0.007	25.137	5.224
27725	0.412	0.011	12.662	0.235
27750	1.551	0.013	24.546	0.308
27775	2.377	0.024	49.098	0.465
27800	2.687	0.008	63.294	0.396
27825	3.447	0.340	76.678	4.348
27850	2.149	0.383	69.953	9.034
27875	0.000	1.536	26.861	23.988
27900	0.000	1.267	0.000	35.038
27925	0.031	0.189	0.389	18.199
27950	1.885	0.000	23.955	2.365
27975	4.356	0.000	78.012	0.000
28000	3.698	0.000	100.673	0.000
28025	4.247	0.000	99.316	0.000
28050	3.388	0.000	95.437	0.000
28075	3.276	0.028	83.295	0.350
28100	3.047	0.009	79.039	0.466
28125	1.227	0.196	53.428	2.570
28150	2.403	0.000	45.376	2.454
28175	2.489	0.000	61.158	0.000
28200	3.170	0.007	70.740	0.091
28225	2.204	0.026	67.171	0.411
28250	3.068	0.177	65.899	2.534
28275	2.418	0.302	68.579	5.993
28300	1.025	0.046	43.040	4.353
28325	2.020	0.000	38.061	0.575
28350	4.712	0.083	84.146	1.042
28375	5.782	0.612	131.176	8.694
28400	4.325	0.000	126.338	7.655
28425	2.736	0.000	88.262	0.002
28450	3.821	0.000	81.972	0.000
28475	2.076	0.285	73.716	3.568
28500	1.908	0.000	49.794	3.568
28525	0.977	0.074	36.064	0.925
28550	0.157	0.668	14.177	9.280
28575	0.426	0.319	7.287	12.344
28600	0.000	5.700	5.328	75.236
28617	0.000	1.865	0.000	64.300
28625	3.089	0.000	12.356	7.460
28650	1.304	0.039	54.908	0.486
28675	2.306	0.000	45.126	0.486

Widening & Strengthening Mahangi to Dudhali mod (NH-21)

Chainage	Area(Fill)	Volume Report		Volume(Cut)
		Area(Cut)	Volume(Fill)	
28700	0.377	0.023	33.542	0.288
28725	1.329	0.030	21.330	0.668
28750	1.795	0.000	39.060	0.380
28775	2.742	0.000	56.715	0.000
28800	3.706	0.000	80.604	0.000
28825	1.743	1.043	68.116	13.035
28850	2.661	0.397	55.042	17.999
28875	2.825	0.001	68.568	4.974
28900	1.620	0.000	55.563	0.010
28925	0.406	0.008	25.329	0.101
28950	2.606	0.000	37.651	0.101
28975	2.129	0.000	59.183	0.000
29000	3.132	0.000	65.755	0.000
29025	0.167	0.384	41.236	4.806
29050	0.811	0.864	12.224	15.605
29075	2.402	0.001	40.163	10.817
29100	0.386	0.099	34.854	1.253
29125	3.248	0.001	45.420	1.252
29150	2.482	0.224	71.621	2.814
29175	1.000	0.000	43.521	2.797
29200	0.475	0.108	18.428	1.356
29225	0.202	0.557	8.456	8.320
29250	0.000	0.274	2.523	10.386
29275	0.000	2.084	0.000	29.476
29300	1.201	0.728	15.016	35.149
29325	0.919	1.312	26.501	25.496
29350	0.000	1.743	11.486	38.189
29375	1.859	1.149	23.237	36.148
29400	2.091	0.135	49.377	16.042
29425	1.569	0.641	45.750	9.694
29450	0.755	1.360	29.052	25.016
29475	2.298	0.026	38.162	17.322
29500	0.147	0.620	30.564	8.075
29525	1.108	0.273	15.697	11.170
29550	1.853	1.346	37.020	20.236
29575	1.167	0.026	37.751	17.152
29600	0.801	0.030	24.595	0.705
29625	0.242	0.224	13.032	3.170
29650	1.033	0.421	15.928	8.053
29675	0.234	0.348	15.838	9.609
29700	0.384	0.081	7.730	5.365
29725	0.816	0.535	15.002	7.697
29750	2.700	0.502	43.957	12.964

Widening & Strengthening Mahangi to Dudhali mod (NH-21)

Chainage	Volume Report			
	Area(Fill)	Area(Cut)	Volume(Fill)	Volume(Cut)
29775	6.446	0.000	114.332	6.281
29800	7.955	0.000	180.016	0.000
29825	7.612	0.000	194.595	0.000
29850	10.717	0.000	229.118	0.000
29875	0.531	0.351	140.596	4.393
29900	0.894	0.003	17.807	4.428
29925	2.300	0.000	39.921	0.035
29950	2.622	0.000	61.518	0.000
29975	0.756	0.257	42.221	3.207
30000	0.621	0.499	17.218	9.444
30025	0.930	0.008	19.396	6.339
30050	5.349	0.000	78.487	0.102
30075	8.120	0.000	168.364	0.000
30100	11.125	0.000	240.566	0.000
30125	10.981	0.000	276.324	0.000
30150	16.300	0.000	341.016	0.000
30175	17.223	0.000	419.041	0.000
30200	14.725	0.000	399.350	0.000
30225	14.437	0.000	364.517	0.000
30250	10.432	0.000	310.855	0.000
30275	8.441	0.000	235.917	0.000
30300	5.132	0.000	169.673	0.000
30325	4.163	0.000	116.195	0.000
30350	2.617	0.000	84.751	0.000
30375	1.089	0.000	46.325	0.000
30400	0.967	0.157	25.700	1.963
30425	0.280	0.445	15.582	7.520
30450	0.417	1.198	8.714	20.533
30475	0.616	0.755	12.913	24.408
30500	0.396	1.237	12.643	24.894
30525	0.257	1.880	8.155	38.959
30550	0.474	0.438	9.137	28.977
30575	0.707	0.038	14.768	5.955
30600	1.274	0.001	24.766	0.492
30625	1.066	0.036	29.252	0.467
30650	3.316	0.000	54.780	0.451
30675	1.818	0.030	64.175	0.370
30700	1.695	0.000	43.910	0.370
30725	2.191	0.000	48.575	0.000
30750	3.204	0.000	67.433	0.000
30775	1.570	0.000	59.678	0.000
30800	1.887	0.325	43.216	4.060
30825	0.962	0.566	35.609	11.133

Widening & Strengthening Mahangi to Dudhali mod (NH-21)

		Volume Report		
Chainage	Area(Fill)	Area(Cut)	Volume(Fill)	Volume(Cut)
30850	1.720	0.590	33.520	14.445
30875	1.284	0.016	37.547	7.572
30900	0.539	0.030	22.786	0.576
30925	0.671	0.187	15.123	2.719
30950	0.377	0.329	13.101	6.459
30975	0.393	0.907	9.633	15.452
31000	0.180	0.076	7.174	12.284
31025	1.338	0.106	18.986	2.269
31050	2.015	0.009	41.914	1.433
31075	1.472	0.010	43.590	0.233
31100	2.080	0.000	44.401	0.121
31125	2.441	0.000	56.503	0.000
31150	1.817	0.065	53.223	0.810
31175	0.975	0.103	34.897	2.094
31200	1.475	0.042	30.620	1.808
31225	1.170	0.044	33.067	1.068
31250	1.763	0.065	36.663	1.362
31275	1.437	0.063	39.993	1.600
31300	1.643	0.035	38.494	1.217
31325	1.929	0.082	44.646	1.461
31350	1.530	0.045	43.235	1.594
31375	0.983	0.100	31.414	1.815
31400	1.523	0.015	31.328	1.440
31425	3.825	0.000	66.853	0.193
31450	9.410	0.000	165.436	0.000
31455	5.373	0.000	36.956	0.000
31460	14.402	0.000	49.438	0.000
31475	14.270	0.000	215.042	0.000
31485	7.098	0.000	106.841	0.000
31500	5.031	0.000	90.973	0.000
31525	10.855	0.000	198.584	0.000
31543	13.828	0.000	222.151	0.000
31550	15.281	0.000	101.883	0.000
31573	10.146	0.000	292.417	0.000
31575	11.096	0.000	21.242	0.000
31600	2.106	0.071	165.026	0.891
31625	2.217	0.002	54.041	0.916
31650	2.380	0.386	57.463	4.848
31675	1.054	0.000	42.926	4.822
31700	1.470	0.000	31.543	0.006
31725	1.529	0.000	37.479	0.006
31750	2.012	0.000	44.263	0.000
31775	2.539	0.000	56.885	0.002

Widening & Strengthening Mahangi to Dudhali mod (NH-21)

Chainage	Area(Fill)	Volume Report		Volume(Cut)
		Area(Cut)	Volume(Fill)	
31800	2.365	0.041	61.289	0.512
31825	1.866	0.272	52.885	3.916
31850	0.964	0.312	35.376	7.300
31875	2.101	0.000	38.308	3.895
31882	4.711	0.000	23.841	0.000
31900	8.440	0.000	118.360	0.000
31912	4.328	0.000	76.612	0.000
31925	1.510	0.337	37.950	2.192
31950	1.717	0.574	40.341	11.393
31975	4.435	0.000	76.893	7.177
31994	5.251	0.000	92.010	0.000
32000	3.309	0.000	25.680	0.000
32025	1.070	0.086	54.735	1.070
32050	1.039	0.384	26.359	5.873
32075	1.011	0.580	25.632	12.057
32100	0.544	0.782	19.446	17.035
32125	0.628	0.869	14.655	20.643
32150	17.705	0.074	229.163	11.784
32175	0.927	0.064	232.892	1.720
32200	0.947	0.066	23.414	1.618
32225	0.461	0.092	17.596	1.968
32250	0.261	0.094	9.021	2.324
32275	0.375	0.081	7.948	2.184
32300	0.748	0.221	14.039	3.768
32325	0.181	0.080	11.609	3.763
32350	0.448	0.043	7.855	1.539
32375	0.444	0.041	11.146	1.047
32400	1.356	0.000	22.499	0.510
32425	1.235	0.000	32.390	0.000
32450	0.002	0.459	15.464	5.738
32475	0.116	0.545	1.474	12.547
32500	0.032	0.278	1.852	10.278
32525	0.042	0.295	0.929	7.153
32550	0.083	0.146	1.562	5.507
32575	0.001	0.393	1.040	6.740
32600	0.034	0.406	0.437	9.994
32625	0.000	0.468	0.429	10.922
32650	0.021	0.354	0.266	10.275
32675	1.174	0.000	14.938	4.430
32700	2.152	0.012	41.570	0.150
32725	2.543	0.000	58.691	0.150
32750	2.189	0.202	59.160	2.524
32775	2.692	0.002	61.023	2.551

Widening & Strengthening Mahangi to Dudhali mod (NH-21)

Chainage	Area(Fill)	Volume Report		Volume(Cut)
		Area(Cut)	Volume(Fill)	
32800	2.020	0.000	58.900	0.027
32825	2.577	0.000	57.463	0.000
32850	2.675	0.000	65.662	0.000
32875	1.490	0.241	52.064	3.009
32900	2.196	0.000	46.072	3.009
32925	1.688	0.096	48.554	1.198
32950	2.154	0.010	48.032	1.324
32975	3.716	0.000	73.374	0.125
33000	3.401	0.000	88.951	0.000
33025	0.041	0.862	43.013	10.771
33050	0.293	0.472	4.172	16.676
33075	0.257	0.529	6.873	12.523
33100	0.103	0.417	4.493	11.827
33125	0.000	0.972	1.285	17.361
33150	0.199	0.658	2.486	20.375
33175	0.569	0.028	9.599	8.572
33200	1.049	0.031	20.229	0.735
33225	1.034	0.000	26.035	0.388
33250	0.681	0.000	21.428	0.000
33275	0.799	0.017	18.496	0.218
33300	1.234	0.002	25.413	0.238
33325	0.992	0.136	27.825	1.720
33350	2.223	0.000	40.182	1.699
33375	1.841	0.000	50.790	0.000
33400	2.038	0.000	48.480	0.000
33425	2.156	0.000	52.422	0.000
33450	2.297	0.000	55.661	0.000
33475	2.083	0.049	54.755	0.614
33500	0.002	0.412	26.064	5.763
33525	1.249	0.023	15.638	5.441
33550	1.894	0.000	39.286	0.292
33575	1.794	0.000	46.091	0.000
33600	0.577	0.223	29.629	2.787
33625	0.773	0.075	16.870	3.719
33650	0.950	0.003	21.542	0.964
33675	1.090	0.021	25.502	0.297
33700	1.484	0.009	32.179	0.380
33725	1.551	0.000	37.948	0.116
33750	1.668	0.000	40.237	0.000
33775	0.693	0.106	29.502	1.321
33800	0.034	0.288	9.087	4.918
33825	0.046	0.291	1.006	7.240
33850	0.116	0.345	2.022	7.958

Widening & Strengthening Mahangi to Dudhali mod (NH-21)

Chainage	Volume Report			
	Area(Fill)	Area(Cut)	Volume(Fill)	Volume(Cut)
33875	0.048	0.209	2.040	6.926
33900	0.252	0.159	3.745	4.599
33925	0.283	0.063	6.682	2.777
33950	0.000	1.554	3.533	20.221
33975	0.249	0.281	3.115	22.946
34000	1.293	0.001	19.284	3.534
34025	0.948	0.000	28.013	0.019
34050	2.257	0.000	40.057	0.000
34075	0.852	0.020	38.859	0.256
34100	0.519	0.234	17.137	3.177
34125	0.629	0.235	14.354	5.859
34150	0.256	0.232	11.056	5.834
34175	0.663	0.206	11.477	5.473
34200	0.000	0.581	8.282	9.834
34225	0.026	3.583	0.328	52.041
34250	0.096	0.098	1.529	46.007
34275	0.408	0.007	6.306	1.310
34300	1.322	0.000	21.636	0.088
34325	2.479	0.000	47.513	0.000
34350	2.069	0.000	56.850	0.000
34375	1.757	0.000	47.833	0.000
34400	1.107	0.029	35.799	0.363
34425	0.536	0.270	20.532	3.734
34450	1.529	0.000	25.815	3.371
34475	0.803	0.094	29.149	1.172
34500	0.531	0.200	16.666	3.671
34525	0.077	0.438	7.590	7.973
34550	0.284	0.060	4.511	6.228
34575	0.433	0.049	8.963	1.367
34600	2.512	0.000	36.812	0.614
34625	1.859	0.119	54.642	1.485
34650	1.232	0.130	38.645	3.106
34675	0.070	0.163	16.277	3.655
34700	0.000	10.436	0.871	132.485
34725	0.000	9.524	0.000	249.500
34750	0.000	2.830	0.000	154.425
34775	0.256	0.060	3.204	36.126
34800	0.057	1.392	3.923	18.155
34825	0.480	0.112	6.719	18.810
34850	1.105	0.000	19.817	1.404
34875	1.069	0.015	27.175	0.191
34900	0.574	0.125	20.534	1.753
34925	0.219	0.221	9.909	4.319

Widening & Strengthening Mahangi to Dudhali mod (NH-21)

Chainage	Area(Fill)	Volume Report		Volume(Cut)
		Area(Cut)	Volume(Fill)	
34950	0.035	0.625	3.164	10.575
34975	0.171	0.176	2.567	10.023
35000	0.000	0.431	2.140	7.590
35025	1.226	0.003	15.324	5.416
35050	0.322	0.143	19.343	1.824
35075	0.155	0.571	5.957	8.936
35100	0.240	0.210	4.932	9.767
35125	1.334	0.000	19.678	2.624
35150	0.233	0.107	19.594	1.333
35175	0.132	0.109	4.558	2.693
35200	0.846	0.368	12.214	5.962
35225	0.861	0.739	21.328	13.838
35250	0.829	0.929	21.117	20.851
35275	0.054	1.329	11.035	28.222
35300	0.000	3.289	0.677	57.723
35325	0.000	2.990	0.000	78.495
35350	0.541	0.775	6.766	47.063
35375	0.641	0.409	14.781	14.797
35400	2.067	0.003	33.851	5.152
35425	0.000	1.683	25.840	21.075
35450	0.436	0.098	5.458	22.257
35475	3.991	0.000	55.342	1.221
35500	3.101	0.000	88.651	0.000
35525	3.717	0.000	85.225	0.000
35550	4.227	0.000	99.295	0.000
35575	2.897	0.000	89.046	0.000
35600	3.461	0.000	79.483	0.000
35625	4.204	0.000	95.822	0.000
35650	0.933	0.012	64.215	0.146
35675	0.643	0.186	19.698	2.472
35700	0.807	0.010	18.129	2.454
35725	2.084	0.000	36.145	0.128
35750	2.705	0.000	59.867	0.000
35775	7.071	0.000	122.203	0.000
35800	5.965	0.000	162.955	0.000
35825	8.863	0.000	185.353	0.000
35850	9.541	0.000	230.049	0.000
35875	10.365	0.000	248.822	0.000
35900	11.881	0.000	278.067	0.000
35925	13.236	0.000	313.958	0.000
35950	1.593	0.000	185.363	0.001
35975	0.000	10.981	19.914	137.263
36000	0.000	20.482	0.000	393.282

Widening & Strengthening Mahangi to Dudhali mod (NH-21)

Chainage	Volume Report			
	Area(Fill)	Area(Cut)	Volume(Fill)	Volume(Cut)
36025	0.000	26.643	0.000	589.061
36050	0.000	13.705	0.000	504.349
36075	0.000	7.093	0.000	259.971
36100	0.181	0.064	2.260	89.458
36125	15.224	0.000	192.556	0.794
36150	30.901	0.000	576.558	0.000
36175	32.795	0.000	796.204	0.000
36200	28.313	0.000	763.859	0.000
36225	31.506	0.000	747.738	0.000
36250	29.087	0.000	757.413	0.000
36275	29.702	0.000	734.864	0.000
36300	29.377	0.000	738.481	0.000
36325	29.010	0.000	729.835	0.000
36350	28.258	0.000	715.853	0.000
36375	25.225	0.000	668.543	0.000
36400	22.240	0.000	593.323	0.000
36425	20.960	0.000	540.010	0.000
36450	22.017	0.000	537.219	0.000
36475	20.792	0.000	535.111	0.000
36500	16.111	0.000	461.288	0.000
36525	10.109	0.000	327.754	0.000
36550	0.000	11.469	126.362	143.361
36575	0.000	8.351	0.000	247.751
36600	0.157	0.741	1.968	113.650
36625	0.505	1.061	8.283	22.524
36650	5.206	0.000	71.395	13.264
36675	13.157	0.000	229.543	0.000
36700	19.813	0.000	412.126	0.000
36725	22.884	0.000	533.719	0.000
36750	24.622	0.000	593.836	0.000
36775	29.975	0.000	682.467	0.000
36800	30.164	0.000	751.741	0.000
36825	25.436	0.000	695.004	0.000
36850	18.164	0.000	545.004	0.000
36875	8.573	0.000	334.221	0.000
36900	0.000	0.402	107.168	5.030
36925	0.000	2.700	0.000	38.782
36950	0.000	4.735	0.000	92.943
36975	0.000	6.088	0.000	135.291
37000	0.000	4.895	0.000	137.285
37025	0.000	3.414	0.000	103.865
37050	0.000	1.249	0.000	58.286
37075	0.007	0.360	0.085	20.113

Widening & Strengthening Mahangi to Dudhali mod (NH-21)

Chainage	Area(Fill)	Volume Report		Volume(Cut)
		Area(Cut)	Volume(Fill)	
37100	1.293	0.003	16.253	4.548
37125	3.766	0.000	63.245	0.042
37150	9.616	0.000	167.275	0.000
37160	8.918	0.000	92.669	0.000
37168	7.646	0.000	66.256	0.000
37175	7.143	0.000	51.763	0.000
37200	0.000	0.383	89.291	4.784
37225	0.000	1.316	0.000	21.233
37250	0.000	3.211	0.000	56.584
37275	0.000	3.536	0.000	84.335
37300	0.000	4.199	0.000	96.682
37325	0.000	2.509	0.000	83.848
37350	0.000	3.197	0.000	71.324
37375	0.182	0.094	2.276	41.138
37400	0.117	0.126	3.732	2.751
37425	0.182	0.068	3.732	2.423
37450	0.000	2.366	2.275	30.431
37475	0.000	3.010	0.000	67.197
37500	0.000	1.945	0.000	61.929
37525	0.000	2.872	0.000	60.209
37550	0.000	1.487	0.000	54.490
37575	0.321	0.178	4.008	20.822
37600	0.000	1.139	4.008	16.469
37625	0.000	3.278	0.000	55.219
37650	0.000	1.157	0.000	55.438
37675	0.244	0.323	3.055	18.500
37700	0.993	0.000	15.464	4.044
37725	0.000	0.688	12.409	8.596
37750	0.000	1.032	0.000	21.495
37775	0.024	0.549	0.296	19.757
37800	1.663	0.000	21.089	6.858
37825	3.578	0.000	65.521	0.000
37850	6.442	0.000	125.255	0.000
37875	8.731	0.000	189.666	0.000
37900	11.604	0.000	254.183	0.000
37925	16.399	0.000	350.033	0.000
37950	19.215	0.000	445.178	0.000
37975	18.812	0.000	475.335	0.000
38000	22.594	0.000	517.571	0.000
38025	27.213	0.000	622.591	0.000
38050	28.123	0.000	691.705	0.000
38075	31.043	0.000	739.571	0.000
38100	32.559	0.000	795.017	0.000

Widening & Strengthening Mahangi to Dudhali mod (NH-21)

Chainage	Area(Fill)	Volume Report		
		Area(Cut)	Volume(Fill)	Volume(Cut)
38125	36.228	0.000	859.832	0.000
38150	35.718	0.000	899.320	0.000
38175	32.566	0.000	853.543	0.000
38200	28.724	0.000	766.120	0.000
38225	22.994	0.000	646.470	0.000
38250	18.871	0.000	523.313	0.000
38275	13.035	0.000	398.828	0.000
38300	12.519	0.000	319.428	0.000
38325	10.061	0.000	282.253	0.000
38350	9.225	0.000	241.075	0.000
38375	8.555	0.000	222.257	0.000
38400	6.237	0.000	184.907	0.000
38425	0.188	0.076	80.310	0.954
38450	0.000	1.335	2.345	17.646
38475	0.000	1.890	0.000	40.319
38500	0.092	0.893	1.144	34.795
38525	0.208	0.882	3.742	22.191
38550	0.097	1.563	3.810	30.566
38575	0.186	0.780	3.542	29.288
38600	0.353	1.626	6.737	30.075
38625	0.197	1.303	6.872	36.615
38650	0.144	1.821	4.261	39.044
38675	0.399	1.112	6.785	36.662
38700	0.376	0.984	9.693	26.201
38725	0.538	0.174	11.428	14.470
38750	0.604	0.063	14.277	2.954
38775	2.617	0.000	40.264	0.782
38800	2.247	0.000	60.802	0.000
38825	2.899	0.000	64.334	0.000
38850	3.330	0.000	77.870	0.000
38875	3.616	0.000	86.822	0.000
38900	4.842	0.000	105.715	0.000
38925	4.381	0.000	115.279	0.000
38950	4.098	0.000	105.981	0.000
38975	5.571	0.000	120.855	0.000
39000	6.958	0.000	156.610	0.000
39025	8.552	0.000	193.882	0.000
39050	9.053	0.000	220.070	0.000
39075	8.070	0.000	214.038	0.000
39100	5.616	0.000	171.073	0.000
39125	0.717	0.029	79.164	0.357
39150	1.436	0.000	26.909	0.357
39175	0.185	0.379	20.261	4.737

Widening & Strengthening Mahangi to Dudhali mod (NH-21)

Chainage	Area(Fill)	Volume Report		Volume(Cut)
		Area(Cut)	Volume(Fill)	
39200	0.032	0.743	2.716	14.024
39225	0.683	0.609	8.936	16.894
39250	0.569	0.726	15.653	16.681
39275	0.252	0.179	10.261	11.314
39300	1.177	0.066	17.861	3.064
39325	2.199	0.000	42.209	0.824
39350	1.777	0.000	49.704	0.000
39375	3.046	0.000	60.290	0.003
39400	3.590	0.000	82.951	0.003
39425	1.375	0.097	62.062	1.214
39450	2.066	0.291	43.019	4.854
39475	2.883	0.000	61.862	3.640
39500	3.193	0.000	75.939	0.000
39525	2.472	0.021	70.803	0.260
39550	1.913	0.000	54.814	0.260
39575	1.702	0.050	45.198	0.620
39600	1.366	0.125	38.357	2.185
39625	1.324	0.261	33.627	4.826
39650	0.854	0.681	27.230	11.773
39675	1.420	0.868	28.431	19.364
39700	0.940	0.028	29.500	11.196
39725	0.761	0.320	21.262	4.339
39750	0.794	0.015	19.437	4.183
39775	0.968	0.204	22.026	2.737
39800	0.447	0.567	17.687	9.635
39825	0.217	0.790	8.297	16.956
39850	1.073	0.004	16.124	9.922
39875	1.745	0.000	35.225	0.053
39900	1.162	0.097	36.339	1.208
39925	1.013	0.347	27.194	5.539
39950	0.677	0.558	21.126	11.307
39975	1.014	0.008	21.139	7.078
40000	1.139	0.002	26.917	0.131
40025	1.161	0.072	28.752	0.932
40050	1.096	0.001	28.212	0.913
40075	0.500	0.215	19.951	2.698
40100	1.380	0.009	23.509	2.798
40125	1.585	0.000	37.072	0.110
40150	1.626	0.000	40.141	0.000
40175	0.334	0.252	24.501	3.149
40200	0.467	0.289	10.017	6.765
40225	0.217	0.793	8.551	13.531
40250	0.462	0.740	8.485	19.167

Widening & Strengthening Mahangi to Dudhali mod (NH-21)

Chainage	Area(Fill)	Volume Report		Volume(Cut)
		Area(Cut)	Volume(Fill)	
40275	0.456	0.473	11.473	15.163
40300	1.438	0.000	23.678	5.913
40325	2.015	0.000	43.167	0.002
40350	0.594	0.057	32.614	0.714
40375	0.740	0.223	16.680	3.504
40400	0.075	0.605	10.190	10.349
40425	0.273	0.486	4.344	13.630
40450	0.317	0.478	7.369	12.050
40475	0.375	0.041	8.644	6.489
40500	0.084	1.118	5.738	14.485
40525	0.371	0.758	5.689	23.456
40550	0.000	1.990	4.635	34.352
40575	0.860	0.031	10.746	25.260
40600	1.547	0.186	30.083	2.713
40625	1.518	0.367	38.307	6.905
40650	1.204	0.486	34.023	10.662
40675	1.187	0.054	29.884	6.756
40700	0.583	0.173	22.118	2.839
40725	2.158	1.173	34.257	16.828
40750	0.645	0.028	35.034	15.019
40775	0.465	0.213	13.871	3.019
40800	0.216	1.877	8.505	26.133
40825	0.621	0.944	10.464	35.271
40850	0.715	0.384	16.698	16.603
40875	0.346	0.707	13.251	13.644
40900	0.805	1.126	14.378	22.922
40925	0.000	2.412	10.059	44.227
40950	0.000	7.537	0.000	124.356
40975	0.015	0.173	0.189	96.365
41000	0.000	0.486	0.189	8.228
41025	0.073	0.244	0.915	9.120
41050	0.475	0.025	6.848	3.366
41075	0.066	0.515	6.763	6.748
41100	2.115	0.000	27.265	6.432
41125	2.624	0.000	59.233	0.000
41150	3.238	0.000	73.276	0.000
41175	3.130	0.000	79.602	0.000
41200	2.448	0.000	69.726	0.000
41225	0.006	0.366	30.678	4.570
41250	0.134	2.198	1.748	32.042
41275	2.621	0.073	34.431	28.388
41300	2.150	0.042	59.638	1.445
41325	2.152	0.000	53.782	0.529

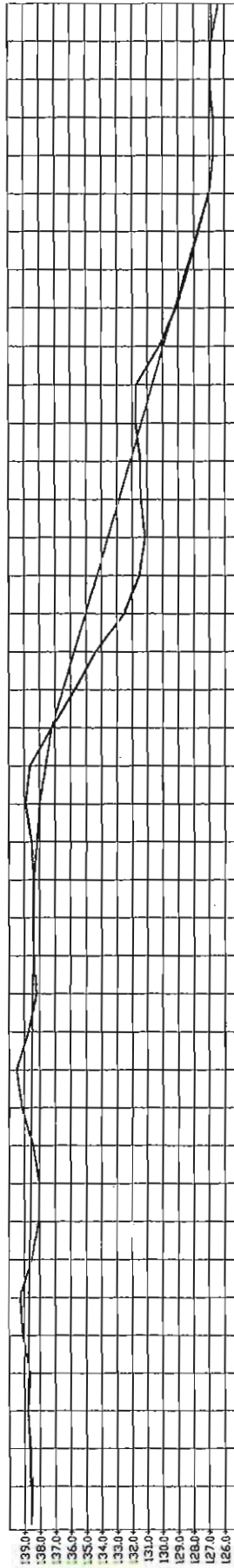
Widening & Strengthening Mahangi to Dudhali mod (NH-21)

Chainage	Area(Fill)	Volume Report		Volume(Cut)
		Area(Cut)	Volume(Fill)	
41350	1.251	0.327	42.546	4.084
41375	1.058	0.327	28.866	8.173
41400	0.903	0.172	24.513	6.243
41425	1.629	0.342	31.653	6.429
41450	1.566	0.340	39.936	8.523
41475	1.886	0.302	43.151	8.026
41500	2.056	0.000	49.279	3.778
41525	1.444	0.293	43.752	3.665
41550	1.092	0.196	31.701	6.109
41575	1.588	0.004	33.504	2.494
41600	1.551	0.024	39.238	0.345
41625	2.093	0.000	45.552	0.296
41650	0.000	1.056	26.168	13.194
41675	0.000	1.131	0.000	27.336
41700	0.132	0.129	1.648	15.750
41725	4.993	0.000	64.067	1.609
41750	12.498	0.000	218.646	0.000
41775	17.563	0.000	375.767	0.000
41800	23.045	0.000	507.597	0.000
41825	23.798	0.000	585.527	0.000
41850	22.091	0.000	573.604	0.000
41875	22.072	0.000	552.030	0.000
41900	20.894	0.000	537.075	0.000
41925	17.613	0.000	481.346	0.000
41950	11.541	0.000	364.429	0.000
41975	10.972	0.000	281.416	0.000
42000	9.617	0.000	257.364	0.000
			164505.004	38145.424


 Azu
 CM/Engineer
 PWD & SD on
 North J.P.M.

ALWER BODER

25.00
50.00
75.00
100.00
125.00
150.00
175.00
200.00
225.00
250.00
275.00
300.00
325.00
350.00
375.00
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425.00
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575.00
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625.00
650.00
675.00
700.00
725.00
750.00
775.00
800.00
825.00
850.00
875.00
900.00
925.00
950.00
975.00
1000.00



B.T./C.C. TOP

Cutting/Filling

Proposed Embankment
Top Level

Existing road Level

Chainage

135.57	138.57	138.57	0.00	+0.33	+0.097	0.00	+0.104	0.391	0.602	+0.117	+0.536	+0.566	+0.145	0.616	1.006	1.063	1.063	0.247	+0.252	+0.021	0.029	1.38.36	1.38.54	1.38.91	1.38.62	1.37.22	1.35.74	1.34.4	1.32.53	1.31.57	1.31.18	1.31.43	1.31.46	1.31.79	1.31.97	1.30.69	1.29.941	0.259	+0.094	+0.096	+0.058	0.00	+0.238	+0.195	0.058	1.26.86	1.26.861	+0.471
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SUPPLIED BY

SURVEY POINT

34 MUKESH COLONY, MALWA PHATAK, JAPUR TEL. : 954999662

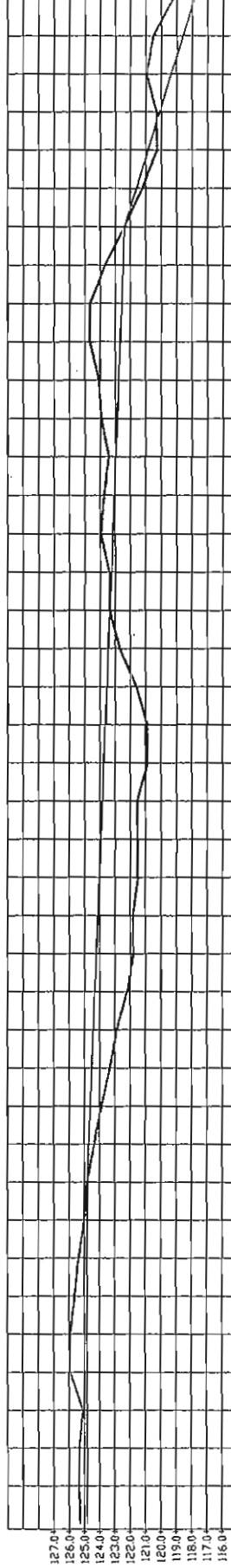
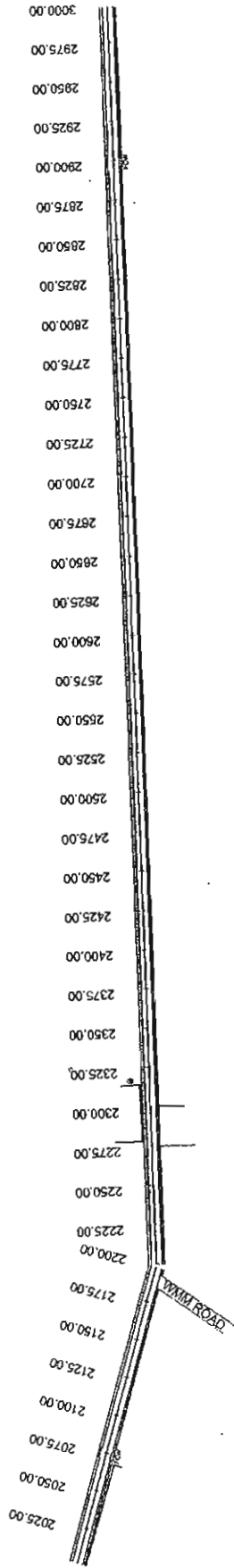
SCALE:

HORZ. 1 : 2500
VERT. 1 : 250

ASSISTANT ENGINEER

EXECUTIVE ENGINEER

Widening & Strengthening
Mahangi to Dudhali mod



SURVEY POINT	Widening & Strengthening Mahangi to Dudhali mod	
	EXECUTIVE ENGINEER	ASSISTANT ENGINEER
34 MUKESH COLONY, MALWA PHATAK, JAIPUR TEL : 9549999662	SCALE: HORZ. 1 : 2500 VERT. 1 : 250	
SURVEYED BY		
2000.0	125.27	124.804
2025.0	125.33	124.803
2050.0	125.315	124.802
2075.0	125.07	124.801
2100.0	125.885	124.8
2125.0	125.885	124.799
2150.0	125.605	124.798
2175.0	125.335	124.797
2200.0	124.995	124.796
2225.0	124.795	124.795
2250.0	124.31	124.697
2275.0	123.85	124.6
2300.0	123.3	124.502
2325.0	122.83	124.405
2350.0	122.17	124.307
2375.0	121.765	124.209
2400.0	121.79	124.112
2425.0	121.46	124.014
2450.0	121.5	123.917
2475.0	121.52	123.819
2500.0	120.83	123.721
2525.0	120.86	123.624
2550.0	121.58	123.526
2575.0	122.645	123.429
2600.0	123.325	123.331
2625.0	123.365	123.233
2650.0	123.136	123.136
2675.0	123.685	123.038
2700.0	123.395	122.941
2725.0	123.9	122.843
2750.0	124.06	122.745
2775.0	124.635	122.648
2800.0	124.63	122.55
2825.0	123.645	122.453
2850.0	122.355	122.355
2875.0	121.205	121.601
2900.0	120.255	120.847
2925.0	120.285	120.093
2950.0	120.905	119.339
2975.0	120.485	118.586
3000.0	119.16	117.832

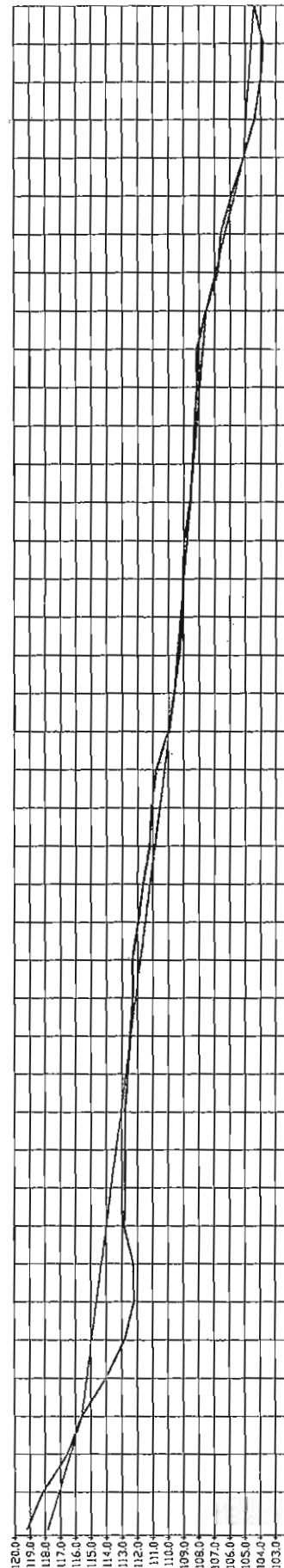
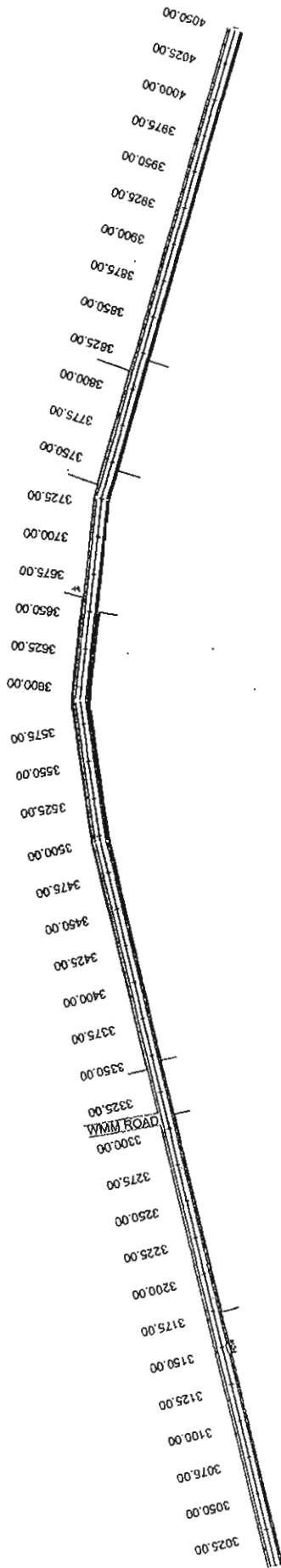
B.T./C.C. TOP

Cutting/Filling

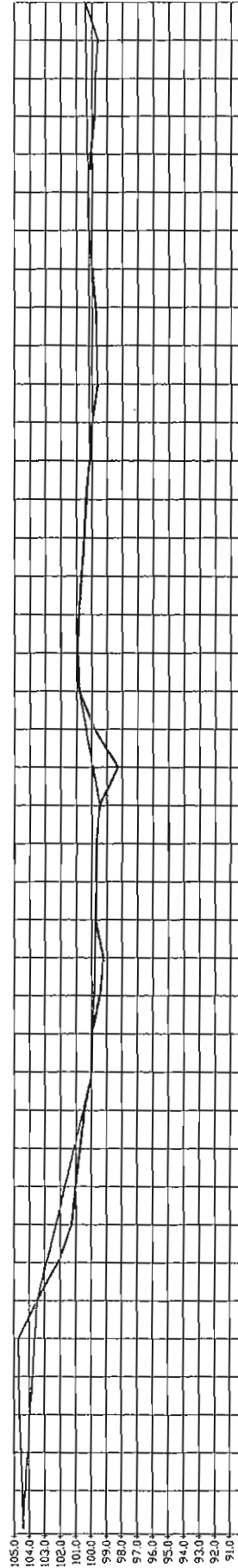
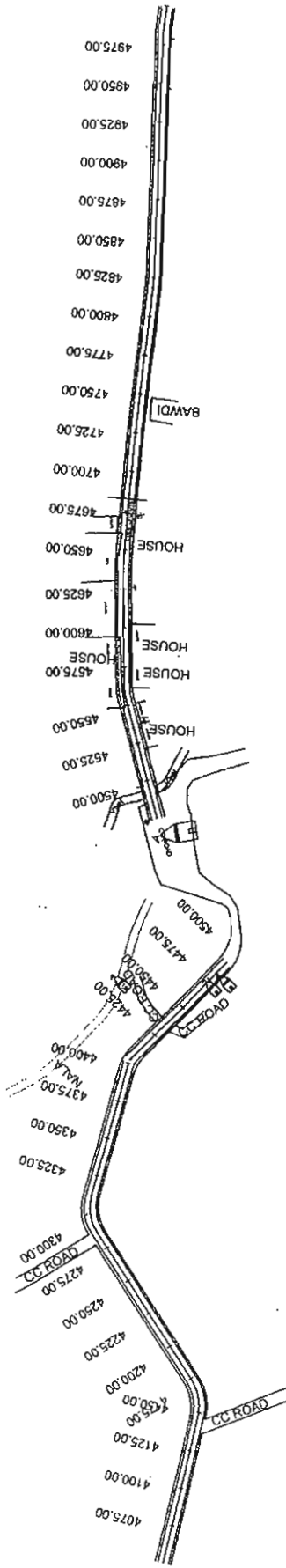
Proposed Embankment
Top Level

Existing road Level

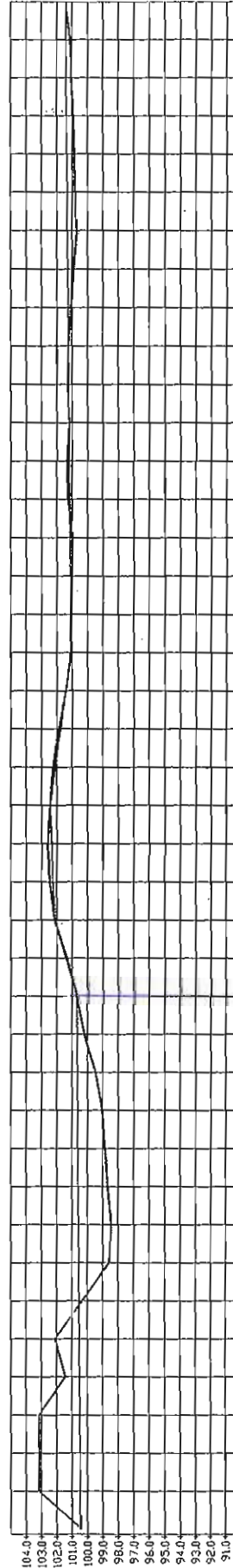
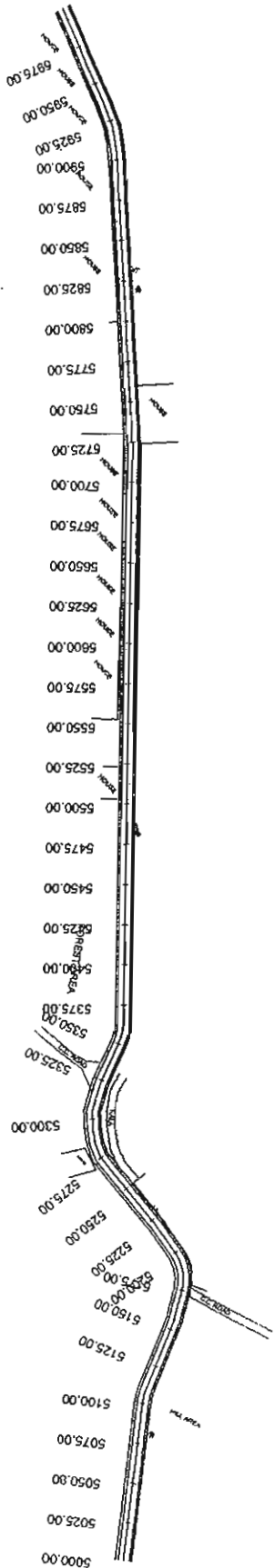
Chainage



Chainage	Widening & Strengthening Mahangi to Dudhali mod		EXECUTIVE ENGINEER		SCALE: HORZ. 1 : 2500 VERT. 1 : 250		SURVEY POINT 34 MUKESH COLONY, MILWALA PHATAK, JAIPUR TEL : 9549999662	
	Existing road Level	Proposed Embankment Top Level	Cutting/Filling	B.T./C.C. TOP				
3000.00	119.16	117.832	1.268					
3025.00	118.105	117.078	1.027					
3050.00	116.505	116.324	0.181					
3075.00	115.57	115.57	0.0					
3100.00	114.0	115.256	+1.256					
3125.00	112.808	114.942	+2.134					
3150.00	112.2	114.627	+2.427					
3175.00	112.25	114.313	+2.063					
3200.00	112.86	113.999	+1.139					
3225.00	112.75	113.685	+0.935					
3250.00	112.77	113.371	+0.601					
3275.00	112.8	113.056	+0.256					
3300.00	112.6	112.742	+0.142					
3325.00	112.46	112.428	0.032					
3350.00	112.27	112.114	0.156					
3375.00	112.32	111.8	0.521					
3400.00	111.93	111.485	0.445					
3425.00	111.6	111.171	0.429					
3450.00	111.21	110.857	0.353					
3475.00	111.08	110.543	0.537					
3500.00	110.75	110.228	0.522					
3525.00	109.99	109.914	0.076					
3550.00	109.6	109.6	0.0					
3575.00	109.25	109.392	+0.142					
3600.00	109.07	109.184	+0.114					
3625.00	109.01	108.976	0.034					
3650.00	108.95	108.768	0.182					
3675.00	108.56	108.56	0.0					
3700.00	108.405	108.355	0.05					
3725.00	108.275	108.15	0.125					
3750.00	108.115	107.74	0.375					
3800.00	107.535	107.535	0.0					
3825.00	106.765	106.925	-0.16					
3850.00	106.575	106.315	0.26					
3875.00	105.895	105.705	0.19					
3900.00	105.095	105.095	0.0					
3925.00	104.38	104.93	+0.55					
3950.00	104.0	104.764	+0.764					
3975.00	103.815	104.599	+0.783					
4000.00	104.39	104.433	+0.043					

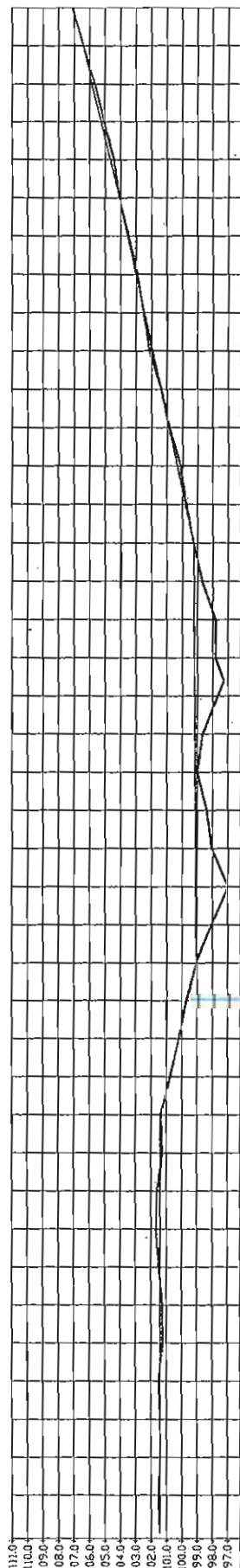
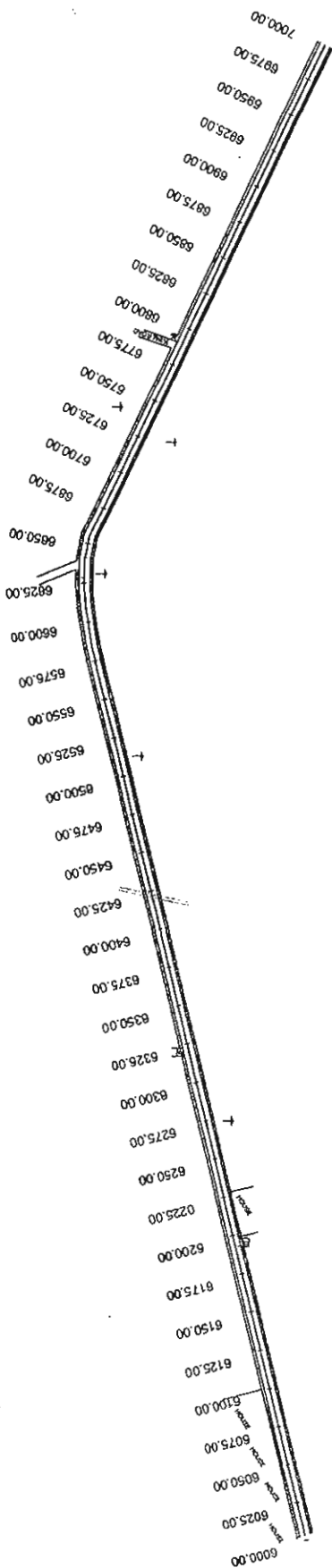


Chainage	4000.0	104.39	104.433	+0.043	B.T./C.C. TOP
	4025.0	104.42	104.268	0.152	
Existing road Level	4050.0	104.5	104.102	0.398	Cutting/Filling
	4075.0	104.61	103.937	0.674	
Proposed Embankment Top Level	4100.0	104.63	103.771	0.859	B.T./C.C. TOP
	4125.0	104.66	103.606	1.055	
Existing road Level	4150.0	103.44	103.44	0.0	Cutting/Filling
	4175.0	102.1	102.858	+0.758	
Existing road Level	4200.0	101.26	102.277	+1.017	B.T./C.C. TOP
	4225.0	101.02	101.695	+0.675	
Existing road Level	4250.0	100.7	101.113	+0.413	Cutting/Filling
	4275.0	100.44	100.532	+0.092	
Existing road Level	4300.0	99.95	99.95	0.0	B.T./C.C. TOP
	4325.0	99.95	99.89	0.06	
Existing road Level	4350.0	99.42	99.83	+0.41	Cutting/Filling
	4375.0	99.19	99.77	+0.58	
Existing road Level	4400.0	99.71	99.71	0.0	B.T./C.C. TOP
	4425.0	99.63	99.697	+0.067	
Existing road Level	4450.0	99.685	99.685	0.0	Cutting/Filling
	4475.0	99.45	99.45	0.0	
Existing road Level	4500.0	98.24	99.907	+1.667	B.T./C.C. TOP
	4525.0	99.79	100.363	+0.573	
Existing road Level	4550.0	100.82	100.82	0.0	Cutting/Filling
	4575.0	100.9	100.9	0.0	
Existing road Level	4600.0	100.83	100.83	0.0	B.T./C.C. TOP
	4625.0	100.68	100.66	0.02	
Existing road Level	4650.0	100.5	100.49	0.01	Cutting/Filling
	4675.0	100.39	100.32	0.07	
Existing road Level	4700.0	100.15	100.15	0.0	B.T./C.C. TOP
	4725.0	99.96	100.159	+0.199	
Existing road Level	4750.0	99.6	100.168	+0.568	Cutting/Filling
	4775.0	99.65	100.178	+0.528	
Existing road Level	4800.0	99.73	100.187	+0.457	B.T./C.C. TOP
	4825.0	99.955	100.196	+0.241	
Existing road Level	4850.0	100.205	100.205	0.0	Cutting/Filling
	4875.0	100.235	100.241	+0.006	
Existing road Level	4900.0	100.055	100.277	+0.222	B.T./C.C. TOP
	4925.0	99.795	100.313	+0.518	
Existing road Level	4950.0	99.755	100.348	+0.593	Cutting/Filling
	4975.0	99.585	100.384	+0.799	
Existing road Level	5000.0	100.42	100.42	0.0	B.T./C.C. TOP



SURVEY POINT			
34 MUKESH COLONY, MULWALA PHATAK, JAIPUR TEL : 954999662			
SCALE:		HORIZ. 1 : 2500 VERT. 1 : 250	
SURVEYED BY		ASSISTANT ENGINEER	
EXECUTIVE ENGINEER		Widening & Strengthening Mahangi to Dudhali mod	
Chainage	Existing road Level	Proposed Embankment Top Level	Cutting/Filling
5000.0	100.42	100.42	0.0
5025.0	103.125	100.438	2.688
5050.0	103.125	100.455	2.67
5075.0	103.155	100.473	2.683
5100.0	101.415	100.49	0.925
5125.0	102.093	100.508	1.588
5150.0	100.285	100.525	0.24
5175.0	98.535	100.543	2.007
5200.0	98.415	100.56	2.145
5225.0	98.645	100.578	1.933
5250.0	98.805	100.595	1.79
5275.0	98.995	100.613	1.618
5300.0	99.445	100.63	1.185
5325.0	100.18	100.648	0.467
5350.0	100.665	100.665	0.0
5375.0	101.32	101.393	0.073
5400.0	102.12	102.12	0.0
5425.0	102.43	102.223	0.207
5450.0	102.6	102.327	0.273
5475.0	102.43	102.43	0.0
5500.0	102.23	102.09	0.14
5525.0	101.83	101.75	0.08
5550.0	101.4	101.41	0.01
5575.0	101.07	101.07	0.0
5600.0	101.07	101.09	0.02
5625.0	100.97	101.109	0.139
5650.0	100.94	101.129	0.189
5675.0	101.235	101.149	0.086
5700.0	101.315	101.169	0.146
5725.0	101.175	101.188	0.013
5750.0	101.255	101.208	0.047
5775.0	101.225	101.228	0.003
5800.0	101.055	101.247	0.192
5825.0	100.865	101.267	0.402
5850.0	100.665	101.287	0.622
5875.0	100.805	101.307	0.501
5900.0	100.815	101.326	0.511
5925.0	101.105	101.385	0.28
5950.0	101.405	101.405	0.0

B.T./C.C. TOP



Chainage	Existing road Level	Proposed Embankment Top Level	Cutting/Filling	B.T./C.C. TOP
6000.0	101.405	101.405	0.0	
6025.0	101.495	101.403	0.092	
6050.0	101.385	101.401	+0.015	
6075.0	101.405	101.398	0.007	
6100.0	101.475	101.396	0.079	
6125.0	101.235	101.394	+0.159	
6150.0	101.245	101.391	+0.146	
6175.0	101.455	101.389	0.066	
6200.0	101.645	101.387	0.258	
6225.0	101.575	101.385	0.19	
6250.0	101.235	101.382	+0.147	
6275.0	101.38	101.38	0.0	
6300.0	100.745	100.794	+0.049	
6325.0	100.195	100.208	+0.013	
6350.0	99.695	99.621	0.074	
6375.0	99.035	99.035	0.0	
6400.0	98.035	99.054	+1.019	
6425.0	96.935	99.072	+2.137	
6450.0	98.045	99.091	+1.046	
6475.0	98.355	99.11	+0.755	
6500.0	98.955	99.128	+0.173	
6525.0	98.625	99.147	+0.522	
6550.0	97.67	99.165	+1.495	
6560.0	97.26	99.173	+1.913	
6575.0	97.79	99.184	+1.394	
6600.0	97.79	99.203	+1.413	
6625.0	90.66	99.221	+0.561	
6650.0	99.24	99.24	0.0	
6675.0	99.715	99.777	+0.062	
6700.0	100.115	100.313	+0.198	
6725.0	100.805	100.85	+0.045	
6750.0	101.353	101.387	+0.032	
6775.0	102.095	101.923	0.172	
6800.0	102.495	102.46	0.035	
6825.0	102.895	102.997	+0.102	
6850.0	103.465	103.533	+0.068	
6875.0	104.07	104.07	0.0	
6900.0	104.42	104.654	+0.234	
6925.0	105.03	105.238	+0.208	
6950.0	105.63	105.821	+0.191	
6975.0	106.405	106.405	0.0	
7000.0	107.105	107.105	0.0	

Widening & Strengthening Mahangi to Dudhali mod

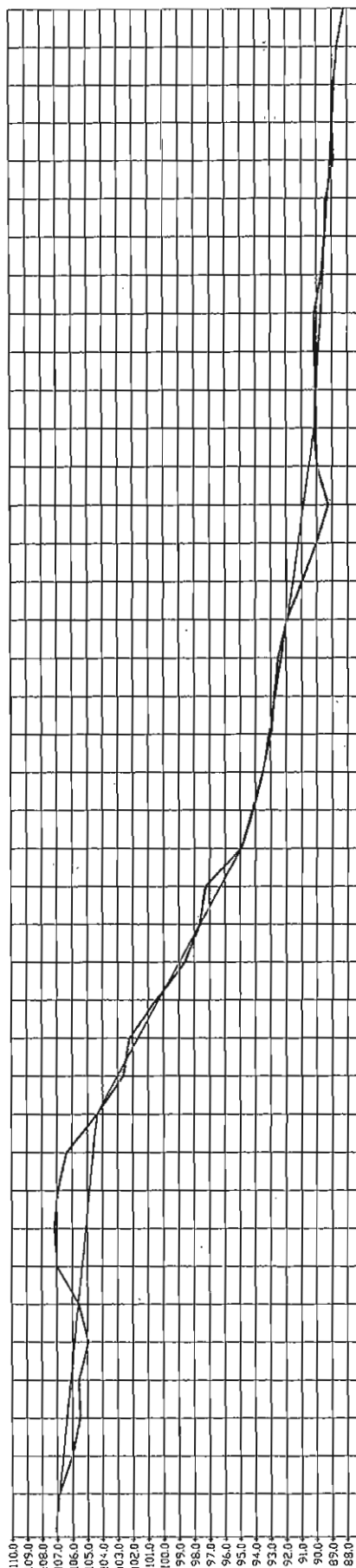
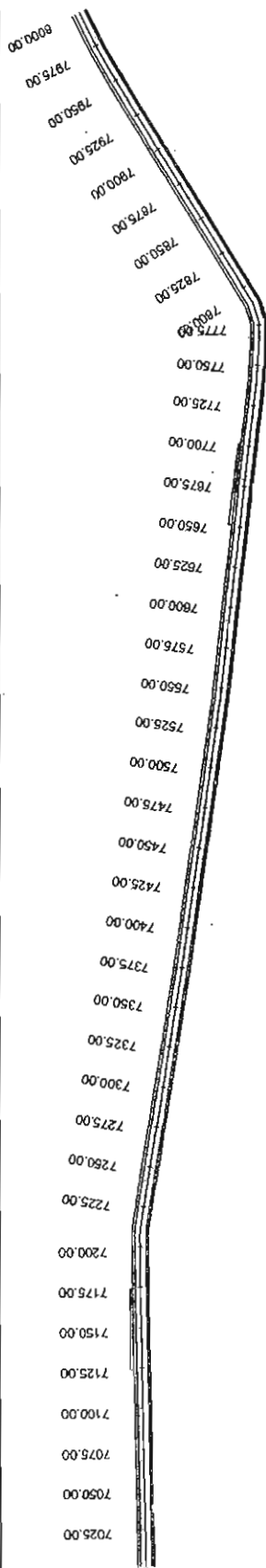
EXECUTIVE ENGINEER

ASSISTANT ENGINEER

HORZ. 1 : 2500
VERT. 1 : 250

SURVEY POINT
J34 MUKESH COLONY, INULWALA PHATAK, JAIPUR TEL. : 9549999662

34 MUKESH COLONY, IMUWALA PHATAK, JAIPUR TEL. : 9549999662



B.T./C.C. TOP

Cutting/Filling

Proposed Embankment
Top Level

Existing road Level

Chainage

880.00	107.105	106.855	0.0	+0.609	106.604	106.353	106.102	+0.547	+0.936	105.851	105.565	105.349	105.098	104.847	104.596	104.345	103.8	+0.385	0.56	101.655	100.31	98.965	97.62	96.275	94.93	94.21	93.49	93.099	92.708	92.316	91.925	91.571	+0.606	+1.232	91.217	90.863	+0.628	90.509	-0.574	0.0	90.155	90.006	89.856	89.707	0.434	0.093	89.557	89.408	0.042	0.102	89.258	89.109	+0.234	+0.029	0.021	0.0	88.66	88.238	+0.058
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SURVED BY

SURVEY POINT

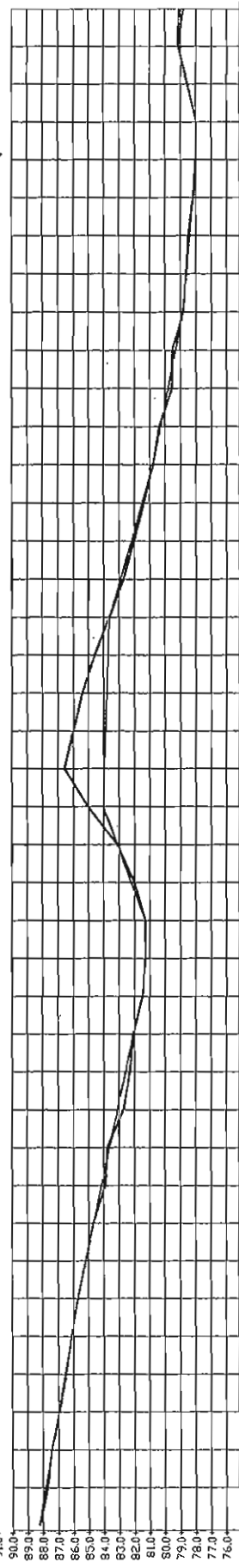
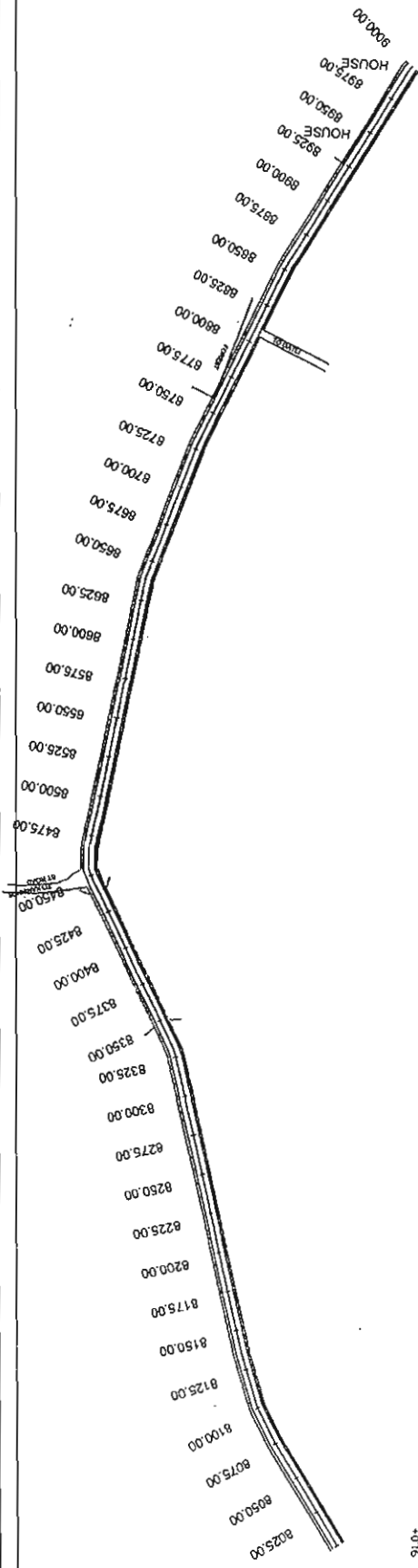
34 MUKESH COLONY, INLUWALA PHATAK, JAIPUR TEL. : 954999662

SCALE: HORIZ. 1 : 2500
VERT. 1 : 250

ASSISTANT ENGINEER

EXECUTIVE ENGINEER

Widening & Strengthening
Mahangi to Dudhali mod



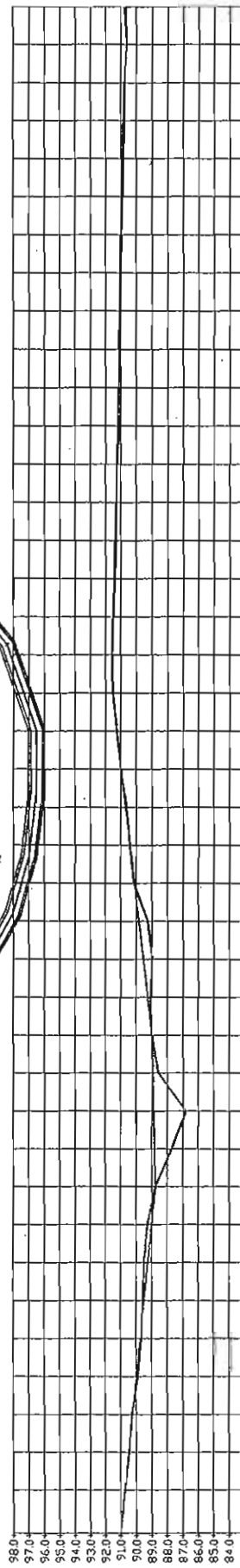
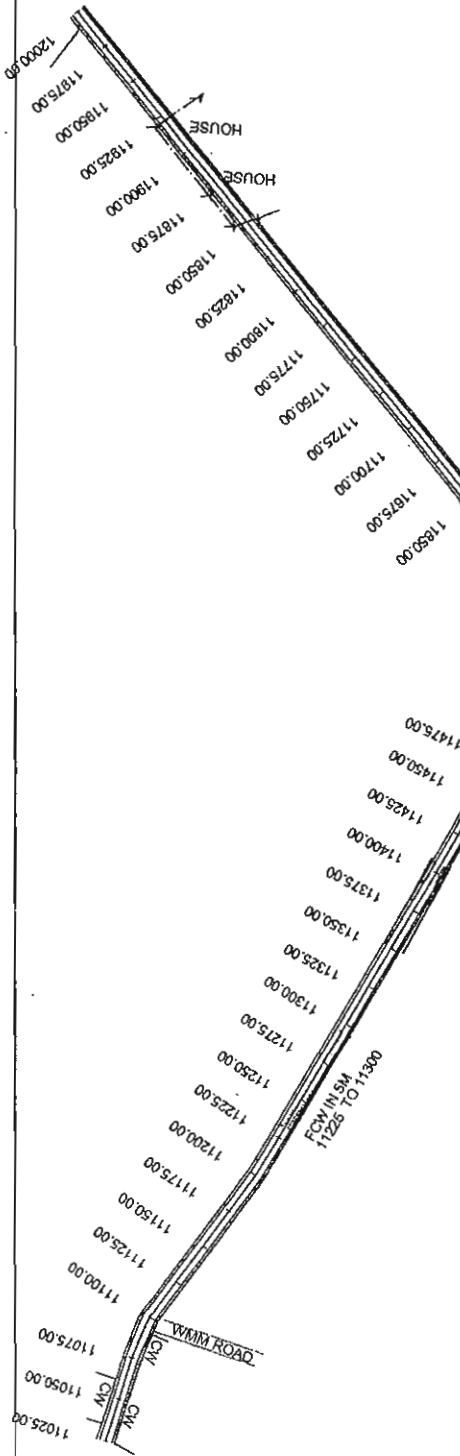
SURVEY POINT	Widening & Strengthening Mahangi to Dudhali mod		EXECUTIVE ENGINEER		SCALE: HORZ. 1 : 2500 VERT. 1 : 250		34 MUKESH COLONY, MULJALA PHATAK, JAIPUR TEL. : 9549999662	
	CHAINAGE	EXISTING ROAD LEVEL	PROPOSED EMBANKMENT TOP LEVEL	CUTTING/FILLING	B.T./C.C. TOP			
9000.00	8000.00	88.18	88.230	+0.058				
8975.00	8025.00	87.68	87.816	+0.136				
8950.00	8050.00	87.425	87.394	0.031				
8925.00	8075.00	86.925	86.971	+0.046				
8900.00	8100.00	86.49	86.549	+0.059				
8875.00	8125.00	86.145	86.127	0.018				
8850.00	8150.00	85.705	85.705	0.0				
8825.00	8175.00	85.185	85.185	0.0				
8800.00	8200.00	84.665	84.665	0.02				
8775.00	8225.00	84.145	84.145	+0.26				
8750.00	8250.00	83.885	83.735	0.15				
8725.00	8275.00	82.715	83.105	+0.39				
8700.00	8300.00	82.285	82.585	+0.3				
8675.00	8325.00	82.065	82.065	0.0				
8650.00	8350.00	81.465	81.465	0.0				
8625.00	8375.00	81.285	81.285	0.0				
8600.00	8400.00	81.275	81.275	0.0				
8575.00	8425.00	81.985	82.193	+0.208				
8550.00	8450.00	83.11	83.11	0.0				
8525.00	8475.00	85.03	84.03	1.0				
8500.00	8500.00	86.56	83.944	2.616				
8475.00	8525.00	86.0	83.858	2.142				
8450.00	8550.00	85.4	83.772	1.628				
8425.00	8575.00	84.55	83.686	0.864				
8400.00	8600.00	83.6	83.6	0.0				
8375.00	8625.00	82.68	82.89	+0.21				
8350.00	8650.00	82.01	82.18	+0.17				
8325.00	8675.00	81.36	81.47	+0.11				
8300.00	8700.00	80.76	80.76	0.0				
8275.00	8725.00	80.34	80.273	0.067				
8250.00	8750.00	79.53	79.785	+0.255				
8225.00	8775.00	79.49	79.298	0.192				
8200.00	8800.00	78.81	78.81	0.0				
8175.00	8825.00	78.62	78.6	0.02				
8150.00	8850.00	78.48	78.39	0.09				
8125.00	8875.00	78.18	78.18	0.0				
8100.00	8900.00	78.02	78.07	+0.05				
8075.00	8925.00	77.96	77.96	0.0				
8050.00	8950.00	78.525	78.555	+0.03				
8025.00	8975.00	79.15	79.15	0.0				
8000.00	9000.00	79.11	78.797	0.313				

Widening & Strengthening
Mahangi to Dudhali mod

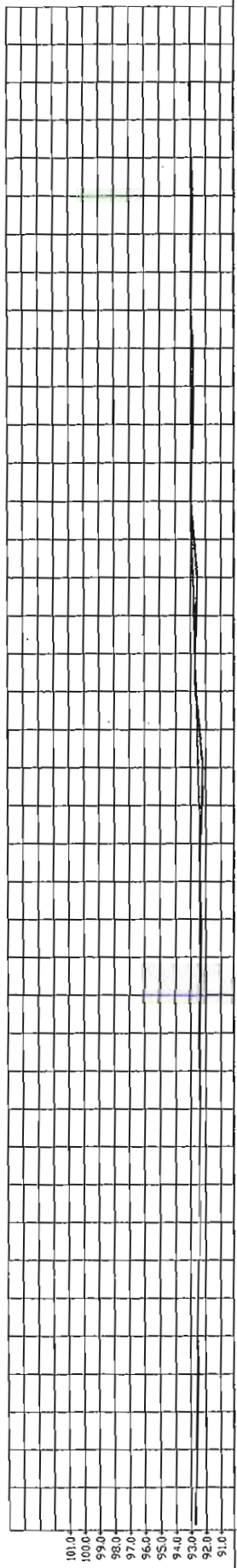
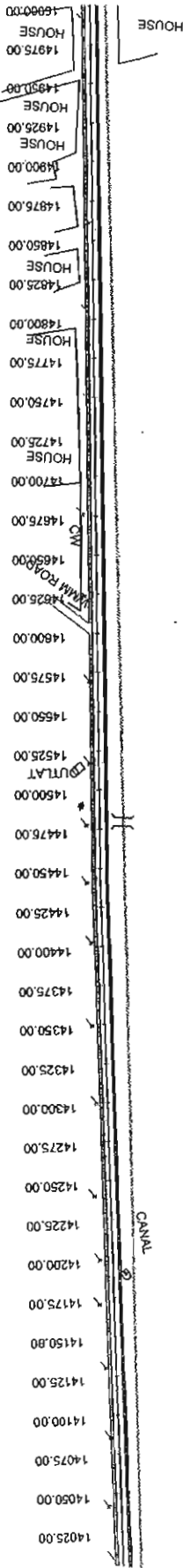
EXECUTIVE ENGINEER

SCALE: HORZ. 1 : 2500
VERT. 1 : 250

34 MUKESH COLONY, MULJALA PHATAK, JAIPUR TEL. : 9549999662



SURVEYED BY	Widening & Strengthening Mahangi to Dudhali mod		EXECUTIVE ENGINEER		ASSISTANT ENGINEER		SCALE: HORZ. 1 : 2500 VERT. 1 : 250		SURVEY POINT 34 MUKESH COLONY, MALIWALA PHATAK, JAIPUR TEL. : 9549999662	
	B.T./C.C. TOP	Cutting/Filling	Proposed Embankment Top Level	Existing road Level	Chainage	Chainage	Chainage	Chainage	Chainage	Chainage
	+0.007	90.962	90.955	90.705	1100.00	1100.00	1100.00	1100.00	1100.00	1100.00
	+0.011	90.716	90.43	89.705	1102.50	1102.50	1102.50	1102.50	1102.50	1102.50
	+0.04	90.47	90.26	89.48	1105.00	1105.00	1105.00	1105.00	1105.00	1105.00
	+0.037	90.223	89.977	89.54	1107.50	1107.50	1107.50	1107.50	1107.50	1107.50
	+0.107	89.977	89.73	89.26	1110.00	1110.00	1110.00	1110.00	1110.00	1110.00
	+0.075	89.73	89.48	89.26	1112.50	1112.50	1112.50	1112.50	1112.50	1112.50
	0.0	89.745	89.45	89.26	1115.00	1115.00	1115.00	1115.00	1115.00	1115.00
	+1.135	89.8	89.65	89.26	1117.50	1117.50	1117.50	1117.50	1117.50	1117.50
	+2.07	88.855	88.785	89.26	1120.00	1120.00	1120.00	1120.00	1120.00	1120.00
	+0.355	88.91	88.965	89.26	1122.50	1122.50	1122.50	1122.50	1122.50	1122.50
	0.0	88.965	89.247	89.26	1125.00	1125.00	1125.00	1125.00	1125.00	1125.00
	+0.177	89.328	89.247	89.26	1127.50	1127.50	1127.50	1127.50	1127.50	1127.50
	+0.573	89.328	89.247	89.26	1130.00	1130.00	1130.00	1130.00	1130.00	1130.00
	+0.565	89.81	89.245	89.26	1132.50	1132.50	1132.50	1132.50	1132.50	1132.50
	0.013	90.092	90.105	89.26	1135.00	1135.00	1135.00	1135.00	1135.00	1135.00
	0.012	90.373	90.385	89.26	1137.50	1137.50	1137.50	1137.50	1137.50	1137.50
	+0.05	90.655	90.605	89.26	1140.00	1140.00	1140.00	1140.00	1140.00	1140.00
	0.028	90.937	90.965	89.26	1142.50	1142.50	1142.50	1142.50	1142.50	1142.50
	0.017	91.218	91.235	89.26	1145.00	1145.00	1145.00	1145.00	1145.00	1145.00
	91.5	91.5	91.5	89.26	1147.50	1147.50	1147.50	1147.50	1147.50	1147.50
	91.565	91.565	91.565	89.26	1150.00	1150.00	1150.00	1150.00	1150.00	1150.00
	0.0	91.503	91.435	89.26	1152.50	1152.50	1152.50	1152.50	1152.50	1152.50
	+0.076	91.441	91.365	89.26	1155.00	1155.00	1155.00	1155.00	1155.00	1155.00
	+0.104	91.379	91.275	89.26	1157.50	1157.50	1157.50	1157.50	1157.50	1157.50
	+0.042	91.317	91.275	89.26	1160.00	1160.00	1160.00	1160.00	1160.00	1160.00
	0.0	91.255	91.255	89.26	1162.50	1162.50	1162.50	1162.50	1162.50	1162.50
	+0.143	91.198	91.055	89.26	1165.00	1165.00	1165.00	1165.00	1165.00	1165.00
	+0.165	91.14	90.975	89.26	1167.50	1167.50	1167.50	1167.50	1167.50	1167.50
	0.017	91.083	91.075	89.26	1170.00	1170.00	1170.00	1170.00	1170.00	1170.00
	0.049	91.026	91.075	89.26	1172.50	1172.50	1172.50	1172.50	1172.50	1172.50
	0.071	90.969	91.04	89.26	1175.00	1175.00	1175.00	1175.00	1175.00	1175.00
	0.074	90.911	90.985	89.26	1177.50	1177.50	1177.50	1177.50	1177.50	1177.50
	0.091	90.854	90.945	89.26	1180.00	1180.00	1180.00	1180.00	1180.00	1180.00
	0.088	90.797	90.885	89.26	1182.50	1182.50	1182.50	1182.50	1182.50	1182.50
	0.085	90.74	90.825	89.26	1185.00	1185.00	1185.00	1185.00	1185.00	1185.00
	0.063	90.682	90.745	89.26	1187.50	1187.50	1187.50	1187.50	1187.50	1187.50
	0.0	90.625	90.625	89.26	1190.00	1190.00	1190.00	1190.00	1190.00	1190.00
	+0.142	90.793	90.65	89.26	1192.50	1192.50	1192.50	1192.50	1192.50	1192.50



B.T./C.C. TOP	Cutting/Filling	Proposed Embankment Top Level	Existing road Level	Chainage
0.00	0.00	92.693	92.755	14025.00
0.00	0.00	92.629	92.6	14050.00
0.00	0.00	92.597	92.575	14075.00
0.00	0.00	92.565	92.495	14100.00
0.00	0.00	92.533	92.555	14125.00
0.00	0.00	92.501	92.535	14150.00
0.00	0.00	92.469	92.455	14175.00
0.00	0.00	92.437	92.365	14200.00
0.00	0.00	92.405	92.405	14225.00
0.00	0.00	92.401	92.345	14250.00
0.00	0.00	92.397	92.34	14275.00
0.00	0.00	92.393	92.38	14300.00
0.00	0.00	92.389	92.46	14325.00
0.00	0.00	92.386	92.36	14350.00
0.00	0.00	92.382	92.32	14375.00
0.00	0.00	92.378	92.29	14400.00
0.00	0.00	92.374	92.37	14425.00
0.00	0.00	92.37	92.37	14450.00
0.00	0.00	92.434	92.24	14475.00
0.00	0.00	92.499	92.165	14500.00
0.00	0.00	92.563	92.4	14525.00
0.00	0.00	92.628	92.66	14550.00
0.00	0.00	92.692	92.68	14575.00
0.00	0.00	92.757	92.6	14600.00
0.00	0.00	92.821	92.53	14625.00
0.00	0.00	92.886	92.73	14650.00
0.00	0.00	92.95	92.95	14675.00
0.00	0.00	92.95	92.9	14700.00
0.00	0.00	92.95	92.81	14725.00
0.00	0.00	92.95	92.79	14750.00
0.00	0.00	92.95	92.8	14775.00
0.00	0.00	92.95	92.96	14800.00
0.00	0.00	92.95	92.85	14825.00
0.00	0.00	92.95	92.82	14850.00
0.00	0.00	92.95	92.83	14875.00
0.00	0.00	92.95	92.91	14900.00
0.00	0.00	92.95	92.95	14925.00
0.00	0.00	92.97	93.03	14950.00
0.00	0.00	92.99	92.99	14975.00
0.00	0.00	93.01	93.01	15000.00

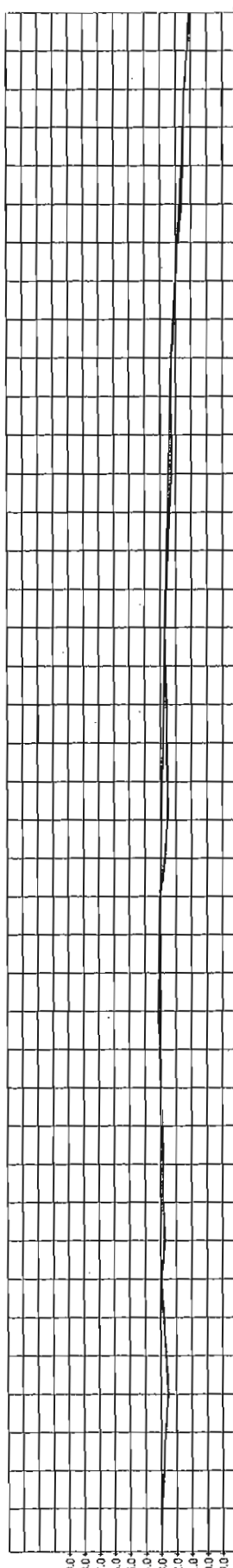
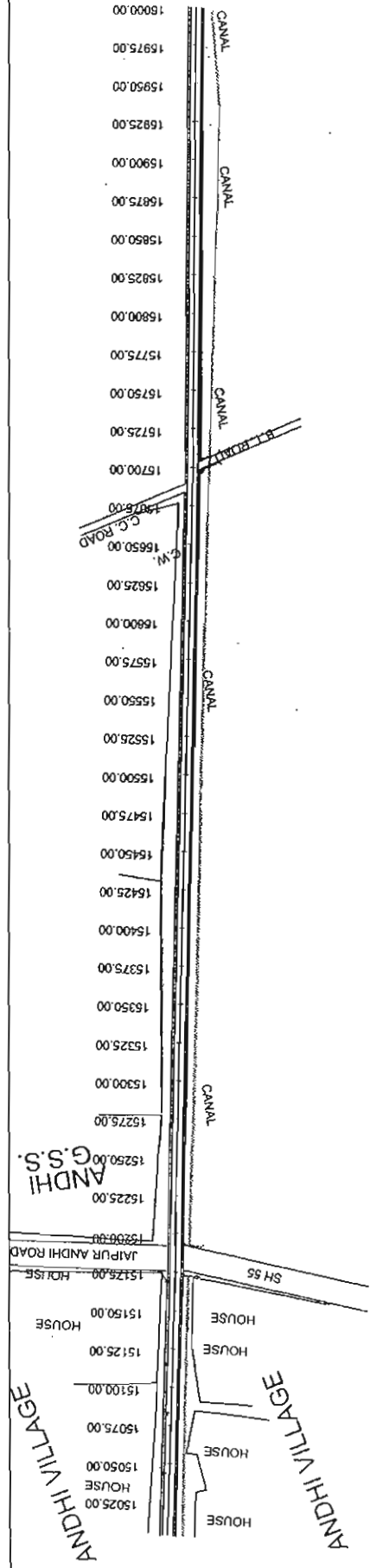
Widening & Strengthening
Mahangi to Dudhali mod

EXECUTIVE ENGINEER

ASSISTANT ENGINEER

SCALE: HORZ. 1 : 2500
VERT. 1 : 250

SURVEY POINT
34 MUKESH COLONY, MUWALA PHATAK, JAIPUR TEL : 954999662



Chainage	SURVEY POINT			SCALE:			SURVEYED BY		
	15000.00	15025.00	15050.00	15075.00	15100.00	15125.00	15150.00	15175.00	15200.00
Existing road Level	93.01	92.95	92.8	92.71	92.515	92.55	92.785	92.96	92.725
Proposed Embankment Top Level	93.01	93.01	93.01	93.01	93.01	93.01	93.01	93.01	93.01
Cutting/Filling	0.0	+0.06	+0.21	+0.3	+0.495	+0.355	+0.225	+0.225	+0.285
B.T./C.C. TOP	91.151	91.01	91.24	91.415	91.605	91.759	91.807	92.016	92.146
	+0.141	0.0	0.046	+0.054	+0.113	+0.152	+0.082	+0.011	+0.001
	15975.00	15950.00	15925.00	15900.00	15875.00	15850.00	15825.00	15800.00	15775.00
	15750.00	15725.00	15700.00	15675.00	15650.00	15625.00	15600.00	15575.00	15550.00
	15325.00	15300.00	15275.00	15250.00	15225.00	15200.00	15175.00	15150.00	15125.00
	15000.00	14975.00	14950.00	14925.00	14900.00	14875.00	14850.00	14825.00	14800.00
	14575.00	14550.00	14525.00	14500.00	14475.00	14450.00	14425.00	14400.00	14375.00
	14150.00	14125.00	14100.00	14075.00	14050.00	14025.00	14000.00	13975.00	13950.00
	13725.00	13700.00	13675.00	13650.00	13625.00	13600.00	13575.00	13550.00	13525.00
	13300.00	13275.00	13250.00	13225.00	13200.00	13175.00	13150.00	13125.00	13100.00
	12875.00	12850.00	12825.00	12800.00	12775.00	12750.00	12725.00	12700.00	12675.00
	12450.00	12425.00	12400.00	12375.00	12350.00	12325.00	12300.00	12275.00	12250.00
	12025.00	12000.00	11975.00	11950.00	11925.00	11900.00	11875.00	11850.00	11825.00
	11600.00	11575.00	11550.00	11525.00	11500.00	11475.00	11450.00	11425.00	11400.00
	11175.00	11150.00	11125.00	11100.00	11075.00	11050.00	11025.00	11000.00	10975.00
	10750.00	10725.00	10700.00	10675.00	10650.00	10625.00	10600.00	10575.00	10550.00
	10325.00	10300.00	10275.00	10250.00	10225.00	10200.00	10175.00	10150.00	10125.00
	9900.00	9875.00	9850.00	9825.00	9800.00	9775.00	9750.00	9725.00	9700.00
	9475.00	9450.00	9425.00	9400.00	9375.00	9350.00	9325.00	9300.00	9275.00
	9050.00	9025.00	9000.00	8975.00	8950.00	8925.00	8900.00	8875.00	8850.00

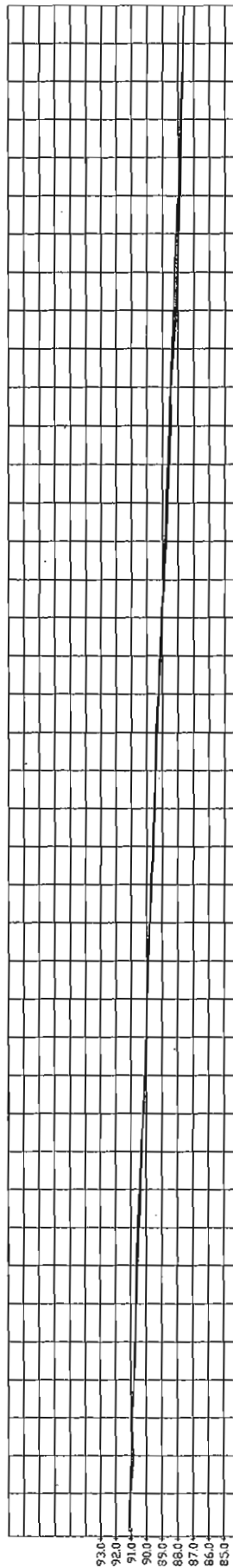
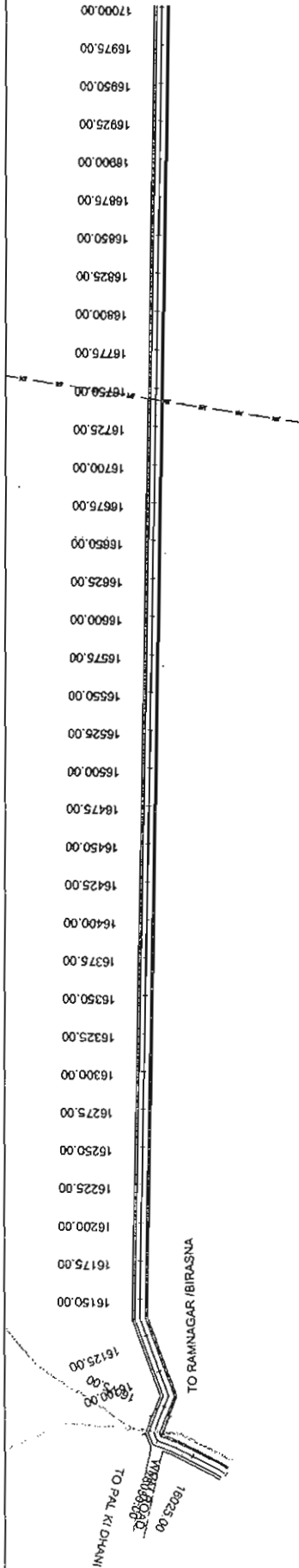
Widening & Strengthening
Mahangi to Dudhali mod

EXECUTIVE ENGINEER

ASSISTANT ENGINEER

SCALE: HORIZ. 1 : 2500
VERT. 1 : 250

34 MUKESH COLONY, MULWALA PHATAK, JAIPUR TEL : 9543999662



B.T./C.C. TOP

Cutting/Filling

Proposed Embankment
Top Level

Existing road Level

Chainage

SURVED BY

SURVEY POINT

34 MUKESH COLONY, MALWA PHATAK, JAPUR TEL : 954999862

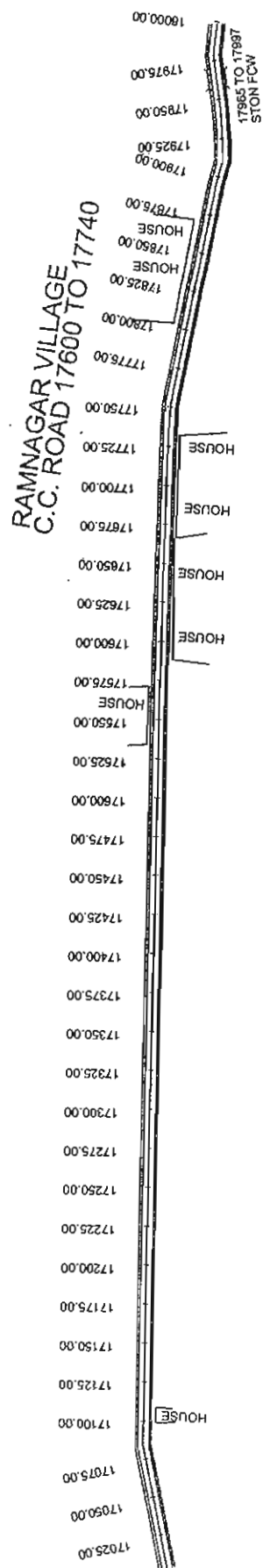
SCALE: HORZ. 1 : 2500
VERT. 1 : 250

ASSISTANT ENGINEER

EXECUTIVE ENGINEER

Widening & Strengthening
Mahangi to Dudhali mod

16000.00	91.01	91.01	+0.141	0.018
16025.00	91.0	91.062	+0.062	0.0
16050.00	90.81	90.974	+0.164	0.0095
16075.00	90.98	90.885	0.095	+0.036
16100.00	90.76	90.796	+0.036	+0.037
16125.00	90.67	90.708	0.037	0.001
16150.00	90.62	90.619	0.001	0.06
16175.00	90.59	90.53	0.06	0.104
16200.00	90.545	90.441	0.104	0.052
16225.00	90.405	90.353	0.052	0.046
16250.00	90.31	90.264	0.046	0.0
16275.00	90.175	90.175	0.0	0.02
16300.00	90.115	90.095	0.02	+0.05
16325.00	90.965	90.015	+0.05	0.03
16350.00	90.965	90.935	0.03	0.07
16375.00	90.925	89.855	0.07	+0.01
16400.00	89.765	89.775	+0.01	0.0
16425.00	89.695	89.695	0.0	+0.025
16450.00	89.575	89.6	+0.025	0.006
16475.00	89.475	89.504	+0.029	0.072
16500.00	89.415	89.409	0.006	0.017
16525.00	89.385	89.313	0.072	0.012
16550.00	89.235	89.216	0.017	+0.106
16575.00	89.135	89.123	0.012	+0.102
16600.00	89.025	89.027	+0.002	+0.42
16625.00	88.89	88.932	+0.042	88.837
16650.00	88.735	88.837	+0.102	88.741
16675.00	88.635	88.646	+0.011	88.53
16700.00	88.545	88.455	0.0	+0.099
16725.00	88.455	88.364	+0.099	+0.159
16750.00	88.115	88.274	+0.159	+0.168
16775.00	88.015	88.183	+0.168	+0.168
16800.00	88.015	88.093	+0.078	+0.117
16825.00	87.925	88.002	+0.077	+0.066
16850.00	87.845	87.912	+0.067	0.0
16875.00	87.731	87.731	0.0	87.552
16900.00	87.64	87.64	0.0	
16925.00				
16950.00				
16975.00				
17000.00				



Chainage	Existing road Level	Proposed Embankment Top Level	Cutting/Filling	B.T./C.C. TOP
17000.0	87.57	87.552	0.018	
17025.0	87.395	87.464	+0.069	
17050.0	87.375	87.376	+0.001	
17075.0	87.235	87.280	+0.052	
17100.0	87.145	87.199	+0.054	
17125.0	87.155	87.111	0.044	
17150.0	87.025	87.023	0.002	
17175.0	86.98	86.935	+0.055	
17200.0	86.79	86.847	+0.057	
17225.0	86.7	86.759	+0.059	
17250.0	86.65	86.671	+0.021	
17275.0	86.57	86.583	+0.013	
17300.0	86.48	86.494	+0.014	
17325.0	86.45	86.406	0.044	
17350.0	86.41	86.318	0.092	
17375.0	86.23	86.23	0.0	
17400.0	86.21	86.157	0.053	
17425.0	86.19	86.083	0.107	
17450.0	86.12	86.01	0.11	
17475.0	85.99	85.937	0.053	
17500.0	85.97	85.863	0.107	
17525.0	85.89	85.79	0.1	
17550.0	85.69	85.717	+0.027	
17575.0	85.635	85.643	+0.000	
17600.0	85.57	85.57	0.0	
17625.0	85.48	85.481	0.0	
17650.0	85.41	85.391	0.019	
17675.0	85.34	85.302	0.038	
17700.0	85.24	85.212	0.028	
17725.0	85.09	85.123	+0.033	
17750.0	84.845	85.033	+0.188	
17775.0	84.765	84.944	+0.179	
17800.0	84.765	84.854	+0.089	
17825.0	84.735	84.765	+0.03	
17850.0	84.675	84.675	0.0	
17875.0	84.485	84.674	+0.109	
17900.0	84.405	84.573	+0.180	
17925.0	84.375	84.672	+0.297	
17950.0	84.245	84.671	+0.426	
17975.0	83.675	84.669	+0.994	
18000.0	84.375	84.668	+0.293	

SURVEYED BY

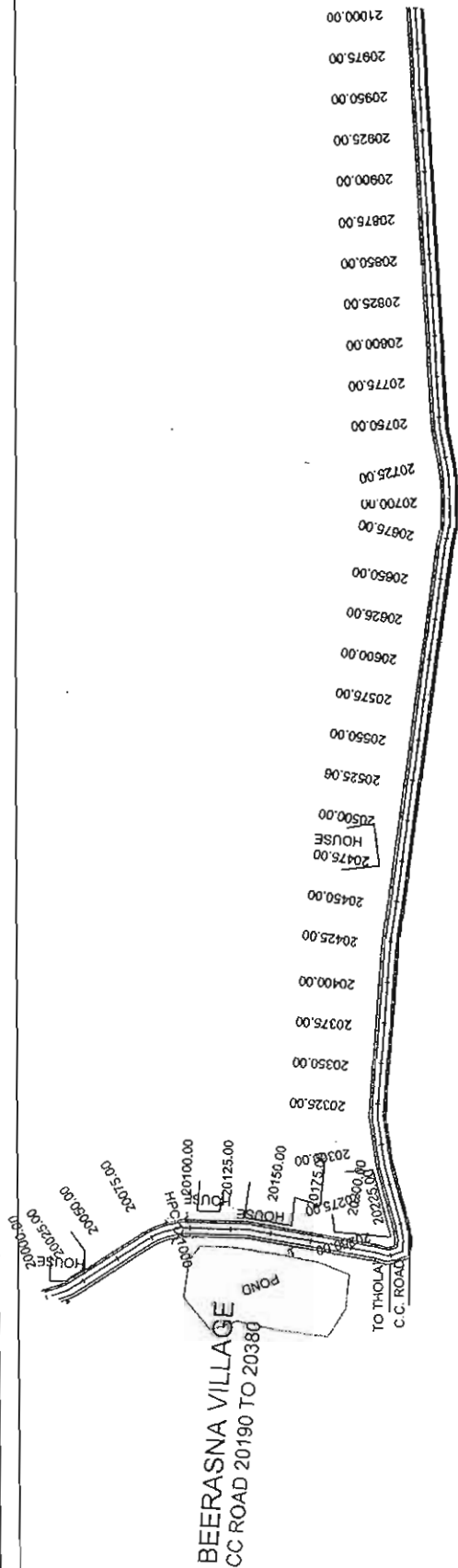
34. MUKESH COLONY, IMLIWALA PHATAK, JAIPUR TEL : 9549999662

SCALE: HORZ. 1 : 2500
 VERT. 1 : 250

~~ASSISTANT ENGINEER~~

EXECUTIVE ENGINEER

Widening & Strengthening
Mahangi to Dudhali mod



Chainage	Existing road Level	Proposed Embankment Top Level	Cutting/Filling	B.T./C.C. TOP
20000.0	84.935	85.223	+0.287	
20025.0	84.835	85.179	+0.344	
20050.0	84.745	85.135	+0.39	
20075.0	84.685	85.091	+0.406	
20100.0	84.935	85.048	+0.113	
20125.0	84.9	85.004	+0.104	
20150.0	84.835	84.96	+0.125	
20175.0	84.94	84.916	0.024	
20200.0	84.86	84.873	+0.013	
20225.0	84.8	84.829	+0.029	
20250.0	84.785	84.785	0.0	
20275.0	84.66	84.697	+0.037	
20300.0	84.525	84.609	+0.084	
20325.0	84.48	84.521	+0.041	
20350.0	84.43	84.434	+0.004	
20375.0	84.38	84.346	0.034	
20400.0	84.25	84.258	+0.008	
20425.0	84.17	84.17	0.0	
20450.0	84.15	84.12	0.03	
20475.0	84.085	84.069	0.016	
20500.0	84.075	84.019	0.056	
20525.0	83.95	83.969	+0.019	
20550.0	84.06	83.919	0.141	
20575.0	83.93	83.868	0.062	
20600.0	83.85	83.818	0.032	
20625.0	83.73	83.768	+0.038	
20650.0	83.695	83.717	+0.022	
20675.0	83.675	83.667	0.008	
20700.0	83.605	83.617	+0.012	
20725.0	83.585	83.566	0.019	
20750.0	83.515	83.516	+0.001	
20775.0	83.505	83.466	0.039	
20800.0	83.435	83.416	0.019	
20825.0	83.355	83.365	+0.01	
20850.0	83.315	83.315	0.0	
20875.0	83.255	83.273	+0.018	
20900.0	83.212	83.23	+0.018	
20925.0	83.225	83.186	0.037	
20950.0	83.175	83.145	0.03	
20975.0	83.13	83.103	0.027	
21000.0	83.11	83.06	0.05	

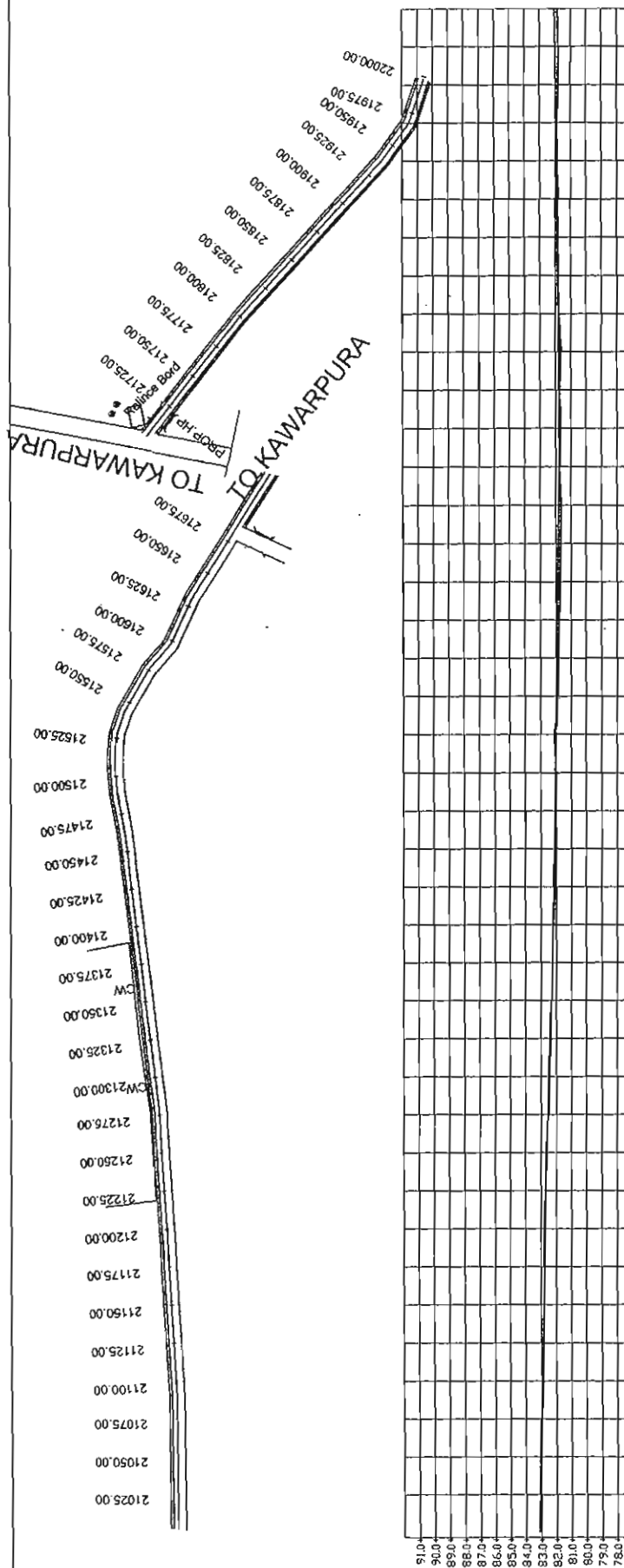
Widening & Strengthening
Mahangi to Dudhali mod

EXECUTIVE ENGINEER

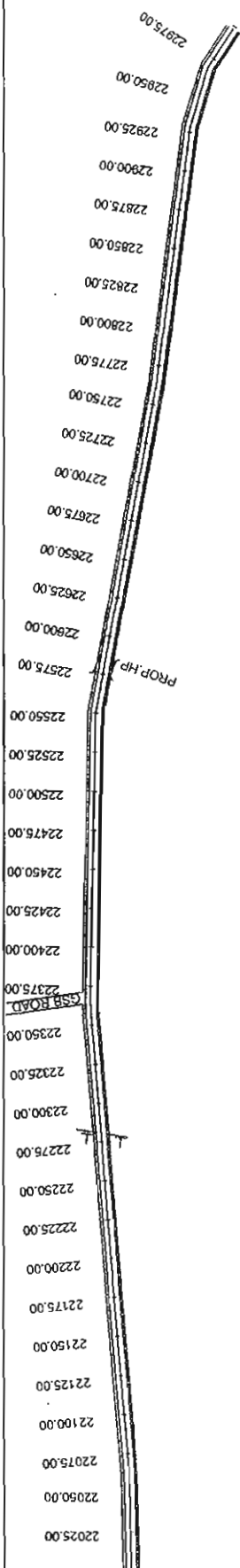
ASSISTANT ENGINEER

SCALE: HORIZ. 1 : 2500
VERT. 1 : 250

SURVEY POINT
34 MUKESH COLONY, INJIWALA PHATAK, JAIPUR TEL : 954999662



Chainage	21000.0	83.11	83.06	0.05
	21025.0	83.09	83.08	0.072
	21050.0	83.06	82.975	0.085
	21075.0	82.99	82.933	0.057
	21100.0	82.835	82.89	+0.055
	21125.0	82.825	82.848	+0.023
	21150.0	82.78	82.805	+0.025
	21175.0	82.78	82.763	0.017
	21200.0	82.76	82.72	0.04
	21225.0	82.695	82.678	0.017
	21250.0	82.635	82.635	0.0
	21275.0	82.525	82.562	+0.037
	21300.0	82.465	82.488	+0.023
	21325.0	82.345	82.415	+0.07
	21350.0	82.285	82.342	+0.057
Existing road Level	21375.0	82.245	82.268	+0.023
	21400.0	82.195	82.195	0.0
	21425.0	82.125	82.159	+0.034
	21450.0	82.075	82.123	+0.048
	21475.0	82.085	82.086	+0.001
	21500.0	81.985	82.05	+0.065
	21525.0	82.075	82.014	0.061
	21550.0	81.84	81.978	+0.138
	21575.0	81.82	81.941	+0.121
	21600.0	81.75	81.905	+0.155
	21625.0	81.715	81.869	+0.154
	21650.0	81.66	81.833	+0.173
	21675.0	81.62	81.796	+0.176
	21700.0	81.76	81.76	0.0
	21725.0	81.65	81.768	+0.118
Proposed Embankment Top Level	21750.0	81.74	81.775	+0.035
	21775.0	81.59	81.783	+0.193
	21800.0	81.79	81.79	0.0
	21825.0	81.81	81.818	+0.008
	21850.0	81.82	81.845	+0.025
	21875.0	81.78	81.873	+0.092
	21900.0	81.86	81.9	+0.02
	21925.0	81.86	81.928	+0.068
	21950.0	81.77	81.955	+0.185
	21975.0	81.76	81.983	+0.222
	81.82		82.01	+0.19
	B.T./C.C. TOP			



SURVEY POINT		Widening & Strengthening Mahangi to Dudhali mod	
3-4 MUKESH COLONY, INLIWALA PHATAK, JAIPUR TEL. : 9549999662		EXECUTIVE ENGINEER	
SCALE: HORZ. 1 : 2500 VERT. 1 : 250		ASSISTANT ENGINEER	
Chainage	B.T./C.C. TOP	Cutting/Filling	Proposed Embankment Top Level
22000.0	81.82	+0.19	82.01
22025.0	81.94	+0.098	82.038
22050.0	81.91	+0.135	82.065
22075.0	82.06	+0.033	82.093
22100.0	82.12	0.0	82.12
22125.0	82.03	+0.057	82.087
22150.0	82.06	0.006	82.054
22175.0	81.97	+0.051	82.021
22200.0	82.03	0.042	81.988
22225.0	81.92	+0.035	81.955
22250.0	81.92	+0.002	81.922
22275.0	81.85	+0.039	81.889
22300.0	81.61	+0.246	81.856
22325.0	81.58	+0.243	81.823
22350.0	81.685	+0.105	81.79
22375.0	81.61	+0.147	81.757
22400.0	81.6	+0.124	81.724
22425.0	81.5	+0.191	81.691
22450.0	81.47	+0.188	81.658
22475.0	81.52	+0.105	81.625
22500.0	81.42	+0.172	81.592
22525.0	81.38	+0.179	81.559
22550.0	81.43	+0.096	81.526
22575.0	81.51	0.017	81.493
22586.0	80.9	+0.578	81.478
22600.0	81.46	0.0	81.46
22625.0	81.38	+0.033	81.413
22650.0	81.43	0.064	81.366
22675.0	81.49	0.171	81.319
22700.0	81.3	0.029	81.271
22725.0	81.26	0.036	81.224
22750.0	81.35	0.173	81.177
22775.0	81.22	0.09	81.13
22800.0	81.27	0.187	81.083
22825.0	81.16	0.124	81.036
22850.0	81.1	0.111	80.989
22875.0	80.93	+0.011	80.941
22900.0	80.71	+0.184	80.894
22925.0	80.83	+0.017	80.847
22950.0	80.8	0.0	80.8
22975.0	80.479	+0.109	80.479
23000.0	80.28	0.122	80.158

Widening & Strengthening Mahangi to Dudhali mod

EXECUTIVE ENGINEER

ASSISTANT ENGINEER

SCALE: HORZ. 1 : 2500
VERT. 1 : 250

SURVEY POINT
34 -UKESH COLONY, MALWALA PHATAK, JAPUR TEL. : 954999862

SURVED BY

Chainage

Existing road Level

Proposed Embankment
Top Level

Cutting/Filling

B.T./C.C. TOP

23000.0	80.28	80.158	0.122
23025.0	80.4	79.836	0.204
23050.0	79.64	79.515	0.125
23075.0	79.415	79.194	0.221
23100.0	79.525	78.873	0.653
23125.0	79.245	78.551	0.694
23150.0	78.895	78.23	0.665
23175.0	77.775	77.909	+0.134
23200.0	77.015	77.588	+0.573
23225.0	76.665	77.266	+0.601
23250.0	76.945	76.945	0.0
23275.0	76.125	76.880	+0.763
23300.0	75.875	76.83	+0.955
23325.0	75.94	76.773	+0.833
23350.0	75.8	76.715	+0.915
23375.0	75.97	76.658	+0.688
23400.0	75.985	76.601	+0.616
23425.0	76.285	76.543	+0.258
23450.0	76.195	76.486	+0.291
23475.0	76.08	76.428	+0.348
23500.0	75.97	76.371	+0.401
23525.0	75.83	76.313	+0.483
23550.0	75.87	76.256	+0.386
23575.0	75.78	76.199	+0.419
23600.0	75.885	76.141	+0.256
23625.0	75.83	76.084	+0.254
23650.0	75.4	76.026	+0.626
23675.0	75.25	75.969	+0.719
23700.0	75.16	75.912	+0.752
23725.0	75.3	75.854	+0.554
23750.0	75.44	75.797	+0.357
23775.0	75.53	75.739	+0.209
23800.0	75.53	75.682	+0.152
23825.0	75.46	75.624	+0.164
23850.0	75.495	75.567	+0.072
23875.0	75.245	75.51	+0.265
23900.0	75.215	75.452	+0.237
23925.0	75.485	75.395	0.09
23950.0	75.495	75.337	0.158
23975.0	75.28	75.28	0.0
24000.0	74.195	75.097	+0.902

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SSB ROAD
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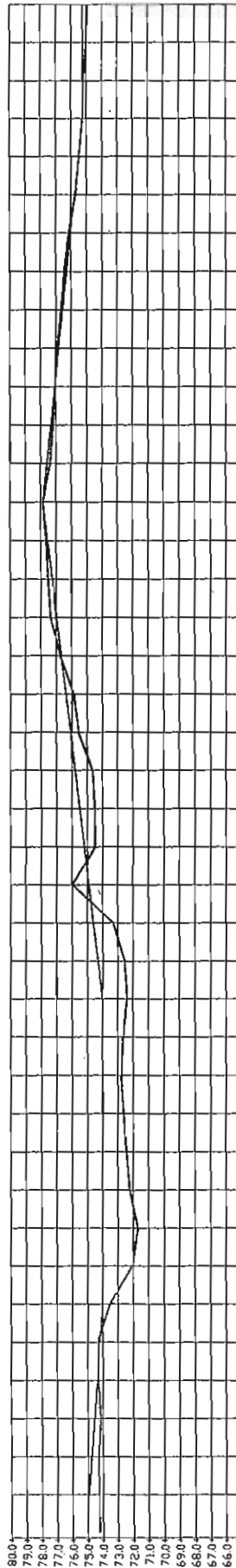
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CC ROAD 24625 TO 24800

FCM



B.T./C.C. TOP

Cutting/Filling

Proposed Embankment
Top Level

Existing road Level

Chainage

Surveyed by

SURVEY POINT

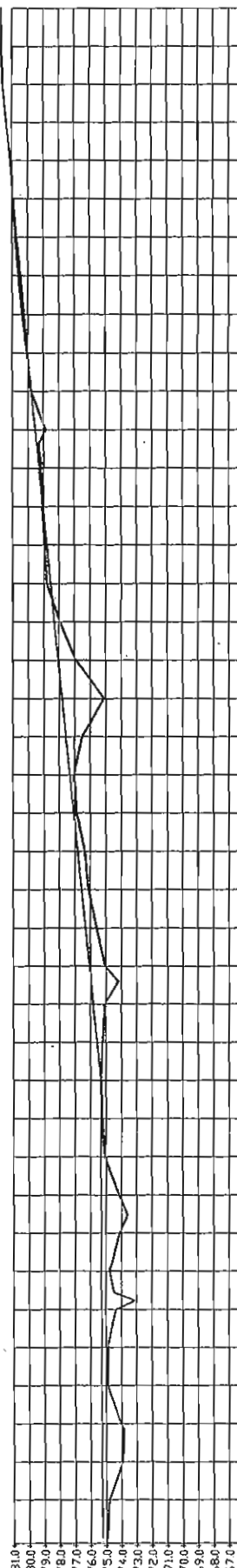
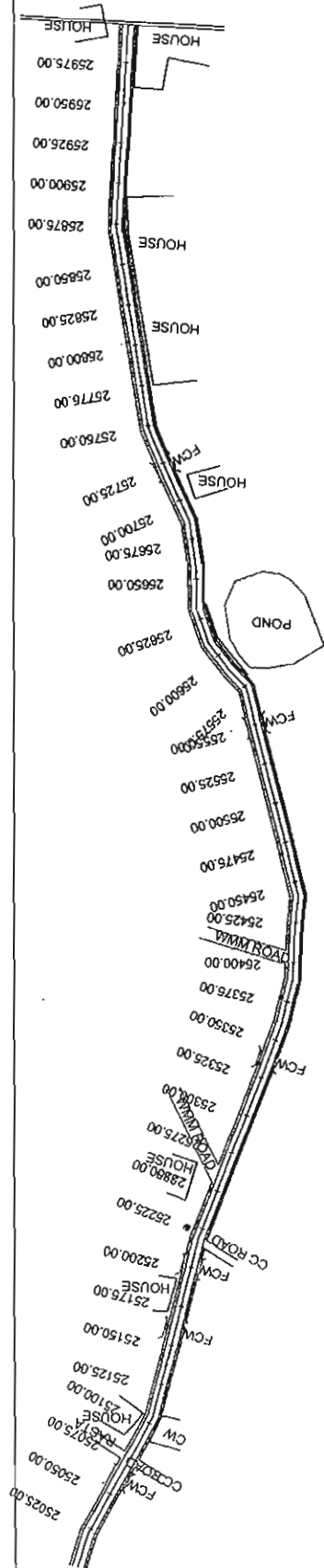
34 MUKESH COLONY, INLIWALA PHATAK, JAIPUR TEL. : 954999862

SCALE: HORZ. 1 : 2500
VERT. 1 : 250

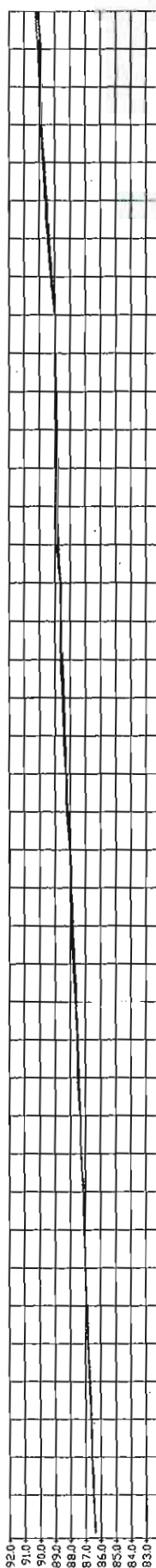
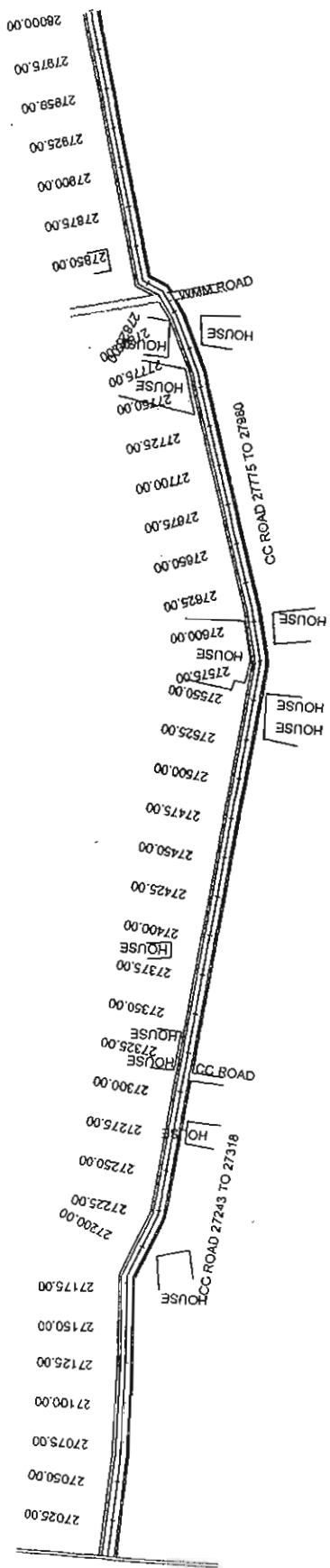
ASSISTANT ENGINEER

EXECUTIVE ENGINEER

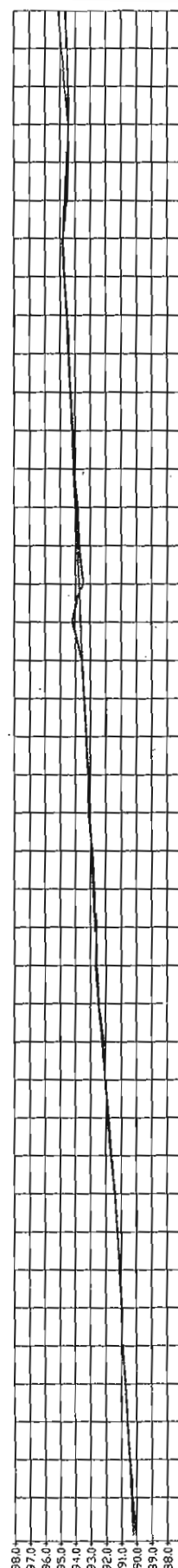
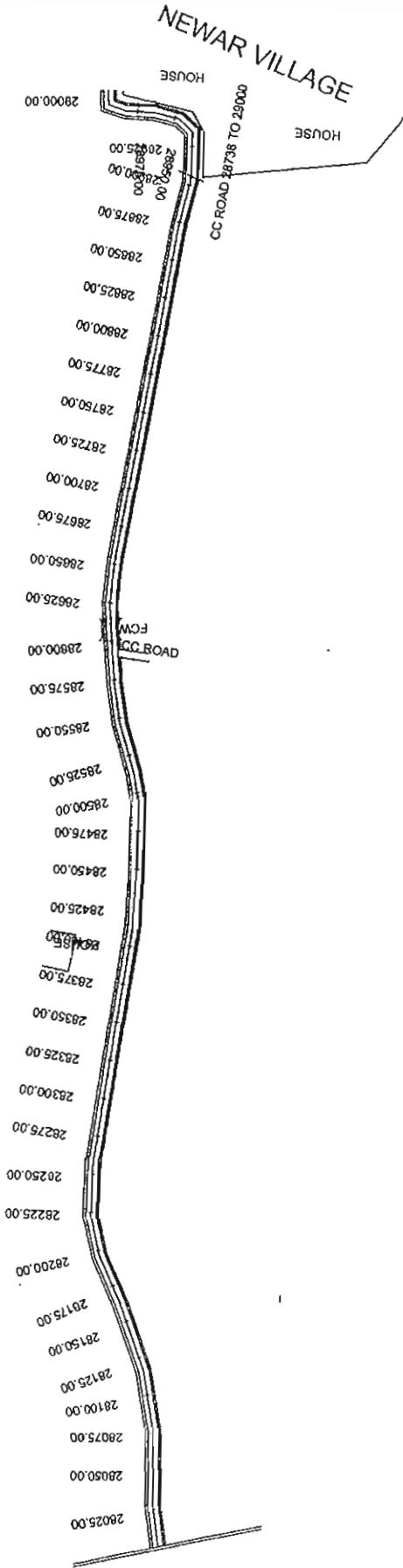
Widening & Strengthening
Mahangi to Dudhali mod



Widening & Strengthening Mahangi to Dudhali mod																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
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B.T./C.C. TOP	Cutting/Filling	Proposed Embankment Top Level	Existing road Level	Chainage	25000.0	74.91	75.246	75.251	75.257	75.259	75.262	75.267	75.273	75.278	75.283	75.288	75.293	75.298	75.303	75.308	75.313	75.318	75.323	75.328	75.333	75.338	75.343	75.348	75.353	75.358	75.363	75.368	75.373	75.378	75.383	75.388	75.393	75.398	75.403	75.408	75.413	75.418	75.423	75.428	75.433	75.438	75.443	75.448	75.453	75.458	75.463	75.468	75.473	75.478	75.483	75.488	75.493	75.498	75.503	75.508	75.513	75.518	75.523	75.528	75.533	75.538	75.543	75.548	75.553	75.558	75.563	75.568	75.573	75.578	75.583	75.588	75.593	75.598	75.603	75.608	75.613	75.618	75.623	75.628	75.633	75.638	75.643	75.648	75.653	75.658	75.663	75.668	75.673	75.678	75.683	75.688	75.693	75.698	75.703	75.708	75.713	75.718	75.723	75.728	75.733	75.738	75.743	75.748	75.753	75.758	75.763	75.768	75.773	75.778	75.783	75.788	75.793	75.798	75.803	75.808	75.813	75.818	75.823	75.828	75.833	75.838	75.843	75.848	75.853	75.858	75.863	75.868	75.873	75.878	75.883	75.888	75.893	75.898	75.903	75.908	75.913	75.918	75.923	75.928	75.933	75.938	75.943	75.948	75.953	75.958	75.963	75.968	75.973	75.978	75.983	75.988	75.993	75.998	80.003	80.008	80.013	80.018	80.023	80.028	80.033	80.038	80.043	80.048	80.053	80.058	80.063	80.068	80.073	80.078	80.083	80.088	80.093	80.098	80.103	80.108	80.113	80.118	80.123	80.128	80.133	80.138	80.143	80.148	80.153	80.158	80.163	80.168	80.173	80.178	80.183	80.188	80.193	80.198	80.203	80.208	80.213	80.218	80.223	80.228	80.233	80.238	80.243	80.248	80.253	80.258	80.263	80.268	80.273	80.278	80.283	80.288	80.293	80.298	80.303	80.308	80.313	80.318	80.323	80.328	80.333	80.338	80.343	80.348	80.353	80.358	80.363	80.368	80.373	80.378	80.383	80.388	80.393	80.398	80.403	80.408	80.413	80.418	80.423	80.428	80.433	80.438	80.443	80.448	80.453	80.458	80.463	80.468	80.473	80.478	80.483	80.488	80.493	80.498	80.503	80.508	80.513	80.518	80.523	80.528	80.533	80.538	80.543	80.548	80.553	80.558	80.563	80.568	80.573	80.578	80.583	80.588	80.593	80.598	80.603	80.608	80.613	80.618	80.623	80.628	80.633	80.638	80.643	80.648	80.653	80.658	80.663	80.668	80.673	80.678	80.683	80.688	80.693	80.698	80.703	80.708	80.713	80.718	80.723	80.728	80.733	80.738	80.743	80.748	80.753	80.758	80.763	80.768	80.773	80.778	80.783	80.788	80.793	80.798	80.803	80.808	80.813	80.818	80.823	80.828	80.833	80.838	80.843	80.848	80.853	80.858	80.863	80.868	80.873	80.878	80.883	80.888	80.893	80.898	80.903	80.908	80.913	80.918	80.923	80.928	80.933	80.938	80.943	80.948	80.953	80.958	80.963	80.968	80.973	80.978	80.983	80.988	80.993	80.998	90.003	90.008	90.013	90.018	90.023	90.028	90.033	90.038	90.043	90.048	90.053	90.058	90.063	90.068	90.073	90.078	90.083	90.088	90.093	90.098	90.103	90.108	90.113	90.118	90.123	90.128	90.133	90.138	90.143	90.148	90.153	90.158	90.163	90.168	90.173	90.178	90.183	90.188	90.193	90.198	90.203	90.208	90.213	90.218	90.223	90.228	90.233	90.238	90.243	90.248	90.253	90.258	90.263	90.268	90.273	90.278	90.283	90.288	90.293	90.298	90.303	90.308	90.313	90.318	90.323	90.328	90.333	90.338	90.343	90.348	90.353	90.358	90.363	90.368	90.373	90.378	90.383	90.388	90.393	90.398	90.403	90.408	90.413	90.418	90.423	90.428	90.433	90.438	90.443	90.448	90.453	90.458	90.463	90.468	90.473	90.478	90.483	90.488	90.493	90.498	90.503	90.508	90.513	90.518	90.523	90.528	90.533	90.538	90.543	90.548	90.553	90.558	90.563	90.568	90.573	90.578	90.583	90.588	90.593	90.598	90.603	90.608	90.613	90.618	90.623	90.628	90.633	90.638	90.643	90.648	90.653	90.658	90.663	90.668	90.673	90.678	90.683	90.688	90.693	90.698	90.703	90.708	90.713	90.718	90.723	90.728	90.733	90.738	90.743	90.748	90.753	90.758	90.763	90.768	90.773	90.778	90.783	90.788	90.793	90.798	90.803	90.808	90.813	90.818	90.823	90.828	90.833	90.838	90.843	90.848	90.853	90.858	90.863	90.868	90.873	90.878	90.883	90.888	90.893	90.898	90.903	90.908	90.913	90.918	90.923	90.928	90.933	90.938	90.943	90.948	90.953	90.958	90.963	90.968	90.973	90.978	90.983	90.988	90.993	90.998	100.003	100.008	100.013	100.018	100.023	100.028	100.033	100.038	100.043	100.048	100.053	100.058	100.063	100.068	100.073	100.078	100.083	100.088	100.093	100.098	100.103	100.108	100.113	100.118	100.123	100.128	100.133	100.138	100.143	100.148	100.153	100.158	100.163	100.168	100.173	100.178	100.183	100.188	100.193	100.198	100.203	100.208	100.213	100.218	100.223	100.228	100.233	100.238	100.243	100.248	100.253	100.258	100.263	100.268	100.273	100.278	100.283	100.288	100.293	100.298	100.303	100.308	100.313	100.318	100.323	100.328	100.333	100.338	100.343	100.348	100.353	100.358	100.363	100.368	100.373	100.378	100.383	100.388	100.393	100.398	100.403	100.408	100.413	100.418	100.423	100.428	100.433	100.438	100.443	100.448	100.453	100.458	100.463	100.468	100.473	100.478	100.483	100.488	100.493	100.498	100.503	100.508	100.513	100.518	100.523	100.528	100.533	100.538	100.543	100.548	100.553	100.558	100.563	100.568	100.573	100.578	100.583	100.588	100.593	100.598	100.603	100.608	100.613	100.618	100.623	100.628	100.633	100.638	100.643	100.648	100.653	100.658	100.663	100.668	100.673	100.678	100.683	100.688	100.693	100.698	100.703	100.708	100.713	100.718	100.723	100.728	100.733	100.738	100.743	100.748	100.753	100.758	100.763	100.768	100.773	100.778	100.783	100.788	100.793	100.798	100.803	100.808	100.813	100.818	100.823	100.828	100.833	100.838	100.843	100.848	100.853	100.858	100.863	100.868	100.873	100.878	100.883	100.888	100.893	100.898	100.903	100.908	100.913	100.918	100.923	100.928	100.933	100.938	100.943	100.948	100.953	100.958	100.963	100.968	100.973	100.978	100.983	100.988	100.993	100.998	110.003	110.008	110.013	110.018	110.023	110.028	110.033	110.038	110.043	110.048	110.053	110.058	110.063	110.068	110.073	110.078	110.083	110.088	110.093	110.098	110.103	110.108	110.113	110.118	110.123	110.128	110.133	110.138	110.143	110.148	110.153	110.158	110.163	110.168	110.173	110.178	110.183	110.188	110.193	110.198	110.203	110.208	110.213	110.218	110.223	110.228	110.233	110.238	110.243	110.248	110.253	110.258	110.263	110.268	110.273	110.278	110.283	110.288	110.293	110.298	110.303	110.308	110.313	110.318	110.323	110.328	110.333	110.338	110.343	110.348	110.353	110.358	110.363	110.368	110.373	110.378	110.383	110.388	110.393	110.398	110.403	110.408	110.413	110.418	110.423	110.428	110.433	110.438	110.443	110.448	110.453	110.458	110.463	110.468	110.473	110.478	110.483	110.488	110.493	110.498	110.503	110.508	110.513	110.518	110.523	110.528	110.533	110.538	110.543	110.548	110.553	110.558	110.563	110.568	110.573	110.578	110.583	110.588	110.593	110.598	110.603	110.608	110.613	110.618	110.623	110.628	110.633	110.638	110.643	110.648	110.653	110.658	110.663	110.668	110.673	110.678	110.683	110.688	110.693	110.698	110.703	110.708	110.713	110.718	110.723	110.728	110.733	110.738	110.743	110.748	110.753	110.758	110.763	110.768	110.773	110.778	110.783	110.788	110.793	110.798	110.803	110.808	110.813	110.818	110.823	110.828	110.833	110.838	110.843	110.848	110.853	110.858	110.863	110.868	110.873	110.878	110.883	110.888	110.893	110.898	110.903	110.908	110.913	110.918	110.923	110.928	110.933	110.938	110.943	110.948	110.953	110.958	110.963	110.968	110.973	110.978	110.983	110.988	110.993	110.998	120.003	120.008	120.013	120.018	120.023	120.028	120.033	120.038	120.043	120.048	120.053	120.058	120.063	120.068	120.073	120.078	120.083	120.088



SURVEY POINT	Widening & Strengthening Mahangi to Dudhali mod		EXECUTIVE ENGINEER	ASSISTANT ENGINEER	SCALE: HORZ. 1 : 2500 VERT. 1 : 250	SURVEY POINT 34 MUKESH COLONY, IMLIWALA PHATAK, JAMPUR TEL. : 9549999662
	B.T./C.C. TOP	Cutting/Filling				
Proposed Embankment Top Level	86.393	+0.028	86.479	+0.014	86.565	27050.00
Existing road Level	86.365	86.465	86.475	86.485	86.575	27060.00
Chainage	27000.00	27025.00	27050.00	27075.00	27100.00	27125.00
	27150.00	27175.00	27200.00	27225.00	27250.00	27275.00
	27300.00	27325.00	27350.00	27375.00	27400.00	27425.00
	27450.00	27475.00	27500.00	27525.00	27550.00	27575.00
	27600.00	27625.00	27650.00	27675.00	27700.00	27725.00
	27750.00	27775.00	27800.00	27825.00	27850.00	27875.00
	27900.00	27925.00	27950.00	27975.00	28000.00	



Chainage	Widening & Strengthening Mahangi to Dudhali mod			EXECUTIVE ENGINEER	ASSISTANT ENGINEER	SCALE: HORZ. 1 : 2500 VERT. 1 : 250	SURVEY POINT 34 MUKESH COLONY, IMUWALA PHATAK, JAPUR TEL : 9549999662
	Proposed Embankment Top Level	Existing road Level	Cutting/Filling				
28000.00	90.07	90.215	+0.145	90.215	90.07	90.215	90.07
28025.00	90.23	90.34	+0.11	90.34	90.23	90.34	90.23
28050.00	90.42	90.465	+0.045	90.465	90.42	90.465	90.42
28075.00	90.59	90.59	0.0	90.59	90.59	90.59	90.59
28100.00	90.71	90.723	+0.013	90.723	90.71	90.723	90.71
28125.00	90.857	90.857	0.038	90.857	90.857	90.857	90.857
28150.00	90.915	90.99	+0.075	90.99	90.915	90.99	90.915
28175.00	91.07	91.123	+0.053	91.123	91.07	91.123	91.07
28200.00	91.25	91.257	+0.007	91.257	91.25	91.257	91.25
28225.00	91.39	91.39	0.0	91.39	91.39	91.39	91.39
28250.00	91.645	91.601	-0.044	91.601	91.645	91.601	91.645
28275.00	91.875	91.812	-0.063	91.812	91.875	91.812	91.875
28300.00	92.03	92.023	-0.007	92.023	92.03	92.023	92.03
28325.00	92.11	92.234	+0.124	92.234	92.11	92.234	92.11
28350.00	92.445	92.445	0.0	92.445	92.445	92.445	92.445
28375.00	92.563	92.563	0.072	92.563	92.563	92.563	92.563
28400.00	92.585	92.581	-0.006	92.581	92.585	92.581	92.585
28425.00	92.735	92.799	+0.064	92.799	92.735	92.799	92.735
28450.00	92.885	92.918	+0.032	92.918	92.885	92.918	92.885
28475.00	93.105	93.036	-0.069	93.036	93.105	93.036	93.105
28500.00	93.115	93.154	+0.039	93.154	93.115	93.154	93.115
28525.00	93.25	93.272	+0.022	93.272	93.25	93.272	93.25
28550.00	93.39	93.39	0.0	93.39	93.39	93.39	93.39
28575.00	93.52	93.508	-0.012	93.508	93.52	93.508	93.52
28600.00	94.15	93.626	-0.524	93.626	94.15	93.626	94.15
28625.00	93.83	93.706	-0.124	93.706	93.83	93.706	93.83
28650.00	93.71	93.862	+0.152	93.862	93.71	93.862	93.71
28675.00	93.81	93.98	+0.17	93.98	93.81	93.98	93.81
28700.00	94.06	94.098	+0.038	94.098	94.06	94.098	94.06
28725.00	94.11	94.215	+0.105	94.215	94.11	94.215	94.11
28750.00	94.3	94.333	+0.033	94.333	94.3	94.333	94.3
28775.00	94.39	94.451	+0.061	94.451	94.39	94.451	94.39
28800.00	94.54	94.569	+0.029	94.569	94.54	94.569	94.54
28825.00	94.715	94.697	-0.028	94.697	94.715	94.697	94.715
28850.00	94.805	94.805	0.0	94.805	94.805	94.805	94.805
28875.00	94.53	94.69	+0.16	94.69	94.53	94.69	94.53
28900.00	94.43	94.575	+0.145	94.575	94.43	94.575	94.43
28925.00	94.46	94.46	0.0	94.46	94.46	94.46	94.46
28950.00	94.43	94.676	+0.246	94.676	94.43	94.676	94.43
28975.00	94.53	94.893	+0.363	94.893	94.53	94.893	94.53
29000.00	94.63	95.109	+0.479	95.109	94.63	95.109	94.63

B.T./C.C. TOP

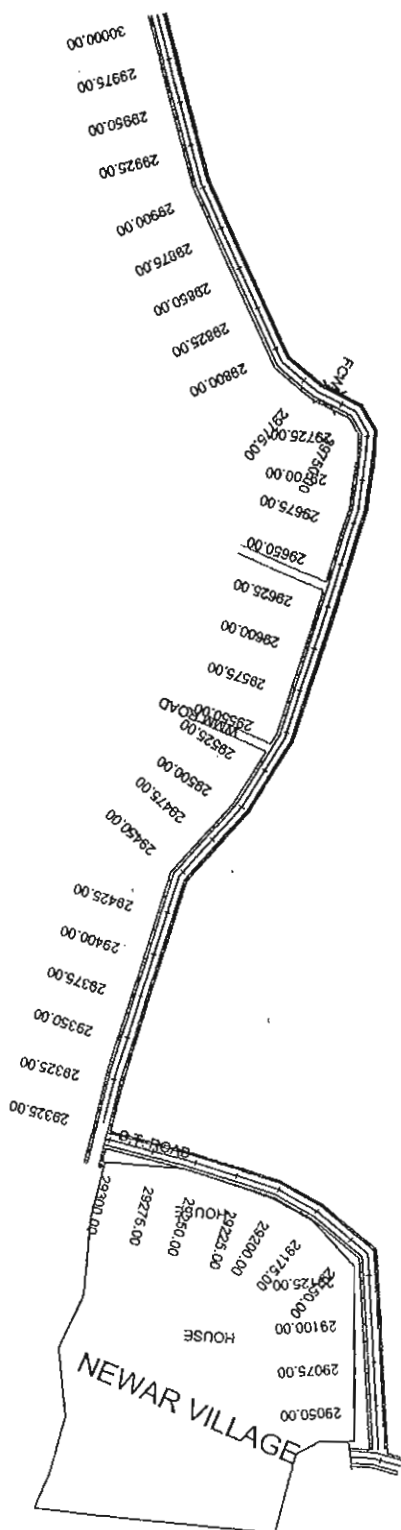
Cutting/Filling

Proposed Embankment
Top Level

Existing road Level

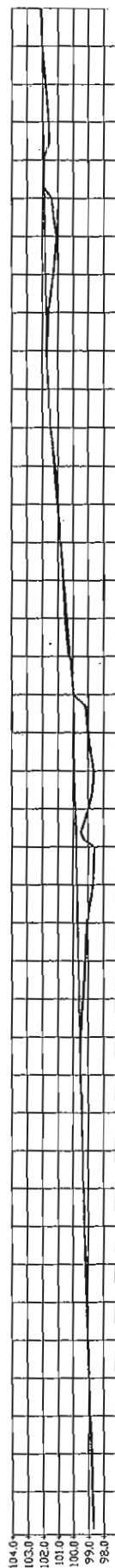
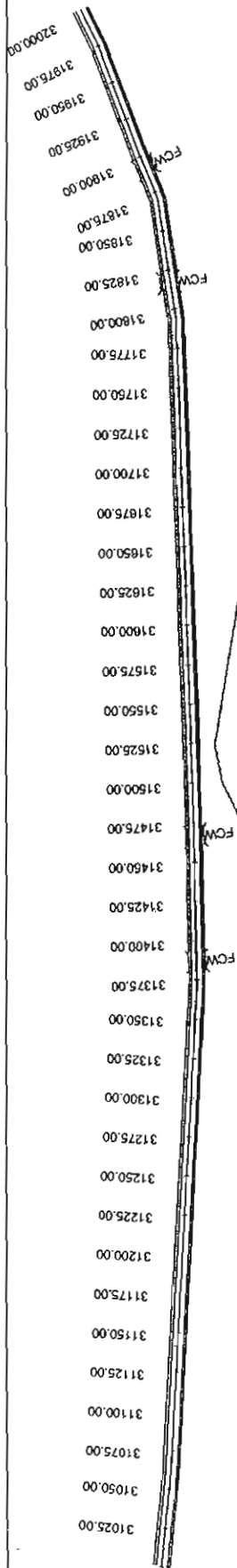
Chainage

SURVED BY
 SURVEY POINT
 34 MUKESH COLONY, IMUWALA PHATAK, JAPUR TEL : 9549999662
 SCALE: HORZ. 1 : 2500
 VERT. 1 : 250
 EXECUTIVE ENGINEER
 ASSISTANT ENGINEER
 WIDENING & STRENGTHENING
 MAHANGI TO DUDHALI MOD

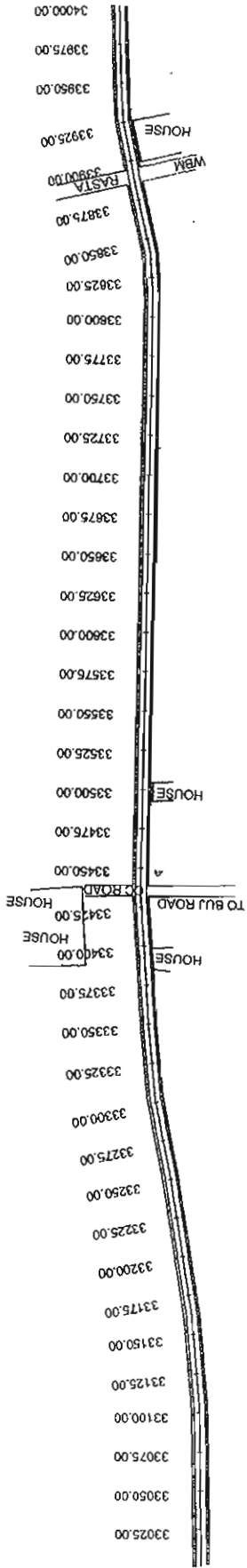


Chainage	Existing road Level	Proposed Embankment Top Level	Cutting/Filling	B.T./C.C. TOP
29000.0	94.63	95.109	+0.479	
29025.0	95.325	95.325	0.0	
29050.0	95.525	95.525	0.0	
29075.0	95.725	95.725	0.0	
29100.0	95.955	95.973	+0.018	
29125.0	96.17	96.222	+0.052	
29150.0	96.755	96.47	0.285	
29175.0	96.725	96.718	0.007	
29200.0	97.045	96.967	0.078	
29225.0	97.215	97.215	0.0	
29250.0	97.215	97.141	0.074	
29275.0	97.155	97.066	0.089	
29300.0	97.05	96.992	0.058	
29325.0	96.835	96.918	+0.083	
29350.0	96.735	96.844	+0.109	
29375.0	96.735	96.769	+0.034	
29400.0	96.695	96.695	0.0	
29425.0	96.465	96.41	0.055	
29450.0	96.095	96.125	+0.03	
29475.0	95.725	95.84	+0.115	
29500.0	95.555	95.555	0.0	
29525.0	95.31	95.345	+0.035	
29550.0	95.11	95.135	+0.025	
29575.0	94.865	94.925	+0.06	
29600.0	94.715	94.715	0.0	
29625.0	94.515	94.505	0.01	
29650.0	94.295	94.295	0.0	
29675.0	94.015	94.292	+0.277	
29700.0	93.785	94.288	+0.503	
29725.0	93.65	94.285	+0.635	
29750.0	93.62	94.282	+0.662	
29775.0	93.38	94.278	+0.898	
29800.0	94.31	94.275	0.035	
29825.0	94.23	94.272	+0.042	
29850.0	94.1	94.268	+0.168	
29875.0	94.1	94.265	+0.165	
29900.0	94.305	94.262	0.043	
29925.0	94.37	94.258	0.112	
29950.0	94.255	94.255	0.0	
29975.0	93.985	94.347	+0.362	
30000.0	93.86	94.439	+0.559	

SURVEYED BY	SURVEY POINT		SCALE:		ASSISTANT ENGINEER		EXECUTIVE ENGINEER		Widening & Strengthening Mahangi to Dudhali mod
34 MUKESH COLONY, IMLIWALA PHATAK, JAIPUR TEL : 9548999662			HORIZ. 1 : 2500 VERT. 1 : 250						



SURVEY POINT	Widening & Strengthening Mahangi to Dudhali mod		EXECUTIVE ENGINEER		SCALE: HORZ. 1 : 2500 VERT. 1 : 250		SURVEY POINT		34 MUKESH COLONY, MILWAALA PHATAK, JAPUR TEL : 9549999662	
	B.T./C.C. TOP		ASSISTANT ENGINEER		SIGNATURE		SIGNATURE		SIGNATURE	
Chainage	Existing road Level	Proposed Embankment Top Level	Cutting/Filling	B.T./C.C. TOP	Chainage	Existing road Level	Proposed Embankment Top Level	Cutting/Filling	B.T./C.C. TOP	Chainage
31000.0	98.63	98.706	+0.076	98.706	31025.0	98.71	98.775	+0.065	98.775	31050.0
31050.0	98.75	98.843	+0.093	98.843	31100.0	98.945	98.98	+0.035	98.98	31125.0
31100.0	98.99	99.049	+0.059	99.049	31150.0	99.045	99.118	+0.073	99.118	31175.0
31150.0	99.135	99.186	+0.051	99.186	31200.0	99.255	99.306	+0.051	99.306	31225.0
31200.0	99.255	99.306	+0.051	99.306	31250.0	99.345	99.396	+0.051	99.396	31275.0
31250.0	99.46	99.512	+0.052	99.512	31300.0	99.475	99.526	+0.051	99.526	31325.0
31300.0	99.305	99.356	+0.051	99.356	31350.0	99.485	99.536	+0.051	99.536	31375.0
31350.0	99.485	99.536	+0.051	99.536	31400.0	99.555	99.606	+0.051	99.606	31425.0
31400.0	99.555	99.606	+0.051	99.606	31450.0	99.618	99.669	+0.051	99.669	31475.0
31450.0	99.618	99.669	+0.051	99.669	31500.0	99.672	99.723	+0.051	99.723	31525.0
31500.0	99.672	99.723	+0.051	99.723	31550.0	99.718	99.769	+0.051	99.769	31575.0
31550.0	99.718	99.769	+0.051	99.769	31600.0	99.758	99.809	+0.051	99.809	31625.0
31600.0	99.758	99.809	+0.051	99.809	31650.0	99.798	99.849	+0.051	99.849	31675.0
31650.0	99.798	99.849	+0.051	99.849	31700.0	99.838	99.889	+0.051	99.889	31725.0
31700.0	99.838	99.889	+0.051	99.889	31750.0	99.878	99.929	+0.051	99.929	31775.0
31750.0	99.878	99.929	+0.051	99.929	31800.0	99.918	99.969	+0.051	99.969	31825.0
31800.0	99.918	99.969	+0.051	99.969	31850.0	99.958	100.009	+0.051	100.009	31875.0
31850.0	99.958	100.009	+0.051	100.009	31900.0	100.008	100.059	+0.051	100.059	31925.0
31900.0	100.008	100.059	+0.051	100.059	31950.0	100.058	100.109	+0.051	100.109	31975.0
31950.0	100.058	100.109	+0.051	100.109	32000.0	100.108	100.159	+0.051	100.159	



Chainage	Existing road Level	Proposed Embankment Top Level	Cutting/Filling	B.T./C.C. TOP
33000.00	104.92	104.825	0.055	
33025.00	104.9	104.862	0.038	
33050.00	104.94	104.859	0.081	
33075.00	104.89	104.856	0.035	
33100.00	104.82	104.852	+0.032	
33125.00	104.765	104.849	+0.084	
33150.00	104.8	104.846	+0.046	
33175.00	104.81	104.843	+0.033	
33200.00	104.79	104.839	+0.049	
33225.00	104.75	104.836	+0.086	
33250.00	104.75	104.833	+0.083	
33275.00	104.72	104.83	+0.109	
33300.00	104.71	104.826	+0.116	
33325.00	104.68	104.823	+0.143	
33350.00	104.67	104.82	+0.15	
33375.00	104.613	104.817	+0.203	
33400.00	104.6	104.813	+0.213	
33425.00	104.81	104.81	0.0	
33450.00	104.73	104.767	+0.037	
33475.00	104.65	104.724	+0.074	
33500.00	104.58	104.681	+0.101	
33525.00	104.65	104.638	0.012	
33550.00	104.56	104.595	+0.035	
33575.00	104.5	104.553	+0.052	
33600.00	104.46	104.51	+0.05	
33625.00	104.4	104.467	+0.067	
33650.00	104.38	104.424	+0.044	
33675.00	104.295	104.381	+0.086	
33700.00	104.325	104.338	+0.013	
33725.00	104.295	104.295	0.0	
33750.00	104.255	104.24	0.015	
33775.00	104.145	104.184	+0.039	
33800.00	104.115	104.129	+0.014	
33825.00	104.025	104.073	+0.048	
33850.00	103.995	104.018	+0.023	
33875.00	104.095	103.963	0.132	
33900.00	103.935	103.907	0.028	
33925.00	103.815	103.852	+0.037	
33950.00	103.715	103.796	+0.081	
33975.00	103.595	103.741	+0.146	
34000.00	103.605	103.685	+0.08	

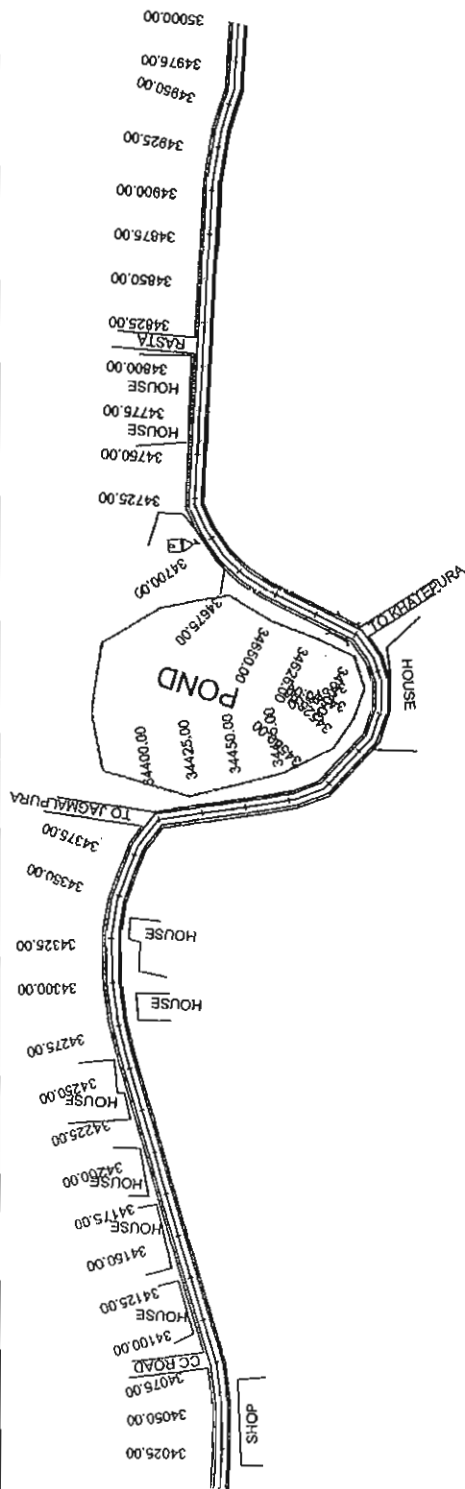
Widening & Strengthening
Mahangi to Dudhali mod

EXECUTIVE ENGINEER

ASSISTANT ENGINEER

SCALE: HORZ. 1 : 2500
VERT. 1 : 250

SURVEY POINT
34 MUKESH COLONY, MULWALA PHATAK, JAPUR TEL. : 954999862



Chainage	Existing road Level	Proposed Embankment Top Level	Cutting/Filling	B.T./C.C. TOP
34000.0	103.605	103.605	+0.08	
34025.0	103.63	103.63	0.0	
34050.0	103.485	103.542	+0.057	
34075.0	103.44	103.453	+0.013	
34100.0	103.385	103.365	0.02	
34125.0	103.3	103.277	0.023	
34150.0	103.195	103.188	0.007	
34175.0	103.1	103.1	0.0	
34200.0	103.11	103.141	+0.031	
34225.0	103.04	103.182	+0.142	
34250.0	102.975	103.223	+0.248	
34275.0	103.095	103.264	+0.179	
34300.0	103.175	103.305	+0.13	
34325.0	103.26	103.346	+0.086	
34350.0	103.395	103.387	0.008	
34375.0	103.285	103.428	+0.143	
34400.0	103.375	103.469	+0.094	
34425.0	103.51	103.51	0.0	
34450.0	103.535	103.495	0.04	
34475.0	103.455	103.48	+0.025	
34500.0	103.465	103.465	0.0	
34525.0	103.205	103.46	+0.255	
34550.0	103.295	103.455	+0.16	
34575.0	103.305	103.45	+0.145	
34600.0	103.445	103.445	0.0	
34625.0	104.205	103.278	0.928	
34650.0	103.925	103.11	0.815	
34675.0	103.175	102.943	0.232	
34700.0	102.775	102.775	0.0	
34725.0	102.555	102.395	0.16	
34750.0	102.015	102.015	0.0	
34775.0	101.885	101.919	+0.034	
34800.0	101.805	101.822	+0.017	
34825.0	101.715	101.726	+0.011	
34850.0	101.645	101.629	0.016	
34875.0	101.53	101.533	+0.003	
34900.0	101.42	101.436	+0.016	
34925.0	101.34	101.34	0.0	
34950.0	101.195	101.318	+0.122	
34975.0	101.32	101.295	0.025	
35000.0	101.32	101.273	0.048	

BY 03A342MS

SURVEY POINT

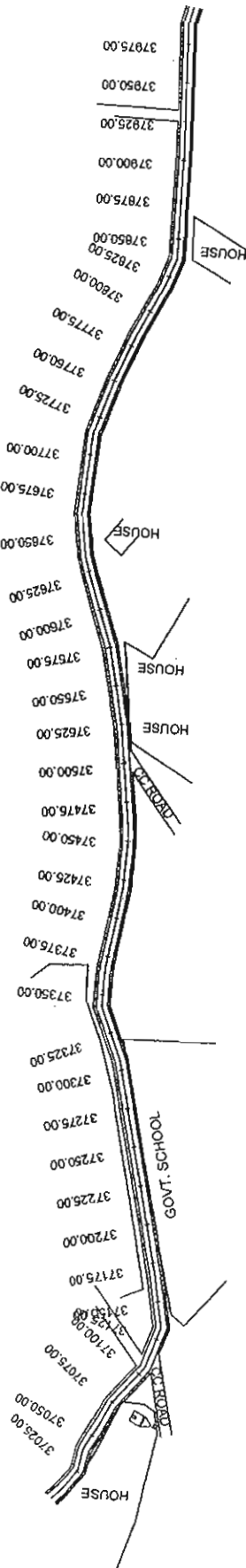
34 MUKESH COLONY, IMLIWALA PHATAK, JAIPUR TEL. : 9549999662

SCALE: HORIZ. 1 : 2500
 VERT. 1 : 250

ASSISTANT DIRECTOR

EXECUTIVE ENGINEER

Widening & Strengthening
Mahangi to Dudhali mod



Chainage	37000.0	96.24	96.28	+0.04
	37025.0	95.99	96.215	+0.225
Existing road Level	37050.0	95.675	96.149	+0.474
	37075.0	95.33	96.003	+0.753
Proposed Embankment Top Level	37100.0	95.16	96.010	+0.858
	37125.0	95.18	95.952	+0.772
Cutting/Filling	37150.0	95.26	95.886	+0.626
	37160.0	95.86	95.86	0.0
B.T./C.C. TOP	37175.0	95.94	95.822	0.118
	37200.0	96.02	95.758	0.262
Chainage	37225.0	96.02	95.694	0.326
	37250.0	95.81	95.63	0.18
Existing road Level	37275.0	95.823	95.566	0.257
	37300.0	95.47	95.503	+0.033
Proposed Embankment Top Level	37325.0	95.44	95.439	0.001
	37350.0	95.375	95.375	0.0
Chainage	37375.0	95.335	95.141	0.194
	37400.0	95.2	94.907	0.293
Existing road Level	37425.0	94.84	94.673	0.167
	37450.0	94.72	94.439	0.281
Proposed Embankment Top Level	37475.0	94.39	94.205	0.185
	37500.0	93.99	93.971	0.019
Chainage	37525.0	93.86	93.738	0.122
	37550.0	93.79	93.504	0.286
Existing road Level	37575.0	93.35	93.27	0.08
	37600.0	93.06	93.036	0.024
Proposed Embankment Top Level	37625.0	92.695	92.802	+0.107
	37650.0	92.61	92.568	0.042
Chainage	37675.0	92.4	92.334	0.066
	37700.0	92.1	92.1	0.0
Existing road Level	37725.0	91.91	92.087	+0.177
	37750.0	91.7	92.073	+0.373
Proposed Embankment Top Level	37775.0	91.485	92.06	+0.575
	37800.0	91.265	92.046	+0.781
Chainage	37825.0	90.925	92.033	+1.108
	37850.0	90.775	92.019	+1.244
Existing road Level	37875.0	90.565	92.006	+1.441
	37900.0	90.505	91.992	+1.487
Proposed Embankment Top Level	37925.0	90.285	91.979	+1.694
	37950.0	90.055	91.965	+1.91
Chainage	37975.0	89.985	91.952	+1.967
	38000.0	89.825	91.938	+2.113

Widening & Strengthening
Mahangi to Dudhali mod

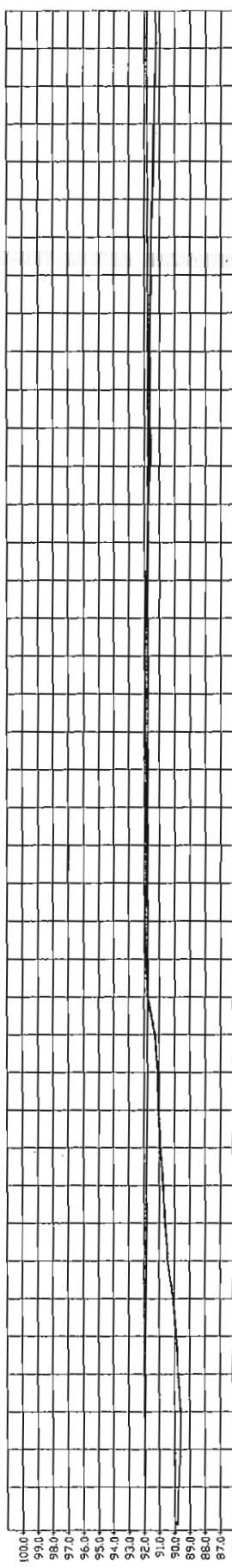
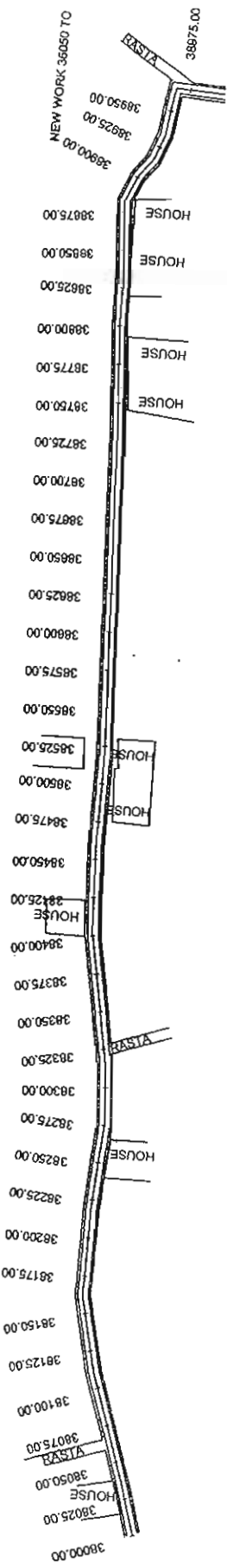
EXECUTIVE ENGINEER

ASSISTANT ENGINEER

SCALE: HORZ. 1 : 2500
VERT. 1 : 250

SURVEYED BY

34 NUKESH COLONY, INJWALA PHATAK, JAIPUR TEL. : 9549999662



SURVEY POINT	SCALE: HORZ. 1 : 2500 VERT. 1 : 250		EXECUTIVE ENGINEER		ASSISTANT ENGINEER	
	34 MUKESH COLONY, MULWALA PHATAK, JAIPUR TEL : 9549999662					
Chainage	Existing road Level	Proposed Embankment Top Level	Cutting/Filling	B.T./C.C. TOP		
38000.00	89.825	91.938	+2.113			
38025.00	89.725	91.925	+2.2			
38050.00	89.595	91.912	+2.317			
38075.00	89.595	91.898	+2.303			
38100.00	89.735	91.885	+2.15			
38125.00	89.865	91.871	+2.006			
38150.00	90.07	91.858	+1.788			
38175.00	90.415	91.844	+1.429			
38200.00	90.595	91.831	+1.236			
38225.00	90.71	91.817	+1.107			
38250.00	90.89	91.804	+0.914			
38275.00	91.04	91.79	+0.75			
38300.00	91.08	91.777	+0.697			
38325.00	91.26	91.763	+0.503			
38350.00	91.75	91.75	0.0			
38375.00	91.87	91.75	0.12			
38400.00	91.92	91.75	0.17			
38425.00	91.83	91.75	0.08			
38450.00	91.84	91.75	0.09			
38475.00	91.87	91.75	0.12			
38500.00	91.82	91.75	0.07			
38525.00	91.92	91.75	0.17			
38550.00	91.885	91.75	0.135			
38575.00	91.93	91.75	0.18			
38600.00	91.88	91.75	0.13			
38625.00	91.83	91.75	0.08			
38650.00	91.75	91.75	0.0			
38675.00	91.75	91.75	0.0			
38700.00	91.6	91.756	+0.156			
38725.00	91.62	91.761	+0.141			
38750.00	91.62	91.767	+0.147			
38775.00	91.64	91.773	+0.133			
38800.00	91.6	91.778	+0.178			
38825.00	91.535	91.784	+0.249			
38850.00	91.56	91.79	+0.23			
38875.00	91.47	91.795	+0.325			
38900.00	91.4	91.801	+0.401			
38925.00	91.35	91.807	+0.457			
38950.00	91.28	91.812	+0.532			
38975.00	91.22	91.818	+0.598			
39000.00	91.245	91.824	+0.579			

Widening & Strengthening
Mahangi to Dudhali mod

SURVEY POINT

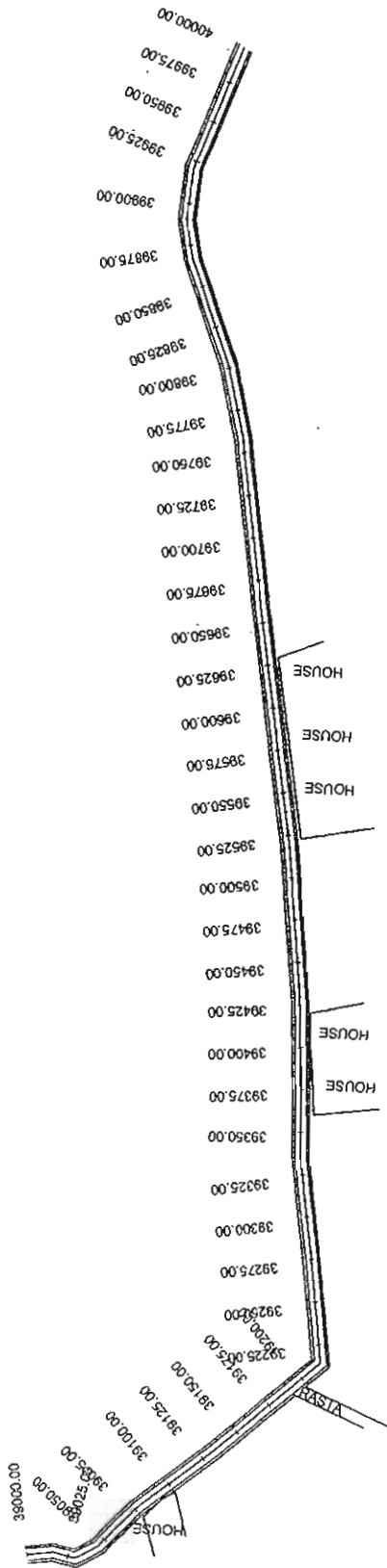
34 MUKESH COLONY, MULWALA PHATAK, JAIPUR TEL : 9549999662

SCALE: HORZ. 1 : 2500
VERT. 1 : 250

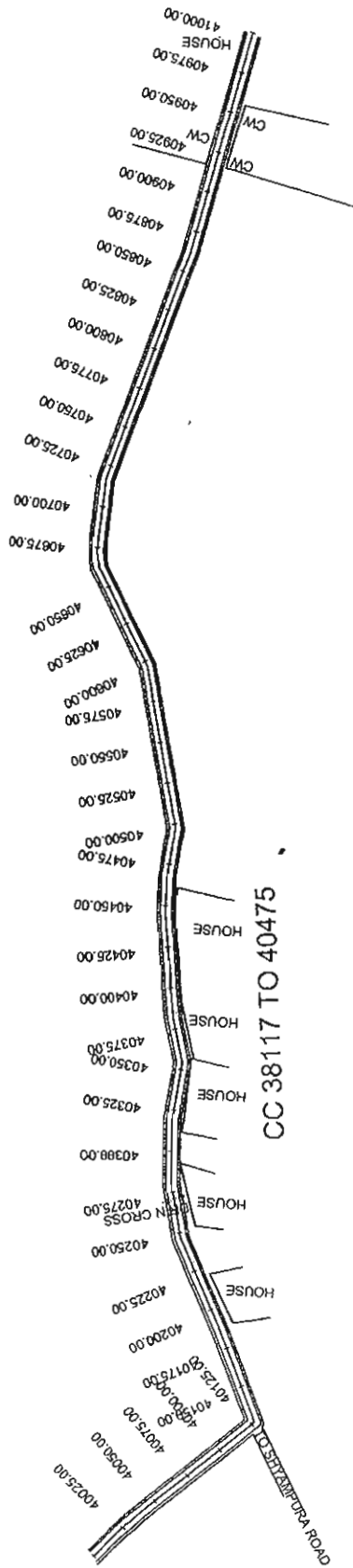
EXECUTIVE ENGINEER

ASSISTANT ENGINEER

SHYAMPURA VILLAGE



SURVEYED BY	SURVEY POINT		SCALE:		EXECUTIVE ENGINEER		ASSISTANT ENGINEER		Widening & Strengthening Mahangi to Dudhali mod	
	34 MUKESH COLONY, IMLIWALA PHATAK, JAIPUR TEL : 9549989662		HORZ. 1 : 2500	VERT. 1 : 250						
Chainage	39000.00	91.24	39250.00	91.625	39400.00	91.585	39550.00	91.585	39700.00	91.14
Existing road Level	39025.00	91.46	39250.00	91.775	39400.00	91.585	39550.00	91.585	39700.00	91.14
Proposed Embankment Top Level	39050.00	91.835	39250.00	91.775	39400.00	91.585	39550.00	91.585	39700.00	91.14
Cutting/Filling	39075.00	91.755	39250.00	91.775	39400.00	91.585	39550.00	91.585	39700.00	91.14
B.T./C.C. TOP	39100.00	91.845	39250.00	91.775	39400.00	91.585	39550.00	91.585	39700.00	91.14
	39125.00	91.915	39250.00	91.775	39400.00	91.585	39550.00	91.585	39700.00	91.14
	39150.00	91.875	39250.00	91.775	39400.00	91.585	39550.00	91.585	39700.00	91.14
	39175.00	91.875	39250.00	91.775	39400.00	91.585	39550.00	91.585	39700.00	91.14
	39200.00	91.815	39250.00	91.775	39400.00	91.585	39550.00	91.585	39700.00	91.14
	39225.00	91.783	39250.00	91.775	39400.00	91.585	39550.00	91.585	39700.00	91.14
	39250.00	91.79	39250.00	91.775	39400.00	91.585	39550.00	91.585	39700.00	91.14
	39275.00	91.768	39250.00	91.775	39400.00	91.585	39550.00	91.585	39700.00	91.14
	39300.00	91.76	39250.00	91.775	39400.00	91.585	39550.00	91.585	39700.00	91.14
	39325.00	91.753	39250.00	91.775	39400.00	91.585	39550.00	91.585	39700.00	91.14
	39350.00	91.745	39250.00	91.775	39400.00	91.585	39550.00	91.585	39700.00	91.14
	39375.00	91.718	39250.00	91.775	39400.00	91.585	39550.00	91.585	39700.00	91.14
	39400.00	91.718	39250.00	91.775	39400.00	91.585	39550.00	91.585	39700.00	91.14
	39425.00	91.69	39250.00	91.775	39400.00	91.585	39550.00	91.585	39700.00	91.14
	39450.00	91.63	39250.00	91.775	39400.00	91.585	39550.00	91.585	39700.00	91.14
	39475.00	91.635	39250.00	91.775	39400.00	91.585	39550.00	91.585	39700.00	91.14
	39500.00	91.608	39250.00	91.775	39400.00	91.585	39550.00	91.585	39700.00	91.14
	39525.00	91.585	39250.00	91.775	39400.00	91.585	39550.00	91.585	39700.00	91.14
	39550.00	91.585	39250.00	91.775	39400.00	91.585	39550.00	91.585	39700.00	91.14
	39575.00	91.553	39250.00	91.775	39400.00	91.585	39550.00	91.585	39700.00	91.14
	39600.00	91.525	39250.00	91.775	39400.00	91.585	39550.00	91.585	39700.00	91.14
	39625.00	91.498	39250.00	91.775	39400.00	91.585	39550.00	91.585	39700.00	91.14
	39650.00	91.47	39250.00	91.775	39400.00	91.585	39550.00	91.585	39700.00	91.14
	39675.00	91.443	39250.00	91.775	39400.00	91.585	39550.00	91.585	39700.00	91.14
	39700.00	91.415	39250.00	91.775	39400.00	91.585	39550.00	91.585	39700.00	91.14
	39725.00	91.388	39250.00	91.775	39400.00	91.585	39550.00	91.585	39700.00	91.14
	39750.00	91.36	39250.00	91.775	39400.00	91.585	39550.00	91.585	39700.00	91.14
	39775.00	91.333	39250.00	91.775	39400.00	91.585	39550.00	91.585	39700.00	91.14
	39800.00	91.305	39250.00	91.775	39400.00	91.585	39550.00	91.585	39700.00	91.14
	39825.00	91.278	39250.00	91.775	39400.00	91.585	39550.00	91.585	39700.00	91.14
	39850.00	91.25	39250.00	91.775	39400.00	91.585	39550.00	91.585	39700.00	91.14
	39875.00	91.223	39250.00	91.775	39400.00	91.585	39550.00	91.585	39700.00	91.14
	39900.00	91.195	39250.00	91.775	39400.00	91.585	39550.00	91.585	39700.00	91.14
	39925.00	91.168	39250.00	91.775	39400.00	91.585	39550.00	91.585	39700.00	91.14
	39950.00	91.14	39250.00	91.775	39400.00	91.585	39550.00	91.585	39700.00	91.14
	39975.00	91.117	39250.00	91.775	39400.00	91.585	39550.00	91.585	39700.00	91.14
	40000.00	91.09	39250.00	91.775	39400.00	91.585	39550.00	91.585	39700.00	91.14



B.T./C.C. TOP

Cutting/Filling

Proposed Embankment
Top Level

Existing road Level

Chainage

SURVEYED BY

SURVEY POINT

34 MUKESH COLONY, IMLIWALA PHATAK, JAPUR TEL. : 9549999662

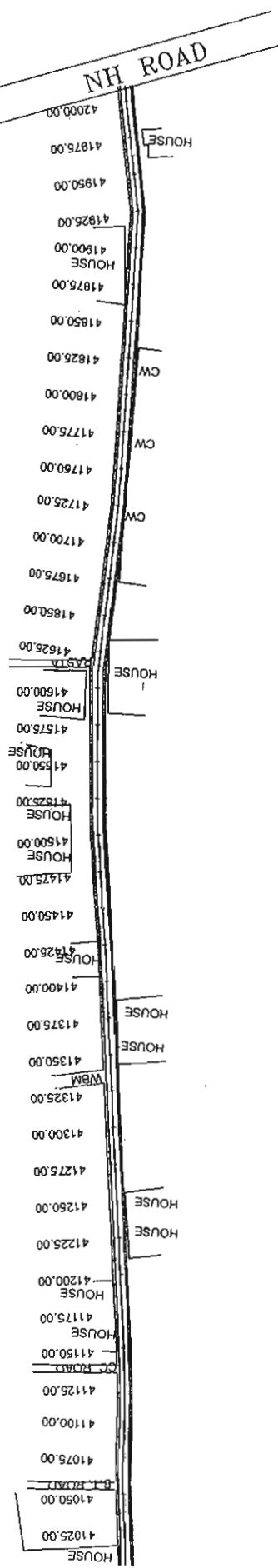
SCALE:

HORZ. 1 : 2500
VERT. 1 : 250

ASSISTANT ENGINEER

EXECUTIVE ENGINEER

Widening & Strengthening
Mahangi to Dudhali mod



B.T./C.C. TOP	Cutting/Filling	Proposed Embankment Top Level	Existing road Level	Chainage
0.0	0.0	93.56	93.56	41000.00
+0.19	0.0	93.59	93.4	41025.00
+0.25	0.0	93.62	93.37	41050.00
+0.27	0.0	93.65	93.38	41075.00
+0.25	0.0	93.68	93.43	41100.00
+0.22	0.01	93.71	93.49	41125.00
0.01	0.03	93.74	93.75	41150.00
0.0	0.0	93.77	93.8	41175.00
0.0	0.0	93.8	93.8	41200.00
+0.099	0.113	93.829	93.845	41225.00
0.004	0.004	93.858	93.89	41250.00
0.0	0.0	93.915	93.915	41275.00
+0.004	0.018	93.934	93.97	41300.00
0.043	0.043	94.071	94.914	41325.00
0.031	0.031	94.789	94.82	41350.00
+0.018	0.004	94.708	94.69	41375.00
0.004	0.0	94.626	94.63	41400.00
0.0	0.0	94.545	94.545	41425.00
+0.078	0.0	94.493	94.415	41450.00
+0.067	0.004	94.442	94.375	41475.00
+0.135	0.035	94.39	94.255	41500.00
0.107	0.093	94.338	94.445	41525.00
0.0	0.0	94.235	94.235	41550.00
+0.438	0.096	94.173	93.735	41575.00
0.0	0.0	94.111	93.195	41600.00
+1.274	0.0	94.049	92.775	41625.00
+1.502	0.0	93.987	92.485	41650.00
+1.53	0.0	93.925	92.395	41675.00
+1.498	0.0	93.863	92.365	41700.00
+1.426	0.0	93.801	92.375	41725.00
+1.324	0.0	93.739	92.415	41750.00
+1.172	0.0	93.677	92.505	41775.00
+1.0	0.0	93.615	92.615	41800.00
+0.878	0.0	93.553	92.675	41825.00
+0.836	0.0	93.491	92.655	41850.00
+0.644	0.0	93.429	92.785	41875.00
+0.522	0.0	93.367	92.845	41900.00
0.0	0.0	93.305	92.905	41925.00

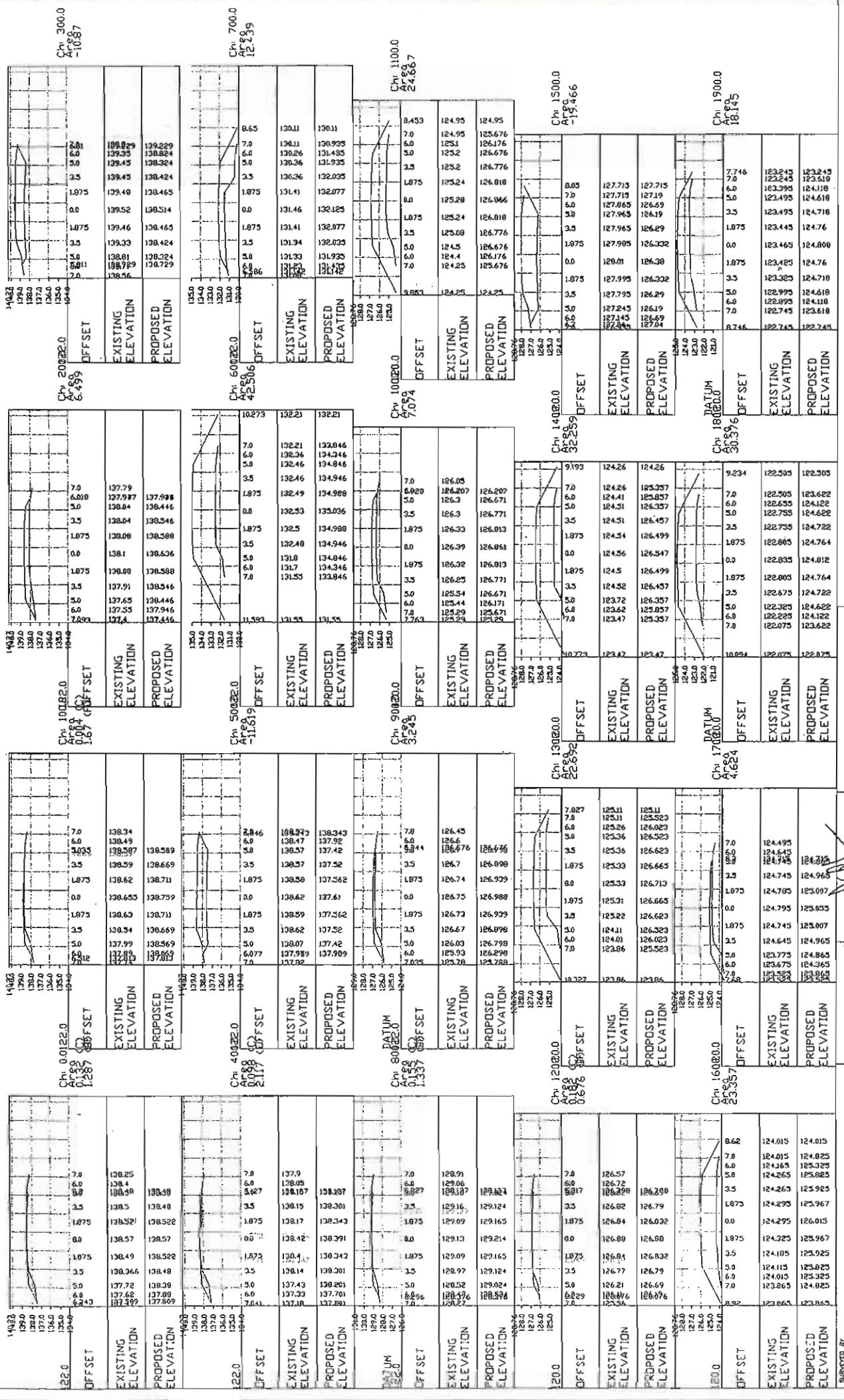
Widening & Strengthening
Mahangi to Dudhali mod

EXECUTIVE ENGINEER

ASSISTANT ENGINEER

SCALE: HORZ. 1 : 2500
VERT. 1 : 250

SURVEY POINT
34 MUKESH COLONY, INLWALA PHATAK, JAPUR TEL. : 9548999662



Mahngi to Dudli mode(NH-21)

EXECUTIVE ENGINEER

ASSISTANT ENGINEER

SCALE: HORIZ. 1 : 2500
VERT. 1 : 250

M/s SURVEY POINT

SURVED BY

SURVED BY

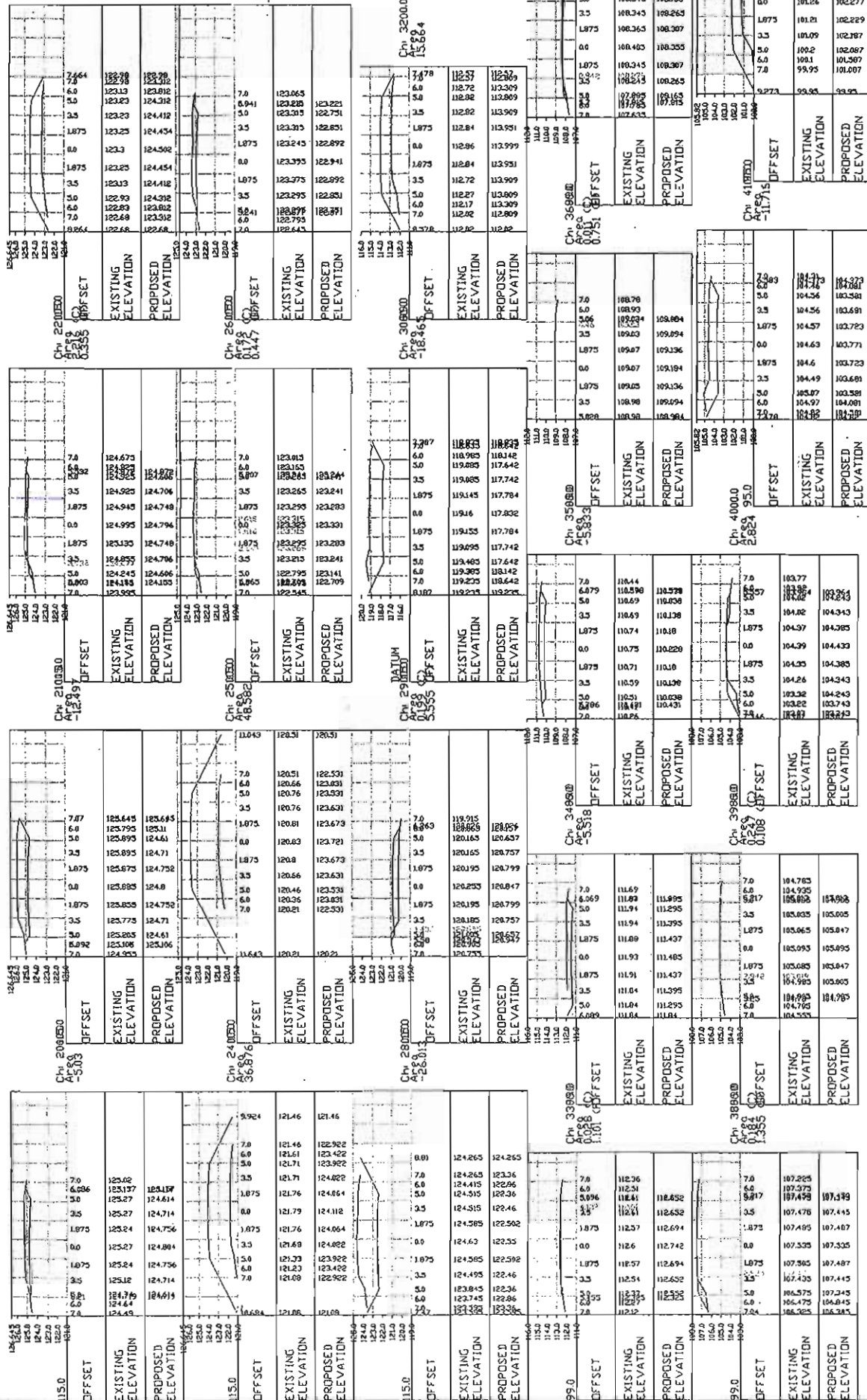
M/s SURVEY POINT

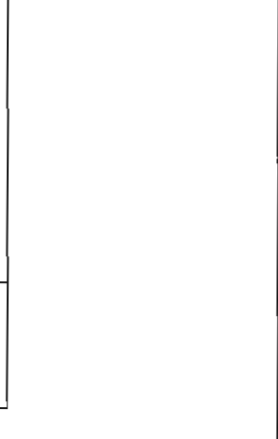
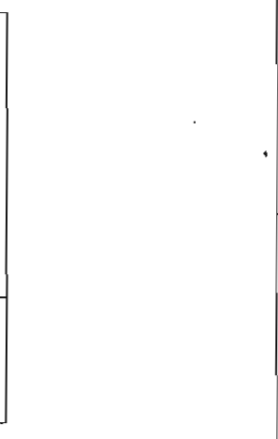
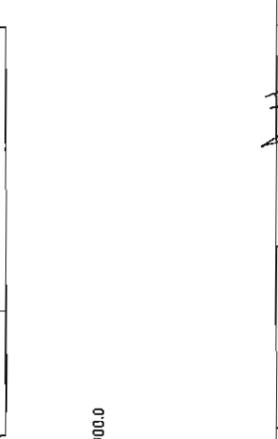
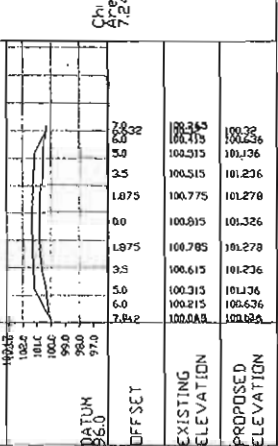
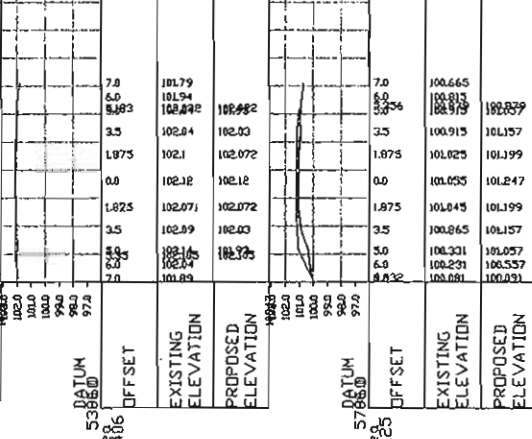
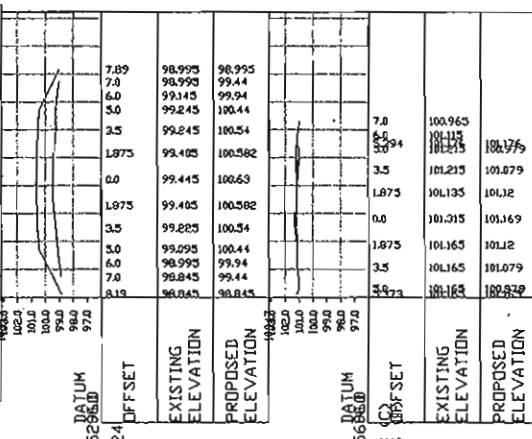
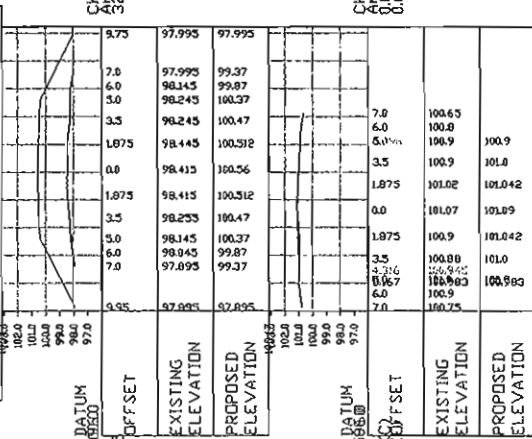
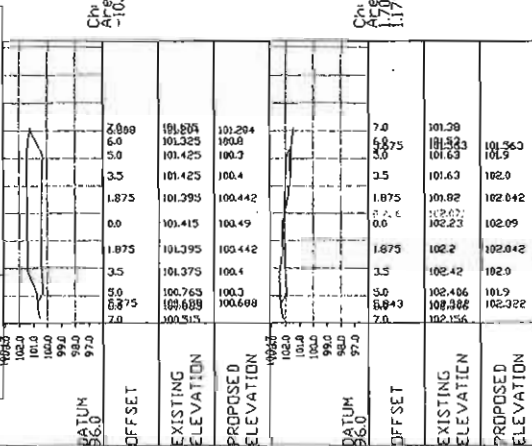
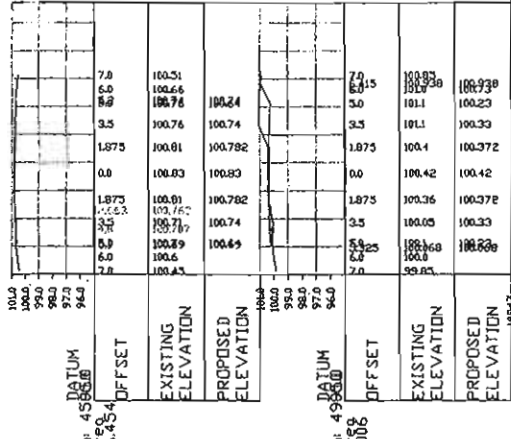
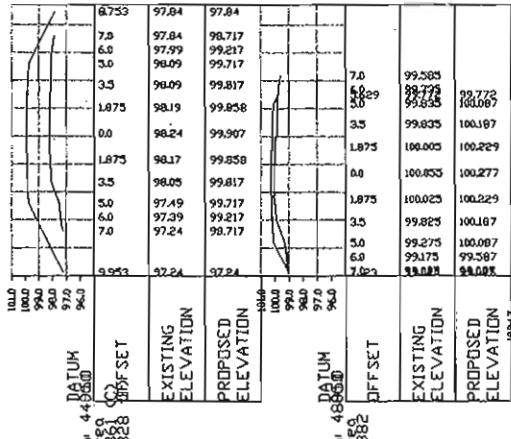
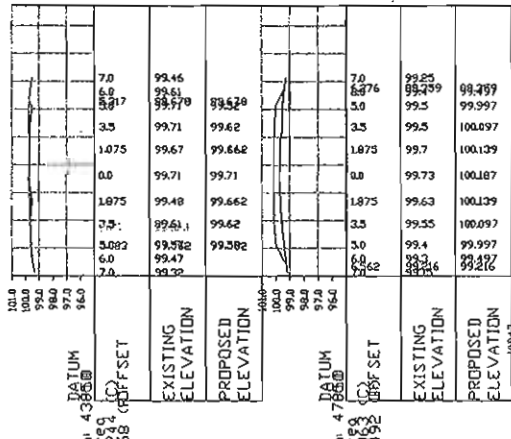
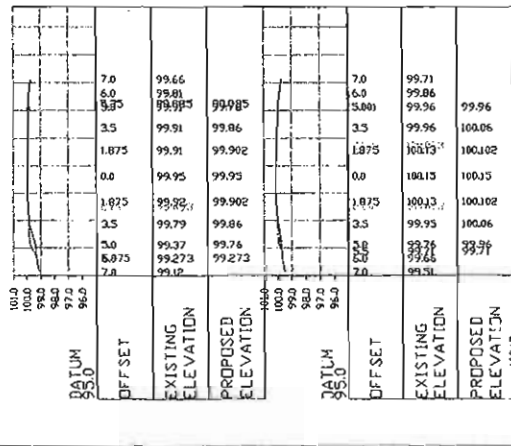
SCALE:
HORZ. 1 : 2500
VERT. 1 : 250

ASSISTANT ENGINEER

EXECUTIVE ENGINEER

Mahngi to Dudli mode(NH-21)





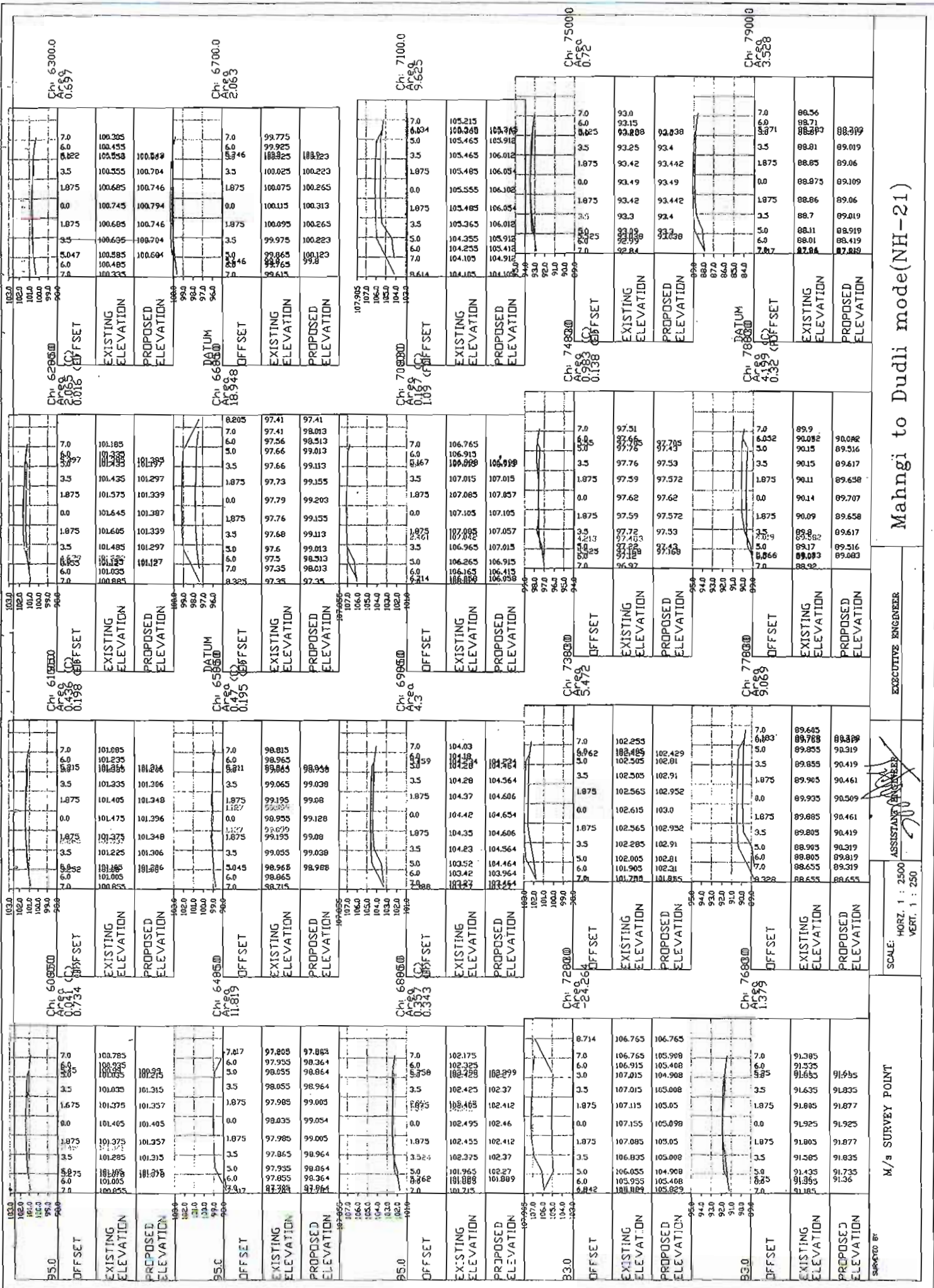
M/s SURVEY POINT

SCALE: HORZ 1 : 2500
VERT. 1 : 250

ASSISTANT ENGINEER

EXECUTIVE ENGINEER

Mahngi to Dudli mode(NH-21)



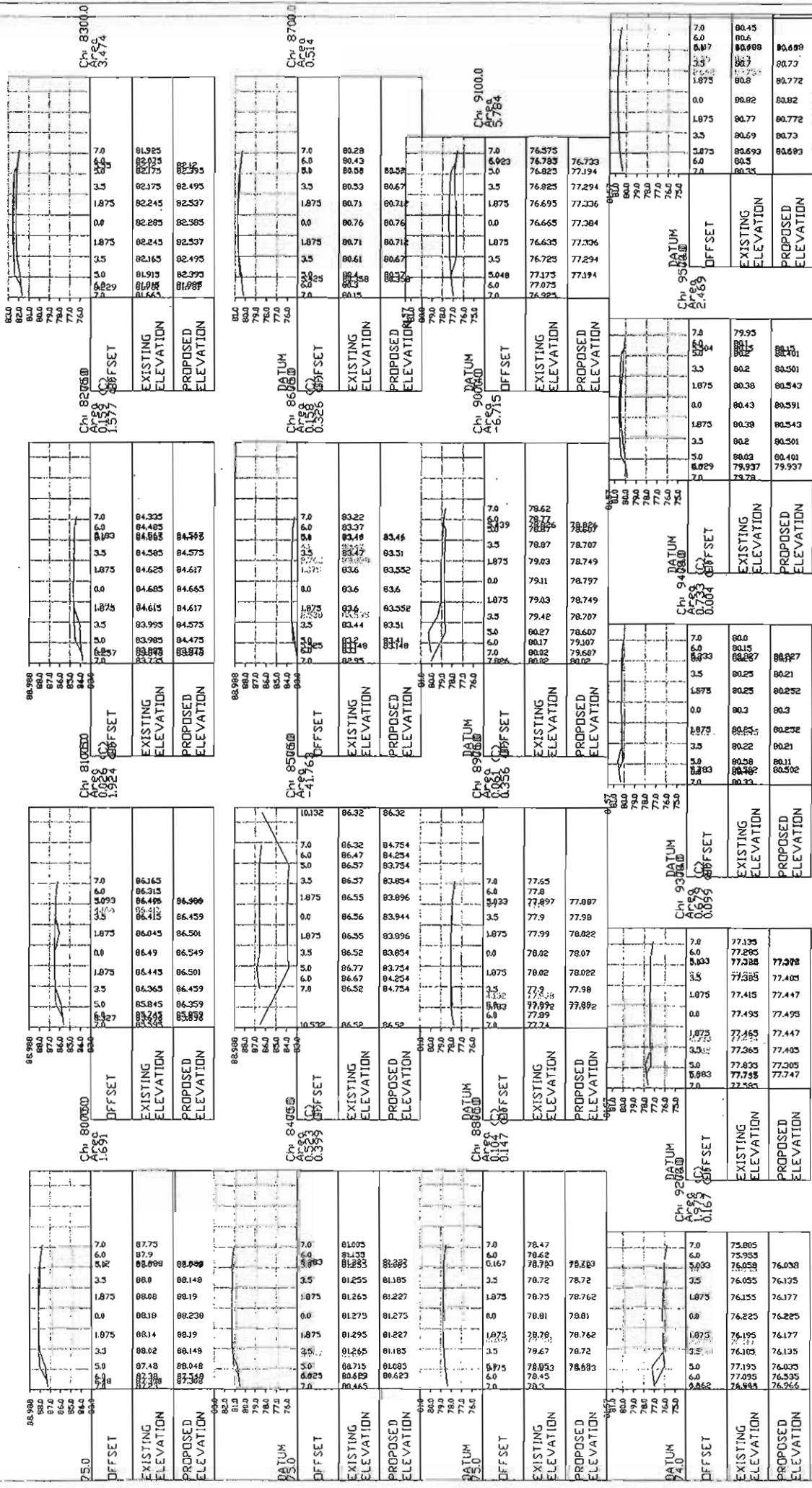
Mahngi to Dudli mode(NH-21)

EXECUTIVE ENGINEER

ISTANT ENGINEER

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M/S SURVEY POINT



Mahngi to Dudli mode(NH-21)

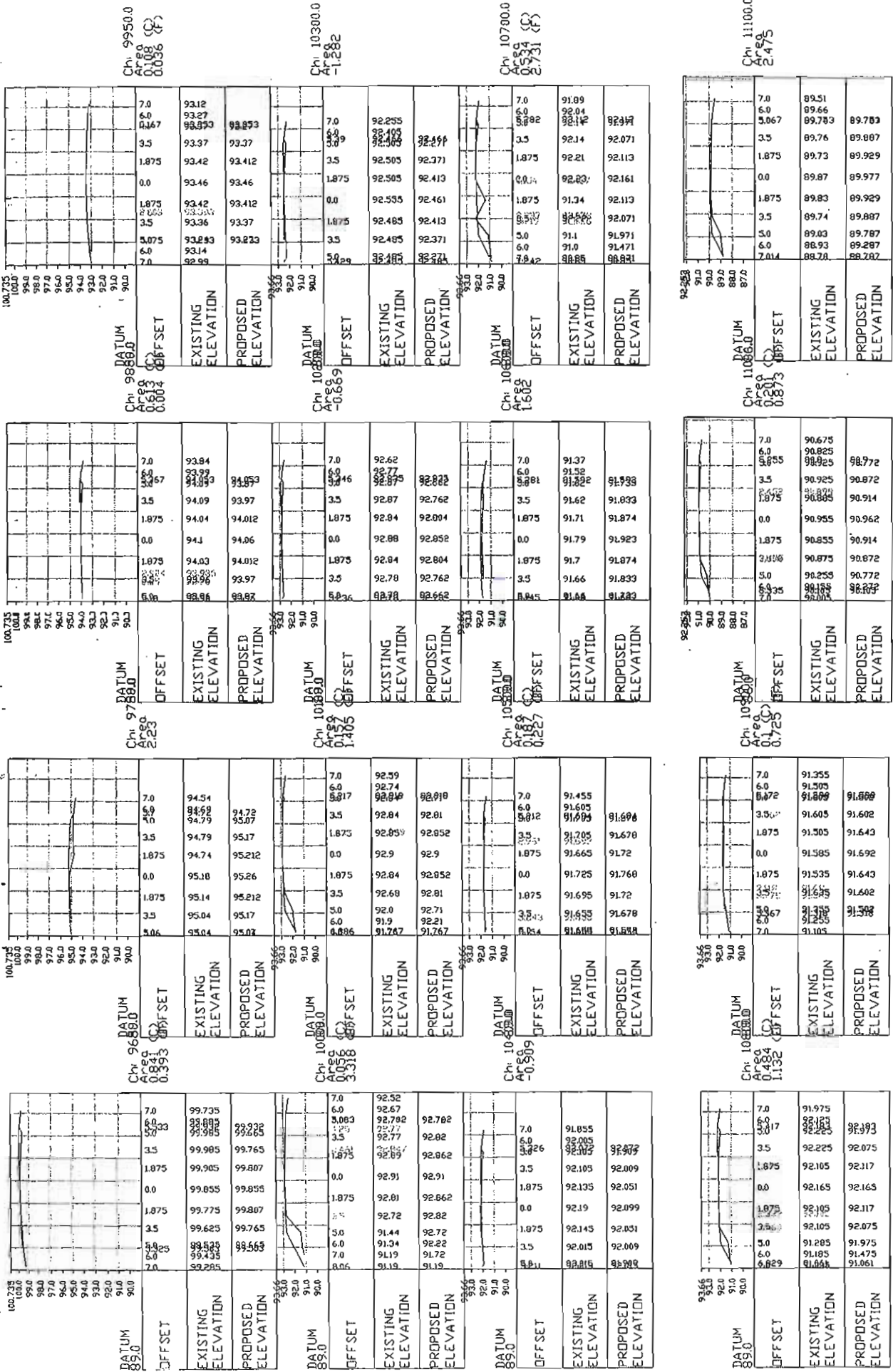
EXECUTIVE ENGINEER

ASSISTANT ENGINEER

SCALE: HORIZ. 1 : 2500
VERT. 1 : 250

M/s SURVEY POINT

SIGNED BY



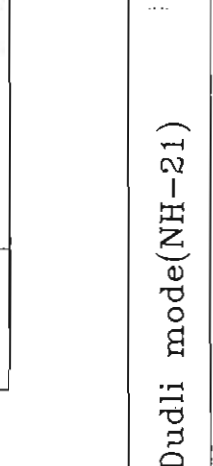
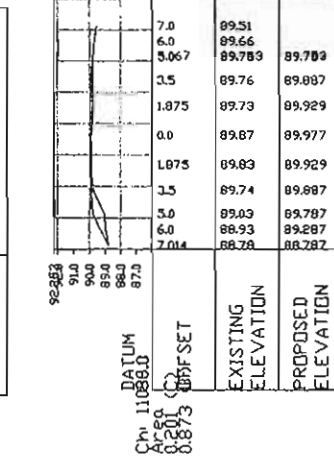
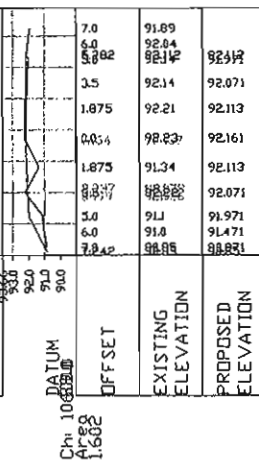
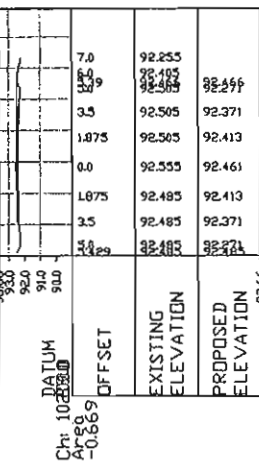
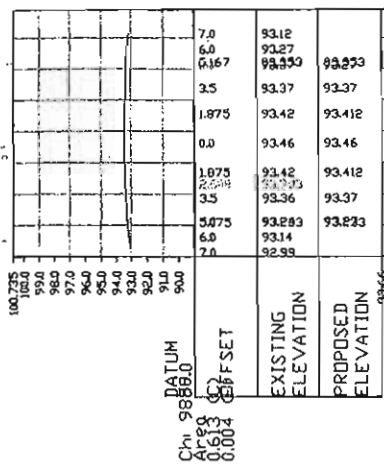
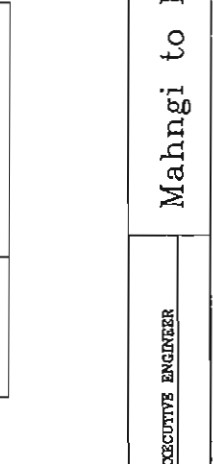
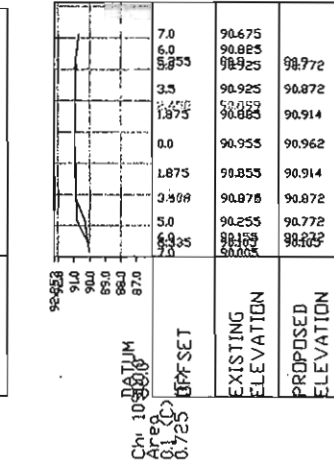
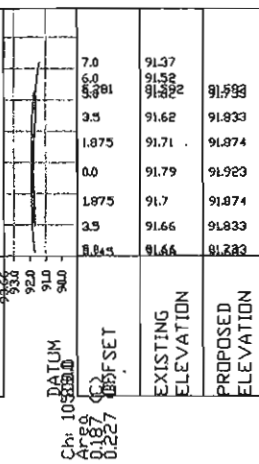
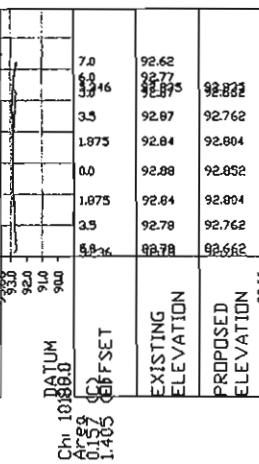
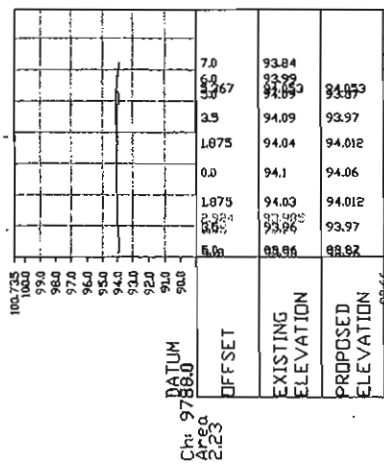
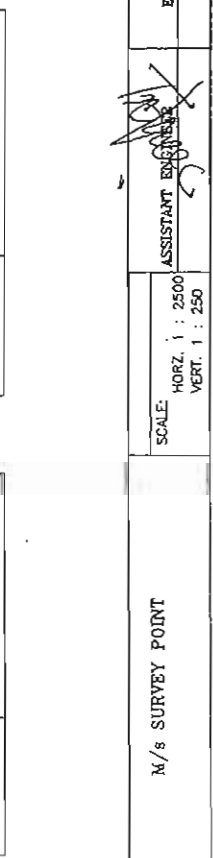
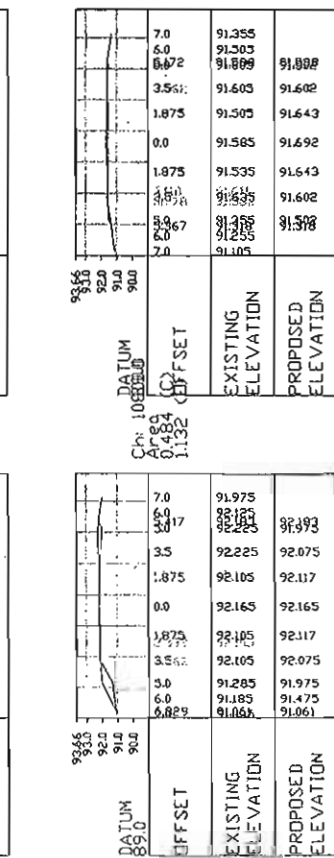
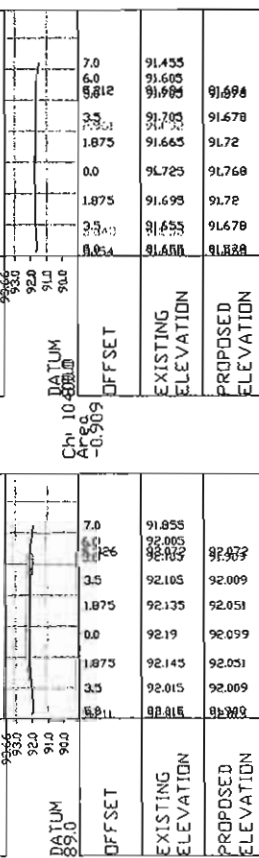
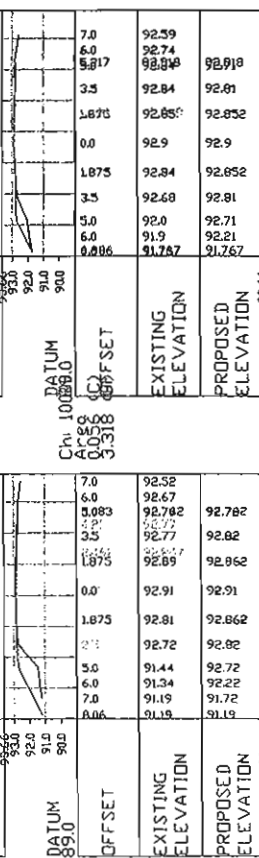
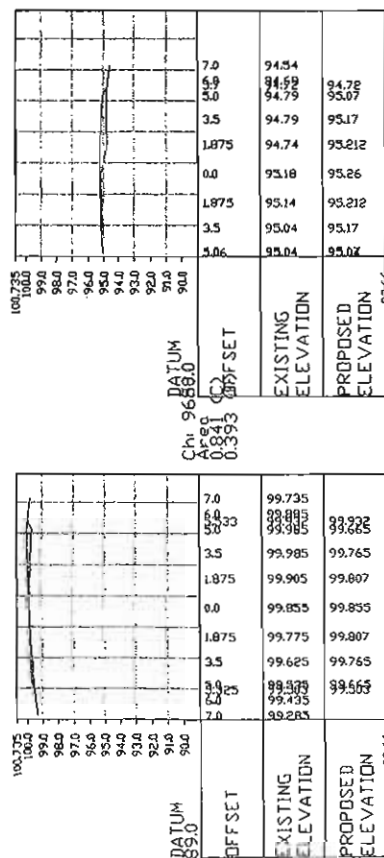
Mahngi to Dudli mode(NH-21)

SCALE: HORIZ. 1 : 2500 VERT. 1 : 250

EXECUTIVE ENGINEER

ASSISTANT ENGINEER

M/s SURVEY POINT



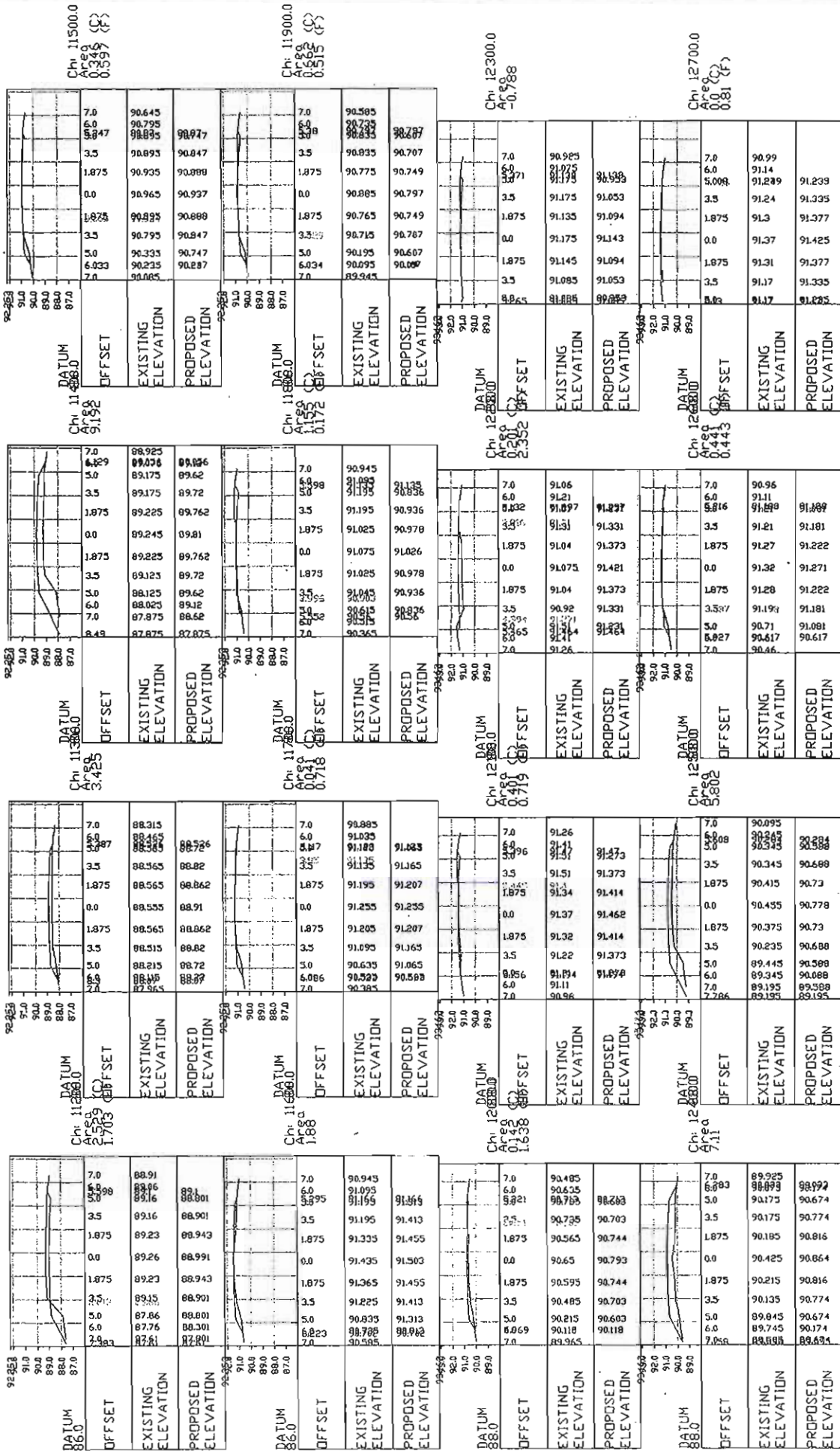
SUBMITTED BY

M/s SURVEY POINT

SCALE:
HORIZ. 1 : 2500
VERT. 1 : 250

EXECUTIVE ENGINEER

Mahngi to Dudli mode(NH-21)



Mahngi to Dudli mode(NH-21)

EXECUTIVE ENGINEER

ASSISTANT ENGINEER

SCALE: HORIZ 1 : 2500
VERT. 1 : 250

M/s SURVEY POINT

SURVED BY

Ch. 12800.0 Area 1.285 1.118 (C) OFFSET DATUM 9300 930 920 910 890 OFFSET EXISTING ELEVATION PROPOSED ELEVATION	Ch. 12900.0 Area 0.588 0.283 (C) DATUM 9300 930 920 910 OFFSET EXISTING ELEVATION PROPOSED ELEVATION	Ch. 13000.0 Area 0.012 1.53 (C) OFFSET DATUM 9300 930 920 910 EXISTING ELEVATION PROPOSED ELEVATION	Ch. 13100.0 Area 0.053 6.345 (C) OFFSET DATUM 9300 930 920 910 EXISTING ELEVATION PROPOSED ELEVATION	Ch. 13200.0 Area 1.4 1.929 (C) OFFSET DATUM 9300 930 920 910 EXISTING ELEVATION PROPOSED ELEVATION	Ch. 13300.0 Area 0.425 5.319 (C) OFFSET DATUM 9300 930 920 910 EXISTING ELEVATION PROPOSED ELEVATION	Ch. 13400.0 Area 0.167 3.551 (C) OFFSET DATUM 9300 930 920 910 EXISTING ELEVATION PROPOSED ELEVATION	Ch. 13500.0 Area 0.053 7.953 (C) OFFSET DATUM 9300 930 920 910 EXISTING ELEVATION PROPOSED ELEVATION	Ch. 13600.0 Area 0.053 7.953 (C) OFFSET DATUM 9300 930 920 910 EXISTING ELEVATION PROPOSED ELEVATION	Ch. 13700.0 Area 0.053 7.953 (C) OFFSET DATUM 9300 930 920 910 EXISTING ELEVATION PROPOSED ELEVATION	Ch. 13800.0 Area 0.053 7.953 (C) OFFSET DATUM 9300 930 920 910 EXISTING ELEVATION PROPOSED ELEVATION	Ch. 13900.0 Area 0.053 7.953 (C) OFFSET DATUM 9300 930 920 910 EXISTING ELEVATION PROPOSED ELEVATION	Ch. 14000.0 Area 0.053 7.953 (C) OFFSET DATUM 9300 930 920 910 EXISTING ELEVATION PROPOSED ELEVATION	Ch. 14100.0 Area 0.053 7.953 (C) OFFSET DATUM 9300 930 920 910 EXISTING ELEVATION PROPOSED ELEVATION	Ch. 14200.0 Area 0.053 7.953 (C) OFFSET DATUM 9300 930 920 910 EXISTING ELEVATION PROPOSED ELEVATION	Ch. 14300.0 Area 0.053 7.953 (C) OFFSET DATUM 9300 930 920 910 EXISTING ELEVATION PROPOSED ELEVATION	Ch. 14400.0 Area 0.053 7.953 (C) OFFSET DATUM 9300 930 920 910 EXISTING ELEVATION PROPOSED ELEVATION	Ch. 14500.0 Area 0.053 7.953 (C) OFFSET DATUM 9300 930 920 910 EXISTING ELEVATION PROPOSED ELEVATION	Ch. 14600.0 Area 0.053 7.953 (C) OFFSET DATUM 9300 930 920 910 EXISTING ELEVATION PROPOSED ELEVATION	Ch. 14700.0 Area 0.053 7.953 (C) OFFSET DATUM 9300 930 920 910 EXISTING ELEVATION PROPOSED ELEVATION	Ch. 14800.0 Area 0.053 7.953 (C) OFFSET DATUM 9300 930 920 910 EXISTING ELEVATION PROPOSED ELEVATION	Ch. 14900.0 Area 0.053 7.953 (C) OFFSET DATUM 9300 930 920 910 EXISTING ELEVATION PROPOSED ELEVATION	Ch. 15000.0 Area 0.053 7.953 (C) OFFSET DATUM 9300 930 920 910 EXISTING ELEVATION PROPOSED ELEVATION
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Mahngi to Dudli mode(NH-21)

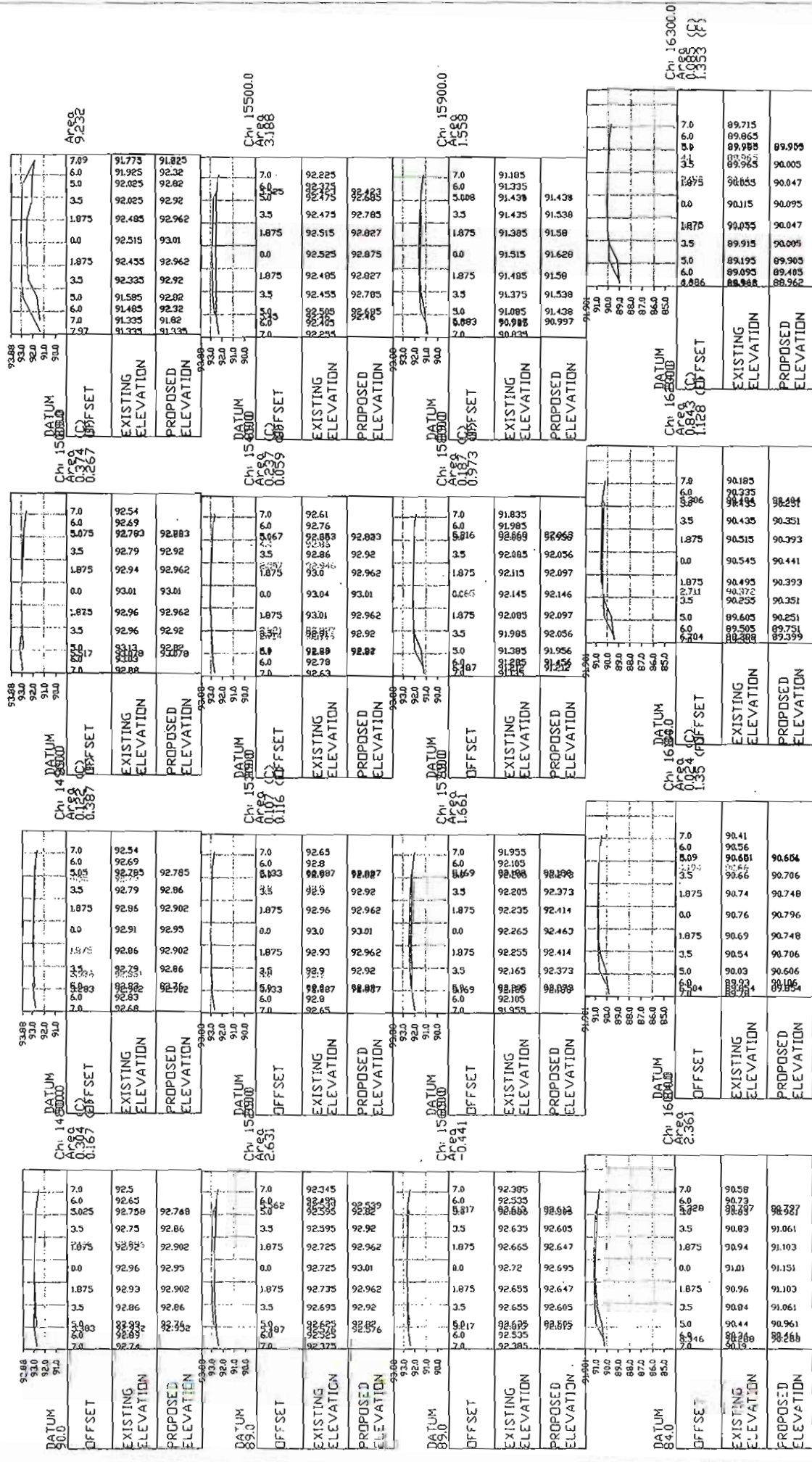
EXECUTIVE ENGINEER

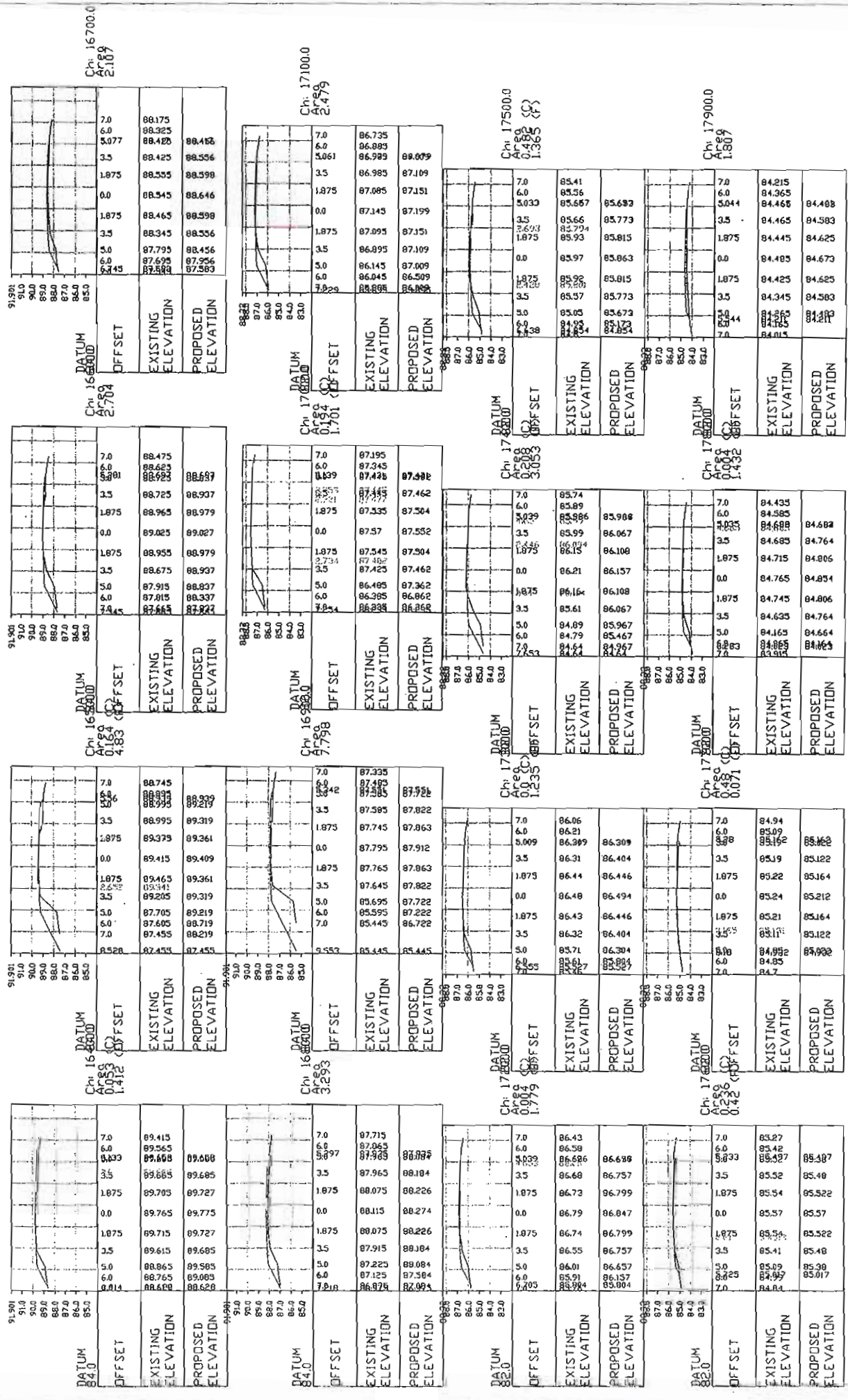
ASSISTANT ENGINEER

SCALE: HORIZ. 1 : 2500
VERT. 1 : 250

M/s SURVEY POINT

SURVEYED BY





Mahngi to Dudli mode(NH-21)

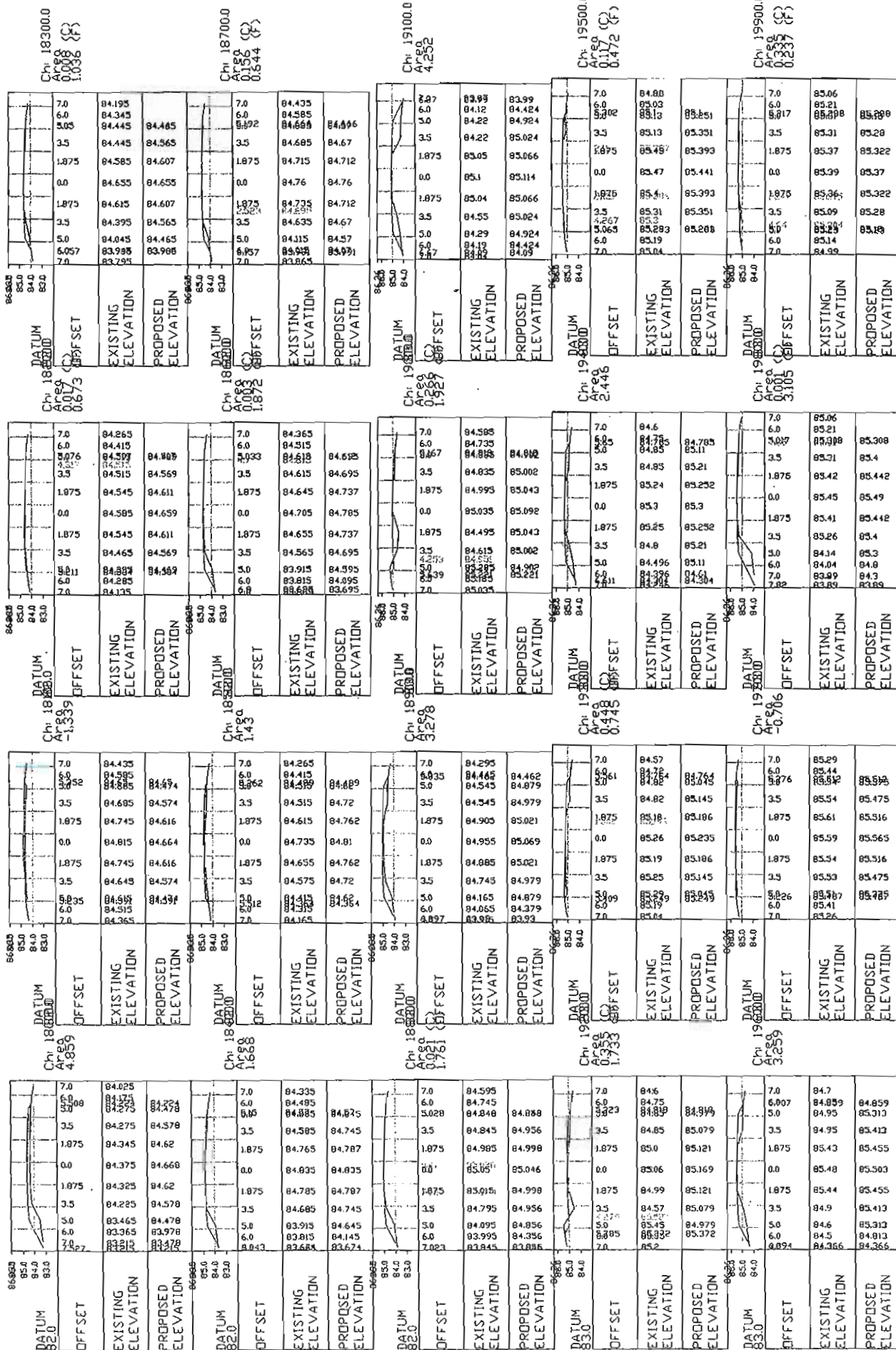
EXECUTIVE ENGINEER

ASSISTANT ENGINEER

SCALE: HORIZ. 1 : 2500
VERT. 1 : 250

M/s SURVEY POINT

SHEET NO. 21



M/s SURVEY POINT

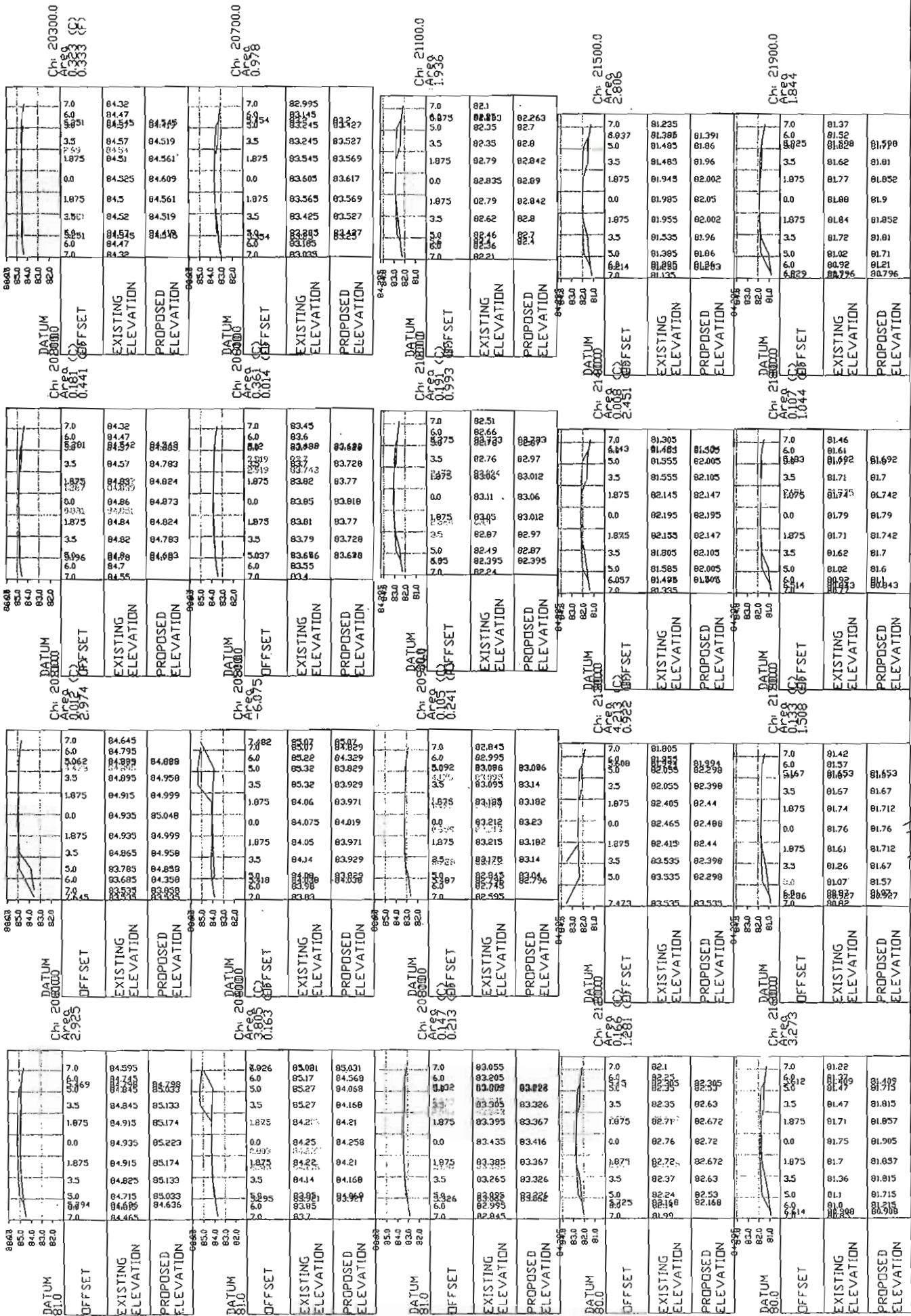
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VERT. 1 : 250

ASSISTANT ENGINEER

EXECUTIVE ENGINEER

Mahngi to Dudli mode(NH-21)

SURVEYED BY



Mahngi to Dudli mode(NH-21)

EXECUTIVE ENGINEER

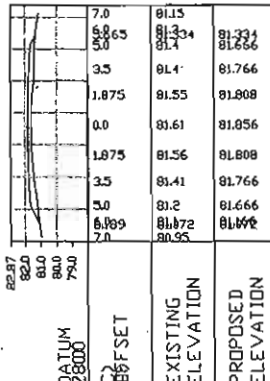
ASSISTANT ENGINEER

SCALE: HORZ. 1 : 2500
 VERT. 1 : 250

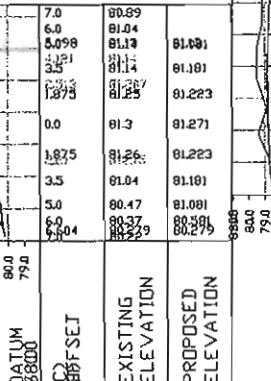
M/s SURVEY POINT

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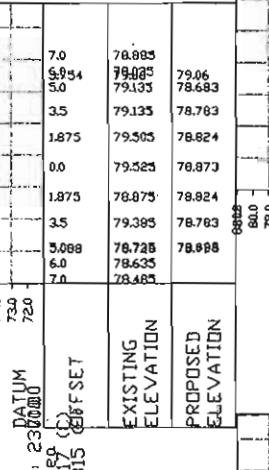
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Area
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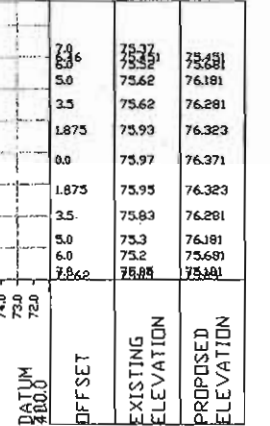
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1.164 (F)



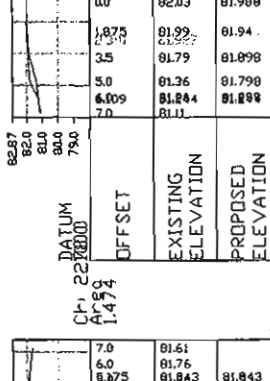
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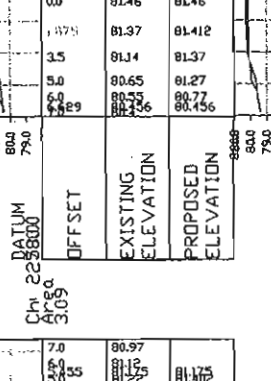
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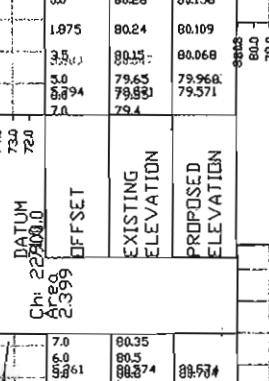
Ch: 22800.0
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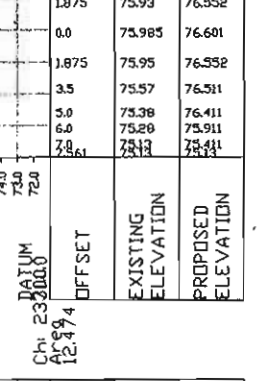
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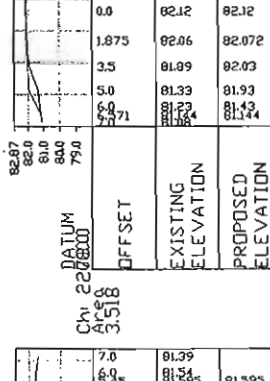
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Area
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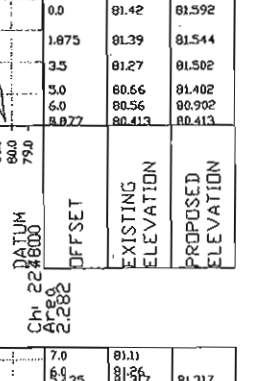
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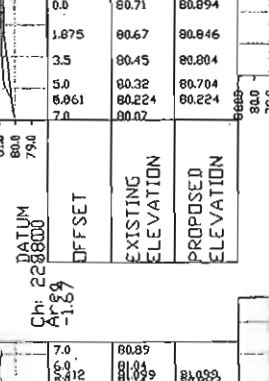
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Area
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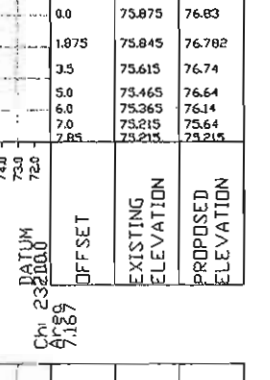
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Area
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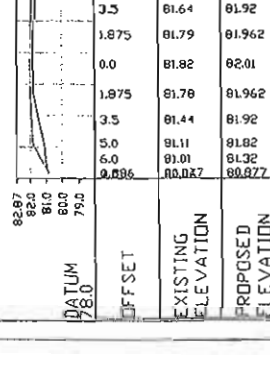
Ch: 22900.0
Area
2.399



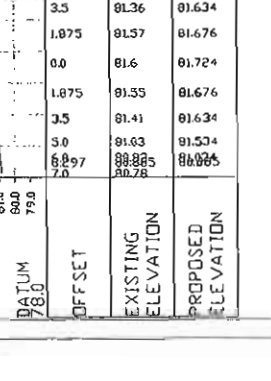
Ch: 23300.0
Area
12.474



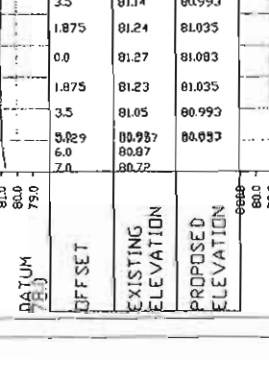
Ch: 22800.0
Area
3.518



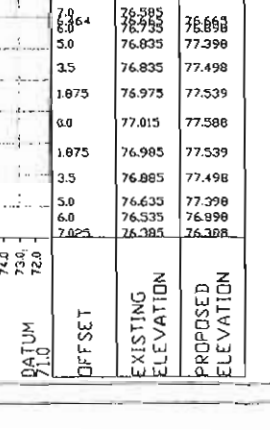
Ch: 22800.0
Area
2.282



Ch: 22800.0
Area
-1.87



Ch: 23200.0
Area
7.187



Mahngi to Dudli mode(NH-21)

EXECUTIVE ENGINEER

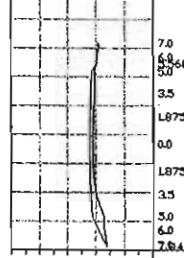
ASSISTANT ENGINEER

SCALE: HORIZ. 1 : 2500
VERT. 1 : 250

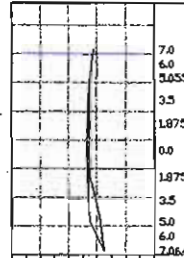
M/s SURVEY POINT

SHEETED BY

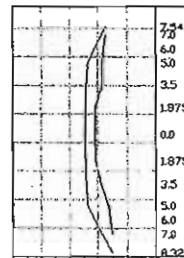
Chi 23900.0
Ar 59
4.039



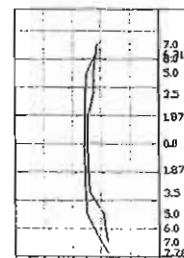
Offset	Existing Elevation	Proposed Elevation
7.0	74.785	74.785
6.0	74.785	74.785
5.0	74.785	74.785
4.0	74.785	74.785
3.0	74.785	74.785
2.0	74.785	74.785
1.0	74.785	74.785
0.0	74.785	74.785
-1.0	74.785	74.785
-2.0	74.785	74.785
-3.0	74.785	74.785
-4.0	74.785	74.785
-5.0	74.785	74.785
-6.0	74.785	74.785
-7.0	74.785	74.785



Offset	Existing Elevation	Proposed Elevation
7.0	75.22	75.22
6.0	75.37	75.37
5.0	75.483	75.483
4.0	75.47	75.47
3.0	75.5	75.5
2.0	75.53	75.53
1.0	75.53	75.53
0.0	75.53	75.53
-1.0	75.53	75.53
-2.0	75.53	75.53
-3.0	75.53	75.53
-4.0	75.53	75.53
-5.0	75.53	75.53
-6.0	75.53	75.53
-7.0	75.53	75.53

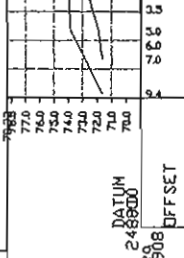


Offset	Existing Elevation	Proposed Elevation
7.0	74.7	74.7
6.0	74.7	74.7
5.0	74.7	74.7
4.0	74.7	74.7
3.0	74.7	74.7
2.0	74.7	74.7
1.0	74.7	74.7
0.0	74.7	74.7
-1.0	74.7	74.7
-2.0	74.7	74.7
-3.0	74.7	74.7
-4.0	74.7	74.7
-5.0	74.7	74.7
-6.0	74.7	74.7
-7.0	74.7	74.7

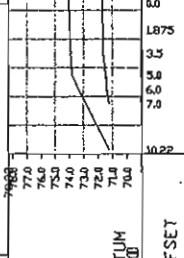


Offset	Existing Elevation	Proposed Elevation
7.0	75.19	75.19
6.0	75.44	75.44
5.0	75.44	75.44
4.0	75.44	75.44
3.0	75.44	75.44
2.0	75.44	75.44
1.0	75.44	75.44
0.0	75.44	75.44
-1.0	75.44	75.44
-2.0	75.44	75.44
-3.0	75.44	75.44
-4.0	75.44	75.44
-5.0	75.44	75.44
-6.0	75.44	75.44
-7.0	75.44	75.44

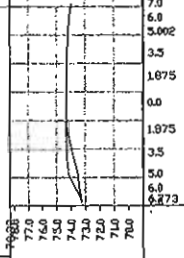
Chi 24300.0
Ar 59
21.315



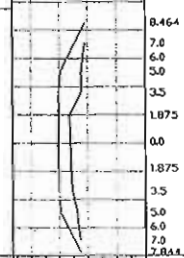
Offset	Existing Elevation	Proposed Elevation
7.0	72.13	72.13
6.0	72.13	72.13
5.0	72.13	72.13
4.0	72.13	72.13
3.0	72.13	72.13
2.0	72.13	72.13
1.0	72.13	72.13
0.0	72.13	72.13
-1.0	72.13	72.13
-2.0	72.13	72.13
-3.0	72.13	72.13
-4.0	72.13	72.13
-5.0	72.13	72.13
-6.0	72.13	72.13
-7.0	72.13	72.13



Offset	Existing Elevation	Proposed Elevation
7.0	71.26	71.26
6.0	71.26	71.26
5.0	71.26	71.26
4.0	71.26	71.26
3.0	71.26	71.26
2.0	71.26	71.26
1.0	71.26	71.26
0.0	71.26	71.26
-1.0	71.26	71.26
-2.0	71.26	71.26
-3.0	71.26	71.26
-4.0	71.26	71.26
-5.0	71.26	71.26
-6.0	71.26	71.26
-7.0	71.26	71.26

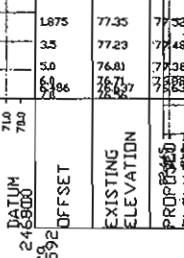


Offset	Existing Elevation	Proposed Elevation
7.0	73.925	73.925
6.0	74.075	74.075
5.0	74.175	74.175
4.0	74.175	74.175
3.0	74.175	74.175
2.0	74.175	74.175
1.0	74.175	74.175
0.0	74.175	74.175
-1.0	74.175	74.175
-2.0	74.175	74.175
-3.0	74.175	74.175
-4.0	74.175	74.175
-5.0	74.175	74.175
-6.0	74.175	74.175
-7.0	74.175	74.175

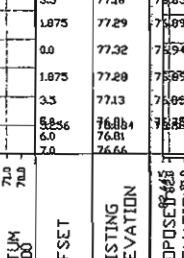


Offset	Existing Elevation	Proposed Elevation
7.0	73.175	73.175
6.0	73.175	73.175
5.0	73.175	73.175
4.0	73.175	73.175
3.0	73.175	73.175
2.0	73.175	73.175
1.0	73.175	73.175
0.0	73.175	73.175
-1.0	73.175	73.175
-2.0	73.175	73.175
-3.0	73.175	73.175
-4.0	73.175	73.175
-5.0	73.175	73.175
-6.0	73.175	73.175
-7.0	73.175	73.175

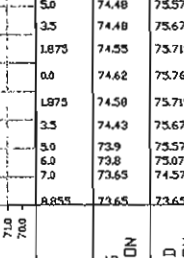
Chi 24700.0
Ar 59
3.498



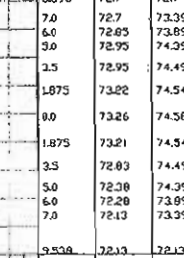
Offset	Existing Elevation	Proposed Elevation
7.0	76.77	76.77
6.0	76.77	76.77
5.0	76.77	76.77
4.0	76.77	76.77
3.0	76.77	76.77
2.0	76.77	76.77
1.0	76.77	76.77
0.0	76.77	76.77
-1.0	76.77	76.77
-2.0	76.77	76.77
-3.0	76.77	76.77
-4.0	76.77	76.77
-5.0	76.77	76.77
-6.0	76.77	76.77
-7.0	76.77	76.77



Offset	Existing Elevation	Proposed Elevation
7.0	76.93	76.93
6.0	76.93	76.93
5.0	76.93	76.93
4.0	76.93	76.93
3.0	76.93	76.93
2.0	76.93	76.93
1.0	76.93	76.93
0.0	76.93	76.93
-1.0	76.93	76.93
-2.0	76.93	76.93
-3.0	76.93	76.93
-4.0	76.93	76.93
-5.0	76.93	76.93
-6.0	76.93	76.93
-7.0	76.93	76.93

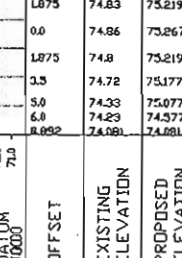


Offset	Existing Elevation	Proposed Elevation
7.0	76.93	76.93
6.0	76.93	76.93
5.0	76.93	76.93
4.0	76.93	76.93
3.0	76.93	76.93
2.0	76.93	76.93
1.0	76.93	76.93
0.0	76.93	76.93
-1.0	76.93	76.93
-2.0	76.93	76.93
-3.0	76.93	76.93
-4.0	76.93	76.93
-5.0	76.93	76.93
-6.0	76.93	76.93
-7.0	76.93	76.93

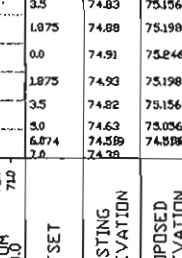


Offset	Existing Elevation	Proposed Elevation
7.0	76.93	76.93
6.0	76.93	76.93
5.0	76.93	76.93
4.0	76.93	76.93
3.0	76.93	76.93
2.0	76.93	76.93
1.0	76.93	76.93
0.0	76.93	76.93
-1.0	76.93	76.93
-2.0	76.93	76.93
-3.0	76.93	76.93
-4.0	76.93	76.93
-5.0	76.93	76.93
-6.0	76.93	76.93
-7.0	76.93	76.93

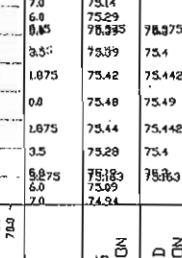
Chi 25100.0
Ar 59
5.283



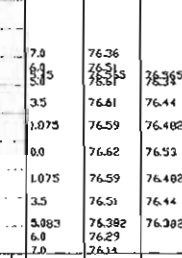
Offset	Existing Elevation	Proposed Elevation
7.0	74.48	74.48
6.0	74.48	74.48
5.0	74.48	74.48
4.0	74.48	74.48
3.0	74.48	74.48
2.0	74.48	74.48
1.0	74.48	74.48
0.0	74.48	74.48
-1.0	74.48	74.48
-2.0	74.48	74.48
-3.0	74.48	74.48
-4.0	74.48	74.48
-5.0	74.48	74.48
-6.0	74.48	74.48
-7.0	74.48	74.48



Offset	Existing Elevation	Proposed Elevation
7.0	74.58	74.58
6.0	74.58	74.58
5.0	74.58	74.58
4.0	74.58	74.58
3.0	74.58	74.58
2.0	74.58	74.58
1.0	74.58	74.58
0.0	74.58	74.58
-1.0	74.58	74.58
-2.0	74.58	74.58
-3.0	74.58	74.58
-4.0	74.58	74.58
-5.0	74.58	74.58
-6.0	74.58	74.58
-7.0	74.58	74.58



Offset	Existing Elevation	Proposed Elevation
7.0	75.14	75.14
6.0	75.29	75.29
5.0	75.39	75.39
4.0	75.39	75.39
3.0	75.39	75.39
2.0	75.39	75.39
1.0	75.39	75.39
0.0	75.39	75.39
-1.0	75.39	75.39
-2.0	75.39	75.39
-3.0	75.39	75.39
-4.0	75.39	75.39
-5.0	75.39	75.39
-6.0	75.39	75.39
-7.0	75.39	75.39



Offset	Existing Elevation	Proposed Elevation
7.0	76.36	76.36
6.0	76.36	76.36
5.0	76.36	76.36
4.0	76.36	76.36
3.0	76.36	76.36
2.0	76.36	76.36
1.0	76.36	76.36
0.0	76.36	76.36
-1.0	76.36	76.36
-2.0	76.36	76.36
-3.0	76.36	76.36
-4.0	76.36	76.36
-5.0	76.36	76.36
-6.0	76.36	76.36
-7.0	76.36	76.36

Mahngi to Dudli mode(NH-21)

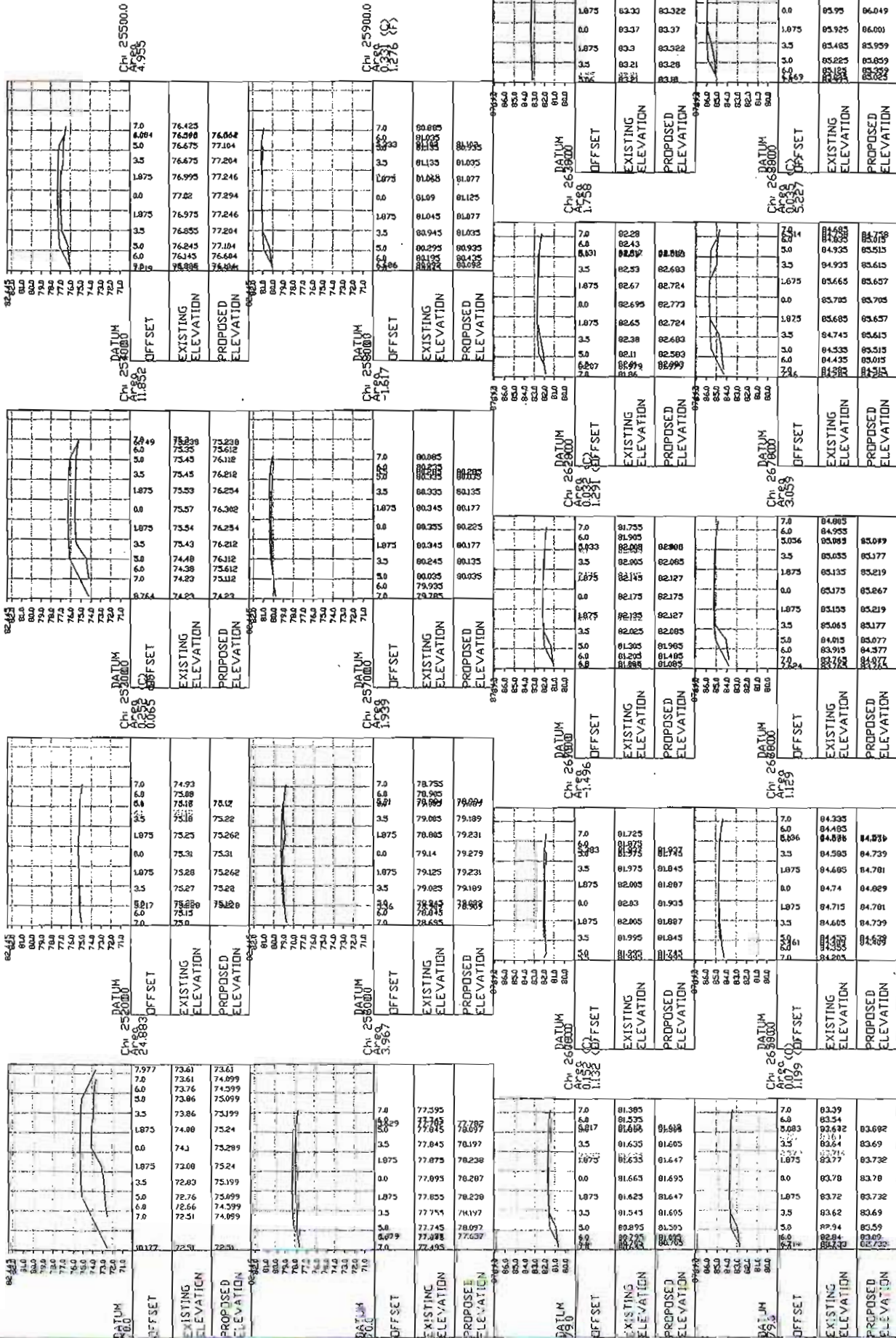
EXECUTIVE ENGINEER

ASSISTANT ENGINEER

SCALE: HORIZ. 1 : 2500
VERT. 1 : 250

M/s SURVEY POINT

SUPPLIED BY



Mahngi to Dudli mode(NH-21)

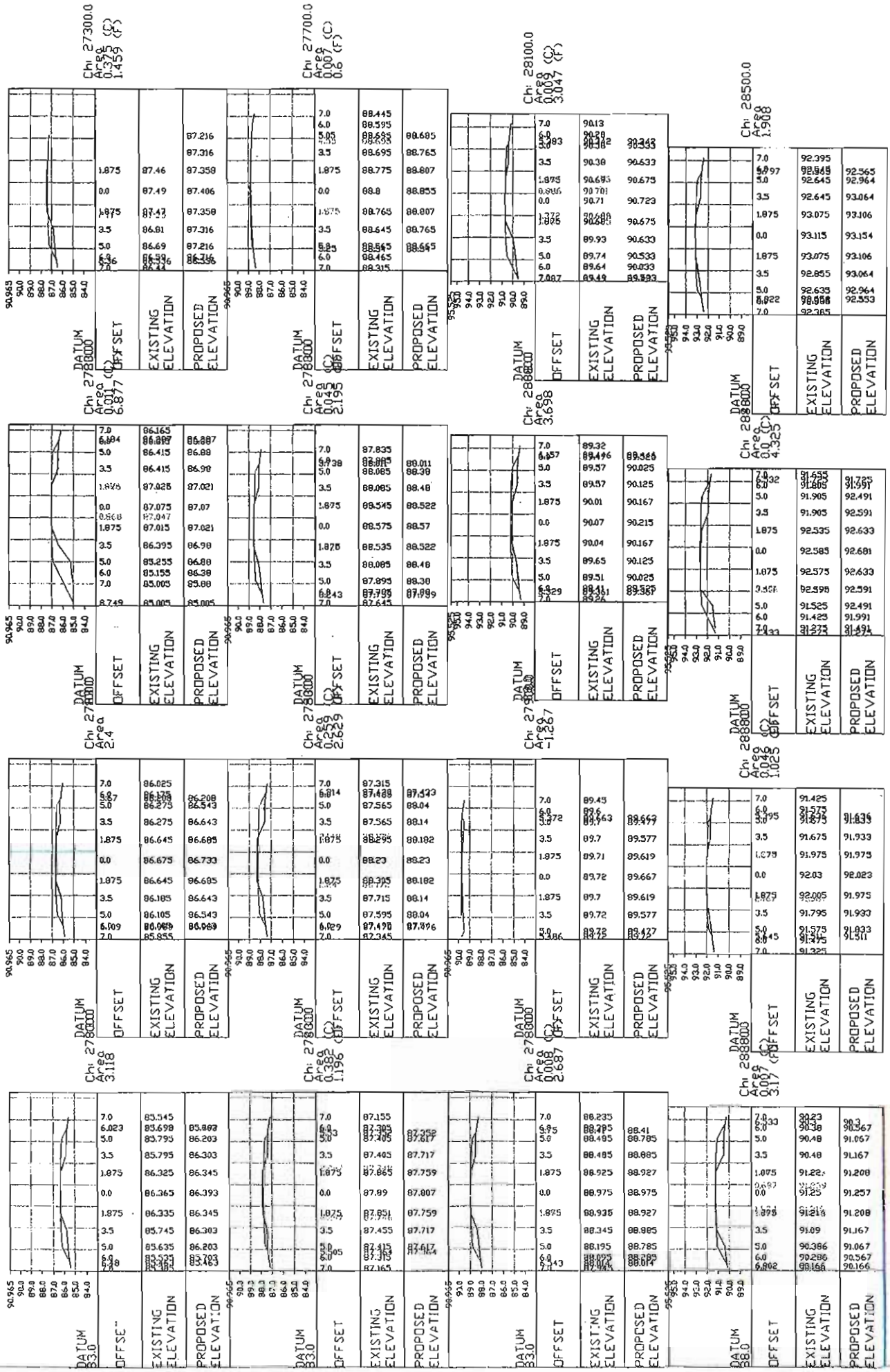
EXECUTIVE ENGINEER

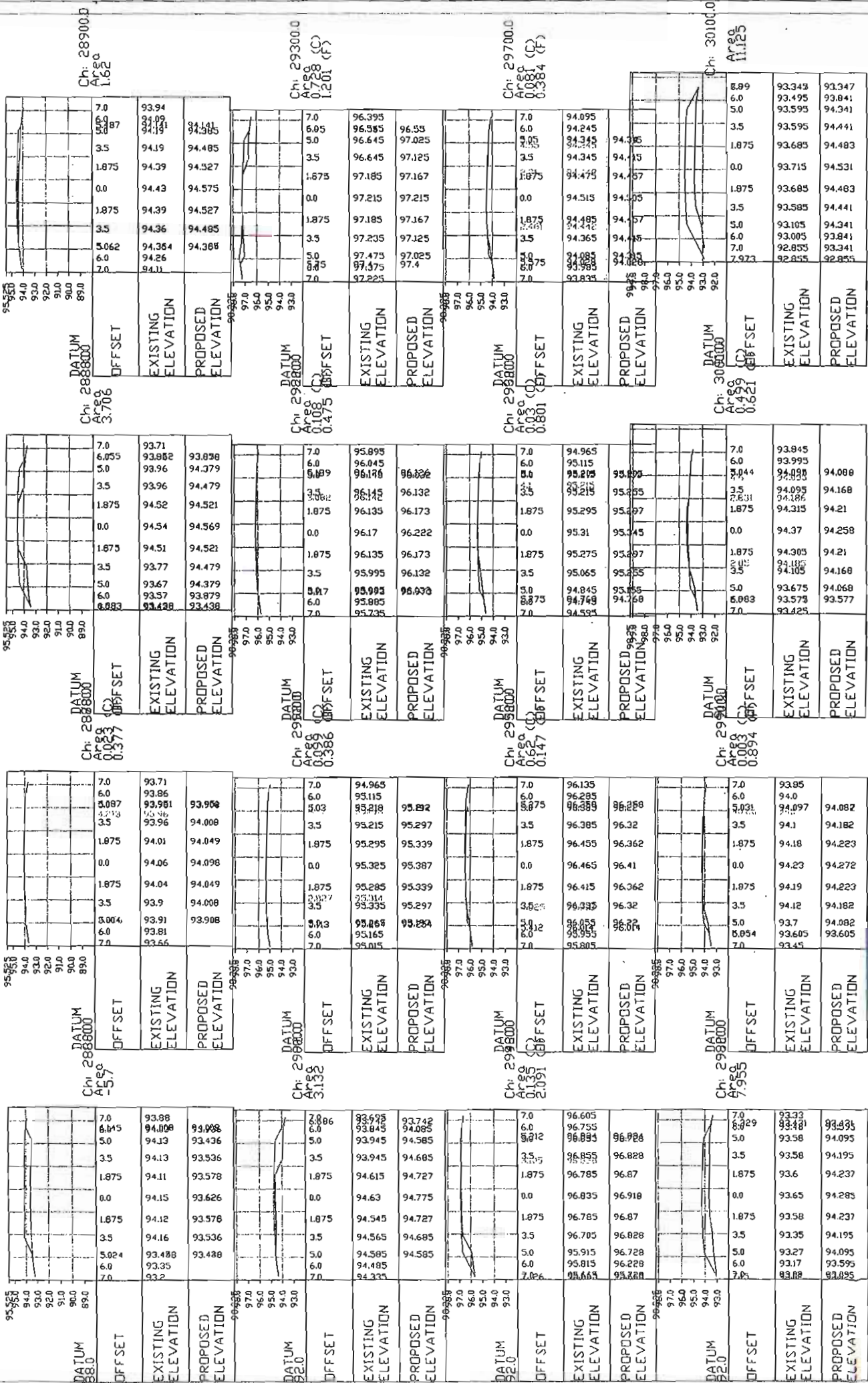
ASSISTANT ENGINEER

SCALE: HORZ. 1 : 2500
VERT. 1 : 250

M/s SURVEY POINT

SURVEYED BY





Mahngi to Dudli mode(NH-21)

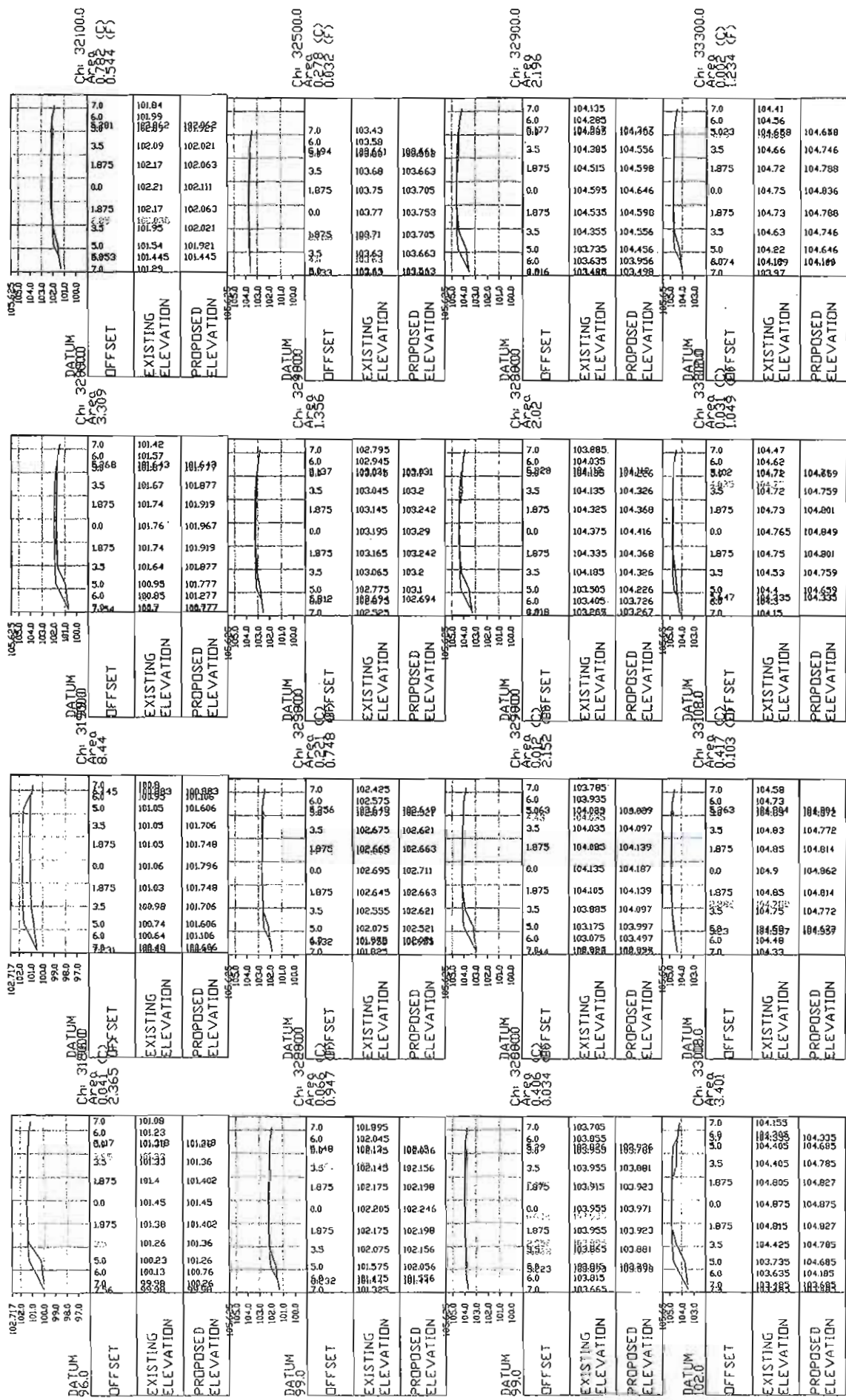
EXECUTIVE ENGINEER

ASSISTANT ENGINEER

SCALE: HORIZ. 1 : 2500
VERT. 1 : 250

M/s SURVEY POINT

SURVEYED BY



Mahngi to Dudli mode(NH-21)

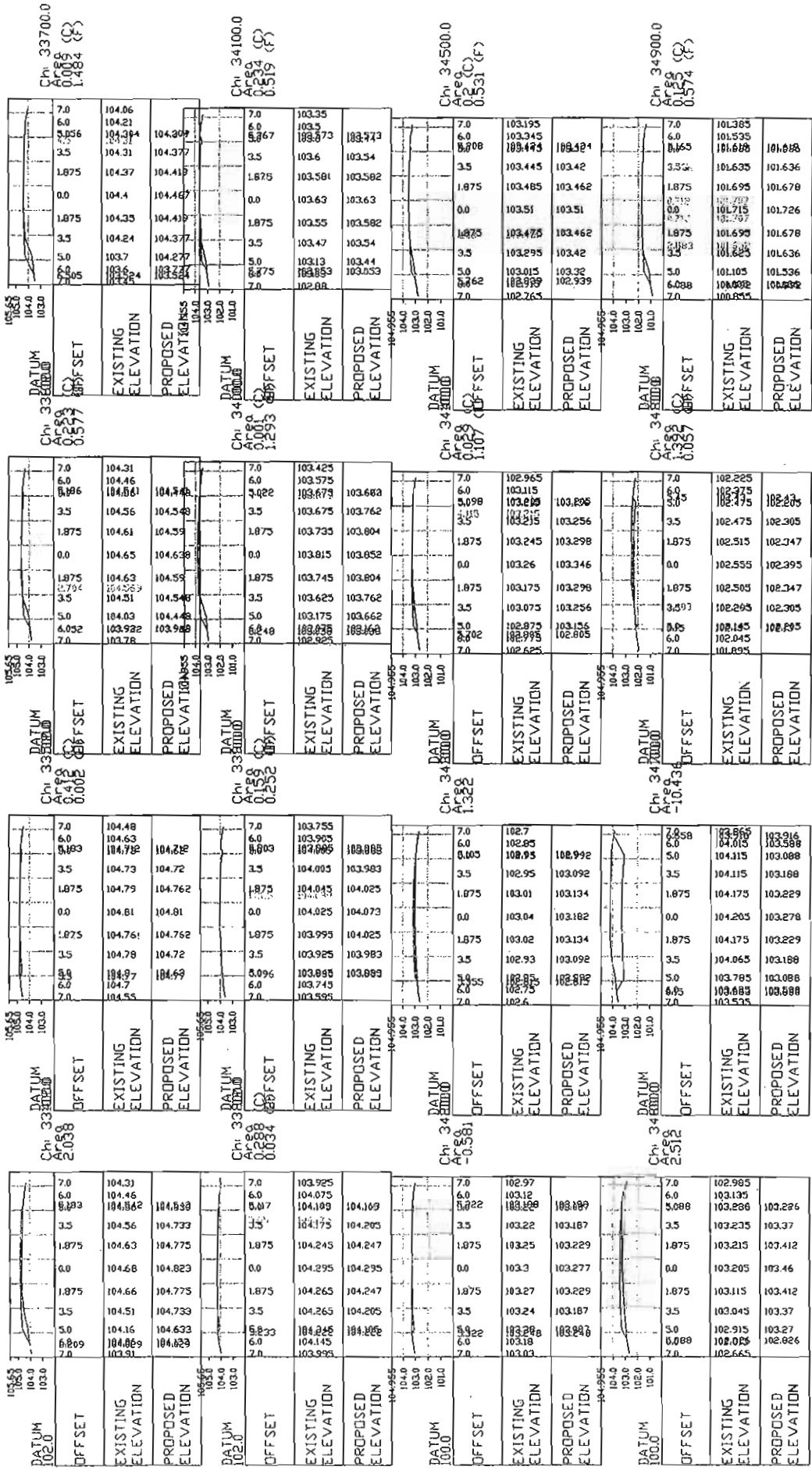
EXECUTIVE ENGINEER

ASSISTANT ENGINEER

SCALE: HORZ. 1 : 2500
VERT. 1 : 250

M/s SURVEY POINT

SURVED BY



Mahngi to Dudli mode(NH-21)

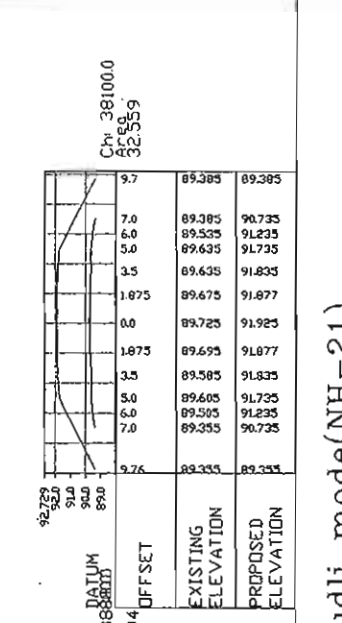
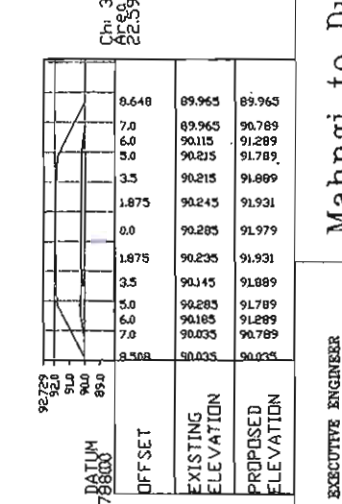
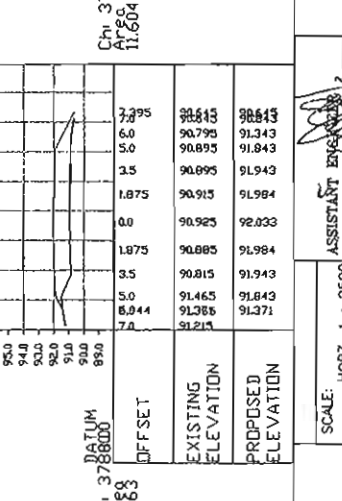
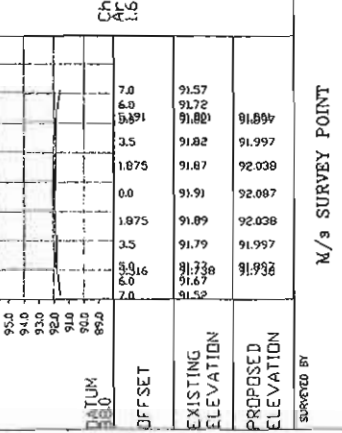
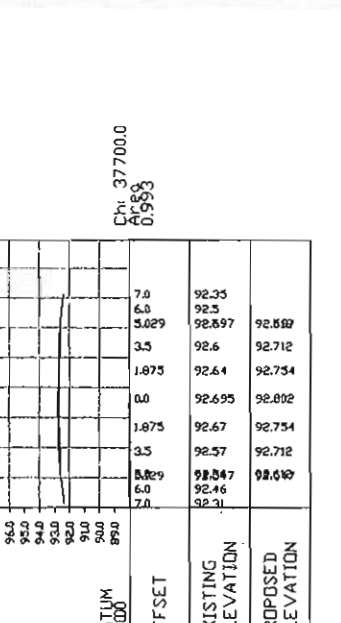
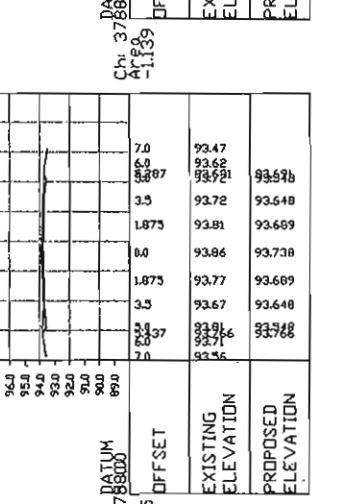
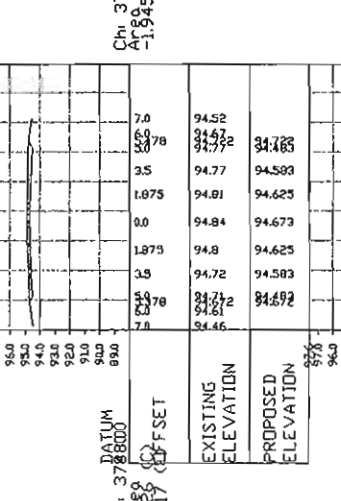
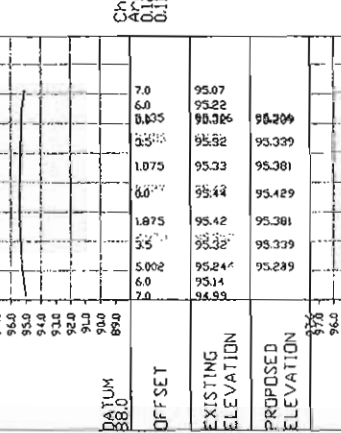
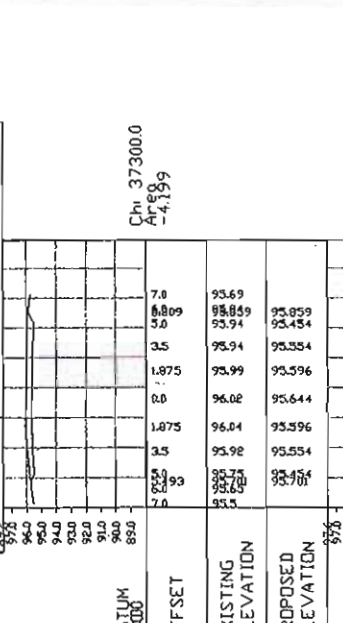
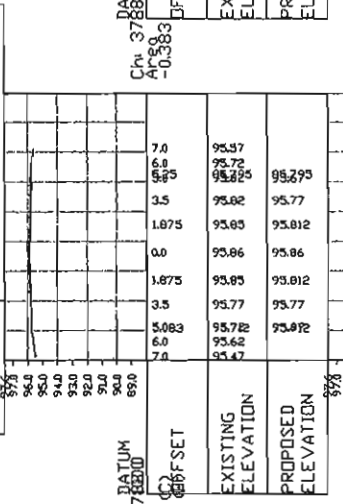
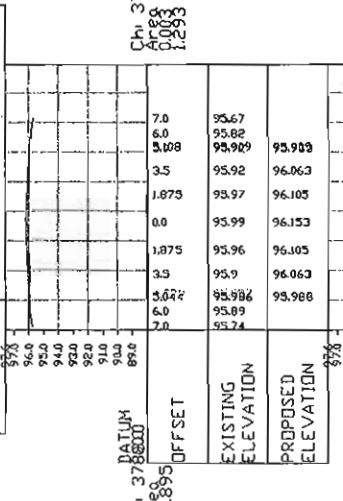
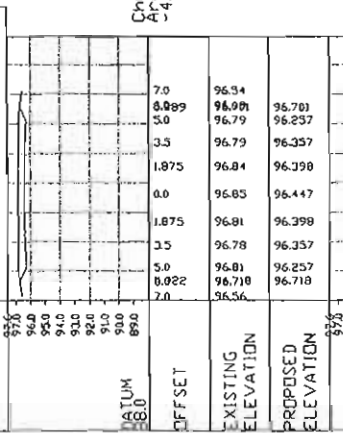
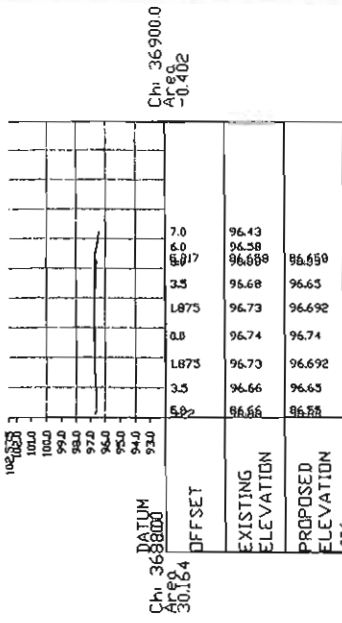
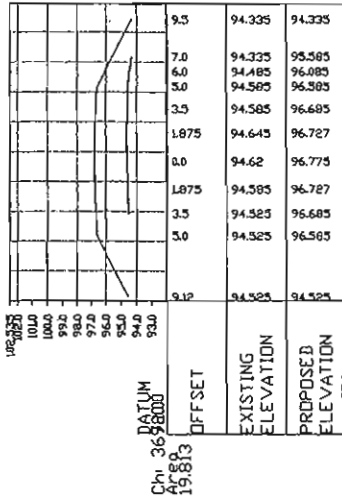
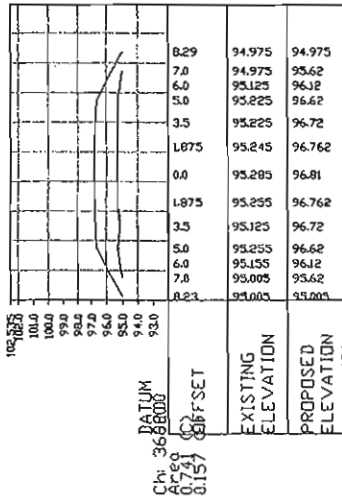
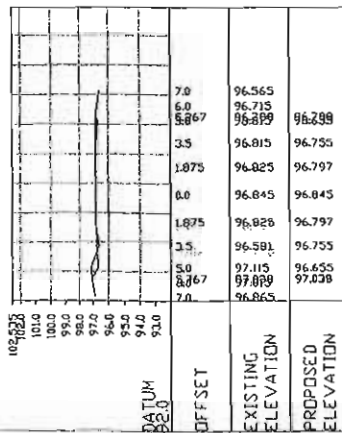
EXECUTIVE ENGINEER

ASSISTANT ENGINEER

SCALE: HORIZ. 1 : 2500
VERT. 1 : 250

M/s SURVEY POINT

SUPPLIED BY



Mahngi to Dudli mode(NH-21)

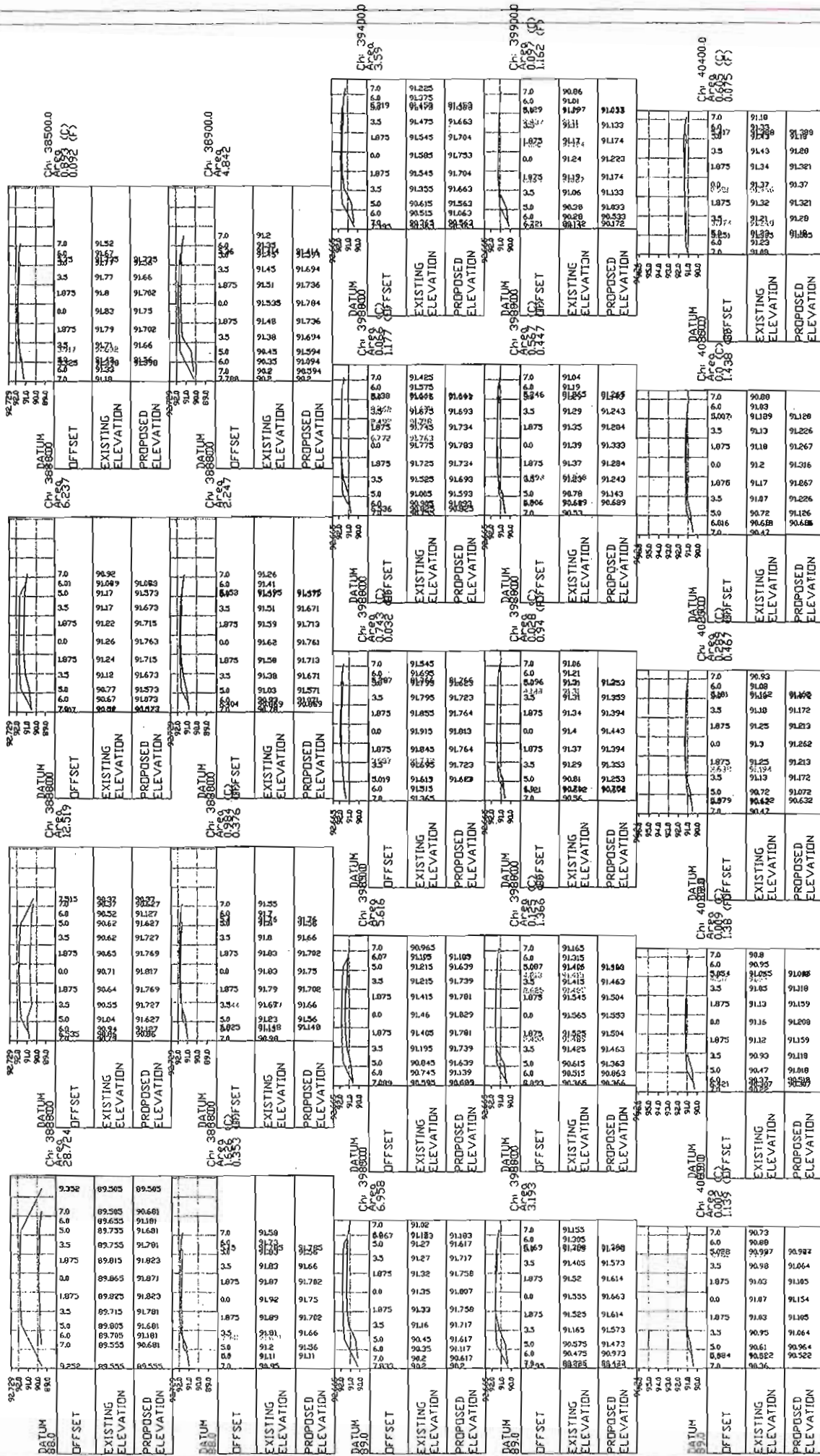
EXECUTIVE ENGINEER

ASSISTANT ENGINEER

SCALE: HORZ. 1 : 2500
VERT. 1 : 250

M/s SURVEY POINT

SURVED BY



Mahangi to Dudli mode(NH-21)

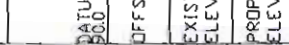
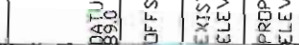
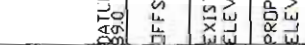
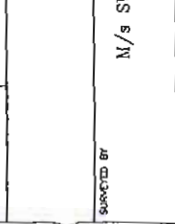
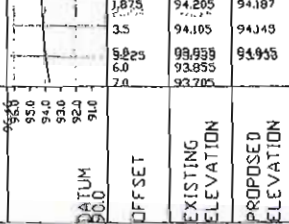
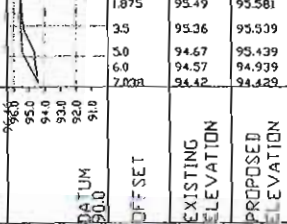
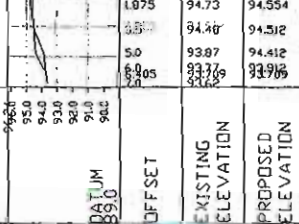
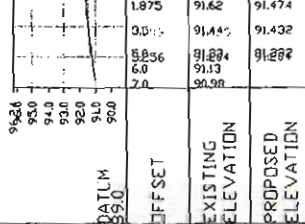
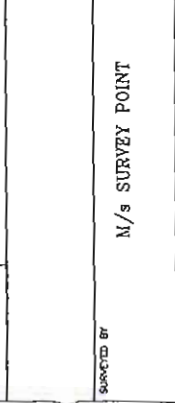
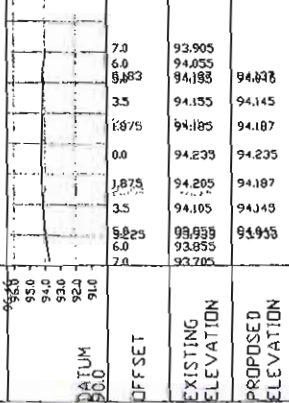
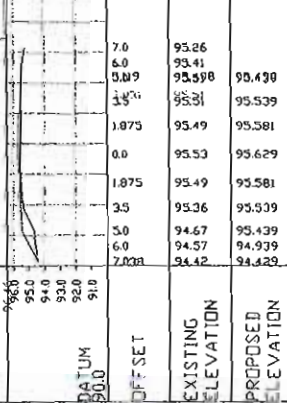
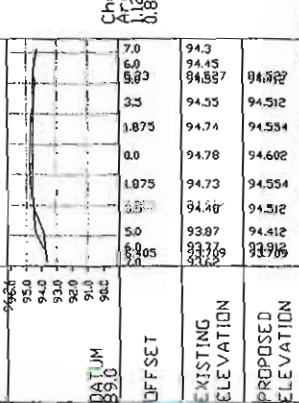
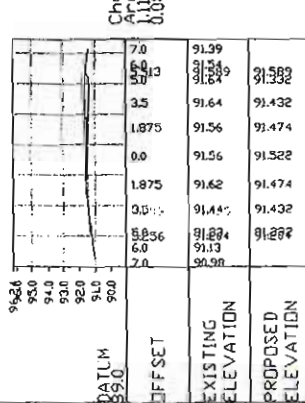
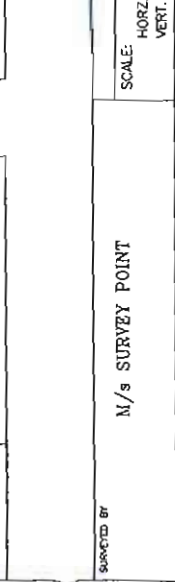
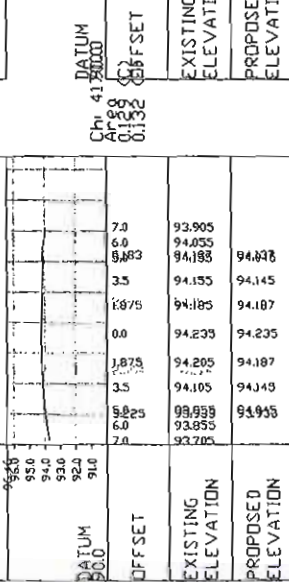
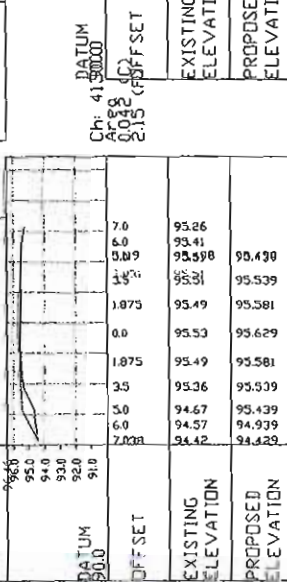
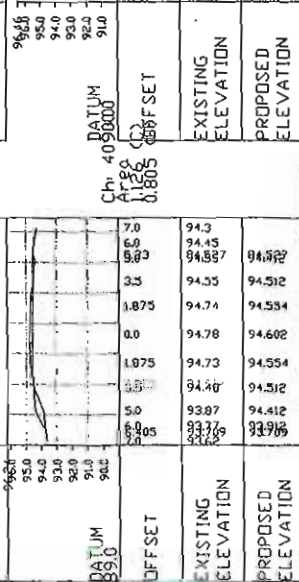
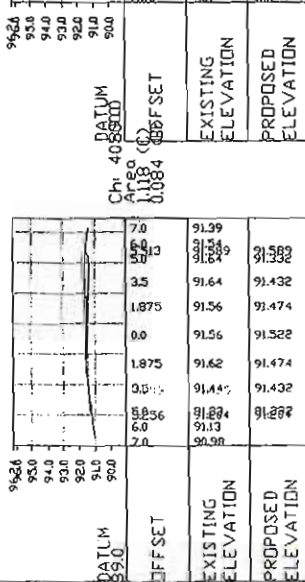
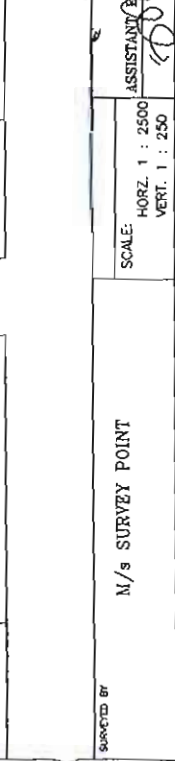
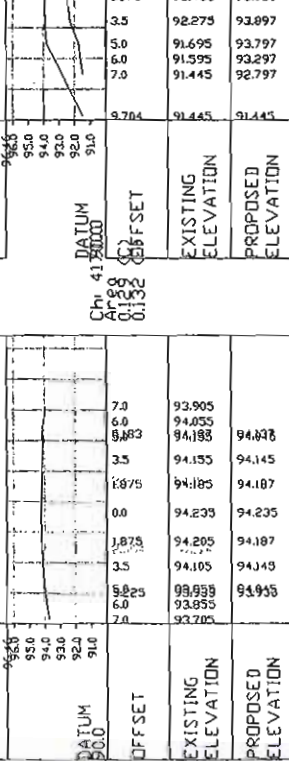
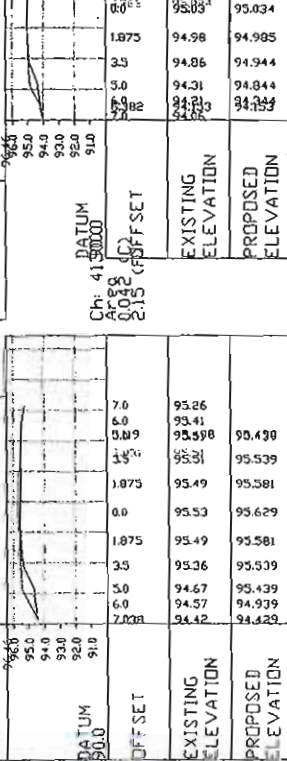
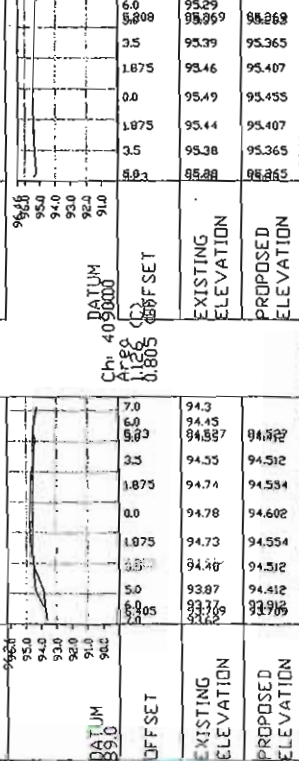
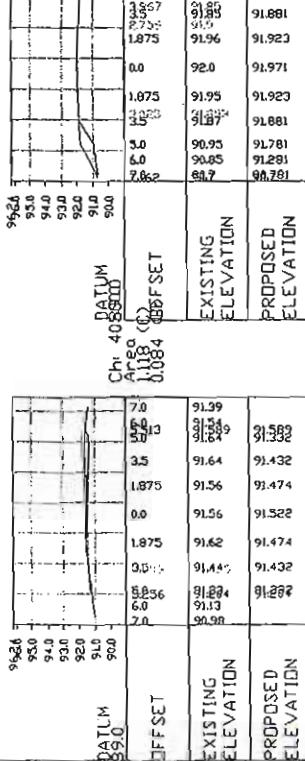
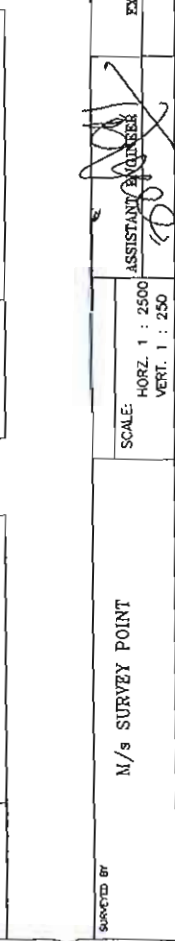
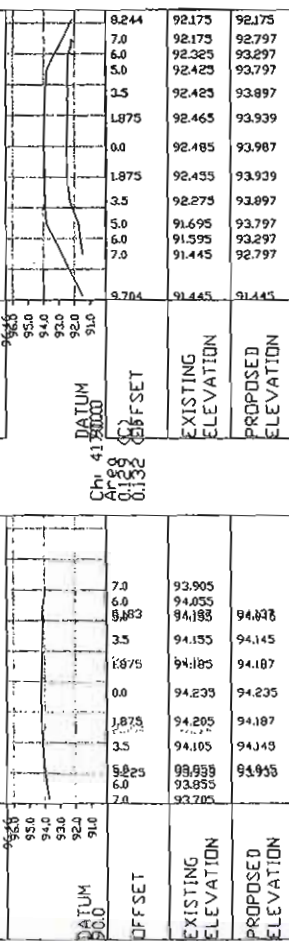
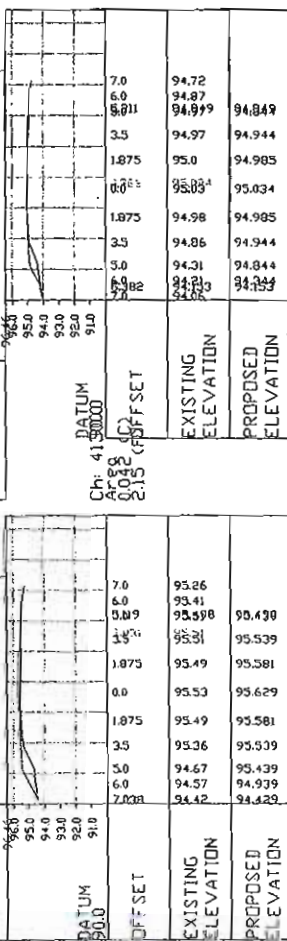
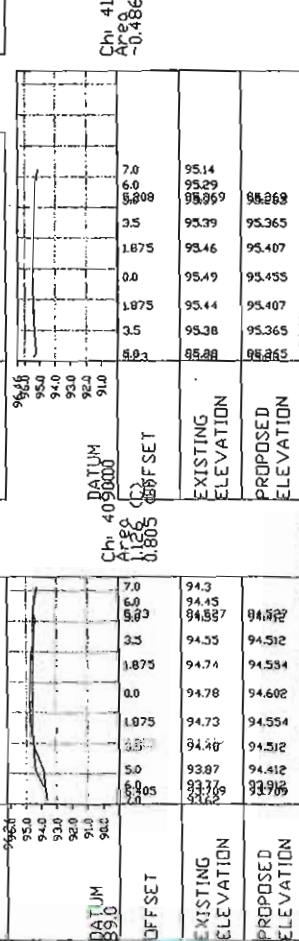
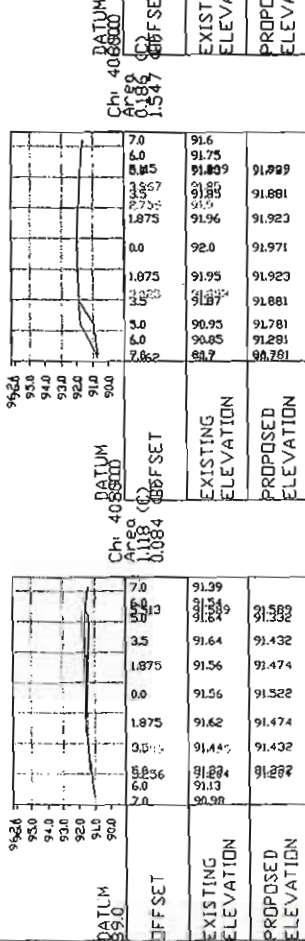
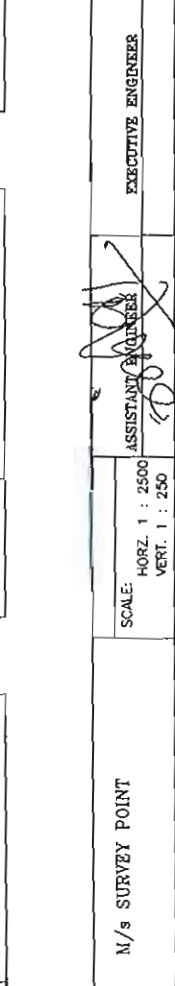
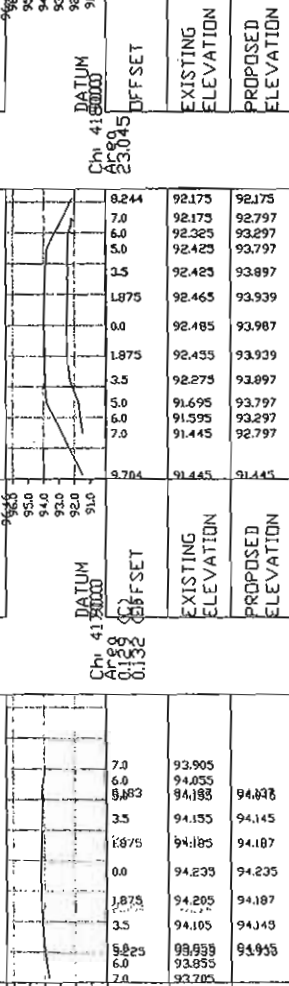
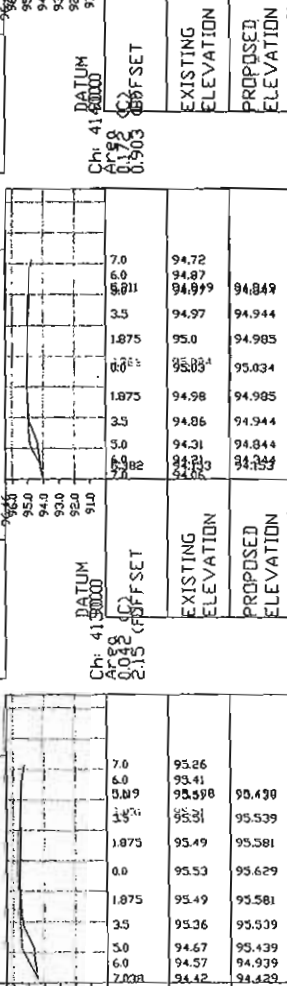
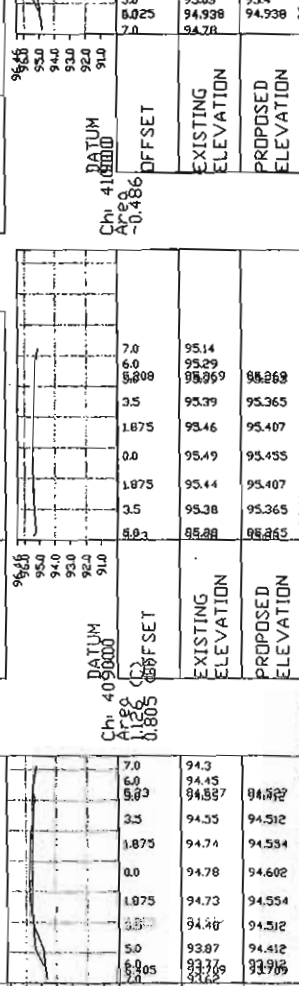
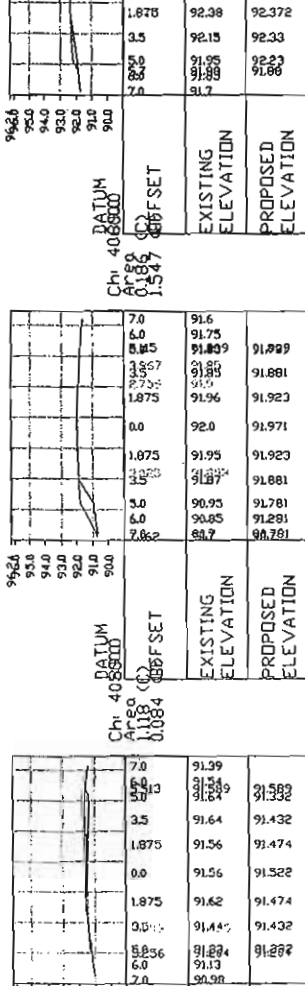
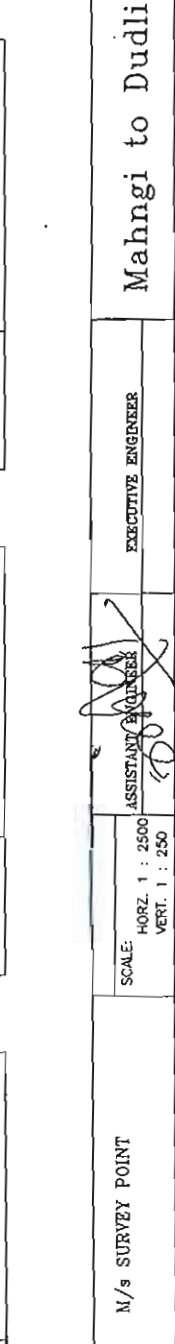
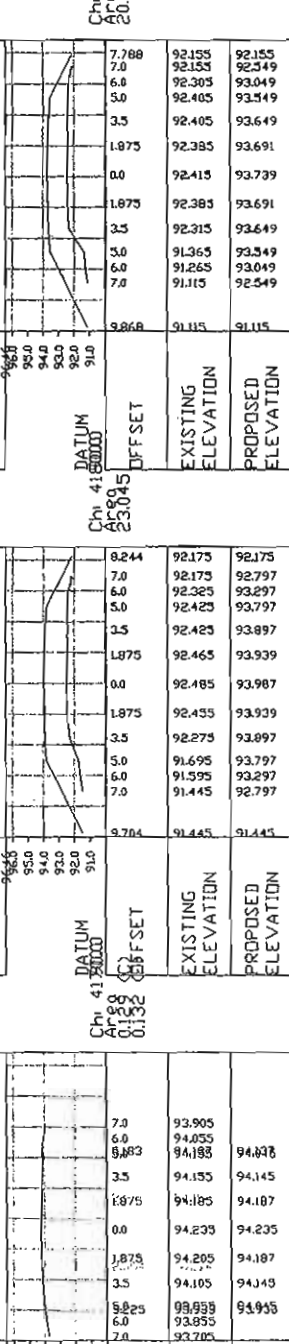
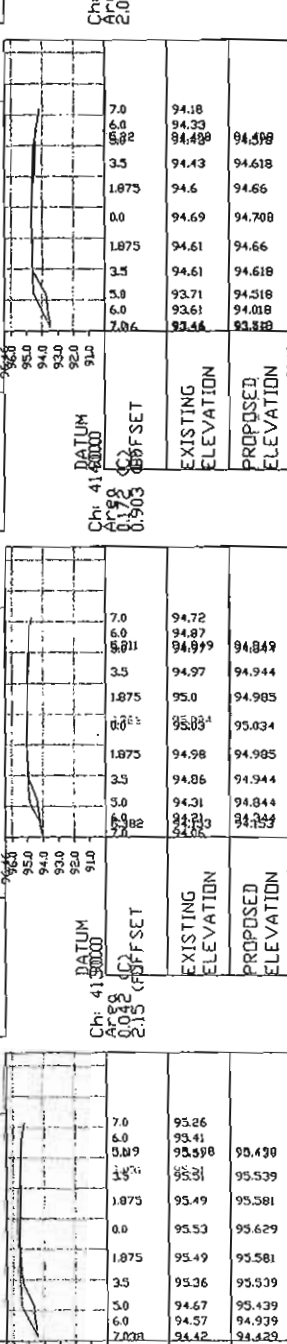
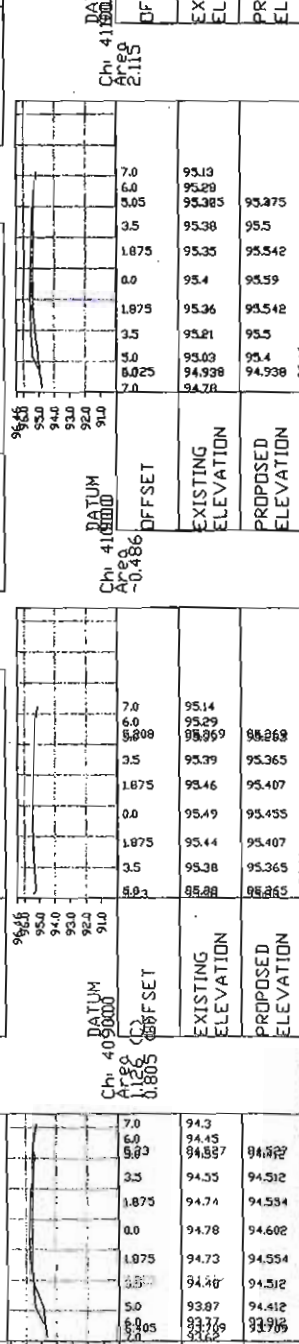
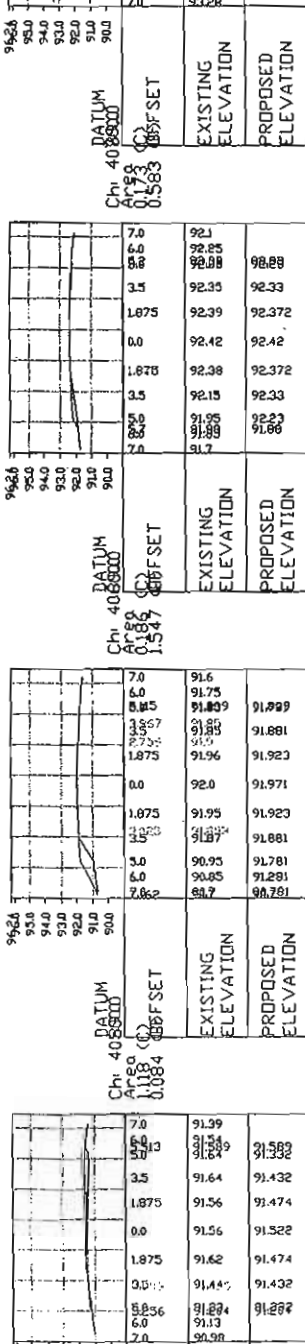
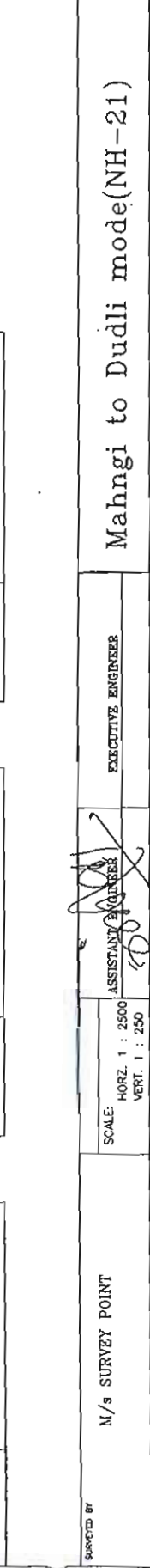
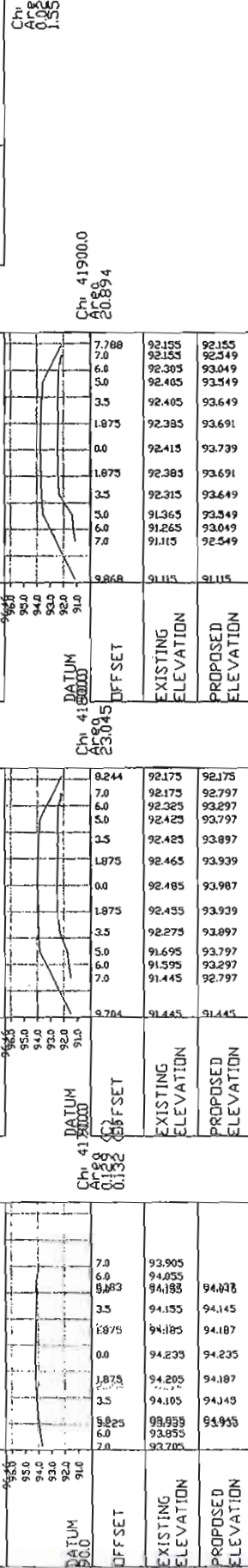
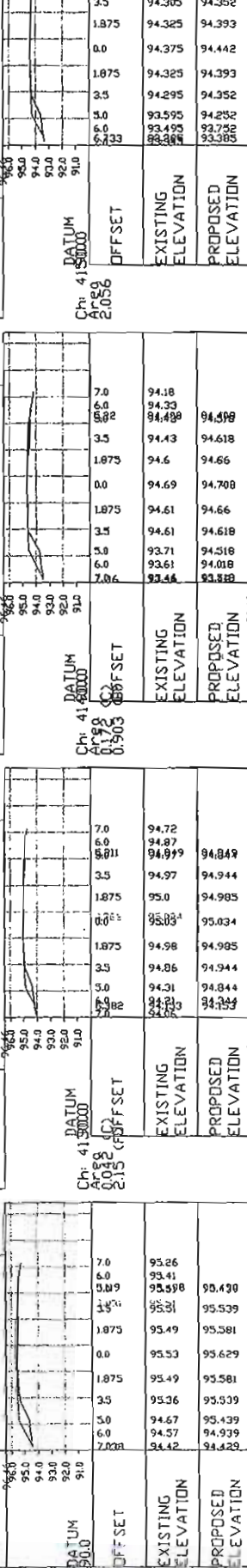
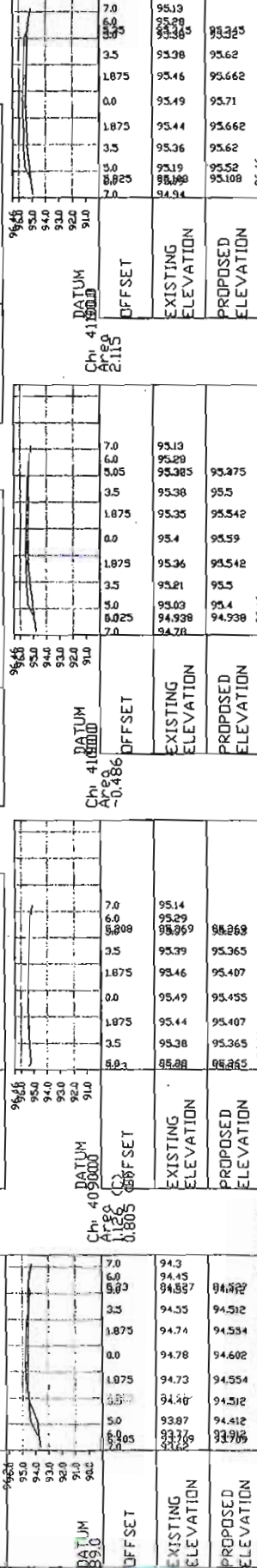
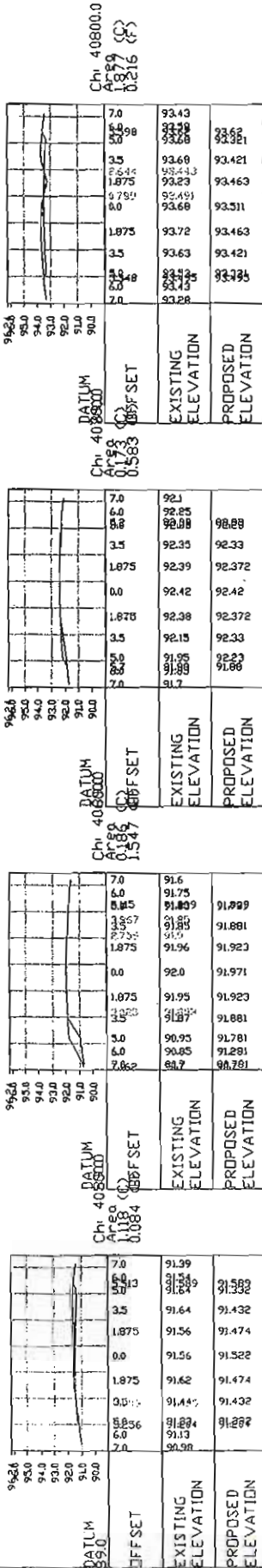
EXECUTIVE ENGINEER

ASSISTANT ENGINEER

SCALE: HORIZ. 1 : 2500
VERT. 1 : 250

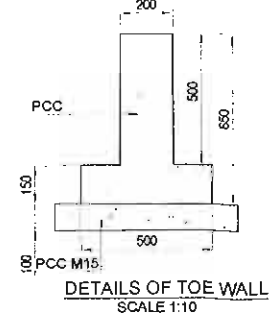
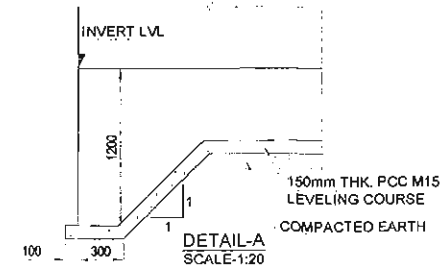
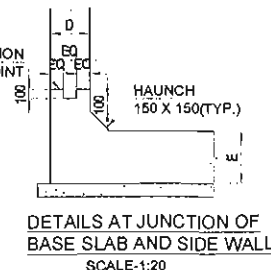
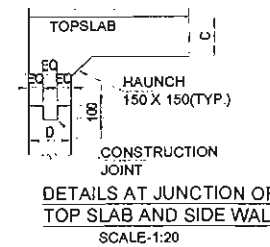
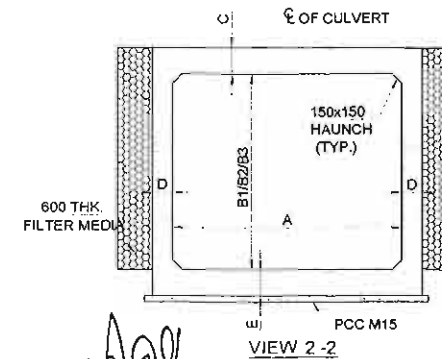
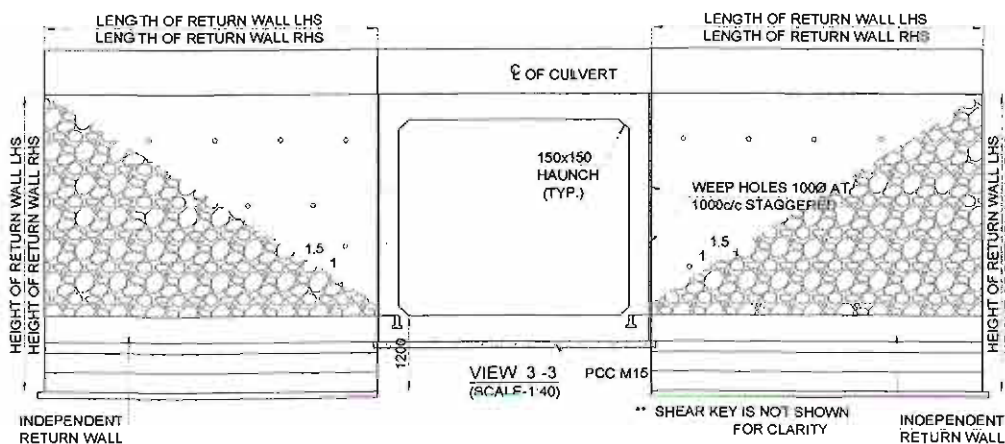
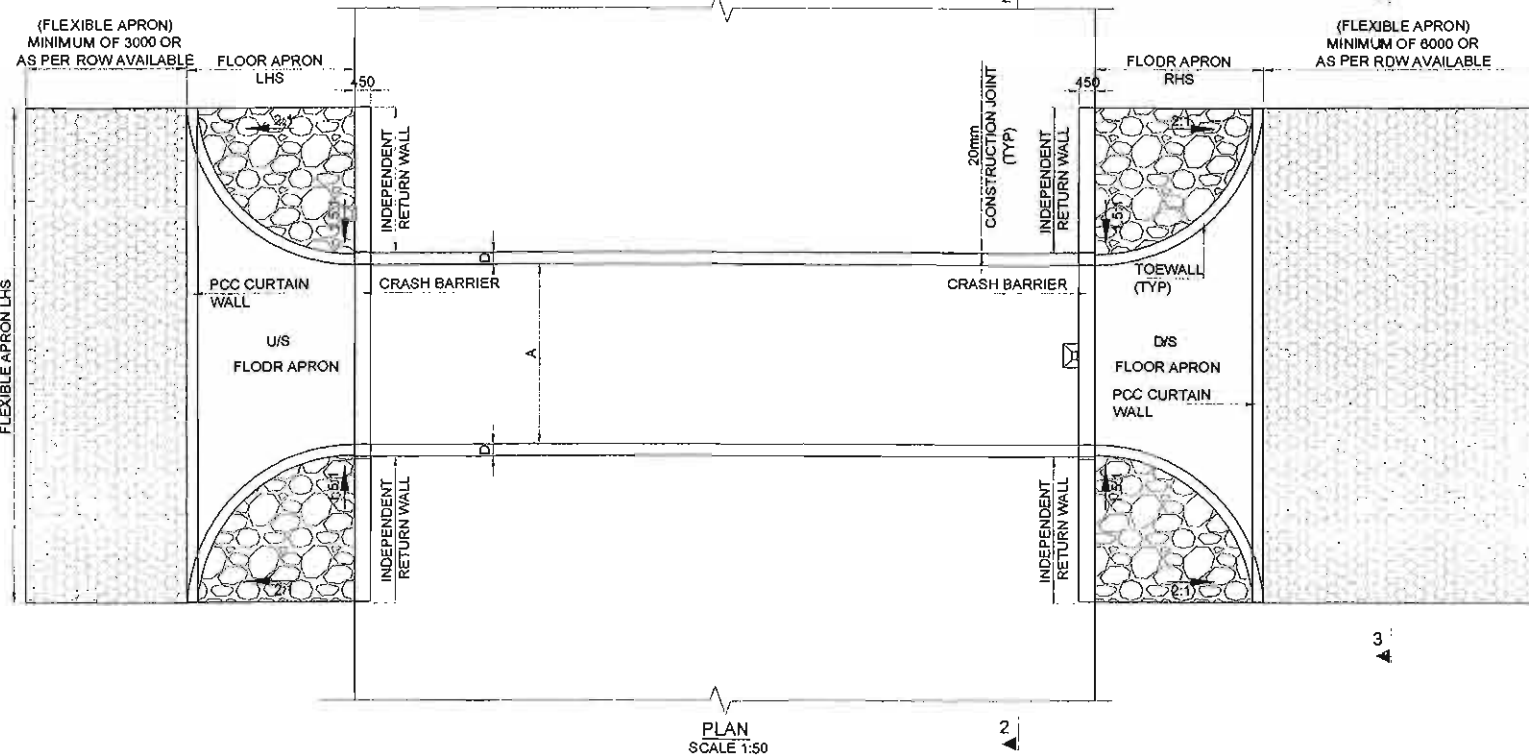
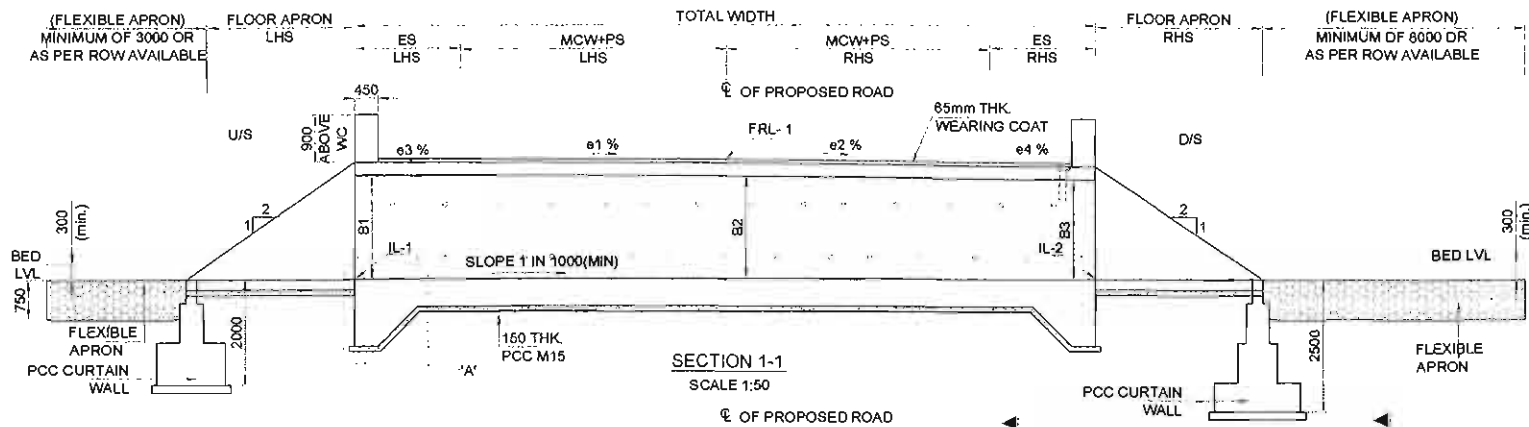
M/s SURVEY POINT

SUBMITTED BY

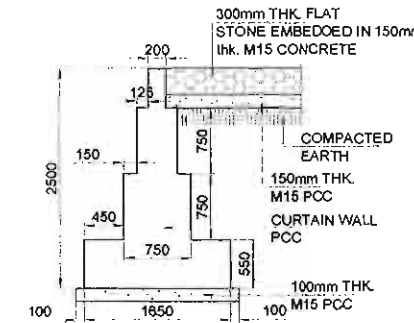


Widening & Strengthening Mahigi to Dudhli mod (NH-21)

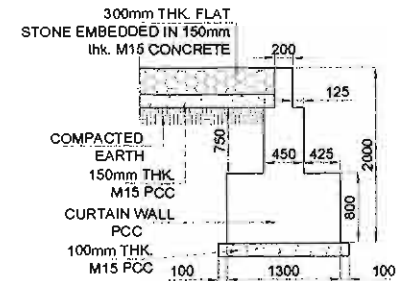
EXISTING CHAINAGE	Schedule CHAINAGE	DESIGN CHAINAGE	Type	Proposal	No Cells	FRL	IL LHS	IL RHS	Flow Direction	Cler Width A	B1 LHS	B2 M center	B3 RHS	Top Slab (C)	Bottom Slab (D)	Outer wall (E)	Inner Wall (F)	Width of MCW+PS LHS	Width of MCW+PS RHS	Width of Earthen Shoulder LHS	Width of Earthen Shoulder RHS	TOTAL WIDTH	Se LHS of MCW (+1%)	Se RHS of MCW (+2%)	Se LHS of Earthen Shoulder (+3%)	Se RHS of Earthen Shoulder (+4%)	Length of LHS return wall	Length of RHS return wall	Ht of LHS return wall	Ht of RHS return wall	Floor Apron Width LHS	Floor Apron Width RHS	Flexible Apron Length LHS	Flexible Apron Length RHS
			Box Culvert	New Construction	1				LTD R	1.5	2.247	2.160	1.924	0.25	0.25	0.25	0.000	3.500	3.500	2.500	2.500	12.000	4.90	-4.90	-3.00	-3.00	4.200	3.700	3.762	3.439	5.123	4.477	10.800	9.800



REFERENCE DRAWINGS
DETAILS OF RCC BOX
MISCELLANEOUS DETAILS
DIMENSION DETAIL OF RETAINING WALLS
REINFORCEMENT DETAIL OF RETAINING WALLS



TYPICAL CROSS SECTION OF CURTAIN WALL (D/S SIDE) SCALE 1:30



TYPICAL CROSS SECTION OF CURTAIN WALL (U/S SIDE) SCALE 1:30

KEY PLAN

- NOTES:
- ALL DIMENSIONS ARE IN MM AND LEVELS ARE IN METERS, UNLESS MENTIONED OTHERWISE.
 - DIMENSIONS ARE NOT TO BE SCALED. ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
 - CONCRETE MIX SHALL BE DESIGN MIX AND SHALL HAVE MAXIMUM 28 DAYS CHARACTERISTIC CUBE STRENGTH AS FOLLOWS:
 - RCC BOX.....M30
 - RCC PARAPET.....M25
 - RCC RETURN WALL.....M30
 - PCC LEVELLING COURSE.....M15
 - PCC CURTAIN WALL.....M15
 - PCC TOE WALL.....M15
 - GRADE OF UNTENSIONED STEEL SHALL BE Fe 500, CONFORMING TO IS: 1786.
 - 600mm FILTER MEDIA SHALL BE PROVIDED BEHIND RCC BOX AND RETURN WALL.
 - THE BACK FILL MATERIAL BEHIND RCC BOX / RETAINING WALL SHALL HAVE FOLLOWING PROPERTIES $\phi 30^\circ$, $D=2.0$ T/Cum.
 - SEISMIC ZONE - II.
 - REQUIRED SAFE BEARING CAPACITY AT FOUNDING LEVEL IS 100kN/m² AND FOR INDEPENDENT RETURN WALL IS 150kN/m².
 - FLOW DIRECTION SHOWN IN THE PLAN IS INDICATIVE ONLY, BED PROTECTION FOR UPSTREAM AND DOWN STREAM SHALL BE BASED ON THE FLOW DIRECTION THE SITE.
 - FLEXIBLE APRON SHALL BE PROVIDED BASED ON SITE CONDITION & SHALL BE DECIDED BY ENGINEER-IN-CHARGE WHEREVER ROCK IS AVAILABLE AT TOP LEVEL FLEXIBLE APRON SHALL BE DISPENSED.
 - BACK FILLING SHALL BE DONE SIMULTANEOUSLY ON BOTH SIDE OF BOX.
 - DRAWING SHALL BE READ IN CONJUNCTION WITH RELEVANT APPROVED HIGHWAY DRAWING FOR FRL, INVERT LEVEL, GL, CROSS SLOPE, LONGITUDINAL GRADIENT, ROAD WAY DETAILS, TCS ETC
 - PITCHING / REVETMENT ON SLOPES TO BE PROVIDED AS PER NORTH SPECIFICATION.
 - IF THE FREE SWELL INDEX OF FOUNDATION SOIL IS MORE THAN 50, THEN SUITABLE SOIL STABILIZATION SHALL BE PROVIDED.
 - THE CLEAR OPENING SIZE AND EARTH CUSHION MENTIONED SHALL BE VERIFIED WITH EXISTING STRUCTURE / APPROVED PPO AND IN CASE OF ANY DECREPAANCY, IT SHOULD BE IMMEDIATELY REPORTED FOR SUITABLE ACTION PRIOR TO COMMENCEMENT OF THE WORK.
 - SOFT AND LOOSE PATCHES IN THE BEARING AREA SHALL BE REPLACED BY COMPACTED GRANULAR FILLS AND SHALL BE PROPERLY COMPACTED WITH LAYERS NOT EXCEEDING 200mm BEFORE LAYING PCC OVER IT.
 - PCC LEVELLING COURSE:
 - BELOW BOX STRUCTURE - 150 THK AND TOE WALL 100THK.
 - BELOW FLOOR APRON - 150 THK. AND CURTAIN WALL 100THK.
 - STRUCTURE HAS BEEN DESIGNED FOR
 - ONE LANE, TWO LANE AND THREE LANES OF CLASS A
 - ONE LANE OF CLASS 70R + ONE LANE OF CLASS A
 - ONE LANE OF 40R BOGIE + ONE LANE OF CLASS A.
 - BV LOADING
 - CONSTRUCTION JOINTS:
 - THE LOCATION AND PROVISION OF CONSTRUCTION JOINTS SHALL BE AS PER THE DRAWING AND THE SAME SHALL BE APPROVED BY THE ENGINEER-IN-CHARGE.
 - THE CONCRETE SURFACE AT THE JOINT SHALL BE BRUSHED WITH A STIFF BRUSH AFTER CASTING WHILE THE CONCRETE IS STILL FRESH AND IT HAS ONLY SLIGHTLY HARDENED.
 - BEFORE NEW CONCRETE IS POURED THE SURFACE OF OLD CONCRETE SHALL BE PREPARED AS UNDER:
 - FOR HARDENED CONCRETE, THE SURFACE SHALL BE THOROUGHLY CLEANED TO REMOVE DEBRIS / LAITANCE & MADE ROUGH SO THAT $\frac{1}{2}$ OF THE SIZE OF THE AGGREGATE IS EXPOSED
 - FOR PARTIALLY HARDENED CONCRETE, THE SURFACE SHALL BE TREATED BY WIRE BRUSH FOLLOWED BY AN AIR JET
 - THE OLD SURFACE SHALL BE SOAKED WITH WATER WITHOUT LEAVING PUDDLES IMMEDIATELY, BEFORE STARTING CONCRETING TO PREVENT THE ABSORPTION OF WATER FROM NEW CONCRETE
 - NEW JOINT SHALL BE THOROUGHLY COMPACTED IN THE REGION OF THE JOINT

PROPOSED SEQUENCE OF CONSTRUCTION:-

- EARTH WORK EXCAVATION
- CONFIRMATION OF FOUNDING LEVEL AS MENTIONED IN GFC DRAWING
- LAYING OF PCC LEVELLING COURSE
- CONSTRUCTION OF BOTTOM SLAB WITH A PORTION OF WEIR
- CONSTRUCTION OF WEB
- CONSTRUCTION OF TOP SLAB WITH A PORTION OF TOP WEIR
- BACK FILLING BEHIND THE SIDE WALL
- LAYING OF WEARING COAT & PLACING OF SIDL

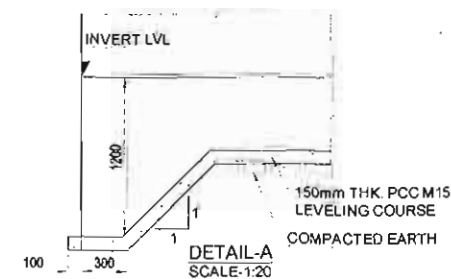
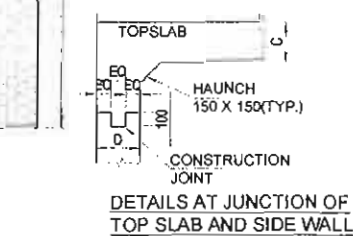
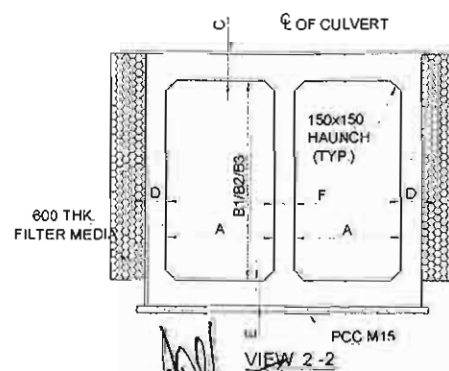
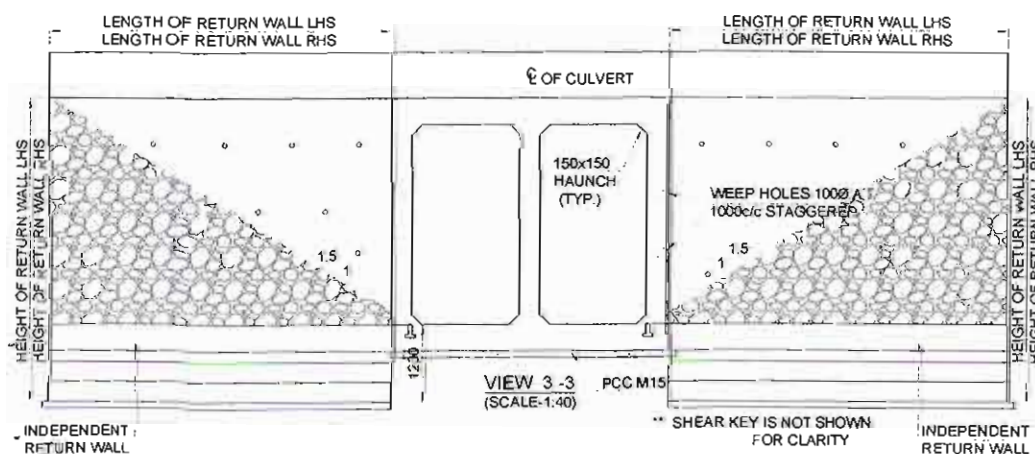
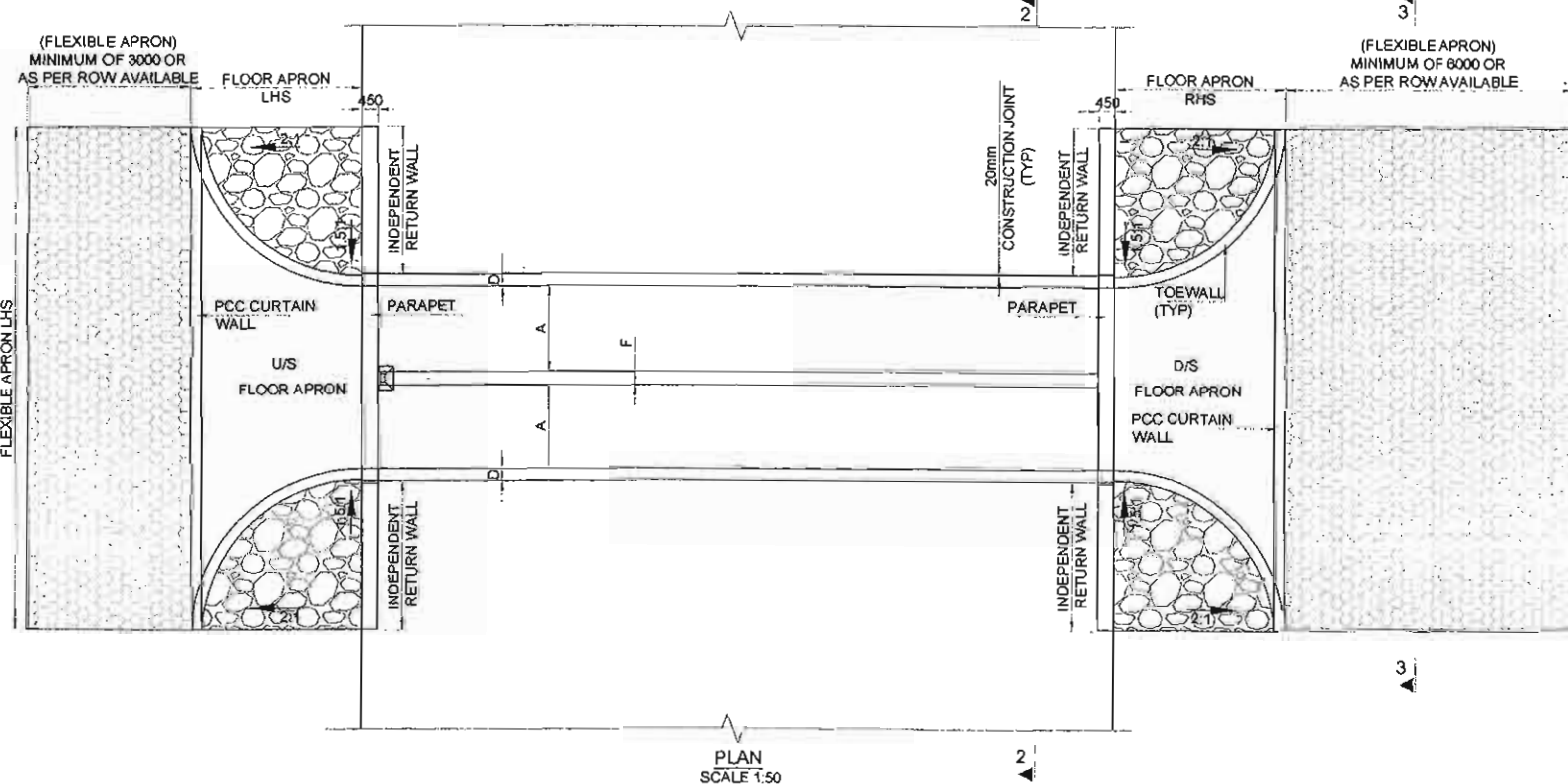
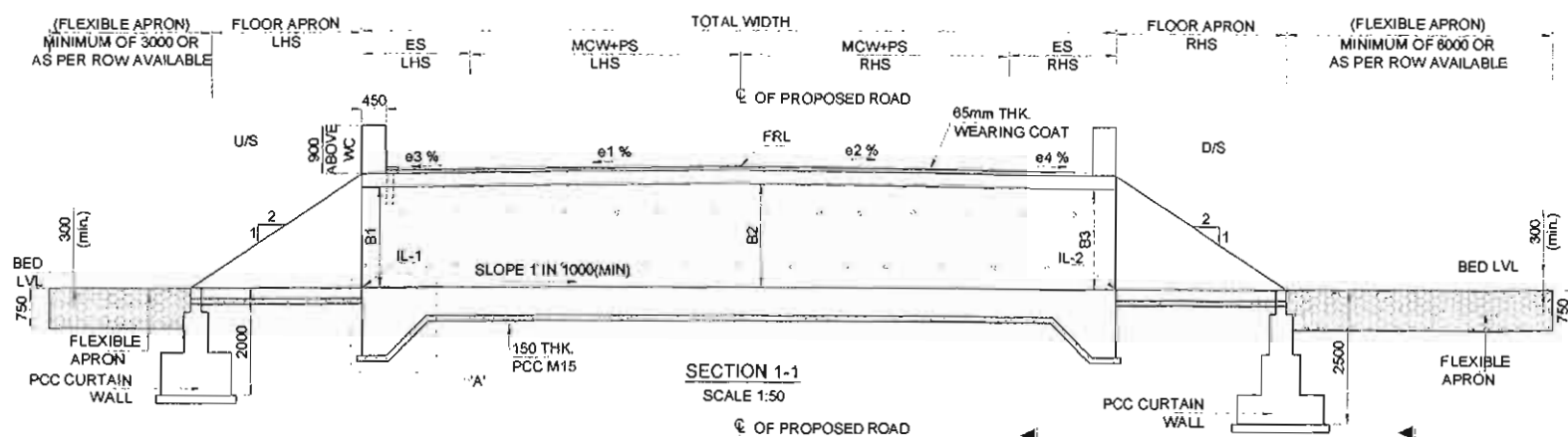
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GENERAL ARRANGEMENT DETAILS OF BOX CULVERT AT CH:

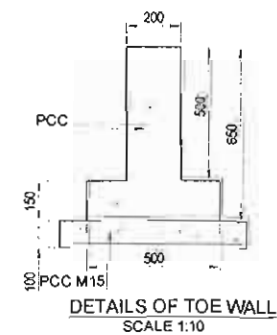
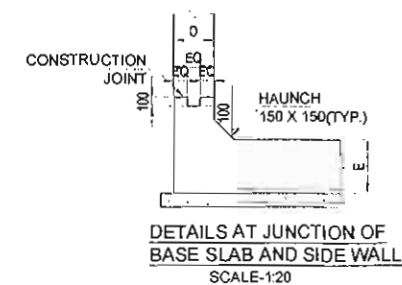
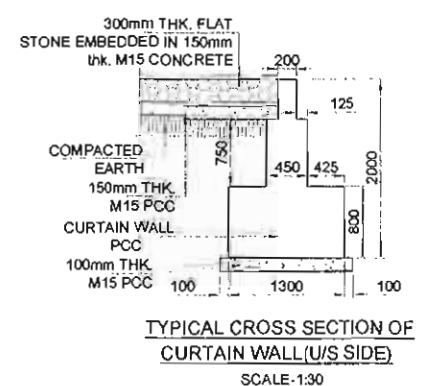
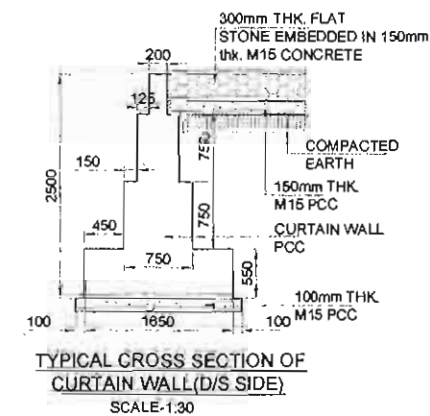
Handwritten notes:
DMS sub and North Rajpur

Widening & Strengthening Mahangi to Dudhali mod (NH-21)

EXISTING DRAINAGE	Schedule	CHAINAGE	DESIGN CHAINAGE	Type	Proposal	No Colls	FRL	IL LHS	IL RHS	Flow Direction	Over Width A	BL LHS	BL center	BS RHS	Top Slab (C)	Bottom Slab (D)	Outer wall (E)	Inner Wall (F)	Width of MCW+PS LHS	Width of MCW+PS RHS	Width of Earthen Shoulder LHS	Width of Earthen Shoulder RHS	TOTAL WIDTH	Se LHS of MCW (e1%)	Se RHS of MCW (e2%)	Se LHS of Earthen Shoulder (e3%)	Se RHS of Earthen Shoulder (e4%)	Length of LHS return wall	Length of RHS return wall	Ht of LHS return wall	Ht of RHS return wall	Floor Apron Width LHS	Floor Apron Width RHS	Flexible Apron Length LHS	Flexible Apron Length RHS
				Box Culvert	Reconstruction	2				L TO R	2.000	2.454	2.622	2.466	0.300	0.300	0.300	0.300	3.500	3.500	2.500	2.500	12.000	-2.50	-2.50	-3.00	-3.00	4.600	4.600	4.019	4.081	5.637	5.661	14.500	14.500



REFERENCE DRAWINGS
DETAILS OF RCC BOX
MISCELLANEOUS DETAILS
DIMENSION DETAIL OF RETAINING WALLS
REINFORCEMENT DETAIL OF RETAINING WALLS



BOX CULVERT
AT

KEY PLAN

NOTES:

01. ALL DIMENSIONS ARE IN mm AND LEVELS ARE IN METERS, UNLESS MENTIONED OTHERWISE.
02. DIMENSIONS ARE NOT TO BE SCALED, ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
03. CONCRETE MIX SHALL BE DESIGN MIX AND SHALL HAVE MAXIMUM 28 DAYS CHARACTERISTIC CUBE STRENGTH AS FOLLOWS:
(i) RCC BOX.....M30
(ii) RCC PARAPET.....M25
(iii) RCC RETURN WALL.....M30
(iv) PCC LEVELING COURSE.....M15
(v) PCC CURTAIN WALL.....M15
(vi) PCC TOE WALL.....M15
04. GRADE OF UNTENSIONED STEEL SHALL BE Fe 500, CONFORMING TO IS: 1786.
05. 800mm FILTER MEDIA SHALL BE PROVIDED BEHIND RCC BOX AND RETURN WALL.
06. THE BACK FILL MATERIAL BEHIND RCC BOX / RETAINING WALL SHALL HAVE FOLLOWING PROPERTIES ϕ 30°, $\square=2.0$ T/Cum.
07. SEISMIC ZONE - II.
08. REQUIRED SAFE BEARING CAPACITY AT FOUNDING LEVEL IS 10v/m². AND FOR INDEPENDENT RETURN WALL IS 15v/m².
09. FLOW DIRECTION SHOWN IN THE PLAN IS INDICATIVE ONLY, BED PROTECTION FOR UPSTREAM AND DOWN STREAM SHALL BE BASED ON THE FLOW DIRECTION THE SITE.
10. FLEXIBLE APRON SHALL BE PROVIDED BASED ON SITE CONDITION & SHALL BE DECIDED BY ENGINEER-IN-CHARGE WHEREVER ROCK IS AVAILABLE AT TOP LEVEL. FLEXIBLE APRON SHALL BE DISPENSED.
11. BACK FILLING SHALL BE DONE SIMULTANEOUSLY ON BOTH SIDE OF BOX.
12. DRAWING SHALL BE READ IN CONJUNCTION WITH RELEVANT APPROVED HIGHWAY DRAWING FOR FRI, INVERT LEVEL, GL, CROSS SLOPE, LONGITUDINAL GRADIENT, ROAD WAY DETAILS, TCS ETC
13. PITCHING / REVETMENT ON SLOPES TO BE PROVIDED AS PER MORTH SPECIFICATION.
14. IF THE FREE SWELL INDEX OF FOUNDATION SOIL IS MORE THAN 50, THEN SUITABLE SOIL STABILIZATION SHALL BE PROVIDED.
15. THE CLEAR OPENING SIZE AND EARTH CUSHION MENTIONED SHALL BE VERIFIED WITH EXISTING STRUCTURE / APPROVED PPD AND IN CASE OF ANY DECREPAANCY, IT SHOULD BE IMMEDIATELY REPORTED FOR SUITABLE ACTION PRIOR TO COMMENCEMENT OF THE WORK.
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17. PCC LEVELLING COURSE:
BELOW BOX STRUCTURE - 150 THK AND TOE WAL 100THK.
BELOW FLOOR APRON - 150 THK AND CURTAIN WALL 100THK.
18. STRUCTURE HAS BEEN DESIGNED FOR
i) ONE LANE, TWO LANE AND THREE LANES OF CLASS A
ii) ONE LANE OF CLASS 70R + ONE LANE OF CLASS A
iii) ONE LANE OF 40R BOGIE + ONE LANE OF CLASS A.
iv) SV LOADING
19. CONSTRUCTION JOINTS:-
i) THE LOCATION AND PROVISION OF CONSTRUCTION JOINTS SHALL BE AS PER THE DRAWING AND THE SAME SHALL BE APPROVED BY THE ENGINEER-IN-CHARGE.
ii) THE CONCRETE SURFACE AT THE JOINT SHALL BE BRUSHED WITH A STIFF BRUSH AFTER CASTING WHILE THE CONCRETE IS STILL FRESH AND IT HAS ONLY SLIGHTLY HARDENED.
iii) BEFORE NEW CONCRETE IS POURED THE SURFACE OF OLD CONCRETE SHALL BE PREPARED AS UNDER:
(a) FOR HARDENED CONCRETE, THE SURFACE SHALL BE THOROUGHLY CLEANED TO REMOVE DEBRIS / LANTANCE & MADE ROUGH SO THAT 1/4 OF THE SIZE OF THE AGGREGATE IS EXPOSED
(b) FOR PARTIALLY HARDENED CONCRETE, THE SURFACE SHALL BE TREATED BY WIRE BRUSH FOLLOWED BY AN AIR JET
(c) THE OLD SURFACE SHALL BE SOAKED WITH WATER WITHOUT LEAVING PUDDLES IMMEDIATELY, BEFORE STARTING CONCRETING TO PREVENT THE ABSORPTION OF WATER FROM NEW CONCRETE
iv) NEW JOINT SHALL BE THOROUGHLY COMPACTED IN THE REGION OF THE JOINT

PROPOSED SEQUENCE OF CONSTRUCTION:-

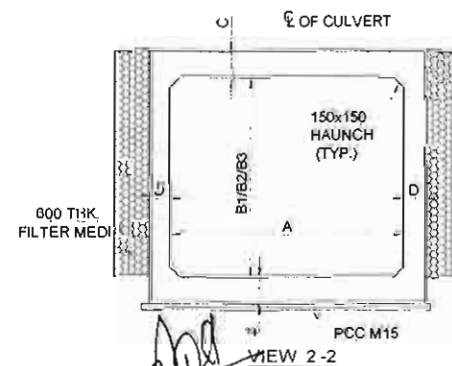
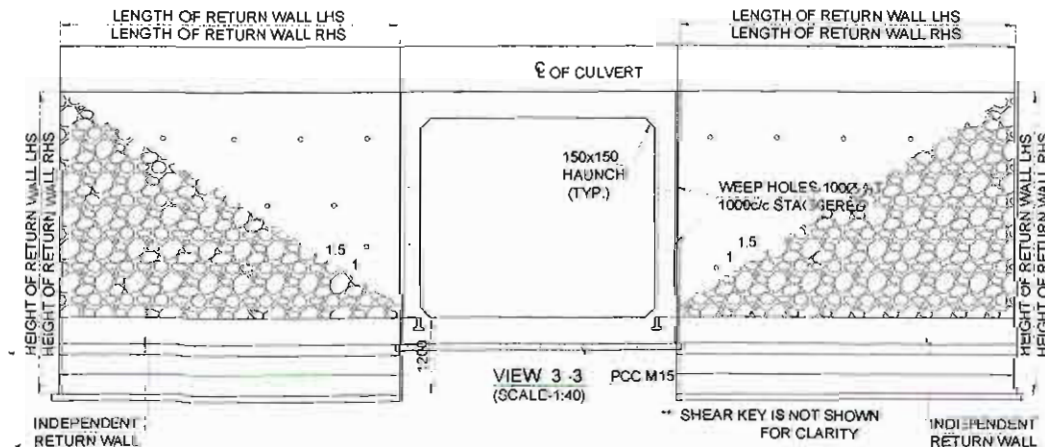
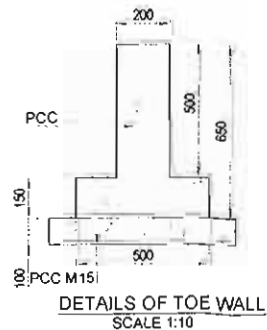
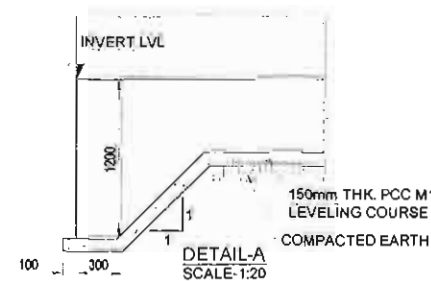
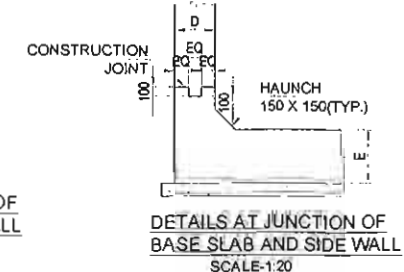
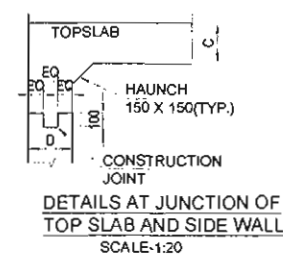
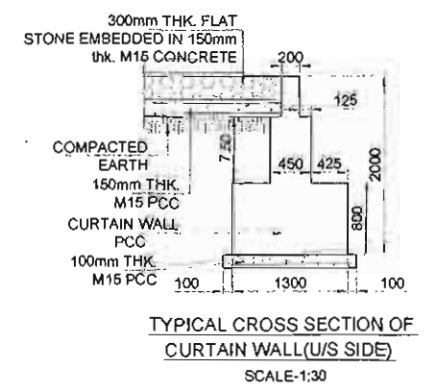
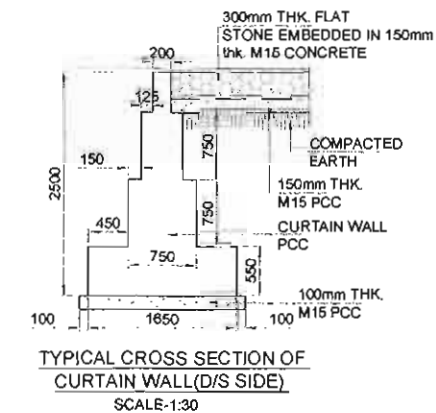
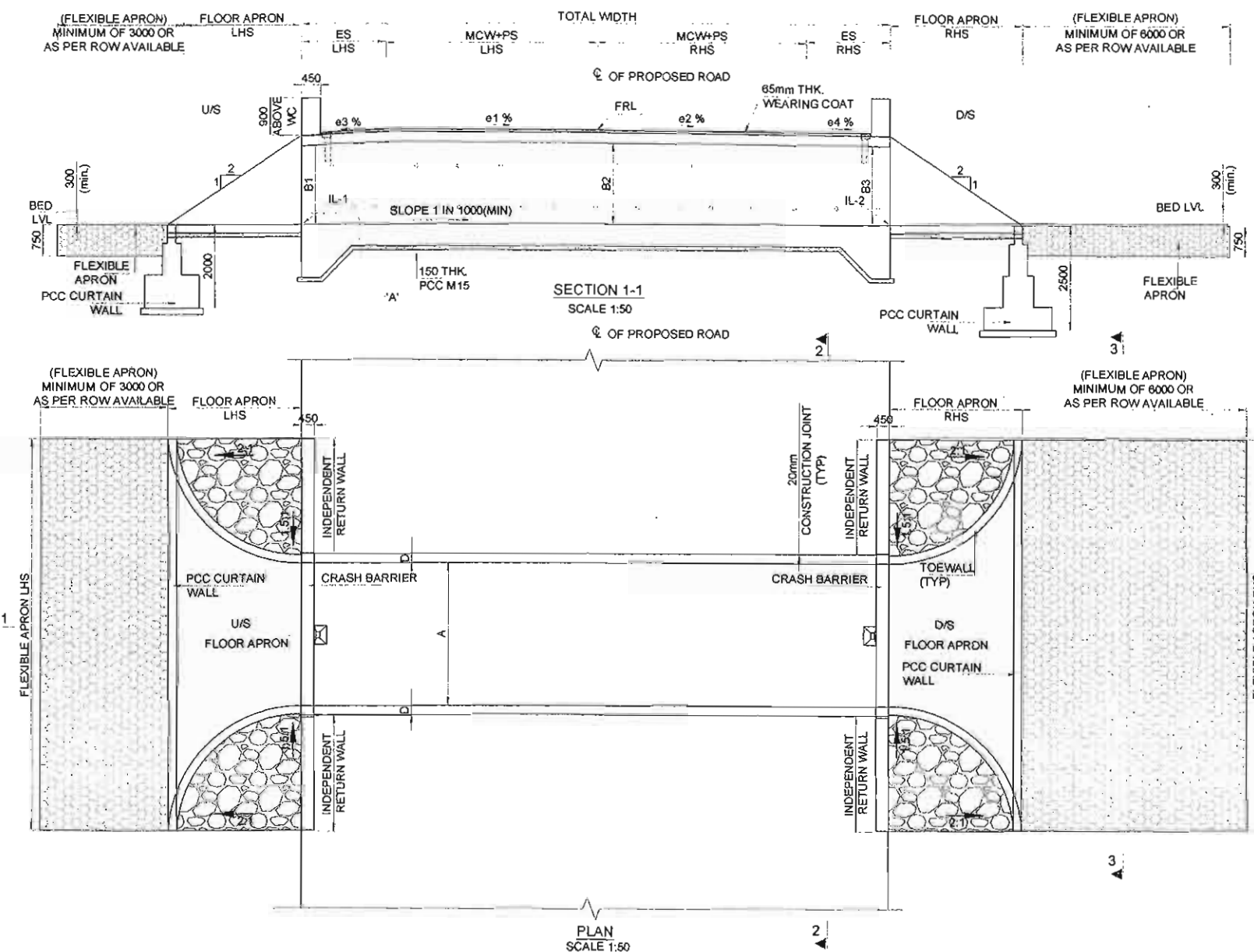
1. EARTH WORK EXCAVATION
2. CONFIRMATION OF FOUNDING LEVEL AS MENTIONED IN GFC DRAWING
3. LAYING OF PCC LEVELLING COURSE
4. CONSTRUCTION OF BOTTOM SLAB WITH A PORTION OF WEBS
5. CONSTRUCTION OF WEBS
6. CONSTRUCTION OF TOP SLAB WITH A PORTION OF TOP WEBS
7. BACK FILLING BEHIND THE SIDE WALL
8. LAYING OF WEARING COAT & 9. PLACING OF SIDL

REFERENCE DESIGN DOCUMENT NO.:

GENERAL ARRANGEMENT DETAILS OF
BOX CULVERT AT CH :

Widening & Strengthening Mahangi to Dudhali mod NH-21)

EXISTING CHAINAGE	SCHEDULE CHAINAGE	DESIGN CHAINAGE	Type	Proposal	No. Cais	FRL	IL LHS	IL RHS	Flow Direction	Clear Width A	B1 LHS	B2 at center	B3 RHS	Top Slab (C)	Bottom Slab (D)	Outer wall (E)	Inner Wall (F)	Width of MCW+PS LHS	Width of MCW+PS RHS	Width of Earthen Shoulder LHS	Width of Earthen Shoulder RHS	TOTAL WIDTH	Se LHS of MCW (a1%)	Se RHS of MCW (a2%)	Se LHS of Earthen Shoulder (a3%)	Se RHS of Earthen Shoulder (a4%)	Length of LHS return wall	Length of RHS return wall	Ht of LHS return wall	Ht of RHS return wall	Floor Apron Width LHS	Floor Apron Width RHS	Flexible Apron Length LHS	Flexible Apron Length RHS
			Box Culvert	Reconstruction	1		190.245		L TO R	2.000	2.007	2.175	2.191	0.300	0.300	0.300	0.000	3.500	3.500	2.500	2.500	12.000	-2.50	2.50	-3.00	-3.00	3.900	4.200	3.572	3.759	4.743	5.117	10.800	11.400



REFERENCE DRAWINGS
DETAILS OF RCC BOX
MISCELLANEOUS DETAILS
DIMENSION DETAIL OF RETAINING WALLS
REINFORCEMENT DETAIL OF RETAINING WALLS

BOX CULVERT
AT

KEY PLAN

- NOTES:**
- ALL DIMENSIONS ARE IN mm AND LEVELS ARE IN METERS, UNLESS MENTIONED OTHERWISE.
 - DIMENSIONS ARE NOT TO BE SCALED, ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
 - CONCRETE MIX SHALL BE DESIGN MIX AND SHALL HAVE MAXIMUM 28 DAYS CHARACTERISTIC CUBE STRENGTH AS FOLLOWS:
(i) RCC BOX.....M30
(ii) RCC PARAPET.....M25
(iii) RCC RETURN WALL.....M30
(iv) PCC LEVELING COURSE.....M15
(v) PCC CURTAIN WALL.....M15
(vi) PCC TOE WALL.....M15
 - GRADE OF UNTENSIONED STEEL SHALL BE Fe 500, CONFORMING TO IS: 1788.
 - 600mm FILTER MEDIA SHALL BE PROVIDED BEHIND RCC BOX AND RETURN WALL.
 - THE BACK FILL MATERIAL BEHIND RCC BOX / RETAINING WALL SHALL HAVE FOLLOWING PROPERTIES $\phi 30^\circ$, $C=2.0$ T/Cum.
 - SEISMIC ZONE - II.
 - REQUIRED SAFE BEARING CAPACITY AT FOUNDING LEVEL IS 10 t/m^2 AND FOR INDEPENDENT RETURN WALL IS 15 t/m^2 .
 - FLOW DIRECTION SHOWN IN THE PLAN IS INDICATIVE ONLY, BED PROTECTION FOR UPSTREAM AND DOWN STREAM SHALL BE BASED ON THE FLOW DIRECTION THE SITE.
 - FLEXIBLE APRON SHALL BE PROVIDED BASED ON SITE CONDITION & SHALL BE DECIDED BY ENGINEER-IN-CHARGE WHEREVER ROCK IS AVAILABLE AT TOP LEVEL FLEXIBLE APRON SHALL BE DISPENSED.
 - BACK FILLING SHALL BE DONE SIMULTANEOUSLY ON BOTH SIDE OF BOX.
 - DRAWING SHALL BE READ IN CONJUNCTION WITH RELEVANT APPROVED HIGHWAY DRAWING FOR FRL, INVERT LEVEL, GL, CROSS SLOPE, LONGITUDINAL GRADIENT, ROAD WAY DETAILS, TCS ETC.
 - PITCHING / REVETMENT ON SLOPES TO BE PROVIDED AS PER MORTH SPECIFICATION.
 - IF THE FREE SWELL INDEX OF FOUNDATION SOIL IS MORE THAN 50, THEN SUITABLE SOIL STABILIZATION SHALL BE PROVIDED.
 - THE CLEAR OPENING SIZE AND EARTH CUSHION MENTIONED SHALL BE VERIFIED WITH EXISTING STRUCTURE / APPROVED PPD AND IN CASE OF ANY DISCREPANCY, IT SHOULD BE IMMEDIATELY REPORTED FOR SUITABLE ACTION PRIOR TO COMMENCEMENT OF THE WORK.
 - SOFT AND LOOSE PATCHES IN THE BEARING AREA SHALL BE REPLACED BY COMPACTED GRANULAR FILLS AND SHALL BE PROPERLY COMPACTED WITH LAYERS NOT EXCEEDING 200mm BEFORE LAYING PCC OVER IT.
 - PCC LEVELLING COURSE:
BELOW BOX STRUCTURE - 150 THK AND TOE WALL 100THK.
BELOW FLOOR APRON - 150 THK. AND CURTAIN WALL 100THK.
 - STRUCTURE HAS BEEN DESIGNED FOR
(i) ONE LANE, TWO LANE AND THREE LANES OF CLASS A
(ii) ONE LANE OF CLASS 7DR + ONE LANE OF CLASS A
(iii) ONE LANE OF 40R BOGIE + ONE LANE OF CLASS A.
(iv) SV LOADING
 - CONSTRUCTION JOINTS:
(i) THE LOCATION AND PROVISION OF CONSTRUCTION JOINTS SHALL BE AS PER THE DRAWING AND THE SAME SHALL BE APPROVED BY THE ENGINEER-IN-CHARGE.
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- LAYING OF WEARING COAT & PLACING OF SID

REFERENCE DESIGN DOCUMENT NO

GENERAL ARRANGEMENT DETAILS OF
BOX CULVERT AT CH:

*Assistant Engineer
PMD Sub Dir North
Jaipur*