# REPORT

ON

THE GEOTECHNICAL INVESTIGATION FOR THE PROPOSED GRADE SEPARATOR BY INTEGRATING SONY WORLD JUNCTION AND EJIPURA MAIN ROAD-INNER RING ROAD JUNCTION AT KORAMANGALA, WARD NO-68, BANGALORE

CLIENT: M/s. Bruhath Bangalore Mahanagar Palike,

Bangalore - 560 025

CONSULTANT: M/s. Manasa Consultants,

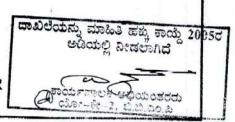
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Bangalore-560003

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REPORT NO: 090911 - 355/R





# REPORT THE GEOTECHNICAL INVESTIGATION FOR THE PROPOSED GRADE SEPARATORS BY INTEGRATING SONY WORLD JUNCTION AND EJIPURA MAIN ROAD-INNER RING ROAD JUNCTION AT KORAMANGALA, WARD NO-68, BANGALORE

### 1.0 INTRODUCTION

M/s. Bruhath Bangalore Mahanagar Palike, Bangalore had entrusted us to carry Geotechnical (soil) investigation for the proposed Grade Separator by Integrating Sony world Junction and Ejipura Main Road-Inner Ring Road Junction at Koramangala, Ward no-68, Bangalore. The primary objective of this investigation is to establish the geotechnical condition at the site and to evaluate the allowable bearing pressure and other engineering design parameters through the various field and laboratory tests. This report consists of the details about the field & Laboratory tests performed and the recommendations made based on the results of the tests.

### 2.0 SCOPE

Field work comprising drilling of 2 boreholes, conducting SPT tests and collection of samples started on 09.09.2011 and was completed on 18.09.2011. The primary objective of this investigation was to obtain information about the sub-surface conditions at the site and obtain net allowable bearing pressure for design of foundations. Fig 1: showing (client's reference drawing) the location of boreholes for the proposed construction site.

# 3.0 RELAVENT DESCRPTION OF PROJECT AREA

# 3.1 General Information about Project Site

The Proposed facility is a Grade separator by integrating Sony world junction and Ejipura main road-inner ring road junction located close to Koramangala.

# 3.2 Regional Geology

Geomorphologically, Bangalore district can be divided into rocky upland, plateau and flat topped Hills at an elevation of about 900m above MSL. A major part of district lies in Cauvery basin lies in Cauvery over an area of 5450 sq km covering nearly 68% of the total area. Major tributaries of Cauvery draining the district are Kanva, Shimsha and Arkavathy. Other rivers draining the remaining part of district are Pennar, Palar and Ponniyar. Soils of 20050

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Bangalore can be broadly classified into three categories (viz.) Loamy Soil, Lateritic Soil and Lateritic gravelly soil depending upon parent rocks in that area. These soils show wide variation in overburden thickness. Below Soil occurs weathered rock exhibiting varying degree of weathering with degree of weathering generally decreasing with depth. Further below, Bangalore urban and rural districts comprise of Precambrian crystalline formations comprising peninsular gneissic complexes with a small patch of hornblende schist in Northern part of District and intrusive Closepet granite all along the western parts of the district. Small stretch of unconsolidated sediments is noticed. The gneissic basement dates back to Archean Era (2500-3500 mya). A large granitic intrusion in south central Part of city extends from Golf Course to Vasantpur. Migmatitic intrusions are seen near Kanakpura Road. These basic intrusions constitute hard massive rocks such as dolerite, Gabbro, Norite and Pyroxenite.

# 3.3 Seismic Vulnerability

With regard to seismic vulnerability, the Project site is located in Karnataka which comes under zone II as per IS 1893 (Part I-2002). Recent earthquakes that occurred close to Bangalore were in the range of 2 to 5.5 in Richter scale. On January 29, 2001, earthquake magnitude of 4.3 in Richter scale hit in the Mandya area, with its epicenter about 35km south of Bangalore.

# 4.0 FIELD INVESTIGATION- RELEVANT DESCRIPTION

# 4.1 Boring and Drilling

Two boreholes of 150 mm/Nx diameter were sunk by deploying boring rigs using the conventional rotary drilling process. Methodology followed for boring confirmed to IS: 1892. Boring was effected by the cutting action of rotating bit and by stabilizing the sides of the boreholes by using casing pipes/bentonite slurry up to required depth to prevent side collapse. The boring was continued by normal boring process using MS soil cutter in borehole up to refusal stratum (N>100), Beyond this depth drilling was progressed using Nx size TC /Diamond bits. The borehole was terminated when adequate depth of drilling was completed in consultation with the Engineer-in-charge, Refer Annexure I for Bore log.





# 4.2 Standard Penetration Test (SPT) in boreholes

Standard Penetration Test (SPT) to determine penetration resistance was conducted in the boreholes using the procedure described in IS: 2131. In this method, driving bit is replaced by split spoon sampler (50.8 mm OD and 35 mm ID) and the sampler is driven by dropping 63.5 kg hammer on the top of the driving collar with a free fall of 75 cm. The length of the sampler is 60 cm. The sampler is first driven through 15 cm as "Seating Drive". It is further driven through 30 cm. The number of blows required to drive the sampler for 30 cm beyond seating drive is termed as "Penetration Resistance, N". Representative samples were collected using split spoon sampler. Where full 30cm penetration beyond seating drive was not possible, number of blows and corresponding penetration is mentioned in borelogs. Refer Annexure I for Borelog.

# 4.3 Sampling in boreholes

In view of silt dominated/weathered rock/ rock formations prevalent, representative samples were collected from split spoon sampler used for conducting SPT at close intervals of 1.5m.

### 4.4 Ground water table

Water table was not met in any of the boreholes within explored depth below the existing ground level at the time of soil investigations; however the same may be subjected seasonal fluctuations.

### 5.0 SUB-SOIL PROFILE ANALYSIS

### Layer - I

The sub soil consists of from top nil to 7.5m depth greyish brown to yellowish brown sandy Silt around BH-01 where as around BH-02 up to 12.0m depth greyish brown/whitish grey with yellowish grey sandy Silt with presence of mica is observed with N -Values ranges from 15 to 50 represents medium dense in nature. Around BH 1 filled up soil is observed to be 1.5m/2.0m depth.

### Layer - II

This layer occurs immediately below soil Layer – I, the soil consist of yellowish brown/white to yellowish brown completely weathered rock is encountered up to 12.0m/13.50m depth with N- Values greater than 50 represents very dense in nature.

Soil Investigation Slope Protection Drilling & Grouting Ground Anchors Pile Foundation Micropiles



### Layer - III

This layer consists of moderately weathered rock around BH-01 up to termination depth with N-values >100 represent very dense strata where as around BH-02 up to termination depth grey hard rock is observed.

# 6.0 RECOMMENDATIONS FOR DESIGN OF FOUNDATIONS

- The foundation for all structure shall be taken to a minimum depth of 1.5m below the proposed road level.
- 2) Net SBC Recommendations based on shear failure and allowable settlement of 25mm for isolated /combined footings having a minimum width of 3m is tabulated as under

Depth below the Natural ground level, m	Net SBC (kN/m²)
1.5	160
3.0	<b>20</b> 0
4,5	250

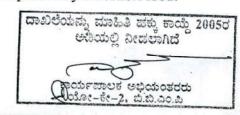
Note 1: In case if water table/ change in strata are observed during foundation excavation, the same shall be brought to the Geotechnical Consultant notice for the review of recommended net SBC.

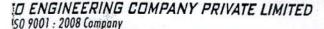
# 6.1 Alternative Foundation Recommendations

Soil Investigation

The following recommendations are made based on the soil investigation conducted and the conclusions drawn.

- Bored cast-in-situ pile foundation is recommended based on load consideration. Piles shall be socketed into hard rock for at least 1.0 times the diameter of pile or 5 times the diameter in hard strata or weathered rock (with N>100).
- 2. For the design consideration (Design length of pile= 15.0m from existing ground) following allowable load carrying capacity of the piles may be considered.





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Diameter, mm Allowable Load, tones
750 180
900 300
1000 430

However actual load carrying capacity of pile may be arrived by conducting initial pile load test.

# 7.0 Other relevant Geo-technical Considerations

- Water table was not met in any of the boreholes within explored depth below the
  existing ground level at the time of soil investigations however the same may be
  subjected seasonal fluctuations. During execution, in case water is met, suitable
  dewatering measures shall be adopted to confine the water table to base level of the
  footing.
- The bottom of foundation shall be properly leveled and verified for loose pockets/weaker zones and if found, the same shall be replaced with lean concrete.

For GEOENGINEERING COMPANY PRIVATE LTD

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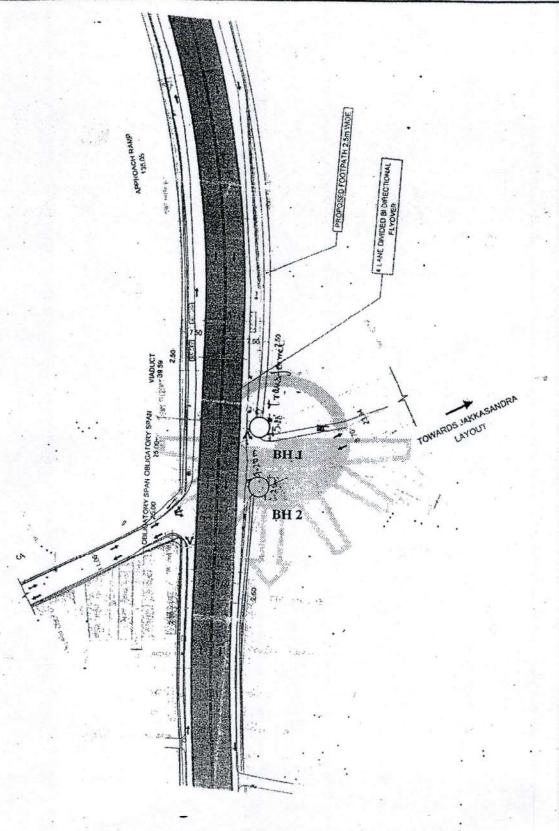
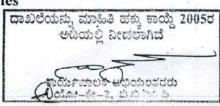


Fig 1: Location of Bore holes



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ENGINEERING BORELOG

ANNEXURE I

Client: BBMP Borehole No : BH 1 Project: Grade Separator

Location: Ejipura Junction Point

Size of Borehole: 150mm/Nx Size Ground water table (m) : Not met

Commenced: 09.09.11 Completed: 11.09.11

Description of Soil	(m)	pue	Sample :	SPT	TEST, nu	imber of orded	. N2+N3	Drill	ing in ole rock	
/Rock Stratum	Depth (m)	Pegend	Sam	1 <sup>st</sup> 15cm	2 <sup>nd</sup> 15cm	3 <sup>rd</sup> 15cm	N Value - N2+N3	CR (%)	RQD (%)	Remarks
				N <sub>1</sub>	N <sub>2</sub>	N <sub>3</sub>	7 Z	(70)	(70)	
Filled up Soil	0.0 1.0 1.5 2.0		SPT	4	4	6	10			
Brown clayey Silt with presence of clay binder	2.5 3.0		SPT	12	15	22	37	-		
White to yellowish grey silty Sand	3.5 4.0 4.5		SPT	38	5cm	. R.	>100			Localized pocket
Consists beauty in	5.0 5.5 6.0			7						
Greyish brown/yellowish brown sandy Silt	6.5		SPT	15	18	21	39			
	7.5		SPT	17	21				: ]	
	8.0		30.5		21	24	45			•
	8.5	51000	.6							
	9.0		SPT	20	20	25	45	0		
ellowish brown/grey to	9.5		11 0	1		2 %	,,,			
yellowish brown . '	10.0	-			8	1				
weathered rock	10.5		SPT	16	28	36	64	7 1		
	11.0			્યુ	<i>a</i>		1.50			
	11.5									
	12.0		SPT	15	40/8cm	R	>100			
ellowish brown coarse	12.5							_		<del></del>
Sand	13.0					1			-	Washed samples
	·13.5		WS.							collected
	14.0		1							
	14.5									V 1
	15.0					1			-	- 11
	15.5 16.0		CR	- :						
1.0	16.0		CK					26	26	
hitish grey moderately	17.0		CR			. [				
weathered rock	17.5			- 1		: :		11 .	NIL	
	18.0		CR					17	17	
	18.5							17	17	
	19.0			-	.					
	19.5			1					-	
Standard penetration	20.0		CR					11	11	

UDS= Undisturbed Sample

RQD= Roack Quality Designation

R= Refusal /Rebound

CR=Core Recovery

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ENGINEERING BORELOG

Client: BBMP Borehole No : BH 2 Project : Grade Separator Location: Ejipura Junction Point Size of Borehole: 150mm/Nx Size Ground water table (m) : Not met Commenced: 14.09.11

Completed: 18.09.11

Description of Soil	Ē	P	ele .		EST, nui				ing in ole rock	
/Rock Stratum	Depth (m)	Legend	Sample	1 <sup>st</sup> 15cm	2 <sup>nd</sup> 15cm	3 <sup>rd</sup> 15cm	N Value	CR	RQD	Remarks
				N <sub>1</sub>	N <sub>2</sub>	N <sub>3</sub>		(%)	(%)	
Brown sandy Silt	0.0					100				
<del></del>	0.5	10.00								24.
Yellowish brown coarse Sand	1.0		SPT	9						
	2.0		351	9	12	13	25			
	2.5									
	3.0		SPT	10	13	16	29			
	3.5		0		13	10	29			
Greyish brown/whitish grey sandy Silt	4.0							- 0		
grey sandy Sut	4.5		SPT	14	17	19	36			
	5.0					.,	50	-		
	5.5									
	6.0	and the	SPT	18	21	25	. ' • 46-			
	6.5			7					-	
	7.0		- 47							
	7.5		SPT	19	23	26	49			
	-0.8-		**************************************	37738277300			020000000000000000000000000000000000000	7		
	8.5		Section 1				300 MAN	A I		
Yellowish grey sandy Siltsilty Sand with	9.0		SPT	28	R		>100			
presence of mica	9.5				100 Acc		4.4			
	10.0				100	R				
	10.5		SPT	26	31	R	>100	. 1	- 1	
	11.0		. 11 1	- 4	4	4 W	CONTROL OF			
the same of the same of	11.5		· Ú	*	8	The state of		- 1	- 1	
	12.0		SPT	>50	R	.00.	>100			
	12,5			1	3"				7-	7
reyish white moderately	13.0			Y		Cal		- 1		
weathered rock	13.5									
	14.0		CR .					44	NIL	7, 2, 7, 2,
	14.5							-	-	
Grey Hard rock	15.0									4 16
* (CANDIDATE OF CANDIDATE OF CA	15.5									141
PT=Standard penetration	16.0		CR					70	64	

UDS= Undisturbed Sample

R= Refusal / Rebound CR=Core Recovery

RQD= Roack Quality Designation

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ANNEXURE II

# TABLE No.1: LABORATORY TEST RESULTS

вн	Depth	Sample		Grain	in size analysis (%)  Limits (%)  NM				NMC	
No.	(m)	Sample	G	cs	MS	FS	Silt and clay	LL	PL	(%)
300	3.0	SPT	0.0	. 1.0	19.0	26.5	53.6			17.3
	6.0	SPT	0.6	1.0	23.8	17.8	56.7	41.3	-	20.4
1	7.5	SPT	0.0	0.7	22.6	15.8	61		i ÷	22.1
	9.0	SPT	0.8	2.4	23.8	19.3	53.8		-	16.5
	12.0	SPT	1.0	2.3	23.4	16.3	57.1			20.7
	1.5	SPT	3.4	14.9	7.2.3	6.9	2.4			12.1
	4.5	SPT -	1.4	6.2	32.5	18.3	41.6	42.6	44.6	16.6
,	6.0	SPT	0.6	4.2	30.5	16.3	48.5		-	20.9
2	9.0	SPT	0.1	2.1	32.8	23.9	41,2			13.5
	10.5	SPT	0.0	0.9	27.9	20.4	50.8	-		16.6
	12.0	SPT	0.0	3	46.5	21:2	29.2			13.4

All depths of sampling and testing are below existing level

G - Gravel, CS- Coarse sand, MS-Medium Sand, FS-Fine Sand,

NMC -Natural moisture content, NP- Non-plastic

LL - Liquid Limit, PL-Plastic Limit

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Idealized testing done based on extensive visual classification and repetitive testing avoided

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# GRAIN SIZE ANALYSIS CURVES

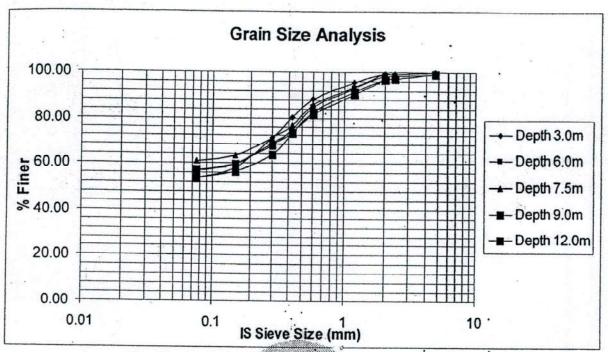


Fig. No. 2: Grain size analysis Curves around BH 1.

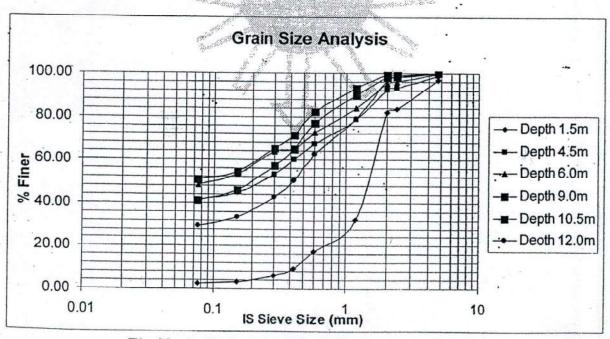
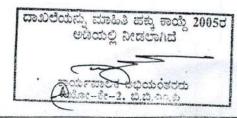


Fig. No. 3: Grain size analysis Curves around BH 2.



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# Design of a Pile Foundation - Single Pile

### Piles in Cohesion less Soils

Diameter of Pile, D = 900 0.9 Length of Pile, L = 15

S. Density of soil at pile tip, r = Assumed 0.8 kN/m3 g/cc Angle of internal friction at pile tip = degrees

Nr = 109 (from IS 6403 for the given phi value) Ng = (from IS 2911 for the given phi value) 125

Ap = 0.6359 m<sup>2</sup>

Ultimate Bearing Capacity, Qu = Qus + Qup

Qup = Ap  $(1/2 * D * r * Nr + P_D * Nq) =$ 7243.86 Qus =Sum ( K \* PDi tan(delta) \* Asi) = 365.91 kN

Qu = 7609.77

Factor of Safety = Qua = 3043.9

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# REPORT

ON

THE GEOTECHNICAL INVESTIGATION FOR THE PROPOSED GRADE SEPARATOR AT THE JUNCTION OF 100 FEET INNER RING ROAD - KORAMANGALA IN WARD NO: 68, BANGALORE

CLIENT: M/s. Manasa Consultants,

No. 140-B, II Floor,

9th Cross, Malleswaram,

Bangalore - 560 003

REPORT NO: 060308 - 422

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> ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು ಎರ್ನೊ-ಕೇ-2. ಬಿ.ಬಿ.ಎಂ.ಪಿ

# REPORT ON THE GEOTECHNICAL INVESTIGATION FOR THE PROPOSED GRADE SEPARATOR AT THE JUNCTION OF 100 FEET INNER RING ROAD, KORAMANGALA IN WARD NO: 68, BANGALORE

### INTRODUCTION

M/s. Manasa Consultants, Bangalore has entrusted us to carry out the geotechnical investigation for the proposed grade separator at the junction of 100 feet inner ring road-Koramangala in ward No: 68, Bangalore The primary objective of this investigation was to establish the ground condition at the site and evaluating the bearing pressure and other engineering design parameters through the field and laboratory tests. This report consists of the details about the field tests performed and the recommendations made based on the results of the tests.

### SCOPE

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The scope of work includes both the field tests and laboratory tests. Four boreholes by mechanical drilling method are planned at location to obtain the sub-surface stratification. Fig. 1 shows the location of the boreholes on the entire plan of the proposed construction site.

### FIELD INVESTIGATION

The field investigation consists of advancing 150mm dia boreholes using rotary drilling with bentonite mud circulation. Standard penetration test (SPT) was conducted at every 1.50m interval as per IS: 2131 – 1981. The number of blows for 30cm penetration of split spoon sampler was recorded as N-values. 100mm dia undisturbed samples (UDS) were collected at intermediate depths using thin walled tube samplers as per IS 2132. The process of drilling, conducting SPT and collecting UDS were continued up to refusal stratum (N>50), Beyond this depth drilling was progressed using NX size TC/diamond bits. The boreholes were terminated when adequate depth of drilling was completed in consultation with the Engineer-in-charge.

The various sub-surface strata are presented in the respective bore charts.

### LABORATORY TESTS

Laboratory Test was performed to evaluate both the index and engineering properties of the soil samples collected during boring. The different tests performed are test for Grain size

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### SUB SOIL PROFILE

The subsoil generally consists of top nil to 1.5m is filled up soil followed by yellowish to brownish medium to fine sandy Clay up to 4.5m depth below this there is greyish yellow weathered rock up to 19.5m around BH 1 and BH 3 whereas around BH 2 and BH 4 there is greyish white weathered rock up 6.0m depth beyond this there is greyish white hard rock up to termination depth. All the boreholes are terminated at an average depth of 15.0m depth from the existing ground level. During the time of investigation water table was encountered at an average depth of 4.0m from the existing ground level.

# CONCLUSIONS AND RECOMMENDATIONS

### CONCLUSIONS

The following conclusions and recommendations are given based on field and laboratory investigations.

- 1. The soil stratum up to 6.0m is found to be medium stiff in nature.
- 2. The soil stratum below 6.0m is found to be very dense in nature.
- 3. The silt presence in the soil is found to be medium compressible in nature.
- The silt presence in the soil is found to be very stiff in consistency and medium plastic in nature.
- 5. During the time of investigation water table was encountered at an average depth of 4.0m from the existing ground level.
- 6. During the time of investigation ground water table was not encountered up to termination depth.

# RECOMMENDATIONS

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The following recommendations are made based on the detailed investigation conducted and the conclusions drawn.

 The foundation for all structure shall be taken to a minimum depth of 1.50m below the existing ground level.

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 Individual footing/combined footing may be designed with the following allowable bearing pressure of, which gives a factor of safety of 3.0 against shear failure and for an allowable settlement of 25mm.

Depth, m		S.B.C (t	$/m^2$ )
1.5		∵ .12	•
3.0		17	
4.5		22	

- Provide 100mm down size well graded aggregates well compacted to 8" depth followed by 4" sand cushion at founding level.
- 4. The bottom of foundation shall be properly leveled and verified for loose pockets/weaker zones and if found, the same shall be replaced with lean concrete.

# Alternatively

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- Bored cast-in-situ pile foundation is recommended based on load consideration. Piles shall be socketed into hard rock for at least 0.6 times the diameter of pile or 5 times the diameter in hard strata or weathered rock.
- 2. In cases of pile founded in a hard stratum the spacing will be governed by the competency of end bearing strata. The minimum spacing in such cases, shall be 2.5times the diameter of the shaft. In case pile resting on hard rock 2 times the diameter may be adopted.
- Piles deriving their bearing capacity mainly from the friction shall be sufficiently apart to ensure that the zones of soils from which piles derive their support do not overlap to such an extent that their bearing values are reduced. Generally spacing in such cases shall not be less than three times the diameter of the shaft.
- 4. For the design consideration (Design length of pile= 15.0m from existing ground) following allowable load carrying capacity of the piles may be considered. However actual load carrying capacity of pile may be arrived by conducting initial pile load test.

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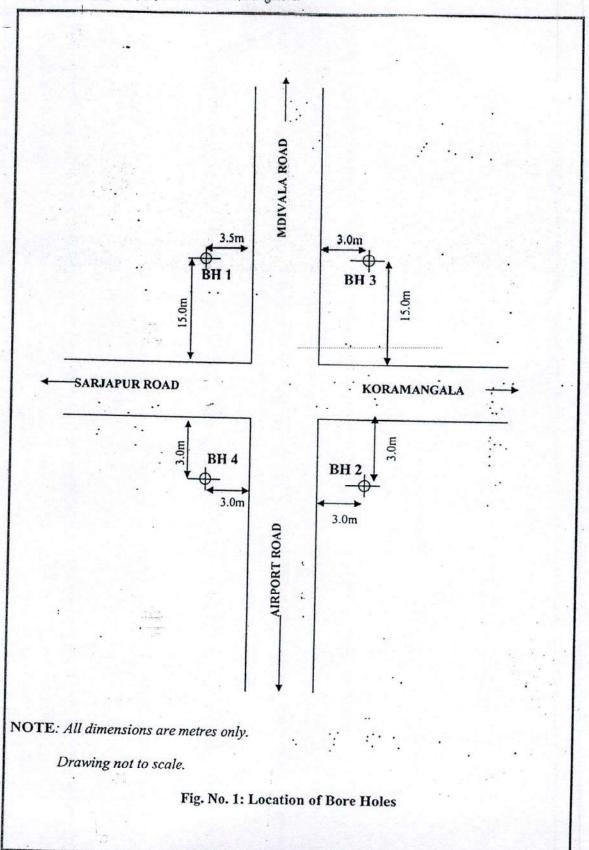
Diameter, mm Allowable Load, tones
600 75
750 175
1000 380

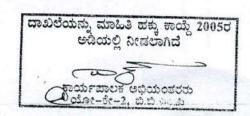
for GEOENGINEERING COMPANY PRIVATE LTD

(JAYAPRAKASH. K. N)

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> ಕಾರ್ಯಪಾಲಕ ಅಥಯಂತರರು ಯೋ-ಕೇ-2, ಬಿ.ಬಿ ಎಂ.ಪಿ





# BORE HOLE NUMBER: 1

Site: Koramangala

Date of testing: 06/03/08

Type of Boring: Rotary Drilling

Borehole diameter: 150 mm

GWT: 2.0 m

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DESCRIPTION	pue	Depth (m)	ple	N - Value	No	SPT of b	Test R lows	Result N/30	s cms
	Legend	Dep	Sample	Z	10	20	30	40	50
Filled up Soil		0.0	-						
Yellowish clayey fine Sand		1.0	. DS	-			A .		
		1.5	SPT	02	9				
		3.0	SPT DS	: i3					
Yellowish medium to fine sandy Clay:		4.5	SPT	16					
			DS	12.		1			
		5.5	DS			1			
Greyish yellow clayey fine to medium Sand		6.0	SPT	22					
		7.5	SPT DS	>50		1			1
Yellowish weathered rock		9.0	SPT DS	>100					
PT – Standard Penetration Tes		10.5	DS						

SF1 – Standard Penetration Test

UDS - Undisturbed soil sample

DS - Disturbed soil Sample

GWT - Ground Water Table

Fig. 2: Bore log at BH: 1

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# BORE HOLE NUMBER: 1 (Contd...)

Site: Koramangala

Date of testing: 06/03/08

Type of Boring: Rotary Drilling

Borehole diameter: 150 mm

GWT: 2.0 m

DESCRIPTION	· pue	Depth (m).	ole	N - Value		SPT 7			
	Legend	Dept	Sample	Z.	10	20	30	40	50
		10.5	DS						
		.12.0	DS	-					
		13.5	DS						
Whitish grey weathered rock		15.0	DS	-					•
		16.5	DS						
		18.0	DS .	-					
		19.5	DS						
Whitish yellow soft Rock				Run		C.R,	% R	.Q.D,%	
Sperior Soft Rock		20.0	C.R	19.5 to	20.0	20		Nil	J

SPT - Standard Penetration Test

UDS - Undisturbed soil sample

DS - Disturbed soil Sample

GWT - Ground Water Table

C.R - Core Recovery

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RQD - Rock Quality Designation

Fig. 3: Bore log at BH: 1

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Site: Koramangala				Date of	ftesti	ng: 1(	0/03/0	8	
Type of Boring: Rotary GWT: Nil	Drilling			Boreho	le dia	mete	r: 150	mm	
DESCRIPTION	Legend	Depth (m)	ple	N - Value		SPT :			
	Leg	Dep	Sample	z	10	20	30	40	50
		0.0	1 -	-				-	
· Filled up Soil						,			
		:3.0	UDS						
				.:.					
Brownish grey medium to fine sandy Clay		4.5	SPT DS	25			9		
		·						/	
		6.0	SPT DS	40					1
Greyish white weathered rock									1
		6.3 6.7	DS 	>100					
Greyish white hard rock				Rur		C.R,		.Q.D,%	6
SPT – Standard Penetration Test		7.9	C.R.	6.7 t	0 7.9	100	):	100	7.

Fig. 4: Bore log at BH: 2

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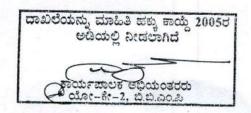
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Site: Koramangala				Date o	f testin	ng: 06	5/03/0	8(	
Type of Boring: Rotary GWT: 2.0 m	Drilling			Boreho	ole dia	meter	r: 150	) mm	
DESCRIPTION	Legend	Depth (m)	ple	N - Value		SPT T			
	Leg	Dep	Sample	ż	10	20	30	40	50
Filled up Soil		0.0	DS				:		
Yellowish clayey fine Sand		1.5	SPT	05					
Yellowish medium to fine		3.0	SPT DS	. 16					
sandy Clay		4.5	SPT DS	21 -	·		?		
		5.5	DS	'			V		
Greyish yellow clayey fine to medium Sand		6.0	SPT DS	31					
		7.5	SPT DS	>50					/
Yellowish weathered rock		9.0	DS	-					
		10.5	DS						

Fig. 5: Bore log at BH: 3



# BORE HOLE NUMBER: 3 (Contd...)

Site: Koramangala

Date of testing: 06/03/08

Type of Boring: Rotary Drilling

Borehole diameter: 150 mm

:GWT: 2.0 m

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DESCRIPTION	pue	Depth (m)	ple	N - Value		SPT 7			
	Legend	Dept	Sample	Z	10	20	30	40	50
		10.5	DS ::	:·••					
		12.0	DS				8,		
		13.5	DS	-					
Whitish grey weathered rock		15.0	DS	-					
		16.5	DS	-	÷				
		18.0	DS						
		19.5	DS	-					
100 C		20.0	DS						

SPT - Standard Penetration Test

UDS - Undisturbed soil sample

DS - Disturbed soil Sample

GWT - Ground Water Table

C.R - Core Recovery

RQD - Rock Quality Designation

Fig. 6: Bore log at BH: 3

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	BORE	HOLE	NUMBI	ER: 4	5		The strategy		
Site: Koramangala				Date o	f testi	ng: 1	0/03/0	08	
Type of Boring: Rotary GWT: Nil	Drilling	g		Boreho					
DESCRIPTION	Pregend	Depth (m)	ple	N - Value	No	SPT	Test R	esult	s cms
	Leg	Dep	Sample	Z	10	20	30	40	50
Filled up Soil		0.0	/ <b></b>	-					
		3.0	UDS						
Brownish grey medium to fine sandy Clay		4.5	SPT DS	24			9		
		6.0	SPT DS	37					
Greyish white weathered rock		· 7.5	DS	>100					1
Greyish white hard rock		8.0	C.R	Run, m 7.5 to 8.0		R, %	R.Q.D		
PT - Standard Penetration Test S - Disturbed soil Sample R - Core Recovery				UDS – Und GWT – Gr					1

Fig. 7: Bore log at BH: 4

C.R - Core Recovery

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RQD - Rock Quality Designation

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# **TABLE NO: 1 (BH 1)**

Dep	oth (m)	1.5	3.0	4.5	6.0
Dry De	nsity (g/cc)	1.59			
Water C	ontent (%)	13.5	14.3	15.8	10.9
Liquid	Limit (%)	33.3	33.3		32.0
Plastic :	Plastic Limit (%)		17.9		: 18.2
	Grain size Distribution Gravel (%)		0.0	.0.3 · .	2.6
	Coarse	2.5	0.9	1.9	6.8
Sand (%)	Medium	20.0	22.9	18.2	45.1
	Fine	26.7	25.4	· 23.4	24.6
Silt &	& Clay	48.0	50.8	: 56.2	21.0
•	C, (kg/cm <sup>2</sup> )	0.11		·	
Shear test	φ, (deg)	26			

# TABLE NO: 2 (BH 2)

				:
Depth (m)		3.0	. 4.5	6.0
Dry Density (g/cc)		1.51		
Water Content (%)		26.9	26.9	:7.7
Liquid Limit (%)		33.6	33.2	
Plastic Limit (%)		18.2	18.7	-
Grain size Distribution Gravel (%)		0.0	0.0	5.9
Sand (%)	Coarse	0.1	0.1	21.4
	Medium	3.2	3.3	42.8
	Fine	8.0	10.0	18.5
Silt &	c Clay	88.7	86.7	11.4
Shear test	C, (kg/cm <sup>2</sup> )	0.12	<u>:</u>	
	φ, (deg)	27		

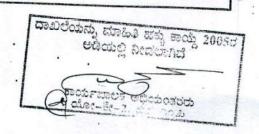
ರಾಖಲೆಯನ್ನು ಮಾಹಿತಿ ಹಕ್ಕು ಕಾಯ್ದೆ 2005ರ ಅಡಿಯಲ್ಲಿ ನೀದರಾಗಿದೆ

# **TABLE NO: 3 (BH 3)**

Depth (m)		1.5	3:0	4.5	6.0
Dry Density (g/cc)		1.59			:
Water Content (%)  Liquid Limit (%)  Plastic Limit (%)  Grain size Distribution  Gravel (%)		12.9	14.9	15.2	11.3
		32.3	34.6		31.5
		10.5		16.3	
		2.1	0.0	0.4	3.2
Sand (%)	Coarse	2.9	0.3	1.7	5.8
	Medium	21.3	23.1	19.6	44.6
	Fine	25.6	24.3	24.3	23.7
Silt & Clay		48.1	52.3	54.0	22.7
Shear test	C, (kg/cm <sup>2</sup> )	0.11			
	φ, (deg)	28			

# TABLE NO: 4 (BH 4)

Depth (m) Dry Density (g/cc)		3.0	4.5	6.0
		1.53	4.5,	6.0
Water Content (%)			-	
		23.6	22.3	8.9
Liquid Limit (%)		32.3	31.6	
Plastic Limit (%)		18.2	19.3	
Grain size Distribution Gravel (%)		0.0	0.0	6.6
Sand (%)	Coarse	0.2	0.6	22.3
	Medium	4.2	5.2	33.4
	Fine	12.3	13.8	19.6
Silt &	& Clay	83.3	80.4	18.1
Shear test	C, (kg/cm <sup>2</sup> )	0.12		
	φ, (deg)	26		



# SBC Specimen Calculation

Depth of footing = 3.0m

Width of footing = 2.0 m

# Based on Shear Failure Criterion (Ref - IS 6403 - 1981):

Net safe bearing capacity,  $q_{ns} = (cN_cS_cd_ci_c + q(N_q-1)S_qd_qi_q + 0.5B\gamma N_\gamma S_\gamma d_\gamma i_\gamma) / F.S.$ 

Where,

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Nc, Nq, Ny are the bearing capacity factors,

Sc, Sq, Sy are shape factors,

dc, dq, dy are depth factors and

 $i_c$ ,  $i_q$ ,  $i_\gamma$  are inclination factors.

Water table is assumed at the base of the footing

# **Assuming Local Shear Failure:**

For  $\phi = 26^{\circ}$ ,  $\phi' = 18$ ,  $N_c = 13.3$ ,  $N_q = 5.4$  and  $N_{\gamma} = 4.3$ 

For a square footing,  $S_c = 1.3$ ,  $S_q = 1.2$  and  $S_\gamma = 0.8$ 

For a depth of 3.0m,  $dc = 1 + 0.2 (D_f/B) \tan (45+\phi/2) = 1.41$ 

$$d_q = d_\gamma = 1 + 0.1 (D_f/B) \tan(45+\phi/2) = 1.21$$

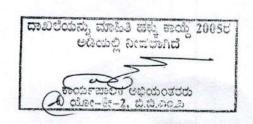
For vertical loading,  $i_c = i_q = i_\gamma = 1.0$ 

Assuming a density of 18.3kN/m<sup>2</sup> and a factor of safety of 3.0,

$$q_{ns} = 134.3 \text{ kN/m}^2 = 13.4 \text{ t/m}^2$$

# Based on Settlement Criterion (Ref - IS 8009 (Part I) - 1976)

For Average N = 21 below the base of foundation to 1.5 times the width of foundation, and width = 2.0m, from Fig.9 of IS 8009, settlement = 0.012m under a pressure of 1 kg/cm<sup>2</sup>. Hence, for a permissible settlement of 25 mm, safe bearing pressure =  $2.08 \text{ kg/cm}^2 = 20 \text{ t/m}^2$ . Hence, safe bearing capacity =  $17 \text{ t/m}^2$  for a footing of width 2.0m at a depth of 3.0m has to be adopted.



# Design of a Pile Foundation - Single Pile

# Piles in Cohesionless Soils

Diameter of Pile, D = 1000 'mm = 15 m

S.Density of soil at pile tip, r = 1 g/cc = 10 kN/m<sup>3</sup> Angle of internal friction at pile tip = . 40 degrees

Nr = (from IS 6403 for the given phi 130 value)

(from IS 2911 for the given phi

Nq = 109.41 value)

 $Ap = 0.7850 \text{ m}^2$ 

Ultimate Bearing Capacity, Qu = Qus + Qup

Qup  $\stackrel{\perp}{=}$  Ap ( 1/2 \* D \* r \* Nr + P<sub>D</sub> \* Nq)

Qus =Sum ( K \* P<sub>Di</sub> tan(delta) \* Asi) = . 10816.67 kN 394.27 kN

Qu = 11210.95 kN

3970003179

Factor of Safety = Qua = 3737.0 kN

373.70 Tonne



1 m

# CHAPTER 6 CORRIDOR IMPROVEMENT SCHEME

### 6.1 General

The Proposal for Corridor Improvement Scheme includes Junction Improvements by proposing Elevated Corridor by integrating Major Junctions like Ejipura Main Road -Inner Ring Road Junction, Sony World Junction and Kendriya Sadana Junction along with one Up Ramp and one Down Ramp at Kendriya Sadana Junction; Widening of existing Carriageway; Link Improvements such as Provision of Footpath, Pedestrian Crossing Facilities; Construction of Drain; Upgradation of Utilities; Improvement to existing Culvert over Storm Water Drain; Provision of Effective Illumination; Lane Marking; Provision of Studs and Delineators; etc.

The Concept of Elevated Corridor proposed along 100ft. Inner Ring Road is briefly explained below.

### 6.2 Elevated Corridor along 100ft. Inner Ring Road

4 lanes divided bi directional Elevated Corridor has been proposed along 100ft. Inner Ring Road by integrating Major Junctions like Ejipura Main Road - Inner Ring Road Junction, Sony World Junction and Kendriya Sadana Junction Jong with one Up Ramp and one Down Ramp at Kendriya Sadana Junction. Slip Road of 10.5m Width and Footpath of minimum Width 2.5m have been proposed on either side at Grade Level. Obligatory Spans of various dimensions based on the existing Site Conditions have been proposed at Ejipura Main Road - Inner Ring Road Junction, Sony World Junction, Koramangala 8th Main Road Junction, Koramangala 60ft. Road Junction, Koramangala 5th Block 1A Cross Road Junction, Koramangala BDA Complex Junction and Kendriya Sadana Junction to take care of the Vehicle Turning Movements at Grade. The Salient Features of the Elevated Corridor along 100ft. Inner Ring Road are given below.

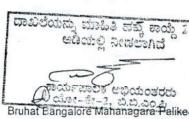


•	Length of Elevated Corridor	2405.64m			
•	Number of Lane	4 lanes divided bi directional			
. •	Carriageway Width	2 X 7.5m			
•	Vertical Clearance	Minimum 5.5m			
•	Vertical Gradient	Maximum 5% (1 in 20)			
•	Length of Obligatory Span	,			
	At Ejipura Main Road – Inner Ring Road Junction	2 Nos. of 25m each			
	Near Storm Water Drain	28.15m .			
	At Sony World Junction	30m			
	At Koramangala 8th Main Road Junction	30m			
	At Koramangala 60ft. Road Junction	30m			
	At Koramangala 5th Block 1A Cross Road Junction	30m			
	At Koramangala BDA Complex Junction	30m			
	At Kendriya Sadana Junction	ರಾಖಲೆಯನ್ನು ಮಾಹಿತಿ ಆಕ್ ಕಾಂ			
	Along 100ft. Inner Ring Road	40m (			
	Near Up Ramp	40m			

Manasa Consultants

Near Down Ramp

Page 1 of 3



40m

•	Length of RCC Viaduct				
	Towards Domlur	50m			
	Between Ejipura Junction and Storm Water Drain	409.4	Om		
	Between Storm Water Drain and Sony World Junction	184.2		2	
	Between Sony World Junction and Koramangala				
	8th Main Road Junction	325.2	7m		
	Between Koramangala 8th Main Road Junction and	020.2			
	Koramangala 60ft. Road Junction	65.06	m		
	Between Koramangala 60ft. Road Junction and	00.00			
	Koramangala 5th Block 1A Cross Road Junction		0m		
	Between Koramangala 5th Block 1A Cross Road Junction				
	and Koramangala BDA Complex Junction	Koramangala BDA Complex Junction 197.8			
	Between Koramangala BDA Complex Junction and				
	Kendriya Sadana Junction	437.1	4m		
	Towards Hosur Road	50m			
•	Length of Solid Ramp				
	Towards Domlur	118.6	2m		
	Towards Hosur Road		6m		
	From Hosur Road - Sarjapur Road Junction		4m		
	Towards Sarjapur Road – Madiwala Road Junction	169.21m			
•	Width of Slip Road				
	Along 100ft. Inner Ring Road on either side at Grade Level				
8	(Between Hosur Road Junction and Kendriya Sadana Junct	ion)	7.5m		
	Along 100ft. Inner Ring Road on either side at Grade Level	5)			
	(Between Kendriya Sadana Junction and Ejipura Junction)		10.5m		
	Along Sarjapur Road on either side at Grade Level		10.5m		
•	Width of Footpath on either side at Grade Level		Minimu	m 2.5m	
•	Land Acquisition		4819.257	7 Sqm	

General Arrangement Drawings along with Longitudinal Section of the Elevated Corridor are given in Drawing No. MC/BBMP/2618/ELC-IRR/GAD/103A, Drawing No. MC/BBMP/2618/ELC-IRR/GAD/103B, Drawing No. MC/BBMP/2618/ELC-IRR/GAD/103B, Drawing No. MC/BBMP/2618/ELC-IRR/GAD/103D, Drawing No. MC/BBMP/2618/ELC-IRR/GAD/103E and Drawing No. MC/BBMP/2618/ELC-IRR/GAD/103F respectively.

At Grade Plans are given in Drawing No. MC / BBMP / 2618 / ELC - IRR / ATGP / 104A, Drawing No. MC / BBMP / 2618 / ELC - IRR / ATGP / 104B, Drawing No. MC / BBMP / 2618 / ELC - IRR / ATGP / 104C and Drawing No. MC / BBMP / 2618 / ELC - IRR / ATGP / 104D respectively.

Cross Section Details of the Elevated Corridor at different Obligatory Spans and Standard Span are given in Drawing No. MC / BBMP / 2618 / ELC - IRR / CS / 105A and Drawing No. MC / BBMP / 2618 / ELC - IRR / CS / 105B respectively.

ದಾಖಲೆಯನ್ನು ಮಾಹಿತಿ ಹಕ್ಕು ಕಾಯ್ದೆ 20 ಅಡಿಯಲ್ಲಿ ನೀಡಲಾಗಿದೆ

Bruhat Bangalore Mahanagara Palike

Charles S

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Land Acquisition Details are given in Drawing No. MC / BBMP / 2618 / ELC - IRR / LAD / 106A, Drawing No. MC / BBMP / 2618 / ELC - IRR / LAD / 106B and Drawing No. MC / BBMP / 2618 / ELC - IRR / LAD / 106C respectively.



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ದಾಖಲೆಯನ್ನು ಮಾಹಿತಿ ಹಶ್ಯ ಶಾಯ್ದೆ 2005ರ ಅಡಿಯಲ್ಲಿ ನೀಡಲಾಗಿದೆ

ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು ರೋ-ಕೇ-2, ಬಿ.ಬಿ.ಎಂ.ಪಿ Bruhat Bangatore Mahanagara Palike

Chapter - 7

Design of Elevated Corridor

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# CHAPTER 7 DESIGN OF ELEVATED CORRIDOR

7.1 Planning and Investigations

The Corridor Improvement Scheme has been discussed in detail in Chapter 6. The Project Stretch is located in one of the thickly developed areas of Bangalore City and has several numbers of Underground Services like Water, Sewer, Electricity, etc. and diverting these Service Lines are very challenging. Further, Diversion of the Underground Services like Water, Sewer, Electricity, etc., which will affect the Construction Activities will be programmed prior to the Excavation Work.

7.2 General Arrangement

Care has been taken while designing so that the Structure generally fulfills the following requirements.

- The Soundness of the Structure and its Durability are of the highest standards.
- Aesthetics is in harmony with the surroundings.
- Speedy and Practicable Construction.
- Economy in Construction.

# 7.3 Design Loads

1. Live Load

Grade Separator has been designed for as per the Provisions given in IRC: 6.

2. Wind Force

Wind Forces have been considered as per the Provisions given in IRC: 6.

The Appropriate Wind Force on 10m high Lighting Pole @ 30 m c/c has been considered in the Design.

3. Seismic Force

The Grade Separator has been designed for the Seismic Force as per the Provisions given in IRC: 6.

4. Earth pressure

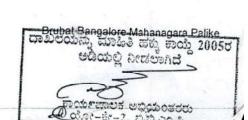
- The Soil Properties for Embankment like Dry Density of Soil 1.85 t / cum.; Saturated Density 2.00 t / cum.; Φ = 30° and c = 0 have been considered for Estimation Purpose.
- Saturated Density of the Backfill (minimum 2 t / cum) has been considered for calculating Active Earth Pressure for Estimation Purpose.

5. Temperature Range

 For Design of Structure, to account for temperature, the following Formula has been considered.

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 $(DL) = \alpha Lt$ 

The value of "t" shall be  $\pm 17^{\circ}$ C.

Where  $\alpha = Coefficient$  of expansion or contraction

L = Length of the member

(DL) = Expansion / Contraction due to Temperature Variation in appropriate units.

The Superstructure has been designed for Effects of Distribution of Temperature across the Deck Depth as per the relevant Codal Provisions. For Calculation, Thermal Force Effect (E) of 50% of the Insulation Value has been considered so that to account for Effect of Creep on Thermal Strain.

# 7.4 Design of Elevated Corridor

## 7.4.1 General

The Length of the Elevated Corridor has been determined by the depth of the superstructure of the Obligatory Span, where a minimum vertical clearance of 5.5m has to be provided. The Roads in the Project Area have a number of Underground Services like Water, Sewer, Electricity, etc. and diverting these Service Lines are not so easy and hence the Foundation has been designed in such a way that there will be minimum obstruction for executing the work. Hence, Open Foundation, though economical is not considered, as it requires Shoring as well as Temporary Support to Service Lines in addition to Prolonged Time of Construction.

The Depth of Pile has been taken as 15m in the Cost Estimate upon the Cut off Level. The Boreholes shall be taken at the Time of Execution one at each Pier prior to the Commencement of the Work. The Termination Level of the Borehole shall be determined by conducting SPT Tests. Three consecutive SPT Tests at an interval of 1.5m each with 'N' Values greater than 100 shall be carried out before Termination. If Rock is encountered, Drilling shall continue upto 3m in Rock with Rock Samples taken for Testing. All the Soil / Sub Soil Investigations shall be strictly in accordance with the Relevant Code Provisions.

While checking the Stresses at the Base of Foundations it has to be ensured that under the Worst Combination of Forces no Tension is permitted. The Safe Bearing Capacity at the Foundation Level shall be verified during Construction so that to ensure that the Stresses imposed on the Foundation Strata are within Permissible Limits.

# 7.4.2 Foundation

With the Presence of Underground Services and Foundation of adjoining Existing Structures, Open Foundation is not permitted considering the Time for Execution, Importance from Traffic Point of View and Location of the Elevated Corridor. Pile Foundation is considered for Speedy Construction and Minimum Traffic Disruption. As far as possible, the Piles will be installed by bypassing the Underground Services and the Piles Caps will be constructed below the Ground Level at a minimum depth of 0.75m form the Surface. The Piles are of Bored Cast – in – Situ Type and resting on Hard Strata,

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where 'N' Values are more than 100. The Construction of Pile Foundation Design has been done as per the Relevant Specifications of IS: 2911.

The Piles are essentially End Bearing and are socketed into the Hard Strata at least to a Depth equal to 1.5 times the Diameter of the Pile. The Presence of Hard Strata shall be established by conducting SPT Tests in the Pile Bore. On ascertaining the Hard Strata through SPT, further Chiseling shall be done for Socketing. The Number of Drops of a given Chisel falling at a constant fall for a Specific Depth of Penetration shall be noted and these Chiseling Criteria (in terms of Number of Drops) shall be used to ascertain Hard Strata in the surrounding bores. Based on the available Soil Data for the area, a Pile Length of 15m has been assumed for the Purpose of Cost Estimation. The Capacity has to be derived by working out the Actual Load Capacity of a laterally supported, free standing Column. However, the Construction Agency shall submit the Design Calculation for Pile Load Capacity to the Engineer on the Basis of the Results of Initial Load Test on Piles. The Test Piles shall be installed as directed by the Engineer.

Metal Casings with Thickness not less then 6mm has been proposed to support the unstable sides at the Top of the Borehole.

# Minimum Length of the Embedment

A minimum Depth of Embedment of 9m (including Socket Length) in Soil has been proposed to be maintained where the Pile cannot be driven any further. However, the Termination Level of the Pile shall be as per specific Instructions of the Engineer – in – Charge or his Authorized Representative. In the event of Presence of Rock or very Hard Strata at a Shallow Depth, the Construction Agency shall be advised by the Engineer regarding the Termination Level and the same shall be in conformity with the Code Provisions.

# Pile Diameters

Piles of two different diameters i.e. 1200mm and 1000mm have been proposed based on the Length of Span and are detailed in Drawing No. MC / BBMP / 2618 / ELC – IRR / CS / 105A and Drawing No. MC / BBMP / 2618 / ELC – IRR / CS / 105B respectively.

The Grade of Concrete for the Pile is M35. The Cement Content for Pilling Work has been assumed as 400 kg/m³ with Ordinary Portland Cement of Grade 43. However, the Pile Foundations shall satisfy the following Requirements.

- ➤ Only Bored Cast in Situ Piles will be accepted.
- ➤ The Pile Foundations shall be designed as per the requirements of IS: 2911 (Part I / Section 2) Latest Revision.
- The Design Capacity assumed for the Piles shall be verified by the Initial Load Testing of Test Piles in Non Working Areas, in the vicinity of the Elevated Corridor Site. These Piles shall be tested for 2.0 times the Design Load and Number of such Tests shall be done for each Diameter of Pile. Additional one Pile

Chapter 7 - Design of Elevated Corridor

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for each Diameter, which is actually going to be used for Piers, shall be tested for 1.5 times the Design Load.

- Annular Piles filled or unfilled shall not be accepted.
- > Design with single row of piles shall not be accepted.
- Design shall ensure that no Pile is subjected to Tension.
- Concreting shall be done by Tremie Method after ensuring proper tip zone cleaning by flushing only.
- The Top of Concrete in Piles shall be brought above the Cut off Level by minimum 750mm to permit Removal of all Laitance and Week Concrete before Pile is laid.

7.4.3 Ramps / Retaining Walls

The adoption of Reinforced Earth Panel is economical and the Construction can be faster compared to Conventional Retaining Walls. Hence, Solid Ramp Portion of the Elevated Corridor has been proposed to be constructed with Reinforced Earth Retaining Structure. This Work consists of Reinforced Soil Structures as per Terramesh Reinforced Soil Wall with Concrete Panel / Segmental Block Facia comprising of Mechanically Woven Double Twisted Hexagonal shape, (Zn + PVC) Coated Wire Mesh as per the Detailed Specifications.

The Work is generally done in conformity to the MoRT&H Specification / BS: 8006 Specifications. The Detailed Design and Drawings of the Work have been done in accordance with the MoRT&H Specification and Guidelines contained in the IRC. Patentee's Specifications has been incorporated wherever relevant.

The Materials shall be procured from the Supplier of the Reinforced Soil Technology approved by the Engineer. The Designs and Drawings shall be got approved from the Client or its Consultants before Execution of Work.

# 7.4.4 Substructure

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The Substructure shall satisfy the following Requirements.

# a. Dimensions

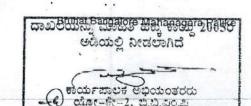
- Dimension of any Element of Substructure shall not be less than 300mm.
- All RCC Piers shall be of Solid Type.
- The Height of Pedestals on Pier Cap supporting Bearings shall not be more than 300mm.

# b. Layout and Design

- All Bearings shall be supported directly on Pier Stem. However, Bearings resting
  on Overhangs are acceptable provided the Differential Deflection of Pier Cap is
  accounted in the Transverse Analysis of Superstructure.
- Scope for Accessibility for Inspection of Bearings and Arrangement for Lifting of the Superstructure for Future Replacement of Bearings shall be provided in the design of Substructure and Superstructure.

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#### Piers

The Piers considered for design is of two types. The first type is Square Type (2.5m X 2.5m) that has been adopted for all the Spans except the Obligatory Spans near Up Ramp and Down Ramp whereas for the Obligatory Spans near Up Ramp and Down Ramp Circular Pier of 1.8m Diameter has been proposed. The Design has been based on the Combination of Design Loads producing the worst effect. One Span Dislodged Condition has also been taken into consideration while designing the Piers. The Details are given in Drawing No. MC / BBMP / 2618 / ELC – IRR / CS / 105A and Drawing No. MC / BBMP / 2618 / ELC – IRR / CS / 105B respectively.

# 7.4.5 Superstructure

The Choice of Superstructure mainly depends on the Span and the Aesthetic Importance. The Spans are determined based on the Superstructure and Feasibility of Transporting Long Span Precast Girders. It is advisable that Construction of Superstructure proceeds with Surface Level Construction like Pier Construction. Precast Beam Girders have been proposed for the Superstructure at Standard Spans whereas Cast – in – Situ Box Girders have been proposed for the Superstructure at Obligatory Spans except the Obligatory Spans near Up Ramp and Down Ramp. Based on the Site Conditions, Cast – in – Situ Solid Slabs have been proposed for Obligatory Spans near Up Ramp and Down Ramp. The Details are given in Drawing No. MC / BBMP / 2618 / ELC – IRR / CS / 105A and Drawing No. MC / BBMP / 2618 / ELC – IRR / CS / 105B respectively.

# 7.4.6 Bearing below Superstructure

Bearing controls the Transfer of the Forces from Superstructure to Substructure. Bearings under Superstructure shall be within the External Line of the Pier / Abutment. The Bearings shall be provided below the Diaphragm at Suitable Locations.

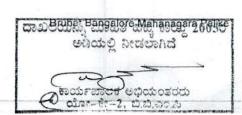
· The Type of Bearing generally allowed is as below.

Span	Type of Bearing
For effective spans upto 20m	POT cum PTFE
For effective spans more than 20m	POT cum PTFE

- The Bearing shall be easily Accessible for Inspection / Maintenance.
- Scope for Lifting the Superstructure for Future Replacement of Bearing shall be provided in the Design of Bearing. The Scheme of Lifting shall be indicated on the Drawing to be submitted by the Contractor along with the Technical Bid.
- Inspection of Bearing by Director General of Supplies and Disposal (DGSD) during manufacturing is essential. The Construction Agency shall have to produce necessary Certificate and Inspection Marks from the DGSD at his own cast.
- The Bearing shall conform to the Requirements of the MoRT&H Specifications.
- The Dimensions of Top Plate of Bearing shall be such that the Contact Surface of the Superstructure projects beyond the Edge of Bearing Plate by a minimum Distance of 50mm at any location.

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7.4.7 Expansion Joints

Elastomeric Strip Seal Type Expansion Joint conforming to Clause 2607 of MORT&H Specifications has been considered. Calculations for the Adequacy of the Expansion extent for which the Joint is selected by the Engineer shall be submitted along with Name of Manufacturer and their Technical Details. During. Installation of these Joints, Manufacturer's Engineer shall be required to supervise the same including the Thermal Presetting, if required.

7.5 Crash barriers

Concrete Crash Barriers shall conform to Clause 809 of MoRT&H Specifications. The Height of the Concrete Crash Barrier is 1000mm above the Finished Road Level. It has been designed to resist an Impact of 30t Axle Loads.

7.6 Wearing Coat

Wearing Coat conforming to Clause 2702.1 of MoRT&H Specifications for Road and Bridge Works (latest edition) has been provided for Smooth Riding Surface.

7.7 Approach Slab

The Approach Slab conforming to Clause 2704 of MoRT&H Specifications for Road and Bridge Works (Latest Edition) has been provided.

7.8 Durability .

From the Durability Consideration, the following minimum Grades of Concrete are to be considered for Plain Cement Concrete (PCC), Reinforced Cement Concrete (RCC) and Pre Stressed Concrete (PSC).

a. Minimum Grade of Concrete shall be as below.

PCC for Levelling Course , M15
RCC for Open Foundation, Substructure and Superstructure M30
Pre Stressed Concrete M35

b. Minimum Cement Content, Diameter of Bar and Cover Requirements For PCC, RCC and PSC, the Value given below regarding minimum Cement Content and maximum Water Cement Ratio shall be followed.

PC	CC	RCC	/ PSC
Minimum cement Content Kg/cum.		Minimum cement Content Kg / cum.	Maximum Water Cement Ratio
360	0.45	380 / 400	0.45 / 0.40

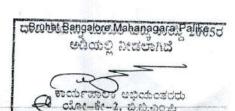
The minimum Nominal Diameter of Reinforcement is 8mm.

# 7.9 Drainage

Drainage of Storm Water collected on the Elevated Corridor and at Surface Level Roads are essentially based on

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IRC: SP: 42 - 1994 - "Guidelines on Road Drainage". IRC: SP: 50 - 1999 - "Guidelines on Urban Drainage".

The Drainage Spouts conform to Clause 2705 of MoRT&H Specifications.

7.10 Traffic Signs, Markings and other Road Appurtenances

Traffic Signs, Markings and other Road Appurtenances shall conform to Clause 800 of the MoRT&H Specifications for Road and Bridges (Latest Edition). Road Markings shall conform to IRC: 35 – 1997 and Road Signs shall confirm to IRC: 67 – 2001.

7.11 Medians, Kerbs and Footpaths

Medians, Kerbs and Footpaths shall conform to Clause 407, 408 and 409 of the MoRT&H Specifications for Road and Bridges (Latest Edition).

7.12 Lighting

The Lighting on the Elevated Corridor, Junction at Surface Level and along Surface Level Road, etc. has been provided as per relevant Codal Provisions.

7.13 Specification and Design Codes

The Designs of Structural Components have been in conformation to the Criteria laid down in the Latest Editions of the following Codes of Practice and Standard Specifications.

a. IRC Standard Specifications and Code of Practice for Road Bridges with amendments issued upto the Date of Issue of Tender Notice.

IRC: 5	General Features of Design
IRC: 6	Loads and Stresses
IRC: 15	Construction of Concrete Roads
IRC: 22	Composite Construction (Limit State Design)
IRC: 24 .	
(Section V)	Steel Road Bridges
IRC: 35	Road Markings
IRC: 37	Design of Flexible Pavements
IRC: 38	Design of Horizontal Curves for Highways and Design Tables
IRC: 44	Cement Concrete Mix Design for Pavements
IRC: 54	Lateral and Vertical Clearances at Underpasses for Vehicular
1	Traffic : Ofearances at Onderpasses for Vehicular
IRC: 58	Design of Plain Jointed Rigid Pavements for Highways
IRC: 67	Road Signs
IRC: 78	Foundation and Substructure
IRC: 79	Road Delineators
IRC: 83	
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(Part I).

Metallic Bearings

IRC: 83	
(Part II)	Elastomeric Bearings
IRC; 83	
(Part III)	POT, POT cum PTFE, PIN and Metallic Guide Bearings
IRC: 86	Geometric Design Standards for Urban Roads in Plains
IRC: 92	Design of Interchanges in Urban Areas
IRC: 103	Pedestrian Facilities
IRC: 112	Concrete Road Bridges
IRC: SP: 23	Vertical Curves for Highways
IRC: SP: 42	Road Drainage
IRC: SP: 56	Steel Pedestrian Bridges
IRC: SP: 57	Quality Systems for Road Construction
IS: 2911	
(All Parts)	Pile Foundations

 IRC - SP: 33 Guidelines on Supplemental Measures for Design, Detailing and Durability of Important Bridge Structures (if applicable).

c. Specification for Roads and Bridge Works (Latest Edition), published by IRC, New Delhi on behalf of Govt. of India, Ministry of Shipping, Road Transport and Highways.

7.14 Boring Data and Soil Investigation at Site

The Details of Boring Data and Soil Investigation Report have been enclosed in Chapter 4.

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Chapter - 8

Traffic Management / Diversion and Traffic Engineering Schemes

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Chapter 8 - Traffic Management / Diversion during Construction and Traffic Engineering Schemes

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# CHAPTER 8

# TRAFFIC MANAGEMENT / DIVERSION DURING CONSTRUCTION AND TRAFFIC ENGINEERING SCHEMES

# 8.1 General

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Traffic Management / Diversion during Construction of Elevated Corridor along 100ft. Inner Ring Road is essential for smooth flow of traffic. Traffic Diversion / Management during Construction has been planned in such a way so that not to cause inconvenience to the existing Traffic Movement along the Corridor and the Width of Carriageway available for Traffic Movement during Construction is adequate.

# Traffic Management during Construction

Work on the entire length of the Elevated Corridor has been planned continuously for 30 months. The available land for the proposed Slip Road on either side of the Elevated Corridor shall be strengthened to allow the traffic. Based on the Site Condition and the Approved Concept, the entire Scheme for Traffic Diversion has been worked out in two phases, i.e. Phase 1: Elevated Corridor along 100ft. Inner Ring Road and Phase 2: Up Ramp and Down Ramp at Kendriya Sadana Junction. The Details are given in Drawing No. MC / BBMP / 2618 / ELC - IRR / TM / 107A, Drawing No. MC / BBMP / 2618 / ELC - IRR / TM / 107G and Drawing No. MC / BBMP / 2618 / ELC - IRR / TM / 107C and Drawing No. MC / BBMP / 2618 / ELC - IRR / TM / 107D respectively.

Solid Ramp and Viaduct Portion of the Elevated Corridor will be barricaded to Width of Pier / Earth Filled Ramp plus 4.6m extra (to accommodate Working Space for Foundation) on either side whereas Solid Ramp and Viaduct Portion of the Up and Down Ramps near Kendriya Sadana Junction will be barricaded to Width of Pier / Earth Filled Ramp plus 4.25m extra (to accommodate Working Space for Foundation) on either side for entire Construction Work. This Scheme shall ensure smooth flow of traffic during the entire Construction Period. During the entire Construction Period, Street Parking on all the Approach Arms of the Junctions coming under the Project Stretch shall be strictly prohibited. Construction Activity of Superstructure at the Obligatory Spans shall be planned only during night. The scaffolding of Obligatory Spans will be arranged in such a way that the traffic across 100ft. Inner Ring Road and other Traffic taking turn at the Junctions can move freely within the clear space between the scaffoldings.

# 8.3 Necessary Improvements

For Effective Implementation of Traffic Diversion Scheme, Diversion Routes shall be kept in Traffic Worthy Condition (Free from Pot Holes, Ruts, Undulation, etc.) during the entire Construction Period.

Necessary Signboards for guiding the Road Users shall be located as per IRC Norms. The Traffic Management Scheme and Traffic Diversion Plans proposed shall be discussed with Police Authorities before Implementation. All the Necessary Improvements and Location of Signboards shall be finalized during Implementation in discussion with Police Authorities.

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# 8.4 Traffic Engineering Schemes Components

Design of At Grade Junction is essential for proper dispersion of traffic retained at Surface Level Road in the Post Construction Scenario. The various Components of At Grade Junction and on the Elevated Corridor that need to be Planned, Designed and Built Integrally in the Elevated Corridor Scheme are detailed in Table 8.1. Planning and Design of these Components are as per the Guidelines stipulated in IRC.

Table 8.1 Components of At Grade Junction and Grade Separation Scheme

Sl. No.	Components	Description	Standards
1.	Traffic Signals	Fully Automatic Traffic Signal with Timer (Solar)	IRC: 93 – 1985
2.	Road Markings	On Elevated Corridor and at Surface Level Roads	IRC: 35 – 1997
3.	Road Signs	On Elevated Corridor and at Surface Level Roads	IRC: 67 – 2012 & IRC: SP – 31 – 1992
4.	Road Delineators	On Elevated Corridor and at Surface Level Roads	IRC: 79 – 1981
5.	Geometrics	Surface Level Roads	IRC: 86 – 1983
6.	Geometrics	Junction	IRC: SP - 41 - 1994
7.	Pedestrian Facilities	At Surface Level Roads and near the Junction (Footpaths, Railing and Zebra Crossing)	IRC: 103 – 2012



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Chapter – 9
Project Cost and Economic Evaluation

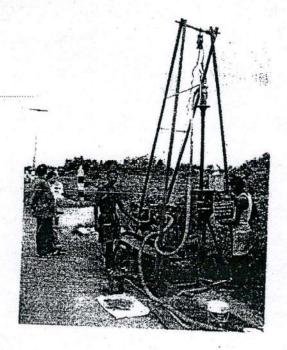
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REPORT ON GEOTECHNICAL INVESTIGATION FOR PROPOSED CONSTRUCTION OF UNDERPASS AND FLYOVER AT ST. JOHN'S HOSPITAL ROAD, KORAMANGALA 100 FEET ROAD JUNCTION, BANGALORE.

JOB NO. : SEA/BBMP/MANASA/GT/KORAMANGALA 100 FT ROAD/2010-11



# REPORT FOR

Bruhat Bangalore Mahanagara Palike, N.R. Square, Bangalore.

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# JANUARY 2010

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Geotechnical Investigation Report

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# REPORT ON GEOTECHNICAL INVESTIGATION FOR PROPOSED CONSTRUCTION OF UNDERPASS & FLYOVER AT ST. JOHN'S HOSPITAL ROAD, KORAMANGALA 100 FEET ROAD JUNCTION, BANGALORE.

#### 1. Introduction

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The foundation is part of an engineered system that transmits to, and into, the underlying soil or rock the loads supported by foundation and it's self-weight. The resulting soil stresses-except at the ground surface-are in addition to those presently existing in the earth mass from its self-weight and geological history. Also the successful performance of Foundation Structure depends as much as adopting standards of good load distribution successfully to the ground.

Investigation of the underground conditions at a site is prerequisite to the economical design of the substructure elements. It is also necessary to obtain sufficient information for successful performance of foundation and substructure.

The elements of Geotechnical Site Investigation depend heavily on the project but generally should provide the following:

- Information to determine the type of foundation required (shallow or deep).
- Information to allow the geotechnical engineer to make a recommendation on the allowable load capacity of the foundation.
- Sufficient data / laboratory tests to make settlement predictions.
- Location of Ground Water Table (or determination of whether, it is in the construction zone).
- Information so that the identification and solution of construction problems.
- Identification potential problems (settlements, existing damage etc).

M/s. Manasa Consultants, Bangalore proposes to construct Flyover at Koramangala: 100 Feet Road Junction, Bangalore.

M/s SHEETAL ENGINEERING ASSOCIATES (Building, Geo-Tech & Highway Material Research Laboratory). Chamarajpet, Bangalore was assigned to carry out the GeoTechnical Investigation work at the above said project site locations with a view to furnish the detailed Geo-Technical Information of the nature and sub-soil strata for detailed Foundation Designs.

# 2. Location of Investigation Site

The locations of Field Geotechnical investigations were carried out at Koramangala 100 Ft Road Junction. Bangalore.

The Plan Showing Location of Borehole Investigations were carried out is enclosed vide Figure No. 1 to 6.

# 3. Objectives and Scope of Work

#### 3.1 Objectives

The objectives of Geo-Technical Investigation are to evaluate the following:

- To ascertain the sub-soil strata at project Site
- To study standing Ground Water Level
- To study the physical and engineering properties of soil strata
- To evaluate allowable safe bearing capacity of soils to design foundations
- To Recommend type and depth of foundation
- To recommend improvements to the weak soil strata if any

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# 3.2. Scope of the Work

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The Scope of Geo-technical Investigations includes the following Insitu and Laboratory Tests.

# 3.2.1. Field Investigations

i) Boring 2 Nos. of 150mm / Nx size Boreholes in all kinds of soils, Soft Rock and Hard Rock up to 16.0 m or up to 3.0 m in Bed Rock whichever encounter early using Rotary operated Drilling Rig.

Determination of natural density as per IS: 2720 Part 29. ii)

Conducting field-testing such as Standard Penetration Tests as per IS: 2131-1981. iii)

Collecting Undisturbed Sand Samples as per IS: 8763.- 1978. iv)

Collecting disturbed and undisturbed soil samples at Ground level in the Boreholes as per IS: V) 1892-1979.

# 3.2.2. Laboratory Testing

The scope of Laboratory Testing is as follows:

i) Grain Size Analysis as per IS: 2720 (Part 4) - 1985.

ii) Specific Gravity as per IS: 2720- (Part 3 / Section 1&2) - 1980.

iii) Atterberg Limits as per IS: 2720 (Part 5) - 1985 & IS: 2720 (Part 6, 20, 40 & 41) - 1977.

Determination of natural moisture content as per IS 2720 (Part 18) - 1978. iv)

- Determination Differential Free Swelling Index as per IS: 2720 (Part 40) 1977 V) vi)
- Determination of Triaxial Strength tests by CU method as per IS: 2720 (Part 10) 1973 Determination of Unit Weight, Specific Gravity and Water Absorption of Rock Core Samples vii) as per IS: 2386 - Part III

Determination of Unconfined Compressive Strength of Rock Core Samples as per IS: 9143. viii)

# 3.3. Report

This comprises preparing a detailed report including soil profiles, physical and engineering properties of soil/rock samples based on laboratory as well as field investigation/tests, recommendations regarding allowable bearing pressure, type and depth of foundations and improvement to existing Foundation Soils. Allowable Load on Piles, type, size and depth of Piles; etc and submission of Detailed Technical Report with complete relevant recommendations in Triplicate.

# 4.0. Schedule of Investigations

# 4.1. Field Investigations

To study sub-soil strata, field investigations were carried out by drilling 02 Nos. 150 mm dia Boreholes using Calyx operated Rig up to a maximum depth of 16.0 m below existing ground at the proposed project Site at the specified locations.

Plans showing location of Borehole Investigations was carried out is enclosed vide Fig. No.1.

Table 4.1 Details of Ground Level and termination depth of each Borehole

SI. No	Threstigation Locations	BH No.	Termination Depth
1	Koramangala 100 Feet Road Junction		from EGL (m)
2	Variation Teet Road Junction	BHI	16.00
2	Koramangala 100 Feet Road Junction	BH 2	15.00

BH: Borehole through Rotary Rig

Sheetal Engineering Associate ಲೆಯನ್ನು ಮಾಹಿತಿ ಹಕ್ಕು ಕಾಯ್ದೆ 2005ರ ಅಡಿಯಲ್ಲಿ ನೀಡಲಾಗಿದೆ ಕ್ಷಾರ್ಯಪ್ರಾಲಕ್ಷ ಅಭಿಯಂತರರು

Consultancy Services for preparation of Feasibility for Construction of Underpass & Flyover at St. John's Hospital Road, Koramangala 100 ft.

# 4.2 Standard Penetration Tests

Standard Penetration Tests (SPT) was conducted using split spoon sampler as per IS: 2131-1981 at various depths in Boreholes to determine 'N' values as well as relative density and stiffness of the soil.

Table 4.2 Details of SPT Tests conducted in Boreholes

SI.	Location Details	BH	SPT Depth (m) & SPT Values (Blows)						
NO		No.	1.5/2.5	3.0/4.0	4.5/5.50	6.0	7.5/8.0	9.0/10.50	
1	Koramangala 100 Feet Road Junction	BÜL	2+3+3	2+3+5	3+5+5	4+5+7	2+2+3	4+4+4 / 5+6+8	
2	Koramangala 100 Feet Road Junction	BH 2	8+9+11	9+11+12	10+11+12	10+12+12	9+11+13	12+14+14	

BH: Borehole through Rotary Rig.

R: Refusal (N>100 Blows for 30 cm penetrations)

UDS: Undisturbed Soil Samples

R: Rebound (No Penetrations)

# 4.3 Sampling

# 4.3.1 Disturbed / Representative Soil Samples (DS/RS) and UDS Soil Samples

Disturbed/Representative samples (DS/RS) were collected during drilling and also during SPT Tests. The Representative Samples from the split spoon sampler and UDS samples using 100 mm thin walled Shelby tubes were also collected. The samples recovered were packed in polythene bags, labeled and sent to the laboratory for carrying out relevant laboratory testing.

Table 4.3 Details of Soil Samples collected from Boreholes

SI. No	Bridge Details	BH No.	Depth of Sampling (m)	Type of Sampling
	Koramangala 100 Feet Road Junction	BH I	1.50, 3.00, 4.50, 6.00, 7.50, 9.00, 10.50	SPT
	Koramangala 100 Feet Road Junction	BH 2°.	1.50, 3.00, 4.50, 6.00, 7.50,	SPT

DS: Disturbed Soil Samples

UDS: Undisturbed Soil Samples

# 4.3.2 Rock Core Samples

Rock Core Samples were collected during field investigations, labeled and numbered and arranged in Core Boxes. The collected Rock Core Samples along with Core Boxes were sent to the laboratory for testing.

Table 4.4 Details of Rock Core Samples collected from Boreholes

SI. No	1	ige De	tails		BH No.	Depth (m)	Core Recovery	RQD (%)
1	Koramangala Junction	100	Feet	Road	ВН:1	2.50	34.00	25.50
2 ,	Koramangala Junction	100	Feet	Road	BH 2 ·	1.50	· 31.33	14.66

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#### 4.4 Water Table Level

During field investigations the standing Water Table levels were studied and recorded in the Borehole log vide Table Nos. 6.3 to 6.7.

# 4.5 Ground Topography, Geology of the area and Sub-soil Details

The ground topography, geology at the Site location and sub-soil details at the Site location on Koramangala 100 Ft Road Junction was studied and recorded in the Borehole logs.

# 4.6 Laboratory Tests

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The following laboratory tests were conducted on the collected disturbed, undisturbed soil samples and

Grain Size Analysis as per IS: 2720 (Part 4) - 1985.

- Specific Gravity as per IS: 2720- (Part 3)/Section 1 1980 and IS: 2720 (Part 3)/Section 2 ii) iii)
- Atterberg Limits as per IS: 2720 (Part 5) .1985; IS: 2720 (Part 6, 20, 40 and 41) 1977. iv)

Determination of natural moisture content as per IS: 2720 (Part 18) - 1978. V)

Determination of natural density as per IS: 2720 (Part 29) vi)

Determination Differential Free Swelling Index as per IS: 2720 (Part 40) - 1977 Vii)

Determination of Triaxial Strength tests by CU method as per IS: 2720 - (Part 10) - 1973

Determination of Unit Weight, Specific Gravity and Water Absorption of Rock Core Samples viii) as per IS: 2386 - (Part 3) ix)

Determination of Unconfined Compressive Strength of Rock Core Samples as per IS: 9143

# 5.0 Results and Discussions

The results of field investigations and laboratory tests are presented in Borehole logs cum sub-soil profile and laboratory tests results.

# 5.1. Soil Profile and Classification

The ground topography at the Road Site locations is fairly level and slightly varying from Location to locations. General Subsoil profile is interpreted from borehole. For this purpose whenever necessary, field borehole logs have been corrected on the basis of laboratory tests conducted on samples.

# 5.2. Standard Penetration Number

The results of SPT test at all the boreholes s at various depths confirm that the Soil / Sandy Strata is medium stiff and Rocky strata are soft. The observed 'N' values at all the Boreholes locations are indicated on the borehole logs cum sub-soil profiles (Tables 6.3 to 6.7.)

# 5.3. Specific Gravity

The specific Gravity of Soil / Sand is indicated in the Borehole Log cum Lab Test Results vide Table Nos.

# 5.4. Liquid Limit and Plastic Limit

The Liquid Limit of sub soil is indicated in the Borehole Log cum Lab Test Results vide Table Nos. 6.3 to 6.7.

# 5.5 Cohesive Strength and Friction Angle

The Cohesive strength of underlain of sub soil observed is indicated in the Borehole Log cum Lab Test Results vide Table Nos. 6.3 to 6.7.

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Sheetal Engineering Associate 78 (Bangalore ದಾಖಲೆಯನ್ನು ಮಾಹಿತಿ ಪಕ್ಕು ಕಾರಿ

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Consultancy Services for preparation of Feasibility for Construction of Underpass & Flyover at St. John's Hospital Road, Koramangala 100 ft.

# 5.6 Differential Free Swelling Index

The Free Swelling Index of underlain of Soil / Sand observed is indicated in the Borehole Log cum Lab Test Results vide Table Nos. 6.3 to 6.7.

# 5.7. Rock Depth or Refusal Strata

The details of SDWR and Soft Rock Gueiss Rock is encountered at different depths below existing bed level and indicated in the Borehole logs.

# 5.8. Water Table Level .

The details of Water Table encountered during field investigations are indicated in the Borehole logs.

Table 5.1 Details of Ground Water Table depth

SI. No	Bridge Details	BH No.	Water Table Depth
1	Koramangala 100 Feet Road Junction	D	from EGL (m)
2	Koramanasia 100 Feet Poul Junction	BH I	2.00
	Koramangala 100 Feet Road Junction	BH 2	2.25

# 6.0. Recommendations

# 6.1 Allowable Safe Bearing Capacity of Soils, Soft Weathered Rock (SDWR) and Soft Rock

The safe bearing pressure of soil has been evaluated as per IS 6403-1982, IS 8009 part I-1993, IS 1904 as per Terzaghi / Thomlinson's Theory, based on 'N' values (Teng's) Theory considering the following criteria.

- i) Local Shear failure condition
- ii) Settlement criteria: Based on 'N' values as per IS 8009
- iii) Unconfined Compressive Strength of Rock Core

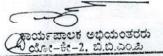
RCC Open / Strip Foundation may be adopted through and allowable Safe Bearing Capacity for minimum 3.0 m width of Footing and Foundations.

Table 6.1 Recommended Safe Bearing Capacity of Soils, SDWR and Soft Rock

No	BH No.	Depth below EGL	Type of strata	Recommended Bea	earing Capacity	
CT I	· ·	(m)		Ultimate Bearing	Safe Bearing Capacity	
31.0	JOHN SH	OSPITAL	ROAD, KORAMANGALA 100 FT R	OAD JUNCTION	Cupacity	
1	BH I	3.00	Reddish Yellow Sandy Silty Clay Soil	37.50	15.00	
2	BH I	500	Reddish Yellow Sandy Silty Soil	42.50	17.00	
3	BH I	7.00	Reddish Yellow Sandy Silty Soil	47.50.		
4	BH 1	9.00	Pinkish White Sandy Silty Soil	52.00	19.00	
5	ВНІ	15.00	Whitish Blackish Hard Rock	1285.00	21.00	



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Consultancy Services for preparation of Feasibility for Construction of Underpass & Flyover at St. John's Hospital Road, Koramangala 100 ft Road Junction, Bangalore.

1	BH 2	3.00	Yellowish Red Silty Sandy Soil	37.50	15.00
2	BH 2	5.00	Yellowish Red Silty Sandy Soil	42.50	17,00
3	BH 2	7.00	Yellowish Red Silty Sandy Soil	47.50	19.00
4	BH 2	9.00	Yellowish Red Silty Sandy Soil	52.00 ·	21.00
5	BH 2	15.00	Brownish Whitish Hard Rock	1375.00	171.00

FS in Soils / Sand = 2.5

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FS in SDWR = 2.5

FS in Soft & hard rock = 8.00

# 6.2. Additional Recommendations

- Buoyancy effect is not considered during SBC calculations; this shall be taken in to account during Structural Design of Foundations.
- The minimum confined depth of foundation shall be 3.00 m from existing Ground Level.
- The Anchoring in the Rock shall be suitably designed and provided for the footing / foundation resting on Rock (Soft or Hard Rock).
- Pile foundations are not necessary but only shallow foundation required.



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C. Clians, services for pluparation of Peasingly for Construction of Underpass Flyover al St. John's Hospital Road, Koramangala 100 tt Road Junction. Bangatore.

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Water Table Course	LION AIGHT ISSUE				(NO WATER LADIE IS		0.30	in vyater lable tou					
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NC	5.70	7.30	9.60	12.90	17.70	25.10	37.20	52.60	57.80	95.70	172.30	258.30	247 60
*	0	5	10	15	20	25	30	34	35	40	45	48	20

# 1.1 SAFE BEARING CAPACITY BASED ON TERZAGHI'S THEORY;

a) Calculation of Bearing Capacity Factors:

		E S
80		ž
Na= SPT = 8		300 (cms)
		Ay*Nq+( B 600 (cms)
10		ō.
11.7		C + 0.5*}
14.66		UBC (kg/Sq cms) = 1.3 CNc + 0.5°y°D•Wq•Nq +0.4 • y •B•Wy•Ny
27.52	on of SBC :	UBC (kg/Sq 26 (degrees)
26	b) Calculation of SBC	C 0.28 (Kg/Sq cms)

UBC(T/Sq.m) SBC(T/sq.m) 163.5856 65.43424 (T/Sq.mis)\*\*\* (T/Sq.mis)

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1.5. ALLOWABLE SETTLEMENT AS PER IS 8009 -1982 BASED ON N VALUES.

B=600 Settlement Factor = 0.00
Recommended SBC = 14.00T/Sq.m = 1.40 kg/Sq.cms Nc=11.2

< 50 mm as per IS 1904, Hence Safe 9.24 Allowable Settlement (mm) =

Hence the Foundation is safe against allowable settlement of 50 mm with 14,00 T/sq.m SBC as per IS 1904



13. SAFE SETTLEMENT PRESSURE BASED ON TENG'S THEC.

Ad Penetration Number = . 18.2

0.0167\*N'B\*Wq+0.027\*(100+N'4)\*D\*Wy=. 21.87008,

1.3. SAFE SETTLEMENT PRESSURE BASED ON TENG'S THEORY:

Rd = Depth Correction Factor = 1+(0.20/8) <= 1.2

Cosp (T/Sq.m) = 3.5 (N-3)\*((8+0.3)/(28)) \*\*2 Ny, Rd

Cosp (T/Sq.m) = 3.5 (N-3)\*((800-7))\*

Cosp (T/

M/s Manasa Consultants

Table - 7.0 Borehole Log, Sub-Soil Profile & Laboratory Test Results

Consultancy Services for preparation of Feasibility for Construction of Subject: Underpass & Flyover at St. John's Hospital Road. Koramangata 100 ft Road Unction, Bangalore.

Client: M/s Bruhat Bangalore Mahanagara Palike, Bangalore.

Consultant: M/s Manasa Consultants, Bangalore

Location: St. John's Hospital Road. Koramangala 100 ft Road Junction.

prehole No . BH.1 Method : Rotary Boring through Catyx Rig

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Date of Execution : 28.01.2010

Ground Water Level : 2100 m Borehole Level : Not Known e-Termination Depth : 16 00 m Page No / Sheet No : 1 of 1

Below Ground (m)	Legend	Sub Soil Strata	Sample Type / SPT Value	Gravel	Size And	Silt +		PL	PI	AASHTO	Content	Insitu Density	Cohesive	Angle of
0,000	1,14,15		1	*	*	*	K	. %		O. S.	*	gm/cc	Strength kg / cm <sup>2</sup>	Internal
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	8,	andy Sitty Clay Soil		. 1										
500			COS	2.42	46,18	51.4	411						1	
			10.10				*"	21	14	CL.	12.75	1.76	0,28	26
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		SPT	w. 9.6 m											
	Pinkish	White Sands No.	1+1+1											
	Si	lty Soil		1					1			1		
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12.000	Brownish Whitish Soft Rech	ď		WAS	SHED SA	MPLE			•••			
13.544		Type of Samples	Core Length	Core Recovery	RQD	Type of Rock	Sp. Gr.	Water Absorption	Unit Weight	UCC Strength (Unsaturated)	UCC Strength (saturated)	Remark
15.000			(cmr)	*	*		-	*	(gm / cc)	T / m2	T/m2	
	Whitish Blackish Hard Rock	Cure Samples	#,00 4,00 10,00 11,00 15,00	31.00	25,50	Hard Rock	2.45	<b>6</b> .34	2.64	1285	,0e	

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Table - 7.1 Borehole Log. Sub-Soil Profile & Laboratory Test Results

Consultancy Services for preparation of Feasibility for Construction of Subject: Underpass & Flyover at S1 John's Hospital Road, Koramangata 100 n Road Junction, Bangalore Clicet: M/s. Bruhat Bangalore Mahanagara Palike, Bangalore. Consultant: M/s. Manasa Consultants, Bangalore. Location: S1 John's Hospital Road, Koramangala 100 ft Road Junction

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Date of Execution : 28 01 2010

Ground Water Level : 2.25 m Borehole Level : Not Known Borehole Termination Depth : 15 km m

Depth				Grain	Size An	alysis				1			Triaxial Stra	ngth Parameter
Below Ground (m)	Legend	Sub Soil Strata	Sample Type / SPT Value	Gravel	Sand	Sin • Clay	ш	PL	PI	AASHTO Classific- ation	Insitu Moisture Content	Insitu Density	Cohesive Strength (Cu)	Angle of Internal
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1,500			SPT w 1.5 m N = N+9+11										A CONTRACTOR OF THE CONTRACTOR	
2,500		-	CDS	1.44	42.92	56	34	NP	NP	CI.	9.54	1.82	0	25
3.000 3.500		Yellowish Red Silty Sandy Soil	SPT & 1.0 m V = 9+11+12 UDS											
4, Mari		s	7.445.0	321	42.76	41.53	42	NP	NP	sc	R15	1.78	. 0	16
S. datas		S	= 10+11+12											
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		SPT N-	9+11-13				-							
tio .	Yelli		or, 9,0 m 12+14+14											
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Mrs Manasa Consultants

oundrams. Services for preparation of Fessibility for Construction of Underpuss Pixever at St. John's Hospital Road, Koramangala 169 ft Road Julicust. Bangalore

12.500	Brownish Yellowish Soft Rock					509						
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		Type of Samples	Core Longth	Core Recinery	RQD	Type of Roel	Sp. Gr.	Water Absorption	Unit Weight	UCC Strength (Untallerated)	UCC Strength (saturated)	Remark
14 1891			(cms)	*	*			*	(PM (AT)	7 / m2	T/m2	
5,000	Brownish Whitish Hard Ruck	Core Samples	6.00 8,00 6,00 5.00 12.00 10,00	נגונ	14.66	Hard Rock	2.42	<b>8.53</b>	2.59	1375	.04	

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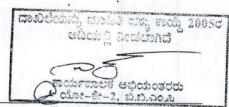
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Chapter - 5

Planning and Design Considerations

# CHAPTER 5 PLANNING AND DESIGN CONSIDERATIONS

# 5.1 General

Planning and Design of Elevated Corridor Facility comprising of Elevated Corridor, Surface Level Roads, At Grade Junction, Pedestrian Facilities, etc. shall be essentially based on the Design Standards as stipulated in relevant IRC Standards and MoRT&H Specifications. Whenever, the Codes / Standards are silent on some of the aspects, the same shall be planned / designed based on the Sound Engineering Practices. Design Standards relevant to the Project Road along with the Broad List of Design Parameters and the relevant IRC Codes / Specifications have been detailed in Table 5.1.

Design Standards (as appropriate) have been further elaborated under the following heads.

- Geometric Design.
- Drainage.

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Grade Separated Structure.

# 5.2 Factors Considered in Planning

The Important Factors considered in the Planning of Elevated Corridor Facility are detailed below.

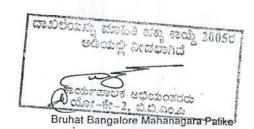
Elevated Corridor Facility has been planned in such a way that it blends well with the existing Transport Infrastructure Facilities in the City.

Elevated Corridor Facility has been planned in such a way that it not only provides Traffic Relief but also enhances the Capacity of the Corridor, provides Safety to the Road Commuters.

Elevated Structure should have no / minimum impact on the existing environment and its surroundings.

# 5.3 Design Standards Related to Geometric Design

Design Standards related to Road Geometric along with the suggested Design Values / Standards and Recommended Values based on Site Conditions and Data Analysis are detailed in Table 5.1.



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Chapter 5 - Planning and Design Considerations

April 2013

# Table 5.1 Geometric Design Standards

Sl. No.	Design Parameters	Reference Code / Design Values
1.	Design Speed	IRC: 69 - 1977 - "Space Standards for Roads in Urban Area
	2 a 1	IRC: 86 - 1983 - "Geometric Design Standards for Ur Roads in Plains".
		IRC: 92 – 1985 – "Guidelines for the Design of Interchange! Urban Areas".
		The Grade Separator and Surface Level Roads have be designed for an Operating Speed of 40 kmph.
2.	Geometric Design Standards	designed for an Operating Speed of 40 kmpn.
11-5-3	Carriageway Width	Four lanes divided bi directional Carriageway
# 44 10	Median	1m
	Footpath at grade level	2.5m
	Camber (bi directional)	1 in 40 (2.5%) for Paved Carriageway
	Vertical Gradient	Limited to 1 in 20 (5%)
	Vertical Clearance	5.5m
	Horizontal Curves	IRC: 38 - 1988 - "Guidelines for Design of Horizontal Curfor Highways and Design Tables" (First Revision).
	Vertical Curves	IRC: SP: 23 – 1983 – "Vertical Curves for Highways".
	At Grade Junction	IRC: SP: 41 - 1994 - "Guidelines on Design of At Gra Intersections in Rural and Urban Areas".

# 5.4 Design Standards Related to Drainage

Drainage of Storm Water collected on the Elevated Corridor and at Surface Level Roads shall be essentially based on the Guidelines given in IRC: SP: 42 - 1994 - "Guidelines on Road Drainage" and in IRC: SP: 50 - 1999 - "Guidelines on Urban Drainage". The Suggested Design Values / Standards and Recommended Values based on Site Conditions are detailed in **Table 5.2**.

Table 5.2 .
Design Standards Related to Drainage

Design Parameters	Reference Code / Design Values
• Camber	1 in 40 (2.5%) (bi directional) for Carriageway
• Longitudinal Gradient	Minimum 1 in 300 (0.3%)
Drain Type	RCC Box Drain covered with Precast RCC Slab

5.5 Design Standards Related to Grade Separated Structure

The Design Standards and Loading considered for Elevated Structure shall be as stipulated in Latest IRC Codes / Special Publications supplemented by appropriate MoRT&H Circulars and / or IS codes.

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# 5.6 Design Life

As per IRC: 92 - 1985 - "Guidelines for the Design of Interchanges in Urban Areas", fo the Purpose of Traffic Projection a 20 year Horizon Period has been considered. The Elevated Corridor and Surface Level Roads have been designed to cater to the trafficanticipated in the next 20 years.

# 5.7 Design Service Volume

As per IRC: 106 – 1990 "Guidelines for Capacity of Urban Roads in Plain Areas", Design Service Volumes corresponding to LOS 'C' have been adopted for Design of Urban Roads.

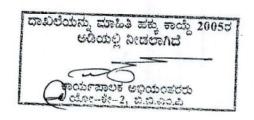
Design Service Volumes for Arterial and Sub Arterial Roads corresponding to LOS 'C' are presented in Table 5.3.

Table 5.3
Design Service Volumes

Sl. No.	Type of Carriageway	Design Service Vo	olume, PCU/hr.	Design Service Volume, PCU/		
		Arterial	Sub arterial	Arterial	Sub arter	
1.	2 - Lane (One	LOS C	LOS C	LOS C	LOS C	
	2 - Lane (One - way)	2400	1900	1200	950	
2.	2 - Lane (Two - way)	1500	1200	750	600	
3.	3 - Lane (One - way)	3600	2900	1200	967	
4.	4 - Lane Undivided (Two-way)	3000	2400	750	600	
5.	4 - Lane Divided (Two-way)	3600	2900	900	725	
6.	6 - Lane Undivided (Two - way)	4800	3800	800	633	
	6 - Lane Divided (Two-way)	5400	4200	900	700	
	8 - Lane Divided (Two-way)	7200		900	**	

(Source: IRC: 106 – 1990)





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Chapter - 6

**Concept Proposals** 

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# CHAPTER 9 PROJECT COST AND ECONOMIC EVALUATION

# 9.1 Rate Analysis

As part of Detailed Project Report (DPR), Rate Analysis of each of the Item has been prepared by adopting PW, P & IWTD SR 2012 – 13, Bangalore Circle and NHSR 2009 – 10, National Highways Circle, Bangalore. The Rates as given in PW, P & IWTD SR are to be enhanced by 8% and by 6% for the Rates given in NHSR for additional weightages for the Works to be executed under extra ordinary conditions for Bangalore Metropolitan Limits. Items not covered in NHSR / PW, P & IWTD SR have been based on Market Rates.

# 9.2 Detailed Cost Estimate

As part of DPR, Detailed Cost Estimate has been prepared for the Elevated Structure and Surface Level Roads based on Detailed Engineering Design.

# Components

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The Costs of Work have been worked out Component wise as below.

- I. Elevated Corridor Works (Works to be taken under Turnkey Lump Sum Contract)
  - · Site Clearance and Dismantling.
  - · Surface Level Roads / Slip Roads.
  - · RCC Drain Works.
  - Culverts across Road.
  - Construction of Storm Water Drain.
  - Diversion Roads.
  - Obligatory Spans and Standard Spans of Elevated Corridor.
  - Approaches to the Elevated Corridor.
  - Electrical Works.
  - · Road Furniture and other Allied Works.

## II. Utility Shifting

- BESCOM
- BWSSB

The Quantities of each of the Component have been assessed by making use of the Layout Plan, Longitudinal Sections, Cross Sections, Design Details and Engineering Drawings.

#### 9.3 Project Cost

The Rates of the Various Items of Works have been analysed keeping in view the Basic Rates as per SR and their respective lead. Provision for Contingencies has been made as per normal practice.

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To accommodate the proposed Elevated Corridor Scheme, 4819.257 Sqm of land needs to be acquired. The Abstract of the Project Cost is detailed in Table 9.1. Total Cost of the Project is Rs. 21404.00 Lakh including Utility Shifting and Land Acquisition Cost.

The Detailed Cost Estimate is presented in Annexure A.9.1.

# Table 9.1 Abstract of Project Cost

Sl. No.	Particulars	Cost in Rs	
1.	Site Clearance and Dismantling	87760	
2.	Surface Level Roads / Slip Roads		
3.	Drain Works	1200700	
	a. Road Side Drain	400100	
	b. Culverts across Roads	498100	
	c. Construction of Storm Water Drain	52240	
4.	Diversion Road	259360	
5.	Works for Obligatory Spans and Standard Spans of Elevated Corridor	379120	
6.	Approaches to the Elevated Corridor	11274800	
7.	Median, Kerb and Compound at Grade Level	8856000	
8.	Electrical Works	1743700	
9.	Road Furniture and other Works	1440000	
	Construction Cost	2677000	
10.	Cost of Topographical Survey	152237500	
11.	Cost of Soil Investigation	25000	
12.	Contingencies (0.20) CO	252500	
13.	Cost for Consultancy Charges for DPR Preparation, Proof Checking and	O - 4567125	
	Project Management (@ 2.5% of Construction Cost)	3805937	
14.	Utility Shifting Charges (@ 8% of Construction Cost)	12179000	
15.	Expenditure towards Land Acquisition for an Area of 4819.257 Sqm35 5000 55 4096		
	Sub Total	214034090	
l6.	Miscellaneous and rounding off	<del>-5909</del>	
	Grand Total	214040000	

( By Two hundred, and your bound only) To work out the Land Acquisition Cost the following have been considered.

204,00,00,00

Land Rate: Rs. 5000/- per Sft. [as per Revised Estimated Market Value of Immovable Properties and Buildings within the Jurisdiction of Bommanahalli Sub Registrar Office, Page No. 351, Sl. No. 13 (i)]. ದಾಖಲೆಯನ್ನು ಮಾಹಿತಿ ಹಕ್ಕು ಕಾಯ್ದೆ 2005ರ

Appreciation Rate per Annum: 12% of Total Land Value.

Statutory Allowance: 30% of Total Land Value.

Expenditure towards Staff Maintenance: 10% of (1+2+3).

Processing Fee: 1% of (1+2+3).

Expenditure towards Publication of Notification: Lump Sum Rs. 1000000/-

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Chapter 9 - Project Cost and Economic Evaluation

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<ul> <li>5. Processing Fee in Rs. = 1% of 36, 81, 71, 423/-</li> <li>6. Expenditure towards Publication of Notification: Lump Sum Rs. 1000000/-</li> </ul>	10, 00, 000/-
$\frac{1}{2}$ Proceeding Rea in Re = 1% of 26 V1 71 499/	36, 81, 714/-
4. Expenditure towards Staff Maintenance in Rs. = 10% of 36, 81, 71, 423/-	3, 68, 17, 142/-
Total	36, 81, 71, 424/-
3. Statutory Allowance in Rs. = 30 % of 25, 92, 75, 650/-	7, 77, 82, 695/-
2. Appreciation per Annum in Rs. = 12% of 25, 92, 75, 650/-	3, 11, 13, 078/-
1. Cost of Land in Rs. = 5000 X 4819.257 X 10.76	25, 92, 75, 650/-

#### 9.4 Economic Evaluation

The Objective of Economic Evaluation is to determine the Feasibility of the Proposed Project in Terms of the Benefits likely to accrue to the Economy as a whole, thereby justifying its Implementation. Economic Appraisal is carried out within the broad framework of Cost Benefit Analysis, which attempts to compare the Investment incurred with the Benefits derived from the Project, in terms of its Contribution towards improving the Welfare of Road Users of Bangalore City.

To begin with, the Project Costs and Benefits under "without" and "with" Project Situations have been identified and valued in Financial Terms. These are converted into Economic Prices to remove Market Imperfections and to reflect the Resource Cost to the Economy. Economic Prices are Net of Taxes, Duties, Royalties or any other Element in the nature of Transfer Payments. The Benefits have been estimated by comparison of "with" and "without" Project Situations. The Annual Stream of Project Cost and Benefits in Economic Terms have been computed over the Analysis Period. The Results are presented in terms of Economic Internal Rate of Return (EIRR). The Resultant EIRR will be compared with the Accounting Rate of Return, considered as the minimum for Investment Decisions by the BBMP.

## 9.4.1 Estimation of Economic Costs

The Project Cost comprises of Capital Cost and Maintenance Cost. Capital Cost consists of Outlays for Construction of Elevated Corridor Structure, Traffic Diversion during Construction, Network Improvements for Efficient Movement of Traffic, Relocation of Utilities, Land Acquisition and Consultancy Charges. These Costs are computed in Financial Terms based on the Market Prices. The Financial Costs are converted into Economic Costs by applying Conversion Factor (0.8) recommended by International Funding Agencies and / or MoRT&H for Economic Evaluation of Transport Projects in India in recent years. All Prices have been kept at Constant Level (2012 – 13 Prices) throughout the Evaluation Period. The Capital Costs have been annually phased over the Construction Period as per Pre Determined Work Schedule.

The Maintenance Costs are Annually Recurring Costs. Both the Routine and Periodic Intervention Costs have been determined in Economic Prices. Maintenance Costs will be considered after the expiry of "Defect Liability Period of the Contractor", which is usually taken as 24 months. The Annual Stream of Costs for both Capital and Maintenance has been developed for the Analysis Period.

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# 9.4.2 Estimation of Economic Benefits

The Estimation of User Benefits in terms of Time Savings and Vehicle Operating Cost Savings has been done as per IRC: SP - 30 "Manual on Economic Evaluation of Highway Projects in India". Other Assumptions made and References are indicated.

The Proposed Elevated Corridor Scheme will ease Congestion along 100ft. Inner Ring Road between Ejipura Main Road — Inner Ring Road Junction and Kendriya Sadana Junction and allow to and fro Vehicular Traffic between Ejipura Main Road — Inner Ring Road Junction and Kendriya Sadana Junction along Liner. Ring Road to move without stopping at signals. This would eliminate / reduce Vehicular and Pedestrian Traffic Conflicts and Delays experienced by both Traffic using the Elevated Corridor and the At Grade Road.

The Future Traffic Flows and corresponding Delays at the Intersection have been estimated for both "without" and "with" Project Situations as part of the Traffic Analysis.

The Direct and Indirect Benefits accruing to the Users can be classified as

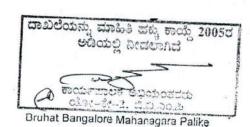
- i. Savings in Idling Fuel Consumption at Intersection due to Reduction in Stopped Vehicular Delays.
- ii. Savings in Travel Time due to Improved Speeds as a Result of Elimination / Reduction of Delays.
- iii. Savings in Fuel due to Improved Travel Speeds. X
- iv. Reduction of Accidents.
- v. Improvement in the Environmental Conditions of Existing and Surrounding Areas.

Direct Benefit Categories viz. (i), (ii) and (iii) have been estimated in Monetary Terms and used for the Viability Analysis. Since Categories (iv) and (v) are Indirect Benefits and are difficult to quantify hence they are excluded from the Analysis.

# 9.4.2.1 Savings in Idling Fuel Consumption

At Signalized Intersections, Stoppages during the 'Red Phase' result in Extra Fuel Consumption when the Vehicle is idling. Since the Proposed Elevated Corridor Scheme will allow traffic to move without stopping at signals, the Delay due to Stoppages will be eliminated for Traffic using the Elevated Corridor and reduced for the remaining At Grade Traffic at the Intersection. This will result in Savings in Idling Fuel Consumption.

The Annual Mode wise Idling Costs have been estimated for "without" and "with" Project Situations to obtain the Savings in Idling Fuel Consumption. These are based on Delays faced by Traffic during each hour and the Standard Idling Fuel Efficiency Norms for Various Vehicle Types. Idle Fuel Consumption of Various Modes of Vehicles based on RUCS is detailed in **Table 9.2**.



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Table 9.2 Idle Fuel Consumption Rates

Vehicle Type	Fuel Consumption in cc/minute		
Cars	12.0		
Buses / Trucks	35.4	·*	
Scooters / Motor Cycles	2.0	) <b>(</b> ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( )	
Auto Rickshaw	2.5		

# 9.4.2.2 Savings in Cruise Fuel Consumption

In the existing scenario, due to the Formation of Longer Queue Length at Signalized Intersections, Vehicles are forced to move at slow speeds, which are sub optimal from mileage point of view. This Crawl Length is taken as equal to Queue Length. Since the Proposed Elevated Corridor Scheme will allow traffic to move with Reduction in Queue Length, which is taken as equal to the Percentage of Traffic excluding that carried by the Elevated Corridor hence this will result in Savings in Cruise Fuel Consumption.

Source

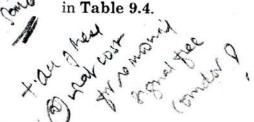
The Annual Mode wise Cruise Costs have been estimated for "without" and "with" Project Situations to obtain the Savings in Cruise Fuel Consumption. These are based on Queues formed by Traffic during each hour, and the Standard Cruising Fuel Efficiency Norms for Various Vehicle Types. Cruise Fuel Consumption of Various Modes of Vehicle based on RUCS is detailed in Table 9.3.

Table 9.3
Fuel Consumption Equations for Estimation of Vehicle Operating Cost

Two Wheeler	$FC = 3.38 + 549.57/V + 0.00436 V^2$
Auto Rickshaw	FC = $4.13 + 549.57/V + 0.00436 V^2$
New Brand Car	$FC = 21.85 + 504.15/V + 0.004957 V^2$
Old Brand Car	$FC = 10.35 + 1675.52/V + 0.0133 V^2$
LCV	$FC = 21.28 + 1615.327/V + 0.0245 V^2$
Truck	$FC = 44.08 + 3904.64/V + 0.0207 V^2$
Bus	$FC = 32.97 + 3904.64/V + 0.0207 V^2$

# 9.4.2.3 Savings in Time

The Annual Time Delay Costs for each Vehicle Type have been estimated on the basis of the Value of Time for Users of Different Modes. The Value of Time (VOT) for different Users is based on available studies carried out for Bangalore City as detailed in Table 9.4.



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# Table 9.4 Vehicle Occupancy and Value of Time

Туре	Occupancy	Value of Passenger Time (Rs. / hour)		
Two :Wheeler	1.20	50		
Auto	2.40	60		
Car / Taxi / Jeep	1.70 · · ·	120		
Truck / Tempo	2.00	30		
Bus / Mini Bus	24.00	30		

# 9.4.2.4 Savings in Fuel Cost

Vehicle Speeds at Intersections are affected due to Platoon Formations and Stoppages during Red Phase of Signal Time, thus resulting in Higher Vehicle Operating Costs. The Difference in Fuel Costs incurred by Vehicles while traversing the intersection with and without Elevated Corridor Scheme has been estimated to obtain the Annual Savings in Fuel at Intersections.

## 9.4.2.5 User Benefits

With the Implementation of Elevated Corridor Scheme, Benefits have been assessed by comparing the User Costs in the 'with' and 'without' Project Scenario. First year Benefit in the Post Elevated Corridor Scenario is Rs. 6750.96 Lakh. Estimated Annual User Costs and Savings on Elevated Corridor are given in Annexure A.9.2.

# 9.5 Economic Appraisal

The Annual Streams of Costs and Benefits have been compared to determine the Annual Stream of Net Benefits of the Project. The Economic Viability has been measured in terms of Economic Internal Rate of Return (EIRR) by applying the Discounted Cash Flow (DCF) Technique to the Annual Stream of Net Benefits of the Project.

EIRR, as a Simple Index of Economic Feasibility, has proven to be a useful tool in comparing the different alternatives and has been used for Evaluation. The EIRR is compared with the Accounting Rate of Return to assess the Economic Viability of the Project. The Accounting Rate of Return is generally taken as 15% for Infrastructure Projects in India.

# Sensitivity Analysis

A Sensitivity Analysis has been performed to study the Impact of Changes in the main variables on the EIRR of the Project and to assess the Robustness of the Project. Changes in main Determinants include

- Increase in Project Cost by 10%
- Decrease in Project Benefits by 10%.

Increase in Project Cost by 10% and Decrease in Project Benefit

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Results of Sensitivity Analysis incorporating all the Determinants as detailed above are summarized in Table 9.5. From the Table it can be seen that Project is still viable, with Increase in Cost at 10% and Decrease in Benefit by 10%, as EIRR is more than 15%.

Table 9.5 Summary of Sensitivity Analysis

Scenario		At the End of 2033			
		EIRR (%)		NPV (Rs. Lakh)	
Base Case with Time Savings	•	31,48 .	•	28429.20	
With Time Savings		7			
10% Increase in Cost	•	29.50		26648.51	
10% Decrease in Benefits	•	29.30		23805.59	
Combination of the above two	•	27.41	•	22024.90	

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Traffic Engineering Cell (Road Infra) Bruhat Bangalore Mahanagara Palike

Bangalore - 560 002

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Annexure A.9.1



Project: Proposed Construction of Flevated Corridor by integrating Ejipura Main Road -Inner Ring Road Junction, Sony World Junction and Kendriya Sadana Junction along 1001 Inner Ring Road, Koramangala, Bangalore

Abatuaat	- C D - 4 - 11 - 1	Cost Estimate
Abstract	of Detailed	Cost Estimate

Sl. No.	Particulars	Cost in Rs.
1	Site Clearance and Dismantling	87760
2	Surface Level Roads / Slip Roads	1200700
3	Drain Works	
	a. Road Side Drain	498100
	b. Culverts across Roads	52240
	c. Construction of Storm Water Drain	259360
4	Diversion Road	379120
5	Works for Obligatory Span and Standard Span of Elevated Corridor	11274800
6	Approaches to the Elevated Corridor	885600
7	Median, Kerb and Compound at Grade Level	174370
8	Electrical Works	144000
9	Road Furniture and other Works	2677000
	Construction Cost	152237500
10	Cost of Topographical Survey	25000
11	Cost of Soil Investigation	252500
12	Contingencies (@ 3% of Construction Cost)	0 4567126
13	Cost for Consultancy Charges for DPR Preparation, Proof Checking and Project Management (@ 2.5% of Construction Cost)	380593
14	Utility Shifting Charges (@ 8% of Construction Cost)	12179000
15	Expenditure towards Land Acquisition for an Area of 4819.25 Sqm 36 50 00	65°20967028
	Sub Total	214034090
16	Miscellaneous and rounding off	5909

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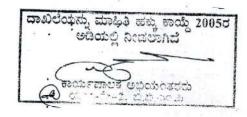
ದಾಖಲೆಯನ್ನು ಮಾಹಿತಿ ಹಕ್ಕು ಕಾಯ್ದೆ 2005:. ಅಡಿಯಲ್ಲಿ ನೀಡಲಾಗಿದೆ

Project: Proposed Construction of Elevated Corridor by

	to who we are		1	A distribute	Mile Arthur	1 575/5	STATE STATE	W. Ferst	
244	a line of the second	<u>D</u>	etailed	Cost Est	<u>imate</u>	3	Salar Salar		La de la company
SI.	Description of Work	Unit	t No.	Length	Breadth	Depth	Quantity	Rate in	Amount in 1
200	SITE CLEARANCE AND DISMANTLING		1			ın	30 St. 118	Rs.	- 11 7 2 3 47 3
	KSRRB 200-1: Cutting of trees girth from	Each	Y	and the second		and confirmed	New Angles to contract the		· Are on the one
	300mm to 600mm including cutting of trunks, branches and removal of stumps stacking of serviceable materials with all lead & lift, earth filling in the depressions / pit, labour charges complete as per specifications. MoRT&H Specification						Nigeron .	•	
	Clause No.201.		De C		(A)	f			
	(P.No.144, I.No.18.1 of PW,P&IWTD S.R 20	12-13)					30	/ 135.00	4050
02	KSRRB 200-2: Cutting of trees girth from	Foob	William .				~		
	600mm to 900mm including cutting of trunks, branches and removal of stumps stacking of serviceable materials with all lead & lift, earth filling in the depressions / pit, labour charges complete as per specifications. MoRT&H Specification					o			
	Clause No. 201.		VETT ATTAIN		Later Corp. In 1987			To the wood fall and Marsing	period of the state of
	(P.No.144, I.No.18.2 of PW,P&IWTD S.R 201	2-13)	- 50/51/5	12:1	٠. د		***	e e esperante en	ovarilaria Parti Maritania
- 1	(* 1	2-10)			-	-	61	270.00	16470
	stacking of serviceable materials with all lead & lift, earth filling in the depressions / pit, */ labour charges complete as per specifications. MoRT&H Specification Clause No.201.	≪apru and					The second of the second		
4-4	(D.N. 144 I.N. 10.2 CDW De Weller O. D. CO.	2.10	7				Section 1 - The		Takes TV
20.7	(P.No.144, I.No.18.3 of PW,P&IWTD S.R 201	2-13)	and Fig. 1		• 19 19 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	-	85	672.84	57191.
	KSRRB 200-4: Cutting of trees girth from 1800 to 2700mm including cutting of trunks, branches and removal of stumps	Each		317 32 37 37 37					
	stacking of serviceable materials with a lead of 100 metres, earth filling in the depressions / pit, labour charges complete as per specifications. MoRT&H. Specification Clause No.201.								*** 12 min 14 mi
	(P.No.144, I.No.18.4 of PW, P&IWTD SR 2012	2-13)		100		-	130		1 / / 1 / 1 / 1 / 1 / 1 / 1 / 1 / 1 / 1
	Y 2 3 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	The Paris		ir i-		Artista.	71	1123.20	79747.
05 1	KSRRB 200-4: Cutting of trees girth from I	Cach	-1	0.00			1	U	/
t	2700mmand above including cutting of trunks, branches and removal of stumps stacking of serviceable materials with a ead of 100 metres, earth filling in the depressions / pit, labour charges complete				A PROCESS		24		
1	as per specifications. MoRT&H Specification Clause No.201.						Fa		
1 2 2	as per specifications. MoRT&H	13)					ದಾಖಲೆ ಕೃತ್ಯಿಯ	2694.60	21050807

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Sl. Description	f Work	Unit	\.	Length	Breadth	Depth		D	
No.			No.	m	m	m	Quantity	Rate in Rs.	Amount in
1.06 KSRRB M20	0-12.1. Dismantling of	Cum	4					AUS,	#
existing struc	tures like culverts, Bridges,		167.5					18 2 1	
retaining wa	lls and other structure		2	-	i		i		
comprising of	masonry, cement concrete,	į	-						i
wood work, ste	el work, including T&P and					-		*	1 10
scaffolding whe	rever necessary, sorting the								
dismantled	material, disposal of								į
unserviceble r	naterial and stacking the		į	1			- 1		
serviceable ma	erial with all lifts complete		111	÷ +					
as per speci	fications. i) Lime/Cement	- 1					İ		1
Concrete. I.By	Manual means, A. Lime			-					
Concrete, Ceme	nt Concrete Grade M-10 &	1							
below PCC			1	1 4			1		7 3 B. T
(P.No.145, I.No.	18.17 of PW,P&IWTD S.R 20	12-13)	1	7				- A Z	110
LHS	- 2		- i -	1		i	<del></del> i		
Ch:100.00 to 45			1	350.00	0.90	0.10	07.70	4 4 4 4 4	Chi. Call Co.
Ch:1974.50 to 2	012.75		1	38.25		0.10	31.50		
Ch:2280.00 to 20	670.00	7 11	1	390.00	0.90	0.10	3.44	_	
Ch:2400.00 to 26	670.00		1	-	0.90	0.10	35.10	/	
RHS	5.00(1)		1	270.00	0.90	0.10	24.30	-	
Ch:0.00.00 to 45			-	100.00		1	1	-1	* ***
Ch:1980.00 to 21	20 A C C C C C C C C C C C C C C C C C C		1	450.00	0.90	0.10	40.50	- /	# N T =
Ch:2280.00 to 27			1	150.00	0.90	0.10	13.50		
For Drain Bed	00.00		1	420.00	0.90	0.10	37.80		1 - 17/-0:17
LHS								1000	
Ch:100.00 to 450	.00							- Francisco	× 1
Ch:2280.00 to 26		- 11	2	350.00	2.10	0.10	147.00		
RHS	70.00	19 14	2	.390.00	2.10	0.10	163.80		
Ch:0.00.00 to 450	A PART OF THE PART	incher ve	and the second	a Calculation and a House bud	relyation of the period	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	100 100 100 100		
		t from	2	450.00	2.10	0.10	189.00	and making the same	
Ch:1980.00 to 21			2	150.00	2.10	0.10	63.00	- XV	4 4 4 4
Ch:2280.00 to 27	00.00		2	420.00	2.10	0.10	176.40		- W
							925.34	1	
	9, 121, 211	5 4ctd 12	121	10.5 10.5	Table 1	Say	926.00	230.04	01001
1				-		Day	320.00	230.04	213017
KSRRB M200-	12.2. Dismantling of C	um		48.15.44			<del></del>		
existing structi	res like culverts, Bridges,				111		1		
retaining walls	and other structure		- 1			2	1		
comprising of in	asonry, cement concrete,	12	**			- 1	1	- 1	
wood work, steel	work, including T&P and	a smajore e	- 1	Maria San Car	34.00 M	1		Section 19 de	The second section
scattolding where	ver necessary, sorting the	i .				ĺ			
dismantled m	aterial, disposal of						1	12	
unserviceble ma	terial and stacking the				e di esti per	1		Part of	
serviceble materi	al and serviceble material			8. L	an Lab				- 77
with all lifts com	olete as per specifications.								
manna B Comment	Concrete.I.By Manual						4.5		out the second
M-20 PCC	t Concrete Grade M-15 &	ł.	- 1		( 22. 11				
101-20 FCC				1					
(P.No.145, I.No.18	.18 of PW,P&IWTD S.R 2012	10)							4.86
Compound Plinth	& Coping	-13)	2	0000 0-	1	- Longian I	1		
Footpath	de Coping ,	-	2	2068.25	0.45	0.10	186.14	1 2 1	-1
LHS	1,225.30			000	34/1			2-11-2-1	Lat Pollar
RHS			1	920.00	2.00	0.15	276.00	The state of	X. A. A. L. T. L.
			1	1046.00	2.00	0.15	313.80		73/11/10
			1 1		35		775.94	200 100 11	13.6
No. of the contract of the con									



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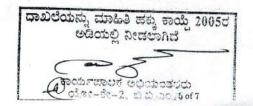
	Description of Work	Unit	No.	Length	Breadth	Depth		Rate in	West 11 10 to 1911 to 1914
No.	Description of work	Umt	INO.	m	m	m	Quantity	Rs.	Amount in Rs
	KSRRB M200-15.2. Dismantling of existing structures like culverts, Bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceble material and stacking the serviceble material with all lifts complete as per specifications. ii) Dismantling Stone					•			
	Masonary B. Rubble Stone Masonry, in Cement Mortar, SSM		w j		e gwed from on	011100 <del>1</del> 1		perturno en es	en gliúgickíhostor i r
	(P.No.146, I.No.18.27 of PW,P&IWTD S.R 20	012-13	)		T THE STREET			1 14 2	
	For Drain	1 11	1 2 6	11 15	1.0	41		8 11 3 1	
	LHS				1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		a service	+ (No. 2)	
	Ch:100.00 to 450.00	3.30	2 .	350.00	0.45	0.60	189.00	/	1984 11 11 11
	Ch:2280.00 to 2670.00		2.	390.00	0.45	0.60	210.60	~	47
	RHS .					110 1	-		
	Ch:0.00.00 to 450.00		2	450.00	0.45		243.00	The second secon	
	Ch:1980.00 to 2130.00 Ch:2280.00 to 2700.00		2	150.00	0.45	0.60	81.00		
-	For Compound	-	2	420.00	0.45	0.60	226.80	/	
	Sub Structure (LHS)								
	RHS		1	740.00	0.75	0.60	333.00	/	
	Super Structure		$\frac{1}{1}$	1020.00	0.45	- 1	1,000		
	Super Structure		1	740.00	0.45	2.00	666.00	Maria Control	
				30.00	- 0	Carr	1949.40		/ /
-00	and the state of t	he To VANDENA	SHOW THE PARTY OF	magazini ing 1 Zin	Carrier to	Say	1950.00	183.60	358020.00
	Removing B.S.Slab of Drain and Stacking	Sqm	rade va estada al estada estad	1 22 3 - + 1 - 1 - 1 - 2	Carlotte de Carlotte de		and the section		<u> </u>
	LHS Ch:100.00 to 450.00		**************************************	350.00	1.00	a se trapado e risa e tol e como esta	350.00		
-	RHS	1.30	NULT IN		Satisfied				
	Ch:0.00.00 to 450.00		1	- 450,00	1,00		450.00	Non-the s	
	Ch:1980.00 to 2130.00 Ch:2280.00 to 2700.00	Law at the sa	1	150.00	1.00		150.00		
-	CII.2280.00 to 2700.00	A 25 3	1	420.00	1.00		420.00	10000	
	Market and the second of the s		Sant Santa	mark to the		Com	1370.00	7	
	Manager and the second of the second	A1	200 J - 6 - 7	The state of the s	27	Say	1370.000	44.47	60930.00
	KSRRB 200-27 Dismantling Kerb stone channel by manual means including and disposal of dimantled material with all lifts and complete as per specifications. MoRT&H Specification No. 202	Rmt						· · · · · · · · · · · · · · · · · · ·	
i	Montan Specification No. 202					1			
					i				
	(P.No.147, I.No.18.50 of PW, P&IWTD S.R 20	12-13)					Sec. (12) 10		and the same of the same
	(P.No.147, I.No.18.50 of PW, P&IWTD S.R 20 LHS	012-13)	1	778.25 -			778.25		1
	(P.No.147, L.No.18.50 of PW, P&IWTD S.R 20 LHS RHS	012-13)	1 1	1220 -		-	778.25 1220		Washington and the second
	(P.No.147, I.No.18.50 of PW, P&IWTD S.R 20 LHS	012-13)	1			-	1220 5400		H vertical
	(P.No.147, L.No.18.50 of PW, P&IWTD S.R 20 LHS RHS	012-13)	1 1	1220 -		-	1220	11.63	86053.48
111	(P.No.147, I.No.18.50 of PW, P&IWTD S.R 20 LHS RHS Median  KSRRB 200-23.1: Dismantling of flexible pavements and disposal of dismantled	-, : 5; - (4,5) - (4,5)	1 1	1220 -		-	1220 5400	11.63	86053.48
111	(P.No. 147, I.No. 18.50 of PW, P&IWTD S.R 20 LHS RHS Median KSRRB 200-23.1: Dismantling of flexible	-, : 5; - (4,5) - (4,5)	1 1	1220 -		-	1220 5400 7398.25	•	
11	(P.No.147, I.No.18.50 of PW, P&IWTD S.R 20 LHS RHS Median  KSRRB 200-23.1: Dismantling of flexible pavements and disposal of dismantled materials— stacking serviceable and unserviceable materials seperately complete as per specifications II. By Mechanical Means: A. Bituminous courses. MoRT&H Specification No. 202.	Cum	1 1 2	1220 -		-	1220 5400 7398.25	ನ್ನು ಮಾಹಿತಿ	ಚನ್ನು ಕಾಯ್ದೆ 200
11	(P.No.147, I.No.18.50 of PW, P&IWTD S.R 20 LHS RHS Median  KSRRB 200-23.1: Dismantling of flexible pavements and disposal of dismantled materials—stacking serviceable and unserviceable materials seperately complete as per specifications II. By Mechanical Means: A. Bituminous	Cum	1 1 2 2	1220 - 2700 -		)	1220 5400 7398.25	•	ಚನ್ನು ಕಾಯ್ದೆ 200
111	(P.No.147, I.No.18.50 of PW, P&IWTD S.R 20 LHS RHS Median  KSRRB 200-23.1: Dismantling of flexible pavements and disposal of dismantled materials— stacking serviceable and unserviceable materials seperately complete as per specifications II. By Mechanical Means: A. Bituminous courses. MoRT&H Specification No. 202.	Cum	1 1 2	1220 -		-	1220 5400 7398.25	ನ್ನು ಮಾಹಿತಿ ಅಡಿಯಲ್ಲಿ ನಿ	86053.48 ಚಕ್ಕು ಕಾಯ್ದೆ 200 ಡಲಾಗಿದೆ

31.	Description of Work	**	Control of the control	Length	Breadth	Depth	47 Z 144 X 144	Rate in	er promote de com m'à
lo.	Description of work	Unit	No.	m	m	m	Quantity	Rs.	Amount in Rs.
12			T. P. C. C.	-	The same	100	1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -		3.0000000000000000000000000000000000000
.12	KSRRB 200-22.2: Dismantling of flexible pavements and disposal of dismantled		1						
	materials upto a lead of 1000 metres,								
	stacking serviceable and unserviceable		1				1		
	materials seperately complete as per	1							
	specifications I. By Manual Means: B.					•			
	Granular courses. MoRT&H Specification			*					
	No. 202.								
	ON-147 IN 10 4 CON DAILY OF CO.								(
	(P.No.147, I.No.18.45 of PW, P&IWTD S.R 2		)	2580.00	. 00.00	0.00			
			1	2000.00	23.00	0.30 Say	17802.00	/	
	1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2			**		Say	17802.00	299.16	5325646.00
-	Dismantling of Existing Culverts						51.0		U. A. H. A.
.13	KSRRB M200-12.1. Dismantling of	Cum	-			7.20			
	existing structures like culverts, Bridges,	Juni	4.4	1.0		1000		- 1	
	retaining walls and other structure		1					į	
	comprising of masonry, cement concrete,	i					7.		
	wood work, steel work, including T&P and	4				4			
	scaffolding wherever necessary, sorting the							j	
	dismantled material, disposal of		-			43.4			
	unserviceble material, disposal of	9				- 1	1		······································
	unserviceble material and stacking the	1 1		- n []	1	1	1		
	serviceable material with all lifts complete	1	11.	1			-	į	
	as per specifications. i) Lime/Cement	į	#			V 6		į	
	Concrete.I.By Manual means, A. Lime		- 4			32.1			
	Concrete, Cement Concrete Grade M-10 &	1	11	1	- X - A	- 1-1-1			
-4	below PCC	ua di				or is south		1	
	(P.No.145, I.No.18,17 of PW,P&IWTD S.R 20	12-13)		- !	1 -	- 1			
	Bed Concrete	12 10)			-				3000
	3m Length	3	1	3.00	2.10	0.10	1.00		
	5m Length	11	1	5.00	2.10	0.10	1.89		
	7m Length	2	1	7.00	2.10	0.10	11.55		and a substitution of the
	8m Length	1	1			0.10	2.94	1 1 1/2 1	Part of the Control
	14m Length	1	1	8.00	.2.10	0.10	1.68		
	30m Length	1	1	30.00		0.10	2.94	<b>&gt;</b>	to the sky
	1			30.00	2.10	0.10	6.30		
- 1	Commence of the commence of th		un a ven anni	and the mark	carallina securi	Say	28.00		
						Day	20.00	230,04	6441.00
14	KSRRB M200-15.2. Dismantling of	Cum	nio	dauly 5.5 za	don good	June 1		1-1-1	er i de la companya d
	existing structures like culverts, Bridges,		0.00	* * p+ * *	the first time	1 to 1 to -		1000	
	retaining walls and other structure	- 1			3.1	10 to 1	ala di		41.3
	comprising of masonry, cement concrete,								The state of the state of
	wood work, steel work, including T&P and					ulas I		1.114	
	scaffolding wherever necessary, sorting the					415.7	-		y plane and a fine
	dismantled material, disposal of	-		100				104 36	
	unserviceble material and stacking the			./			1		THE LABOR
	serviceable material with all lifts complete	•			/				1 19 97 17
	as per specifications. ii) Dismantling Stone	į							
	Masonary B. Rubble Stone Masonry, in Cement Mortar. SSM								
	MAY 1				4.				FI Edward
	(P.No.146, I.No.18.27 of PW,P&IWTD S.R 201 SSM	2-13)				1 14		16 17	
. 9	SSM 3m Length	0					1 1		13.012
1	5m Length	3	2	3.00	0.45	1.00	8.10		
	om Length 7m Length	11	2	5.00	0.45	1.00	49.50		
		1	2	7.00	0.45	1.00	12.60		Ace a li
		. 11	2	8.00	0.45	1.00	7.20		
	8m Length		-		0.45	1.00	12.60		
	8m Length 14m Length	1	2	14.00		-			
	8m Length 14m Length 30m Length		2 2	30.00	0.45	1.00	27.00	day due a	the state and
	8m Length 14m Length	1	- A				117.00		
	8m Length 14m Length 30m Length	1	- A			1.00 Say		183.60	21481.00

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No.	Description of Work	Unit	No.	Length	Breadth	Depth	and an appearance of	Rate in	September 180 Conservation
	Description of Work	Onit	No.	m	m	m	Quantity	Rs.	Amount in
1.15	KSRRB M200-13.1. Dismantling of existing structures like culverts, Bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the								
	dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications. By mechanical means,		-			ration of 1		•	
	A. Cement concrete Grade M-15 & M-20.		+ #					paragraphic	1000
	(P.No.145, I.No.18.20 of PW,P&IWTD S.R 20 Deck Slab	)12-13)					•		
	3m Length	3!	1	3.00	1.90	0.20	F 10		
	5m Length	11	1	5.00	1.90	0.30	5.13		
	7m Length	2	1	7.00	1.90	0.30	31.35		
	8m Length	1	1	8.00	1.90		7.98	-	
	14m Length	1	1	14.00	1.90	0.30	4.56		
and the latest designation of the latest des	30m Length	1	1	30.00	1.90	0.30	7.98		
-		-	-	30.00	1.30	0.30	17.10		
	74.74					Say	74.10 75.00	317.52	23814
						Day	75.00	317.32	23814
	KSRRB M200-17.1. Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T & P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications. v) Steel Work in all types of sections upto a Height of 5m above plinth level excluding cutting of rivet A.	MT							
1	including dismembering. MoRT&H Specification No.202 (P.No.146, I.No.18.33 of PW,P&IWTD S.R 201	2-13)				on to	- 2		
	Consider 100kg/Cum for Slab								
	10018	LIBERT PROPERTY.	1	75.00			7.50		Marie Carlo de Carlo
+	and the state of t	Man r Tons	1	75,00		Say	7.50	865.08	6488
		in Cu	verts &		. Wall		7.50		/
17 ]	Dismantling of Existing Storm Water Dra KSRRB M200-12.1. Dismantling of ( existing structures like culverts, Bridges, retaining walls and other structure	in Cul	lverts &		g Wall		1000		6488
117   117	Dismantling of Existing Storm Water Drack KSRRB M200-12.1. Dismantling of Coxisting structures like culverts, Bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and coaffolding wherever necessary, sorting the dismantled material, disposal of	in Cul	lverts &		g Wall		7.50		6488
1   1   1   1   1   1   1   1   1   1	Dismantling of Existing Storm Water Dra KSRRB M200-12.1. Dismantling of existing structures like culverts, Bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceble material and stacking the serviceable material with all lifts complete as per specifications. i) Lime/Cement	in Cul	verts &		g Wall		7.50		6488
	Dismantling of Existing Storm Water Dra KSRRB M200-12.1. Dismantling of Caxisting structures like culverts, Bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceble material and stacking the serviceable material with all lifts complete as per specifications; i) Lime/Cement Concrete. I.By Manual means, A. Lime Concrete, Cement Concrete Grade M-10 & Delow PCC	Cum	verts &		g Wall		7.50		6488
117   1   6   7   7   7   7   7   7   7   7   7	Dismantling of Existing Storm Water Dra KSRRB M200-12.1. Dismantling of Caristing structures like culverts, Bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and caffolding wherever necessary, sorting the dismantled material, disposal of inserviceble material and stacking the serviceable material with all lifts complete as per specifications, i) Lime/Cement Concrete. I. By Manual means, A. Lime Concrete, Cement Concrete Grade M-10 & Delow PCC P.No.145, I.No.18.17 of PW,P&IWTD S.R 2013	Cum	verts &		g Wall		7.50		6488
117   1   6   7   7   7   7   7   7   7   7   7	Dismantling of Existing Storm Water Dra KSRRB M200-12.1. Dismantling of Caristing structures like culverts, Bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and caffolding wherever necessary, sorting the dismantled material, disposal of inserviceble material and stacking the serviceable material with all lifts complete as per specifications, i) Lime/Cement Concrete. I.By Manual means, A. Lime Concrete, Cement Concrete Grade M-10 & Delow PCC P.No.145, I.No.18.17 of PW,P&IWTD S.R 2011 CH:H 1740 to CH:H 1840	Cum		Retaining	<i>y</i> -		7.50		6488
1117   1   1   1   1   1   1   1   1	Dismantling of Existing Storm Water Drack SRRB M200-12.1. Dismantling of Casisting structures like culverts, Bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and caffolding wherever necessary, sorting the dismantled material, disposal of anserviceble material and stacking the serviceable material with all lifts complete as per specifications; i) Lime/Cement Concrete. I.By Manual means, A. Lime Concrete, Cement Concrete Grade M-10 & Delow PCC P.No.145, I.No.18.17 of PW,P&IWTD S.R 2015 CH:H 1740 to CH:H 1840 Retaining Wall Bed	Cum	4.	Retaining	2.00		6.00	865,08	6488
1117   1   1   1   1   1   1   1   1	Dismantling of Existing Storm Water Dra KSRRB M200-12.1. Dismantling of Caristing structures like culverts, Bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and caffolding wherever necessary, sorting the dismantled material, disposal of inserviceble material and stacking the serviceable material with all lifts complete as per specifications, i) Lime/Cement Concrete. I.By Manual means, A. Lime Concrete, Cement Concrete Grade M-10 & Delow PCC P.No.145, I.No.18.17 of PW,P&IWTD S.R 2011 CH:H 1740 to CH:H 1840	Cum		Retaining	<i>y</i> -	Say	7.50	865,08	6488



	Description of Work	Unit	No.	Length			Quantity	Rate in	A TO THE TOTAL TO
No	· · · · · · · · · · · · · · · · · · ·	1.1	1906	m	m	m	Quantity	Rs.	Amount in R
1.1	8 KSRRB M200-13.1. Dismantling of existing structures like culverts, Bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceble material and stacking the serviceble material with all lifts complete as per specifications. II. By mechanical	Cum				•			
	means, A. Cement concrete Grade M-15 & M-20.	1					ĺ		3. b. T.
	& M-20.		41 4						
	(P.No.145, I.No.18.20 of PW, P&IWTD S.R 20	19 12)	-					5° 1' 1	
7	Deck Slab	12-13)	1	25.00	00.00	0.40	200 00	- 10 to 10 t	11 11
	I Girder	1	8	25.00	20.00	0.40	200.00	CAL DISCOURT OF THE PARTY OF TH	
-	Abutment	-	2	25.00	0.60	1.00	80.00		
7	Retaining Wall Stem		4	5.00	0.30	4.00	105.00		
	Retaining Wall Footing		4	5.00	1.50	0.50	24.00	-	
				0.00	1.50	0.50	15.00		-
	1 5 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		10. 3	1		Say	424.00		134628.0
			1,	*		Day	424,000	317.52	134628.0
1.19	KSRRB M200-17.1. Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T & P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications. v) Steel Work in all types of sections upto a Height of 5m above plinth level excluding cutting of rivet A. including dismembering. MoRT&H Specification No.202	MT							
	(P.No.146, I.No.18.33 of PW,P&IWTD S.R 2012	2-13)	1	35.3				G Is State	
	Consider 100kg/Cum	- 4	1971	424.00			42.40	Abor Popular	San
			en alegazione	Carte Maria Lawred	_timei	Say	43.00	865.08	37198.0
20	KSRRB M100-4.2. Haulage of materials by C tipper Including cost of loading, unloading and stacking complete as per specifications.	um	V 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	1					
	MoRT&H Chapter 1 Case-I : Surface Road for SSM masonry of Drain & Compound Wall								
	MoRT&H Chapter 1 Case-I : Surface Road for SSM masonry of Drain & Compound Wall		- 1					15	
	MoRT&H Chapter 1 Case-I : Surface Road for SSM masonry of Drain & Compound Wall  (P. No.142&148 of PW,P&IWTD S.R 2012-13)	•							
	MoRT&H Chapter 1 Case-I : Surface Road for SSM masonry of Drain & Compound Wall  (P. No.142&148 of PW,P&IWTD S.R 2012-13)  Quty same as item No. 7.07, 7.13				·				
	MoRT&H Chapter 1 Case-I : Surface Road for SSM masonry of Drain & Compound Wall  (P. No.142&148 of PW,P&IWTD S.R 2012-13)			2067.00			2067.00	144.94	299583.00
	MoRT&H Chapter 1 Case-I: Surface Road for SSM masonry of Drain & Compound Wall  (P. No.142&148 of PW,P&IWTD S.R 2012-13)  Que the same as item No. 7.07, 7.13  Total Qty =2748+117 = 2865 Cum  For 20Km RS. 2.00 X 1.8 X 20 = (72.00 +	ım		2067.00			2067.00	144.94	299583,00
	MoRT&H Chapter 1 Case-I: Surface Road for SSM masonry of Drain & Compound Wall  (P. No.142&148 of PW,P&IWTD S.R 2012-13)  Qnty same as item No. 7.07, 7.13  Total Qty =2748+117 = 2865 Cum  For 20Km RS. 2.00 X 1.8 X 20 = (72.00 + 62.20)X1.08=144.94  KSRRB M100-4.2. Haulage of materials by Compound the Compound of the C	ım	· · · · · · · · · · · · · · · · · · ·	2067.00			2067.00	144.94	299583.00
	MoRT&H Chapter 1 Case-I: Surface Road for SSM masonry of Drain & Compound Wall  (P. No.142&148 of PW,P&IWTD S.R 2012-13)  Qnty same as item No. 7.07, 7.13  Total Qty =2748+117 = 2865 Cum  For 20Km RS. 2.00 X 1.8 X 20 = (72.00 + 62.20)X1.08=144.94  KSRRB M100-4.2. Haulage of materials by Critical Compounds of the compound of the comp	ım		2067.00			2067.00	144.94	299583.0
	MoRT&H Chapter 1 Case-I: Surface Road for SSM masonry of Drain & Compound Wall  (P. No.142&148 of PW,P&IWTD S.R 2012-13)  Qnty same as item No. 7.07, 7.13  Total Qty =2748+117 = 2865 Cum  For 20Km RS. 2.00 X 1.8 X 20 = (72.00 + 62.20)X1.08=144.94  KSRRB M100-4.2. Haulage of materials by Critical Compounding and stacking complete as per specifications. MoRT&H Chapter 1 Case-I: Surface Road  (P. No.142&148 of PW,P&IWTD S.R 2012-13)  Qnty-same as item No. 7.05,7.06,(7.08 X 0.10),(7.09 X 0.45 X 0.20),7.12,7.14,7.16 & 7.17	ım		2067.00			2067.00	144.94	299583.00
	MoRT&H Chapter 1 Case-I: Surface Road for SSM masonry of Drain & Compound Wall  (P. No.142&148 of PW,P&IWTD S.R 2012-13)  Qnty same as item No. 7.07, 7.13  Total Qty =2748+117 = 2865 Cum  For 20Km RS. 2.00 X 1.8 X 20 = (72.00 + 62.20)X1.08=144.94  KSRRB M100-4.2. Haulage of materials by Critical Compound of the compo	ım		2067.00					
	MoRT&H Chapter 1 Case-I: Surface Road for SSM masonry of Drain & Compound Wall  (P. No.142&148 of PW,P&IWTD S.R 2012-13)  Qnty same as item No. 7.07, 7.13  Total Qty =2748+117 = 2865 Cum  For 20Km RS. 2.00 X 1.8 X 20 = (72.00 + 62.20)X1.08=144.94  KSRRB M100-4.2. Haulage of materials by Critical Compounding and stacking complete as per specifications. MoRT&H Chapter 1 Case-I: Surface Road  (P. No.142&148 of PW,P&IWTD S.R 2012-13)  Qnty-same as item No. 7.05,7.06,(7.08 X 0.10),(7.09 X 0.45 X 0.20),7.12,7.14,7.16 & 7.17	ım		2067.00					299583.0 තෙක්දු 2005ට රෙසිස් 299689.00

Manasa Consultants;

ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು

SI.	Description of Work	TT-14	N	Length	Breadth	Depth	PORTHER ARETON	Rate in	CERT STATE
No.	Description of Work	Unit	No.	. m	m	m	Quantity	Rs.	Amount in Rs.
	KSRRB M100:4.2. Haulage of materials by tipper Including cost of loading, unloading and stacking complete as per specifications. MoRT&H Chapter 1 For Steel	- 1	4				- Ta	***	
	(P. No.142&148, Item No.17.3 of PW,P&IWT	D S.R	2012-13)						
No.	Qnty same as item No.7.15 + 7.18		1.1						
	For 20Km Rs. 2.00 X 7.85 X 20 = (52.00 + 103.70)X1.08=451.12		1.	50.50	1-1		50.50	451.12	22781.00
					1				8775781.88
.23	Miscellaneous and Rounding off		manner especia	le majorità	Length Studiesymperischer	Charles Comp	entroperation on the service	(Purchase Line)	218.12
	the second secon	110		Total C	ost of Site	Cleara	nce and Di	smantling	8776000.00

Assistant Executive Engineer

Traffic Engir caring Cell,

Executive Engineer Bruhath Bangaiore Hahanagara Palike Engineering Cell (Road Infra) Bruhat Bangalore Mahanagara Palike Bangalore - 560 002. Bangalore - 560 002.

ದಾಖಲೆಯನ್ನು ಮಾಹಿತಿ ಹಕ್ಕು ಕಾಯ್ದೆ 2005ರ

Project: Proposed Construction of Elevated Corridor by integrating Ejipura Main Road - Inner Ring Road Junction, Sony World Junction and Kendriya Sadana Junction along 100ft. Inner Ring Road, Koramangala, Bangalore

# Detailed Cost Estimate

SI.	Description of Work	,		Length	Breadth	Depth	· 1		r
No.		Unit	No.	- m	_ m	m	Quantity	Rate in Rs.	Amount in l
2.00	SURFACE LEVEL ROADS/ SLIP ROADS	S						As.	
2.01	KSRRB M300-11:Excavation for road way in soil by mechanical means including cutting and pushing the earth to site of embankment upto a distance of 100								,
	meters (average lead 50 meters), including trimming bottom and side slopes in accordance with requirements of lines, grades and cross sections complete as per specifications. MoRT&H Specification No. 301			The state of the s					
	(P.No.151, I.No.19.11 of PW,P&IWTD S.R 20	1				. [			l Ev
	Surface level Roads	012-13)	3 - 5 -			4		7 77 9	
	LHS					i			
	Ch-90 to 210		- 4-	Ar	ea			•	
-	Ch-210 to 450		1	402	.03	0.59	237.20		
	Ch-480 to 1150		1	790	.05	0.59	466.13		
-	Ch-1170 to 1290	- 41	1	665	02: • •	0.59	392.36		
	Ch-1302 to 1340	100	1	155.	73	0.59	·91.88	1	
	Ch-1390 to 1520	sometime detection	ine In	49.	12	0.59	28.98		
	Ch-1550 to 1740	54 10	1	29.0	)3	0.59	17.13		
	Ch-1740		1	121.	40	0.59	71.63		
	Ch- 1760 to 1970	<u> </u>	1	3.7	3	0.59	2.20		
	Ch-2100 to 2300	42-1-2	1	271.	19	0.59	160.00		
-	Ch-2400	ACHREATED A	Ti i	410.	13	0.59	241.98		
	Ch-2420 to 2650		-1	3.9	4	0.59	2.32	2 50 6 F vo.	The Hart Page
	RHS		1	888.	02	0.59	523.93		
	Ch-0 to 200		of the		2		1-1-1-1-1-1		
	Ch-200 to 450		1	1383.	40	0.59	816.21		
-	Ch -480 to 530	water to	1	1384.	48	0.59	816.84		AND A THE PARTY
100			1	36.8	9	0.59	21.77	74 1	
_	h-540 to 580 h-590		1	24.6	8	0.59	14.56		No. 1 Contractions
_	h-630		1	9.34	China massa -	0.59	5.51	· bal haras	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	1 19 1		1	1.56	and the	0.59	0.92	V 200	THE PARTY OF THE P
_	h-640 to 690	10,01	1	41.9	out of the	0.59	24.73		era ander bysker i de i de i Distribution de i de i de i
	h-700 to 780		1	70.0	Section 1	0.59	41.33		
_	h-790 to 880	1	1	74.08	3	0.59	43.71	C 10 1 10 10 10 10 10 10 10 10 10 10 10 1	The state of the s
-	h-900 to 930	C. T. War	1	33,00		0.59	19.47	N. Carlotte	
	h-940 to 1070		1	279.3	2	0.59	164.80		
1000	h-1080 to 1390	4000	1	456.8	13	0.59	269.52	to the second	Carp a state of
10000	h-1410 to 1540		1	182.3		0.59	107.56	Unit Company	terroria di State del Carro del Carr
7.0	h-1540 to 1680		1	146.4		0.59	86.41	44	TO STATE OF THE ST
	h-1690 to 1740	19	1	70.19		0.59	41.41	Code you of sub-	milecular 35 miles
-	n-1760 to 1850		1	89.81		0.59	52.99	10 (1 m) + 10 (1 m)	P. J. St. 10
	n-1910 to 2150		1	520.99		0.59	307.38	- 1	200
	1-2210 to 2420		1	512.18		0.59	302.19		
CI	n-2430 to 2680		1	820.72		0.59	484.22		the second second
-i_			i		1		<del>5</del> 857.26		
					-				

ಧಾಖಲೆಯನ್ನು ಮಾಹಿತಿ ಡಕ್ಕು ಕಾಯ್ದೆ 2005ರ ಅದಿಯಲ್ಲಿ ನೀಡಲಾಗಿದೆ ರಾರ್ಯವಾಲಕ ಅಭಿಯಂತರರು ರಾರ್ಯವಾಲಕ ಅಭಿಯಂತರರು

SI.		den a	7.52	Length	Breadth	Depth	e - sellint er mig	Rate in	De Sout - De
No. D	escription of Work	Unit	No.	m	m	m	Quantity	Rate in	Amount in F
co	SRRB 300-50. Scarifying bituminous burse 50mm to 75mm thick along with							Ks.	
di w al	remix carpet / surface dressing by road oller attached with scarifier without isturbing the base and stacking the debris ithin a lead of 100 metres including cost of Il labour charges, HOM of machineries	٠	100			•			
C	omplete as per specifications.MORT&H hapter 3	•	1						
	P. No.156 I No 19.56 of PW, P & IWTD S.R or Pedestrian Crossing	2012-	13)	1.	*				1 176
	endriya Sadana Junction		0.7	04.00	and the state of t		HELT THE DESIGNATION AND THE		
	oramangala BDA Complex Junction	+	2	34.00	3.00		204.00		
	oramangala 5th Block Junction		2	21.50	3.00		129.00		
	oramangala 60 feet Road Junction		2	12.30	3.00		73,80	the second secon	a and white parties
	oramangala 8th Main Junction		2	12.50	3.00	-	75.00		
	ony world Junction		2	15.50 20.13	3.00		93.00		
	jipura Junction		2	18.30	3.00	7 - 11 - 1 - 1	120.78	100 comments of the comments o	
	ipara o anomon			10.50	3.00		109.80		
				-			805.38	/	
<del></del>		-				Say	805.50	23.76	19139.
02 K	CDD 14 6 1 Providing and Indian	0			1/2	or andress	Cold and		4 6 6 6
du	SRB 14.6-1. Providing and laying heavy ity cobble stones 75mm thick interlock livers, using cement and course sand for	Sqm							
m	anufacture of blocks of approved size, appe and colour with a minimum		j						
co	mpressive strength of 281 kg per sqm	- : 1	1	100	1 12	7	4111		
ov	er 50mm thick sand bed (average	- 1							
	ickness) and compacting with plate		57 7 15	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		Server section	P. The Park Co.	NOTE - 110 - 40-	The state of the state of
	brator having 3 tons compaction force	1		" med 15"	147 972	on Sand		5.51	
th	ereby forcing part of sand underneath to	- 1		Y 1	4 - 4			174	74 7040
	me up in between joints, final compaction				- Service		1		
	paver surface joints into its final level,	1						1	- 4
inc	cluding cost of materials, labour and OM of machineries complete as per								
en	ecification. Specification No. KBS	1			115.21	5-201	The Your		
(F	P. No.109 I No 14.7 of PW, P & IWTD S.R 20	012-13	1	and the second	Control Control	The second	Constitution of the second		Commenter of the
	or Pedestrian Crossing	012-10						4	
	y Same as Item No-1.02						005 50		
, 40	The second state of the second			N- 1711-1711-1-1		C	805.50	The same street with the last	/
	The state of the s			-		Say	805.50	763.56	615048.
.04 KS	SRRB M100-4.2. Haulage of materials by	Cum	777	72.1 24.	Manager Service	1000000	To the second	7 912 914	and the second second
tip	oper Including cost of loading, unloading d stacking complete as per specifications.	Cum				-11 -001.11 -12 -001.11	4-11-12-14		And the second s
	oRT&H Chapter 1 Case-I : Surface Road	201	13			137		¥1 - 1 - 1	E - 1
P.	No.142&148 of PW, P&IWTD S.R 2012-13	3)	nation of Line Co.	Cabrellay tarin	rent (In this same in a part	in the contract of the con-	of the street of	The Carrier	and the state of t
	nty same as item no 1.01	-	1	5857.50	2.14		F057 50	100.47	
Qr	r 20Km Rs 2 00 X 1 28 X 20 = (52 00 +			0007.00	1000		5857.50	122.47	717380.0
Qr Fo	or 20Km Rs. 2.00 X 1.28 X 20 = (52.00 + .20)X1.08=122.47								3 46 36
Qn Fo 62	.20)X1.08=122.47			77,81	1				- 1
Qn Fo 62.	.20)X1.08=122.47 oviding and fixing RCC Precast Cover	Sqm		ndia statismos		Andrews C	rlor share the same good s	Hamilton or Smiles	
Qn Fo 62 .05 Pro	.20)X1.08=122.47 oviding and fixing RCC Precast Cover ab of 100mm thick for drain in cement	Sqm				ದಾಖೆಲೆಂ	ಶನ್ಯು ಮಾಹಿ	ತಿ ಹಕ್ಕು ಕಾಯೆ	2005년
Qn Fo 62 05 Pro sla	.20)X1.08=122.47  oviding and fixing RCC Precast Cover ab of 100mm thick for drain in cement acrete 1:1.5:3 using graded granite jelly	Sqm				ಧಾಖೆಲೆಂ	ತಿನ್ನು ಮಾಹಿ ಅಡಿಯಲ್ಲಿ	ತಿ ಹಕ್ಕು ಕಾಯ್ದೆ ನೀಡಲಾಗಿದೆ	2005ਰ
Qn Fo 62 .05 Pro sla con 20	.20)X1.08=122.47  oviding and fixing RCC Precast Cover to be of 100mm thick for drain in cement acrete 1:1.5:3 using graded granite jelly mm and down size with steel	Sqm				ದಾಖೆಲೆಂ	ತುನ್ನು ಮಾಹಿ ಅಡಿಯಲ್ಲಿ	ತಿ ಹಕ್ಕು ಕಾಯ್ದೆ ನೀಡಲಾಗಿದೆ	2005ರ
Qn Fo 62 .05 Pro sla con 20 rei	.20)X1.08=122.47  oviding and fixing RCC Precast Cover to the of 100mm thick for drain in cement acrete 1:1.5:3 using graded granite jelly mm and down size with steel inforcement, including form work, lift	Sqm				<u>ದಾಖೆ</u> ಅಂ	ತಿನ್ನು ಮಾಹಿ ಅಡಿಯಲ್ಲಿ	ತಿ ಹಕ್ಕು ಕಾಯೆ ನೀಡಲಾಗಿದೆ	2005ರ
Qn Fo 62 .05 Pro sla cor 20 rei cha	20)X1.08=122.47  oviding and fixing RCC Precast Cover ab of 100mm thick for drain in cement acrete 1:1.5:3 using graded granite jelly mm and down size with steel inforcement, including form work, lift arges, curing and concrete finished	Sqm					මයිග්වූ	ನೀಡಲಾಗಿದೆ	
Qn Fo 62 .05 Prosla cor 200 rei cha	20)X1.08=122.47  oviding and fixing RCC Precast Cover ab of 100mm thick for drain in cement acrete 1:1.5:3 using graded granite jelly mm and down size with steel inforcement, including form work, lift arges, curing and concrete finished rfaces on both sides etc, complete and as	Sqm					ಅಡಿಯಲ್ಲಿ  ರ್ಯಾಪಾಲಕ	ನೀಡಲಾಗಿದೆ	
Qn Fo 62 .05 Prosile cor 20 rei che sur	20)X1.08=122.47  oviding and fixing RCC Precast Cover to of 100mm thick for drain in cement acrete 1:1.5:3 using graded granite jelly mm and down size with steel inforcement, including form work, lift arges, curing and concrete finished rfaces on both sides etc, complete and as r the directions of Engineer in Charge.	Sqm	•				ಅಡಿಯಲ್ಲಿ  ರ್ಯಾಪಾಲಕ	ನೀಡಲಾಗಿದೆ	
Qn Fo 62 .05 Prosila cor 20 rei cha sur per	20)X1.08=122.47  oviding and fixing RCC Precast Cover ab of 100mm thick for drain in cement acrete 1:1.5:3 using graded granite jelly mm and down size with steel inforcement, including form work, lift arges, curing and concrete finished rfaces on both sides etc, complete and as a the directions of Engineer in Charge.	Sqm					ಅಡಿಯಲ್ಲಿ  ರ್ಯಾಪಾಲಕ	ನೀಡಲಾಗಿದೆ	
Qn Fo 62 .05 Pr sla cor 20 rei cha sur per	20)X1.08=122.47  oviding and fixing RCC Precast Cover ab of 100mm thick for drain in cement acrete 1:1.5:3 using graded granite jelly mm and down size with steel inforcement, including form work, lift arges, curing and concrete finished rfaces on both sides etc, complete and as a the directions of Engineer in Charge.  ata Rate)  r Pedestrian Crossing	Sqm		24.00			ಅಡಿಯಲ್ಲಿ  ಾರ್ಯಪಾಲಕ ಯೋ-ಕೇ-2	ನೀಡಲಾಗಿದೆ	
Qn Fo 62 05 Pr sla cor 20 rei cha sun pen (Da For	20)X1.08=122.47  oviding and fixing RCC Precast Cover ab of 100mm thick for drain in cement acrete 1:1.5:3 using graded granite jelly mm and down size with steel inforcement, including form work, lift arges, curing and concrete finished rfaces on both sides etc, complete and as a the directions of Engineer in Charge.  ata Rate)  r Pedestrian Crossing andriya Sadana Junction	Sqm	4	34.00	0.30		ಅಡಿಯಲ್ಲಿ 	ನೀಡಲಾಗಿದೆ	
Qn Fo 62 05 Pr sla cor 20 rei cha sun per (Da Ke	20)X1.08=122.47  oviding and fixing RCC Precast Cover ab of 100mm thick for drain in cement acrete 1:1.5:3 using graded granite jelly mm and down size with steel inforcement, including form work, lift arges, curing and concrete finished rfaces on both sides etc, complete and as a the directions of Engineer in Charge.  ata Rate)  r Pedestrian Crossing andriya Sadana Junction  ramangala BDA Complex Junction	Sqm	'4	21,50	0.30 0.30		ಅಡಿಯಲ್ಲಿ 	ನೀಡಲಾಗಿದೆ ಅಭಿಯಂತರರ , ಬಿ.ಬಿ.ಎಂ.ಪಿ	
Qn Fo 62 05 Prosis con 200 rei cha sun per (Da Ke Ko	20)X1.08=122.47  oviding and fixing RCC Precast Cover ab of 100mm thick for drain in cement acrete 1:1.5:3 using graded granite jelly mm and down size with steel inforcement, including form work, lift arges, curing and concrete finished rfaces on both sides etc, complete and as a the directions of Engineer in Charge.	Sqm	4 4	21,50 12.30	0.30 0.30 0.30		900000 المارة المارة	ನೀಡಲಾಗಿದೆ ಅಭಿಯಂತರರ , ಬಿ.ಬಿ.ಎಂ.ಪಿ	
Qn Fo 62 05 Pr sla con 20 rei cha sun pen (Da Ke Ko Ko Ko	and fixing RCC Precast Cover to be of 100mm thick for drain in cement increte 1:1.5:3 using graded granite jelly mm and down size with steel inforcement, including form work, lift arges, curing and concrete finished rfaces on both sides etc, complete and as a the directions of Engineer in Charge.	Sqm	'4	21,50 12.30 12.50	0.30 0.30 0.30 0.30		900000 	ನೀಡಲಾಗಿದೆ ಅಭಿಯಂತರರ , ಬಿ.ಬಿ.ಎಂ.ಪಿ	
Qn Fo 62 05 Pr sla con 20 rei cha sun pen (Da Ke Ko Ko Ko	20)X1.08=122.47  oviding and fixing RCC Precast Cover ab of 100mm thick for drain in cement acrete 1:1.5:3 using graded granite jelly mm and down size with steel inforcement, including form work, lift arges, curing and concrete finished rfaces on both sides etc, complete and as a the directions of Engineer in Charge.	Sqm	4 4	21,50 12.30	0.30 0.30 0.30 0.30 0.30		40.80 25.80 14.76 15.00 18.60	ನೀಡಲಾಗಿದೆ ಅಭಿಯಂತರರ , ಬಿ.ಬಿ.ಎಂ.ಪಿ	
Qn Fo 62 05 Pr sla con 20 rei cha sun pen (Da Ke Ko Ko Ko Son	and fixing RCC Precast Cover to be of 100mm thick for drain in cement increte 1:1.5:3 using graded granite jelly mm and down size with steel inforcement, including form work, lift arges, curing and concrete finished rfaces on both sides etc, complete and as a the directions of Engineer in Charge.	Sqm	4 4	21,50 12.30 12.50 15.50	0.30 0.30 0.30 0.30 0.30		40.80 25.80 14.76 15.00 24.16	ನೀಡಲಾಗಿದೆ ಅಭಿಯಂತರರ , ಬಿ.ಬಿ.ಎಂ.ಪಿ	
Qn Fo 62 05 Pr sla con 20 rei cha sun pen (Da Ke Ko Ko Ko Son	coviding and fixing RCC Precast Cover ab of 100mm thick for drain in cement acrete 1:1.5:3 using graded granite jelly mm and down size with steel inforcement, including form work, lift arges, curing and concrete finished rfaces on both sides etc, complete and as a the directions of Engineer in Charge.	Sqm	4 4 4 4 4	21,50 12.30 12.50 15.50 20.18	0.30 0.30 0.30 0.30 0.30 0.30		40.80 25.80 14.76 15.00 18.60	ನೀಡಲಾಗಿದೆ ಅಭಿಯಂತರರ , ಬಿ.ಬಿ.ಎಂ.ಪಿ	

(3)

Sl.	Description of Work	Unit	No.	Length	Breadth		Quantity	Rate in	Amount in
No.				m	m	m	Quantity	Rs.	Amount in
44-19/0	Tell Andrews Children			7	97, AT	F V - Y			A Training
2.06	KSRRB M300-55 Construction of subgrade	Cum							1
	and earthen shoulders with approved				1 2 3 4	i .		CON NO	
	material gravel / murrum with all lifts &	1		1					
	leads, transporting to site, spreading		1						
	leads, transporting to site, spreading								
	grading to required slope and compacted to					41.4			
	meet requirement of Table 300-2 complete		1						
	as per specifications (including cost of		1		8:				
	earth, watering charges & compaction by		1.1						1
	vibratory roller)			1.		DE PRESS.	er som det til til til til til	100000000000000000000000000000000000000	And the second
				•					
	(P.No.157, I.No.19.62 of PW,P&IWTD S.R 20	012-13)				r s(== ,==,eg) ()	and the state		
// Total	Surface level Roads					1 10	v	-	
	Standard Span Pier		78	27.20	1.00	100		/	1
	Obligatory Span Pier		14	38.8	1.00				
	Obligatory Pier 25m Span		3						
-		-	3	33.20	1.00	0.50	49.80		
	Up Ramp and Down Ramp						1 1	,	
	Standard Span Pier	1	. 2	27.20	1.00	0.50	27.20		
	Up Ramp and Down Ramp								
	Obligatory Pier		4	38.80	1.00	0.50	77.60		
	375	1.					1487.00	/	
	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					Say	1487.00		26016
								171.00	20010
.07	KSRRB M400-7 Construction of granular	Cum							
200	sub-base by providing coarse graded	- Cuin				-	-	-	
	material, spreading in uniform layers with		1		1	W	ಖಲೆಯನ್ನು ಸ	ಬಾಹಿತಿ ಹಕ	ಕಾಯ್ದೆ 2005
		- 1	L	•		. I. I	95,7	ಯಲ್ಲಿ ನೀಡಲ	500
	motor grader on prepared surface, mixing		1	. 1	to set 1			many coconc	0/1W
	by mix in place method with rotavator at				2 1				3
	OMC, and compacting with vibratory roller	oren i .			* 10 (0000000)		1	7	egar a yar i i
	to achieve the desired density, complete as	i			d	100	- Amorba		ಎಂತರರು
				- 1		2000	W cine	-ಕೇ-2. ಬಿ.ಬ	30 &
	per 400-2 For Grading I Material.					L	W cine	-ಕೇ-2, ಬಿ.ಬ	.ఎం.పి
	per 400-2 For Grading I Material.	012-13)					€ ಯೇ	-8e-2, 83.83	.30.2
	per 400-2 For Grading I Material.  (P.No.165, I.No.20.6.1 of PW,P&IWTD S.R 20	4					Cinc	-8e-2, 13.13	.ఎం.పి
	per 400-2 For Grading I Material.	4	-0.00 P	Ar	92		€ cinc		.30.2
	per 400-2 For Grading I Material.  (P.No.165, I.No.20.6.1 of PW,P&IWTD S.R 20 Surface level Roads LHS	4		Ar		0.90	ing ang ang ang ang ang ang ang ang ang a	-e-2, si.c	
	per 400-2 For Grading I Material.  (P.No.165, I.No.20.6.1 of PW,P&IWTD S.R 20 Surface level Roads LHS Ch-90 to 210	4	1	402	.03	0.20	80.41	-tr-2, sis	
	per 400-2 For Grading I Material.  (P.No.165, I.No.20.6.1 of PW,P&IWTD S.R 20 Surface level Roads LHS Ch-90 to 210 Ch-210 to 450	4	1	402 790	.03 .05	0.20	80.41 158.01	-8(-2, 25.2)	.30.A
	per 400-2 For Grading I Material.  (P.No.165, I.No.20.6.1 of PW,P&IWTD S.R 20 Surface level Roads LHS Ch-90 to 210 Ch-210 to 450 Ch-480 to 1150	4	1 1 1	402 790 665	.03 .05 .02	0.20	80.41 158.01 133.00	-ec-2, e5.es	.30.a
	per 400-2 For Grading I Material.  (P.No.165, I.No.20.6.1 of PW,P&IWTD S.R 20 Surface level Roads LHS Ch-90 to 210 Ch-210 to 450	4	1	402 790	.03 .05 .02	0.20	80.41 158.01 133.00	-ec-2, e5.es	.30.A
	per 400-2 For Grading I Material.  (P.No.165, I.No.20.6.1 of PW,P&IWTD S.R 20 Surface level Roads LHS Ch-90 to 210 Ch-210 to 450 Ch-480 to 1150	4	1 1 1	402 790 665 155	.03 .05 .02	0.20 0.20 0.20	80.41 158.01 133.00 31.15	-8c-2, c5.c	.30.A
	per 400-2 For Grading I Material.  (P.No.165, I.No.20.6.1 of PW,P&IWTD S.R 20 Surface level Roads LHS Ch-90 to 210 Ch-210 to 450 Ch-480 to 1150 Ch-1170 to 1290 Ch-1302 to 1340	4	1 1 1 1	402 790 665 155 49.	.03 .05 .02 .73	0.20 0.20 0.20 0.20	80.41 158.01 133.00 31.15 9.82	-8c-2, c5.c	.30.2
	per 400-2 For Grading I Material.  (P.No.165, I.No.20.6.1 of PW,P&IWTD S.R 20 Surface level Roads LHS Ch-90 to 210 Ch-210 to 450 Ch-480 to 1150 Ch-1170 to 1290 Ch-1302 to 1340 Ch-1390 to 1520	4	1 1 1 1 1	402 790 665 155 49.	.03 .05 .02 .73 .12	0.20 0.20 0.20 0.20 0.20	80.41- 158.01- 133.00- 31.15- 9.82- 5.81	-8c-2, e5.cs	.30.2
	per 400-2 For Grading I Material.  (P.No.165, I.No.20.6.1 of PW,P&IWTD S.R 20 Surface level Roads LHS Ch-90 to 210 Ch-210 to 450 Ch-480 to 1150 Ch-1170 to 1290 Ch-1302 to 1340 Ch-1390 to 1520 Ch-1550 to 1740	4	1 1 1 1 1 1 1 1	402 790 665 155 49. 29.	.03 .05 .02 .73 .12 .03 .40	0.20 0.20 0.20 0.20 0.20 0.20	80.41 158.01 133.00 31.15 9.82 5.81 24.28	-8c-2, e5.cs	
	per 400-2 For Grading I Material.  (P.No.165, I.No.20.6.1 of PW,P&IWTD S.R 20 Surface level Roads LHS Ch-90 to 210 Ch-210 to 450 Ch-480 to 1150 Ch-1170 to 1290 Ch-1302 to 1340 Ch-1390 to 1520 Ch-1550 to 1740 Ch-1740	4	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	402 790 665 155 49. 29. 121	.03 .05 .02 .73 .12 .03 .40	0.20 0.20 0.20 0.20 0.20 0.20 0.20	80.41 158.01 133.00 31.15 9.82 5.81 24.28 0.75	-8e-2, e5.cs	
	per 400-2 For Grading I Material.  (P.No.165, I.No.20.6.1 of PW,P&IWTD S.R 20 Surface level Roads LHS Ch-90 to 210 Ch-210 to 450 Ch-480 to 1150 Ch-1170 to 1290 Ch-1302 to 1340 Ch-1390 to 1520 Ch-1550 to 1740 Ch-1760 to 1970	4	1 1 1 1 1 1 1 1 1 1	402 790 665 155 49. 29. 121 3.3	.03 .05 .02 .73 .12 .03 .40 .73 .19.	0.20 0.20 0.20 0.20 0.20 0.20 0.20 0.20	80.41 158.01 133.00 31.15 9.82 5.81 24.28 0.75 54.24	-8e-2, e5.cs	
	per 400-2 For Grading I Material.  (P.No.165, I.No.20.6.1 of PW,P&IWTD S.R 20 Surface level Roads LHS Ch-90 to 210 Ch-210 to 450 Ch-480 to 1150 Ch-1170 to 1290 Ch-1302 to 1340 Ch-1390 to 1520 Ch-1550 to 1740 Ch-1760 to 1970 Ch-1760 to 2300	4	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	402 790 665 155 49. 29. 121 3.7 271	.03 .05 .02 .73 .12 .03 .40 .73 .19	0.20 0.20 0.20 0.20 0.20 0.20 0.20	80.41 158.01 133.00 31.15 9.82 5.81 24.28 0.75	-ec-2, e5.cs	
	per 400-2 For Grading I Material.  (P.No.165, I.No.20.6.1 of PW,P&IWTD S.R 20 Surface level Roads LHS Ch-90 to 210 Ch-210 to 450 Ch-480 to 1150 Ch-1170 to 1290 Ch-1302 to 1340 Ch-1390 to 1520 Ch-1550 to 1740 Ch-1760 to 1970	4	1 1 1 1 1 1 1 1 1 1	402 790 665 155 49. 29. 121 3.3	.03 .05 .02 .73 .12 .03 .40 .73 .19	0.20 0.20 0.20 0.20 0.20 0.20 0.20 0.20	80.41 158.01 133.00 31.15 9.82 5.81 24.28 0.75 54.24	-8e-2, s5.s	
	per 400-2 For Grading I Material.  (P.No.165, I.No.20.6.1 of PW,P&IWTD S.R 20 Surface level Roads LHS Ch-90 to 210 Ch-210 to 450 Ch-480 to 1150 Ch-1170 to 1290 Ch-1302 to 1340 Ch-1390 to 1520 Ch-1550 to 1740 Ch-1760 to 1970 Ch-1760 to 2300	4	1 1 1 1 1 1 1 1 1 1 1	402 790 665 155 49. 29. 121 3.7 271	0.03 0.05 0.02 0.73 12 03 03 04 07 19 13	0.20 0.20 0.20 0.20 0.20 0.20 0.20 0.20	80.41 158.01 133.00 31.15 9.82 5.81 24.28 0.75 54.24 82.03 0.79	-3e-2, s5.c	
	per 400-2 For Grading I Material.  (P.No.165, I.No.20.6.1 of PW,P&IWTD S.R 20 Surface level Roads LHS Ch-90 to 210 Ch-210 to 450 Ch-480 to 1150 Ch-1170 to 1290 Ch-1302 to 1340 Ch-1390 to 1520 Ch-1550 to 1740 Ch-1760 to 1970 Ch-2100 to 2300 Ch-2400 Ch-2420 to 2650	4	1 1 1 1 1 1 1 1 1 1 1 1	402 790 665 155 49. 29. 121 3.3 271 410	0.03 0.05 0.02 0.73 12 03 03 04 07 19 13	0.20 0.20 0.20 0.20 0.20 0.20 0.20 0.20	80.41- 158.01- 133.00- 31.15- 9.82- 5.81- 24.28- 0.75- 54.24- 82.03- 0.79- 177.60-	-3e-2, s5.c	.30.3
-	per 400-2 For Grading I Material.  (P.No.165, I.No.20.6.1 of PW,P&IWTD S.R 20 Surface level Roads LHS Ch-90 to 210 Ch-210 to 450 Ch-480 to 1150 Ch-1170 to 1290 Ch-1302 to 1340 Ch-1390 to 1520 Ch-1550 to 1740 Ch-1740 Ch-1760 to 1970 Ch-2100 to 2300 Ch-2400 Ch-2420 to 2650 RHS	4	1 1 1 1 1 1 1 1 1 1 1 1	402 790 665 155 49. 29. 121 3.3 271 410 8.8	.03 .05 .02 .73 .12 .03 .40 .73 .19 .13	0.20 0.20 0.20 0.20 0.20 0.20 0.20 0.20	80.41 158.01 133.00 31.15 9.82 5.81 24.28 0.75 54.24 82.03 0.79	-3e-2, s5.s	.30.3
	per 400-2 For Grading I Material.  (P.No.165, I.No.20.6.1 of PW,P&IWTD S.R 20 Surface level Roads LHS Ch-90 to 210 Ch-210 to 450 Ch-480 to 1150 Ch-1170 to 1290 Ch-1302 to 1340 Ch-1390 to 1520 Ch-1550 to 1740 Ch-1740 Ch-1760 to 1970 Ch-2100 to 2300 Ch-2420 to 2650 RHS Ch-0 to 200	4	1 1 1 1 1 1 1 1 1 1 1 1	402 790 665 155 49. 29. 121 3.7 271 410 8.8 888	.03 .05 .02 .73 .12 .03 .40 .73 .19 .13 .94 .02	0.20 0.20 0.20 0.20 0.20 0.20 0.20 0.20	80.41 158.01 133.00 31.15 9.82 5.81 24.28 0.75 54.24 82.03 0.79 177.60	-8e-2, c5.c	.30.3
	per 400-2 For Grading I Material.  (P.No.165, I.No.20.6.1 of PW,P&IWTD S.R 20 Surface level Roads LHS Ch-90 to 210 Ch-210 to 450 Ch-480 to 1150 Ch-1170 to 1290 Ch-1302 to 1340 Ch-1390 to 1520 Ch-1550 to 1740 Ch-1740 Ch-1760 to 1970 Ch-2100 to 2300 Ch-2400 Ch-2420 to 2650 RHS Ch-0 to 200 Ch-200 to 450	4	1 1 1 1 1 1 1 1 1 1 1 1 1	402 790 665 155 49. 29. 121 3.7 271 410 3.8 888	.03 .05 .02 .73 .12 .03 .40 .73 .19; .13 .94 .02	0.20 0.20 0.20 0.20 0.20 0.20 0.20 0.20	80.41 158.01 133.00 31.15 9.82 5.81 24.28 0.75 54.24 82.03 0.79 177.60 276.68 276.68	-8c-2, e5.cs	.30.3
	per 400-2 For Grading I Material.  (P.No.165, I.No.20.6.1 of PW,P&IWTD S.R 20 Surface level Roads LHS Ch-90 to 210 Ch-210 to 450 Ch-480 to 1150 Ch-1170 to 1290 Ch-1302 to 1340 Ch-1390 to 1520 Ch-1550 to 1740 Ch-1740 Ch-1760 to 1970 Ch-2100 to 2300 Ch-2400 Ch-2420 to 2650 RHS Ch-0 to 200 Ch-200 to 450 Ch-480 to 530	4	1 1 1 1 1 1 1 1 1 1 1 1 1 1	402 790 665 155 49. 29. 121 3.7 271 410 3.8 888 1383 1384 36.	.03 .05 .02 .73 .12 .03 .40 .73 .19, .13 .94 .02	0.20 0.20 0.20 0.20 0.20 0.20 0.20 0.20	80.41- 158.01- 133.00- 31.15- 9.82- 5.81- 24.28- 0.75- 54.24- 82.03- 0.79- 177.60- - 276.68- 276.90- 7.38-	-8c-2, e5.cs	.30.3
	per 400-2 For Grading I Material.  (P.No.165, I.No.20.6.1 of PW,P&IWTD S.R 20 Surface level Roads LHS Ch-90 to 210 Ch-210 to 450 Ch-480 to 1150 Ch-1170 to 1290 Ch-1302 to 1340 Ch-1390 to 1520 Ch-1550 to 1740 Ch-1740 Ch-1760 to 1970 Ch-2100 to 2300 Ch-2400 Ch-2420 to 2650 RHS Ch-0 to 200 Ch-200 to 450	4	1 1 1 1 1 1 1 1 1 1 1 1 1	402 790 665 155 49. 29. 121 3.7 271 410 3.8 888	.03 .05 .02 .73 .12 .03 .40 .73 .19, .13 .94 .02	0.20 0.20 0.20 0.20 0.20 0.20 0.20 0.20	80.41 158.01 133.00 31.15 9.82 5.81 24.28 0.75 54.24 82.03 0.79 177.60 276.68 276.68	-8c-2, e5.cs	
	per 400-2 For Grading I Material.  (P.No.165, I.No.20.6.1 of PW,P&IWTD S.R 20 Surface level Roads LHS Ch-90 to 210 Ch-210 to 450 Ch-480 to 1150 Ch-1170 to 1290 Ch-1302 to 1340 Ch-1390 to 1520 Ch-1550 to 1740 Ch-1740 Ch-1760 to 1970 Ch-2100 to 2300 Ch-2400 Ch-2420 to 2650 RHS Ch-0 to 200 Ch-200 to 450 Ch-480 to 530	4	1 1 1 1 1 1 1 1 1 1 1 1 1 1	402 790 665 155 49. 29. 121 3.7 271 410 3.8 888 1383 1384 36.	.03 .05 .02 .73 .12 .03 .40 .73 .19 .13 .04 .02	0.20 0.20 0.20 0.20 0.20 0.20 0.20 0.20	80.41- 158.01- 133.00- 31.15- 9.82- 5.81- 24.28- 0.75- 54.24- 82.03- 0.79- 177.60- - 276.68- 276.90- 7.38-	-8c-2, e5.cs	
	per 400-2 For Grading I Material.  (P.No.165, I.No.20.6.1 of PW,P&IWTD S.R 20 Surface level Roads LHS Ch-90 to 210 Ch-210 to 450 Ch-480 to 1150 Ch-1170 to 1290 Ch-1302 to 1340 Ch-1390 to 1520 Ch-1550 to 1740 Ch-1760 to 1970 Ch-2100 to 2300 Ch-2420 to 2650 RHS Ch-0 to 200 Ch-200 to 450 Ch-480 to 530 Ch-540 to 580	4	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	402 790 665 155 49. 29. 121 3.7 271 410 3.8 888 1383 1384 36. 24.	0.03 0.05 0.02 0.73 12 03 03 04 02 19 13 04 02 03 04 06 08 08 08 08 08 08 08 08 08 08	0.20 0.20 0.20 0.20 0.20 0.20 0.20 0.20 0.20 0.20 0.20 0.20 0.20 0.20	80.41 158.01 133.00 31.15 9.82 5.81 24.28 0.75 54.24 82.03 0.79 177.60 276.68 276.90 7.38 4:94 1.87	-8e-2, e5.cs	.30.3
	per 400-2 For Grading I Material.  (P.No.165, I.No.20.6.1 of PW,P&IWTD S.R 20 Surface level Roads LHS Ch-90 to 210 Ch-210 to 450 Ch-480 to 1150 Ch-1170 to 1290 Ch-1302 to 1340 Ch-1390 to 1520 Ch-1550 to 1740 Ch-1760 to 1970 Ch-2100 to 2300 Ch-2420 to 2650 RHS Ch-0 to 200 Ch-200 to 450 Ch-480 to 530 Ch-540 to 580 Ch-550	4	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	402 790 665 155 49. 29. 121 3.7 271 410 3.6 888 1384 36. 24. 9.3	0.03 0.05 0.02 0.73 12 03 03 04 02 19 03 19 04 02 03 04 06 08 08 08 08 08 08 08 08 08 08	0.20 0.20 0.20 0.20 0.20 0.20 0.20 0.20 0.20 0.20 0.20 0.20 0.20 0.20 0.20	80.41 158.01 133.00 31.15 9.82 5.81 24.28 0.75 54.24 82.03 0.79 177.60 276.68 276.90 7.38 4:94 1.87 0.31	-3e-2, e5.cs	
	per 400-2 For Grading I Material.  (P.No.165, I.No.20.6.1 of PW,P&IWTD S.R 20 Surface level Roads LHS Ch-90 to 210 Ch-210 to 450 Ch-480 to 1150 Ch-1170 to 1290 Ch-1302 to 1340 Ch-1390 to 1520 Ch-1550 to 1740 Ch-1760 to 1970 Ch-2100 to 2300 Ch-2420 to 2650 RHS Ch-0 to 200 Ch-2400 to 450 Ch-480 to 530 Ch-540 to 580 Ch-590 Ch-630 Ch-640 to 690	4	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	402 790 665 155 49. 29. 121 3.7 271 410 3.6 888 1384 36. 24. 9.3 1.5	0.03 0.05 0.02 0.73 12 03 03 04 01 02 03 04 02 03 04 06 08 09 09 09 09 09 09 09 09 09 09	0.20 0.20 0.20 0.20 0.20 0.20 0.20 0.20 0.20 0.20 0.20 0.20 0.20 0.20 0.20 0.20	80.41 158.01 133.00 31.15 9.82 5.81 24.28 0.75 54.24 82.03 0.79 177.60 276.68 276.90 7.38 4:94 1.87 0.31 8.38	-3e-2, e5.cs	
	per 400-2 For Grading I Material.  (P.No.165, I.No.20.6.1 of PW,P&IWTD S.R 20 Surface level Roads LHS Ch-90 to 210 Ch-210 to 450 Ch-480 to 1150 Ch-1170 to 1290 Ch-1302 to 1340 Ch-1390 to 1520 Ch-1550 to 1740 Ch-1760 to 1970 Ch-2100 to 2300 Ch-2400 Ch-2420 to 2650 RHS Ch-0 to 200 Ch-200 to 450 Ch-540 to 580 Ch-590 Ch-630 Ch-640 to 690 Ch-700 to 780	4	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	402 790 665 155 49. 29. 121 3.7 271 410 3.8 888 1384 36. 24. 9.3 1.5 41.9	.03 .05 .02 .73 .12 .03 .40 .73 .19 .13 .94 .02 	0.20 0.20 0.20 0.20 0.20 0.20 0.20 0.20	80.41 158.01 133.00 31.15 9.82 5.81 24.28 0.75 54.24 82.03 0.79 177.60 276.68 276.68 276.90 7.38 4.94 1.87 0.31 8.38 14.01	-3e-2, e5.cs	
	per 400-2 For Grading I Material.  (P.No.165, I.No.20.6.1 of PW,P&IWTD S.R 20 Surface level Roads LHS Ch-90 to 210 Ch-210 to 450 Ch-480 to 1150 Ch-1170 to 1290 Ch-1302 to 1340 Ch-1390 to 1520 Ch-1550 to 1740 Ch-1760 to 1970 Ch-2100 to 2300 Ch-2400 Ch-2420 to 2650 RHS Ch-0 to 200 Ch-200 to 450 Ch-590 Ch-630 Ch-640 to 690 Ch-700 to 780 Ch-790 to 880	4		402 790 665 155 49. 29. 121 3.7 271 410 3.8 888 1384 36. 24. 9.3 1.5 41.9 74.6	0.03 0.05 0.02 0.73 12 03 03 040 73 19 13 04 02 03 04 05 06 08	0.20 0.20 0.20 0.20 0.20 0.20 0.20 0.20	80.41 158.01 133.00 31.15 9.82 5.81 24.28 0.75 54.24 82.03 0.79 177.60 276.68 276.68 276.90 7.38 4.94 1.87 0.31 8.38 14.01 14.82	-3e-2, e5.cs	
	per 400-2 For Grading I Material.  (P.No.165, I.No.20.6.1 of PW,P&IWTD S.R 20 Surface level Roads LHS Ch-90 to 210 Ch-210 to 450 Ch-1170 to 1290 Ch-1170 to 1290 Ch-1302 to 1340 Ch-1390 to 1520 Ch-1550 to 1740 Ch-1760 to 1970 Ch-2100 to 2300 Ch-2400 Ch-2420 to 2650 RHS Ch-0 to 200 Ch-240 to 450 Ch-540 to 580 Ch-590 Ch-630 Ch-640 to 690 Ch-700 to 780 Ch-790 to 880 Ch-900 to 930	4		402 790 665 155 49. 29. 121 3.7 271 410 8.8 888 1384 36. 24. 9.3 1.5 41.9	.03 .05 .02 .73 .12 .03 .40 .73 .19 .13 .94 .02 	0.20 0.20 0.20 0.20 0.20 0.20 0.20 0.20	80.41 158.01 133.00 31.15 9.82 5.81 24.28 0.75 54.24 82.03 0.79 177.60 276.68 276.90 7.38 4:94 1.87 0.31 8.38 14.01 14.82 6.60	-ee-2, e5.cs	
	per 400-2 For Grading I Material.  (P.No.165, I.No.20.6.1 of PW,P&IWTD S.R 20 Surface level Roads LHS Ch-90 to 210 Ch-210 to 450 Ch-1170 to 1290 Ch-1170 to 1290 Ch-1302 to 1340 Ch-1390 to 1520 Ch-1550 to 1740 Ch-1760 to 1970 Ch-2100 to 2300 Ch-2400 Ch-2400 Ch-2420 to 2650 RHS Ch-0 to 200 Ch-590 to 450 Ch-630 Ch-640 to 690 Ch-700 to 780 Ch-790 to 880 Ch-900 to 930 Ch-940 to 1070	4		402 790 665 155 49. 29. 121 3.7 271 410 3.8 888 1384 36. 24. 9.3 1.5 41.9 74.6	.03 .05 .02 .73 .12 .03 .40 .73 .19 .13 .94 .02 	0.20 0.20 0.20 0.20 0.20 0.20 0.20 0.20	80.41 158.01 133.00 31.15 9.82 5.81 24.28 0.75 54.24 82.03 0.79 177.60 276.68 276.68 276.90 7.38 4.94 1.87 0.31 8.38 14.01 14.82	-ee-2, e5.cs	
	per 400-2 For Grading I Material.  (P.No.165, I.No.20.6.1 of PW,P&IWTD S.R 20 Surface level Roads LHS Ch-90 to 210 Ch-210 to 450 Ch-1170 to 1290 Ch-1170 to 1290 Ch-1302 to 1340 Ch-1390 to 1520 Ch-1550 to 1740 Ch-1760 to 1970 Ch-2100 to 2300 Ch-2400 Ch-2420 to 2650 RHS Ch-0 to 200 Ch-240 to 450 Ch-540 to 580 Ch-590 Ch-630 Ch-640 to 690 Ch-700 to 780 Ch-790 to 880 Ch-900 to 930	4		402 790 665 155 49. 29. 121 3.7 271 410 8.8 888 1384 36. 24. 9.3 1.5 41.9	3.03 3.05 3.02 3.73 12 03 3.40 73 3.19 3.19 3.19 3.40 3.44 3.40 3.44 3.44 3.44 3.45	0.20 0.20 0.20 0.20 0.20 0.20 0.20 0.20	80.41 158.01 133.00 31.15 9.82 5.81 24.28 0.75 54.24 82.03 0.79 177.60 276.68 276.90 7.38 4:94 1.87 0.31 8.38 14.01 14.82 6.60	-ee-2, e5.cs	
	per 400-2 For Grading I Material.  (P.No.165, I.No.20.6.1 of PW,P&IWTD S.R 20 Surface level Roads LHS Ch-90 to 210 Ch-210 to 450 Ch-1170 to 1290 Ch-1170 to 1290 Ch-1302 to 1340 Ch-1390 to 1520 Ch-1550 to 1740 Ch-1760 to 1970 Ch-2100 to 2300 Ch-2400 Ch-2400 Ch-2420 to 2650 RHS Ch-0 to 200 Ch-590 to 450 Ch-630 Ch-640 to 690 Ch-700 to 780 Ch-790 to 880 Ch-900 to 930 Ch-940 to 1070	4		402 790 665 155 49. 29. 121 3.7 271 410 8.8 888 1383 1384 36. 24. 9.3 1.5 70. 74.6 33.6 279.	3.03 3.05 3.02 3.73 12 03 3.40 73 3.19 3.19 3.19 3.40 3.44 3.40 3.44 3.44 3.45	0.20 0.20 0.20 0.20 0.20 0.20 0.20 0.20	80.41 158.01 133.00 31.15 9.82 5.81 24.28 0.75 54.24 82.03 0.79 177.60 276.68 276.90 7.38 4:94 1.87 0.31 8.38 14.01 14.82 6.60 55.86 91.36	-ee-2, e5.cs	
	per 400-2 For Grading I Material.  (P.No.165, I.No.20.6.1 of PW,P&IWTD S.R 20 Surface level Roads LHS Ch-90 to 210 Ch-210 to 450 Ch-1170 to 1290 Ch-1170 to 1290 Ch-1302 to 1340 Ch-1390 to 1520 Ch-1550 to 1740 Ch-1760 to 1970 Ch-1760 to 1970 Ch-2100 to 2300 Ch-2400 Ch-2420 to 2650 RHS Ch-0 to 200 Ch-540 to 580 Ch-590 Ch-640 to 690 Ch-700 to 780 Ch-790 to 880 Ch-900 to 930 Ch-940 to 1070 Ch-1080 to 1390	4	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	402 790 665 155 49. 29. 121 3.7 271 410 3.8 888 1383 1384 36. 24. 9.3 1.5 41. 70. 74. 33. 279. 456. 182.	3.03 3.05 3.02 3.73 12 03 3.40 19 3.19 3.19 3.19 3.19 3.40	0.20 0.20 0.20 0.20 0.20 0.20 0.20 0.20	80.41 158.01 133.00 31.15 9.82 5.81 24.28 0.75 54.24 82.03 0.79 177.60 276.68 276.90 7.38 4:94 1.87 0.31 8.38 14.01 14.82 6.60 55.86 91.36 36.46	-ee-2, e5.cs	
	per 400-2 For Grading I Material.  (P.No.165, I.No.20.6.1 of PW,P&IWTD S.R 20 Surface level Roads LHS Ch-90 to 210 Ch-210 to 450 Ch-1170 to 1290 Ch-1302 to 1340 Ch-1390 to 1520 Ch-1550 to 1740 Ch-1760 to 1970 Ch-1760 to 1970 Ch-2100 to 2300 Ch-2420 to 2650 RHS Ch-0 to 200 Ch-2400 Ch-300 to 450 Ch-300 to 450 Ch-590 Ch-630 Ch-640 to 690 Ch-700 to 780 Ch-900 to 930 Ch-940 to 1070 Ch-1080 to 1390 Ch-1140 to 1540 Ch-1140 to 1540 Ch-1540 to 1540 Ch-1540 to 1680	4	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	402 790 665 155 49. 29. 121 3.3 271 410 3.6 888 1383 1384 36. 244. 9.3 1.5 70. 74.1 33.6 279. 456. 182.	3.03 3.05 3.02 3.73 12 03 3.40 73 19 3.19 3.19 3.13 3.40 3.50 3.	0.20 0.20 0.20 0.20 0.20 0.20 0.20 0.20	80.41 158.01 133.00 31.15 9.82 5.81 24.28 0.75 54.24 82.03 0.79 177.60 276.68 276.90 7.38 4:94 1.87 0.31 8.38 14.01 14.82 6.60 91.36 29.29	-8e-2, s5.s	
	per 400-2 For Grading I Material.  (P.No.165, I.No.20.6.1 of PW,P&IWTD S.R 20 Surface level Roads LHS Ch-90 to 210 Ch-210 to 450 Ch-1170 to 1290 Ch-1302 to 1340 Ch-1390 to 1520 Ch-1550 to 1740 Ch-1760 to 1970 Ch-1760 to 1970 Ch-2100 to 2300 Ch-2420 to 2650 RHS Ch-0 to 200 Ch-2400 Ch-300 to 450 Ch-480 to 530 Ch-540 to 580 Ch-590 Ch-630 Ch-640 to 690 Ch-700 to 780 Ch-900 to 930 Ch-940 to 1070 Ch-1080 to 1390 Ch-1410 to 1540 Ch-1540 to 1680 Ch-1540 to 1680 Ch-1540 to 1680 Ch-1690 to 1740	4		402 790 665 155 49. 29. 121 3.7 271 410 3.8 888 1383 1384 36. 244. 9.3 1.5 41. 70. 74.1 33.6 279. 456. 182. 146. 70.1	3.03 3.05 3.02 3.73 12 03 3.40 73 19 3.19 3.19 3.13 3.19 3.40 3.	0.20 0.20 0.20 0.20 0.20 0.20 0.20 0.20	80.41 158.01 133.00 31.15 9.82 5.81 24.28 0.75 54.24 82.03 0.79 177.60 276.68 276.90 7.38 4:94 1.87 0.31 8.38 14.01 14.82 6.60 91.36 29.29 14.04	-8e-2, s5.s	
	per 400-2 For Grading I Material.  (P.No.165, I.No.20.6.1 of PW,P&IWTD S.R 20 Surface level Roads LHS Ch-90 to 210 Ch-210 to 450 Ch-1170 to 1290 Ch-1302 to 1340 Ch-1390 to 1520 Ch-1550 to 1740 Ch-1760 to 1970 Ch-1760 to 1970 Ch-2100 to 2300 Ch-2400 Ch-2420 to 2650 RHS Ch-0 to 200 Ch-2400 to 450 Ch-300 to 450 Ch-540 to 580 Ch-590 Ch-640 to 690 Ch-700 to 780 Ch-900 to 930 Ch-940 to 1070 Ch-1080 to 1390 Ch-1410 to 1540 Ch-1540 to 1680 Ch-1690 to 1740 Ch-1760 to 1850	4		402 790 665 155 49. 29. 121 3.7 271 410 3.8 888 1383 1384 36. 24. 9.3 1.5 41. 70. 74. 33. 279. 456. 182. 146. 70. 89.8	3.03 3.05 3.02 3.73 12 03 3.40 19 3.19 3.19 3.40 1.48 89 68 68 68 69 105 08 00 32 81 30 46 19 81	0.20 0.20 0.20 0.20 0.20 0.20 0.20 0.20	80.41 158.01 133.00 31.15 9.82 5.81 24.28 0.75 54.24 82.03 0.79 177.60 276.68 276.90 7.38 4:94 1.87 0.31 8.38 14.01 14.82 6.60 55.86 91.36 29.29 14.04 17.96	-3e-2, s5.s	
	per 400-2 For Grading I Material.  (P.No.165, I.No.20.6.1 of PW,P&IWTD S.R 20 Surface level Roads LHS Ch-90 to 210 Ch-210 to 450 Ch-1170 to 1290 Ch-1302 to 1340 Ch-1390 to 1520 Ch-1550 to 1740 Ch-1760 to 1970 Ch-1760 to 1970 Ch-2100 to 2300 Ch-2420 to 2650 RHS Ch-0 to 200 Ch-2400 Ch-300 to 450 Ch-480 to 530 Ch-540 to 580 Ch-590 Ch-630 Ch-640 to 690 Ch-700 to 780 Ch-900 to 930 Ch-940 to 1070 Ch-1080 to 1390 Ch-1410 to 1540 Ch-1540 to 1680 Ch-1540 to 1680 Ch-1540 to 1680 Ch-1690 to 1740	4		402 790 665 155 49. 29. 121 3.7 271 410 3.8 888 1383 1384 36. 244. 9.3 1.5 41. 70. 74.1 33.6 279. 456. 182. 146. 70.1	3.03 3.05 3.02 3.73 12 03 3.40 1.48 3.94 3.02 3.40 1.48 89 68 68 68 69 105 00 32 81 30 46 19 31 99	0.20 0.20 0.20 0.20 0.20 0.20 0.20 0.20	80.41 158.01 133.00 31.15 9.82 5.81 24.28 0.75 54.24 82.03 0.79 177.60 276.68 276.90 7.38 4:94 1.87 0.31 8.38 14.01 14.82 6.60 91.36 29.29 14.04	-3e-2, s5.s	

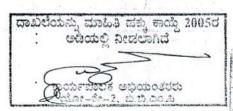
Sl. No. Des	scription of Work	Unit	No.	m	Breadth m	m	Quantity	Rate in Rs.	Amount in R
	2422 + 2222		-		-	, fa H	104.14	all the Sheet of	A STATE
	-2430 to 2680		78	27.20	1.00	0.20	164.14 424.32		
	andard Span Pier		14	38.80	1.00	0.20	108.64		
and the same of the same of	ligatory Span Pier		3					-	
	ligatory Pier 25m Span		3	33.20	1.00	0.20	19.92		
	Ramp and Down Ramp		2	07.00	1.00	0.00	10.88	1	-
	andard Span Pier		2	27.20	1.00	0.20	10.88		
	Ramp and Down Ramp			00.00	1.00	0.00	91.04		
Obl	ligatory Pier		4	38.80	1.00	0.20	31.04		
					<u> </u>		2580.31 2581.00		2712218.
gra ma pre in me lay	oviding laying, spreading and compacting add stones aggregate to wet mix acadam specifications including emixing the material with water at OMC mechanical mix plant carriage of mixed without of tipper to site, laying in uniform ters with paver in sub base / base course well prepared surface and compacting					ಧಾಖೀ	ೆಯನ್ನು ಮಾ		ಯ್ದ 2005ರ
wit der	th vibratory roller to achieve the desired nsity complete as per Specifications. ause 406 of MoRT&H.			• •	•		ಕಾರ್ಯಪ್ರೀ ಯೋ-ಕೇ	2, 2.3.40	ಶರದು ಪಿ
(P	No.167, I.No.20.18 PW,P&IWTD S.R 2013	2-13)	1-1			=	· :		
	rface level Roads	/				- 0.		. 1	
LH	The state of the s			A	rea				
-	1-90 to 210		1		2.03	0.25	100.51		1
	1-210 to 450		1		0.05	0.25			1.
	1-210 to 450	12 1	1		5.02	0.25			
CONTRACTOR CONTRACTOR	Control of the Contro		1		5.73	0.25			<del></del>
	-1170 to 1290						12.28		<del> </del>
	1-1302 to 1340		1		.12	0.25		A Color	<u> </u>
****	1-1390 to 1520		1		.03	0.25			!
war a de come of	1-1550 to 1740		1	THE REAL PROPERTY.	1.40	0.25			<u> </u>
	1-1740	/ vr	1		73	0.25	41.3561	A STATE OF THE STA	-
	1- 1760 to 1970		1		1.19	0.25	67.80		
	1-2100 to 2300 .		102.1		0.13	0.25	The state of the s		
	22400		1		94	0.25			11-2
Ch	1-2420 to 2650	-	1	88	3.02	0.25	222.01	/	100
RH	IS		OR SHOW OF THE	tot care etemple	espires all	year to a second	a amount mountain	Managara and Arian	N. Care at Labor.
Ch	1-0 to 200		1	138	3.40	0.25	345.85		
Ch	1-200 to 450	3	1	138	4.48	0.25			and the second of
	1 -480 to 530	niii ne	1	.36	.89	0.25			A 114
_	1-540 to 580	100	1		.68 .	0.25			i in a
120.00	1-590		1		34	0.25			
	1-630	328,72	1		56	0.25			NAC TABLE
-	1-640 to 690		1	OFFICE CONTRACTOR OF	.91	0.25	10.48		The second
	1-700 to 780	17	1		.05	0.25			1
	1-790 to 880	-	1		.08	0.25			
			1		.00 /	0.25			1
	1-900 to 930	2-24	1		9.32	0.25	69.83		A STATE OF THE STA
	1-940 to 1070		-		6.81	0.25		100 To 10	-
-	1-1080 to 1390	-+	1 -1 -1		2.30	0.25			1777
-	1-1410 to 1340		1		6.46	0.25			1
	n-1540 to 1680		1						-
-	n-1690 to 1740		1		.19	0.25			<del>                                     </del>
	n-1760 to 1850		1		.81	0.25			!
	n-1910 to 2150		1		0.99	0.25			
The second second	n-2210 to 2420		11		2.18	0.25	The second secon		+
	n-2430 to 2680		1 70	-	0.72	0.25			
	andard Span Pier		78	27.2	1.00		-		
	bligatory Span Pier		14	38.8	1.00		and an order of the last of th		1
	bligatory Pier 25m Span		3	33.2	1.00				
-	andard Span Pier		78	14.60	1.25				1 1 1 1 1 1 1 1 1
	bligatory Span Pier		.14	27.0					
Ob	bligatory Pier 25m Span		3	24.20	1.25	0.15	13.61	V	
	p Ramp and Down Ramp								
	andard Span Pier		2	27.20	1.00	0.25	13.60	1/	1

51.	D. J. W. JONES	Unit	No.	-	Breadth		Quantity	Rate in	Amount in R
lo.	Description of Work	Unit	No.	m	m	m	Quantity	Rs.	Tunoune III 10
	14 (1994)		2	14.60	1.25	0.15	5.48		
	Up Ramp and Down Ramp			20.00		0.05	20.00	_	122
	Obligatory Pier		4	38.80	1.00	0.25	38,80	_	1
			4:	27.00	1.95	0.15	31.59		1
	*. //					<u> </u>	3600.16	1000	0017107
						Say	3601.00	1059.4	3815187.
00	Providing and applying Primer coat with	Sam		+		Characteristics.			-
00	bitumen emulsion on prepared surface of			- 1-		Down !			
	granular Base including clearing of road			1			Vilout.	, ideas make	٧ .
	surface and spraying primer at the rate of			1		1		A COAR C	
	0.60 kg/sqm using mechanical means					1			
	complete as per specifications. MoRT&H						ಕಾಯ್ ಸಮಾತಿ	ಕ ಅಭಿಯಂ	ತರರು
	Specification No.502		1				රේකද-රිද	2, 2,30	0,2)
11/1	CAN 150 IN- 01 C - CDW DEIWTD CD 9	019.13		1				77	1 17 1 2 2 1 1 1 1 1
	(P.No. 172, I.No. 21.6 of PW,P&IWTD S.R 20 (Prevailing Rate as on 26-12-2012)	012-13						i,	
	Surface level Roads		-	. :A	rea · · ·		-		
-	LHS	-	1		2.03		402.03		
	Ch-90 to 210		1		0.05		=00.05		
			1		5.02		004.00		A Lyon L
	Ch-210 to 450 Ch-480 to 1150		1	- I	5.73				1
			1		9.12	T	10.10		
	Ch-1170 to 1290	1	. 1		9.03	1	1		
-	Ch-1302 to 1340	-	1		21.4	-	1		
	Ch-1390 to 1520	-	1	-	.73	1	0.70		of their purposes
	Ch-1550 to 1740	<del> </del>	1		1.19				
_	Ch-1740	<del> </del>	1		0.13				ar ar are services on a
-	Ch- 1760 to 1970	-	1		3.94	<u> </u>			
	Ch-2100 to 2300	-	1		88.02		200.00	and the same of th	
_	Ch-2400	-	1	00	0.02			- B	
	Ch-2420 to 2650	-	1	-	-	1		-	1
	RHS		· 1	10000000	883.4	Co. In As	1383.40	V	on the state of the
	Ch-0 to 200	-	1		84.48	<del>†                                     </del>			
	Ch-200 to 450		1-1-1-1-1		6.89		THE PERSON NAMED IN		en aufan Asia tur san i te
1	Ch -480 to 530		1		4.68	-	0.00		200
	Ch-540 to 580				0.34				
,	Ch-590	<u>i — — </u>	1		1.56		-	~	91
	Ch-630	للصحصا	1	A Paris No. of Concession,	1.91	1	41.91		to a proper of the contract of
_	Ch-640 to 690	<u> </u>	1		0.05	1	70.00		T 1 1/95 1 1
	Cn-700 W 780	-	1		4.08	5 00	74.08		
	Ch 100 to co	1	1	of Charles	33	-	33.00		W Commercial Commercia
	Ch-900 to 930		1	9	79.32		070 0		Contractor -
_	Ch-940 to 1070	-	12		56.81		1 480 00	- A-1	
100	Ch-1080 to 1390		T		82.3		100 0		Contract Contract
	Ch-1410 to 1540	-	1		46.46		- 10 1		
	Ch-1540 to 1680	-	1		0.19	<u> </u>	T		77.5
-	Ch-1690 to 1740	-	1		9.81/	1	- 89.8		
-	Ch-1760 to 1850		1		20.99				Carrie Inc.
100	Ch-1910 to 2150	-	1		12.18	-	- 512.1		1 1 - 1 1 1 1 1 1
_	Ch-2210 to 2420	:	1 1		20.72	1.	1 225 -		TARREST TA
-	CII-2430 to 2000	-	78	27.		-	4773.6		
	Standard Span Pier	-	14	38.			- 1602.4		77 S- 18 77
_	Obligatory Span Pier		3	33.			- 224.1		17. P. S. S. S.
_	Obligatory Pier 25m Span	-	1 3	33.	4.20		201.1	1157 4 5	-1
-	Up Ramp and Down Ramp		2	27.2	2.2	5	- 122.4	0	
_	Standard Span Pier	-1	++4-	21.2	3.20	1	1	1	
	Up Ramp and Down Ramp	1	4	38.8	0 2.9	5	457.8	4V	1
	Obligatory Pier		+	1 30.0		1	17107.9		
	·			1			y 17108.0		83 73278

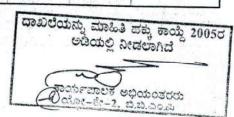
ನಾಖಲೆಯನ್ನು ಮಾಹಿತಿ ಹಕ್ಕು ಕಾಯ್ದೆ 2005 ಅಡಿಯಲ್ಲಿ ನೀಡಲಾಗಿದೆ

ಕಾರ್ಯವಾಲಕ ಅಭಿಯಂತರರು ಯೋ-ಕೇ-2, ಬಿ.ರಿಕೊಕಿ12

SI. Dec	erintion of Worls	T	N.	Length	Breadth	Depth	0	Rate in	Kingar Telegra
No. Des	cription of Work	Jnit	No.	m	m	m	Quantity	Rs.	Amount in Rs
2.10 KSR	RB 3000 Filling Pot - holes and S	Sqm	A		- 11-2-1			1	3 - 10 - 10 - 10
Pate									
Con	crete, 40mm KSRRB M3000-5:	1							
Rem	oval of all field material, trimming of	4							
	pleted excavation to provide firm	1	i						
	ical faces, cleaning of surface, painting		1						
	ack coat on the sides and base of	1				•			
	vation as per clause 500.3, back filling	1						i r	i
	pot holes with hot bituminous material	1	- 1					1	1
	er clause 500.4, compacting, trimming								
	finishing the surface to form a smooth					1 25			1
	inuous surface, all as per clause 3004.2	1		a great and the con-					
	plete as per specifications MoRT&H				8 "	- 12			
	rification No. 3004.2	1				7 7 5			
			1			THE THE		E4+E 12+	
	o.262, I.No.35.5, PW, P & IWTD SR 2011-	12)							S
Surf	ace level Roads		10.0	1000		150			Providence
LHS		- 11	3	Bris 9		1 1	ar T		
CH-	1-199.83 to CH-1-2605.46 (deductions of		1 .	2137.48	10.50		22443.51	/	
Obli	gatory Span)	į							
RHS									
CH-	1-199.83 to CH-1-2605.46 (deductions of		1	2137.48	10.50	_	22443.51		Service Control
4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	gatory Span)	Î	1.7	7.796	2011	V -	Constitution of	Great Switze	AND AND AND AND
	Ramp LHS & RHS	- 1	2	207.64	10.50	1	4360.44		
	n Ramp LHS & RHS		2	203.44	10.50		4272.24		-
				200,44	10.00		4212.24		W. France
	igatory Span	-			•	2.7			1
	1-442.29 to CH-1-482.291		1	40.00	25.00		1000.03		Fig. Comments
	1-919.428 to CH-1-949.43		1	30.00	25.00	-+	750.05		
CH-	1-1147.24 to CH-1-1177.24		1	30.00	25.00	10 Th. A. Thirt of Belleville	750.00	V	engineer operations about a consens
CH-	1-1284.74 to CH-1-1314.74	1.	1	30.00	25.00		750.00		
CH-	1-1379.80 to CH-1-1409.80	- 1	1-1-1	30.00	25.00		750.00	1	and the same
CH-	1-1735.07 to CH-1-1765.07	- 1	1	30.00	25.00		750.00		
CH-	1-1949.30 to CH-1-1977.45	- 1	1	28.15	25.00	7.7	703.75		
CH-	1-2386.85 to CH-1-2436.85	Lucia an	1	-	25.00	Autorita della comme	1250.00		Annual Control
	tery limit	1000			ARTS 82 32		1200.00	Market Market	Columbia de la columbia del columbia del columbia de la columbia del columbia del columbia de la columbia de la columbia del columbia d
	ards Kendriya sadana	-	1	100.00	28.97	100	2897.00	-	
Court from the later to the lat	ards Domlur		1	100.00				The second secon	
	ards Hosur Road - Sarjapur Road	- 1	1	-	26.86		2685.50		
Juct	10 T		. 1	100.00	26.70		2670.00		
	the state of the s	- Contraction	And the second reverse	700.00	07.70	-0.4000000	oeba aa		Local Calety of the Calety
	ards Sarjapur Road -Madiwala Road		1.:	100.00	27.70		2770.00	•	Control of the Contro
Juct	ion	-	7				71040 00	_	
- 0	The second secon		And a second		in a succession		71246.02		The state of the s
Cons	sider 10% of the Qty for pot hole filling						7124.60		/ /
3 3 2			E	100		Say	7125.00	395.82	2820218.0
									C 20
	RB 500-8 Providing and applying tack S	qm	والمعاولة أواو أواوا	Company to the con-			ei sandii s		The second secon
	on granular surface treated with	15					And the same	- 1 1 1	
	er at 3 Kg per 10 sqm, heating bitumen	1		1	25 1 3 1			X-1	
	oiler fitted with spray set (excluding		The same			1			The Table
	ning of road surface) including cost of	. 1	100		# .				10075
	naterials, labour, HOM of machienries	( e ( ) ) ( e ( ) )	1				777		
comp	plete as per specifications.	1	1			. 1			
	- Variation	3							
(P.N	o. 173 I.No. 21.8 of PW,P&IWTD S.R 2012	-13)	no n			- ,	1.	a-14.7-5,225	
	vailing Rate as on 26-12-2012)	1						7/2	
	ace level Roads	- 1		• •		-			
	same as It No-1.06	-	171/	8.00			17108.00	1	
Qty 8	Same as 11 140-1.00		, 1/10	0.00					V
		- 1	-	• •i		Say	17108.00	- 20.76	355121.0



Des	scription of Work	Unit	No.		Breadth	Depth	0	Rate in	+ Addison Section
0.		Omit	110.	· m	m	m	Quantit	Rs.	Amount in I
	oviding and laying bituminous	Cum	-				100		-
ma	cadam on prepared surface with		1	Ì	æ.			1	
crus	shed coarse aggregates as per design	- 1						-	
mix	formula for base / binding course	1							
incl	luding loading of aggregaters with F.E.		- 3					1	
load	der, hot mixing of stone aggregates and			1				1	1
bitu	amen in hot mix plant 40 tonne capacity.	4 1						i	
trar	nsporting the mixed material in tipper to		*						
pav	er and laying mixed materials with	. 1	- 1						
pave	er finisher to the required level and								#70 m \$140 mod # 20 mod
grad	de, rolling by power roller to acheive the		1						
deis	sred density, 50 / 75 mm compacted		- i					1	The second second second second second
thic	kness with 3.3% bitumen but excluding		. 1	1					
cost	of primer / tack coat with lead upto	1		1 1					
1km	including cost of all materials, labour,			1 4				Section and	Alt Res
HO	M of machineries complete as per						•		
spec	cifications. MoRT&H Chapter 5 with 60	1		1				10 11	
/70	grade bitumen							1	
1	No. 173 I.No. 21.11.2 of PW,P&IWTD S.R 2	2010 12					•	19	1975-611 859
	evailing Rate as on 26-12-2012)	201Z-13	)						
	face level Roads ·			-				<u> </u>	
LHS	14-06-47		1.00	X					
CH-	1-199.83 to CH-1-2605.46 (deductions of		1	2137.48	10.50	0.05	1122.18		
Obli	igatory Span)			2107.10	10.50	0.05	1122.10		
RHS		- ji-	-, -			- 1			
CH-	1-199.83 to CH-1-2605.46 (deductions of		1	2137.48	10.50	0.05	1122,18	/	
	gatory Span)		5.3	2201.10	10.50	0.03	1122,18		S. W. J. W. F.
1	Ramp LHS & RHS			207.01		- 1			
	n Ramp LHS & RHS		2	207.64	10.50	0.05	218.02	1	Land Control of the Control of the Control
	igatory Span		2	203.44	10.50	0.05	213.61		to the section of
	1-442.29 to CH-1-482.291		Series of the Control	40.00			41.6.0		
	1-919.428 to CH-1-949.43	-	1	40.00	25.00	0.05	50.00		
			1	30.00	. 25.00	0.05	37.50		
	1-1147.24 to CH-1-1177.24	an same	**** <b>1</b> ***	30:00	25.00	0.05	37.50	Vall partials of	Astropic according at 2000 to 1
	1-1284.74 to CH-1-1314.74	- 4	1	30.00	. 25.00	0.05	37.50		0 - 10 - 13 - 1
	1-1379.80 to CH-1-1409.80	Properties	and we we	30.00	25.00	0.05	37.50	Same a series in the second	and the second second
CH-	1-1735.07 to CH-1-1765.07	450	1	30.00	25.00	0.05	37.50		
	1-1949.30 to CH-1-1977.45	- 1	- 1	28.15	25.00	0.05	35.19		
CH-1	1-2386.85 to CH-1-2436.85		1	50.00	25.00	0.05	62.50		
Stan	dard Span Pier	1	78	27.20	2.25	0.05	238.68	Contract of the Contract of th	MOUNT CREATING TO THE PARTY OF
Oblig	gatory Span Pier	1	14	38.80	2.95	0.05	80.12		
	gatory Pier 25m Span	1:07	3	33.20	2.25	0.05			
	Ramp and Down Ramp	7-30	7. 22	00.20	2.20	0.03	11.21		
	dard Span Pier		2	27.20	2.25	0.05	0.10	1	
	Ramp and Down Ramp		-	21.20	4.20	0.05	6.12		Market arter as the same
	gatory Pier	7 10 70	4	38.80	2.25	0.05	17.40		
1		4		00.00	2.20	0.03	17.46 3364.76		New York Control of the Control of t
				, A			0004.76		
Dedi	uct Pier Excavation portion							2 1977 7 19	Three services
	dard Span Pier	2	78	6.30	1.40	0.05	68.80		An Best
	gatory Span Pier	2	14	10.7	2.10	0.05	31.46		CALL STONE CO. CO.
	gatory Pier 25m Span	2	3	9.30	1.40	0.05	3.91	/	
	damp and Down Ramp		4					. 1 9.445	A CONTRACTOR OF STATE
	dard Span Pier	2	2	6.30	1.40	0.05	1.76		* 4 TO THE REST OF
	amp and Down Ramp gatory Pier	-					- 50 1		
Oblig	sawry Fler	2	4	10.70	1.00	0.05	4.28		CALL STATE OF THE
-			++				110.20		
-			$\rightarrow$			~	3254,56		
			1 1	:		Say	3255.00	6455.69	21013268.0



7 -6 10

Sl.	Description of the contract of		N STANSON	Length	Breadth	Depth	11 57 8	Rate in	21119 - Trans
No.	Description of Work	Unit	No.	m	m	m	Quantity	Rate in	Amount in R
2.13	KSRRB 200-7.Providing and applying tack coat on prepared black topped surfaces at		1.		* * * * * * * * * * * * * * * * * * * *			RS.	
	2.5 kg per 10 sqm,heating bitumen in boiler fitted with spray set (Excluding		- 1				!		
	cleaning of road surface) incuding cost of all materials, labour, HOM of machineries		1	i .					
	complete as per specifications. MORTH/Chapter 5					•			
	(P.No. 173 I.No.21.7 of PW,P&IWTD S.R 201	2-13)			•	- 14	F-444.	• • • • • • • • • • • • • • • • • • • •	
	(Prevailing Rate as on 26-12-2012) Surface level Roads (Over Exsting surface)						CE 14 CE 15 15		the state of the second
	LHS								
	CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span)		1	2137.48	10.50	-	22443.51		
	RHS CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span)		1	2137.48	10.50		22443.51	/	, t
	Up Ramp LHS & RHS		2	207.64	10.50	-	4360.44	V	
	Down Ramp LHS & RHS		2	203.44	10.50		4272.24	V	
	Obligatory Span	1					***************************************		
	CH-1-442.29 to CH-1-482.291	1	1	40.00	25.00	1	1000.03		
	CH-1-919.428 to CH-1-949.43 CH-1-1147.24 to CH-1-1177.24		1	30.00	25.00		750.05		
	CH-1-1147.24 to CH-1-1177.24 CH-1-1284.74 to CH-1-1314.74		1 1	30.00	25.00 25.00	y :	750.00		
	CH-1-1379.80 to CH-1-1409.80	-	1	30.00	25.00		750.00 750.00		241
	CH-1-1735.07 to CH-1-1765.07	talk to be	ī	30.00	25.00		750.00	inches de la constantia	ORIGINAL REPORT OF THE PROPERTY OF THE
	CH-1-1949.30 to CH-1-1977:45	7 7	1	28.15	25.00		703.75		
	CH-1-2386.85 to CH-1-2436.85		1	50.00	25.00	-	1250.00		
	Standard Span Pier	12.1	78	27.20	2.25		4773.60		
	Obligatory Span Pier	Va.	14	38.80	, 2.95		1602.44		
2	Obligatory Pier 25m Span	200	3	33.20	2.25		224.10		
	Up Ramp and Down Ramp			l'acide		4	14.11		2002 AND - 201 A
	Standard Span Pier	on the second	2	27.20	2.25	***	122.40	1	
	Up Ramp and Down Ramp		- 100	2-1-20X12		141			
	Obligatory Pier		4	38.80	2.25		349.20		r he en joya a switch de sa
	D. 2. A Charles and approximation of the control of	even are	Factor exhaustati	promise some	Gertaleten Societis o	TT CAR C		Andrew Contractor	where the committee and the will
-	Deduct Qty of Item No-1.07	3.6			100		17108.00		The second of
-	200 Sept. 100 Se	-			replaced to	-	50187.26	-	Market Street Street Street
-	A STATE OF THE STA	-		entre mane	1 1 1 1 1 1 1	Say.	50188.00	17.12	859118.0
	KSRRB M500-17. Providing and laying	Cum		Va.	- N. A. a. A				
	dense graded bituminous macadam with 100-120 TPH batch type HMP		en sake a comp			Parameter.			
- 1	producing an average output of 75 tonnes per hour using crushed aggregates of						1 34		
	specified grading, premixed with	1			. ,	ದಾಖ	ಲೆಯನು, ಮ	ಾಹಿತಿ ಹಕ್ಕು ಕ	ಯೆ 2005ರ
	bituminous binder at 4.0 to 4.5% by weight						<b>ප</b> ඕಯ	ಲ್ಲಿ ನೀಡಲಾಗ	ದೆ
	of total mix and filler, transporting the hot							£ +	<b>S</b>
	mix to work site, laying with a hydrostatic		711-1		7-1-1		-	3	
	paver finisher with sensor control to the required grade, level and alignment, rolling		1				A CONTRACT	ಲಕ ಅಭಿಯಂತ	ಕರರು
	with smooth wheeled, vibratory and	1		1		1	€ cine-†	₹−2, బి.పి.ఎం	).@s
	andem rollers to achieve the desired		1						Mer.
i	compaction as per MoRT&H specification	-	7				5 1		
	clause No. 500.7 complete in all respects as per specifications. Bitumen 60/70 MoRT&H	- 1	1			-		1	
	Specification No. 507				.				
	P.No. 175 I.No. 21.19.2 of PW,P&IWTD S.R 2	012-13	)		N - 100	4			
	Prevailing Rate as on 26-12-2012) Surface level Roads					<del></del>			
_	LHS :		•		-		/		
	CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span)		1	2137.48	10.50	0.05	1122.18		Florida de la Carte

SI.	Description of Work	Unit	No.	Length	Breadth		Quantity	Rate in	Amount in 1
Vo.	10.75 F		Shower	m	m	m	quality	Rs.	Zimbunt in I
	CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span)		1	2137.48	10.50	0.05	1122.18		
77.00	Up Ramp LHS & RHS		2	207.64	10.50	0.05	218.02	/	
	Down Ramp LHS & RHS		2	203.44	10.50				-
	Down tamp Drib & 1010		4.1	203.44	10.50	0.05	213.61		
	Obligatory Span							-	
	CH-1-442.29 to CH-1-482.291		1	40.00	25.00	0.05	50.00	1	
	CH-1-919.428 to CH-1-949.43		1	30.00	25.00	0.05			
	CH-1-1147.24 to CH-1-1177.24		1	30.00	25.00	0.05			
7	CH-1-1284.74 to CH-1-1314.74		1	30.00	25.00	0.05	37.50		
	CH-1-1379.80 to CH-1-1409.80		1	30.00	25.00	0.05	37.50		1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1
	CH-1-1735.07 to CH-1-1765.07		1	30.00	25.00	0.05	37.50	V.	Harry Co.
	CH-1-1949.30 to CH-1-1977.45		1 '	28.15	25.00	0.05	35.19		100
	CH-1-2386.85 to CH-1-2436.85		1	50.00	25.00	0.05	62.50	V	1 1 1 1
	Standard Span Pier		78	27.20	2.25	0.05	238.68		7.
. 1	Obligatory Span Pier	1	14	38.80	2.95	0.05	80.12	/,	
	Obligatory Pier 25m Span	•	3	33.20	2.25	0.05	11.21		
	Up Ramp and Down Ramp		1						
	Standard Span Pier		2	27.20	2.25	0.05	6.12	/	
	Up Ramp and Down Ramp		1						
	Obligatory Pier		4	38.80	2.25	0.05	17.46		
	Battery limit		1-1	20	22.4				
	Towards Kendriya sadana		1	100.00	28.97	0.05	144.85	V	
	Towards Domlur		1	100.00	26.86	0.05	134.28	$\checkmark$	
	Towards Hosur Road - Sarjapur Road		1	100.00	26.70	0.05	133.50	V.	1993
8	Towards Sarjapur Road -Madiwala Road		1	100.00	27.70	0.05	138.50	V	1 1/2
22.3	For Pedestrian Crossing	-	many mineries	e designation of the control of	V-10-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	Agreement to the same	Construction of States in particular	alternative of the second	Profession (Million Color)
	Kendriya Sadana Junction	1. 1-1	4	34.00	1.50	0.05	10.20		
	Koramangala BDA Complex Junction	3 00000	4	21.50	1.50	0.05	6.45		
	Koramangala 5th Block Junction		4	12.30	1.50	0.05	3.69	V.	6-5 (1-3-1)
	Koramangala 60 feet Road Junction		4	12.50	1.50	0.05	3.75		
	Koramangala 8th Main Junction	part of the s	1 mil <b>4</b> mil mil	15.50	1.50	0.05	4.65		telia an alta del para
	Sony world Junction		4	20.13	1.50	0.05	6.04		11 for and a sit in the
11-1	Ejipura Junction		4	18.30	1.50	0.05	5.49		tale - comment
	C. 10. C.	2,000	F 101 (2) (1)	10000000		54.5	3956.16	<b>V</b>	
-	Deduct Pier Excavation portion	-		-				1	50 A 100 TO 10
_	Standard Span Pier	2	78	6.30	1.40	0.05	68.80	The second secon	Marin San Car
_	Obligatory Pier 25m Span	2	14	. 10.70	2.10	0.05	31.46	A CONTRACTOR OF THE PARTY OF TH	
	Obligatory Pier 25m Span	2	3	9.30	· 1.40	0.05	3.91		THE COLUMN TWO
1		-					104.16	The second second	Carlo Constitution
-		-	ST. 194. 13			0	3852.00		
			100		-	Say	3852.00	9183.46	35374673
15	KSRRB 200-7.Providing and applying tack	Sam	) + pro 3/2 (*) - 24	**************************************	the programme of the con-	Marine 1	ter (All Seleting)	er anne vorman	Allow parelle to the con-
	coat on prepared black topped surfaces at 2.5 kg per 10 sqm,heating bitumen in boiler fitted with spray set (Excluding cleaning of road surface) incuding cost of all					ಧಾತ	ರಿಲೆಯನ್ನು ವ ಅಡಿಯ	බසීම ස්තු වේ බැස්පත ——	ಾಯ್ದೆ 2005ರ ಗಿದೆ
	materials, labout, HOM of machineries complete as per specifications. MORTH/Chapter 5						Spore a	စ် <del>ဝန် ပ</del> ည်ထ မိုး-2, ညီညီနှ	ಂತರರು ಎಂ.ಪಿ
	(P.No. 173 I.No.21.7 of PW,P&IWTD S.R 201 (Prevailing Rate as on 26-12-2012)	2-13)	1					1 1 1 1 1 1 1	
	Surface level Roads (Over BM & DBM)	7	1						
	LHS		1						
	CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span)	2	1	2137.48	10.50		'44887.02		
	RHS CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span)	2	i	2137.48	10.50		44887.02	/	
	Up Ramp LHS & RHS	2	2	207.64	10.50		8720.88	/	
	Down Ramp LHS & RHS	2	$-\frac{2}{2}$		10.50			/	
			1	203.44	16.50		8544.48	/	

Sl. I	Description of Work	Unit	No.		Breadth		Quantity	Rate in	A CHARLES
0.		1		m	m	m	Quantity	Rs.	Amount in I
	CH-1-442.29 to CH-1-482.291	2	1	40.00	25.00		2000.05		
	CH-1-919.428 to CH-1-949.43	2	1 "	30.00	25.00		1500.10		1 1
	CH-1-1147.24 to CH-1-1177.24	2	1.	30.00	25.00		1500.00		-
	CH-1-1284.74 to CH-1-1314.74	2	1:	30.00	25.00	-	1500.00	1	
	CH-1-1379.80 to CH-1-1409.80	2	1	30.00	25.00	,++	1500.00		
	CH-1-1735.07 to CH-1-1765.07	2	1 .	30.00	25.00	1.	1500.00		
	H-1-1949.30 to CH-1-1977.45	2	1	28.15	25.00		1407.50		
-	CH-1-2386.85 to CH-1-2436.85	2 .	1	50.00	25.00		2500.00		1 1 1 1 1 1 1 1
	tandard Span Pier	2	78	27.20	2.25		9547.20		
	Obligatory Span Pier	2	14	38.80	2.95		3204.88		Switz Control of the
	bligatory Pier 25m Span	2	3	33.20	2.25		448.20	Part Marymore	
	p Ramp and Down Ramp							11/1/20	the Think of
	tandard Span Pier	2	2	27.20	. 2.25		244.80		S. Mirgan and
	P Ramp and Down Ramp				- 1				is the second
	bligatory Pier	2	4	. 38.80	2.25		698.40	A 187	War and The Land
	or Pedestrian Crossing			•					27 - W
	endriya Sadana Junction	2	4.	34.00	1.50		408.00		
	oramangala BDA Complex Junction	2	4	21.50	1.50		258.00	<i>'</i> .	
	oramangala 5th Block Junction	2	4	12.30	1.50		147.60		
	oramangala 60 feet Road Junction	2	4	12.50	1.50		150.00	1	
	oramangala 8th Main Junction	2	4	15.50	1.50		186.00		* ****
	ony world Junction	2	4	20.13	1.50		241.56		
	jipura Junction	2	4	18.30	1.50		219.60	^	
	attery limit			1					-1 1 1 2 2 2
	owards Kendriya sadana	2	1	100.00	28.97		5794.00		War and the
	owards Domlur	2	1	100.00	26.86	0 **	5371.00 V	,	30000 0200
	owards Hosur Road - Sarjapur Road	2	1	100.00	26.70	-	5340.00		Mark Committee Contraction
	owards Sarjapur Road -Madiwala Road	2	1::	100.00	27.70	-	5540.00		
C	ross Roads		0.10	1857 151	Mary				T. C. DO TO HEAVE
L	HS			and the same and the	war and the same		• • • • •		- 15 St. 16 St.
17	7th Main		1 - 1	50.00	9.14		457.00		Coyer (Signatura Napa) y
Te	owards St. Johns (0.00 to 250.00)		1	250.00	29.57		7392.50		
	st Cross .		1	50.00	10.79		539.50 V		5/5/2010 (CALS ) 1970
	ad .		1	50.00	11.57		578.50		
7t	h Cross		1	50.00	7.60		380.00		10 02 E-10 CA
	h Cross	+	1	50.00	9.22	WOOD WILL	461.00		one and description to the second
	owards Sony World		1	50.00	17.90		895.00		TEAR COLUMN
	ross Road		001000	50.00	5.40		270.00		The state of the s
	ross Road		1	50.00	6.07		303.50		397 B ( ) 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
-	h Cross		1	50.00	3.49	-	174.50		A 2000 -
_	ross Road		1	50.00	2.33				ANCHEL BUT LOS
-	h Cross	-		50.00	4.34		116.50		
	d Cross	1.0	1	50.00	4.34		217.00 V		The state of the s
	d Cross		1	50.00	5.05	-			
-	t Cross		1	50.00	3.25		252.50		
	h Cross		1	50.00	2.94		162.50		
	wards Ejipura		1	. 50.00	8.23		147.00	A SECTION OF THE SECTION	or a marker in the second
-	HS AFTER		1	90.00	0.20		411.50		No. of Contract
	wards Sarjapura (0.00 to 250.00)		i	250.00	90.94		7007.00		- market
	th Main		1	50.00	7.02		7335.00		Esterior Dell Cons
_	d Cross		1	50.00	7.44		351.00 372.00		
_	d Cross		1	50.00	7.43		371.50	_	A
***	h Cross	· · · · · · · · · · · · · · · · · · ·	1	50.00	7.46		373.00		
Tree bearing	Cross -		1	50.00	7.80		390.00		production of the same
-	Cross		1	50.00	8.06		403.00		
-	wards Koramangala 1st Block	-	1	50.00	10.97		548.50		
ALCOHOL: NAME OF	Cross			7 50.00	6.98		349.00		
-	n main ದಾಖಲೆಯನ್ನು ಮಾಹಿತಿ-ಹ	ಕ್ಕಾ ಕಾಯ	2005	50.00	11.73	**!	The second second second		
-	n Cross	<b>ಆಾಗಿದ</b>	1 =	50.00	6.53		586.50		
	oss road		1	50.00	9.09		326.50	-	
_	wards Sarjapura		1	50.00	17.05		454.50		
10				100.00	17.05		852.50		
	d main	100000		50.00	4.42		221.00 V		

a s

No.	D	1.1		Length	Breadth	Depth	27027	F 40, 100	FALL DESCRIPTION
	2.43%	Unit	No.	m	m	m	Quantity	Rate in Rs.	Amount in Rs
-	Cross Road	1	1	50.00	4.21	- 1	210.50	/	OT PARTIES (ALA)
-	Cross Road		1	50.00	6.03	-			1.5
-	Cross Road		1	50.00	3.97		ATT TO THE PROPERTY OF		
-	Cross Road		1,	50.00	5.25		262.50,	1.	Participation of the Control of the
	Towards Divya Jyothi Apartment		1.	50.00	15.61		780.50	1	
	D.1. D.	1	-1"				186253.78	1	
_	Deduct Pier Excavation portion								
	Standard Span Pier	2	.78	6.30	1.40		. 13,75.92		7 20
	Obligatory Span Pier	2	14	10.70	2.10		629.16	1.	
	Obligatory Pier 25m Span	2	3	9.30	1.40		78.12		1, 145 (* 154
	to the second se	er s mpajara		process of the second	the make	The State of	2083.20		the second many and as the specimens
-	<del></del>		1	1 0			184170.58	/	/ /
-	<del>                                     </del>					Say	184171.00	17.12	3152639.00
2 16	Providing and lawing bit	<u>a</u>							
2.10	Providing and laying bituminous concrete 40 mm thick with 100 - 120 TPH batch type hot mix plant producing an			- , = -			4 4		
	average output of 75 tonnes per hour using	- 1	a - 1				1		
	crushed aggregates of specified grading,				1	ì			
	premixed with bituminous binder at 5.4 to	1		-	1	1	1		
	5.6% of mix and filler, transporting the hot	-0.1	4			3 -			
	mix to work site, laying with a hydrostatic		er a reg					7 11 1 25 1	
	paver finisher with sensor control to the							2 2005	हा ।
	required grade, level and alignment, rolling	3			. ದಾಖ	ತೆಯನ್ನು ನ	ಮಾಹಿತಿ ಹಕ್ಕು	ಕಾಯ್ದ 2003	°
	with smooth wheeled, vibratory and		- 1			<b>୬</b> ଜ	ක්වූ බැස්ප්	ಗಿದ	
	tandem rollers to achieve the desired	100	Î				* =	1	
- , *	compaction as per MoRT&H specification		1111	10.4		-	3/	700	
	clause No. 500.9 complete in all respects as					Const	ಪಾಲಕ ಅಭಿಯ -ಕೇ-2, ಬಿ.ಎ.	ಂತರರು	7
	per specifications. MoRT&H Specification				1 (	- Doing	_हैc−2, थी.की.	ಎಂಪಿ	
	No. 509 with 30-45mm compacted thickness (grading II) with 6% 60/70 grade bitumen				-	-			1224
	(grading it) with 6% 60/70 grade bitumen				Park to the	1			
	(P.No.176 of I.No.21.22.4 in PW,P&IWTD S.F	2012-	13)						
	(Prevailing Rate as on 26-12-2012)					-	And the second second	The state of the state of	Service and the service of the servi
						12.51	3.000	7 25 25 2	W 4
	Surface level Roads							1 11	18 2 4
-2 %	Surface level Roads  LHS		participation of the second					1	
	LHS		1	2137.48	10.50	0.04	897.74		a comment
		0	1	2137.48	10.50	0.04	897.74		
	LHS CH-1-199.83 to CH-1-2605.46 (deductions of	0	I I	2137.48	10.50	0.04	897.74	7	
	LHS CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span) RHS	0		of the Williams			EMATEUR IN		(1)
	CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span) RHS CH-1-199.83 to CH-1-2605.46 (deductions of	,	1	2137.48	10.50	0.04	897.74		
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	LHS CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span) RHS CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span) Up Ramp LHS & RHS Down Ramp LHS & RHS Obligatory Span CH-1-442.29 to CH-1-482.291 CH-1-919.428 to CH-1-949.43 CH-1-1147.24 to CH-1-1177.24 CH-1-1284.74 to CH-1-1314.74 CH-1-1379.80 to CH-1-1314.74 CH-1-1379.80 to CH-1-1765.07 CH-1-1949.30 to CH-1-1977.45 CH-1-2386.85 to CH-1-2436.85 Standard Span Pier Obligatory Span Pier		1 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	207.64 203.44 40.00 30.00 30.00 30.00 30.00 28.15 50.00 27.20 38.80 33.20	10.50 10.50 10.50 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00	0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04	897,74 174.42 170.89 40.00 30.00 30.00 30.00 28.15 50.00 190.94 64.10 8.96		
	LHS CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span) RHS CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span) Up Ramp LHS & RHS Down Ramp LHS & RHS Obligatory Span CH-1-442.29 to CH-1-482.291 CH-1-919.428 to CH-1-949.43 CH-1-1147.24 to CH-1-1177.24 CH-1-1284.74 to CH-1-1314.74 CH-1-1379.80 to CH-1-1314.74 CH-1-1735.07 to CH-1-1765.07 CH-1-1949.30 to CH-1-1977.45 CH-1-2386.85 to CH-1-2436.85 Standard Span Pier Obligatory Span Up Ramp and Down Ramp, Standard Span Pier		1 2 2 1 1 1 1 1 1 1 1 1 78 14 3	207.64 203.44 40.00 30.00 30.00 30.00 30.00 30.00 28.15 50.00 27.20 38.80	10.50 10.50 10.50 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00	0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04	897,74 174.42 170.89 40.00 30.00 30.00 30.00 30.00 28.15 50.00 190.94 64.10		
	LHS CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span) RHS CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span) Up Ramp LHS & RHS Down Ramp LHS & RHS Obligatory Span CH-1-442.29 to CH-1-482.291 CH-1-919.428 to CH-1-949.43 CH-1-1147.24 to CH-1-1177.24 CH-1-1284.74 to CH-1-1314.74 CH-1-1379.80 to CH-1-1409.80 CH-1-1735.07 to CH-1-1765.07 CH-1-1949.30 to CH-1-1977.45 CH-1-2386.85 to CH-1-2436.85 Standard Span Pier Obligatory Span Up Ramp and Down Ramp.		1 2 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2137.48 207.64 203.44 40.00 30.00 30.00 30.00 30.00 28.15 50.00 27.20 38.80 33.20	10.50 10.50 10.50 25.00 25	0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04	897,74 174.42 170.89 40.00 30.00 30.00 30.00 28.15 50.00 190.94 64.10 8.96		
	CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span) RHS  CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span) Up Ramp LHS & RHS  Down Ramp LHS & RHS  Obligatory Span  CH-1-442.29 to CH-1-482.291  CH-1-919.428 to CH-1-482.291  CH-1-1147.24 to CH-1-1177.24  CH-1-1284.74 to CH-1-1314.74  CH-1-1379.80 to CH-1-1409.80  CH-1-1735.07 to CH-1-1765.07  CH-1-1949.30 to CH-1-1977.45  CH-1-2386.85 to CH-1-2436.85  Standard Span Pier  Obligatory Span Pier  Obligatory Pier 25m Span  Up Ramp and Down Ramp  Standard Span Pier  Up Ramp and Down Ramp  Obligatory Pier		1 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	207.64 203.44 40.00 30.00 30.00 30.00 30.00 28.15 50.00 27.20 38.80 33.20	10.50 10.50 10.50 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00	0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04	897,74 174.42 170.89 40.00 30.00 30.00 30.00 28.15 50.00 190.94 64.10 8.96		
	CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span) RHS  CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span) Up Ramp LHS & RHS  Down Ramp LHS & RHS  Down Ramp LHS & RHS  Obligatory Span  CH-1-442.29 to CH-1-482.291  CH-1-919.428 to CH-1-949.43  CH-1-1147.24 to CH-1-1177.24  CH-1-1284.74 to CH-1-1314.74  CH-1-1379.80 to CH-1-1409.80  CH-1-1735.07 to CH-1-1765.07  CH-1-1949.30 to CH-1-1977.45  CH-1-2386.85 to CH-1-2436.85  Standard Span Pier  Obligatory Pier 25m Span  Up Ramp and Down Ramp  Standard Span Pier  Up Ramp and Down Ramp  Obligatory Pier  For Pedestrian Crossing		1 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 2 2	2137.48 207.64 203.44 40.00 30.00 30.00 30.00 30.00 28.15 50.00 27.20 38.80 33.20 27.20	10.50 10.50 10.50 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00 2.25 2.25 2.25	0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04	897,74  174.42  170.89  40.00  30.00  30.00  30.00  30.00  28.15  50.00  190.94  64.10  8.96  4.90  13.97		
	CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span)  RHS  CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span)  Up Ramp LHS & RHS  Down Ramp LHS & RHS  Down Ramp LHS & RHS  Obligatory Span  CH-1-442.29 to CH-1-482.291  CH-1-919.428 to CH-1-949.43  CH-1-1147.24 to CH-1-1177.24  CH-1-1284.74 to CH-1-1314.74  CH-1-1379.80 to CH-1-1409.80  CH-1-1735.07 to CH-1-1765.07  CH-1-1949.30 to CH-1-1977.45  CH-1-2386.85 to CH-1-2436.85  Standard Span Pier  Obligatory Pier 25m Span  Up Ramp and Down Ramp  Standard Span Pier  Up Ramp and Down Ramp  Obligatory Pier  For Pedestrian Crossing  Kendriya Sndana Junction		1 2 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2137.48 207.64 203.44 40.00 30.00 30.00 30.00 30.00 28.15 50.00 27.20 38.80 33.20 27.20 38.80 34.00	10.50 10.50 10.50 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00 2.25 2.25 2.25 2.25	0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04	897,74 174.42 170.89 40.00 30.00 30.00 30.00 30.00 28.15 50.00 190.94 64.10 8.96 4.90 13.97		
	CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span) RHS  CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span) Up Ramp LHS & RHS  Down Ramp LHS & RHS  Down Ramp LHS & RHS  Obligatory Span  CH-1-442.29 to CH-1-482.291  CH-1-919.428 to CH-1-949.43  CH-1-1147.24 to CH-1-1177.24  CH-1-1284.74 to CH-1-1314.74  CH-1-1379.80 to CH-1-1409.80  CH-1-1735.07 to CH-1-1765.07  CH-1-1949.30 to CH-1-1977.45  CH-1-2386.85 to CH-1-2436.85  Standard Span Pier  Obligatory Pier 25m Span  Up Ramp and Down Ramp  Standard Span Pier  Up Ramp and Down Ramp  Obligatory Pier  For Pedestrian Crossing		1 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 2 2	2137.48 207.64 203.44 40.00 30.00 30.00 30.00 30.00 28.15 50.00 27.20 38.80 33.20 27.20	10.50 10.50 10.50 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00 2.25 2.25 2.25	0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04	897,74  174.42  170.89  40.00  30.00  30.00  30.00  30.00  28.15  50.00  190.94  64.10  8.96  4.90  13.97		

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0.	Description of Work	Unit	No.	The same of the sa	Breadth		Quantity	Rate in	A Company of
٠,	Koramangala 8th Main Junction		•	m :	m	m	Quantity	Rs.	Amount in
-	Sony world Junction		4	. 15.50	• 1.50	0.04	3.72	1	
	Ejipura Junction		4	20.13		0.04	4.83	1	1
	Battery limit		4	18.30	1.50	0.04	4.39		
	Towards Kendriya sadana			100 50	1 1 1 1 1 1 1 1				
-	Towards Domlur		1	100.00	28.97	0.04	115.88		*
	Towards Hosur Road - Sarjapur Road		1	100.00	26.86	0:04			į.
	Towards Sarjapur Road -Madiwala Road			100.00	26.70	0.04			
	Cross Roads			100.00	27.70	0.04	110.80	/	
1 ( ) (0	LHS FORD								The second second
	17th Main		1.	50.00	0.14				
	Towards St. Johns (0.00 to 250.00)		1	250.00	9.14	0.04	18.28		Elmaker a committee
	1st Cross		1	50.00	29.57	0.04	295.70		
	Road		1	50.00	10.79	0.04	21.58		+
	7th Cross		1	50.00	11.57	0.04	23.14 V	A CONTRACTOR OF THE PARTY OF TH	
	4th Cross :		1	50.00	7.60	0.04	15.20		1 6-5
-	Towards Sony World		1	50.00	17.90	0.04	18.44		
	Cross Road		1	50.00	5.40	0.04	35.80		
-	Cross Road		1	50.00	6.07	0.04	10.80 V		
	7th Cross		1	50.00	3.49	0.04	12.14 V 6.98 V	1.	
	Cross Road		1	50.00	2.33	0.04	4.66 V	/	
	4th Cross		1	50.00	4.34	0.04	8.68		
	3rd Cross		1	50.00	. 4.34	0.04	8.68		
	2nd Cross		1	50.00	5.05	0.04	10.10		
_	1st Cross	1	1	50.00	3.25	0.04	6.50 V		
	4th Cross		1	50.00	2.94	0.04	5.88	- +	- 3
	Towards Ejipura		1	50.00	8.23	0.04	16.46 V	-	
_	RHS			and the second second	100-100-000	1			
	Cowards Sarjapura (0.00 to 250.00)		1	250.00	29.34	0.04	293.40		
	7th Main		1	50.00	7.02	0.04	14.04	-	
-	2nd Cross		1	50.00	7.44	0.04	14.88	100	
	ard Cross	-	1 .	50.00	7.43	0.04	14.86	are a complete of	
	th Cross		1	50.00	7.46	0.04	14.92	1000 A	195, 5 63
_	th Cross	- Mari	1	50.00	7.80	0.04	15.60		183,4419 (441)
-			1	-50.00	8.06	0.04	16.12	~	1.75
	owards Koramangala 1st Block		1	50.00	10.97	0.04	21.94	1	10
	th main		1	50.00	6.98	0.04	13.96	•	7
-	th Cross		- July and a	50.00	11.73	0.04	23.46	Title and a service of	Contract of the second
-	cross road	-	1	50.00	6.53	0.04	13.06	•	- 12 - 12
_	owards Sarjapura	100	1	50.00	9.09	0.04	18.18	A Company of the Comp	
	nd main	-	1	50.00	17.05	0.04	34.10		
-	nd main (A)	-	1	50.00	4.42	0.04	8.84	Turket of	200
-	ross Road	12 3	1	50.00	6.89	0.04	13.78		for the stage of
	ross Road		1	50.00	4.21	0.04	8.42	market in the	and spile to posterio
	ross Road	-	1	50.00	6.03 3.97	0.04	12.06		
	ross Road		1	50.00	5.25	0.04	7.94		1000
T	owards Divya Jyothi Apartment		1	50.00	15.61	0.04	10.50		1111
-	and the second s	14,5 40 5	1 1 1 2 2	55.00	7 10.01	0.04	31.22	Lucian	and the same
D	educt Pier Excavation portion		-				4285.23	-	4 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -
S	tandard Span Pier	2	78	6.30	1.40	0.04	55.04		1.11
	bligatory Span Pier	2	14	10.70	2.10	0.04	25.17	1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
0		2	3	9.30	1.40	0.04	3.12		a region of
						3.04	83.33		
_							4201.90		1110
	Cla		1			Say		1177.44	46967596.
	1/1/91=	SI 11.	1	1 1 1	r		11 1	1	120066226.

Traffic Engineering Callal Cost of Surface Level Boad (Slip Boad 09 20070000:00 Rangalore Mahanagara Palike Executive Engineer Bruhath Bangalore Mahanagara Palike ರಾಖಲೆಯನ್ನು ಮಾಹಿತಿ ದಪ್ಪ ಕಾರ್ಮ್ನಾಗಿಕಾತ - 560 002.

Traffic Engineering Cell (Road Infra) Bruhat Bangalore Mahanagara Palike Bangalore - 560 002.

Manasa Consultania

SI.	Description of Work	TT	N7.	Length	Breadth	Depth	0	Rate in	Outstandings
No.	Description of Work	Unit	No.	m	m	m	Quantity	Rs.	Amount in 1
.13	KSRRB 200-7. Providing and applying tack coat on prepared black topped surfaces at 2.5 kg per 10 sqm, heating bitumen in boiler fitted with spray set (Excluding cleaning of road surface) incuding cost of all								
	materials, labour,HOM of machineries complete as per specifications. MORTH/Chapter 5								***
	(P.No. 173 I.No.21.7 of PW,P&IWTD S.R 201	2-13)		•	:				1 -
	(Prevailing Rate as on 26-12-2012)				TOTAL CONTROL OF THE				
	Surface level Roads (Over Exsting surface)								N MAT C
-	LHS CH-1-199.83 to CH-1-2605.46 (deductions of			0107 (0	10.70				
	Obligatory Span)		1	2137.48	10.50		22443.51		
	RHS CH-1-199.83 to CH-1-2605.46 (deductions of		25 11	93.07.40	10.70				31
	Obligatory Span)	1	. 1	2137.48	10.50		22443.51	<b>Y</b>	
	Up Ramp LHS & RHS		2	207.64	10.50		4360.44	~	
	Down Ramp LHS & RHS	-	2	203.44	10.50	!	4272.24		
	32.3			* + 3 g		- 1			
	Obligatory Span	1							
	CH-1-442.29 to CH-1-482.291		1	40.00	25.00		1000.03	V	
-	CH-1-919.428 to CH-1-949.43		1	30.00	25.00		750.05	-	-
-	CH-1-1147.24 to CH-1-1177.24	i	1	30.00	25.00		750.00	No.	Harry May
_	CH-1-1284.74 to CH-1-1314.74 CH-1-1379.80 to CH-1-1409.80		1	30.00	25.00	10. **	750.00	_	
	CH-1-1735.07 to CH-1-1765.07		1 1	30.00	25.00		750.00		
-	CH-1-1949.30 to CH-1-1977:45		1	28.15	25.00 25.00		750.00 703.75	_	
	CH-1-2386.85 to CH-1-2436.85		1	50.00	25.00		1250.00	AND THE RESERVE OF THE PARTY OF	
	Standard Span Pier		78	27.20	2.25		4773.60		
	Obligatory Span Pier		14	38.80	2.95		1602.44		
	Obligatory Pier 25m Span		3	33.20	2.25		224.10		3.5
	Up Ramp and Down Ramp			and the same	a,	=( [		1	Antological and
	Standard Span Pier Up Ramp and Down Ramp		2	27.20	2.25		122.40		disconding the second
	Obligatory Pier		4	38.80	2.25		0.40.00		Migrature and a
-	Congacoty Tier		-1	30.00	2.20		349.20 67295.26	_	4-0-1
	Deduct Qty of Item No-1.07						17108.00		THE SPECIAL PROPERTY.
	less care success				4,4427		50187.26		
	at King Strategy	15.54	300	P 1 1 10 17 2	11111111	Say.	50188.00	-	859118.
				45,				A Topped	(4 1-4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	KSRRB M500-17. Providing and laying	Cum					Jul.		
	dense graded bituminous macadam with 100-120 TPH batch type HMP		ere - 42 f - 17 40 f	esta se l'erefice		Tempore.	o-1 - 1		aria de la compansión d
	producing an average output of 75 tonnes						9 9		
	per hour using crushed aggregates of	1							
	specified grading, premixed with				1	ಧಾಖ	ಲೆಯನ್ನು ಮ	ಾಹಿತಿ ಹಕ್ಕು ಕ	ಂಯ್ದೆ 2005ರ
	bituminous binder at 4.0 to 4.5% by weight of total mix and filler, transporting the hot		*				ಅಡಿಯ	එූ බැස්ප්රාර	ದೆ
	mix to work site, laying with a hydrostatic	İ	1						A STORY
l.	paver finisher with sensor control to the		- 1	100				0	
	required grade, level and alignmnet, rolling						್ಷಾರ್ಯಪ್ರ ೧೯೮೭	ಲಕ ಅಭಿಯರ ೧–2. ಬಿ.ಏ.ಎಂ	ತರರು
	with smooth wheeled, vibratory and tandem rollers to achieve the desired		1 -	- 1-		-		A CONTRACTOR OF THE PARTY OF TH	
	compaction as per MoRT&H specification				i	I		-	
	clause No. 500.7 complete in all respects as	1	į	i	Ī			1	
	per specifications. Bitumen 60/70 MoRT&H	1					and a second	- 1	
	Specification No. 507		1						
_	P.No. 175 I.No.21.19.2 of PW,P&IWTD S.R 2	012-13	)		53.4	- i		1 1 5 1 1 1	41
	(Prevailing Rate as on 26-12-2012) Surface level Roads					<u>_</u>		i	
	LHS				·		j		
	CH-1-199.83 to CH-1-2605.46 (deductions of		1	2137.48	10.50	0.05	1122.18		
1	011-1-133.03 to CH-1-2003.46 meducinns m			213/48	111 311	(1 (1):)			

SI.	Description of Work	Unit	No.	Length		Depth	Quantity	Rate in	Amount in
No.		d A		m	m	m	- Cualitate	Rs.	Timount in
	CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span)		1	2137.48	10.50	0.05	1122.18		
	Up Ramp LHS & RHS		2	207.64	10.50	0.05	218.02	/	1
	Down Ramp LHS & RHS		2	203.44	10.50	0.05		Carrier and the second	1 20 20
		· · · · · ·		200.11	10.00	0.00	210.01		-
	Obligatory Span		1						-
-	CH-1-442.29 to CH-1-482.291		. 1 :	40.00	25.00	0.05	50.00		<del> </del>
	CH-1-919.428 to CH-1-949.43		1	30.00	25.00	0.05			
	CH-1-1147.24 to CH-1-1177.24		1	30.00	25.00	0.05	7		The state of the second control of
	CH-1-1284.74 to CH-1-1314.74		1	30.00	25.00	0.05	37.50		1
377	CH-1-1379.80 to CH-1-1409.80		1	30.00	25.00	0.05	37.50		
	CH-1-1735.07 to CH-1-1765.07		1	30.00	25.00	0.05			17
	CH-1-1949.30 to CH-1-1977.45		1	28.15	25.00	0.05	35.19		
	CH-1-2386.85 to CH-1-2436.85		1	50.00	25.00	0.05			
	Standard Span Pier		78	27.20	2.25	0.05	238.68		-
-	Obligatory Span Pier		14	38.80	2.25	0.05	80.12		
-	Obligatory Pier 25m Span ·		3	33.20	2.25	0.05	11.21	/	
	Up Ramp and Down Ramp		<u> </u>	33.20	2.20	0.03	11.21		-
-		-+	2	27.20	0.05	0.05	0.10	/	-
		$\rightarrow$		21.20	2.25	0.05	6.12	V	1
	Up Ramp and Down Ramp Obligatory Pier		-	00.00	0.05			/	4
	Battery limit		4	38.80	2.25	0.05	17.46	<i>v</i>	1
-				100.00	22.05				
_	Towards Kendriya sadana		1	100.00	28.97	0.05	144.85		
	Towards Domlur		1	100.00	26.86	0.05	134.28		
	Towards Hosur Road - Sarjapur Road		-1	100.00	26.70	0.05	133.50		
4	Towards Sarjapur Road -Madiwala Road		1	100.00	27.70	0.05	138.50	V	
	For Pedestrian Crossing	and the same of the same	a hara de la companya	es asimplement in the contract of a	WHAT CHY JUST 4	and an action		in the second	Park to the control of the same
	Kendriya Sadana Junction		4	34.00	1.50	0.05	10.20		
	Koramangala BDA Complex Junction	1	4	21.50	1.50	0.05	6.45		2 11 - + 0 1
	Koramangala 5th Block Junction		4	12.30	1.50	0.05	3.69		
	Koramangala 60 feet Road Junction		4	12.50	1.50	0.05	3.75		
	Koramangala 8th Main Junction	ie in religionality	4 10 4		1.50	0.05	4.65	V	Charles and the second
	Sony world Junction		4	20.13	1.50	0.05	6.04		Mary Liver 1 A
	Ejipura Junction	or consists	4	18.30	1.50	0.05			market and the second
2				12.7		1.68	3956.16	/	
- 6	Deduct Pier Excavation portion	-						_	a de introdu
_	Standard Span Pier	2	78	6.30	1.40	0.05	68.80		TOTAL CONTROL OF
	Obligatory Span Pier	2	14	. 10.70	2.10	0.05	31.46		
	Obligatory Pier 25m Span	2	3	9.30	• 1.40	0.05	3.91		1 200 000
TYL:	15 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		A. A. C. C. C. C. C.		Angle to the late of		104.16		A Common
1					1		3852.00		
						Say	3852.00	9183.46	3537467
15	KSRRB 200-7.Providing and applying tack	C	rama - jr v			**********	+ +		
	coat on prepared black topped surfaces at 2.5 kg per 10 sqm,heating bitumen in boiler fitted with spray set (Excluding	<b>54.</b>				ಧಾತ	ುಲೆಯನ್ನು ಜ ಅಡಿಯ	මෙම ස්තු ලේ බැස්ජා	ಾಯ್ದೆ 2005ರ ಗಿದೆ
i and	cleaning of road surface) incuding cost of all materials, labout, HOM of machineries complete as per specifications.		4-14-1				on our a	ರ್ ಅಭಿಯ	ಂತರರು
	MORTH/Chapter 5		1				Etaine-	e−2, ಬಿ.ඪ.ය.<	DO.23
	(P.No. 173 I.No.21.7 of PW,P&IWTD S.R 201 (Prevailing Rate as on 26-12-2012)	2-13)						1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
	Surface level Roads (Over BM & DBM)					1			
	LHS		3						
	CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span)	2	1	2137.48	10.50	-	44887.02		
	RHS CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span)	2	-i <sub>1</sub>	2137.48	10.50		44887.02 <b>Y</b>	/	
-	Up Ramp LHS & RHS	2	2	207.64	10.50		8720.88	/	7.7.
			$-\frac{2}{2}$	203.44	10.50	- 4 1	8544.48	1	
	Down Ramp LHS & RHS	2	-	2413 717					

SI.			- 181	Length	Breadth	Depth	Park 17 Table	Rate in	100 100 10 10 NAME OF THE OWNER OWNER OWNE
lo.	Description of Work	Unit	No.	m	m	m	Quantity	Rs.	Amount in R
-	CH-1-442.29 to CH-1-482.291	2	1	40.00	25.00		2000.05		
	CH-1-919.428 to CH-1-949.43	2	1	30.00	25.00		1500.10		
	CH-1-1147.24 to CH-1-1177.24	2	1.	30.00	25.00		1500.00		<del> </del>
	CH-1-1284.74 to CH-1-1314.74	2	1	30.00	25.00		1500.00		
	CH-1-1379.80 to CH-1-1409.80	2	1	30.00	25.00		1500.00		
	CH-1-1735.07 to CH-1-1765.07	2	1	30.00	25.00	1.	1500.00		<del> </del>
	CH-1-1949.30 to CH-1-1977.45	2	1	28.15	25.00		1407.50		
	CH-1-2386.85 to CH-1-2436.85	2 -	1	50.00	25.00		2500.00	_	
	Standard Span Pier	2	78	27.20	. 2.25		9547.20		
	Obligatory Span Pier	2	14	38.80	2.95		3204.88		1
-	Obligatory Pier 25m Span	2	3	33.20	2.25		448.20		The second section is a second section of
	Up Ramp and Down Ramp						110.20		low.
	Standard Span Pier	2	2	27.20	. 2.25	!	244.80	/	
	Up Ramp and Down Ramp					. i	211.00		
	Obligatory Pier	2	4	. 38.80	2.25	- ::	698.40	/	
1	For Pedestrian Crossing				1000	510	000.40		7 1 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
or I	Kendriya Sadana Junction	2	- 4	34.00	1.50	-	408.00	/	
	Koramangala BDA Complex Junction	2	4	21.50	1.50		258.00		
	Koramangala 5th Block Junction	2	4	12.30	1.50		147.60		
	Koramangala 60 feet Road Junction	2	4	12.50	1.50	-	150.00		1
	Koramangala 8th Main Junction	2	4	15.50	1.50		Y		The second
	Sony world Junction	2	4	20.13	1.50		186.00		
	Ejipura Junction	2	4	18.30	1.50		241.56		4 4 4
	Battery limit	-	1	10.00	1.00		219.60		
	Towards Kendriya sadana	2	1	100.00	28.97		FE0.1.00	/	Marie Marie
	Towards Domlur	2	1	100.00	To Marie C. I.		5794.00		A STATE OF
	Towards Hosur Road - Sarjapur Road	2	1	100.00	26.86	0	5371.00	/	Property of the
-4	Juction			100.00	26.70		5340.00		
	Towards Sarjapur Road -Madiwala Road	2	1 .	100.00	27.70		5540.00	-	10 10 10 10 10 10 10 10 10 10 10 10 10 1
	Cross Roads				No.		-		
-				•					A LANGE OF THE PARTY OF THE PAR
	LHS		45 - 156 W. W.	(Sporting Services) adding	Marting over 1911	er tilg		a sa higanisa	a pro isasser capaca
	17th Main		1	50.00	9.14		457.00	egy law la	Commence of
	Towards St. Johns (0.00 to 250.00)		1	250.00	29.57		7392.50 V	19 (4) (4)	And the second second second
-	1st Cross		1	50,00	10.79	••	539.50 V		
-	Read		1	50.00	11.57	-	578.50	1	
-	7th Cross		1	50.00	7.60		380.00 V	1	
	4th Cross		T	50.00	9.22		461.00 V	/	The value of the said
	Towards Sony World		1	50.00	17.90		895.00		ACCURACY OF THE PARTY OF
_	Cross Road		. 1	50.00	5.40		270.00	Crata to pro-	19 Page 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
-	Cross Road		1	50.00	6.07		303.50	1	AN BERKERSTERNING
_	7th Cross	2.50	1	50.00	3.49	Sec	174.50	C. Joseph	And Salar Salar
17.0	Cross Road		1	50.00	2.33		116.50		
	4th Cross		1				217.00		tarini enganga takan arang at
-			not a more	50.00	4.34			A CAMPAGE AND AND AND AND AND AND AND AND AND AND	
-	3rd Cross	7)	1	50.00 50.00	4.34			A 2 1 1 1 1 2 1 2 1	1009
	3rd Cross 2nd Cross			1,000			217.00	And the property	
	3rd Cross		1	50.00	4.34 5.05		217.00 252.50		
	3rd Cross 2nd Cross		1 1	50.00 50.00	4.34 5.05 3.25		217.00 252.50 162.50		
	3rd Cross 2nd Cross 1st Cross		1 1 1	50.00 50.00 50.00 50.00	4.34 5.05 3.25 2.94		217.00 252.50 162.50 147.00		
	3rd Cross 2nd Cross 1st Cross 4th Cross		1 1 1 1	50.00 50.00 50.00	4.34 5.05 3.25		217.00 252.50 162.50		
1	3rd Cross 2nd Cross 1st Cross 4th Cross Towards Ejipura RHS		1 1 1 1	50.00 50.00 50.00 50.00 50.00	4.34 5.05 3.25 2.94 8.23		217.00 252.50 162.50 147.00 411.50		
1	3rd Cross 2nd Cross 1st Cross 4th Cross Towards Ejipura		1 1 1 1	50.00 50.00 50.00 50.00 - 50.00 250.00	4.34 5.05 3.25 2.94 8.23		217.00 252.50 162.50 147.00 411.50 7335.00		
1	3rd Cross 2nd Cross 1st Cross 4th Cross Fowards Ejipura RHS Fowards Sarjapura (0.00 to 250.00)		1 1 1 1 1	50.00 50.00 50.00 50.00 - 50.00 250.00 50.00	· 4.34 5.05 · 3.25 2.94 · 8.23 29.34 7.02		217.00 252.50 162.50 147.00 411.50 7335.00 351.00		Andrew Marine
1 1 2	3rd Cross 2nd Cross 1st Cross 4th Cross Fowards Ejipura RHS Fowards Sarjapura (0.00 to 250.00) 17th Main		1 1 1 1 1 1 1 1	50.00 50.00 50.00 50.00 - 50.00 250.00 50.00 50.00	4.34 5.05 3.25 2.94 8.23 29.34 7.02 7.44		217.00 252.50 162.50 147.00 411.50 7335.00 351.00 372.00		
	3rd Cross 2nd Cross 1st Cross 1st Cross 4th Cross Fowards Ejipura RHS Fowards Sarjapura (0.00 to 250.00) 17th Main 2nd Cross		1 1 1 1 1 1 1 1 1	50.00 50.00 50.00 50.00 50.00 250.00 50.00 50.00 50.00	4.34 5.05 3.25 2.94 8.23 29.34 7.02 7.44 7.43		217.00 252.50 162.50 147.00 411.50 7335.00 351.00 372.00 371.50		
1 1 1 1 2 2 3 4	3rd Cross 2nd Cross 1st Cross 1st Cross 4th Cross Fowards Ejipura RHS Fowards Sarjapura (0.00 to 250.00) 17th Main 2nd Cross Brd Cross		1 1 1 1 1 1 1 1 1 1 1	50.00 50.00 50.00 50.00 50.00 250.00 50.00 50.00 50.00 50.00	4.34 5.05 3.25 2.94 8.23 29.34 7.02 7.44 7.43 7.46		217.00 252.50 162.50 147.00 411.50 7335.00 351.00 372.00 371.50 373.00		
11 12 2 3 4 5 5	3rd Cross 2nd Cross 1st Cross 1st Cross 4th Cross Towards Ejipura RHS Fowards Sarjapura (0.00 to 250.00) 17th Main 2nd Cross 3rd Cross 4th Cross		1 1 1 1 1 1 1 1 1 1 1 1	50.00 50.00 50.00 50.00 50.00 250.00 50.00 50.00 50.00 50.00 50.00	4.34 5.05 3.25 2.94 8.23 29.34 7.02 7.44 7.43 7.46 7.80		217.00 252.50 162.50 147.00 411.50 7335.00 351.00 372.00 371.50 373.00 390.00		
1   1   1   1   1   1   1   1   1   1	3rd Cross 2nd Cross 1st Cross 4th Cross 4th Cross Fowards Ejipura RHS Fowards Sarjapura (0.00 to 250.00) 17th Main 2nd Cross 3rd Cross 4th Cross 5th Cross 5th Cross		1 1 1 1 1 1 1 1 1 1 1	50.00 50.00 50.00 50.00 50.00 250.00 50.00 50.00 50.00 50.00 50.00 50.00	4.34 5.05 3.25 2.94 8.23 29.34 7.02 7.44 7.43 7.46 7.80 8.06		217.00 252.50 162.50 147.00 411.50 7335.00 351.00 372.00 373.00 390.00 403.00		
1	3rd Cross 2nd Cross 1st Cross 4th Cross Fowards Ejipura RHS Fowards Sarjapura (0.00 to 250.00) 17th Main 2nd Cross 3rd Cross 5th Cross 5th Cross Fowards Koramangala 1st Block		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	50.00 50.00 50.00 50.00 - 50.00 - 50.00 50.00 50.00 50.00 50.00 50.00 50.00	4.34 5.05 3.25 2.94 8.23 29.34 7.02 7.44 7.43 7.46 7.80 8.06 10.97		217.00 252.50 162.50 147.00 411.50 7335.00 351.00 372.00 373.00 390.00 403.00 548.50		
1	Srd Cross 2nd Cross 1st Cross 1st Cross 4th Cross Fowards Ejipura RHS Fowards Sarjapura (0.00 to 250.00) 17th Main 2nd Cross 3rd Cross 3rd Cross 4th Cross 5th Cross 5th Cross Fowards Koramangala 1st Block 7th Cross 8th main	ಕ್ಕು ಕಾಯೆ	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	50.00 50.00 50.00 50.00 - 50.00 - 50.00 50.00 50.00 50.00 50.00 50.00 50.00 50.00	4.34 5.05 3.25 2.94 8.23 29.34 7.02 7.44 7.43 7.46 7.80 8.06 10.97 6.98		217.00 252.50 162.50 147.00 411.50 7335.00 351.00 372.00 371.50 373.00 390.00 403.00 548.50 349.00		
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Brd Cross 2nd Cross 1st Cross 4th Cross 4th Cross Fowards Ejipura RHS Fowards Sarjapura (0.00 to 250.00) 17th Main 2nd Cross 3rd Cross 3rd Cross 5th Cross 5th Cross Fowards Koramangala 1st Block 7th Cross 8th main	ಕ್ಕು ಕಾಯೆ ಚಲಾಗಿದೆ	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	50.00 50.00 50.00 50.00 - 50.00 - 50.00 50.00 50.00 50.00 50.00 50.00 50.00 50.00 50.00	4.34 5.05 3.25 2.94 8.23 29.34 7.02 7.44 7.43 7.46 7.80 8.06 10.97 6.98 11.73		217.00 252.50 162.50 147.00 411.50 7335.00 351.00 372.00 371.50 373.00 390.00 403.00 548.50 349.00 586.50		
13   14   17   17   17   17   17   17   17	Srd Cross 2nd Cross 1st Cross 4th Cross Fowards Ejipura RHS Fowards Sarjapura (0.00 to 250.00) 17th Main 2nd Cross 3rd Cross 5th Cross 5th Cross Fowards Koramangala 1st Block 7th Cross Sth màin 1th Cross 1th Cross 1th Cross 1th Cross 1th Cross 1th Cross 1th Cross 1th Cross 1th Cross 1th Cross 1th Cross 1th Cross 1th Cross 1th Cross 1th Cross 1th Cross 1th Cross 1th Cross 1th Cross	ಕ್ಕು ಕಾಯೆ ಚಲಾಗಿದೆ	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	50.00 50.00 50.00 50.00 - 50.00 - 50.00 50.00 50.00 50.00 50.00 50.00 50.00 50.00 50.00 50.00 50.00 50.00 50.00	4.34 5.05 3.25 2.94 8.23 29.34 7.02 7.44 7.43 7.46 7.80 8.06 10.97 6.98 11.73 6.53		217.00 252.50 162.50 147.00 411.50 7335.00 351.00 372.00 371.50 373.00 390.00 403.00 548.50 349.00 586.50 326.50		
13 13 13 13 13 13 13 13 13 13 14 14 17 17 17 18 18 18 18 18 18 18 18 18 18 18 18 18	Srd Cross 2nd Cross 1st Cross 4th Cross Fowards Ejipura RHS Fowards Sarjapura (0.00 to 250.00) 17th Main 2nd Cross 3rd Cross 5th Cross 5th Cross Fowards Koramangala 1st Block 7th Cross Sth màin 1th Cross Cross road	ಕ್ಕು ಕಾಯೆ ಆಾಗಿದೆ	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	50.00 50.00 50.00 50.00 - 50.00 - 50.00 50.00 50.00 50.00 50.00 50.00 50.00 50.00 50.00 50.00 50.00 50.00	4.34 5.05 3.25 2.94 8.23 29.34 7.02 7.44 7.43 7.46 7.80 8.06 10.97 6.98 11.73 6.53 9.09		217.00 252.50 162.50 147.00 411.50 7335.00 351.00 372.00 371.50 373.00 403.00 403.00 548.50 349.00 586.50 454.50 454.50		
13 13 13 13 13 13 13 13 13 13 14 14 15 17 17 18 18 18 18 18 18 18 18 18 18 18 18 18	Srd Cross 2nd Cross 1st Cross 4th Cross Fowards Ejipura RHS Fowards Sarjapura (0.00 to 250.00) 17th Main 2nd Cross 3rd Cross 5th Cross 5th Cross Fowards Koramangala 1st Block 7th Cross Sth màin 1th Cross 1th Cross 1th Cross 1th Cross 1th Cross 1th Cross 1th Cross 1th Cross 1th Cross 1th Cross 1th Cross 1th Cross 1th Cross 1th Cross 1th Cross 1th Cross 1th Cross 1th Cross 1th Cross		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	50.00 50.00 50.00 50.00 - 50.00 - 50.00 50.00 50.00 50.00 50.00 50.00 50.00 50.00 50.00 50.00 50.00 50.00 50.00	4.34 5.05 3.25 2.94 8.23 29.34 7.02 7.44 7.43 7.46 7.80 8.06 10.97 6.98 11.73 6.53		217.00 252.50 162.50 147.00 411.50 7335.00 351.00 372.00 371.50 373.00 390.00 403.00 548.50 349.00 586.50 326.50		

Sl.	Description of Work	Unit	No.		Breadth		Quantity	Rate in	Amount in R
140.		4		m	m	m	quantity	Rs.	Amount in K
157	Cross Road Cross Road	77.0	1	50.00	4.21	•	210.50		A THE PARTY OF THE
	Cross Road	-	1	50.00	6.03	-	301.50		
- 177	Cross Road		1	50.00			198.50		
		-	1	50.00		-	262.50	1	
	Towards Divya Jyothi Apartment	<u>.                                    </u>	1	50.00	15.61		780.50		
	Deduct Die Territier	<u> </u>					186253.78		
	Deduct Pier Excavation portion Standard Span Pier		-	1		,			
	Obligatory Span Pier	2	.78	6.30	1.40	. 3.	. 1375.92		
	Obligatory Pier 25m Span	2	14	10.70	2.10		629.16		The second secon
-	Congacory rier zom Span	2	3	9.30	1.40		78.12		100000000000000000000000000000000000000
		- a supplied	and the second second second	pare to section	Committee of		2083.20	A	A CONTRACTOR OF THE STATE OF TH
				1			184170.58	/	1
				-		Say	184171.00	17.12	3152639,
.16	Providing and laying bituminous	Cum							Aug 2
	concrete 40 mm thick with 100 - 120 TPH				145° E	-			
	batch type hot mix plant producing an						- 1		
	average output of 75 tonnes per hour using	ì					4		
	crushed aggregates of specified grading,				į	ĺ			0 2 T
	premixed with bituminous binder at 5.4 to	- 1				1			
	5.6% of mix and filler, transporting the hot		1						
	mix to work site, laying with a hydrostatic	1			•				
- 8	paver finisher with sensor control to the					-		2005	डा
	required grade, level and alignment, rolling				ದಾಖ	ತಿಯನ್ನು (	ಮಾಹಿತಿ ಹಕ್ಕ ಯಲ್ಲಿ ನೀಡಲಾ	50000 200	
	with smooth wheeled, vibratory and	1				90	ಯಲ್ಲಿ ನೀಡಲಾ	ina .	
	tandem rollers to achieve the desired	-11	- [		200				
-	compaction as per MoRT&H specification clause No. 500.9 complete in all respects as			1 1		-	03		
	per specifications. MoRT&H Specification		CALSON ISSUED			- mont	ಪಾಲಕ ಅಭಿಯ	ಂತರರು	V
	No. 509 with 30-45mm compacted thickness				1 (	- Ochoc	-8e-2, ≥2.50.	ಎಂ.ಬ	
	(grading II) with 6% 60/70 grade bitumen  (P.No. 176 of I.No. 21. 22. 4 in PW, P&IWTD S.I. (Prevailing Rate as on 26-12-2012)	₹ 2012-	13)				and the state of t		L.
	(grading II) with 6% 60/70 grade bitumen  (P.No. 176 of I.No. 21. 22.4 in PW,P&IWTD S.F (Prevailing Rate as on 26-12-2012)  Surface level Roads  LHS		Sant Park	2137.48	10.50	004	2007		
	(grading II) with 6% 60/70 grade bitumen (P.No.176 of I.No.21.22.4 in PW,P&IWTD S.F (Prevailing Rate as on 26-12-2012) Surface level Roads		13)	2137.48	10.50	0.04	897.74		
	(grading II) with 6% 60/70 grade bitumen  (P.No. 176 of I.No. 21. 22. 4 in PW.P&IWTD S.I (Prevailing Rate as on 26-12-2012)  Surface level Roads  LHS  CH-1-199.83 to CH-1-2605.46 (deductions of		Sant Park	2137.48	10.50	0.04	897.74		
	(grading II) with 6% 60/70 grade bitumen  (P.No. 176 of I.No. 21. 22. 4 in PW,P&IWTD S.I (Prevailing Rate as on 26-12-2012)  Surface level Roads  LHS  CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span)  RHS		1	э эвра дэг жэд э		-	M. D. A. M. T. T. M. M. T. M.		
	(grading II) with 6% 60/70 grade bitumen  (P.No. 176 of I.No. 21. 22. 4 in PW, P&IWTD S. I (Prevailing Rate as on 26-12-2012)  Surface level Roads  LHS  CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span)  RHS  CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span)		Sant Park	2137.48	10.50	0.04	897.74		
	(grading II) with 6% 60/70 grade bitumen  (P.No.176 of I.No.21.22.4 in PW,P&IWTD S.F. (Prevailing Rate as on 26-12-2012)  Surface level Roads  LHS  CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span)  RHS  CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span)		I	2137.48	10.50	0.04	897,74		
	(grading II) with 6% 60/70 grade bitumen  (P.No. 176 of I.No. 21. 22. 4 in PW, P&IWTD S.I. (Prevailing Rate as on 26-12-2012)  Surface level Roads  LHS  CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span)  CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span)  Up Ramp LHS & RHS		1 2	э эвра дэг жэд э		-	M. D. A. M. T. T. M. M. T. M.		
	(grading II) with 6% 60/70 grade bitumen  (P.No. 176 of I.No. 21.22.4 in PW, P&IWTD S. I (Prevailing Rate as on 26-12-2012)  Surface level Roads  LHS  CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span)  RHS  CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span)  Up Ramp LHS & RHS  Down Ramp LHS & RHS		I	2137.48	10.50	0.04	897,74		
	(grading II) with 6% 60/70 grade bitumen  (P.No. 176 of I.No. 21.22.4 in PW, P&IWTD S.F. (Prevailing Rate as on 26-12-2012)  Surface level Roads  LHS  CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span)  RHS  CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span)  Up Ramp LHS & RHS  Down Ramp LHS & RHS  Obligatory Span		1 2	2137.48 .	10.50	0.04	897,74 174.42		
	(grading II) with 6% 60/70 grade bitumen  (P.No. 176 of I.No. 21.22.4 in PW, P&IWTD S. F. (Prevailing Rate as on 26-12-2012)  Surface level Roads  LHS  CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span)  RHS  CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span)  Up Ramp LHS & RHS  Down Ramp LHS & RHS  Obligatory Span  CH-1-442.29 to CH-1-482.291		1 2	2137.48 .	10.50	0.04	897,74 174.42 170.89		
	(grading II) with 6% 60/70 grade bitumen  (P.No. 176 of I.No. 21. 22. 4 in PW, P&IWTD S. I. (Prevailing Rate as on 26-12-2012)  Surface level Roads  LHS  CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span)  RHS  CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span)  Up Ramp LHS & RHS  Down Ramp LHS & RHS  Dobligatory Span  CH-1-442.29 to CH-1-482.291  CH-1-919.428 to CH-1-949.43		1 2 2 2	2137.48 . 207.64 203.44	10.50 10.50 10.50	0.04 0.04 0.04	897,74 174.42 170.89 40.00		
	(grading II) with 6% 60/70 grade bitumen  (P.No.176 of I.No.21.22.4 in PW,P&IWTD S.I. (Prevailing Rate as on 26-12-2012)  Surface level Roads  LHS  CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span)  RHS  CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span)  Up Ramp LHS & RHS  Down Ramp LHS & RHS  Obligatory Span  CH-1-442.29 to CH-1-482.291  CH-1-919.428 to CH-1-949.43  CH-1-1147.24 to CH-1-1177.24		1 2 2 2	2137.48 . 207.64 203.44 40.00	10.50 10.50 10.50 25.00	0.04 0.04 0.04	897,74 174.42 170.89 40.00 30.00		
	(grading II) with 6% 60/70 grade bitumen  (P.No. 176 of I.No. 21. 22. 4 in PW, P&IWTD S. I. (Prevailing Rate as on 26-12-2012)  Surface level Roads  LHS  CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span)  RHS  CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span)  Up Ramp LHS & RHS  Down Ramp LHS & RHS  Obligatory Span  CH-1-442.29 to CH-1-482.291  CH-1-919.428 to CH-1-949.43  CH-1-1147.24 to CH-1-1177.24  CH-1-1284.74 to CH-1-1314.74		1 2 2 2	2137.48	10.50 10.50 10.50 25.00 25.00	0.04 0.04 0.04 0.04	897,74 174.42 170.89 40.00		
	(grading II) with 6% 60/70 grade bitumen  (P.No. 176 of I.No. 21. 22. 4 in PW, P&IWTD S.I. (Prevailing Rate as on 26-12-2012)  Surface level Roads  LHS  CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span)  RHS  CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span)  Up Ramp LHS & RHS  Down Ramp LHS & RHS  Obligatory Span  CH-1-442.29 to CH-1-482.291  CH-1-919.428 to CH-1-1177.24  CH-1-1284.74 to CH-1-1314.74  CH-1-1379.80 to CH-1-1409.80		1 2 2 2	2137.48	10.50 10.50 10.50 25.00 25.00 25.00	0.04 0.04 0.04 0.04 0.04 0.04	897,74 174.42 170.89 40.00 30.00 30.00 .30.00		
	(grading II) with 6% 60/70 grade bitumen  (P.No. 176 of I.No. 21. 22. 4 in PW, P&IWTD S.I. (Prevailing Rate as on 26-12-2012)  Surface level Roads  LHS  CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span)  RHS  CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span)  Up Ramp LHS & RHS  Down Ramp LHS & RHS  Down Ramp LHS & RHS  Obligatory Span  CH-1-442.29 to CH-1-482.291  CH-1-919.428 to CH-1-1177.24  CH-1-1147.24 to CH-1-1314.74  CH-1-1379.80 to CH-1-1409.80  CH-1-1735.07 to CH-1-1765.07		1 2 2 2 1 1 1	207.64 203.44 40.00 30.00 30.00 30.00	10.50 10.50 10.50 25.00 25.00 25.00 25.00	0.04 0.04 0.04 0.04 0.04 0.04 0.04	897,74 174.42 170.89 40.00 30.00 30.00 30.00 30.00		
	(grading II) with 6% 60/70 grade bitumen  (P.No. 176 of I.No. 21. 22. 4 in PW, P&IWTD S.I. (Prevailing Rate as on 26-12-2012)  Surface level Roads  LHS  CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span)  RHS  CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span)  Up Ramp LHS & RHS  Down Ramp LHS & RHS  Down Ramp LHS & RHS  Obligatory Span  CH-1-442.29 to CH-1-482.291  CH-1-919.428 to CH-1-1177.24  CH-1-1284.74 to CH-1-1314.74  CH-1-1379.80 to CH-1-1409.80  CH-1-1735.07 to CH-1-1765.07  CH-1-1949.30 to CH-1-1977.45		1 2 2 2 1 1 1	2137.48	10.50 10.50 10.50 25.00 25.00 25.00 25.00 25.00	0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04	897,74 174.42 170.89 40.00 30.00 30.00 .30.00		
	(grading II) with 6% 60/70 grade bitumen  (P.No. 176 of I.No. 21. 22. 4 in PW, P&IWTD S.I. (Prevailing Rate as on 26-12-2012)  Surface level Roads  LHS  CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span)  RHS  CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span)  Up Ramp LHS & RHS  Down Ramp LHS & RHS  Down Ramp LHS & RHS  Obligatory Span  CH-1-442.29 to CH-1-482.291  CH-1-919.428 to CH-1-949.43  CH-1-1147.24 to CH-1-1177.24  CH-1-1284.74 to CH-1-1314.74  CH-1-1379.80 to CH-1-1409.80  CH-1-1735.07 to CH-1-1765.07  CH-1-1949.30 to CH-1-1977.45  CH-1-2386.85 to CH-1-2436.85		1 2 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2137.48 207.64 203.44 40.00 30.00 30.00 30.00 30.00 28.15 50.00	10.50 10.50 10.50 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00	0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04	897,74 174.42 170.89 40.00 30.00 30.00 30.00 30.00 30.00		
	(grading II) with 6% 60/70 grade bitumen  (P.No. 176 of I.No. 21. 22. 4 in PW, P&IWTD S.I. (Prevailing Rate as on 26-12-2012)  Surface level Roads  LHS  CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span)  RHS  CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span)  Up Ramp LHS & RHS  Down Ramp LHS & RHS  Down Ramp LHS & RHS  Obligatory Span  CH-1-442.29 to CH-1-482.291  CH-1-919.428 to CH-1-949.43  CH-1-1147.24 to CH-1-1177.24  CH-1-1284.74 to CH-1-1314.74  CH-1-1379.80 to CH-1-1409.80  CH-1-1735.07 to CH-1-1765.07  CH-1-1949.30 to CH-1-2436.85  Standard Span Pier		1 2 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2137.48 207.64 203.44 40.00 30.00 30.00 30.00 30.00 28.15 50.00 27.20	10.50 10.50 10.50 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00	0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04	897,74 174.42 170.89 40.00 30.00 30.00 30.00 30.00 28.15		
	(grading II) with 6% 60/70 grade bitumen  (P.No. 176 of I.No. 21. 22. 4 in PW, P&IWTD S.I. (Prevailing Rate as on 26-12-2012)  Surface level Roads  LHS  CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span)  RHS  CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span)  Up Ramp LHS & RHS  Down Ramp LHS & RHS  Obligatory Span  CH-1-442.29 to CH-1-482.291  CH-1-919.428 to CH-1-949.43  CH-1-1147.24 to CH-1-1314.74  CH-1-1284.74 to CH-1-1314.74  CH-1-1379.80 to CH-1-1409.80  CH-1-1735.07 to CH-1-1765.07  CH-1-1949.30 to CH-1-2436.85  Standard Span Pier  Obligatory Span Pier		1 2 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	207.64 203.44 40.00 30.00 30.00 30.00 30.00 30.00 28.15 50.00 27.20 38.80	10.50 10.50 10.50 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00	0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04	897,74 174,42 170,89 40,00 30,00 30,00 30,00 30,00 28,15 50,00 190,94 64,10		
	(grading II) with 6% 60/70 grade bitumen  (P.No. 176 of I.No. 21. 22. 4 in PW, P&IWTD S.I. (Prevailing Rate as on 26-12-2012)  Surface level Roads  LHS  CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span)  RHS  CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span)  Up Ramp LHS & RHS  Down Ramp LHS & RHS  Down Ramp LHS & RHS  Obligatory Span  CH-1-442.29 to CH-1-482.291  CH-1-919.428 to CH-1-1177.24  CH-1-1284.74 to CH-1-1314.74  CH-1-1379.80 to CH-1-1409.80  CH-1-1735.07 to CH-1-1765.07  CH-1-1949.30 to CH-1-1977.45  CH-1-2386.85 to CH-1-2436.85  Standard Span Pier  Obligatory Span Pier  Obligatory Span Pier		1 2 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2137.48 207.64 203.44 40.00 30.00 30.00 30.00 30.00 28.15 50.00 27.20	10.50 10.50 10.50 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00	0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04	897,74 174,42 170,89 40,00 30,00 30,00 30,00 30,00 28,15 50,00 190,94		
	(grading II) with 6% 60/70 grade bitumen  (P.No. 176 of I.No. 21. 22. 4 in PW, P&IWTD S.I. (Prevailing Rate as on 26-12-2012)  Surface level Roads  LHS  CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span)  RHS  CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span)  Up Ramp LHS & RHS  Down Ramp LHS & RHS  Obligatory Span  CH-1-442.29 to CH-1-482.291  CH-1-919.428 to CH-1-949.43  CH-1-1147.24 to CH-1-1314.74  CH-1-1379.80 to CH-1-1314.74  CH-1-1735.07 to CH-1-1765.07  CH-1-1949.30 to CH-1-1977.45  CH-1-2386.85 to CH-1-2436.85  Standard Span Pier  Obligatory Span  Up Ramp and Down Ramp.		1 2 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	207.64 203.44 40.00 30.00 30.00 30.00 30.00 30.00 28.15 50.00 27.20 38.80 33.20	10.50 10.50 10.50 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00	0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04	897,74 174.42 170.89 40.00 30.00 30.00 30.00 30.00 28.15 50.00 190.94 64.10 8.96		
	(grading II) with 6% 60/70 grade bitumen  (P.No. 176 of I.No. 21. 22. 4 in PW, P&IWTD S.I. (Prevailing Rate as on 26-12-2012)  Surface level Roads  LHS  CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span)  RHS  CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span)  Up Ramp LHS & RHS  Down Ramp LHS & RHS  Down Ramp LHS & RHS  Obligatory Span  CH-1-442.29 to CH-1-482.291  CH-1-919.428 to CH-1-949.43  CH-1-1147.24 to CH-1-1314.74  CH-1-1379.80 to CH-1-1409.80  CH-1-1735.07 to CH-1-1765.07  CH-1-1949.30 to CH-1-1977.45  CH-1-2386.85 to CH-1-2436.85  Standard Span Pier  Obligatory Span Pier  Obligatory Span Pier  Obligatory Pier 25m Span  Up Ramp and Down Ramp,  Standard Span Pier		1 2 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	207.64 203.44 40.00 30.00 30.00 30.00 30.00 30.00 28.15 50.00 27.20 38.80	10.50 10.50 10.50 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00	0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04	897,74 174,42 170,89 40,00 30,00 30,00 30,00 30,00 28,15 50,00 190,94 64,10		
	(grading II) with 6% 60/70 grade bitumen  (P.No. 176 of I.No. 21. 22. 4 in PW, P&IWTD S.I. (Prevailing Rate as on 26-12-2012)  Surface level Roads  LHS  CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span)  RHS  CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span)  Up Ramp LHS & RHS  Down Ramp LHS & RHS  Down Ramp LHS & RHS  Obligatory Span  CH-1-442.29 to CH-1-482.291  CH-1-919.428 to CH-1-949.43  CH-1-1147.24 to CH-1-1177.24  CH-1-1379.80 to CH-1-1409.80  CH-1-1735.07 to CH-1-1765.07  CH-1-1949.30 to CH-1-1977.45  CH-1-2386.85 to CH-1-2436.85  Standard Span Pier  Obligatory Span Pier  Obligatory Pier 25m Span  Up Ramp and Down Ramp  Standard Span Pier  Up Ramp and Down Ramp		1 2 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	207.64 203.44 40.00 30.00 30.00 30.00 30.00 30.00 28.15 50.00 27.20 38.80 33.20	10.50 10.50 10.50 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00	0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04	897,74 174.42 170.89 40.00 30.00 30.00 30.00 30.00 28.15 50.00 190.94 64.10 8.96		
	(grading II) with 6% 60/70 grade bitumen  (P.No. 176 of I.No. 21. 22. 4 in PW, P&IWTD S.I. (Prevailing Rate as on 26-12-2012)  Surface level Roads  LHS  CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span)  RHS  CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span)  Up Ramp LHS & RHS  Down Ramp LHS & RHS  Down Ramp LHS & RHS  Obligatory Span  CH-1-442.29 to CH-1-482.291  CH-1-919.428 to CH-1-949.43  CH-1-1147.24 to CH-1-1177.24  CH-1-1284.74 to CH-1-1314.74  CH-1-1379.80 to CH-1-1409.80  CH-1-1735.07 to CH-1-1765.07  CH-1-1949.30 to CH-1-1977.45  CH-1-2386.85 to CH-1-2436.85  Standard Span Pier  Obligatory Span Pier  Obligatory Span Pier  Obligatory Pier 25m Span  Up Ramp and Down Ramp  Standard Span Pier  Up Ramp and Down Ramp  Obligatory Pier		1 2 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	207.64 203.44 40.00 30.00 30.00 30.00 30.00 30.00 28.15 50.00 27.20 38.80 33.20	10.50 10.50 10.50 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00	0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04	897,74 174.42 170.89 40.00 30.00 30.00 30.00 30.00 28.15 50.00 190.94 64.10 8.96		
	(grading II) with 6% 60/70 grade bitumen  (P.No. 176 of I.No. 21. 22. 4 in PW, P&IWTD S.I. (Prevailing Rate as on 26-12-2012)  Surface level Roads  LHS  CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span)  RHS  CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span)  Up Ramp LHS & RHS  Down Ramp LHS & RHS  Down Ramp LHS & RHS  Obligatory Span  CH-1-442.29 to CH-1-482.291  CH-1-919.428 to CH-1-1177.24  CH-1-1147.24 to CH-1-1177.24  CH-1-1284.74 to CH-1-1314.74  CH-1-1379.80 to CH-1-1409.80  CH-1-1735.07 to CH-1-1765.07  CH-1-1949.30 to CH-1-1977.45  CH-1-2386.85 to CH-1-2436.85  Standard Span Pier  Obligatory Span Pier  Obligatory Pier 25m Span  Up Ramp and Down Ramp  Standard Span Pier  Up Ramp and Down Ramp  Obligatory Pier  For Pedestrian Crossing		1 2 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2137.48 207.64 203.44 40.00 30.00 30.00 30.00 30.00 28.15 50.00 27.20 38.80 33.20 27.20	10.50 10.50 10.50 25.00 25	0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04	897,74 174.42 170.89 40.00 30.00 30.00 30.00 30.00 28.15 50.00 190.94 64.10 8.96 4.90		
	(grading II) with 6% 60/70 grade bitumen  (P.No. 176 of I.No. 21. 22. 4 in PW, P&IWTD S.I. (Prevailing Rate as on 26-12-2012)  Surface level Roads  LHS  CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span)  RHS  CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span)  Up Ramp LHS & RHS  Down Ramp LHS & RHS  Down Ramp LHS & RHS  Obligatory Span  CH-1-442.29 to CH-1-482.291  CH-1-919.428 to CH-1-1177.24  CH-1-1147.24 to CH-1-1177.24  CH-1-1284.74 to CH-1-1314.74  CH-1-1379.80 to CH-1-1409.80  CH-1-1735.07 to CH-1-1765.07  CH-1-1949.30 to CH-1-1977.45  CH-1-2386.85 to CH-1-2436.85  Standard Span Pier  Obligatory Span Pier  Obligatory Pier 25m Span  Up Ramp and Down Ramp  Standard Span Pier  Up Ramp and Down Ramp  Obligatory Pier  For Pedestrian Crossing  Cendriya Sadana Junction		1 2 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2137.48 207.64 203.44 40.00 30.00 30.00 30.00 30.00 28.15 50.00 27.20 38.80 33.20 27.20 38.80 34.00	10.50  10.50  25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.25 2.25 2	0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04	897,74 174.42 170.89 40.00 30.00 30.00 30.00 30.00 28.15 50.00 190.94 64.10 8.96 4.90 13.97		
	(grading II) with 6% 60/70 grade bitumen  (P.No. 176 of I.No. 21. 22. 4 in PW, P&IWTD S.I. (Prevailing Rate as on 26-12-2012)  Surface level Roads  LHS  CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span)  RHS  CH-1-199.83 to CH-1-2605.46 (deductions of Obligatory Span)  Up Ramp LHS & RHS  Down Ramp LHS & RHS  Down Ramp LHS & RHS  Obligatory Span  CH-1-442.29 to CH-1-482.291  CH-1-919.428 to CH-1-1177.24  CH-1-1147.24 to CH-1-1177.24  CH-1-1284.74 to CH-1-1314.74  CH-1-1379.80 to CH-1-1409.80  CH-1-1735.07 to CH-1-1765.07  CH-1-1949.30 to CH-1-1977.45  CH-1-2386.85 to CH-1-2436.85  Standard Span Pier  Obligatory Span Pier  Obligatory Pier 25m Span  Up Ramp and Down Ramp  Standard Span Pier  Up Ramp and Down Ramp  Obligatory Pier  For Pedestrian Crossing		1 2 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2137.48 207.64 203.44 40.00 30.00 30.00 30.00 30.00 28.15 50.00 27.20 38.80 33.20 27.20	10.50 10.50 10.50 25.00 25	0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04	897,74 174.42 170.89 40.00 30.00 30.00 30.00 30.00 28.15 50.00 190.94 64.10 8.96 4.90		

l. Description of Work	Unit	No.	Length	Breadth m	Depth	Quantity	Rate in	Amount in
Koramangala 8th Main Junction		in many as					Rs.	Amount in
Sony world Junction ·		4	. 15.50	1.50		3.72		
Ejipura Junction		4	20.13	1.50	0.04	4.83		
Battery limit			18.30	1.50	0.04	4.39		
Towards Kendriya sadana		1	100.00	00.05	201		,	No.
Towards Domlur		1	100.00	28.97		115.88	4	
Towards Hosur Road - Sarjapur Ro	nad	1	100.00	26.86		107.42		
Towards Sarjapur Road -Madiwala Ro	nad	1	100.00	26.70	0.04	106.80	/	
Cross Roads			100.00	27.70	0.04	110.80		
LHS			1					3
17th Main		1.	50.00	9.14	0.04	10.00	/	
Towards St. Johns (0.00 to 250.00)		1	250.00		0.04	18.28	/	
1st Cross		1	50.00	29.57	0.04	295.70	/	ļ
Road		1	50.00	10.79	0.04	21.58		1 2 1 441
7th Cross		1	50.00	7.60	0.04	23.14 V		17
4th Cross :		1	50.00	9.22	0.04	15.20		The second of
Towards Sony World		1	50.00	17.90		18.44		
Cross Road		1	50.00	5.40	0.04	35.80		8
Cross Road		1	50.00	6.07		10.80		
7th Cross		1	50.00	3.49	0.04	12.14	1.	
Cross Road		1	50.00	2.33	0.04	6.98	,	
4th Cross	+	1	50.00	4.34	0.04	4.66		
3rd Cross		1	50.00	. 4.34	0.04	8.68 V		
2nd Cross		1	50.00	. 5.05	0.04	10.10	-	
1st Cross		1	50.00	3.25	0.04	6.50 V	<i>;</i>	
4th Cross		1	50.00	2.94	0.04	5.88		
Towards Ejipura		1	50.00	8.23	0.04	16.46 V	/	
RHS		a distribution	t you to have at employed	**************************************	Heart Law			
Towards Sarjapura (0.00 to 250.00)		1	250.00	29.34	0.04	293.40	-	
17th Main		1	50.00	7.02	0.04	14.04	•	
2nd Cross 3rd Cross		1	50.00	7.44	0.04	14.88		
4th Cross		1 .	50.00	7.43	0.04	14.86		
5th Cross		1 -	50.00	7.46	0.04	14.92	The last	4
6th Cross	1	1	50.00	7.80	0.04	15.60		
		1	50.00	8.06	0.04	16.12	~ sectorii	
Towards Koramangala 1st Block 7th Cross	1 - 1	1	50.00	10.97	0.04	-		-
8th main		1	50.00	6.98	0.04	13.96	-	
4th Cross	- Francisco	rusul rusul e vici	50:00	11.73	0.04	23.46		POST SERVICE AND SERVICE
Cross road		1	50.00	6.53	0.04	13.06	•	10.111 - 27.
Towards Sarjapura	4171192		50.00	9.09	0.04	18.18		Part Indiana
2nd main			50.00	17.05	0.04	34.10	•	1 - 1 - 2
2nd main (A)	-	1	50.00	4.42	0.04	8.84	1400 00	1. A. A. A. A. A. A.
Cross Road	-	1	50.00	6.89	0.04	13.78	4. 5 4	4
Cross Road		1	50.00	4.21	0.04	8.42		
Cross Road	1	1	50.00	6.03	0.04	12.06		
Cross Road	1-1-	1	50.00	3.97	0.04	7.94		
Towards Divya Jyothi Apartment		1	50.00	5.25	0.04	10.50	4 .	44.5
and the strength of the first of the strength	1 + 266-7 9- 5	1	50.00	#15.61	0.04	31.22	1	
Deduct Pier Excavation portion	+	-				4285.23		1 1 1 1
Standard Span Pier	2	78	6.30	1.40	0.04		-	1.34 144
Obligatory Span Pier	2	14	10.70	1.40	0.04	55.04	1000	
Obligatory Pier 25m Span	2	3	9.30	2.10	0.04	25.17		Physical Control
	-		9.30	1.40	0.04	3.12	50 T T	ent reach
			-			83.33		1 44 7 7 7
Q <sub>1</sub>		1				4201.90	/	
					39TF	married DD -		46967596.

Traffic Engineering Callal Cost of Surface Level Boad (Slip Boad V 20070000:00 h Bangalore Mahanagara Palike Executive Engineer Bruhath Bangalore Mahanagara Palike ರಾಖಲೆಯನ್ನು ಮಾಹಿತಿ ಪಕ್ಕು ಕಡಿತ್ರಾಂತಿ 560 002.

Traffic Engineering Cell (Road Infra) Bruhat Bangalore Mahanagara Palike Bangalore - 560 002.

**७**विक्रं शिक्षक्रित

Manasa Consultana

Project: Proposed Construction of Elevated Corridor by integrating Ejipura Main Road - Inner Ring Road Junction, Sony World Junction and Kendriya Sadana Junction along 100ft. Inner Ring Road, Koramangala, Bangalore

Detai	led	Cost	Estimate
	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	1	

	77 T T T T T T T T T T T T T T T T T T	Det	tailed	Cost Est	imate	44.			
Sl.	Description of Work	Unit	No.	Length	Breadth	_	Quantity	Rate in	
No.	A Company of the Comp	1		m	m	m	quantity	Rs.	Amount in Rs.
3.00	DRAIN WORKS								
-	a) For Road side Drain	1		+					
3.01	Excavation for road way in soil by mechanical means including cutting and pushing the earth to site of embankment upto a distance of 100 metres (average lead 50 metres), including trimming bottom and side slopes in accordance with requirements								
	of lines, grades and cross sections complete as per specifications. MoRT&H Specification No. 301	!							
	(P.No.151, I.No.19.11 of PW,P&IWTD S.R 2	012-13)							
	For Utility Duct(LHS)				-24 37				
	Ch:100.00 to 450.00		1	350.00	1.31	1.83	839.06		
	Ch:1974.50 to 2012.75		1	38.25	1.31	1.83	91.70		
	Ch:2280.00 to 2670.00		1	390.00	1.31	1.83	934.95		70 00 000
	Ch:2400.00 to 2610.00	1	1	210.00	1.31	1.83	503.43	/	
	RHS					1.4	500.10		
	Ch:0.00.00 to 450.00	100 000	1	450.00	• 1.31	1.83	1078.79		
	Ch:1980.00 to 2130.00	- 1	1	150.00	1.31	1.83	359.60	/	
	Ch:2280.00 to 2610.00		1	- 330.00	1.31	1.83	791.11	/	7
	For Drain (LHS)	- :	T A B		v s. rviji	100			
	Ch:0.00.00 to 450.00		1	450.00	1.56	1.28	898.56		
	Ch:480.00 to 1140.00		1	660.00	1.56	1.28	1317.89		
	Ch:1770.00.00 to 2390.00		1	620.00	1.56	1.28	1238.02		
	Ch:2410.00.00 to 2610.00	4	1	200.00	1.56	1.28	399.36		
	For Drain (RHS)								
	Ch:0.00.00 to 450.00		1	450.00	1.56	1.28	898.56		
	Ch:480.00 to 1140.00		and of the sales	660.00	1.56	1.28	1317.89	/,	COMPANIE OF THE PARTY OF THE PA
-	Ch:1770.00.00 to 2390.00	i	1	620.00	1.56	1.28	1238.02		
	Ch:2410.00.00 to 2610.00		1	200.00	1.56	1.28	399.36		1 24 C 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	W. at Venich (MCC) and C			+ 10 <sup>-1</sup> (PD 64	ter married to the	and the	12306.27		
	Deduct for SWD			No.	4	profit is			
11.7	Ch:1958.00 to1974.50 (LHS)		1	16.50	1.56	1.28	32.95		
40.7	Ch:1958.00 to1974.50 (RHS.)		_ 1-	16.50	1.56	1.28	32.95	A company of the	and the second section of
	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				Sylvery du	The state of	65.89		1000
				•	N	et Qty	12240.37	Action to the second	17 THE WOLLD'S
					7	Say	12241.00	70.20	859318:00
0.00	*******				1				
	KSRRB M2100 - 13. Plain Cement Concrete M15 with OPC cement @ 240kgs, with 40mm and down size graded granite metal coarse aggregates @ 0.84cum and fine aggregates @ 0.56cum in Open Foundation complete as per Drawing and Technical Specifications MoRT&H Specification No. 1500, 1700 & 2100	Cum						ಹಿತಿ ಹಕ್ಕು ಕಾ ಲ್ಲಿ ನೀಡಲಾಗಿಯ ಕ್ರಾಂಥ್ಯಂತ್ರ	
		10.11	7 -1			-	The second state of	-2, එ.එ.ඉද්.	2)
	(P.No.223, I.No.27.24 of PW,P&IWTD S.R 20)	12-13)	1						
	For Utility Duct(LHS) Ch:100.00 to 450.00		-(					/	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	Ch:100.00 to 450.00 Ch:1974.50 to 2012.75		1	350.00	1.31	0.10	45.85	The Prop St. Pt.	and the same of the
	Ch:2280.00 to 2670.00		1	38.25	1.31	0.10	5.01		A chair rafe of the second
	Ch:2400.00 to 2670.00 Ch:2400.00 to 2610.00		1	390.00	1.31	0.10	51.09		
	RHS		1	210.00	1.31	0.10	27.51		
	Ch:0.00.00 to 450.00		1	450.00	÷ 100	0.17			
-			1	·450.00	1.31	0.10	58.95		

SI.	Description of Work	Unit	No.	Length	Breadth	Depth	A CONTRACTOR OF THE PARTY OF TH	Rate in	F-11-11-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1
No.	Description of work	Unit	No.	m	m	m,	Quantity	Rs.	Amount in F
	Ch:1980.00 to 2130.00	187	1	150.00	1.31	0.10	19.65		1600 S 1844
	Ch:2280.00 to 2610.00		1	330.00	1.31	0.10		~ _	-
	For Drain (LHS)		,	3 7 10 7		0.10	10.20		
	Ch:0.00.00 to 450.00	-	1	450.00	. 1.56	0.10	70.20		<del> </del>
	Ch:480.00 to 1140.00		1	660.00			102.96		1
-	Ch:1770.00.00 to 2390.00		1,	620.00	-100	0.10			i
e-pres	Ch:2410.00.00 to 2610.00		1	200.00		0.10	31.20		-
	For Drain (RHS)				- 1100	0.10	01.20	<u> </u>	-
	Ch:0.00.00 to 450.00	7	1	450.00	1.56	0.10	70.20		1
	Ch:480.00 to 1140.00		1	660.00	1.56	0.10	102.96		-
	Ch:1770.00.00 to 2390.00			620.00	1:56	0.10	96.72		Acres and Justice House
	Ch:2410.00.00 to 2610.00	- 7	1	200.00	1.56	0.10	31.20		
			10.00		1.00	0.10	853.45		
	Deduct for SWD						00.40		
	Ch:1958.00 to1974.50 (LHS)		1 .	16.50	1.56	0.10	2.57	/	
	Ch:1958.00 to1974.50 (RHS)		1	16.50	1.56	0.10	2.57	-	
4.			10-	10.00	1.00	0.10	5.15	-	
							848.30	-	
						Say	849.00		2004500
1.9	100		• 4	19		Day	043.00	3892.32	3304580.
3.03	KSRRB 2200-5.9 Design mix M20 in sub	Cum							
	structure with OPC cement @ 320kgs.					ದಾಶಿ	ರಿಲೆಯನ್ನು ಪ	ಭಾಹಿತಿ ಹಕ್ಕು	ಕಾಯ್ದೆ 2005ರ
	with 20mm and down graded granite metal	i		•	<i>\</i>		<b>ම</b> බ්ර	<u>ර්ම</u> ූ බැස්ජ්	ಗಿವೆ
	coarse aggregates @0.69cum and fine	9							
	aggregates @ 0.46cum, with	- 1						_>	
	superplastisiser @ 3lts conforming to	i	*	- 1			Gu	0	
4	IS9103-1999 Reaffirmed-2008 - i) Upto 5 m				2	1		ಾಲಕ ಅಭಿಯ ಕೇ-2, ಬಿ.ಬಿ.	09000 0031
-:	height		on he has	same same	me channels		1	-	1
	(P.No.228, I.No.28.7.9 of PW, P& IWTD SR 2	019 19							
	For Drain Bottom slab	012-13	1					t tier	1 1 25-
	For Utility Duct(LHS)				40,000		-	3 74 1	100000
-	Ch:100.00 to 450.00			050.00		- 1			4 - 32
	Ch:1974.50 to 2012.75		1	350.00	- visit 1.11	0.18	69.93		Att one process
	Ch:2280.00 to 2670.00	4	1	38.25	1.11	0.18	7.64	-	The state of the state of
-0.7	Ch:2400.00 to 2610.00		1	390.00	1.11	0.18	77.92		and the second second second
	RHS		1	210.00	1.11	0.18	41.96		
	Ch:0.00.00 to 450.00		-,	450.00					A
	Ch:1980.00 to 2130.00		1 j	450.00	1.11	0.18	89.91		
			1	150.00	· 1.11	0.18	29.97		
	TO TO A TYPE	-+	1	330.00	1.11	0.18	65.93		A Property
7. 7	Ch:0.00.00 to 450.00	-	The state of the state of	Property of the	-//		ng rikasi sa		
	Ch:480.00 to 1140.00		1	450.00	1.36	0.10	61.20		
	Ch:1770.00.00 to 2390.00		1	660.00	1.36	0.10	89.76		Janes, S.V. ages
	Ch:2410.00.00 to 2610.00	-	1	620.00	1.36	0.10	84.32		1,31,50
-	For Drain (RHS)	-	1	200.00	1.36	0.10	27.20		Continue CA Continue
	Ch:0.00.00 to 450.00			450.00			14		The Section 1997
	Ch:480.00 to 1140.00		1	450.00	1.36	0.10	61.20		9
	Ch:1770.00.00 to 2390.00		1	660.00	1.36	0.10	89.76		
	Ch:2410.00.00 to 2610.00			620.00	1.36	0.10	84.32 -		er i - anne deadh-ion
	CH.2410.00.00 to 2010.00		1	200.00	1.36	0.10	27.20		I alde in
	Deduct for SWD		1		1.5	4	908.23		** (1) W L. 1711
	Ch:1958.00 to1974.50 (LHS )			100					
	Ch:1958.00 to1974.50 (LHS )	<del></del>	1	16.50	1.36	0.10	2.24		1 1.0
-	C.1.100.00 W13 (4.30 (RFIS )		1	16.50	1.36	0.10	2.24		24 7 22 1
-			1 1	1-		-	4.49		1, "
- 1	For Drain Side Wall	i-					903.74	/	
	For Utility Duct(LHS)								
	Ch:100.00 to 450.00		-						
-			2	350.00	0.18	1.50	189.00	1200	A Line
	Ch:1974.50 to 2012.75		2 +	38.25	0.18	1.50	20.66		0.30
	Ch:2400.00 to 2670.00		2	390.00	0.18	1.50	210.60/		200
	Ch:2400.00 to 2610.00		2	210.00	0.18	1.50	113.40 /		1 1
_							1		
				-					
	Ch:0.00.00 to 450.00 Ch:1980.00 to 2130.00		2 .	450.00	.0.18	1.50	243.00	2	

6

Sl. No.	Description of Work	Unit	No.		Breadth.		Quantity	Rate in	Amount in R
140.	GL 2000 00			m	m	m	quantity	Rs.	Amount in K
	Ch:2280.00 to 2610.00		2	330.00	0.18	1.50	178.20		
	For Drain (LHS)						i i	1	111-11
	Ch:0.00.00 to 450.00	1	2	450.00		1.00	162.00		
4	Ch:480.00 to 1140.00	1	2	660.00		1.00	237.60		
	Ch:1770.00.00 to 2390.00	-	2	620.00		1.00	223.20	-	
	Ch:2410.00.00 to 2610.00	1	2	200.00	0.18	1.00	72.00		
	For Drain (RHS)			1					1 7 7 1
	Ch:0.00.00 to 450.00		2	450.00		1.00	162.00		
	Ch:480.00 to 1140.00	-	2	660.00		1.00	237.60		
	Ch: 1770.00.00 to 2390.00	-	2	620.00		1.00	223.20		4 10 11 11
	Ch:2410.00.00 to 2610.00		2	200.00	0.18	1.00	72.00		
	Deduct for SWD		- 1				2425.46	1	AN AND R. I
	Ch:1958.00 to1974.50 (LHS)			1			- 62		
			2	16.50		1.00	5.94		
	Ch: 1958.00 to 1974.50 (RHS )	ii	2 '	16.50	0.18	1.00	5.94		
-				1		1171	11.88		J. 15, 32, 37, 11,
-						- 4.7	2413.58	there was not a second	
-							3317.31		/
						Say	3318.00	5176.44	17175428.0
2 04	KSRRB M2300 - 14. Supplying, fitting and	3.600				i	•	10 10 10 10	
J. U 4	placing TMT bar reinforcement in sub -	MT			1	9		1	
	structure complete as per drawing and				1			İ	
	technical specifications complete as per			7		- 1			
	specifications. MoRT&H Specification No.	- !	1						
	1600 & 2200				19 m 4	-1.		5 4 J B	
-	(P. No. 920, I. No. 98 8 - F. DW. D. HWED CD. 991	0.10						0	
	(P.No.230, I.No.28.8 of PW, P&IWTD SR 201 Steel at 70kg/cum	2-13)		- and - Commenter		7	-41 (4 11 11 11 11 11	A	a principles of the second states
	Steel at lokg/cum	- 1	••				232.26		
	The state of the s	-							
	Providing and fixing RCC Precast Cover slab of 100mm thick for drain in cement concrete 1:1.5:3 using graded granite jelly 20mm and down size with steel	Sqm				Say ලාන	233.00, ಲೆಯನ್ನು ಮ ಅಡಿಯ	68178.24 ಾಹಿತಿ ಹಕ್ಕು ಕಾ ಂಲ್ಲಿ ನೀಡಲಾಗಿ	ಯ್ದೆ 2005ರ
	Providing and fixing RCC Precast Cover slab of 100mm thick for drain in cement concrete 1:1.5:3 using graded granite jelly 20mm and down size with steel reinforcement, including form work, lift charges, curing and concrete finished	Sqm					ಲೆಯನ್ನು ಮ	ಾಹಿತಿ ಹಕ್ಕು ಕಾ ಎಲ್ಲಿ ನೀಡಲಾಗಿ!	<b>3</b>
	Providing and fixing RCC Precast Cover slab of 100mm thick for drain in cement concrete 1:1.5:3 using graded granite jelly 20mm and down size with steel reinforcement, including form work, lift charges, curing and concrete finished surfaces on both sides etc, complete and as						ಲೆಯನ್ನು ಮ	ාසිම සතු ස ාවූ බැය්පාඩ ව	ಯ್ದೆ 2005ರ ವೆ
	Providing and fixing RCC Precast Cover slab of 100mm thick for drain in cement concrete 1:1.5:3 using graded granite jelly 20mm and down size with steel reinforcement, including form work, lift charges, curing and concrete finished surfaces on both sides etc, complete and as per the directions of Engineer in-Charge.				4101.0		ಲೆಯನ್ನು ಮ ಅಡಿಯ ಸಾರ್ಯಪ	ාසිම සතු ස ාවූ බැය්පාඩ ව	ಯ್ದೆ 2005ರ ವೆ
	Providing and fixing RCC Precast Cover slab of 100mm thick for drain in cement concrete 1:1.5:3 using graded granite jelly 20mm and down size with steel reinforcement, including form work, lift charges, curing and concrete finished surfaces on both sides etc, complete and as per the directions of Engineer in-Charge.  (Data Rate)						ಲೆಯನ್ನು ಮ ಅಡಿಯ ಸಾರ್ಯಪ	ාසිම සතු ස ාවූ බැය්පාඩ ව	ಯ್ದೆ 2005ರ ವೆ
	Providing and fixing RCC Precast Cover slab of 100mm thick for drain in cement concrete 1:1.5:3 using graded granite jelly 20mm and down size with steel reinforcement, including form work, lift charges, curing and concrete finished surfaces on both sides etc, complete and as per the directions of Engineer in-Charge.  (Data Rate)  Utility Duct and Drain Cover Slab				A14 A		ಲೆಯನ್ನು ಮ ಅಡಿಯ ಸಾರ್ಯಪ	ාසිම සතු ස ාවූ බැය්පාඩ ව	ಯ್ದೆ 2005ರ ವೆ
	Providing and fixing RCC Precast Coverslab of 100mm thick for drain in cement concrete 1:1.5:3 using graded granite jelly 20mm and down size with steel reinforcement, including form work, lift charges, curing and concrete finished surfaces on both sides etc, complete and as per the directions of Engineer in-Charge.  (Data Rate)  Utility Duct and Drain Cover Slab  For Utility Duct(LHS)				43.65 mm		ಲೆಯನ್ನು ಮ ಅಡಿಯ ಸಾರ್ಯಪ	ාසිම සතු ස ාවූ බැය්පාඩ ව	ಯ್ದೆ 2005ರ ವೆ
	Providing and fixing RCC Precast Coverslab of 100mm thick for drain in cement concrete 1:1.5:3 using graded granite jelly 20mm and down size with steel reinforcement, including form work, lift charges, curing and concrete finished surfaces on both sides etc, complete and as per the directions of Engineer in-Charge.  (Data Rate)  Utility Duct and Drain Cover Slab  For Utility Duct (LHS)  Ch:100.00 to 450.00		1	350.00	1.11		ಲೆಯನ್ನು ಮ ಅಡಿಯ ಸಾರ್ಯಪ	ිසිම ස්තු ස එ බැස්පාඩ වේ මහුරාග වේ මහුරාග වේ – 2 , කි.කි.බර	ಯ್ದೆ 2005ರ ವೆ
	Providing and fixing RCC Precast Cover slab of 100mm thick for drain in cement concrete 1:1.5:3 using graded granite jelly 20mm and down size with steel reinforcement, including form work, lift charges, curing and concrete finished surfaces on both sides etc, complete and as per the directions of Engineer in-Charge.  (Data Rate)  Utility Duct and Drain Cover Slab  For Utility Duct(LHS)  Ch:100.00 to 450.00  Ch:1974.50 to 2012.75		1 1	350.00 38,25	1.11 1.11	ದಾಖ	ಲೆಯನ್ನು ಮ ಅಡಿಯ ಧಾರ್ಯಪ ದಿಯೋ-	ිසිම සත්දු ස එ බැස්පාව් වේද මහුගාග බැපදි, සි.සි.ම	ಯ್ದೆ 2005ರ ತೆ
	Providing and fixing RCC Precast Cover slab of 100mm thick for drain in cement concrete 1:1.5:3 using graded granite jelly 20mm and down size with steel reinforcement, including form work, lift charges, curing and concrete finished surfaces on both sides etc, complete and as per the directions of Engineer in-Charge.  (Data Rate)  Utility Duct and Drain Cover Slab  For Utility Duct(LHS)  Ch:100.00 to 450.00  Ch:1974.50 to 2012.75  Ch:2280.00 to 2670.00			-		ದಾಖ	ಲೆಯನ್ನು ಮ ಅಡಿಯ ಕಾರ್ಯಪ ರಾರ್ಯಪ -	ිසිම සත්දු ස එ බැස්පාර් වේද මහුගාග බැපදි, සි.සි.ම	ಯ್ದೆ 2005ರ ತೆ
	Providing and fixing RCC Precast Cover slab of 100mm thick for drain in cement concrete 1:1.5:3 using graded granite jelly 20mm and down size with steel reinforcement, including form work, lift charges, curing and concrete finished surfaces on both sides etc, complete and as per the directions of Engineer in-Charge.  (Data Rate)  Utility Duct and Drain Cover Slab  For Utility Duct (LHS)  Ch:100.00 to 450.00  Ch:1974.50 to 2012.75  Ch:2280.00 to 2670.00  Ch:2400.00 to 2610.00		1	38,25	1.11		ಲೆಯನ್ನು ಮ ಅಡಿಯ ಕಾರ್ಯಪ ಯೋ-: 388.504	ිරීම ස්ත්ර සිට වේ වැස්වාර් වේද මහුගාර දෙ-2, ඩී.ඩී.බර්	ಯ್ದೆ 2005ರ ತೆ
	Providing and fixing RCC Precast Cover slab of 100mm thick for drain in cement concrete 1:1.5:3 using graded granite jelly 20mm and down size with steel reinforcement, including form work, lift charges, curing and concrete finished surfaces on both sides etc, complete and as per the directions of Engineer in-Charge.  (Data Rate)  Utility Duct and Drain Cover Slab  For Utility Duct (LHS)  Ch:100.00 to 450.00  Ch:1974.50 to 2012.75  Ch:2280.00 to 2670.00  Ch:2400.00 to 2610.00  RHS		1	38,25 390.00	1.11		ಲೆಯನ್ನು ಮ ಅಡಿಯ ಕಾರ್ಯಪ ಯೋ 388.50 42.46 432.90	ිරීම ස්ත්ර සිට වේ වැස්වාර් වේද මහුගාර දෙ-2, ඩී.ඩී.බර්	ಯ್ದೆ 2005ರ ತೆ
	Providing and fixing RCC Precast Cover slab of 100mm thick for drain in cement concrete 1:1.5:3 using graded granite jelly 20mm and down size with steel reinforcement, including form work, lift charges, curing and concrete finished surfaces on both sides etc, complete and as per the directions of Engineer in-Charge.  (Data Rate)  Utility Duct and Drain Cover Slab  For Utility Duct (LHS)  Ch:100.00 to 450.00  Ch:1974.50 to 2012.75  Ch:2280.00 to 2670.00  Ch:2400.00 to 2610.00  RHS  Ch:0.00.00 to 450.00		1	38,25 390.00	1.11		ಲೆಯನ್ನು ಮ ಅಡಿಯ ಕಾರ್ಯಪ ಯೋ 388.50 42.46 432.90	ිරීම ස්ස්ථු ස වේ බැස්පාඩ් වේ මහුගාර ලේ මහුගාර ලේ වේ ස්ථා වර්	ಯ್ದೆ 2005ರ ತೆ
	Providing and fixing RCC Precast Cover slab of 100mm thick for drain in cement concrete 1:1.5:3 using graded granite jelly 20mm and down size with steel reinforcement, including form work, lift charges, curing and concrete finished surfaces on both sides etc, complete and as per the directions of Engineer in-Charge.  (Data Rate)  Utility Duct and Drain Cover Slab For Utility Duct (LHS)  Ch:100.00 to 450.00  Ch:1974.50 to 2012.75  Ch:2280.00 to 2670.00  RHS  Ch:0.00.00 to 450.00  Ch:1980.00 to 2130.00		1 1 1 1 1 1	38,25 390.00 210.00	1.11 1.11 1.11	[509)	ಲೆಯನ್ನು ಮ ಅಡಿಯ ಸಾರ್ಯಪ ಯೋ	ිරීම ස්ස්ථු ස වේ බැස්පාඩ් වේ මහුගාර ලේ මහුගාර ලේ වේ ස්ථා වර්	ಯ್ದೆ 2005ರ ತೆ
	Providing and fixing RCC Precast Cover slab of 100mm thick for drain in cement concrete 1:1.5:3 using graded granite jelly 20mm and down size with steel reinforcement, including form work, lift charges, curing and concrete finished surfaces on both sides etc, complete and as per the directions of Engineer in-Charge.  (Data Rate)  Utility Duct and Drain Cover Slab For Utility Duct (LHS)  Ch:100.00 to 450.00  Ch:1974.50 to 2012.75  Ch:2280.00 to 2670.00  RHS  Ch:0.00.00 to 450.00  Ch:1980.00 to 2130.00  Ch:1980.00 to 2130.00  Ch:2280.00 to 2610.00		1 1 1	38,25 390.00 210.00 450.00	1.11 1.11 1.11	[509)	ಲೆಯನ್ನು ಮ ಅಡಿಯ ಸಾರ್ಯಪ ಯೋ	මෙයම් සැත්පු සැ ලේ බැස්පොඩ වෙස මඟුරාග ලේස මඟුරාග ල්ස – 2, නි.එ. බර	ಯ್ದೆ 2005ರ ತೆ
	Providing and fixing RCC Precast Cover slab of 100mm thick for drain in cement concrete 1:1.5:3 using graded granite jelly 20mm and down size with steel reinforcement, including form work, lift charges, curing and concrete finished surfaces on both sides etc, complete and as per the directions of Engineer in-Charge.  (Data Rate)  Utility Duct and Drain Cover Slab  For Utility Duct (LHS)  Ch:100.00 to 450.00  Ch:1974.50 to 2012.75  Ch:2280.00 to 2670.00  Ch:2400.00 to 450.00  Ch:1980.00 to 2130.00  Ch:1980.00 to 2130.00  Ch:2280.00 to 2610.00  For Drain (LHS)		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	38,25 390.00 210.00 450.00	1.11 1.11 1.11 1.11 1.11 1.11 1.11	[509)	ಲೆಯನ್ನು ಮ ಅಡಿಯ ಸಾರ್ಯಪ ಯೋ -	මෙයම් සැත්පු සැ ලේ බැස්පොඩ වෙස මඟුරාග ලේස මඟුරාග ල්ස – 2, නි.එ. බර	ಯ್ದೆ 2005ರ ತೆ
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	Providing and fixing RCC Precast Cover slab of 100mm thick for drain in cement concrete 1:1.5:3 using graded granite jelly 20mm and down size with steel reinforcement, including form work, lift charges, curing and concrete finished surfaces on both sides etc, complete and as per the directions of Engineer in-Charge.  (Data Rate)  Utility Duct and Drain Cover Slab  For Utility Duct (LHS)  Ch:100.00 to 450.00  Ch:1974.50 to 2012.75  Ch:2280.00 to 2670.00  Ch:2400.00 to 2610.00  RHS  Ch:0.00.00 to 450.00  Ch:1980.00 to 2130.00  Ch:1980.00 to 2610.00  For Drain (LHS)  Ch:0.00.00 to 450.00  Ch:480.00 to 1140.00  Ch:1770.00.00 to 2390.00		1 1 1 1 1 1 1 1 1	38,25 390,00 210,00 450,00 150,00 330,00 450,00 660,00 620,00	1.11 1.11 1.11 1.11 1.11 1.11 1.36 1.36	[D090]	ජියා ක් ස් මෙයා මෙයා මෙයා 388.50 42.46 43.290 233.10 499.50 166.50 366.30 897.60 843.20	මෙයම් සැත්වූ සැ වේ බැස්පොඩ වේ මහුරාගය බැ – 2, නි.එ. බර	ಯ್ದೆ 2005ರ ತೆ
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and the state of t	Providing and fixing RCC Precast Coverslab of 100mm thick for drain in cement concrete 1:1.5:3 using graded granite jelly 20mm and down size with steel reinforcement, including form work, lift charges, curing and concrete finished surfaces on both sides etc, complete and as per the directions of Engineer in-Charge.  (Data Rate)  Utility Duct and Drain Cover Slab  For Utility Duct (LHS)  Ch:100.00 to 450.00  Ch:1974.50 to 2012.75  Ch:2280.00 to 2670.00  Ch:2400.00 to 450.00  Ch:1980.00 to 2130.00  Ch:1980.00 to 2130.00  Ch:280.00 to 2610.00  For Drain (LHS)  Ch:0.00.00 to 450.00  Ch:480.00 to 1140.00  Ch:1770.00.00 to 2390.00  Ch:2410.00.00 to 2610.00  For Drain (RHS)		1 1 1 1 1 1 1 1 1 1	38,25 390,00 210,00 450,00 150,00 330,00 450,00 660,00 620,00 200,00	1.11 1.11 1.11 1.11 1.11 1.11 1.36 1.36	[7990]	ජිගා ක් ස් මෙගේ මෙගේ මෙගේ 388.50 42.46 432.90 233.10 499.50 166.50 366.30 897.60 843.20 272.00	මෙයම් සැත්වූ සැ වේ බැස්පොඩ වේ මහුරාගය බැ – 2, නි.එ. බර	ಯ್ದೆ 2005ರ ತೆ
	Providing and fixing RCC Precast Coverslab of 100mm thick for drain in cement concrete 1:1.5:3 using graded granite jelly 20mm and down size with steel reinforcement, including form work, lift charges, curing and concrete finished surfaces on both sides etc, complete and as per the directions of Engineer in-Charge.  (Data Rate)  Utility Duct and Drain Cover Slab  For Utility Duct (LHS)  Ch:100.00 to 450.00  Ch:1974.50 to 2012.75  Ch:2280.00 to 2670.00  Ch:2400.00 to 2610.00  RHS  Ch:0.00.00 to 450.00  Ch:1980.00 to 2130.00  Ch:280.00 to 2610.00  For Drain (LHS)  Ch:0.00.00 to 450.00  Ch:480.00 to 1140.00  Ch:1770.00.00 to 2390.00  Ch:2410.00.00 to 2610.00  For Drain (RHS)  Ch:0.00.00 to 450.00		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	38.25 390.00 210.00 450.00 330.00 450.00 660.00 620.00 200.00	1.11 1.11 1.11 1.11 1.11 1.11 1.36 1.36	[70930	ජියා ක් ක් මයිය මයිය මයිය මයිය 388.50 42.46 432.90 233.10 499.50 166.50 366.30 897.60 843.20 272.00	ිරීම් ස්ස්ථු සි වේ බැස්පාර් වේ මහුරාග බැ-2, සි.සි.මර	ಯ್ದೆ 2005ರ ತೆ
	Providing and fixing RCC Precast Coverslab of 100mm thick for drain in cement concrete 1:1.5:3 using graded granite jelly 20mm and down size with steel reinforcement, including form work, lift charges, curing and concrete finished surfaces on both sides etc, complete and as per the directions of Engineer in-Charge.  (Data Rate)  Utility Duct and Drain Cover Slab  For Utility Duct (LHS)  Ch:100.00 to 450.00  Ch:1974.50 to 2012.75  Ch:2280.00 to 2670.00  Ch:2400.00 to 2610.00  RHS  Ch:0.00.00 to 450.00  Ch:1980.00 to 2130.00  Ch:280.00 to 2610.00  For Drain (LHS)  Ch:0.00.00 to 450.00  Ch:480.00 to 1140.00  For Drain (RHS)  Ch:0.00.00 to 450.00  Ch:2410.00.00 to 450.00  Ch:480.00 to 1140.00  Ch:480.00 to 1140.00  Ch:480.00 to 1140.00		1 1 1 1 1 1 1 1 1 1 1 1	38.25 390.00 210.00 450.00 330.00 450.00 660.00 200.00 450.00 660.00	1.11 1.11 1.11 1.11 1.11 1.11 1.36 1.36	[5000)   5000    388.50 42.46 432.90 233.10 499.50 166.50 366.30 612.00 897.60 843.20 272.00	ිරීම් ස්ස්ථු සි වේ බැස්පාර් වේ මහුරාග් බැ-2, සි.සි.මර්	ಯ್ದೆ 2005ರ ತೆ	
	Providing and fixing RCC Precast Cover slab of 100mm thick for drain in cement concrete 1:1.5:3 using graded granite jelly 20mm and down size with steel reinforcement, including form work, lift charges, curing and concrete finished surfaces on both sides etc, complete and as per the directions of Engineer in-Charge.  (Data Rate)  Utility Duct and Drain Cover Slab  For Utility Duct (LHS)  Ch:100.00 to 450.00  Ch:1974.50 to 2012.75  Ch:2280.00 to 2670.00  Ch:2400.00 to 2610.00  RHS  Ch:0.00.00 to 450.00  Ch:1980.00 to 2130.00  Ch:2880.00 to 2610.00  For Drain (LHS)  Ch:0.00.00 to 450.00  Ch:480.00 to 1140.00  Ch:410.00.00 to 450.00  Ch:480.00 to 1140.00  Ch:480.00 to 1140.00  Ch:480.00 to 1140.00  Ch:480.00 to 1140.00  Ch:1770.00.00 to 2390.00  Ch:480.00 to 1140.00		1 1 1 1 1 1 1 1 1 1 1 1 1	38.25 390.00 210.00 450.00 330.00 450.00 660.00 620.00 450.00 660.00 620.00	1.11 1.11 1.11 1.11 1.11 1.11 1.36 1.36	[D000]	388.50 42.46 432.90 233.10 499.50 166.50 366.30 612.00 897.60 843.20 897.60 843.20 897.60 843.20	ිරීම් ස්ස්ථු සි වේ බැස්පාර් වේ මහුරාග් බැ-2, සි.සි.මර්	ಯ್ದೆ 2005ರ ತೆ
	Providing and fixing RCC Precast Coverslab of 100mm thick for drain in cement concrete 1:1.5:3 using graded granite jelly 20mm and down size with steel reinforcement, including form work, lift charges, curing and concrete finished surfaces on both sides etc, complete and as per the directions of Engineer in-Charge.  (Data Rate)  Utility Duct and Drain Cover Slab  For Utility Duct (LHS)  Ch:100.00 to 450.00  Ch:1974.50 to 2012.75  Ch:2280.00 to 2670.00  Ch:2400.00 to 2610.00  RHS  Ch:0.00.00 to 450.00  Ch:1980.00 to 2130.00  Ch:280.00 to 2610.00  For Drain (LHS)  Ch:0.00.00 to 450.00  Ch:480.00 to 1140.00  For Drain (RHS)  Ch:0.00.00 to 450.00  Ch:2410.00.00 to 450.00  Ch:480.00 to 1140.00  Ch:480.00 to 1140.00  Ch:480.00 to 1140.00		1 1 1 1 1 1 1 1 1 1 1 1	38.25 390.00 210.00 450.00 330.00 450.00 660.00 200.00 450.00 660.00	1.11 1.11 1.11 1.11 1.11 1.11 1.36 1.36	[5000)   5000    388.50 42.46 432.90 233.10 499.50 166.50 366.30 612.00 897.60 843.20 272.00	ිරීම් ස්ස්ථු සි වේ බැස්පාර් වේ මහුරාග් බැ-2, සි.සි.මර්	ಯ್ದೆ 2005ರ ತೆ	
	Providing and fixing RCC Precast Cover slab of 100mm thick for drain in cement concrete 1:1.5:3 using graded granite jelly 20mm and down size with steel reinforcement, including form work, lift charges, curing and concrete finished surfaces on both sides etc, complete and as per the directions of Engineer in-Charge.  (Data Rate)  Utility Duct and Drain Cover Slab  For Utility Duct (LHS)  Ch:100.00 to 450.00  Ch:1974.50 to 2012.75  Ch:2280.00 to 2670.00  Ch:2400.00 to 2610.00  RHS  Ch:0.00.00 to 450.00  Ch:1980.00 to 2130.00  Ch:280.00 to 2610.00  For Drain (LHS)  Ch:0.00.00 to 450.00  Ch:480.00 to 1140.00  Ch:1770.00.00 to 2390.00  Ch:480.00 to 1140.00  Ch:4770.00.00 to 2390.00  Ch:1770.00.00 to 2390.00  Ch:1770.00.00 to 2390.00  Ch:1770.00.00 to 2390.00  Ch:1770.00.00 to 2390.00  Ch:2770.00.00 to 2390.00  Ch:2770.00.00 to 2390.00  Ch:2770.00.00 to 2390.00  Ch:2770.00.00 to 2390.00		1 1 1 1 1 1 1 1 1 1 1 1 1	38.25 390.00 210.00 450.00 330.00 450.00 660.00 620.00 450.00 660.00 620.00	1.11 1.11 1.11 1.11 1.11 1.11 1.36 1.36	[D000]	388.50 42.46 432.90 233.10 499.50 166.50 366.30 612.00 897.60 843.20 897.60 843.20 897.60 843.20	ිරීම් ස්ස්ථු සි වේ බැස්පාර් වේ මහුරාග් බැ-2, සි.සි.මර්	ಯ್ದೆ 2005ರ ತೆ
	Providing and fixing RCC Precast Cover slab of 100mm thick for drain in cement concrete 1:1.5:3 using graded granite jelly 20mm and down size with steel reinforcement, including form work, lift charges, curing and concrete finished surfaces on both sides etc, complete and as per the directions of Engineer in-Charge.  (Data Rate)  Utility Duct and Drain Cover Slab  For Utility Duct (LHS)  Ch:100.00 to 450.00  Ch:1974.50 to 2012.75  Ch:2280.00 to 2670.00  Ch:2400.00 to 2610.00  RHS  Ch:0.00.00 to 450.00  Ch:1980.00 to 2130.00  Ch:280.00 to 2610.00  For Drain (LHS)  Ch:0.00.00 to 450.00  Ch:480.00 to 1140.00  Ch:4770.00.00 to 2590.00  Ch:480.00 to 1140.00  Ch:1770.00.00 to 2390.00  Ch:1770.00.00 to 2390.00  Ch:2110.00.00 to 2390.00  Ch:2770.00.00 to 2390.00  Ch:1770.00.00 to 2390.00  Ch:2770.00.00 to 2390.00		1 1 1 1 1 1 1 1 1 1 1 1 1 1	38,25 390.00 210.00 450.00 150.00 330.00 450.00 660.00 200.00 450.00 660.00 620.00 200.00	1.11 1.11 1.11 1.11 1.11 1.11 1.36 1.36	[5093)	388.50 42.46 432.90 233.10 499.50 166.50 366.30 612.00 897.60 843.20 272.00 7378.86	ිරීම් ස්ස්ථු සි වේ බැස්පාර් වේ මහුරාග් බැ-2, සි.සි.මර්	ಯ್ದೆ 2005ರ ತೆ
	Providing and fixing RCC Precast Cover slab of 100mm thick for drain in cement concrete 1:1.5:3 using graded granite jelly 20mm and down size with steel reinforcement, including form work, lift charges, curing and concrete finished surfaces on both sides etc, complete and as per the directions of Engineer in-Charge.  (Data Rate)  Utility Duct and Drain Cover Slab  For Utility Duct (LHS)  Ch:100.00 to 450.00  Ch:1974.50 to 2012.75  Ch:2280.00 to 2670.00  Ch:2400.00 to 2610.00  RHS  Ch:0.00.00 to 450.00  Ch:1980.00 to 2130.00  Ch:280.00 to 2610.00  For Drain (LHS)  Ch:0.00.00 to 450.00  Ch:480.00 to 1140.00  Ch:1770.00.00 to 2390.00  Ch:480.00 to 1140.00  Ch:4770.00.00 to 2390.00  Ch:1770.00.00 to 2390.00  Ch:1770.00.00 to 2390.00  Ch:1770.00.00 to 2390.00  Ch:1770.00.00 to 2390.00  Ch:2770.00.00 to 2390.00  Ch:2770.00.00 to 2390.00  Ch:2770.00.00 to 2390.00  Ch:2770.00.00 to 2390.00		1 1 1 1 1 1 1 1 1 1 1 1 1	38.25 390.00 210.00 450.00 330.00 450.00 660.00 620.00 450.00 660.00 620.00	1.11 1.11 1.11 1.11 1.11 1.11 1.36 1.36	[D000]	388.50 42.46 432.90 233.10 499.50 166.50 366.30 612.00 897.60 843.20 272.00	ිසිම් ස්ස්වූ සිට වේ බැස්පාර් වේ මහුගාග (c-2, නි.එ.බර	ಯ್ದೆ 2005ರ ತೆ

Sl.	Description of Work	ST-11 (C-18)	9-1	Length	Breadth	Depth	The Fernand In	Poto :	Property of the
No.	Description of Work	Unit	No.	m	m	m	Quantity	Rate in Rs.	Amount in
-	1.88			V 1.79	100		7333.98		/
		1			12.	Say	7334.00	1489.00	10920326
0.00	VCCDD Mago a D. 'l'	1	i				1		
5,00	KSSRB M220 - 8. Providing weep holes in Brick masonry / Plain / Reinforced concrete abutment, wing wall / return wall with 100mm dia AC pipe, extending through the full width of the structure with slope of 1V:20H towards drawing foce. Complete as per drawing and Technical Specifications complete as per specifications. MoRT&F.	e Mtr n e f s							
	Specification No. 2706 & 2200		100		Ar. of	20.5			
	P.No 230 INo 28.10 of PW,P&IWTD S.R 201	2-13)		1					
	LHS	1	1930	0.30			F70.00	/	
	RHS	1	1930	0.30	NA ALERIA		579.00	<i>r</i>	
-		1	1550	0.30			579.00	_	
				-			1158.00	-	
		<del> </del>				Say	1158.00	148.23	171650.
3.07	KSRB 2.3: Filling available Excavated Earth (excluding rock) in sides of foundations upto plinth in layers not			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					
	exceeding 20cms in depth, compacting each deposited layer by raming after watering with lead upto 50m and lift upto 1.5 m including cost of all labour complete as per specifications. Specification No.KBS 2.9	1			- 1				
	(P.No.6, I.No.2.10 of PW, P&IWTD S.R 2012	2-13)		plus (comagan) e i	the religions	PR 42-2	A 1967 TO 1065		Total Control Control
	LHS	10)	1.7.	1000 00	0.10			- !	
120	RHS		1	1930.00	0.10	1.20	231.60		
				1930.00	0.10	1.20	231.60		
		-	1 - 2 - 1 - 1	1	-	3 2	463.20		
	Committee of the commit	200 Sept 1	Description and		i i	Say	464.00	90.72	42094.
.08	KSRRB M100-4.2. Haulage of materials by tipper including cost of loading, unloading and stacking complete as per specifications. MoRT&H Chapter 1 Case-I: Surface Road	energy I vo			140014	The second			
100	(P. No.147 of PW, P&IWTD S.R. 2012-13)	-							
	Qnty same as item no 2.01- 2.07				not man time				- 15 15 1 for
1.5	For 20Km RS. 2.00 X 1.28X 20 = (52.00 + 62.20)X1.08=122.47		1	11777.00			11777.00	122.47	1442353.(
		10 140	100	Control of		6.50			49801279.0
	Miscellaneous and Rounding off		CONTRACTOR		والمراجعة والمساورة		replacement of the last section of	- Arthurstellin	8721.0
					To	tal Cost	of Road Si	de Drain	49810000.0
	THE CHARLES TO SEE THE SECOND			- 15.4	•	3 74.	PARE COMPA	D. 1 12 1 1	and distance in
	b) Culverts Across the Roads	- 1						Name of the	
	excavation for foundation of structures as per drawing and technical specifications,	Cum							2005d T
	including setting out, construction of shoring and bracing, removal of stumps and other deleterious matter, dressing of sides and bottom and backfilling with approved material complete as per specifications. B. Mechanical Means (i) Depth upto 3m.	and the second s			1	•		ತಿ ಹಕ್ಕು ಕಾಯ್ದೆ ನೀಡಲಾಗಿದೆ ಶ್ರಿ ಕ ಅಭಿಯಂತರ 2. ಬಿ.ಬಿ.ಎಂ.ಪಿ	to to
	(Add 10% Extra for Dewatering)					<u></u>	D (3)19(-9(-		
	P.No.221, I.No.27.4 of PW,P&IWTD S.R 201	2-13)				1	•		77.7
	Kendriya Sadana Junction	-					1		
1.5	LHS '			1000					11 10 10 10 10 10
-	01 70 T		1	· 31.70	2 00	0.15	100.00		
1	31.70m Length		1	. 31.70	2.80	2.15	190.83		
1	RHS			. 31.70	2.80	2.15	190.83	- · · · ·	
			1	32.56	2.80	2.15	196.01		

SI.	Description of Work	Unit	NT-	Length	Breadth	Depth	Marie and	Rate in	Total Control
No.			No.	m	m	m	Quantity	Rs.	Amount in R
3.13	KSSRB M220 8. Providing weep holes in Brick masonry / Plain / Reinforced concrete abutment, wing wall / return wall with 100mm dia AC pipe, extending through the full width of the structure with slope of	Mtr							
	1V:20H towards drawing foce. Complete as per drawing and Technical Specifications complete as per specifications. MoRT&H Specification No. 2706 & 2200	- į	•			٠			
	2.57	Î	- 1		•				
	P.No 230 I.No 28.10 of PW,P&IWTD S.R 201	2-13)							
j.	Kendriya Sadana Junction								
	LHS			31.87	0.30		9.56	/	707
	RHS	77		32.56	0.30		9.77		
	Sony world junction			1 6	0.00		3.11		Trans.
	LHS		SEPTIME TO	24.61	0.30		7.38		
	RHS			22.74	0.30		1.0		
	Ejipura Junction			22.14	0.50		6.82		
	LHS CAGE		S	15.00	0.30		4.50		
	RHS			21.00	0.30		4.50		*
				21.00	0.00		6.30	_	
		- †				Say	44.33	/ · · · · · · · · · · · · · · · · · · ·	/
		-	- 1	- 1		bay	44.50	148.23	6596.0
	KSRB 2.6: Providing and filling sand in foundation upto plinth to required depth for sub soil treatment including watering ramming with all lead and lift complete as per Specifications. Specification. No. KBS	Cum		(C)					
	foundation upto plinth to required depth for sub soil treatment including watering ramming with all lead and lift complete as per Specifications. Specification. No. KBS 2.10.2								
	foundation upto plinth to required depth for sub soil treatment including watering ramming with all lead and lift complete as per Specifications. Specification. No. KBS		200,700,000						
	foundation upto plinth to required depth for sub soil treatment including watering ramming with all lead and lift complete as per Specifications. Specification. No. KBS 2.10.2 P.No 6 INo 2.13 of PW,P&IWTD S.R. 2012-13			31.87	0.30	1.50	28.68		
	foundation upto plinth to required depth for sub soil treatment including watering ramming with all lead and lift complete as per Specifications. Specification. No. KBS 2.10.2 P.No 6 INo 2.13 of PW,P&IWTD S.R 2012-13 Kendriya Sadana Junction		1	31.87 32.56	0.30	1.50	28.68/		
	foundation upto plinth to required depth for sub soil treatment including watering ramming with all lead and lift complete as per Specifications. Specification. No. KBS 2.10.2 P.No 6 INo 2.13 of PW,P&IWTD S.R 2012-13 Kendriya Sadana Junction LHS	2.		31.87 32.56	0.30	1.50 1.00	28.68/ 19.54		
	foundation upto plinth to required depth for sub soil treatment including watering ramming with all lead and lift complete as per Specifications. Specification. No. KBS 2.10.2 P.No 6 INo 2.13 of PW,P&IWTD S.R 2012-13; Kendriya Sadana Junction LHS RHS	2. 2 2 2	1 .	The state of the	0.30	1,00	19.54		
	foundation upto plinth to required depth for sub soil treatment including watering ramming with all lead and lift complete as per Specifications. Specification. No. KBS 2.10.2  P.No 6 INo 2.13 of PW,P&IWTD S.R 2012-13 Kendriya Sadana Junction  LHS  RHS  Sony world junction	2. 2 2 2	1 1	32.56	-	The state of the s	19.54 14.77		
	foundation upto plinth to required depth for sub soil treatment including watering ramming with all lead and lift complete as per Specifications. Specification. No. KBS 2.10.2  P.No 6 INo 2.13 of PW,P&IWTD S.R 2012-13; Kendriya Sadana Junction  LHS  RHS  Sony world junction  LHS	2 2 2 2 2	1	32.56	0.30	1.00	19.54		
	foundation upto plinth to required depth for sub soil treatment including watering ramming with all lead and lift complete as per Specifications. Specification. No. KBS 2.10.2  P.No 6 INo 2.13 of PW,P&IWTD S.R 2012-13; Kendriya Sadana Junction  LHS  RHS  Sony world junction  LHS  RHS	2 2 2 2 2 2	1 1 1	32.56	0.30	1.00	19.54 14.77 20.47		
	foundation upto plinth to required depth for sub soil treatment including watering ramming with all lead and lift complete as per Specifications. Specification. No. KBS 2.10.2  P.No 6 INo 2.13 of PW,P&IWTD S.R 2012-13; Kendriya Sadana Junction  LHS  RHS  Sony world junction  LHS  RHS  Ejipura Junction	2 2 2 2 2 2 2 2	1 1 1 1	32,56 24.61 22.74	0.30 -0.30 -0.30	1.00 1.00 1.50	19.54 14.77		
	foundation upto plinth to required depth for sub soil treatment including watering ramming with all lead and lift complete as per Specifications. Specification. No. KBS 2.10.2  P.No 6 INo 2.13 of PW,P&IWTD S.R 2012-13, Kendriya Sadana Junction  LHS  RHS  Sony world junction  LHS  RHS  Ejipura Junction  LHS	2 2 2 2 2 2 2 2 2	1 1 1 1	32.56 24.61 22.74 15.00	0.30 0.30 0.30	1.00 1.00 1.50	19.54 14.77 20.47 13.50 12.60		
	foundation upto plinth to required depth for sub soil treatment including watering ramming with all lead and lift complete as per Specifications. Specification. No. KBS 2.10.2  P.No 6 INo 2.13 of PW,P&IWTD S.R 2012-13, Kendriya Sadana Junction  LHS  RHS  Sony world junction  LHS  RHS  Ejipura Junction  LHS	2 2 2 2 2 2 2 2 2	1 1 1 1	32.56 24.61 22.74 15.00	0.30 0.30 0.30	1.00 1.00 1.50	19.54 14.77 20.47 13.50	1298.16	142798.0
	foundation upto plinth to required depth for sub soil treatment including watering ramming with all lead and lift complete as per Specifications. Specification. No. KBS 2.10.2  P.No 6 INo 2.13 of PW,P&IWTD S.R. 2012-13; Kendriya Sadana Junction  LHS  RHS  Sony world junction  LHS  RHS  Ejipura Junction  LHS  RHS  ERHS	2 2 2 2 2 2 2 2 2 2	1 1 1 1 2 1	32.56 24.61 22.74 15.00	0.30 0.30 0.30	1.00 1.50 1.50 1.00	19.54 14.77 20.47 13.50 12.60 109.55	1298.16	142798.0
115	foundation upto plinth to required depth for sub soil treatment including watering ramming with all lead and lift complete as per Specifications. Specification. No. KBS 2.10.2  P.No 6 INo 2.13 of PW,P&IWTD S.R. 2012-13; Kendriya Sadana Junction  LHS  RHS  Sony world junction  LHS  RHS  Ejipura Junction  LHS  RHS  Ejipura Junction  LHS  KSRRB M100-4.2. Haulage of materials by tipper Including cost of loading, unloading and stacking complete as per specifications.	2 2 2 2 2 2 2 2 2 2	1 1 1 1 2 1	32.56 24.61 22.74 15.00	0.30 0.30 0.30	1.00 1.50 1.50 1.00	19.54 14.77 20.47 13.50 12.60 109.55	1298.16	142798.0
15	foundation upto plinth to required depth for sub soil treatment including watering ramming with all lead and lift complete as per Specifications. Specification. No. KBS 2.10.2  P.No 6 INo 2.13 of PW,P&IWTD S.R 2012-13) Kendriya Sadana Junction LHS RHS Sony world junction LHS RHS Ejipura Junction LHS RHS Ejipura Junction LHS RHS  Ejipura Junction LHS RHS  KSRRB M100-4.2. Haulage of materials by tipper Including cost of loading, unloading and stacking complete as per specifications. MoRT&H Chapter 1 Case-I: Surface Road	2 2 2 2 2 2 2 2 2 2	1 1 1 2 1 2 1	32.56 24.61 22.74 15.00	0.30 0.30 0.30	1.00 1.50 1.50 1.00	19.54 14.77 20.47 13.50 12.60 109.55	1298.16	142798.0
15	foundation upto plinth to required depth for sub soil treatment including watering ramming with all lead and lift complete as per Specifications. Specification. No. KBS 2.10.2  P.No 6 INo 2.13 of PW,P&IWTD S.R 2012-13)  Kendriya Sadana Junction  LHS  RHS  Sony world junction  LHS  RHS  Ejipura Junction  LHS  RHS  Ejipura Junction  LHS  RHS  Chapter 1 Case-I : Surface Road  P. No.147 of PW, P&IWTD S.R 2012-13)	2 2 2 2 2 2 2 2 2 2	1 1 1 2 1 2 1	32.56 24.61 22.74 15.00	0.30 0.30 0.30	1.00 1.50 1.50 1.00	19.54 14.77 20.47 13.50 12.60 109.55	1298.16	**************************************
15	foundation upto plinth to required depth for sub soil treatment including watering ramming with all lead and lift complete as per Specifications. Specification. No. KBS 2.10.2  P.No 6 INo 2.13 of PW,P&IWTD S.R 2012-13; Kendriya Sadana Junction  LHS  RHS  Sony world junction  LHS  RHS  Ejipura Junction  LHS  RHS  Eyipura Junction  LHS  RHS  KSRRB M100-4.2. Haulage of materials by tipper Including cost of loading, unloading and stacking complete as per specifications. MoRT&H Chapter 1 Case-I: Surface Road  (P. No.147 of PW, P&IWTD S.R 2012-13)  Quty same as item No. 2.09	2 2 2 2 2 2 2 2 2 2	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	32.56 24.61 22.74 15.00 21.00	0.30 0.30 0.30	1.00 1.50 1.50 1.00	19.54 14.77 20.47 13.50 12.60 109.55	1298.16	
15	foundation upto plinth to required depth for sub soil treatment including watering ramming with all lead and lift complete as per Specifications. Specification. No. KBS 2.10.2  P.No 6 INo 2.13 of PW,P&IWTD S.R 2012-13)  Kendriya Sadana Junction  LHS  RHS  Sony world junction  LHS  RHS  Ejipura Junction  LHS  RHS  Ejipura Junction  LHS  RHS  Chapter 1 Case-I : Surface Road  P. No.147 of PW, P&IWTD S.R 2012-13)	2 2 2 2 2 2 2 2 2 2	1 1 1 2 1 2 1	32.56 24.61 22.74 15.00	0.30 0.30 0.30	1.00 1.50 1.50 1.00	19.54 14.77 20.47 13.50 12.60 109.55	1298.16	
115	foundation upto plinth to required depth for sub soil treatment including watering ramming with all lead and lift complete as per Specifications. Specification. No. KBS 2.10.2  P.No 6 INo 2.13 of PW,P&IWTD S.R 2012-13; Kendriya Sadana Junction  LHS  RHS  Sony world junction  LHS  RHS  Ejipura Junction  LHS  RHS  Eyipura Junction  LHS  RHS  KSRRB M100-4.2. Haulage of materials by tipper Including cost of loading, unloading and stacking complete as per specifications. MoRT&H Chapter 1 Case-I: Surface Road  (P. No.147 of PW, P&IWTD S.R 2012-13)  Quty same as item No. 2.09	2 2 2 2 2 2 2 2 2 2	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	32.56 24.61 22.74 15.00 21.00	0.30 0.30 0.30	1.00 1.50 1.50 1.00 Say	19.54 14.77 20.47 13.50 12.60 109.55 110.00	, ,	

Assistant Executive Engineer

Traffic Engineering Cell, ದಾಖಲೆಯನ್ನು ಮಾಹಿತಿ ಹಕ್ಕು ಕಾಯ್ದೆ 2655 thath Bangalore Mahanagara Palike ಅಡಿಯಲ್ಲಿ ನೀಡಲಾಗಿದೆ Bangalore - 560 002.

Executive Engineer Traffic Engineering Cell (Road Infra) Bruhat Bangalore Mahanagara Palik Bangalore - 560 002.

ಕ್ಷಾರ್ಯಪ್ರಾಲಕ ಅಭಿಯಂತರರು

Sl. No.	Service and the services	14/2 47	de la maria	Length	Breadth	Depth	er i de mines	Doto in	STERNING.
to the side	Description of Work	Unit	No.	m	m	m	Quantity	Rate in Rs.	Amount in R
	c) RCC Box Culvert for Storm Water Dr.	ain & l	Retainin	g Wall		77			
3.16	KSRB 2100 - 5: Excavation in Marshy soil	Cum	1	1					
	up to 3m depth for foundations of		1						
	structures as per drawing and technical		1	1.					
	specifications including removing the		1						
	excavated stuff to a lead of 15m, including				::• /	٠.	1		
	dewatering, shoring and shuttering,							•	
	refilling trenches in 250mm layers,		1						
	wherever necessary watering and ramming		1					0.19-00 10-00.00	11
	including cost of all materials, labour	0.0			JF. 1				
	complete as per specifications. MoRT&H Chapter 12				min program				10.000
	Chapter 12	- 1							
	(P.No.222, I.No.27.11 of PW,P&IWTD S.R 20	12-13)			127.3	-1	100 Aug.	5	
	For Removing Silt			1				-	
	Existing Storm Water DrainPortion			1116		1.5			
	CH:1958.00 to1974.50		1	45.00	16.50	1.00	742.50		
API I			1			Say	742.50	386.64	287080.0
	n								
3.17	Diversion of water course by providing	Cum							The second of
110	Coffer dams or bunds or islands as may be necessary for piers and abutments	-		1					
	foundations, bailing out or pumping water	1							
	during excavation and until completion etc.,	Î	-1				i		
1	complete. Beyond 1.50m depth upto &		1			= 10	- 1	-	
- 1	including 3m depth.		45.45%						
			v / 18					J. 17 (1 1)	
	(P.No.269, I.No.37.41.2 of PW,P&IWTD S.R 2	2012-13	)		-				
44.11/14	Existing Storm Water DrainPortion			Artes and the	CONTRACTOR CONTRACTOR		V-17 A-11 A	4.7	er a be delicated
	CH:1958.00 to1974.50		1	45.00	6.00	2.00	540.00	41	-
			1.14.	11 W + + 5 , =	partie la	Say	540.00	274.32	148133.0
			Period Manager	101 17 4 10	1000				110100.0
	KSRB - 5.1.1: Providing and	Cum	III CONTRA	County and to the	18 0130 57 962 6 1	-Negros	the content	-william 19-1	The state of the second
	constructing grantie / trap / basalt	-71		14	S 10 00				
!	rubble stone masornry in foundation with mud mortar (uncoursed), bond stones			er en je ma e mije e	ne transport of the second				HOUSE AND THE
	at two m apart in each course including cost		N -1 /2 /						1. 人名英格里
	of materials, labour, curing complete as per				1.4		0	C. B.	
	specifications. KBS 5.1.12	i i		L. LAND NI LOTE BY					
1									
	(P.No.25, I.No.5.1 of PW,P&IWTD S.R 2012-1	3)	13.5	71					
-	For Diversion of Water	4 10 10 10 10 10		Tall and	-240 ( tag (		/	A se at the	e i a major i major e i i de la companio del companio de la companio de la companio del companio de la companio del companio de la companio de la companio de la companio del companio de la companio della companio de la companio della companio della companio della companio della companio della companio della companio del
1	CH:1958.00 to1974.50		2	45.00	1.00	1.50	135.00	1	
- 1	A CONTRACTOR OF THE CONTRACTOR		7,100	10000		Say	135.00	1156.68	156152.00
V.				The state of					
10	VCDDD Me100 2 1 Fouth	The same of	Marie Control	College and Care Constitution of the	CALL SECTION	201 201 111			a
.19	KSRRB M2100-2.1. Earth work in		1		Carrier 1		27	1	
	excavation for foudnation of structures as								
	excavation for foudnation of structures as per drawing and technical specifications,								
	excavation for foudnation of structures as per drawing and technical specifications, including setting out, construction of shoring and bracing, removal of stumps and				7				
	excavation for foudnation of structures as per drawing and technical specifications, including setting out, construction of shoring and bracing, removal of stumps and other deleterious matter, dressing of sides				1				
	excavation for foudnation of structures as per drawing and technical specifications, including setting out, construction of shoring and bracing, removal of stumps and other deleterious matter, dressing of sides and bottom and backfilling with approved	177			<i>j</i>				
	excavation for foudnation of structures as per drawing and technical specifications, including setting out, construction of shoring and bracing, removal of stumps and other deleterious matter, dressing of sides and bottom and backfilling with approved material complete as per specifications. B.				,				
	excavation for foundation of structures as per drawing and technical specifications, including setting out, construction of shoring and bracing, removal of stumps and other deleterious matter, dressing of sides and bottom and backfilling with approved material complete as per specifications. B. Mechanical Means (i) Depth upto 3m.				,				
	excavation for foudnation of structures as per drawing and technical specifications, including setting out, construction of shoring and bracing, removal of stumps and other deleterious matter, dressing of sides and bottom and backfilling with approved material complete as per specifications. B.								
	excavation for foudnation of structures as per drawing and technical specifications, including setting out, construction of shoring and bracing, removal of stumps and other deleterious matter, dressing of sides and bottom and backfilling with approved material complete as per specifications. B. Mechanical Means (i) Depth upto 3m. (Add 10% Extra for Dewatering)				<i>j</i>	-			
	excavation for foudnation of structures as per drawing and technical specifications, including setting out, construction of shoring and bracing, removal of stumps and other deleterious matter, dressing of sides and bottom and backfilling with approved material complete as per specifications. B. Mechanical Means (i) Depth upto 3m. (Add 10% Extra for Dewatering)	2-13)							
	excavation for foudnation of structures as per drawing and technical specifications, including setting out, construction of shoring and bracing, removal of stumps and other deleterious matter, dressing of sides and bottom and backfilling with approved material complete as per specifications. B. Mechanical Means (i) Depth upto 3m. (Add 10% Extra for Dewatering)  (P.No.221, I.No.27.4 of PW.P&IWTD S.R 2012 CH:1958.00 to 1974.50	2-13)		10.00					
	excavation for foudnation of structures as per drawing and technical specifications, including setting out, construction of shoring and bracing, removal of stumps and other deleterious matter, dressing of sides and bottom and backfilling with approved material complete as per specifications. B. Mechanical Means (i) Depth upto 3m. (Add 10% Extra for Dewatering)  (P.No.221, I.No.27.4 of PW.P&IWTD S.R 2012 CH:1958.00 to 1974.50  Retaining Wall	2-13)	4 4 2	10.00	4.80	3.00	576.00		
	excavation for foudnation of structures as per drawing and technical specifications, including setting out, construction of shoring and bracing, removal of stumps and other deleterious matter, dressing of sides and bottom and backfilling with approved material complete as per specifications. B. Mechanical Means (i) Depth upto 3m. (Add 10% Extra for Dewatering)  (P.No.221, I.No.27.4 of PW.P&IWTD S.R 2012 CH:1958.00 to 1974.50	2-13)	4 2	10.00	4.80	3.00	576.00 67.50 643.50		

ದಾಖಲೆಯನ್ನು ಮಾಹಿತಿ ಹಕ್ಕು ಕಾಯ್ದೆ 2005ಂ ಅಡಿಯಲ್ಲಿ ನೀಡಲಾಗಿದೆ

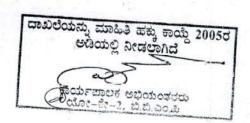
Manasa consultants

SI.	Description of Work	11-11	THE COUNTY OF THE PARTY OF THE	Length	Breadth	Depth		Rate in	I ment i i seriene
No.		Unit	No.	m	m	m	Quantity	Rs.	Amount in F
	KSRRB M2100-2.1. Earthwork in excavation for foundation of structures as per drawing and technical specifications, including setting out, construction of shoring and bracing, removal of stumps and other deleterious matter, dressing of sides and bottom and backfilling with approved material complete as per specifications, B. Mechanical means ii) Depth 3m to 6m								
	and any Depth of to off		1	1		1			Total management
ī į	Add 10% extra for dewatering charges				4.6				
	(P.No.221, I.No.27.5 of PW,P&IWTD S.R 20	12-13)	1		al all all all all all all all all all		*******	7-04-0-00	the sales have present at the
	CH:1958.00 to1974.50				-				
	Box Portion		1	35.00	21.80	7.25	5531.75	/	La Son
	Retaining Wall		4	10.00	1		748.80	,	17 3977
1.	Deduct Existing Storm Water Drain		-1	35.00	The second secon		-2380.00		
-						1.00	3900.55		
				1		Say	3901.00		197888.
0.01	VODDD MAROL 1 2 2 2			1				00.75	137000.
į	KSRRB M100-4.2. Haulage of materials by ipper including cost of loading, unloading and stacking complete as per specifications. MoRT&H Chapter 1 Case-I: Surface Road	Cum							
(	P. No.147 of PW, P&IWTD S.R 2012-13)			7 1		15			
(	Inty same as item no 2.16, 2.17, 2.18, 2.19		in		120 8 400	17		(1)	14.5
I	For 20Km Rs. 2.00 X 1.28 X 20 = (52.00 +			120				- 1	
16	2.20)X1.08=122.47		100	Y.	10.0	and the	5962.00		
				ATTEMPT OF THE SAME SAME SAME SAME SAME SAME SAME SAM	MICHAEL ROMAN CONTRACTOR	Say	5962.00	100 15	The second contracts
	Providing and filling in foundation		a faith	U. W. H	V 575	· Say	3502,00	122.47	730178.0
la la	with granite / trap broken metal 00mm. and down size, with approved sand including hand packing, ramming, ratering, including cost of all materials and abour with all lead and lift complete as perpecifications.						The state of the s		
	No 6 I.No 2.15 of PW,P&IWTD SR 2012-13)		SCH SESSOR	Part Stronger	Secretarion of the second con-	EARL LAND	A Tomas to the last of the	A CAN AND A SA A CAN A CAN	
	H:1958.00 to1974.50			4 2 2					Service Allega Allega and a service and a se
	ox Portion		1	35.00	21.30	0.30	223.65	1	*
	etaining Wall pproch Slab		4	10.00	4.30	0.30	51.60		Translative Commence
A	pproch Siao	-	2	25.00	3.00	0.30	45.00	41.	
					10.24		320.25		
	the state of the s	000	Programme to the	1 1 10 10 10 10	granudga sa	Say	320.50	1135.08	363793.0
	the state of the second of the								· Med Treat
C	SRRB M 2200 5 - 12: Plain Cement Concrete M15 with OPC cement @ 240	um					•		
kg gr	oncrete M15 with OPC cement @ 240 cs, with 40mm and down size graded anite metal coarse aggregates @ 0.63cum	um		• • • •					
kg gr ar	oncrete M15 with OPC cement @ 240 (s, with 40mm and down size graded anite metal coarse aggregates @ 0.63cum of fine aggregates @0.42cum - i) Upto 5m eight.								
kg gr ar he	oncrete M15 with OPC cement @ 240 cs, with 40mm and down size graded anite metal coarse aggregates @ 0.63cum of fine aggregates @0.42cum - i) Upto 5m eight.  No 227 I.No 28.7.1 of PW,P&IWTD SR 2012-								
kg gr an he	oncrete M15 with OPC cement @ 240 cs, with 40mm and down size graded anite metal coarse aggregates @ 0.63cum of fine aggregates @0.42cum - i) Upto 5m bight.  No 227 I.No 28.7.1 of PW,P&IWTD SR 2012-I:1958.00 to1974.50			/					
kg gr ar he	oncrete M15 with OPC cement @ 240 cs, with 40mm and down size graded anite metal coarse aggregates @ 0.63cum of fine aggregates @0.42cum - i) Upto 5m wight.  No 227 I.No 28.7.1 of PW,P&IWTD SR 2012-1:1958.00 to1974.50 oproch Slab		2	25.00	3.00	0.15	22 50		
Regarder of the control of the contr	oncrete M15 with OPC cement @ 240 cs, with 40mm and down size graded anite metal coarse aggregates @ 0.63cum of fine aggregates @0.42cum · i) Upto 5m eight.  No 227 I.No 28.7.1 of PW,P&IWTD SR 2012-H:1958.00 to1974.50 oproch Slab ox Portion		2	25.00 35.00	3.00	0.15 0.15	22.50		
Regarder of the control of the contr	oncrete M15 with OPC cement @ 240 cs, with 40mm and down size graded anite metal coarse aggregates @ 0.63cum of fine aggregates @0.42cum - i) Upto 5m wight.  No 227 I.No 28.7.1 of PW,P&IWTD SR 2012-1:1958.00 to1974.50 oproch Slab			-			111.83		
Regarder of the control of the contr	oncrete M15 with OPC cement @ 240 cs, with 40mm and down size graded anite metal coarse aggregates @ 0.63cum of fine aggregates @0.42cum · i) Upto 5m eight.  No 227 I.No 28.7.1 of PW,P&IWTD SR 2012-H:1958.00 to1974.50 oproch Slab ox Portion		1	35.00	21.30	0.15			
Regarder of the control of the contr	oncrete M15 with OPC cement @ 240 cs, with 40mm and down size graded anite metal coarse aggregates @ 0.63cum of fine aggregates @0.42cum · i) Upto 5m eight.  No 227 I.No 28.7.1 of PW,P&IWTD SR 2012-H:1958.00 to1974.50 oproch Slab ox Portion		1	35.00	21.30	0.15	111.83 25.80	4115.88	660599.00

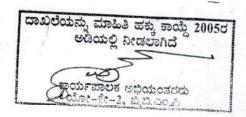
ದಾಖಲೆಯನ್ನು ಮಾಹಿತಿ ಹಮ್ಮ ಕಾಯ್ದೆ 2005ರ ಅಡಿಯಲ್ಲಿ ನೀಡಲಾಗಿದೆ ರಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು

Manasa consultants

No.	Description of Work	11-24	NT-	Length	Breadth	Depth	agovernaturality (in	Rate in	et il 70° by containi
		Unit	No.	m	m	m	Quantity	Rs.	Amount in R
3.24	KSRRB 2200-5.18 Design mix M35 with OPC cement @ 390kgs, with 20mm and down size graded granite metal coarse aggregates @ 0.68cum and fine aggregates @ 0.45cum, with superplastisiser @ 3lts confirming to IS9103-1999 Reaffirmed-2008	1							
	- i) Upto 5m height.					3671.			
	(P.No.229, I.No.28.7.18 of PW,P&IWTD S.R	2012-1	3)						
	CH:1958.00 to1974.50								
	Box Portion			,		100	1110	-	
	Bottom Slab		1	35.00	21.00	0.65	477.75	/	
	Side Walls	- 1	3	35.00	0.60	5.50	346.50	/	
	Carbel		2	35.00	0.55	0.30	11.55		161
	Haunches	0.5	8	35.00	0.30	0.30	12.60	/	
	Retaining Wall		- 11			SACE IN	848.40	ZOTATEL !	No la constitución
4	Bottom Slab		4	10.00	4.10	0.30	49.20		77. 1. 2. 1. 1.
			4	10.00	2.43	0.45	43.65/	-	
	Stem		4	10.00	0.48	6.15	116.85	/	
	Approch Slab	-	2	25.00	3.00	0.10	30.00		
	(1.69) 2. M.	7		20,00	0.00	0.20	239.70	/	
	7-14				•		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	<u> </u>	the state of the s
						- 0	1088.10		/ /
					•	Say	1088.50	5795.28	6308162,0
	technical specifications complete as per specifications. MoRT&H Specification No.		***		77-	1000		The last second	
	1600 & 2200					7 W	Nation Levis		
	1600 & 2200 (P.No.230, I.No.28.8 of PW, P&IWTD SR 201	2-13)					Tartin Land		
		2-13)				2 4 4 5 1 4 1 4 1 4 1 4 1 4 1 4 1 4 1 4 1	Note that		
	(P.No.230, I.No.28.8 of PW, P&IWTD SR 201	2-13)		848.40			110.290	***	
	(P.No.230, I.No.28.8 of PW, P&IWTD SR 201 Qty same as item no 2.24	2-13)		848.40 239.70			110.29	2012	
	(P.No.230, I.No.28.8 of PW, P&IWTD SR 201 Qty same as item no 2.24 Considering 130kg/cum for Culvert	2-13)		848.40 239.70			19.18	2	
	(P.No.230, I.No.28.8 of PW, P&IWTD SR 201 Qty same as item no 2.24 Considering 130kg/cum for Culvert	2-13)				Sav	19.18 129,47	201706	
	(P.No.230, I.No.28.8 of PW, P&IWTD SR 201 Qty same as item no 2.24 Considering 130kg/cum for Culvert	2-13)				Say	19.18 129,47	68178.24	8829082.00
3.26	(P.No.230, I.No.28.8 of PW, P&IWTD SR 201 Qty same as item no 2.24 Considering 130kg/cum for Culvert Considering 80kg/cum for Retaining wall					Say	19.18 129,47	68178.24	8829082.00
	(P.No.230, I.No.28.8 of PW, P&IWTD SR 201 Qty same as item no 2.24 Considering 130kg/cum for Culvert					Say	19.18 129,47	68178.24	8829082.00
	(P.No.230, I.No.28.8 of PW, P&IWTD SR 201. Qty same as item no 2.24 Considering 130kg/cum for Culvert Considering 80kg/cum for Retaining wall  KSRB M 2300 - 7.2: Furnishing and Placing Reinforced / Prestressed Cement Concrete in Super-structure as per drawing and					Say	19.18 129,47	68178.24	8829082.00
	(P.No.230, I.No.28.8 of PW, P&IWTD SR 201. Qty same as item no 2.24 Considering 130kg/cum for Culvert Considering 80kg/cum for Retaining wall  KSRB M 2300 - 7.2: Furnishing and Placing Reinforced / Prestressed Cement Concrete in Super-structure as per drawing and technical specification complete as per					Say	19.18 129,47	68178.24	8829082.00
	(P.No.230, I.No.28.8 of PW, P&IWTD SR 201. Qty same as item no 2.24 Considering 130kg/cum for Culvert Considering 80kg/cum for Retaining wall  KSRB M 2300 - 7.2: Furnishing and Placing Reinforced / Prestressed Cement Concrete in Super-structure as per drawing and technical specification complete as per specifications. D.RCC / PSC with OPC					Say	19.18 129,47	68178.24	8829082.00
	(P.No.230, I.No.28.8 of PW, P&IWTD SR 201. Qty same as item no 2.24 Considering 130kg/cum for Culvert Considering 80kg/cum for Retaining wall  KSRB M 2300 - 7.2: Furnishing and Placing Reinforced / Prestressed Cement Concrete in Super-structure as per drawing and technical specification complete as per specifications. D.RCC / PSC with OPC Cement Design mix M35 @ 390 kgs, with					Say	19.18 129,47	68178.24	8829082.00
	(P.No.230, I.No.28.8 of PW, P&IWTD SR 201. Qty same as item no 2.24 Considering 130kg/cum for Culvert Considering 80kg/cum for Retaining wall  KSRB M 2300 - 7.2: Furnishing and Placing Reinforced / Prestressed Cement Concrete in Super-structure as per drawing and technical specification complete as per specifications. D.RCC / PSC with OPC Cement Design mix M35 @ 390 kgs, with 20mm and down size graded granite metal					Say	19.18 129,47	68178.24	8829082.00
	(P.No.230, I.No.28.8 of PW, P&IWTD SR 201) Qty same as item no 2.24 Considering 130kg/cum for Culvert Considering 80kg/cum for Retaining wall  KSRB M 2300 - 7.2: Furnishing and Placing Reinforced / Prestressed Cement Concrete in Super-structure as per drawing and technical specification complete as per specifications. D.RCC / PSC with OPC Cement Design mix M35 @ 390 kgs, with 20mm and down size graded granite metal coarse aggregates @0.68cum and fine					Say	19.18 129,47	68178.24	8829082.00
	(P.No.230, I.No.28.8 of PW, P&IWTD SR 201. Qty same as item no 2.24 Considering 130kg/cum for Culvert Considering 80kg/cum for Retaining wall  KSRB M 2300 - 7.2: Furnishing and Placing Reinforced / Prestressed Cement Concrete in Super-structure as per drawing and technical specification complete as per specifications. D.RCC / PSC with OPC Cement Design mix M35 @ 390 kgs, with 20mm and down size graded granite metal coarse aggregates @0.68cum and fine aggregates @ 0.45cum, with					Say	19.18 129,47	68178.24	8829082.00
	(P.No.230, I.No.28.8 of PW, P&IWTD SR 201) Qty same as item no 2.24 Considering 130kg/cum for Culvert Considering 80kg/cum for Retaining wall  KSRB M 2300 - 7.2: Furnishing and Placing Reinforced / Prestressed Cement Concrete in Super-structure as per drawing and technical specification complete as per specifications. D.RCC / PSC with OPC Cement Design mix M35 @ 390 kgs, with 20mm and down size graded granite metal coarse aggregates @0.68cum and fine aggregates @ 0.45cum, with superplastisiser @3lts confirming to IS 9103					Say	19.18 129,47	68178.24	8829082.00
	(P.No.230, I.No.28.8 of PW, P&IWTD SR 201. Qty same as item no 2.24 Considering 130kg/cum for Culvert Considering 80kg/cum for Retaining wall  KSRB M 2300 - 7.2: Furnishing and Placing Reinforced / Prestressed Cement Concrete in Super-structure as per drawing and technical specification complete as per specifications. D.RCC / PSC with OPC Cement Design mix M35 @ 390 kgs, with 20mm and down size graded granite metal coarse aggregates @ 0.68cum and fine aggregates @ 0.45cum, with superplastisiser @3lts confirming to IS 9103 1999 Reaffirmed-2008 MoRT&H					Say	19.18 129,47	68178.24	8829082.00
	(P.No.230, I.No.28.8 of PW, P&IWTD SR 201. Qty same as item no 2.24 Considering 130kg/cum for Culvert Considering 80kg/cum for Retaining wall  KSRB M 2300 - 7.2: Furnishing and Placing Reinforced / Prestressed Cement Concrete in Super-structure as per drawing and technical specification complete as per specifications. D.RCC / PSC with OPC Cement Design mix M35 @ 390 kgs, with 20mm and down size graded granite metal coarse aggregates @0.68cum and fine aggregates @ 0.45cum, with superplastisiser @3lts confirming to IS 9103 1999 Reaffirmed-2008 MoRT&H Specification No. 1500, 1600 & 1700 - i)					Say	19.18 129,47	68178.24	8829082.00
	(P.No.230, I.No.28.8 of PW, P&IWTD SR 201. Qty same as item no 2.24 Considering 130kg/cum for Culvert Considering 80kg/cum for Retaining wall  KSRB M 2300 - 7.2: Furnishing and Placing Reinforced / Prestressed Cement Concrete in Super-structure as per drawing and technical specification complete as per specifications. D.RCC / PSC with OPC Cement Design mix M35 @ 390 kgs, with 20mm and down size graded granite metal coarse aggregates @ 0.68cum and fine aggregates @ 0.45cum, with superplastisiser @3lts confirming to IS 9103 1999 Reaffirmed-2008 MoRT&H					Say	19.18 129,47	68178.24	8829082.00
	(P.No.230, I.No.28.8 of PW, P&IWTD SR 201.  Qty same as item no 2.24  Considering 130kg/cum for Culvert  Considering 80kg/cum for Retaining wall  KSRB M 2300 - 7.2: Furnishing and Placing Reinforced / Prestressed Cement Concrete in Super-structure as per drawing and technical specification complete as per specifications. D.RCC / PSC with OPC Cement Design mix M35 @ 390 kgs, with 20mm and down size graded granite metal coarse aggregates @ 0.45cum, with superplastisiser @3lts confirming to IS 9103 1999 Reaffirmed-2008 MoRT&H Specification No. 1500, 1600 & 1700 - i) Upto 5m height.	Cum				Say	19.18 129,47	68178.24	8829082.00
	(P.No.230, I.No.28.8 of PW, P&IWTD SR 201. Qty same as item no 2.24 Considering 130kg/cum for Culvert Considering 80kg/cum for Retaining wall  KSRB M 2300 - 7.2: Furnishing and Placing Reinforced / Prestressed Cement Concrete in Super-structure as per drawing and technical specification complete as per specifications. D.RCC / PSC with OPC Cement Design mix M35 @ 390 kgs, with 20mm and down size graded granite metal coarse aggregates @0.68cum and fine aggregates @ 0.45cum, with superplastisiser @3lts confirming to IS 9103 1999 Reaffirmed-2008 MoRT&H Specification No. 1500, 1600 & 1700 - i) Upto 5m height.	Cum	3-13)			Say	19.18 129,47	68178.24	8829082.00
	(P.No.230, I.No.28.8 of PW, P&IWTD SR 201. Qty same as item no 2.24 Considering 130kg/cum for Culvert Considering 80kg/cum for Retaining wall  KSRB M 2300 - 7.2: Furnishing and Placing Reinforced / Prestressed Cement Concrete in Super-structure as per drawing and technical specification complete as per specifications. D.RCC / PSC with OPC Cement Design mix M35 @ 390 kgs, with 20mm and down size graded granite metal coarse aggregates @ 0.48cum and fine aggregates @ 0.45cum, with superplastisiser @3lts confirming to IS 9103 1999 Reaffirmed-2008 MoRT&H Specification No. 1500, 1600 & 1700 - i) Upto 5m height.  P. No. 237&238 INo 29.14.1 of PW,P&IWTD S CH:1958.00 to1974.50	Cum	3-13)			Say	19.18 129,47	68178.24	8829082.00
	(P.No.230, I.No.28.8 of PW, P&IWTD SR 201. Qty same as item no 2.24 Considering 130kg/cum for Culvert Considering 80kg/cum for Retaining wall  KSRB M 2300 - 7.2: Furnishing and Placing Reinforced / Prestressed Cement Concrete in Super-structure as per drawing and technical specification complete as per specifications. D.RCC / PSC with OPC Cement Design mix M35 @ 390 kgs, with 20mm and down size graded granite metal coarse aggregates @0.68cum and fine aggregates @ 0.45cum, with superplastisiser @3lts confirming to IS 9103 1999 Reaffirmed-2008 MoRT&H Specification No. 1500, 1600 & 1700 - i) Upto 5m height.	Cum	3-13)		19.80	Say	19.18 129,47	68178.24	8829082.00



Sl.	A 190	State 1	00-13-50 C 17.	Length	Breadth	Depth	and the same	Det :	1 300
No.	Description of Work	Unit	No.	m	m	m	Quantity	Rate in Rs.	Amount in R
	KSRB M2300 2.12: Furnishing and Placing Reinforced / Prestressed Cement Concrete in Super-structure as per drawing and technical specification complete as per								
	specifications. A. RCC- with OPC cement design mix M20 @ 320kgs, with 20mm and down size graded granite metal coarse aggregates @ 0.69cum and fine aggregates @ 0.46cum, with superplastisiser @ 3lts conforming to IS9103-1999 Reaffirmed-								
	2008. Case-II: Using Batching Plant, Transit Mixer & Concrete Pump, MoRT&H Specification No. 1500, 1600 & 1700 - i) Upto 5m height.								
	opio om neight.					12 13	7		
1	P.No 234 INo 29.4.1 of PW,P&IWTD SR 2012	12)		1000					
	CH:1958.00 to1974.50	-13)	17		1	G E		7	
	Area of Crash Barrier = 0.386 Sqm		2	20.00	0.38	6	15.44	/ .	- 1 - 1 - 1
	Cootpath		2	20.00		0.15	15.00	<i></i>	
		1.					30.44		
- 1	1 - 26	į.		1 1 2 2	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Say	30.50	5589.00	170465.0
1 00 T	KSRRB M2300 - 14. Supplying, fitting and			:			100		
t	placing TMT bar reinforcement in super structure complete as per drawing and echnical specifications complete as per pecifications MoRT&H Specification No. 600	***************************************							
0	P.No.243, I.No.29.29 of PW, P&IWTD S.R 20	112-13	·			72.41-			The state of the state of
	Considering 130kg/cum ·	12-10		10-11-14-	100		60.57	68891.04	4172882.0
		7 - ck				710 71	00.07	00091.04	4172882.0
C	SRRB M600-1. Construction of dry lean ( ement concrete mix M5 with OPC ement @ 160Kgs, with 25mm and down	Cum			audie recepta e di argonistration argonistration	- 15.00m, 19.00 19.00 19.00			Personal States Commission
a	ize graded granite metal coarse aggregate t 0.86cum and fine aggregates @ 0.58cum ub-base over a prepared sub-grade with					,			
3	parse and fine aggregate conforming to IS: 83, aggregate cement ratio not to exceed 5:1, aggregate gradation after blending to	en line		o mant no store	anti-sertini asi s		Control State Company		
to	e as per Table 600-1, cement content not be less than 160 kg/cum, optimum soisture content to be determined during								Bur sp
tr	ial length construction, concrete strength of to be less than 10 Mpa at 7 days, mixed								
co	a batching plant, transported to site, laid ith a paver with electronic sensor, impacting with 8-10 tonnes vibratory ler, finishing and curing complete as per								
sp 60	pecifications. MoRT&H Specification No.	2							
	No.186 INo 22.1 of PW,P&IWTD SR 2012-1: H:1958.00 to1974.50	3)	1		77. T	5.54			
	or DrainTop		1	35.00	10.50	0.00	170.0=/		
				35.00	16.50	0.30	173.25	0000	499742.00
					10.00	Say	173.50	2880.36	-



Sl.	Description of Work	Unit	No.	1 2 4 1	Breadth	-	Quantity	Rate in	Amount in Rs
No.			.,,,,	m	m	m	quantity	Rs.	Amount in R
3.30	KSSRB M2200 - 9. Providing and laying Filter Media with granular materials I	1							
	stone crushed aggregates satisfying the requirements laid down in clause								
	2500.4.2.2. of MoRT&H specifications to a thickness of not less than 600 mm with								
	smaller size towards the soil and bigger size towards the wall and provided over the		1						
	entire surface behind abutment, wing wall and return wall to the full height				. 1				As is remarked to wait a contraction of
	compacted to a firm condition complete as per drawing and Technical Specification					and in	- 200 0000 000	- ee way 'n je van	
	complete as per specifications MoRT&H Specification No. 710.1.4 of IRC: 78 & 2200	18 -							
	(P.No.230, I.No.28.13 of PW,P&IWTD S.R 20 CH:1958.00 to1974.50	12-13)					N = 140 =1 . +1.		(Sept. 10 (Sept.
	For Box Portion	14 ;	2	35.00	0.60	6.15	258.30	/	
	For Retaining Wall		4	10.00	0.60	6.15	147.60	The state of the s	
				1 .			405.90		_
-	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	$\rightarrow$	1			Say	406.00	650.16	263965.0
3.31	KSRRB M2200 - 8.1. Back filling behind abutment, wing wall and return wall	Cum	1					Zeringaliya in a	38 TO 8 FEB 7
	complete as per drawing and Technical Specification complete as per specifications.					. 1		Marie	1.4
	A. Granular Material MoRT&H Specification No. 710.1.4 of IRC: 78 & 2200		- 0		• 11 = 1				
	(P.No.230, I.No.28.11 of PW,P&IWTD S.R 20 CH:1958.00 to1974.50	12-13)			•				
	For Box Portion	7	2	35.00	0.45	6.15	193.73	_	
	For Retaining Wall		4	10.00	1.40	6.15		<b>,</b>	
3.32		a dig sine g	Charles and the	Anni Serentura	war - Talle	are company	538.13	Carly was in	
		-	nation			Say	538.50	262.44	141324.0
	KSSRB M220 - 8. Providing Weep holes in Brick masonry / Plain / Reinforced concrete abutment, wing wall / return wall with 100mm dia AC pipe, extending through the		TO SEE THE SEE				and the second		mante passas accountance
	full width of the structure with slope of 1V:20H towards drawing foce. Complete as per drawing and Technical specifications								
	complete as per specifications. MoRT&H Specification No. 2706 & 2200						•		
	Land Salama Salama and Salama	Ana	en residence se se en La companyación de la companyación	e				A PARTICIPATION OF	Andrew West Co.
	PNo 230 INo 28.10 of PW,P&IWTD S.R 2012- CH:1958.00 to1974.50	13)		1 24				Well of the	
	Box Portion		2X3X35	0.65	- i		136.50	-	
	Retaining Wall		4X3X10	0.65	orientalia e curi	V = 1 0 min	78.00		The same year, the same
						7 7 5 9	214.50		
	A CALLED				-11	Say	214.50	148.23	31795.0
3.33	KSRRB 800-1. Painting two coats after	Sam			79 1				
	filling the surface with synthetic enamel paint in approved shades on new plastered concrete surfaces, with materials, labour complete as per specifications. MoRT&H Chapter 8					- 100			
	(P.No.192, I.No. 24.1 of PW,P&IWTD SR 2012	2.13)	-	•	•				
110	Crash Barrier	2-13)			. ;		N V VIII	-	
	CH:1958.00 to1974.50		2 '	20.00		2.30	92.00		
				· • · · ·	•	ದಾತ್ರಿಪ್ಟರ	ರುನ್ನು <b>ಕ್ರಾಗ್ರ</b> ್ಯ ಅಡಿಯಲ್ಲಿ ಕ	व्यक्तिक विकास	200554302.0
		Ä							

Sl.	Description of Work	Unit	N7-	Length	Breadth	Depth		Rate in	William or Produce and
No.	Description of Work	Onit	No.	m	m	m	Quantity	Rs.	Amount in Rs.
3.34	KSRRB M2700-5. Drainage Spouts complete as per drawing and Technical								
	Specification complete as per specifications. MoRT&H Specification No. 2705		900					-	
	(P.No,252, I.No.32.5 of PW,P&IWTD S.R 201	12-13)							
	At 4m interval on both sides		2	5			. 10	1270.08	12701.00
					HELD TO SERVICE				25935280.00
3.35	Miscellaneous and Rounding off	1_			. :				720.00
ALL SE	10 m		Total C	ost for RC	C Slab Cu	lvert fo	r Storm Wa	ter Drain	25936000.00

Belgos

Assistant Executive Engineer

Traffic Engineering Cell, France Bruhath Bangalore Mahanagara Palike Bangalore - 560 002.

Traffic Engineering Cell (Road Infra)
Bruhat Bangalore Mahanagara Palike
Bangalore - 560 002.

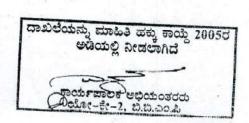
ಧಾಖಲೆಯನ್ನು ಮಾಹಿತಿ ಹಕ್ಕು ಕಾಯ್ದೆ 2005ರ ಅಡಿಯಲ್ಲಿ ನೀಡಲಾಗಿದೆ

> ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು ರಿಯೋ-ಕೇ-2, ಬಿ.ಬಿ.ಎಂ.ಪಿ

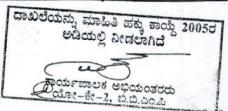
Project: Proposed Construction of Elevated Corridor by integrating Ejipura Main Road - Inner Ring Road Junction, Sony World Junction and Kendriya Sadana Junction along 100ft. Inner Ring Road, Koramangala, Bangalore

#### **Detailed Cost Estimate**

SI.	7 Mins (64 100 C 100			Length	Breadth	Depth		Rate in	
No.	Description of Work	Unit	No.	m	m	m	Quantity	Rs.	Amount in Rs
4.00	Diversion Road	-							
4.01	KSRRB 3000 Filling Pot - holes and Patch Repairs with Bituminous Concrete, 40mm KSRRB M3000-5: Removal of all field material, trimming of completed excavation to provide firm vertical faces, cleaning of surface, painting of tack coat on the sides and base of excavation as per clause 500.3, back filling the pot holes with hot bituminous material as per clause 500.4, compacting, trimming and finishing the surface to form a smooth continuous surface, all as per clause 3004.2 complete as per specifications MoRT&H Specification No. 3004.2	Sqm							
	(P.No.262, I.No.35.5, PW, P & IWTD SR 2011	-12)							- 0
7-16	Surface level Roads	12)							- 9
	LHS and RHS		2	2405.63	6.50		31273.19	1	
	Up Ramp and Down Ramp		2	165.00	6.50		2145.00	_	
	Battery limit	. 1		200,00	0.00	-	2110.00		
	Elevated Corridor(Both sides)		2	100.00	21.00		4200.00	/	
	Up Ramp and Down Ramp(Both sides)	14	2	100.00	22.00	( and the second	4400.00	1	
-	01111	-		7			2.37	*111	
-	Obligatory Span				SPIC MICE OF		Promote Action	/	
	40.00m		1 .	32.00	11.70		374.40		
1000	30.00m		5	22.00	11.70		1287.00		
	25.00m	-	2	17.00	11.70		397.80		
SOME	The second secon			L. L'en-	territorio del		44077.39	C	
	Consider 1.5% of Area						661.16	395.82	261700.09
	TO THE REAL PROPERTY OF THE PERSON OF THE PE								
4.02	KSRRB 200-7.Providing and applying tack coat on prepared black topped surfaces at 2.5 kg per 10 sqm,heating bitumen in boiler fitted with spray set (Excluding cleaning of road surface) incuding cost of all materials, labour,HOM of machineries complete as per specifications. MORTH/Chapter 5	Sqm							
	(P.No. 173 I.No.21.7 of PW,P&IWTD S.R 2012	2-13)						,	
	Qty same Item No-4.01	-	4	4407	77.39	1 The state of the state of	44077.39	17.12	754516.76
-			1	- 1		75/		11.12	104010.70



SI.		· .	100	Length	Breadth	Depth		Rate in	
No.	Description of Work	Unit	No.	m	m	m	Quantity	Rs.	Amount in Rs
4.03	Providing and laying bituminous concrete	Cum							
	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		1 1						
	bituminous binder at 5.4 to 5.6% of mix and		1000						
	filler, transporting the hot mix to work site,		3		•				
	laying with a hydrostatic paver finisher							5.40	
	with sensor control to the required grade,		TO THE PERSON			1 107.4		-	
	level and alignment, rolling with smooth		3 -	X 04	line .		0.3		
	wheeled, vibratory and tandem rollers to		+	U pr		-			
	achieve the desired compaction as per		8 1						
	MoRT&H specification clause No. 500.9 complete in all respects as per					- 1	Y 2		
	complete in all respects as per specifications30-45mm compacted								
	thickness (Grading II) with 6% Bitumen							. ib	
	60/70. MoRT&H Specification No. 509								
	(P.No.176 of I.No.21.22.4 in PW,P&IWTD S.F	2012	2-13)				-		
	Surface level Roads					7.5			
	LHS and RHS		2	2405.63	7.00	0.04	1347.15	/	******
	Up Ramp and Down Ramp		2	165.00	6.50	0.04	85.80		
-	Battery limit	14							
	Elevated Corridor		2	100.00	21.00	0.04	168.00		
	Up Ramp and Down Ramp		2	100.00	25.00	0.04	200.00	/	
			1		75				
	Obligatory Span							_	
	40.00m	- 5	1	32.00	11.70	0.04	14.98		
100	30.00m		5	22.00	11.70	0.04	51.48		
	25.00m		2	17.00	11.70	0.04	15.91		
					17. K	- 8	1883.32,	11177.44	21050702.2
1.04	KSRRB M800- Portable barricade in	Each			1			1245	All office for
	construction Zone KSRRBB M800-43:					1 1			
	Installation of a steel portable barricade	- 2		1 314 4					
	with horizontal rail 300mm wide, 2.5m in length fitted on a 'A' frame made with		10	100					
	45x45x5mm angle iron section, 1.5m in				6	-			
	height, horizontal rail painted (2coats) with								
	yellow and white strips, 150mm in width at						Marin Marin Marin	The state of	A CANT DESCRIPTION
	an angle of 45, 'A' frame painted with 2								1.0
	coats of yellow paint, complete as per		8		3.22	2 (2)			
	IRC:SP:55-2001 complete as per								147
	specifications.							PLISA.	
48	(P.No.199, I.No.24.44 of PW,P&IWTD SR 201	2-13)		5-15-5-1		Marie Co		,	CASCAL STATE
	Para control of the control of the control	Total a	2221.46	10 Fg-	Charles . •		2221.00	1-1-1	To design and
-27	Deduction for Obligetory Span		70.40				70.40		
				1.7			2150.60	3095.28	6656709.1
			TS a The						and invent
1.05		MT			-/-		7.00	12°	
	in position, inserts and embedments, Truss,								
	clamps, brackets, insert plates and all					- 34		17.75	
	miscellaneous steel works as shown in					1.3			
	drawing and as directed by the Engineer at					-			
	all depths, using MS angles, channels, steel								
	beams, rails, tees, plates, flats, rounds squares etc., of various sizes and other		1				- I		
	squares etc., of various sizes and other structural section confirming IS 2062 grade								
	A, medium class GI pipes etc., including						71. 11		
	straighting, cutting, fabricating, welding,				-				
	carabitation carried in the carried	- 11		- 1				1	



Sl.	Description of Work	Unit	No.	Length	Breadth	Depth	0	Rate in	5 54 5 20
No.			No.	m	m	m	Quantity	Rs.	Amount in R
	bending to slope fixing to position, welding to insert plate embeded in concrete and inclusive of 2coats of enamel paint over one coat of metal primer. The rate quoted is to include the cost of all materials, labour, tools, tackets, cranes, devices and plants,					•			
	wastage etc., as per specifications and drawings complete. Including cost of bolts, nuts, washers, clamps, welding, electrodes,								
	and connections required for the work. Rate to include shims and packing peices etc., complete with all lead and lifts as directed by the Engineer-in-charge.								
	Data Rate								
	MS Sheet 2mm thick for Barricading		,					(T)	
	((2405.63+170+165)*2)+7.3+7.3+6.7+6.7 x 1.5 x 0.002 x 7850 =129743.07kg Say 129.74MT			5509.26	129743.07		129.74	,	
	Deduction for Obligetory Span	.,		176.00	4144.80		4.14		/
							125.60	72000.00	9043075.
	Providing and fixing Project Display								
	Board of size 1.80 vertical x 1.60 mtrs. Horizontal made of cold rolled coil 16 Gauge (1.6mm thickness) sheeting strengthened by welding to MS angle of size 35x35x5mm iron framework on all sides, extra cross vertical angle fixed using nuts and bolts, base of the board shall be cleaned, applying red oxide								
	and black paint by sprayer on both sides of the board and all MS iron frameworks, background of the facing side of the board painted in traffic yellow, project information written in English / Kannada / Hindi, painting letters and numeral in black, fixed on a mild steel angle iron post 75 mm x 75								,
	mm x 6mm, 2Nos. firmly fixed to the ground by means of properly designed foundation with M15 grade cement concrete 45 x 45 x 60 cm. 60cm below ground level and the board 2.8m from ground level as per approved drawing including cost of all materials, labour, unloading, curing backfilling, transporting etc., complete.		-377						Ye Carrier and American
	(P. No.81, Item no 8.47 of NHSR 2009-10)		9	2.00			18.00		
	500mtrs Each on Both sides						18.00	7960.60	143290.8
			1.	4V 3 17	1			Zens ker	37909995.3
.07	Miscellaneous and Rounding off		Lagar	Za baktoria		2500	Line Land		2004.
		700	100		T	otal Co	st of Diver	sion Road	37912000.0

Assistant Executive Engineer

Traffic Engineering Cell, Bruhath Bangalon Mahanagara Palike Traffic Engineering Cell (Road Infra)

Bangalore - 560 002.

Executive Engineer

Bruhat Bangalore Mahanagara Palike Bangalore - 560 002.

ದಾಖಲೆಯನ್ನು ಮಾಹಿತಿ ಹಕ್ಕು ಕಾಯ್ದೆ 2005ರ ಅಡಿಯಲ್ಲಿ ನೀಡಲಾಗಿದೆ

Project: Proposed Construction of Elevated Corridor by integrating Ejipura Main Road - Inner Ring Road Junction, Sony World Junction and Kendriya Sadana Junction along 100ft. Inner Ring Road, Koramangala, Bangalore

De	tailed	Cost	Es	timate	

SI.		20		Length	Breadth	Depth		Rate in	Processor and
No.	Description of Work	nit	No.	m	m	m	Quantity	Rs.	Amount in Rs
5.00	WORKS FOR OBLIGATORY SPANS AND S	TAN	DARD S	PANS OF	ELEVATI	ED COR	RIDOR	100 000	
5.01	KSRRB M2100 - Excavation in Ordinary C Soil KSRRB M2100 - 2.1. Earth work in excavation for foundation of structures as per drawing and technical specifications,	um			3				
	including setting out, construction of shoring and bracing, removal of stumps and other deleterious matter, dressing of sides and bottom and backfilling with approved material complete as per specifications. B. Mechanical Means (i) Depth upto 3m.	The state of the s							
_	Add 10% for dewatering charges			17.1	1				
	(P.No.221, I.No.27.4 of PW,P&IWTD S.R 2012-	13)	-	3- 00				- 11 3	
	For Pile cap	10)						- 0	
	Obligatory Span		14.	9.70		0.05	0000000	f	
- 17	Standard Span	-	78	-	9.70	2.25	2963.84		
91	25m Obligatory Span	-		5.30	: 8.30	1.95	6690.88	The second	
	Up Ramp Pier	-	3	5.30	8.30	1.95	257.34	(A) 1, (F)	- 13 - 162 9 1
	to the same and th		3	5,30	8.30	1.95	257.34	4 1 1	
4	Down Ramp Pier		3	5.30	8.30	1.95	257.34	4 (6 - 1)	
	r admirantation of the second		regord, and comment	12.11.4			10426.74	HALL STORY	
				200		Say	10427.00	/ 44.37	462665.0
1	KSRRB M2100 - 13. Plain Cement Concrete M15 with OPC cement @240kgs, with 40mm and down size graded granite metal coarse aggregates @ 0.84cum and fine aggregates @ 0.56cum in Open Foundation complete as	o use							
	per Drawing and Technical Specifications MoRT&H Specification No. 1500, 1700 & 2100		10.7				***		
- 1	(P.No.223, I.No.27.24 of PW,P&IWTD S.R 2012	-13)	da vay	1.3	4 19	De Marie	1000		1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1
1.0	For Pile cap		A MALL	S* - 3.73	121			A12-1	····
	Obligatory Span	610	14	8,90	8:90	0.15	166.34	ref a large control and man	A CONTRACTOR OF THE PARTY OF TH
	Standard Span .		78	4.50	7.50	0.15	394.88		**************************************
	25m Obligatory Span		3	4.50	7.50	0.15	15.19	Charles A	
	Up Ramp Pier		3	4.50	7.50	0.15	15.19/		7 - 2 - 3 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5
	Down Ramp Pier		3	4.50	7.50	0.15	15.19		THE TAXABLE PARTY
	and the state of t	***			.,.00	0.10	606.78/		erina de la composição de la composição de la composição de la composição de la composição de la composição de
The l	To the part of the		J = 1			Say		2000 06	
-	100 ATT				Cal	bay	607.00	3892.32	2362638.0

ದಾಖಲೆಯನ್ನು ಮಾಹಿತಿ ಹಕ್ಕು ಕಾಯ್ದೆ 2005ರ ಅಡಿಯಲ್ಲಿ ನೀಡಲಾಗಿದೆ

> ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು ಯೋ-ಕೇ-2 ಬಿ.ಬಿ.ಎಂ.ತಿ

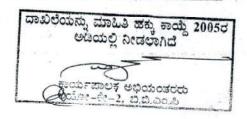
SI.				Length	Breadth	Depth			
No.	Description of Work	Unit	No.	m .	m	m	Quantity	Rate in : Rs.	Amount in Rs
5.03	KSRRB 1100 - 3.1 - Bored cast - in - situ R. C. C. Piles KSRRB 1100 - 3.1. Bored cast - in -situ RCC Pile with OPC cement design mix M35 @390kgs, with 20mm and down size graded granite metal coarse				•			25.	
	aggregates @ 0.68cum and fine aggregates @ 0.45cum, with superplastisiser @ 3lts conforming to IS9103-1999 Reaffirmed-			i					10.
	2008, excluding Reinforcement complete as per Drawing and Technical Specifications and removal of excavated earth with all lifts and lead upto 1000m complete as per specifications.					To an analysis of the second s	-		
	For Drilling of Pile	1	,	1					70
7	Obligatory Span	1		1	i				
а	KSRRB M1100-3.3 C. Pile Diameter = 1200mm, MoRT&H specifications No. 1100 & 1700	1							
	(P.No.202, I.No.25.5 of PW,P&IWTD S.R 201	2-13)					i		
	14 nos of pier X 8Piles each pier=112		112			15.00	1680.00	10248.12	17216842.00
	25m Obligatory Span					. 1		, .	- <del>1</del>
	KSRRB M1100-3.2 B. Pile Diameter = 1000mm, MoRT&H specifications No. 1100, 1600 & 1700		24			15.00	360.00	7919.64	2851070.00
11.0	3 nos of pier X 8Piles each pier=24		1 197	The statement			(m) (m)	Control of the state of the sta	TO BE A DESIRE STORE AND STORES
	Standard Span						. /		er system i
c	KSRRB M1100-3.2 B. Pile Diameter = 1000mm, MoRT&H specifications No. 1100, 1600 & 1700		468		-	15.00	7020.00	7919.64	55595873.00
	78 nos of pier X 6Piles each pier=468		1 1 1			- 1			ates and the second
	(P.No.202, I.No.25.4 of PW,P&IWTD S.R 2012	2-13)	100 10-2		<del></del>			- 101	
1	Up Ramp Pier		· 1.000	JC 101 4 4	2, 12-	100			and the state of the
	KSRRB M1100-3.2 B. Pile Diameter = 1000mm, McRT&H specifications No. 1100, 1600 & 1700		18	Marie andre	-	15.00	270.00	7919.64	2138303.00
	3 nos of pier X 6Piles each pier=18	7	75. 75.2					4 lettingun	
	Down Ramp Pier	in a c	- aviint	Seature Page	10.00-00.00	100		an arrival and the	and the second of the second
	KSRRB M1100-3.2 B. Pile Diameter = 1000mm, MoRT&H specifications No. 1100, 1600 & 1700		18			15.00	270.00	7919.64	2138303.00
- /-	3 nos of pier X 6Piles each pier=18		Color distribution		are homespapers			200	ter transfer and transfer and
	(P.No.202, I.No.25.4 of PW, P&IWTD S.R 2012	-13)			124.00	10.00	18 18 1 P 18 2	7 12 2001	Maria de Caractera
13.			. 35 - 1 - 1	200				0.771	X South and the second
	(A) Doing Initial vertical load test for a design pile load of 270 Tons including cost of all equipment, men and material, reaction piles etc (if required) required for				and the second of				
	the setup complete as per drawing and technical specification and as directed by the Engineer in Charge.	Nos	74 (410), me						
	(P.No.150, I.No.12.37(a) of NH S.R 2009-10)		3	-		-	3.00	85860.00	257580.00
			-				0.00	30000.00	201000.00

ದಾಖಲೆಯನ್ನು ಮಾಹಿತಿ ಹಕ್ಕು ಕಾಯ್ದೆ 2005ರ ಅಡಿಯಲ್ಲಿ ನೀಡಲಾಗಿದೆ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು

SI.	Description of Work	Unit	NT.	Length	Breadth	Depth	e es fea	Rate in	22 44 7 1 1
No.			No.	m · .	m· ·	m	Quantity	Rs.	Amount in
5.05	(B) Doing Horizontal load test for a design pile load of 20 Tons including cost of all equipment, men and material, reaction piles etc (if required) required for the setup complete as per drawing and	Walter Comment					•		
	technical specification and as directed by the Engineer in Charge.								
	(P.No.150, I.No.12.37(b) of NH S.R 2009-10)		3				. 3.00 4	106000.00	318000
06	KSRRB M1200-47: Providing steel liner	) Im						7 7	1000
,.00	10mm thick for curbs and 6mm thick for seining of wells including fabricating and setting out as per detailed drawing complete as per specifications. MoRT&H Specifications No.1200 & 1900	MI							
. 5	(P.No.218, I.No.26.125 of PW.P&IWTD S.R 20	012-13)	1: 11	1.					
	Casing for Piles	i			1- 4-7-1			75275	T
	Obligatory Span		112	12.00	0.178		238.64		
	25m Obligatory Span		24	12.00	0.148	-	42.62/		
	Standard Span		468	12.00	0.148		831.10	1.	A 100
E S	Up Ramp Pier		18	12.00	0.148		31.96		т.
17	Down Ramp Pier 3.142*1.2*0.006*7.85 = 0.178		18	12.00	0.148	-	31.96		
- 1	3.142*1*0.006*7.85 = 0.148				1 "		1176.28		
		a probable	THE REAL PROPERTY.	1111-121-1-1-1	pureus regression	Say	1176.50	80395.20	94584953
	complete as per specifications. D.RCC with OPC cement design mix M35 @ 390kgs, with 20mm down size graded granite metal coarse aggregates @ 0.68cum and fine aggregates @ 0.45cum, with superplastisiser @ 3lts conforming to IS9103-1999 Reaffirmed-2008. Case - II: Using Batching Plant, Transit Mixer and Concrete Pump.			•		e di Santa			
	MoRT&H Specification No. 1100, 1500 & 1700.								* ( * 100 *)
	(P.No.204, I.No.25.25 of PW,P&IWTD S.R 201	2-13)	-		Carlos Primarios	9/4 = 1-1			111 -4 F 129(s)
	For Pile cap	1.0		- 15.00	1. 24. 44			100	
	Obligatory Span		14	8,70	8.70	1.80	1907.39		Part Clares
	25m Obligatory Span		3	4.30	7.30	1.50	141.26	or provide the same	VALUE PROPERTY OF
-		100000000000000000000000000000000000000		The second second	7.30	1.50	3672.63		
	Standard Span	. 3.4	78	4.30		-			
	Standard Span Up Ramp Pier		3	4.30	7.30	1.50	141.26	THE WAY	
	Standard Span		-	-		-	141.26 141.26		10 10 10 10 10 10 10 10 10 10 10 10 10 1
	Standard Span Up Ramp Pier		3	4.30	7.30	1.50 1.50	141.26 141.26 6003.78	5300.64	3182504
	Standard Span Up Ramp Pier Down Ramp Pier		3	4.30	7.30	1.50	141.26 141.26	5300.64	31825045
08	Standard Span Up Ramp Pier	MT	3	4.30	7.30	1.50 1.50	141.26 141.26 6003.78	5300.64	3182504\$
08	Standard Span Up Ramp Pier Down Ramp Pier  KSRRB M2300 - 14. Supplying, fitting and placing TMT bar reinforcement in substructure complete as per drawing and Technical Specifications complete as per drawing and Technical Specifications MoRT&H Specification No. 1600 & 2200 Sub Structure		3	4.30	7.30	1.50 1.50	141.26 141.26 6003.78	5300.64	31825045
08	Standard Span Up Ramp Pier Down Ramp Pier  KSRRB M2300 - 14. Supplying, fitting and placing TMT bar reinforcement in substructure complete as per drawing and Technical Specifications complete as per drawing and Technical Specifications MoRT&H Specification No. 1600 & 2200 Sub Structure  (P:No.230, I.No.28.8 of PW, P&IWTD SR 2012-		3 3 3	4.30	7.30	1.50 1.50 Say	141.26 141.26 6003.78 6004.00	5300.64	3182504\$.
08	Standard Span Up Ramp Pier Down Ramp Pier  KSRRB M2300 - 14. Supplying, fitting and placing TMT bar reinforcement in substructure complete as per drawing and Technical Specifications complete as per drawing and Technical Specifications MoRT&H Specification No. 1600 & 2200 Sub Structure		3	4.30	7.30	1.50 1.50	141.26 141.26 6003.78	5300.64	3182504\$.

ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು ರಾಯೇ-ಕೇ-2, ಬಿ.ಬಿ.ಎಂ.ಪಿ

Sl.	Description of Work	77-24	NI	Length	Breadth	Depth	10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Rate in	Art are Early
Vo.	Description of work	Unit	No.	m	' . m	m	Quantit	Rs.	Amount in I
00	VCDDD 0000 F 10 D		1			Say	1680.5	68178.24	114573532
09	KSRRB 2200-5.18 Design Mix M35 with OPC cement @ 390kgs, with 20mm and down size graded granite metal coarse aggregates @ 0.68cum and fine aggregates @ 0.45cum, with superplastisiser @ 3lts					•			
	conforming to IS9103-1999 Reaffirmed-2008  - i) Upto 5m height.								
	(P.No.229, I.No.28.7.18 of PW,P&IWTD S.R	2012-13	3)						
	Pier	- 1							
10	Obligatory Span Pier		14	2.50	2.50	5.84	511.3	1/	
	25m Obligatory Span		3	2.50	2.50	5.64	105.7		3-1-1-1-1
	Standard Span Pier		78	2.50	2.50	5.69	2774.6		34 13
	Up Ramp		3	-	54	5.61		3/	100
	Down Ramp		3	-	54	5.52	42.1		-
	w: 5a		7.1	<del>†                                    </del>		0.02			
	Pedestal		1				3476.6	b/	
7	Standard Span=(76*4+end Pier 2*2=308)		308	0.90	0.90	0.20	710		
	Obligatory Span=(17*4=68)	1	68	0.90	0.90	0.30	74.8		
	Up Ramp =(2*4+end Pier 1*2=10)		10	0.90		0.30	16.5	The state of the s	
	Down Ramp =(2*4+end Pier 1*2=10)		10.	4000	0.90	0.30	2.4		
		-	10.	0.90	0.90	0.30	2.4		trace the party
	Pier Beam				A117-11 (1175)		96.2	3 /	game NASS Page
	Standard Span Pier Beam		78	10.00			1	Keep or T	- 0
	Trapizoidal Area=6.8Sqm		The second second	10,00	2.75	1.00	2145.00		Carrier of Statement
	40 m Obligatory Pier Beam		78	2.75	6.80		1458.60	The second secon	
	Trapizoidal Area=6.8Sqm	-	2 .	10.00	2.75	1.00	55.00		Maryland St. St. 2 M.
	30 m Obligatory Pier Beam		12	2,75	6.80		37,40	11.1	years god
	Trapizoidal Area=6.8Sqm		12	10.00	2,75	1.00	330.00	1	
	25m Obligatory Pier Beam			2.75	6.80	431.772 - 0.00	224.40		The Allerance Methodal
	Trapizoidal Area=5.32Sqm		3	9.00	2.75	1.00	74,25		14 55 4
	Up and Down Ramp Pier Beam		3	2.75	5.32		43.89		SHIP TO THE
	Trapizoidal Area=1.88Sqm		6	4.50	2.75	0.75	55.69		10 6 5 1 4 7 h
	Trapitolidai Area-1.005qm		6	2.75	1.88	11000	31.02		SM P drops
	Pier Protection						4455.25		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	For Obligatory Span 40m& 30m Pier		14	0.00	0.05	emercia de la	North Control Books	THE PERSON IN THE PERSON	TO THE SAME AND ADDRESS.
	Length=(2.5+0.75+0.75+0.25+0.25)*2=9.0		19	9.00	0.25	1.95	61.43		
	length=(2,5+0.75+0.75)*2=8.00		14	8.00	0.25	1.95	54.60		4
	For Obligatory Span 25mPier Length=(2.5+0.75+0.75+0.25+0.25)*2=9.0		3	9.00	0.25	1.95	13.16	1	
-	ength=(2.5+0.75+0.75)*2=8.00		3	8.00	0.25	1.95	11.70	1.39	
	For Standard Span Pier Length=(2.5+0.75+0.75+0.25+0.25)*2=9.0		. 78	9.00	0.25	1.95	342.23	Annual Control of the State of the	ik .
	ength=(2.5+0.75+0.75)*2=8.00		70	0.00		39 6			A 10 10 10 10 10 10 10 10 10 10 10 10 10
			78	8.00	0.25	1.95	304.20	/	
1	ength=(1.8+0.75+0.75)*3.142=10.37		3	10.37	0.25	1.95	15.16		
	DownRamp ength=(1.8+0.75+0.75)*3.142=10.37		3	10,37	0.25	1.95	15.16		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	36 (c) 55 (c) 55 (c) 496 (c)			113/11/1	144		817.64		THE THE WEST
-							8845.78		0.00
1			1 1	1.1		Say	8846.00	The state of the s	51265047.0



SI.	Description of W			Length	Breadth	Depth	47 Th 48 74	Rate in	The Private
No.	Description of Work	Unit	No.	m	m	m	Quantity	Rs.	Amount in Rs
5.10	KSRB 2.6: Providing and filling sand in foundation upto plinth to required depth for sub soil treatment including watering ramming with all lead and lift complete as per Specifications. Specification. No. KBS 2.10.2								
	P.No 6 INo 2.13 of PW, P&IWTD S.R 2012-13	)							
Mulcar	For Obligator Span		17	13.00	0.75	1.50	248.63	/	
2.74	For Standaad Span		78	13.00	0.75	1.50		-	
	Up Ramp and Down Ramp		6	10.37	0.75	1.50	69.99	/	
-			- K				1459.36		
			1 - 14			Say	1460.00	1298.16	1895314.01
		1	1 17	A subsection				634.	
5.11	KSRRB 2300 - 11.3. Furnishing and Placing Reinforced / Prestressed cement concrete in super structure as per drawing and Technical Specification complete as per specifications. F.PSC with OPC cement design mix M45 @450kgs, with down size graded granite metal coarse aggregates @0.66cum and fine aggregates @0.44cum, with superplastisiser @4lts conforming to IS9103-1999 Reaffirmed-2008 MoRT&H Specification No.1500, 1000 & 1700—Height 5m to 10m	Cum	ignature and the second			The second secon			
	THE SECTION OF SECTION								
-	(P.No.242, I.No.29.26.2 of PW,P&IWTD S.R 2	012-13	)		100		-1-1		
	Box Girder for Obligatory span(Super Str	ructur		- m n	P-1 22 75 1	100		200 100	
	40 m Obligatory span@ 12.39Sqm		40.00	7		12.39	495.60	/_	
	30 m Obligatory span@ 11,04Sqm	ration a	30.00	AND PROPERTY.	ny gangon 784	11.04	331.20	Mineral Yapagiri	Carrier and the
	30 m Obligatory span@ 11.04Sqm	12.54	30.00	C. Salinophie		11.04	331.20		417
-	30 m Obligatory span@ 11.04Sqm	-	30.00	estan el escentro Debre	Anna an an an an an an an an an an an an	11.04	331.20	Art (this can reserve 6.74) be	ar Torrest desired in the artist
	30 m Obligatory span@ 11.04Sqm	19	30,00	•		11.04	331.20	1	
	30 m Obligatory span@ 11.04Sqm	- 1	30.00			11.04	331.20		J. All J. San met.
-	28.15 m Obligatory span@ 11.04Sqm		28.15	French		11.04	310.78	La more	e objectionment have a transfer of the
	25 m Obligatory span@ 10.98 Sqm		25.00			10.98	274.50		
	26 m Obligatory span@ 10.98 Sqm		25.00	3 14.50 /24		10.98	274.50		
	40mUp Ramp Obligatory span @ 9.05 Sqm	No 10 40 Aug.	40.00			9.05	362.00/		Charles to the contract
	40mDownRampObligatory span@ 9.05 Sqm	-	40.00			9.05	362.00		SK SK SK SK
Se Su			F-1 1,545		A contract of	Say	3735.38	7930.44	29623175.00
	KSRRB M2300-10,2, Furnishing and C Placing Reinforced / Prestressed cement concrete in super - structure as per drawing and Technical Specification complete as per specifications. RCC with OPC cement design mix M40 @ 420kgs, with 20mm and	Cum			, , , , ,	- (-1) (-1)	the section of the section of		
	down size graded granite metal coarse aggregates @ 0.67cum and fine aggregates @ 0.44cum, with superplastisiser @ 3lts conforming to IS9103-1999 Reaffirmed-2008 Case - II: Using Batching Plant, Transit Mixer & Cocnrete Pump MoRT&H Specification No. 1500, 1600 & 1700, Height om to 10m	The second secon		Annual Control of the		e deservation e manufacture de code de la come de manufacture de la code de l			
-	P No 240 and 241 I No 20 22 2 of DW PATHON	DQ P	2012 12					_	
	P.No.240 and 241, I.No.29.22.2 of PW,P&IWT Standard Span Girder	US.K	2012-13)					2.00	
	50m Viaduct (length=25-(0.02-0.9)*2=23.16)	-		red of		i			13-11-12
							/		
	Top-Haunch (7Girderx2 Span=14)		14	23.16	0.02		7.30	/	

SI. D	Description of Work	Unit	No.	Length	Breadth	Depth	Ougatit	Rate in	1
10.		Onit		m	m	m	Quantity	Rs.	Amount in R
	attom Haunch		14	23.16	0.0		7.30	/	
В	attom Slab		14	23.16	0.50	0.30	48.64	/	
	37.14m Viaduct(length=21.87-(0.02- .9)*2=20.03)								
T	op Haunch (7Girderx20 Span=140)	1	140	20.03	0.0	2	63.09	/	
	ib		140	20.03	0.20	1.05	588.88	1	
В	attom Haunch		140	20.03	0.03	2	63.09	/	
В	attom Slab		140	20.03	0.50	0.30	420.63	1	
	97.81m Viaduct (length=21.87-(0.02- .9)*2=20.16)		. 49				P-12		
T	op Haunch (7Girderx9 Span=63)	1	63	20.16	0.03	2	28.58		
	ib sax	1	63	20.16	.0.20	1.05	266.72	/	-
В	attom Haunch	1	63	20.16	0.02	. 1.00	28.58	1.	-
В	attom Slab		63	20.16	0.50	0.30	190.51		- American Street
	07.50m Viaduct(length=21.50-(0.02- .9)*2=19.66)					Į.			
T	op Haunch (7Girderx5 Span=35)		35	19.66	0.02	:	15.48	1	- 20-20-20-20-20-20-20-20-20-20-20-20-20-2
R			35	19.66	0.20	1.05	144.50	1	13.11.00
-	attom Haunch	1	35	19.66	0.02	ososed ea	15.48	/	
B	attom Slab		35	19.66	0.50	0.30	103.22	/	South in the last
	5.06m Viaduct (length=21.68-(0.02- 9)*2=19.84)					+ 58			TA C
To	op Haunch (7Girderx3 Span=21)	-	21	19.84	0.02	1	9.37	~	
R		10 a - 1 - 10 - 1	21	19.84	0.20	1.05	87.49	-	21-72-52-745-6-6-
	attom Haunch		21	19.84	0.02		9.37	1	
B	attom Slab		21	19.84	0.50	0.30	62.50	(	Light of the end by
	25.27m Viaduct (length=21.68-(0.02- 9)*2=19.84)						,		
	op Haunch (7Girderx15 Span=105)	Lare made	105	19.84	0.02	awazan wany	46.87	. September 2 and A	- 5-07/8 6-355-200
Ri		1	105	19.84	0.20			1	
-	attom Haunch		105	19.84	0.02	1.05	437.47 46.87	1	Market and a second of the sec
	attom Slab	8	105	19.84	0.50	0.30	312.48	/	Control of the second s
04 H						1.011			Selection Co.
0,	34.23m Viaduct (length=21.47 (0.02- 9)*2=19.63)		A WALLAND AND		Name of the section of the	11011	halm and one one		1 721
	op Haunch (7Girderx9 Span=63)	24 - 1	63	19.63	0.02		27.83	1	
Ri			63	19.63	0.20	1.05	259.70		an out of the second se
	attom Haunch attom Slab		63	19.63	0.02	0.00	27.83	/	
Di	atom Siab	400000	03	19.63	• 0.50	0:30	185.50	Section Contracts	
	09.40m Viaduct(length=21.47-(0.02- 9)*2=19.63)								
	op Haunch (7Girderx20 Span=140)	- 1	140	19.63	0.02		61.83	/	
Ri			140	19.63	0.20	1.05	577.12	_	1
Ba	attom Haunch	401	140	19.63	0:02		61.83		
-	attom Slab		140	19.63	0.50	0.30	412.23	7	
50	m Viaduct (length=25-(0.02-0.9)*2=23.16)		į.						
To	op Haunch (7Girderx2 Span=14)		14	23.16	0.02		ರಾಖ್ಯಲ್ಲೆಂತ	ನು, ಮಾಹಿತಿ	व्यक्त कार्ल क
10	P Inductive Span-14)			25.10	0.02		7.30	ಕ್ಷಾರ್ಥನ್ನು ನ	ಹಕ್ಕು ಕಾಯ್ದೆ 20 ಇಡಲಾಗಿದೆ

ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು ರ್ಯೋ-ಕೇ-2, ಬಿ.ಬಿ.ಎಂ.ಸಿ

Sl. No.	Description of Work	Unit	No.		Breadth		Quantity	Rate in	Amount in R
No.				m	m	m	. quality	Rs.	Amount in K
	Rib		14	23.16	0.20	1.05	68.09		
	Battom Haunch		14	23.16	0.02	•	7.30		
	Battom Slab		14	23.16	0.50	0.30	48.64		
	Up Ramp Viaduct @ 9.05 Sqm	-	1	30.00	16				
	Down Ramp Viaduct @ 9.05 Sqm	-	1	30.00	-, -	9.05	271.50		to the first of the state of th
W.	Zowa Itamp ( laudet & 5.00 Eq.ii	-		30.00		9.05	271.50		
1	End Diaphgram	-	156	16.00	0.90	1.00	5360.71	MARIE AND A STATE OF	and the second second second
	Deck Slab for Standard Span		1	1826.41	17.00		3594.24		
	Area of Crash Barrier =0.350 Sqm		2	2094.50	0.35		6209.79		1
	Up and Down Ramp Area of Crash Barrier		4	70.00	0.35		1466.15 98.00	-	2012
	=0.456 Sqm			70.00	0.55	U	98.00		
	Median above Flyover		1	2094.50	1.000	0.300	628.35	/	
		-	81 to 81	1.00		-	17357.25		
						Say	17357.50		11000000
	992					Day	17007.00	0713.28	116525758.
5.13	KSRRB M2200-6. Supplying, fitting and	МТ	70.75	1.486					
	placing TMT bar reinforcement in sub-		- 1					1	man in the state of
	structure complete as per drawing and					į			
	Technical Specifications complete as per								100
	specifications MoRT&H Specification No.		- 1.6			1		4	110 100
	1600 & 2200	_	1	-					** *** *******************************
12.7	(P.No.230, I.No.28.8 of PW, P&IWTD S.R 20	12.10	- F-			2.1			
		12-13)		•	•	- 0			4 1 1 1 1 4 1 5
	Considering 180kg/cum for Pier Considering 130kg/cum for Pier Beam		- 400	347			625.80		Free Transaction of the Parket Co.
-	Considering 150kg/cum for Pier Beam  Considering 150kg/cum for Pedestal				5,25		579.18		1 45
-	For Pier Protection Consider 40kg/cum			96			14.43	/	A THE COL
-	101 Fet 1 Totection Consider 40kg/cum		2 1 10 10 10	817	.64	-	32.71		
-				-		-	1252.12	The second secon	
						Say	1252.50	68178.24	85393246.0
.14	KSRRB M2300 - 14. Supplying, fitting and	MT						A see The Vision	v v na Nation
Op.	placing TMT bar reinforcement in super	1					4-1-6-1	artin participance	Breeze da le se heritar XIII i le en
	structure complete as per drawing and								
9	technical specifications complete as per	. 1				. 1			
	specifications MoRT&H Specification No.								
	1600 Super structure								CONTRACTOR CONTRACTOR
	The second secon					-		1. 6	
-	(P.No.243, I.No.29.29 of PW, P&IWTD S.R 20 Considering 150kg/cum for Standard Span Gi	012-13	) .:	4 7 7 7 7 7 7 7 7		4.7		in the second second	an of finance ordered and
	Considering 250kg/cum for Standard Span Gr	rder	100 5 11 11	5360		-	804.11		Washington and the second
	Considering 250kg/cum for Children Standard Stan	Ci-	J	3594			898.56		our randfalls of
	Considering 125kg/cum for deck Slab	ox Gir	der	3738			597.66	Eghi.	Palar Andrea
		A CHARLES	partition is a second	6209		name of	776.22	100	San was the Fred Late
-	Considering 130kg/cum for Crash Barrier & M	ledian	(d) (0)=3	2192	2.50	•••	285.03	And the Asset	
-			-				3361.58		1 1 12 25 1 1
		-				Say	3362.00	68891.04	231611676.0
15	KCBBB M9700 0 Describing	0			1				: TO WITH S
	KSRRB M2700-9. Providing, precasting, transportation and placing in position	Cum						i	
	precast post tensioned concrete girders		-1 1			İ			
	as per drawing and technical specifications	1	- 1	-1					
	complete as per specifications. MoRT&H	1	1					4.55	anti-sa fatha <del>a</del>
	Specification No.1800 & 2300				i		·		Port of Alberta
- 1	*								
1	1							-	
	P.No.253, L.No.32.9 of PW,P&IWTD S.R 2012	-13)						, (	12.5
-	In each span 7 Girders						7014-11		
i						1			
	Girder -				1		_	. /	/
			71		1817.71		4817.71	20648.52	99478663.0

ನ್ನು ಮಾಹಿತಿ ಹಕ್ಕು ಕಾಯ್ದೆ 2005ರ ಅಡಿಯಲ್ಲಿ ನೀಡಲಾಗಿದೆ ල ක්රුද්දිය. එරා බල ව

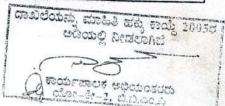
7 of 11

್ಷಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು ಯೋ-ಕೇ-2. ಬಿ.ಟಿ.ಎಂ.ಜಿ

SI.	Description of Wards	TT	and agreement	Length	Breadth	Depth		Rate in	and the state of
No.	Description of Work	Unit	No.	m	m	m	Quantity	Rs.	Amount in R
16	KSRRB M2300 - 15. High tensile steel	MT	100	37 7 7 7 7 7					
	wires / strands including all accessories for	4.5	- A		-				
Î	stressing, stressing operations and grouting			į				1	
	complete as per drawing and Technical	1		1		1		i i	
1	Specifications complete as per specifications		1 4						
	MoRT&H Specification No. 1800			1					
	1 CATE CO.	- 1		1		18   1			
-	1845		-	1000		1			Land of the second
	(P.No.243, I.No.29.30 of PW,P&IWTD S.R 20	12-13)					6 1 27 1		
	Considering 42kg/m for up to 21m Girder		29	20.47			24.93		15 1 1 1 1 1 1 1
	Considering 63kg/m for up to 25m Girder		20	21.85	4-1-4	,	27.53		The state of
	Considering 63kg/m for up to 25m Girder		5	21.50			6.77		1 - 7 - 7
- 1	Considering 63kg/m for up to 25m Girder		18 .	21.68	800 1 100		24.59		4 4 1 1 1 1
	Considering 63kg/m for up to 25m Girder		9.	22.00			12.47	-	
-	Considering 63kg/m for up to 25m Girder		4	25.00		-	6.30		
	Considering 40kg/cum for Box Girder			-	35.38	7	149.42		
				1 010	70.00	-	252.01		
. 1					9.500	0			
	75.75	- 1		100		Say	252.20	159054.84	40113631.0
17	KSRRB M2200-15: Supplying, fitting and	NI-	-	1		<u> </u>		,	
	fixing in position true to line and level POT	INOS.	1	1	4				
1	exing in position true to line and level POT		1						
	PTFE bearings consisting of a metal	1		1 . 3		- 1			
1	piston supported by a disc or unreinforced	. 1			1 99				
	elastomer confined with in a metal		100	1 193					
. !	cylinder, sealing rings, dust seals, PTFE				1 100 - 11				
_ !	surface sliding against stainless steel			a real col	Section 1	P James		en comme	The second second
	making surface complete assembly to be of								
	cast steel / fabricated structural steel, metal			in short	William P				A TALL
	and elastomer elements to be as per IRC: 83	3.1							
	Part I and II respectively and other parts	+4 -4	E 1 4 40 1		#2051B	-		**	ar all or i
	conforming to BS: 5400 section 9.1 and 9.2	4					0.30		
	and clause 2000.6 of MoRT&H Specification				1 2 (195)				
	complete as per drawing and approved		e i V		•				
	rechnical specifications complete as per	Lange .	and in production in	Some and in		-	er community	distribution	ere dispersion mispersons
	specifications. MoRT&H Specification								
1	No.2000 & 2200.	1					4. 1		
(	P.No.231, I.No.28.19 of PW,P&IWTD S.R 201	2-13)			1.24				
1	For Obligatory Span					1 1 1	hard all the same	4-3-34-32-48cm-4-4	CAN THE TRANSPORTED BY AND ADDRESS
	a) Guided/ fixed PTFE bearings 600MT	-	14					200000	-
	vertical Capacity		14	ar back			56.00	220968.00	12374208.0
	o) Guided/ fixed PTFE bearings 380MT			KOK,	The second				
			81	*** *** ***		-	320.00	139946.40	44782848.0
	vertical Capacity		- 44 F 75	100	1 1			THE STATE OF THE S	Between enters the property
	b) Guided/ fixed PTFE bearings 600MT		3	-		-	10.00	220968.00	2209680.0
	rertical Capacity(Up Ramp)	1 - 19	e reductivity	PROPERTY.	ATT - 30	0		TA ST	on a surpressional
	) Guided/ fixed PTFE bearings 600MT		3	1-7-101 5-4	-	-	10.00	220968.00	2209680.0
1	ertical Capacity (Down Ramp)		1 1/2		13 00			22.7	
			23						100
18	SRRB M2600-9. Providing and laying of a	Rmt	4		× 1				
	trip seal Expansion joint catering of				-4				ere and the part
	naximum horizontal movement upto 70		1						The same of the same of
r	nm, complete as per approved drawings			125/11/2	1			Trees.	
a	and standard specifications to be installed		i	12.4					
b	y the manufacturer / supplier or their	- 1		1		1			
	uthorised representative ensuring	1	1 1			. i	5		5 E .
	ompliance to the manufacturer's	1					1		
12.00	nstructions for installation complete as per		11			i	- 1		
	pecifications. MoRT&H	1	p		7	1			
	pecification No. 2607	;			- 1	į	- 1		
_	•	2 3 5 5							
	P.No. 249, I.No.31.9 of PW,P&IWTD S.R 201	2-13)	1						and the second
F	or Flyover		95	17.00			1615.00	/	
_	or up & Down Ramp	(4)	6	6.70			40.20		1
_	or up a nown termp		1	0	con or a large		10.20		
_	or up a bown tomp			marian and		[ tri	The state of the s	15672.90	25041883.30

Description of Work	Unit	NT-	Length	Breadth	Depth		D	T
	0	No.	m	m	m	Quantity	Rate in Rs.	Amount in Rs.
onti carbonate painting with approved flour as per specifications including cost of naterials, labour etc., complete as per pecifications and as directed by the lagineer in Charge.	= 1						KS.	•
farket rate)	-	-		-				
bligatory Span			+	<u> </u>			:	
ettem slab		- 1	900.15					
des including Crash Barrier	-	2	. 268.15		-	5363.00		
of at Obligatory span		17	268.15		2.10	1448.01	_	
er Cap at Obligatory span40m	2	1		5.48	5.69	967.56		
depet 1 kg	2	1		.90		32.96		
ar Cap at Obligatory span30m & 25m	2	- 16		.05		17.80		
<b>3</b> - <b>4</b>	2	16		68		449.60		
Andard Span	i					277.76		
Mom Slab	i	1	1826.43	20.00		26500 00	_	
des incuding Crash Barrier		2	1826.43	20.00	2.62	36528.60 9570.49		
er at Standard span		78	10.00	******	5.84	4557.99		
er with hi otandard span	2	78	16	.48	3.31	2570.88		
Mamp	2	78	8,	90		1388.40		
Hem Slab	i_				1	1000.40		· ·
68 Incuding Crash Barrier		3	165.00	9.02		4464.90		
		2	165.00		2.77	914.10	/	1
(Cap	4	3	5.66		5.00	84.83		
Mark and the second second second second second second second second second second second second second second		3	5.2	23		62.76		
Wil Ramp			1 1					1 1000
mm Slab		3	170.00	9.02 ·		1600.00		
en incuding Crash Barrier		2	170.00	0.02	2.77	941.80 V		
Cap		3	5.66		5.00	84.83	,	
Nach	4	3	5.2	3		62.76		
						74389.24		1,4282
A	1					74390.00	(200.00)	14070000
thick mastic asphalt wearing the on top of deck slab excluding prime with paving grade bitumen meeting the lifements given in table 500-29, which have a specifications. It is a specifications. It is a specifications. It is a specifications. It is a specifications.	The second secon						192.00	
#8#, I.No.32.1 of PW,P&IWTD S.R 2012-13		2	2094.56	7.50	0.4			
#8#, I.No.32.1 of PW,P&IWTD S.R 2012-13 Of Acction		2	2094.56 70.00	7.50		418.40		
#8#, I.No.32.1 of PW,P&IWTD S.R 2012-13				5.50		385.00		
#8#, I.No.32.1 of PW,P&IWTD S.R 2012-13 Of Acction	1 1		70.00			385.00		
#8#, I.No.32.1 of PW,P&IWTD S.R 2012-13 Of Acction	1 1		70.00	5.50	32	385.00 385.00 188.40	258.13	8308625.00

Sl.	Description of Work	Unit	No.	Length	Breadth	Depth		Rate in	
No.			140.	m	m	m	Quantity	Rs.	Amount in
5.21	KSRRB 200-7. Providing and applying tack coat on prepared black topped surfaces at 2.5 kg per 10 sqm, heating bitumen in boiler fitted with spray set (Excluding cleaning of road surface) incuding cost of all materials, labour, HOM of machineries	ti ni S							
	complete as per specifications. MORTH/Chapter 5		en ener des	<u> </u> ::	:: :	w 12- 42-			
	(P.No. 173 I.No.21.7 of PW,P&IWTD S.R 201	2-13)	1.				1777		10 10
	Fly over section		2	2094.56	7.50	-	31418.40	,	-
-	Up Ramp		1	70.00			385.00		
	Down Ramp		1	70.00	5.50		385.00		H. Call Parcy
			1		27 1 1/6	7 THE ST	32188.40		A second
				1	F-147	Say	Total Control		551011
E 99	VCDDD Mass to D 11							+ T.	331011
r. 705	KSRRB M500-19. Providing and laying bituminous concrete 40 mm thick 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		W E IN					1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
	bituminous binder at 5.4 to 5.6% 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			0					
	wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRT&H Specification clause No. 500.9 complete in all respects as per specifications. MoRT&H Specification No. 509 with 6% Bitumen 60/70 grade using 40-50 HMP			100. 2					
10	P.No.176 of I.No.21.22.4 in PW,P&IWTD S.R	0010.1				The September	n service and the service	Symmetric designation	Salara de La
I	Fly over section	2012-1						VANDA BY	
	Jp Ramp		1	2094.56	7.50	0.04	1256.74		
	Down Ramp	was in	- 1	70.00	5.50	0.04	15.40	,	
	1 4000		-	70.00	5.50	0.04	15.40	Contraction of the Contraction o	WITH SHIP PEACE - HOUSE
	A STATE OF THE STA		200			Say	1287.54		Variation of
0	ASRRB M2700-5. Drainage Spouts omplete as per drawing and Technical pecification complete as per specifications. MoRT&H Specification No. 2705	No.		*		Say	1288.00	11177.44	14396541.0
M	ioni Gil Specification No. 2705			- S 41.71	the state of the state of the state of		MANUAL PROPERTY.		er pilosono e sue com
M (I	P.No.252, I.No.32.5 of PW,P&IWTD S.R 2012	-13)	New column and						
(I	P.No.252, I.No.32.5 of PW,P&IWTD S.R 2012 t 8m interval on both sides	-13)	2	279		1201			/
M (I	P.No.252, I.No.32.5 of PW,P&IWTD S.R 2012	-13)	2	279		•	559	1270,08	709517.0
M (I A 24 K	P.No.252, I.No.32.5 of PW,P&IWTD S.R 2012 t 8m interval on both sides  SRB 13-8.5: Providing and fixing to wall, eiling and floor, low density polythylene ipes 6.00 kgf/sq.cm working pressure	-13) m	2	279	<i>V</i>	-	559	1270,08	709517.0
I A A A A A A A A A A A A A A A A A A A	P.No.252, I.No.32.5 of PW,P&IWTD S.R 2012 t 8m interval on both sides  SRB 13-8.5: Providing and fixing to wall, siling and floor, low density polythylene		2	279			559	1270,08	709517.0
M (I) A Co	P.No.252, I.No.32.5 of PW,P&IWTD S.R 2012 t 8m interval on both sides  SRB 13-8.5: Providing and fixing to wall, eiling and floor, low density polythylene tipes 6.00 kgf/sq.cm working pressure 60mm outside diameter with special lange, compression type fittings, wall clips, aking good the wall, ceiling and floor cluding cost of all materials, labour larges, HOM of equipments and testing implete as per specifications.	m	2	279	<i>y</i>	•	559	1270,08	709517.00
M (I) (I) A A A A A A A A A A A A A A A A A A A	P.No.252, I.No.32.5 of PW,P&IWTD S.R 2012 t 8m interval on both sides  SRB 13-8.5: Providing and fixing to wall, eiling and floor, low density polythylene ipes 6.00 kgf/sq.cm working pressure 60mm outside diameter with special lange, compression type fittings, wall clips, aking good the wall, ceiling and floor cluding cost of all materials, labour larges, HOM of equipments and testing implete as per specifications.  No.101, I.No.13.70.6 of PW,P&IWTD S.R 20	m	2	279		-	559	1270,08	709517.00



Description of Work	T		Length	Breadth	Depth		Rate in	
Description of Work	Jnit	No.	m	m	m	Quantity	Rs.	Amount in Rs
North Medium Medium of the Medium Medium Medium Medium of the Medium of	m							
(P,No. 252, I.No. 32.4 of PW, P & IWTD S.R 20	12 -	2	2234.56			4469.12	3465.72	15488719.0
Marin 2.3: Filling available Excavated C Barth (excluding rock) in sides of bundations upto plinth in layers not oxceeding 20cms in depth, compacting each deposited layer by ramming after watering with lead upto 50m and lift upto 1.50m including cost of all labour complete as per openifications. Specification No.KBS 2.9  1. No. 6, I. No. 2, 10 of PW, P&IWTD S.R 2012-1: For foundation liams as Qty of Item No. 5.01-5.02-5.06					 Say	5030.00 5030.00	90.72	456322.00
KBIRB M100-4.2. Haulage of materials by Cripper including cost of loading, unloading and stacking complete as per specifications.  HORTAH Chapter 1 Case-I: Surface Road  II. No.147 of PW. P&IWTD S.R 2012-13)  Unity same as item no 5.01-5.25  For JOKM RS. 2.00 X 1.3 X 20 = (52.00 +	um							
64.80)X1.08=123.34					2			
A CONTRACTOR OF THE CONTRACTOR		1.'	5397.00		3	5397.00	123.34	665644.00
The same of the sa			14				20155	1127475575.39
Miscellaneous & Rounding off		•		1.		2 49	544.6 Corridor	1404.03

les

Assistant Executive Engineer

Traffic Engil Certing Cell, Bruhath Bangalore Mahanagara Palike Bangalore - 560 002. Executive Engineer

Traffic Engineering Cell (Road Infra) Bruhat Bangalore Mahanagara Palike Bangalore - 560 002.

> ದಾಖಲೆಯನ್ನು ಮಾಹಿತಿ ಹಕ್ಕು ಕಾಯ್ದೆ 2005ರ ಅಡಿಯಲ್ಲಿ ನೀಡಲಾಗಿದೆ

> > ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು ಯೋ-ಕೇ-2, ಬಿ.ಬಿ.ಎಂ.ಪಿ

Project: Proposed Construction of Elevated Corridor by integrating Ejipura Main Road - Inner Ring Road Junction, Sony World Junction and Kendriya Sadana Junction along 100ft. Inner Ring Road, Koramangala, Bangalore

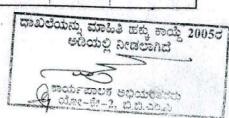
n	_	
Detailed	Cost F	ctimata
- Courte	OUSL L	Sumate

SI.	Description of Work			Length	Breadth	Depth		D.C.	rear a service and
No.	Description of Work	Unit	No.	m	m	m	Quantity	Rate in Rs.	Amount in R
3.00	APPROACHES TO ELEVATED CORRIDO	RS		1 2			-	As.	
6.01	KSRRB M2100 - 1.1. Earthwork in	Cum		11.5				İ	
	excavation for foundation of structures as	1							
	per drawing and technical specifications,	1			N 20 1			İ	1
	including setting out, construction of							l as:	15.
	shoring and bracing, removal of stumps and	î							1
	other deleterious matter, dressing of sides	i						1	İ
- 1	and bottom and backfilling with approved								
	material complete as per specifications. I. Ordinary Soil - A. Manual Means (i) Depth	1							
- 1	upto 3m. MoRT&H Specification No. 304			i				į	
	appeared in Motor Con Specification No. 304		-1					1	
	A33 100/								
	Add 10% extra for dewatering charges								
	(P.No.221, I.No.27.1 of PW,P&IWTD S.R 2012 R.E Wall	2-13)	-		1	2		:	-C 17 15 15
						. 1			
	From Kendriya sadana towards Ejipura	1	2	• 192.46	1.50	1.50	866.07		7.11
-+	From Ejipura junction towards Domlur for RE walls behind abutments		2	118.62	1.50	1.50	533.79		Service Co.
-	From Medicale towards E		2	17.00	1.50	1.50	76.50	/	SHIPPINE V
	From Madiwala towards Ejipura (Up Ramp) From Ejipura towards Sarjapura(Down Ramp)		2	164.75	1.50	1.50	741.38		
1	for RE walls behind abutments		2	169.21	1.50	1.50	761.45		
	to ten wans beaming abutments		2	6.70	1.50	1.50	30.15		7-7-
						- 1	3009.33		1425, 115, 127
1	KSRRB M2100 - 13. Plain Cement C Concrete M15 with OPC cement @ 240kgs,	um ,				Say	3010.00	89.04	268012/0
	Concrete M15 with OPC cement @ 240kgs, with 40mm and down size graded granite	um ,	5 at 1 a a 4	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		Say	3010.00	89.04	268012,8
,	Concrete M15 with OPC cement @ 240kgs, with 40mm and down size graded granite netal coarse aggregates @ 0.84cum and fine	um	Turti sant			Say	3010.00	89.04	268012,0
1	Concrete M15 with OPC cement @ 240kgs, with 40mm and down size graded granite metal coarse aggregates @ 0.84cum and fine aggregates @ 0.56cum in Open Foundation complete as per Drawing and Technical	um	Secretary states			Say	3010.00	89.04	268012,0
1	Concrete M15 with OPC cement @ 240kgs, with 40mm and down size graded granite metal coarse aggregates @ 0.84cum and fine aggregates @ 0.56cum in Open Foundation complete as per Drawing and Technical	um				Say	3010.00	89.04	268012,80
1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Concrete M15 with OPC cement @ 240kgs, with 40mm and down size graded granite metal coarse aggregates @ 0.84cum and fine aggregates @ 0.56cum in Open Foundation complete as per Drawing and Technical Specifications MoRT&H Specification No. 1500, 1700 & 2100	2				Say	3010.00	89.04	268012,80
1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Concrete M15 with OPC cement @ 240kgs, with 40mm and down size graded granite netal coarse aggregates @ 0.84cum and fine aggregates @ 0.56cum in Open Foundation complete as per Drawing and Technical Specifications MoRT&H Specification No. 1500, 1700 & 2100  P.No.223, I.No.27.24 of PW,P&IWTD S.R 2012	2				Say	3010.00	89.04	268012,80
11 (	Concrete M15 with OPC cement @ 240kgs, with 40mm and down size graded granite netal coarse aggregates @ 0.84cum and fine aggregates @ 0.56cum in Open Foundation complete as per Drawing and Technical Specifications MoRT&H Specification No. 1500, 1700 & 2100  P.No.223, I.No.27.24 of PW,P&IWTD S.R 2012 I.R.E Wall	2		200		Say	3010.00	89.04	268012,80
1	Concrete M15 with OPC cement @ 240kgs, with 40mm and down size graded granite netal coarse aggregates @ 0.84cum and fine aggregates @ 0.56cum in Open Foundation complete as per Drawing and Technical Specifications MoRT&H Specification No. 1500, 1700 & 2100  P.No.223, I.No.27.24 of PW,P&IWTD S.R 2012  L.R.E. Wall  From Kendriya sadana towards Ejipura	2	2	192.46	1.50			89.04	268012,8
i i i i i i i i i i i i i i i i i i i	Concrete M15 with OPC cement @ 240kgs, with 40mm and down size graded granite netal coarse aggregates @ 0.84cum and fine aggregates @ 0.56cum in Open Foundation complete as per Drawing and Technical Specifications MoRT&H Specification No. 1500, 1700 & 2100  P.No.223, I.No.27.24 of PW,P&IWTD S.R 2012  L.R.E. Wall  From Kendriya sadana towards Ejipura  From Ejipura junction towards Domlur	2	2 2	192.46 118.62	1.50	0.15	86.61	89.04	268012,8
i i i i i i i i i i i i i i i i i i i	Concrete M15 with OPC cement @ 240kgs, with 40mm and down size graded granite metal coarse aggregates @ 0.84cum and fine aggregates @ 0.56cum in Open Foundation complete as per Drawing and Technical Specifications MoRT&H Specification No. 1500, 1700 & 2100  P.No.223, I.No.27.24 of PW,P&IWTD S.R 2012  L. R.E. Wall  From Kendriya sadana towards Ejipura  From Ejipura junction towards Domlur  or RE walls behind abutments	2	-		1.50	0.15 0.15	86.61 53.38	89.04	268012,0
i i i i i i i i i i i i i i i i i i i	Concrete M15 with OPC cement @ 240kgs, with 40mm and down size graded granite metal coarse aggregates @ 0.84cum and fine aggregates @ 0.56cum in Open Foundation complete as per Drawing and Technical Specifications MoRT&H Specification No. 1500, 1700 & 2100  P.No.223, I.No.27.24 of PW,P&IWTD S.R 2012  R.E. Wall  From Kendriya sadana towards Ejipura  From Ejipura junction towards Domlur or RE walls behind abutments  From Madiwala towards Ejipura (Up Ramp)	2	2	118.62		0.15 0.15 0.15	86.61 53.38 7.65	89.04	268012,0
in it is a second of the interest of the inter	Concrete M15 with OPC cement @ 240kgs, with 40mm and down size graded granite metal coarse aggregates @ 0.84cum and fine aggregates @ 0.56cum in Open Foundation complete as per Drawing and Technical Specifications MoRT&H Specification No. 1500, 1700 & 2100  P.No.223, I.No.27.24 of PW,P&IWTD S.R 2012  R.E. Wall  From Kendriya sadana towards Ejipura  From Ejipura junction towards Domlur for RE walls behind abutments  From Madiwala towards Ejipura (Up Ramp)  From Ejipura towards Sarjapura(Down Ramp)	2	2	118.62 17.00	1.50 1.50	0.15 0.15	86.61 53.38 7.65 74.14	89.04	268012,81
a F F F F F F F F F F F F F F F F F F F	Concrete M15 with OPC cement @ 240kgs, with 40mm and down size graded granite metal coarse aggregates @ 0.84cum and fine aggregates @ 0.56cum in Open Foundation complete as per Drawing and Technical Specifications MoRT&H Specification No. 1500, 1700 & 2100  P.No.223, I.No.27.24 of PW,P&IWTD S.R 2012  R.E. Wall  From Kendriya sadana towards Ejipura  From Ejipura junction towards Domlur for RE walls behind abutments  From Madiwala towards Ejipura (Up Ramp)  From Ejipura towards Sarjapura(Down Ramp)  From Ejipura towards Sarjapura(Down Ramp)  From Egipura towards Sarjapura(Down Ramp)  From Egipura towards Sarjapura(Down Ramp)  From Egipura towards Buttments	2	2 2 2	118.62 17.00 164.75	1.50 1.50 , 1.50 1.50	0.15 0.15 0.15 0.15 0.15	86.61 53.38 7.65 74.14 76.14	89.04	268012,60
c c c c c c c c c c c c c c c c c c c	Concrete M15 with OPC cement @ 240kgs, with 40mm and down size graded granite metal coarse aggregates @ 0.84cum and fine aggregates @ 0.56cum in Open Foundation complete as per Drawing and Technical Specifications MoRT&H Specification No. 1500, 1700 & 2100  P.No.223, I.No.27.24 of PW,P&IWTD S.R 2012  R.E. Wall  From Kendriya sadana towards Ejipura  From Ejipura junction towards Domlur  for RE walls behind abutments  From Madiwala towards Ejipura (Up Ramp)  From Ejipura towards Sarjapura (Down Ramp)  From Ejipura towards Sarjapura (Down Ramp)  From Eyepura towards Sarjapura (Down Ramp)  From Eyepura towards Sarjapura (Down Ramp)  From Eyepura towards Sarjapura (Down Ramp)  From Eyepura towards Sarjapura (Down Ramp)  From Friction Slab	2	2 2 2 2	118.62 17.00 164.75 169.21	1.50 1.50 1.50	0.15 0.15 0.15 0.15	86.61 53.38 7.65 74.14	89.04	268012,60
SS SS SS SS SS SS SS SS SS SS SS SS SS	Concrete M15 with OPC cement @ 240kgs, with 40mm and down size graded granite metal coarse aggregates @ 0.84cum and fine aggregates @ 0.56cum in Open Foundation complete as per Drawing and Technical Specifications MoRT&H Specification No. 1500, 1700 & 2100  P.No.223, I.No.27.24 of PW,P&IWTD S.R 2012  R.E. Wall  From Kendriya sadana towards Ejipura  From Ejipura junction towards Domlur  for RE walls behind abutments  From Madiwala towards Ejipura (Up Ramp)  From Ejipura towards Sarjapura(Down Ramp)  From Ejipura towards Sarjapura(Down Ramp)  From Eyipura towards Ejipura (Ejipura Sarjapura(Down Ramp)  From Kendriya sadana towards Ejipura	2	2 2 2 2	118.62 17.00 164.75 169.21	1.50 1.50 , 1.50 1.50	0.15 0.15 0.15 0.15 0.15	86.61 53.38 7.65 74.14 76.14 3.02	89.04	268012,0
constraints of the constraints o	Concrete M15 with OPC cement @ 240kgs, with 40mm and down size graded granite metal coarse aggregates @ 0.84cum and fine aggregates @ 0.56cum in Open Foundation complete as per Drawing and Technical Specifications MoRT&H Specification No. 1500, 1700 & 2100  P.No.223, I.No.27.24 of PW,P&IWTD S.R 2012  R.E. Wall  From Kendriya sadana towards Ejipura  From Ejipura junction towards Domlur  for RE walls behind abutments  From Madiwala towards Ejipura (Up Ramp)  From Ejipura towards Sarjapura(Down Ramp)  From Ejipura sadana towards Ejipura  From Kendriya sadana towards Ejipura  From Kendriya sadana towards Ejipura	2	2 2 2 2 2 2	118.62 17.00 164.75 169.21 6.70	1.50 1.50 , 1.50 1.50 : 1.50	0.15 0.15 0.15 0.15 0.15 0.15	86.61 53.38 7.65 74.14 76.14	89.04	268012,6
cc SS SS SS SS FF FF FF FF FF FF FF FF	Concrete M15 with OPC cement @ 240kgs, with 40mm and down size graded granite metal coarse aggregates @ 0.84cum and fine aggregates @ 0.56cum in Open Foundation complete as per Drawing and Technical Specifications MoRT&H Specification No. 1500, 1700 & 2100  P.No.223, I.No.27.24 of PW,P&IWTD S.R 2012  R.E. Wall  Prom Kendriya sadana towards Ejipura  From Ejipura junction towards Domlur for RE walls behind abutments  From Madiwala towards Ejipura (Up Ramp)  From Ejipura towards Sarjapura(Down Ramp)  From Eyipura sadana towards Ejipura  From Kendriya sadana towards Ejipura  From Kendriya sadana towards Ejipura  From Kendriya sadana towards Ejipura  From Kendriya sadana towards Ejipura  From Madiwala towards Ejipura  From Madiwala towards Ejipura (Up Ramp)	2	2 2 2 2 2 2 2 2 2 2 2 2	118.62 17.00 164.75 169.21 6.70	1.50 1.50 1.50 1.50 1.50 2.00	0.15 0.15 0.15 0.15 0.15 0.15	86.61 53.38 7.65 74.14 76.14 3.02	89.04	268012,60
c c c c c c c c c c c c c c c c c c c	Concrete M15 with OPC cement @ 240kgs, with 40mm and down size graded granite metal coarse aggregates @ 0.84cum and fine aggregates @ 0.56cum in Open Foundation complete as per Drawing and Technical Specifications MoRT&H Specification No. 1500, 1700 & 2100  P.No.223, I.No.27.24 of PW,P&IWTD S.R 2012  R.E. Wall  From Kendriya sadana towards Ejipura  From Ejipura junction towards Domlur  for RE walls behind abutments  From Madiwala towards Ejipura (Up Ramp)  From Ejipura towards Sarjapura(Down Ramp)  from Kendriya sadana towards Ejipura  from Kendriya sadana towards Ejipura  from Ejipura towards Sarjapura(Down Ramp)  from Ejipura junction towards Domlur  from Madiwala towards Ejipura (Up Ramp)  from Madiwala towards Ejipura (Up Ramp)	2	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	118.62 17.00 164.75 169.21 6.70 192.46 118.62	1.50 1.50 1.50 1.50 1.50 1.50 2.00	0.15 0.15 0.15 0.15 0.15 0.15 0.15	86.61 53.38 7.65 74.14 76.14 3.02 	89.04	
cccccccccccccccccccccccccccccccccccccc	Concrete M15 with OPC cement @ 240kgs, with 40mm and down size graded granite metal coarse aggregates @ 0.84cum and fine aggregates @ 0.56cum in Open Foundation complete as per Drawing and Technical Specifications MoRT&H Specification No. 1500, 1700 & 2100  P.No.223, I.No.27.24 of PW,P&IWTD S.R 2012  R.E. Wall  Prom Kendriya sadana towards Ejipura  From Ejipura junction towards Domlur for RE walls behind abutments  From Madiwala towards Ejipura (Up Ramp)  From Ejipura towards Sarjapura(Down Ramp)  Friction Slab  Friction Slab  From Kendriya sadana towards Ejipura  From Ejipura junction towards Domlur  From Madiwala towards Ejipura (Up Ramp)  From Madiwala towards Ejipura (Up Ramp)  From Madiwala towards Ejipura (Up Ramp)  From Madiwala towards Ejipura (Up Ramp)  From Ejipura towards Sarjapura(Down Ramp)	2	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	118.62 17.00 164.75 169.21 6.70	1.50 1.50 1.50 1.50 1.50 2.00 2.00 2.00	0.15 0.15 0.15 0.15 0.15 0.15 0.15 0.15	86.61 53.38 7.65 74.14 76.14 3.02  115.48 71.17 98.85	89.04	
a a c c c c c c c c c c c c c c c c c c	Concrete M15 with OPC cement @ 240kgs, with 40mm and down size graded granite metal coarse aggregates @ 0.84cum and fine aggregates @ 0.56cum in Open Foundation complete as per Drawing and Technical Specifications MoRT&H Specification No. 1500, 1700 & 2100  P.No.223, I.No.27.24 of PW,P&IWTD S.R 2012  R.E. Wall  Prom Kendriya sadana towards Ejipura  From Ejipura junction towards Domlur for RE walls behind abutments  From Madiwala towards Ejipura (Up Ramp)  From Ejipura towards Sarjapura(Down Ramp)  From Kendriya sadana towards Ejipura  From Kendriya sadana towards Ejipura  From Ejipura junction towards Domlur  From Madiwala towards Ejipura (Up Ramp)  From Ejipura junction towards Domlur  From Madiwala towards Ejipura (Up Ramp)  From Ejipura towards Sarjapura(Down Ramp)  Approach Slab	2	2 2 2 2 2 2 2 1	118.62 17.00 164.75 169.21 6.70	1.50 1.50 1.50 1.50 1.50 2.00 2.00 2.00 2.00 4.00	0.15 0.15 0.15 0.15 0.15 0.15 0.15 0.15	86.61 53.38 7.65 74.14 76.14 3.02  115.48 71.17 98.85	89.04	
a a c c c c c c c c c c c c c c c c c c	Concrete M15 with OPC cement @ 240kgs, with 40mm and down size graded granite metal coarse aggregates @ 0.84cum and fine aggregates @ 0.56cum in Open Foundation complete as per Drawing and Technical Specifications MoRT&H Specification No. 1500, 1700 & 2100  P.No.223, I.No.27.24 of PW,P&IWTD S.R 2012  R.E. Wall  Prom Kendriya sadana towards Ejipura  From Ejipura junction towards Domlur  for RE walls behind abutments  From Madiwala towards Ejipura (Up Ramp)  From Ejipura towards Sarjapura(Down Ramp)  from Kendriya sadana towards Ejipura  from Kendriya sadana towards Ejipura  from Ejipura junction towards Domlur  from Madiwala towards Ejipura (Up Ramp)  from Ejipura towards Ejipura (Up Ramp)  from Ejipura towards Ejipura (Up Ramp)  from Ejipura towards Sarjapura(Down Ramp)  Approach Slab  from Kendriya sadana towards Ejipura  from Kendriya sadana towards Ejipura	2	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 1 2 1 2	118.62 17.00 164.75 169.21 6.70 192.46 118.62 164.75 169.21 - 17.00 17.00	1.50 1.50 1.50 1.50 1.50 2.00 2.00 2.00 2.00	0.15 0.15 0.15 0.15 0.15 0.15 0.15 0.15	86.61 53.38 7.65 74.14 76.14 3.02 115.48 71.17 98.85 101.53	89.04	
a a c c c c c c c c c c c c c c c c c c	Concrete M15 with OPC cement @ 240kgs, with 40mm and down size graded granite metal coarse aggregates @ 0.84cum and fine aggregates @ 0.56cum in Open Foundation complete as per Drawing and Technical Specifications MoRT&H Specification No. 1500, 1700 & 2100  P.No.223, I.No.27.24 of PW,P&IWTD S.R 2012  R.E. Wall  Prom Kendriya sadana towards Ejipura  From Ejipura junction towards Domlur  for RE walls behind abutments  From Madiwala towards Ejipura (Up Ramp)  From Ejipura towards Sarjapura(Down Ramp)  from Ejipura junction towards Domlur  from Madiwala towards Ejipura (Up Ramp)  from Ejipura towards Ejipura (Up Ramp)  from Ejipura towards Ejipura (Up Ramp)  from Ejipura towards Ejipura (Up Ramp)  from Kendriya sadana towards Ejipura (Up Ramp)  from Kendriya sadana towards Ejipura (Up Ramp)  from Kendriya sadana towards Ejipura (Up Ramp)  from Kendriya sadana towards Ejipura	2	2 2 2 2 2 2 2 2 2 2 2 2 2 2 1 2 1 1 1 1	118.62 17.00 164.75 169.21 6.70 192.46 118.62 164.75 169.21 - 17.00 17.00 6.70	1.50 1.50 1.50 1.50 1.50 2.00 2.00 2.00 2.00 4.00	0.15 0.15 0.15 0.15 0.15 0.15 0.15 0.15	86.61 53.38 7.65 74.14 76.14 3.02 115.48 71.17 98.85 101.53	89.04	
a a c c c c c c c c c c c c c c c c c c	Concrete M15 with OPC cement @ 240kgs, with 40mm and down size graded granite metal coarse aggregates @ 0.84cum and fine aggregates @ 0.56cum in Open Foundation complete as per Drawing and Technical Specifications MoRT&H Specification No. 1500, 1700 & 2100  P.No.223, I.No.27.24 of PW,P&IWTD S.R 2012  R.E. Wall  Prom Kendriya sadana towards Ejipura  From Ejipura junction towards Domlur  for RE walls behind abutments  From Madiwala towards Ejipura (Up Ramp)  From Ejipura towards Sarjapura(Down Ramp)  from Kendriya sadana towards Ejipura  from Kendriya sadana towards Ejipura  from Ejipura junction towards Domlur  from Madiwala towards Ejipura (Up Ramp)  from Ejipura towards Ejipura (Up Ramp)  from Ejipura towards Ejipura (Up Ramp)  from Ejipura towards Sarjapura(Down Ramp)  Approach Slab  from Kendriya sadana towards Ejipura  from Kendriya sadana towards Ejipura	2	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 1 2 1 2	118.62 17.00 164.75 169.21 6.70	1.50 1.50 1.50 1.50 1.50 2.00 2.00 2.00 2.00 4.00 4.00	0.15 0.15 0.15 0.15 0.15 0.15 0.15 0.15	86.61 53.38 7.65 74.14 76.14 3.02 115.48 71.17 98.85 101.53 10.20 10.20 4.02 4.02	89.04	
a a c c c c c c c c c c c c c c c c c c	Concrete M15 with OPC cement @ 240kgs, with 40mm and down size graded granite metal coarse aggregates @ 0.84cum and fine aggregates @ 0.56cum in Open Foundation complete as per Drawing and Technical Specifications MoRT&H Specification No. 1500, 1700 & 2100  P.No.223, I.No.27.24 of PW,P&IWTD S.R 2012  R.E. Wall  Prom Kendriya sadana towards Ejipura  From Ejipura junction towards Domlur  for RE walls behind abutments  From Madiwala towards Ejipura (Up Ramp)  From Ejipura towards Sarjapura(Down Ramp)  from Ejipura junction towards Domlur  from Madiwala towards Ejipura (Up Ramp)  from Ejipura towards Ejipura (Up Ramp)  from Ejipura towards Ejipura (Up Ramp)  from Ejipura towards Ejipura (Up Ramp)  from Kendriya sadana towards Ejipura (Up Ramp)  from Kendriya sadana towards Ejipura (Up Ramp)  from Kendriya sadana towards Ejipura (Up Ramp)  from Kendriya sadana towards Ejipura	2	2 2 2 2 2 2 2 2 2 2 2 2 2 2 1 2 1 1 1 1	118.62 17.00 164.75 169.21 6.70 192.46 118.62 164.75 169.21 - 17.00 17.00 6.70	1.50 1.50 1.50 1.50 1.50 2.00 2.00 2.00 2.00 4.00 4.00 4.00	0.15 0.15 0.15 0.15 0.15 0.15 0.15 0.15	86.61 53.38 7.65 74.14 76.14 3.02 115.48 71.17 98.85 101.53 10.20 10.20 4.02	89.04	

යිම්වීම් සැක්ත්ව ස්වා කරනු 2005ර මෙහාව වංගයවෙන්

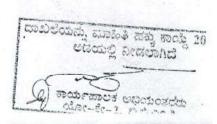
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Sl.	Description (SYV.)			Length	Breadth	Depth	State of	Rate in	San 1 / 2 / 2 / 2
No.	Description of Work	Unit	No.	m	m	m	Quantity	Rs.	Amount in
6.03	KSRRB M2100 - 17.1. Plain / Reinforced		4		2.5.4.4				
	Cement Concrete design mix M25 with								
	OPC cement @340kgs, with 20mm and down	1							
	size graded granite metal coarse aggregates				make the man college of the college of	(1) (1) (1) (1) (1) (1) (1) (1) (1)			10
	@ 0.7cum and fine aggregates @0.47cum,								
	with superplastisiser @3lts conforming to				in c				
	IS9103-1999 Reaffirmed-2008, Open					eri week	THE SECTION OF		one and the second
	Foundation complete as per Drawing and								
	Technical Specifications. Case - 1: Using								100
	Concrete Mixer. MoRT&H Specification No.								
	1500, 1700 & 2100.				Sar V rou		160		
	(P.No. 224, I.No.27.30 of PW,P&IWTD S.R 2	012-13	)		11 200	V 1		1	
	R.E Wall	1		S 241 1	7.4			1-/7-	
	From Kendriya sadana towards Ejipura		2	192.46	1.40	0.30	161.6	7/	
	From Ejipura junction towards Domlur		2	118.62	1.40	0.30	99.64		
	for RE walls behind abutments		2	17.00	1.40	0.30	14.28	-	-
	From Madiwala towards Ejipura (Up Ramp)		2	164.75	1.40	0.30	138.39		-
	From Ejipura towards Sarjapura(Down Ram)	p)	2	169.21	1.40	0.30	142.14	-	
	for RE walls behind abutments		2	6.70	1.40	0.30	5.68		
			-			0.00	561.74	-	
	NA TOTAL TOT			1 3	1	Say	562.00	/	20012000
						Day	002.00	3126.76	2881239.
6.04	KSRRB M2300-10.2. Furnishing and	Cum		1 3			11.00	13.	100000
	Placing Reinforced / Prestressed cement								
-11	concrete in super - structure as per drawing			and the second second	e consume as es	a to a make	TOWN 10	and the same	THE STREET, SALES
	and Technical Specification complete as per	1981	23.90	1-1	central end	1130		Part of a 1	
n. 1	specifications. RCC with OPC cement					53 68 ±			De jurg Park
100	design mix M - 40 @ 420kgs, with 20mm	907 E.				1.7			
	and down size granite metal coarse			1 7 100	mo 113				
1	aggregates @ 0.7cum and fine aggregates @	on term	TO HALL	Technology &	rear sign at least to	Veget on the Se	NAME OF GROOM	i	
8	0.44cum, with superplastisiser @ 3lts				10 10 B	Sec.	Sec. 47.	V 8.2. 3 (	
	confirming. IS9103-1999 Reaffirmed-2008	1	œ.	1 5	and party				
-	Case-II: Using Batching Plant, Transit	Carlo Carlo	2 Table 2	Catalan .	contract to		AND THE PARTY OF	I make the second	mark and replacement
-	Mixer & Cocnrete Pump MoRT&H			100					
	Specification No. 1500, 1600 & 1700, Height	1			# 1				
anal	5m to 10m		173 July 107 220						
	(P.No.240&241, I.No.29.22.2 of PW,P&IWTD	S R 20	119.12)		eces is an and independing an	Charles S. T. Land	And Allegary Designation	Name and Advanced to the least	The section of the se
	Friction Slab	Dile	712-10)	77.7	7 107		5 55 45		- 11 - 12 - 12
_	From Kendriya sadana towards Ejipura		2	100 10	and when been	*/*** A-P	The state of the same	/	- 40
	From Ejipura junction towards Domlur	-	2	192.46	-	0.40	307.94		- Cram vagates in
- 4	for RE walls behind abutments	1	2	118.62	2.00	0.40	189.79		e territorio (con es
	From Madiwala towards Ejipura (Up Ramp)	75		17.00	2.00	0.40	27.20	C-2500	
	From Ejipura towards Sarjapura(Down Ramp)	Na ale	2	164.75	2,00	0.40	263.60.		
		)	2	169.21	2.00	0.40	270.74		- Tell Control and and a
	for RE walls behind abutments		2	6.70	2.00	0.40	10.72	V .	
- 1	Approch Slab		2	17.00	4.00	0.30	40.80		- 12.5
			2	6.70	4.00	0.30	16.08		1
	Area of Crash Barrier = 0.386 Sqm		mild Comme on	and the second	A STATE OF THE PARTY.	and the second	all second town	value in the same of the	end to a shall-handley
	From Kendriya sadana towards Ejipura		2	192.46	0.350		134.72		W TO THE
	From Ejipura junction towards Domlur		2	118.62	0.350		83.03		1170 3011
	From Madiwala towards Ejipura (Up Ramp)		2	164.75	0.350		115.33		1400014
- !]	From Ejipura towards Sarjapura(Down Ramp)		2	169.21	0.350	4 10 2	118.45	/	734
-	Central Median			165 18	CHICSON III		1 11 1	1	AL VALUE OF SE
1]	From Kendriya sadana towards Ejipura		1	192.46	1.00	0.30	57.74		1 2 7
	From Ejipura junction towards Domlur		1	118.62	1.00	0.30	35.59	/	-
			-	11/100					
		1			* **	1	1671.72	_	
						Say	1671.72 1672.00	6713.28	11224604.0

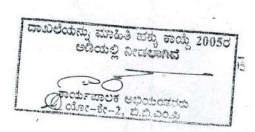


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SI. No.	Description of Work	Unit	No.	m	Breadth	Depth	Quantity	Rate in Rs.	Amount in Rs
6.05	KSRRB M2300 - 14. Supplying, fitting and placing TMT bar reinforcement in super structure complete as per drawing and technical specifications complete as per specifications MoRT&H Specification No. 1600							RS.	
	(P.No.243, I.No.29.29 of PW, P&IWTD S.R.2	2012-13	3)						
	Considering 130kg/cum		exemple and the second		- I-V	-	290.42	68891.04	20007386.0
ilu ni	797.28 X 0.15 = 119.59MT		174.	1				00001.01	2000 1400.0
		ti	P. 10	1		- I In		1	47 Y = 1180 V
6.06	KSRRB M2200 - 8.1. Back filling behind abutment, wing wall and return wall complete as per drawing and Technical Specification complete as per specifications. A. Granular material MoRT&H Specification No. 710.1.4 of IRC: 78 & 2200								
	(P. No. 220, I. No. 28, 11 of DW De IWED C. D. 20	10.10	100				10.0	Sec. 18	
-	(P.No.230, I.No.28.11 of PW,P&IWTD S.R 20 R E wall	12-13)							
	From Kendriya sadana towards Ejipura	0	0						
	From Ejipura junction towards Domlur	Cum	2	192.46	1.20	1.05	485.00	·	
	for RE walls behind abutments		2	118.62	1.20	1.05	298.92		
7	Up Ramp	-	2	17.00	1.20	1.05	42.84		
	Down Ramp	-	2	164.75	1.20	1.05	415.17		CVIII A SA
	for RE walls behind abutments		- Z .	169.21	1.20	1.05	426.41	/	
	To the wants beining aputments		2	6.70	1.20	1.05	16.88		
		dr. social	STATE WERE	2.10 - 10 - 10 - 10 - 10 - 10 - 10 - 10 -			1685.22		
	The second secon		100	-		Say	1686.00	- 262/44	442474.00
	RCC facia panel of M35 grade aesthetically finished cruciform shape mechanically stabilized reinforced earth wall to the required line, grade and cross sections with hot dip high adherence strips and panel lugs of required length having width and thickness of 40 x 5mm at specified interval.						M		CARL COLOR
_	Panels are to be seated in each other using	1	and the latest and th		- Land		Same of the		and the same of the same
	two numbers EPDM rubber seating pad per panel. vertical joints should be covered with Geo-textile filter cloth glued to the panel and horizontal joints to be provided with 25								
	mm dia. polyethylene foam joint filler, 160 mm dia. PVC pipe of 10 Kg./cm2 wrapped with non woven geo textile with perforation						11 11	100	
	of 5mm dia. at staggered intervals of 10 cm		1		1	000			
	c/c etc., complete as per approved drawing and specification including cost of hot dip		6			7 1		The state of the s	
i	high adherence strip, legs, geo-textile cloth,	-			- 1				1
1	EPDM pad, polyethylene foam, joint fillers,								E. Church
t	tie strips ,fasteners and all accessories,	- 1		10:1-		1000			
1	coping beam(if any), drainage layer, drain	- 1	- [ ]						100
	pipe etc cost of all materials, form work,		£- !		i				
I	net of HVCD minforment						i		
I	cost of HYSD reinforcement steel and	1				20		1	
f	abrication design with all lead and lift,						- 1		
i	abrication design with all lead and lift, oading, unloading, stacking, hire charges of				- [ - ]				
f	abrication design with all lead and lift,							The state of the s	
f l	abrication design with all lead and lift, oading, unloading, stacking, hire charges of machineries as approved by the Engineer					entered to the state of the state of			
	abrication design with all lead and lift, oading, unloading, stacking, hire charges of machineries as approved by the Engineer					And the same of th			

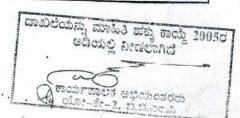
Description of Work	Unit	No.	Length	Breadtl	h Dept	h	Rate in	T-1-1-1
	J.2210		m	m	m	Quantit	Rs.	Amount in Rs
From Kendriya sadana towards Ejipura		2	192.46	3	- 2.8	8 1109.2	1	-
From Ajipura junction towards Domlur		2	118.62		2.5	1 595.4	7	
Up Ramp		2	164.75		. 3.6			
Liewn Ramp		2	. 169.21		3.6			
for All walls behind abutments		2	17.00		7.2		_	1
44 A 17 A 17 A 17 A 17 A 17 A 17 A 17 A		2	6.70		- 6.1			-
All the state of t						4479.28	1	
Control (Control Control				Sa			2,9290%	
Vincent of the second	77				- 54	4400.00		
HIGH M2200 - 9. Providing and laying riller Media with granular meterials / tone grushed aggregates satisfying the equirements laid down in clause	Cum						6538.0	0
100.4.2.2. of MoRT&H specifications to a highness of not less than 600 mm with maller size towards the soil and bigger size								
awards the wall and provided over the nire surface behind abutment, wing wall and return wall to the full height compacted a firm condition complete as per drawing and Technical Specification complete as per		: :>						
potification MoRT&H Specification No.		_				٠.		
Na. 110, I.No.28.13 of PW,P&IWTD S.R 201	2-13)							4
10m Ajipura junction towards Domlur	- 1	2	192.46	0.60	2.29	529.27		2
Hamp		2	118.62	0.60	1.92	273.30		- 52.4
own Ramp		2	164.75	0.60	3.06	604.96	/	
ewn Kemp		2	169.21	0.60	3.09	627.43	1	
ters				-		2034.96	/	
					Say	2035.00	650.16	10000000
A CONTRACTOR OF THE CONTRACTOR							000.10	1323076.00
mbankment with approved material eavel / Murrum with all lifts and leads, apporting to site, spreading, grading to site, spreading, grading to meet duired slope and compacting to meet duirement Table 300-2 complete as per confections, (which includes cost of gravel muffum, watering charges & compaction yibratory roller)				•				
No. 187, I.No. 19.60 of PW, P&IWTD S.R 2012	-13)							- A - A - A - A - A - A - A - A - A - A
M Kendriya sadana towards Ejipura		1	192.46	16.00	2.29	7056.87	-	
m Lipura junction towards Domlur		1	118.62	16.00	1.92	3644.01		
Ramp		1	164.75	5.50	3.06	2772.74		
NO THE CO.		1	169.21	5.50	3.09			
NO THE CO.				0.00	3,09	2875.73		
DOM: TWING.	<del></del>					10040 04		
Wh Hamp					Say	16349.34 1650.00	146.88	2401488.00



Sl.	no contract of the		17.	Length	Breadth	Depth	e 1 1 1 1 2	Rate in	185 F 11
No.	Description of Work	Unit	No.	m	m	m	Quantity	Rs.	Amount in R
6.10	KSRRB M400-7. Construction of granular sub-base by providing coarse graded material, spreading in uniform layers with motor grader on prepared surface, mixing				124	•			
	by mix in place method with rotavator at OMC, and compacting with vibratory roller to achieve the desired density, complete as per Specifications. For Coarse graded								
	granular sub-base material as per 400-2. For Grading I Material								
	(P.No.165, I.No.20.6.1 of PW,P&IWTD S.R 2	012-13)				70 7			CONTROL OF THE PARTY OF THE PAR
	From Kendriya sadana towards Ejipura	· · · · ·	1	192.46	16.00	0.20	615.87		5 11 TH 5
	From Ejipura junction towards Domlur		1	118.62	16.00	0.20	379.58		10
-24	Up Ramp		1.	164.75	5.50	0.20	181.23	100	18 187/19
	Down Ramp	1	1	. 169.21	. 5.50	0.20	186.13		
	-			1100.21	0.00	0.20	1362.81		
					1 500	Say	1363.00	1050.8₽	1432295.0
6.11	KSSRB M400-17. Providing laying, spreading and compacting graded stone aggregate to wet mix macadam specifications including premixing the								
	material with water at OMC in mechanical mix plant carriage of mixed method of tipper to site, laying in uniform layers with paver in sub base / base course on well prepared surface and compacting with vibratory roller to achieve the desired density complete as per specifications.		. 0						
	MoRT&H Specification No. 407 : (P.No.167, I.No.20.18 PW,P&IWTD S.R 2012	2-13)			7 - 7 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	1	er and development To development		E A STATE
	From Kendriya sadana towards Ejipura	70 W 190	1	192.46	16.00	0.25	769.84		7 - 1 - 1 - 1
	From Ejipura junction towards Domlur	1	1	118.62	16.00	0.25	474.48		
	Up Ramp	1	1	164.75	5.50	0.25	226.53		12 TO T
	Down Ramp	i le	1	169.21	5.50	0.25	232.66		CONTRACTOR STATE AND ADDRESS.
	APPLA I						1703.52		_
-	A PARTY -					Say	1704.00		1805354.0
de la	The state of the second		(AV) - (3						10000040
5.12	KSRRB M500-6. Providing and applying Primer coat with bitumen emulsion on prepared surface of granular base including clearing of road surface and spraying primer	Sqm						**	
7	at the rate of 0.6kg/sqm using mechanical means complete as per specification. MoRT&H Specification No.502			/					
	(P.No.172, I.No.21.6 of PW,P&IWTD S.R 201	2-13)		10,758	on Language				
	From Kendřiýa sadana towards Ejipura		2	192,46	7.50		2886.90		95 - 173-6
	From Ejipura junction towards Domlur		2	118.62	7.50		1779.30	1	HILAD I
11	Up Ramp		1	164.75	5.50		906.13		-11 -1111
	Down Ramp		1	169.21	5.50	-	930.66		
							6502.98	/_	
					- 1	Say		1 1000	
		1	1	1		Day	6503.00	42.83	278542.0



SI.	Description of Work	Unit	No.	Length	Breadth	Depth		Rate in	Service Its
No.	La constitución de la constituci	0.00000	140.	m	m	m	Quantit	Rs.	Amount in I
6.13	KSRRB 500-8. Providing and applying tack coat on granular surface treated with primer at 3.0 kg per 10 sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface including cost of all materials, labour, HOM of machineries complete as per specifications, MORT&H Chapter 5					•	Tal.		
	(P.No.173 I.No.21.8 of PW,P & IWTD SR of	2012-13	1			-			
	From Kendriya sadana towards Ejipura	1012-10	2	192.46	7.50		2000		
	From Ejipura junction towards Domlur		2	118.62	7.50		2886.9		200
	Up Ramp		1	164.75	5.50		1779.3		
	Down Ramp		1	169.21	5.50		906.1		
	Search Section 1		-	103.41	5,50		930.6		A second of
							6502.9		
6.14	KSRRB 500-11 Providing and laying	Cum		1 :		Say	6503.0	0 20.76	134987.
	bituminous macadam on prepared surface with crushed coarse aggregates as per design mix formula for base / binding course including loading of aggregaters with F. E.	-							32 pr 3
	loader, hot mixing of stone aggregates and bitumen in hot mix plant 40 tonne capacity, transporting the mixed material in tipper to paver and laying mixed materials with paver finisher to the required level and	•							
	grade, rolling by power roller to acheive the deisred density. 50 / 75 mm compacted thickness with 3.3% bitumen but excluding cost of primer / tack coat with lead upto 1km including cost of all materials, labour, HOM of machineries complete as perspecifications. MoRT&H Chapter 5 with 60 /								
	70 grade bitumen		-	eschiper com-	1 100 - 100	00036			
-	(P.No.173 I.No. 21.11.2 of PW,P&IWTD S.R 20 From Kendriya sadana towards Ejipura	012-13)		Andrew Co.	234	11/4			1 - 334.00
-	From Ejipura junction towards Domlur		2	192.46	7.50	0.05	144,35		1.4-
	Up Ramp		2	118.62	7.50	0.05	88.97	10 A 10 A	Again to the
	Down Ramp	12.15.70	T	164.75	5.50	0.05	45.31	1	
	Down Ramp		1	169.21	5.50	0.05	46.53	(	O BUT OF
2.11	A CAN THE STATE OF	5	1.26 1+1	a color of co	and the second	or clay	325.15		and to a second that is may all
-				are a spile	West of Action	Say	326.00	6455.69	2104855.0
15 1	KSRRB M500-7 Providing and applying S				3. 25 1 7				
1	ack coat on the prepared black topped surfaces at 2.5kg per 10sqm, heating	Sqm						F	A Company of Company o
i	excluding cleaning of road surface) ncluding cost of all materials, labour, HOM f machineries complete as per pecifications MORTh Chapter 5						-1	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	
	P.No.173 I.No.21.7 of PW,P & IWTD SR of 201	2.12\	-					Santa de la constitución	1.00
	rom Kendriya sadana towards Ejipura	2-10)	2	100 40	7.50		2015	1	A Company
F	rom Ejipura junction towards Domlur			192.46	7.50	-	2886.90		the Second Physics of
	Ip Ramp		2	118.62	7.50		1779.30		Terror Programme
	own Ramp		1	164.75	5.50		906.13		2.10
			1	169.21	5.50		930.66	/	
			-						
							6502.98		



	Description of Work	TT		Length	Breadth	Depth			Established States
No.		Unit	No.	m	m	m	Quantity	Rate in Rs.	Amount in R
6.16	KSRRB M500-17. Providing and laying	Cum	11-1-1-	100				1	
	dense graded bituminous macadam	- 1	. 1	46.70		1	1	1	J
	with 100-120 TPH batch type HMP			1			İ	1	
	producing an average output of 75 tonnes	- 1					Ī		
	per hour using crushed aggregates of				i				
	specified grading, premixed with	esso se k	oranie de c	+			- x - x		
	bituminous binder at 4.0 to 4.5% by weight	- 1							
	of total mix and filler, transporting the hot			10.5	9 1				
40,0110-18	mix to work site, laying with hydrostatic		er community of	A STATE OF THE PARTY OF	region of			1	
	paver finisher with sensor control to the	- 1	8.5				98	1 - 1	
	required grade, level and alignment, rolling	- 1							- C Asid
	with smooth wheeled, vibratory and tandem				9	1.5			
	rollers to achieve the desired compaction as			1 1					
	per MoRT&H specification clause No. 500.7			1 2					
		- 1	- 1			1			
		1	2 4					56.	3 - 11 - 17 1 1 1 1
	specifications. Bitumen 60/70 MoRT&H	1			1	i			
d	Specification No. 507	- 1			- 1	1		i	
	(P.No. 174 I.No.21.19.2 of PW,P&IWTD S.R 2	012-13	):	-1					l sa tala
	From Kendriya sadana towards Ejipura		2	192.46	. 7.50	0.05	144.05		A NOTE OF STREET
	From Ejipura junction towards Domlur		2	118.62	7.50		144.35	5	
	Up Ramp		1	. 164.75		0.05	88.97		
	Down Ramp		1	-	5.50	0.05	45.31		
			1	169.21	5.50	0.05	46.53		MAN SERVICE
- 1		-+		12.21		43)	325.15		S. W. L. Wall
				1100 110		Say	326.00	9183.46	2993807.00
1	Surfaces at 25kg ner 10ccm booting		A Total Street, Street	A STATE OF THE PARTY OF THE PAR		7 5 6 7 7 7			
- 11	surfaces at 2.5kg per 10sqm, heating bitumen in boiler fitted with spray set								
	bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per			m steep verse					a kada ada san jarah da
1	bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications MORTh Chapter 5		o zwie wy	er i stan Varra					a wall all the second of
	bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications MORTh Chapter 5  P.No.173 I.No.21.7 of PW,P & IWTD SR of 201	2-13)		on information					
1	bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications MORTh Chapter 5  P.No.173 I.No.21.7 of PW.P & IWTD SR of 2016 from Kendriya sadana towards Ejipura	2-13)	2	192.46	7.50		2896 00 /		
	bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications MORTh Chapter 5  P.No.173 I.No.21.7 of PW.P & IWTD SR of 2017 of From Kendriya sadana towards Ejipura  From Ejipura junction towards Domlur		2 2		7.50	1	2886.90		
;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;	bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications MORTh Chapter 5  P.No.173 I.No.21.7 of PW,P & IWTD SR of 201 From Kendriya sadana towards Ejipura From Ejipura junction towards Domlur  Jp Ramp	0	2	118.62	7.50	7	1779.30		
	bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications MORTh Chapter 5  P.No.173 I.No.21.7 of PW.P & IWTD SR of 2017 of From Kendriya sadana towards Ejipura  From Ejipura junction towards Domlur	0	2.	118.62 164.75	7.50 5.50	7 m / 7 m /	1779.30 906.13		
	bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications MORTh Chapter 5  P.No.173 I.No.21.7 of PW,P & IWTD SR of 201 From Kendriya sadana towards Ejipura From Ejipura junction towards Domlur  Jp Ramp	0	2	118.62	7.50	7 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	1779.30 / 906.13 / 930.66 /		
;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;	bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications MORTh Chapter 5  P.No.173 I.No.21.7 of PW,P & IWTD SR of 2016 From Kendriya sadana towards Ejipura From Ejipura junction towards Domlur  Jp Ramp	0	2.	118.62 164.75	7.50 5.50	2 - A7	1779.30 / 906.13 / 930.66 / 6502.98 /		
	bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications MORTh Chapter 5  P.No.173 I.No.21.7 of PW,P & IWTD SR of 2016 From Kendriya sadana towards Ejipura From Ejipura junction towards Domlur  Jp Ramp	0	2.	118.62 164.75	7.50 5.50	7 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	1779.30 / 906.13 / 930.66 /		111318.00
	bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications MORTh Chapter 5  P.No.173 I.No.21.7 of PW,P & IWTD SR of 201  From Kendriya sadana towards Ejipura  From Ejipura junction towards Domlur  Jp Ramp  Down Ramp		2.	118.62 164.75	7.50 5.50	2 - A7	1779.30 / 906.13 / 930.66 / 6502.98 /		111318.00
18 B b	bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications MORTh Chapter 5  P.No.173 I.No.21.7 of PW.P & IWTD SR of 201  From Kendriya sadana towards Ejipura  From Ejipura junction towards Domlur  Jp Ramp  Down Ramp  CSRRB M500-19. Providing and laying Contuminous concrete 40 mm thick with		2.	118.62 164.75	7.50 5.50	2 - A7	906.13 / 930.66 / 6502.98 / 6503.00		111318.00
((	bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications MORTh Chapter 5  P.No.173 I.No.21.7 of PW.P & IWTD SR of 201  From Kendriya sadana towards Ejipura  From Ejipura junction towards Domlur  Jp Ramp  Down Ramp  CSRRB M500-19. Providing and laying Continuous concrete 40 mm thick with 00 - 120 TPH batch type hot mix plant		2.	118.62 164.75	7.50 5.50	2 - A7	906.13 / 930.66 / 6502.98 / 6503.00	17.12	111318.00
(	bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications MORTh Chapter 5  P.No.173 I.No.21.7 of PW.P & IWTD SR of 201  From Kendriya sadana towards Ejipura  From Ejipura junction towards Domlur  Jp Ramp  Down Ramp  CSRRB M500-19. Providing and laying continuous concrete 40 mm thick with 00 - 120 TPH batch type hot mix plant roducing an average output of 75 tonnes		2.	118.62 164.75	7.50 5.50	2 - A7	906.13 / 930.66 / 6502.98 / 6503.00	17.12	111318.00
118 K b 1 1 p p p	bitumen in boiler fitted with spray set excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications MORTh Chapter 5  P.No.173 I.No.21.7 of PW.P & IWTD SR of 201  From Kendriya sadana towards Ejipura  From Ejipura junction towards Domlur  Jp Ramp  Down Ramp  CSRRB M500-19. Providing and laying Cituminous concrete 40 mm thick with 00 - 120 TPH batch type hot mix plant roducing an average output of 75 tonnesser hour using crushed aggregates of		2.	118.62 164.75	7.50 5.50	2 - A7	906.13 / 930.66 / 6502.98 / 6503.00	17.12	111318.00
11 I I I I I I I I I I I I I I I I I I	bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications MORTh Chapter 5  P.No.173 I.No.21.7 of PW.P & IWTD SR of 201  From Kendriya sadana towards Ejipura  From Ejipura junction towards Domlur  Jp Ramp  Down Ramp  CSRRB M500-19. Providing and laying continuous concrete 40 mm thick with 00 - 120 TPH batch type hot mix plant roducing an average output of 75 tonnesser hour using crushed aggregates of pecified grading, premixed with		2.	118.62 164.75	7.50 5.50	2 - A7	906.13 / 930.66 / 6502.98 / 6503.00	17.12	111318.00
18 F b 1 1 P P P S S b b b b b b b b b b b b b b b	bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications MORTh Chapter 5  P.No.173 I.No.21.7 of PW.P & IWTD SR of 201  From Kendriya sadana towards Ejipura  From Ejipura junction towards Domlur  Jp Ramp  Down Ramp  CSRRB M500-19. Providing and laying clituminous concrete 40 mm thick with 00 - 120 TPH batch type hot mix plant roducing an average output of 75 tonnes er hour using crushed aggregates of pecified grading, premixed with ituminous binder at 5.4 to 5.6% of mix and		2.	118.62 164.75	7.50 5.50	2 - A7	906.13 / 930.66 / 6502.98 / 6503.00	17.12	111318.00
118 K b b 11 p p p s s b b f f f	bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as perspecifications MORTh Chapter 5 P.No.173 I.No.21.7 of PW.P & IWTD SR of 201 From Kendriya sadana towards Ejipura From Ejipura junction towards Domlur Jp Ramp Down Ramp  CSRRB M500-19. Providing and laying continuous concrete 40 mm thick with 00 - 120 TPH batch type hot mix plant roducing an average output of 75 tonnesser hour using crushed aggregates of pecified grading, premixed with ituminous binder at 5.4 to 5.6% of mix and liler, transporting the hot mix to work site.		2.	118.62 164.75	7.50 5.50	2 - A7	906.13 / 930.66 / 6502.98 / 6503.00	17.12	111318.00
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18 F b 1 1 p p p s s b 6 f i la w	excluding cleaning of road surface) (excluding cleaning of road surface) (excluding cost of all materials, labour, HOM of machineries complete as perspecifications MORTh Chapter 5  P.No.173 I.No.21.7 of PW.P & IWTD SR of 2016 From Kendriya sadana towards Ejipura From Ejipura junction towards Domlur  Jp Ramp  Down Ramp  CSRRB M500-19. Providing and laying Continuous concrete 40 mm thick with 00 - 120 TPH batch type hot mix plant roducing an average output of 75 tonnesser hour using crushed aggregates of pecified grading, premixed with ituminous binder at 5.4 to 5.6% of mix and liler, transporting the hot mix to work site, tying with a hydrostatic paver finisher ith sensor control to the required grade.		2.	118.62 164.75	7.50 5.50	2 - A7	906.13 / 930.66 / 6502.98 / 6503.00	17.12	111218.00
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I I I I I I I I I I I I I I I I I I I	bitumen in boiler fitted with spray set excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications MORTh Chapter 5 P.No.173 I.No.21.7 of PW.P & IWTD SR of 201 From Kendriya sadana towards Ejipura From Ejipura junction towards Domlur  Jp Ramp Down Ramp  CSRRB M500-19. Providing and laying Cituminous concrete 40 mm thick with 00 - 120 TPH batch type hot mix plant roducing an average output of 75 tonnes er hour using crushed aggregates of pecified grading, premixed with ituminous binder at 5.4 to 5.6% of mix and liler, transporting the hot mix to work site, tying with a hydrostatic paver finisher ith sensor control to the required grade, wel and alignment, rolling with smooth heeled, vibratory and tandem rollers to the chieve the desired compaction as per or or the control of the required grade.  The control of the required grade, well and alignment, rolling with smooth heeled, vibratory and tandem rollers to the chieve the desired compaction as per or or the control of the required grade.		2.	118.62 164.75	7.50 5.50	2 - A7	906.13 / 930.66 / 6502.98 / 6503.00	17.12	111318.00
Il8 K b la la la la la la la la la la la la la	bitumen in boiler fitted with spray set excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications MORTh Chapter 5 P.No.173 I.No.21.7 of PW.P & IWTD SR of 2016 from Kendriya sadana towards Ejipura From Ejipura junction towards Domlur  Jp Ramp Down Ramp  CSRRB M500-19. Providing and laying Cituminous concrete 40 mm thick with 00 - 120 TPH batch type hot mix plant roducing an average output of 75 tonness er hour using crushed aggregates of pecified grading, premixed with ituminous binder at 5.4 to 5.6% of mix and liler, transporting the hot mix to work site, tying with a hydrostatic paver finisher ith sensor control to the required grade, wel and alignment, rolling with smooth heeled, vibratory and tandem rollers to the desired compaction as per forted to all respects as per orted.		2.	118.62 164.75	7.50 5.50	2 - A7	906.13 / 930.66 / 6502.98 / 6503.00	17.12	111318.00
18 K b 11 pp pp ss b fin las we as a M M coo sp 500 600 600 600 600 600 600 600 600 600	bitumen in boiler fitted with spray set excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications MORTh Chapter 5 P.No.173 I.No.21.7 of PW.P & IWTD SR of 2018 from Kendriya sadana towards Ejipura from Ejipura junction towards Domlur  Jp Ramp Down Ramp  CSRRB M500-19. Providing and laying dituminous concrete 40 mm thick with 00 - 120 TPH batch type hot mix plant roducing an average output of 75 tonness er hour using crushed aggregates of pecified grading, premixed with ituminous binder at 5.4 to 5.6% of mix and ituminous binder at 5.4 to 5.6% of mix and ituminous binder at 5.4 to 5.6% of mix and ituminous binder at folion with the sensor control to the required grade, well and alignment, rolling with smooth heeled, vibratory and tandem rollers to the chieve the desired compaction as per oRT&H specification clause No. 500.9 mplete in all respects as per pecifications. MoRT&H Specification No. 19 with 6% Bitumen 60/70 grade using 40 - 19 HMP	um	2	118.62 164.75	7.50 5.50	2 - A7	906.13 / 930.66 / 6502.98 / 6503.00	17.12	111318.00
18 K b 1 1 p p p s s s b b f i l a w a c a c a M C c c c s p 5 0 6 0 (P	including cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications MORTh Chapter 5 P.No.173 I.No.21.7 of PW.P & IWTD SR of 2016 from Kendriya sadana towards Ejipura From Ejipura junction towards Domlur  Jp Ramp  Down Ramp  CSRRB M500-19. Providing and laying clituminous concrete 40 mm thick with 00 - 120 TPH batch type hot mix plant roducing an average output of 75 tonness er hour using crushed aggregates of pecified grading, premixed with ituminous binder at 5.4 to 5.6% of mix and iller, transporting the hot mix to work site, typing with a hydrostatic paver finisher ith sensor control to the required grade, wel and alignment, rolling with smooth heeled, vibratory and tandem rollers to the chieve the desired compaction as per oRT&H specification clause No. 500.9 mplete in all respects as per pecifications. MoRT&H Specification No. 19 with 6% Bitumen 60/70 grade using 40 - 10 HMP  No.176 of I.No.21.22.4 in PW.P&IWTD S.R 20	um	2	118.62 164.75 169.21	7.50 5.50 5.50	2 - A7	1779.30/ 906.13/ 930.66/ 6502.98/ 6503.00	17.12	111318.00
Il8 K b b Il pp p sign b b fin law was according to the control of	bitumen in boiler fitted with spray set excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications MORTh Chapter 5 P.No.173 I.No.21.7 of PW.P & IWTD SR of 2018 from Kendriya sadana towards Ejipura from Ejipura junction towards Domlur  Jp Ramp Down Ramp  CSRRB M500-19. Providing and laying dituminous concrete 40 mm thick with 00 - 120 TPH batch type hot mix plant roducing an average output of 75 tonness er hour using crushed aggregates of pecified grading, premixed with ituminous binder at 5.4 to 5.6% of mix and ituminous binder at 5.4 to 5.6% of mix and ituminous binder at 5.4 to 5.6% of mix and ituminous binder at folion with the sensor control to the required grade, well and alignment, rolling with smooth heeled, vibratory and tandem rollers to the chieve the desired compaction as per oRT&H specification clause No. 500.9 mplete in all respects as per pecifications. MoRT&H Specification No. 19 with 6% Bitumen 60/70 grade using 40 - 19 HMP	um	2	118.62 164.75	7.50 5.50 5.50	2 - A7	906.13 / 930.66 / 6502.98 / 6503.00	17.12	111318.00

क्रिक्ट स्थाय क्षेत्रका व्यवस्था क्षेत्रका व्यवस्था क्षेत्रका व्यवस्था क्षेत्रका व्यवस्था क्षेत्रका व्यवस्था क

Description of Work	- 1	Unit	No.	Length	Breadth	Depth		D-4 :	
Up Ramp		Onit	INO.	m	m	m	Quantity	Rate in Rs.	Amount in Rs
Down Ramp			1	164.75	5.50	0.04	36.25	/	
Samuel Company			1	169.21	5.50	0.04	37.23		
BEST FEET STATE OF THE STATE OF				1			260.12		*
Application (a) The second sec						Say		11177.44	29173114
RARRM M2700 -4. Providing fixing mild steel railing complete as per MoRT&H Spector, 1900, 1900	plete as per	m							291/81/4
(P.No. 252, I.No. 32.4 of PW, P &	WTD S.R 20	012 - 13	3)						
From Kendriya sadana towards	Ejipura		2	. 192.46		. :	384.92	-	
From Ejipura junction towards I Up Ramp	Domlur		2 .	118.62		1.1	237.24		
Down Ramp			2	164.75			329.50	-	
Salar Marian David		- 4	2	169.21			338.42		
NO KARRB M100-4.2. Haulage of n	antoniolo L. C						1290.08	3465.72	4471086.0
And stacking complete as per spe MaRT&H Chapter 1 Case-I: Surf	unloading ecifications. face Road								2271000.00
(P. No.141&148 of PW, P&IWTD	S.R 2012-13)					-			
Onty same as item no 6.01					1				
Per 20Km RS. 2.00 X 1.28 X 20 68,20)X1.08=122.47	= (52.00 +	•							
NAT CONTROL OF THE PARTY OF THE	<u>-</u>		1	3010.00			3010.00	122.47	368641.00
Miscellaneous & Rounding off							£7358		88554606.08
The grinding of the state of th		-		1 4 1		- 1	LADIE	552 91.	5893.94
			Tota	Cost of A	pproache	to be I	Elevated Co	weight and	88560000.00

zalgi.

Assistant Executive Engineer

Traffic Engineering Cell, Bruhath Bangalore Mahanagara Palike Bangalore - 560 062, Executive Engineer

Traffic Engineering Cell (Road Infra)
Bruhat Bangalore Mahanagara Palike
Bangalore - 560 002.

ದಾಖಲೆಯನ್ನು ಮಾಹಿತಿ ಹಕ್ಕು ಕಾಯ್ದೆ 2005ರ ಅಡಿಯಲ್ಲಿ ನೀಡಲಾಗಿದೆ

ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು ಯೋ-ಕೇ-2, ಬಿ.ಬಿ.ಎಂ.ಪಿ

Project: Proposed Construction of Elevated Corridor by integrating Ejipura Main Road - Inner Ring Road Junction, Sony World Junction and Kendriya Sadana Junction along 100ft. Inner Ring Road, Koramangala, Bangalore

Detai	led	Cost	Estimat	0

SI.	Description (SW.)	**	1	Length	Breadth	Depth	What was a street and a	Rate in	
No.	Description of Work	Unit	No.	m	m	m	Quantity	Rs.	Amount in Rs
	MEDIAN, KERB & COMPOUND								
7.01	Providing and fixing Pre cast solid concrete kerb stones made out of CC 1:2:4 and finished with CM 1:3 plastering and finishing cutting etc., complete Size 450 x 200 x 400 mm								
	(P.No.28, I.No.5,29.1 of PW,P&IWTD S.R 20	12-13)					****		
	For Road Side Kerb	. 1			7				
	LHS		1	2405.63		0.45	5346.00	1	
1	RHS	T	1	2405.63		0.45	5346.00		
	Battery limit					0110	0010.00	-	
	Towards Kendriya sadana	7	2	100.00		0.45	444.00		
-	Towards Domlur	1	2	100.00		0.45	444.00		
	Towards Hosur Road - Sarjapur Road Juction		2	100.00	27,71	0.45	444.00		
	Towards Sarjapur Road -Madiwala Road Juction		2	100.06		0.45	444.00	America	
	For Median Kerb	- 1	1 6		HI - 2 57	20 2 1	- 12	en il la la la la la la la la la la la la la	
	Battery limit						V. 1944 W	train miles	
	Towards Kendriya sadana	17.5	2	100,00		0.45	444.00		
	Towards Domlur		2	100.00		0.45		enst the second	
	Towards Hosur Road - Sarjapur Road Juction		2	100.00	-	0.45	444.00	У У	
	Towards Sarjapur Road -Madiwala Road Juction		2	100.00	TO ALLES TO BE THE REPORT OF T	0.45	444.00		
	Kerb between Pier below Flyover		2	2405.63		0.45	10692.00	the same of the same of the same of	,
1900	Deduct Cross Roads			Printer Street Street	- was in this	enstate !	24936.00	Line stantary	edecine and spice of
	7.770	-					Car Charles		Carried States
76	17th Main	Agit in	er. 1	11.00	10.0944.000	0.45		-	
	7th Cross	•	1 1	11.36		0.45			And the second of the second o
1	4th Cross	0	1	8.18		0.45	18.00	<b>✓</b>	
	Ch-1980		1	11.93	••	0.45	27.00	The state of the s	man i Marin contro
	Ch-2019		1	5.43 6.07	-	0.45	12.00		
20.775	Ch-2070		1	4.94	in and restaurant	0.45	13.00		Marie Carlotte Carlotte
$\overline{}$	Ch-2130	-	1		48.5	0.45	11.00	-	
	3rd Cross		1	2.28 4.61	-	0.45	5.00		
-	2nd Cross		1	5.13		0.45	10.00		200
-	1st Cross		1	3.34		0.45	11.00		Acceptance of the second
_	4th Cross		1	2.99		0.45	7.00		1 1 1 1 1 1 1
	Ch-2310		1	4.19	9/4	0.45	7.00	All and the second seco	
$\rightarrow$	RHS	,	1	4.13		0.43	9,00	0.00	
-	17th Main	-	1	7.03		0.45	4		
-	Ch-540		1	9.00		The second second second	16.00		A
_	Ch-600		1	9.80		0.45	20.00		
	Ch-630	-	1	9.31		0.45	21.00		
	Ch 690		1	10.21	10 No.	0.45	23.00		
_	Ch-780		1	10.35		0.45	23.00		-
	h-1080	33.	1	9.00		0.45	20.00		
	Ch-1530		1	9.90		0.45	22.00		
	Ch-1680	1 1	1	11.59		0.45	26.00		A Agreement
	Ch-1980	1	1	4.37		0.45	14 00	ರಿಲಿಯನ್ನು ಕ	A CONTRACTOR AND

-		EG	R.Y.L
. 15	8	339	52
30	5%		12
10.5	250	Sää	A.,
			314

SI.	Description of West	Unit	Nt.	Length	Breadth	Depth	0,,,,,,,,	Rate in	South to be the second
No.	Description of Work	Unit	No.	m	m	m	Quantity	Rs.	Amount in Rs
	Ch-2040		1	6.94		0.45	15.00	1	
	Ch-2130		1-	4.24		0.45	9.00		THE RESERVE A
	Ch-2190		1	6.36		0.45	14.00		
	Ch-2220		1.	4.53		0.45	10.00		
1	Ch-2250		1	12.38	٠	0.45	28.00	✓ .	
	Obligatory Cross Roads								
	Kendriya sadana Junction		2	40.00		0.45	178.00		- 4
	Kormangala BDA Complex		2	30.00	en in a real	0.45	133.00		
	Kormangala 5th Block		2	30.00		0.45	133.00		5.60 28 12
	Kormangala 60feet Road		2	30.00		0.45	133.00		(a-1
100	Kormangala 8th Main Road Junction		2	30.00		0.45	133.00	1	
	Sony World Junction		2	30.00		0.45	133.00	~	10
	At Ch-1950		2	28.15	-21	0.45	125.00		
	Ejipura Junction		2 .	50.00		0.45	222.00		
	Down Ramp Cross Roads							100	7.7 - 3.9 5.1
	At Ch-2-150		2	8.78		0.45	39.00	V	
	At Ch-2-203.31		2	8.88		0.45			
	Pier Protection		202	4.30		0.45	1930.00		
						4	3632.00		
-						1.6	21304.00	_	-
					- 99	Sav			6166230.0
	The second of the second					Duj		200.11	0100200.0
-	RE- CONSTRUCTION OF COMPOUND		- 0		1, ,	7,140			17 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
7.02	KSRB 2 - 2.1: Earthwork excavation for	Cum			100	100			
	foundation of buildings, culverts, water	V. =						0	6 6 7 7 mg
	supply, sanitary lines and electrical		and the	- in	er er 90 =	20	to the later of	s & incrue	Common or the common of
	conduits either in pits or in trenches		2		10				Table 5 Table
	1.5m.and above in width, in ordinary soil		- 920		8 1		472		to a larger
	not exceeding 1.5m in depth including			1000	374 X 111	1	vr = =		ey's and
	dressing the bottom and sides of pits and				270 1	5,57			
	trenches, stacking the excavated soil clear			i	1.5		M. T		
	from edges of excavation with lead upto 50				14.1			1257	
	m. after breaking of clods complete as per	27.7			184759				1 2 2 1 1
	specifications.	- 57				arab, er	Transfer of the	l sala se	Taran Salan da
	(P.No.5, I.No.2/3 of PW,P&IWTD S.R 2012-1	3)		-	100	,	-		
-	For Compound			1	· (4.67		Successive to		
	LHS			1	the set the set the				
70 4	Ch:100.00 to 450.00		1	. 350.00					5.11. • Santanion (4.5.) (4.11.)
-	Ch: 1974.50 to 2012.75		1	38.25	0.90		36.15	-	1000
nds .	Ch:2280.00 to 2670.00	-	1	390.00	A STATE OF THE PARTY OF THE PAR	A LANGE TO SELECT	368.55	The state of the s	
			1	7.7.7.7.7	100000	1110	11	-	1000
-	Ch:2400.00 to 2670.00			270.00	0.90	1.05	255.15	-	The state of the state of
	RHS Ch:0.00,00 to 450.00	-	1	450.00	0.90	1.05	425.25		CARLO DE LA CAR
1000		17.77	Can I am	-				/	Tarket All Control
1200	Ch: 1980.00 to 2130.00			150.00			141.75		The state of the s
	Ch:2280.00 to 2700.00	-	1	420.00	0.90	1.05	396.90		
_				+-+		C	1954.50	-	2000000
		0		-		Say	1955.00	135.00	263925.0
7.03	KSRB 4-1.3: Providing and laying in								
	position plain cement concrete of mix			1.	100				3 10 145
	M7.5 with OPC Cement @180kgs, with 40mm and down size graded granite metal					300			
- 13	coarse aggregates @ 0.85cum and fine						150 5		
	aggregates @0.57cum machine mixed,		- A.	1 10	of the of				
	machine mixed, concrete laid in layers not		1		- 2		•	11	
	exceeding 15cms thick, well compacted, in							1	
	foundation and plinth, including cost of all								
	materials, labour, HOM_of machinery,			1 2 3					
	curing complete as per specifications.								
18	Specification No. KBS 4.1, 4.2								
	(P.No.12, I.No.4.3 of PW, P&IWTD S.R 2012-	12)	7	1	1014141	200		113	100
		10)	F (5)	-	-	-			
-	For Compound bed			20			- E -	200	

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ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು 2

Sl.	Description of Work	Unit	No.	C. The Control of the	Breadth		Quantity	Rate in	
No.	Later to the second second		- 8	m	m	m		Rs.	Amount in R
	Ch:100.00 to 450.00		1	350.00	0.90	0.15	47.25	1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	Ch:1974.50 to 2012.75		1	38.25	0.90	0.15	5.16		
	Ch:2280,00 to 2670.00		1	390.00	0.90	0.15			
	Ch:2400.00 to 2670.00		1	270.00	0.90	0.15	36.45		
-	RHS								
1	Ch:0.00.00 to 450.00			450.00	0.90	0.15	60.75		
-	Ch:1980.00 to 2130.00?		1	150.00	0.90	0.15	20.25		
	Ch:2280.00 to 2700.00		1	420.00	0.90	0.15	56.70		
				4			279.21		
						Say	280.00	3884.76	1087733.0
7.04	KSRB 5.2-3: Providing and Constructing	0	1	-					+91
1.04	granite / trap / basalt size stone masonry in	Cum							
	foundation with cement mortor 1:6,	374			1	- 1			
	stone hammered dressed in courses not less			1	i			7.0	
	than 20cms high, bond stones at 2m. apart		7 7 7			1	78	718	
	than 20cms high, bond stones at 2m. apart				i	ĺ			
	in each course including cost of materials,	- 1		1 1		i			
	labour, curing complete as per				1	i	- 3		
	specifications. Specification No. KBS 5.1.13.		4						
		-			1		***************************************		
311 42	(P.No.25, I.No.5.6 of PW, P&IWTD S.R 2012-	13)				-1			
	For compound					- 1			
-	LHS					-6			4.75
	Ch:100.00 to 450.00		- 1	350.00	0.75	0.225	59.06	/	ALL THE STREET
~ 8	Ch:1974.50 to 2012.75		1	38.25	0.75	0.225	6.45		4 F & 7 A T
	Ch:2280.00 to 2670.00		une Ir on	390.00	0.75	0.225			
	Ch:2400.00 to 2670.00		1	270.00	0.75		65.81		The state of the s
	RHS			270.00	0.75	0.225	45.56	P. R. S.	112 2
	Ch:0.00.00 to 450.00	-+		150.00		6.5			2 4
-	Ch:1980.00 to 2130.00		1	450.00	0.75	0.225	75.94		
TW-			1	150.00	0.75	0.225	25.31		a Mingray I
-	Ch:2280.00 to 2700.00	1.5	. 1	420.00	0.75	0.225	70.88	Comment	مادا وديون كاليوطونان سام
-	2nd footing		STIPSO.		(12		A STATE OF THE PARTY OF THE PAR		control of the state of
	LHS	1-1	1	1048.25	0.60	0.45	283.03	, with the same of	E SHOW
	RHS		- 1	1020.00	0.60	0.45	275.40	Committee House	145
11.5%	3rd footing	94	[24 (6 00)		3 7	or first and		_	
- 1	LHS		1	1048.25	0.45	0.225	106.14		
	RHS	anna a	and Lorein	1020.00	0.45	0.225	103.28	ALL ALLIA LANGUAGE	an veta-nulawayan dan dan
1	and the same of th			0.5			1116.86	_	
*-7	- Professional Contract Contra					Say	1117.00	2761.56	3084663.00
Ton You	The second of th	4 60 50		*********				2,01.00	0004003.00
7.05	KSRB 5.3-3: Providing and Constructing	Cum				-	-		1 1 1 1 1 1 1 1
1	granite / trap / basalt size stone masonry in					8 - 1			
10.2	basement with cement mortor 1:6, edges	100			State Library			12 mg	
18	of stones chistle dressed in courses not less		4 6 4				A 7		
-	than 15cms high, bond stones at 2m. apart								W. The same of the
	in each course including cost of materials.	. 1							
	labour, curing complete as per		20 3 7 5	/				3	7 10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	specifications. Specification No. KBS 5.1.13.		1		, 1				7 7
	and American Program of the control	_		and the contract					والمامة المساولة المامة والمساور والمامة
-	(P.No.26, I.No.5.9 of PW, P&IWTD S.R 2012-1	3)							
_	For compound	-	1			1			Selection of the second
-	LHS	1	1	1048.25	0.45	0.45	212.27		24 W. 24 V. + 1 - 1 - 1 - 1
- 1	RHS		1	1020.00	0.45	0.45	206.55		
							418.82	Salah Maraka	-
						Say	419.00	3223.80	1350772.00

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SI.	Description of Work	77-74	27	Length	Breadth	Depth	CENTRAL 2017	Rate in	1121117
No.		Unit	T.F.	m	m	m	Quantity	Rs.	Amount in Rs.
7.06	KSRB 4-1.6: Providing and laying in position plain cement concrete nominal mix M15 with cement @240kgs, with 20mm and down size graded granite metal coarse aggregates @ 0.878cum and fine aggregates @ 0.459cum, machine mixed, concrete laid in layers not exceeding 15 cms.thick well compacted in foundation.						-		
	plinth and cills, including cost of all materials, labour, HOM of machinery, curing complete as per specifications.							i.	
	Specification No.KBS 4.1,4.2   (P.No.12, I.No 4.6 of PW, P&IWTD S.R 2012-	13)		1				- T-	
	For Plinth at Basement Lvl	10)	. 0						
	LHS		1	1048.25	0.45	0.10	47.17	151	
-	RHS At Top Coping		1	1020.00	0.45	0.10	45.90		
	LHS			1040.05					
	RHS		1	1048.25	2.000	0.10	20.97		Ŷ.
			1	1020.00	0.20	0.10	134.44		a The silver
						Say	135.00		595381.00
						Jay	100.00	1408.04	999301.00
7.07	KSRB - 5.14: Providing and Constructing precast concrete solid blocks with compressive strength not less than 35 Kg/sqm with cement mortar 1:4 masonry (quoin, Jamb, closer blocks) with solid	Sqm						F. 5	
	concrete blocks of size 40x20x20cms conforming to I.S:2185/1965 in superstructure including cost of materials, labour charges, scaffolding, curing complete as per specifications.		10 mm			•			
	(P.No.27, I.No 5.27 of PW, P&IWTD S.R 2012) For compound	-		44		2.77	Pri Tari		104 St 4 10 SW
	LHS		-	1040.05				/	A STATE OF THE STATE OF THE
-	RHS		1	1048.25		2.00	2096.50		
				1020.00		2.00	2040.00	-	
-100	And the second s	Ser Late	Children St. 1	oma e ment		Say	4137.00	696.60	2881834.00
100	WODD IF I B I W W								14.64.1
	KSRB 15.1-1: Providing flush pointing to square rubble, course or uncoursed stone masonry with cement mortar 1:3, 20mm deep, after raking joints to depth of 20mm nicely lining, including cost of materials, labour, curing complete as per specifications.	Sqm							
	(P.No.120, I.No.15.1 of PW, P&IWTD S.R 2012	12)					•	20	B
	For Basement	-10)			7.70			-	
	LHS		1 .	1048.25	0.45	· .	.471.71		1
	RHS		1	1020.00	0.45		459.00		7
-	ANTE						930.71		
	1.0 165/6	-	1			Say	931.00	71.69	66462.00
.09	KSRB - 15-3.7: Providing 18mm thick S	an			-			in a property	A STATE OF THE PARTY OF
1	cement plaster in single coat with the permetter of the plaster in single coat with the cement mortor 1:6, to brick masonry including rounding off corners wherever required smooth rendering, providing and removing scaffolding, including cost of materials, labour, curing complete as per precifications.	qm	341		Transmission of the state of th			military manifestation and management of the second	
							- Francis	ක්ක්, සායි පයිරාවූ	ತಿ ಹಪ್ಪ ಕಾಯ್ದ 2 ನೀಡಲಾಗಿದೆ
								5.4	

ರಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು ಯೋ-ನೇ-1, ಬಿ.ಬಿ.ಎಂ.ಫಿ.ಟ್

Sl.			1000	Length	Breadth	Depth	Array Array and	Rate in	Service Visit House
No.	Description of Work	Unit	No.	m	m	m	Quantity	Rs.	Amount in Rs.
	(P.No.121, I.No.15.17 of PW,P&IWTD S.R 201	2-13)	-	C. STORY		- 53		1 2 1 X A 1 4	
	LHS		1	1048.25		4.25	4455.06	/	part Ellin Transition
4 1	RHS		1	1020.00		• 4.25	4335.00		
				·			8790.06		
			11			Sav	8791.00	147.66	1300/16.0
-	- 1487, GE 2							21,100	1000,10.0
7.10	KSRB 2.3: Filling available Excavated	Cum.						12.7	
	Earth (excluding rock) in sides of				and the state of	0.00	Contract Contract		e - Ann autem
	foundations upto plinth in layers not					1			
5- I	exceeding 20cms in depth, compacting each	- 1			M. 15.	1- 3-			
	deposited layer by raming after watering						444.445.0		
	with lead upto 50m and lift upto 1.5m			100 11			A.	1 total 1	
	including cost of all labour complete as per			1 3 3	- E	a di	TY 15		
	specifications. Specification No.KBS 2.9						too sia	.54	
		- 1		2 4		0.0	- 20	-34-	
	(P.No.6, I.No.2.10 of PW, P&IWTD S.R 2012-	13)						4	
	For foundation	,	-				7		
	Same as Qty of Item No.3.02 - I.No.3.03 & 3.0	4		75.7		1	558.15		1
				1.32		Say	559.00	SUPPLIES OF BUILDING TO SUPPLIES	50712.0
						Say	334.UU	90.72	50712.0
7.11	KSRB 15-16.1: Providing and finishing external walls in two coats with waterproof cement paint of approved brand and shade to give and even shade after throughly brooming the surface to remove all dirt and loose powdered	Sqm		1. 7	- 0				
	material, free from mortar drops and other foreign matter cost of materials, labour, complete as per specifications. (with primer)	14.							
	(P.No.125, I.No.15.53.2 of PW,P&IWTD S.R 20	012-13	3)	- William Charles	eta personal de la colonia de la colonia de la colonia de la colonia de la colonia de la colonia de la colonia	Little in exclusive	ministra de la fina	Sp. Savigito Tip of Soci	William Company
4.5.	LHS	trail.	1	1048.25	F	4.25	4455.06	/	Mary and the best of
	RHS		1	1020.00	to a special re	4.25	4335.00		are the guarantees of
- (4)					i enigri mesu	147.745.19	8790.06	And the second second second second	
		- 1	200	11-12-11-11	********	Say	8791.00		588645.0
		- 1	Car in	4		6 75	Targardes.	-300	17436993.0
7.12	Miscellaneous and Rounding off	No. Own	THE PROPERTY OF THE PARTY OF	en men desi	and a special confidence of	r British et Latinish	- restaurantes	A SOURCE SERVICE SEC.	7:0
				The same of the sa				and Kerb	

and a

Assistant Executive Engineer

Traffic Eng. ering Cell,
Bruhath Bangalore idahanagara Palike
Bangalore - 560 002.

Executive Engineer

Traffic Engineering Cell (Road Infra) Bruhat Bangalore Mahanagara Palike Bangalore - 560 002.

> ದಾಖಲೆಯನ್ನು ಮಾಹಿತಿ ಹಕ್ಕು ಕಾಯ್ದೆ 2005ರ ಅಡಿಯಲ್ಲಿ ನೀಡಲಾಗಿದೆ

> > ್ರ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು ಯೋ-ಕೇ-2, ಬಿ.ಬಿ.ಎಂ.ಪಿ

Project: Proposed Construction of Elevated Corridor by integrating Ejipura Main Road - Inner Ring Road Junction, Sony World Junction and Kendriya Sadana Junction along 100ft. Inner Ring Road,

Koramangala, Bangalore

402.04.0	Electrical Works		1 1 1		
HI No.	Description of Work	Unit	Quantity	Rate in Rs.	Amount in Rs.
4,01	Supplying and fixing of Philips make Velocity street light fixtures suitable for 250 Watt metal hallide lamp SGP 338 I x HPI-T250 FG sea green, or equivalent with following parameters Housing made out of LM6 high pressure die cast recyclable aluminium alloy for sturdiness and excellent corrosion resistance the finish should be powder coated sea green housing for improved aesthetics and better environmental protection. The lamp compartment should consist of electrochemicsly anodized, high purity POT reflector with a soecifically designed ribbed profile for better uniformity and high spacing to mounting ratio, All electrical accessories such as energy efficient low loss open construction copper ballast with tw.130 deg., semi parallel ignitor and siemens EPCOS make power pafactor improvement capacitor should be provided prewored upto terminal block. All accessories are to be mounted toa removable gear plate for ease of maintenance. All electrical connections of the control gear module with the rest of the luminarie are click fix, foolproof and require use of no., tools.	74 1		AGS	
	Control gear compartment opens from top. Heat resistant toughned curved glass bowl for the lamp compartment, which is smaled replacement, is by opening the top compartment to ensure ingress protection of IP66 for the lamp compartment. Flexible optics to achieve optimum light distribution to suit different road and installetion parameter. Specially designed dual pole mounting arrangement bottom as well as lateral pole mounting suitable for mounting on pole dial., 42mm-70mm luminarie shall fully confirmed to safety norms according to IEC598/ENEC60598 make philips or GE.	Nos.	326.00	(12500.00) Rocte to appro	4075000.00
8,09	Pixing metal halide Street light fitting over existing pole / wall seiling including clamps, bolts, nuts and wiring using suitable sapacity wires complete (SR 2010 - 11) Page 28, Item 5.	Nos.	326.00	130.00	42380.00
4.00	Supplying and fixing telescopic M.S.bracket fabricated by using 0.5m length 4" dia telescopic M.S.pipe with 2" dia 1.5m long M.S.bracket all are welded with suitable angle using 6mm thick M.S.sheet, grip bolt & nuts as required suitable for 9 to 12 mtrs M.S.tubular pole or octogonal pole with necessary two coats of approved painting, with all other accessories etc complete				
n)	Double bracket 2 X 1.5 Mtr.Length (SR 2010-11) Page 28, Item	Nos.	163.00	1200.00	195600.00
1.04	Pahricating, supplying and erecting sawged tubular pole of height 9Mtr having three sections and providing two coats of red oxide paint and finished with two coats of enamaled paint of approved qualility and color and M.S.Base plate of suitable size welded at the bottom of the pole(as per IS) and 40mm dia GI/flexible PVC pipe of 1Mtr. length fitted to the heavy guage polycarbonate control box including 5way connector of size 167x125x82mm for 7.6M pole 200 x 160 x 98 mm for remaining length of pole with front opening cover, with locking arrangements and suitable sapaoity MCB/DP switch.				

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II. No.	Description of Work	Unit	Quantity	Rate in Rs.	Amount in Rs.
	The pole shall be erected n cement concrete work(1:2:4)including excavation and refilling of planting depth of the pole to the to the ground level and the coping CC shall be upto 0.6M above ground level as per 2713-7	7 T			
114, 1401.4	C) 10 Mtr (5.2Mtr Hb 139.7mm dia 4.85mm thick x 2.4 Mtr Hm, 114.3mm dia 4.50mm thick x 2 M Ht, 88.9mm dia 3.25mm thick as per IS 410 SP 29 (SR 2010-2011) Page 74 item 21 b	Nos.	163.00	17500.00	2852500.00
8.08	Supply , installation,testing & commissioning of outdoor type feeder piller board with TVM meter as per power distribution schematic diagram enclosed The rates shall include all necessary foundation & civil works (MKT Rate)	Nos.	11.00	80000.00 Rate to	) 880000.00 begat
8.06	Supplying, providing, testing and commissioning of 1.1 KV class	Mtrs	2500.00	25.00	62500.00
	single core 3/20mm stranded copper cable PVC insulated and sheathed for street lights from the control points located on pole supports at 2.0m above ground level complete and as directed by the Engineer in charge (SR 2010 - 11) Page 9, Item 20(I) (c)				
8,07	Supplying, providing, testing and commissioning of 50mm GI pipe at pole supports to enclose the UG cable etc., complete and as directed by the Engineer in charge including digging erection etc. (SR 2010 - 11) Page 70, Item 10(b).	Mtrs	652.00	260.00	169 <b>52</b> 0.00
4.08	Fabrication, Supplying and erection of 16Mtrs long polygon high mast of bottom dia 475mm and top dia 150mm with two telescopic sections having bottom piece 8.25Mtrs with 400 thick and top piece 8.25Mtrs with 3mm thick as per BSEN 10025 grade S 355 JO steel sheet plate for shaft suitab le to withstand a wind velocity of 180Km/Hr as per IS 875 part 3 (as per GA drawing).base plate having size 650mm dia 20mm thick with 8 NOS of foundation bolts M24 x 850mm long and connected accessories as per IS 2062.The mast shall be hot dip Galvanised as per BSEN ISO 1461 with an average 70 microns as per IS 2629,and welded as per BS 5135 single L - seam joint.the mast shall have 2 way head frame with 4 now. of 190mm die cast LM-6 pulleys, stainless steel axils, phosphors bearing bush press fitted with seperate guides for 2 runs of 6mm dia stainless steel wire rope and 5 Core 2.5 sqmm EPR insulated PCP sheathed trailing power cable all are housed iside the bottom shaft of mast with suitable locking 275x1000mm hinged door. The mast shall have power tool having 1.0HP, 415V, 50 Hz, 3 phases reversible				
	segments,2370mm dia with max load of 350Kgs carrying capacity as per IS 1239. The mast shall be errected on existing 1700mm depth of shallow shaft RCC footing. The mast shall be supplied with 3mm thick template, lightning arrestor of 1.2m lenght galvanised pipe with top arrow will be fitted at top of the head frame cover and GLS type aviation twin lamps fitting with wiring complete. (weight of the mast with accessories approximately 734Kgs) (SR 2010 - 11) Page 77, Item 27				
	(BR 2010-11) Page 77, Item no. 27(1).				
R)	Group A	Each	4.00	192000.00	768000.00

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PERSONAL MARIL

81. No	Description of Work		Uni	t Quantit	y Rate in	Amount in R
	Suppling high pressure 2 x 400 Watts Metal halide flood luminary suitable for use with high pressure metal halide I with integrated control gear. The fitting shall be non corrosive pressure die cast aluminium housing with toughened glass, copper content black/grey powder coated paint finish incluwiring, suitable to operate on 230/250Volts 50Hz supplied with 400 Watts HP metal halide lamps. (SR 2010 - 11) Page 20, I 14.VI.	amp high low ding			Rs.	
a)	Group A	_	Each	32.00	18700.00	
8.10	Flying helogon/wat-11 221 (gyr gy				10700.00	598400.0
19 - November 1	Fixing halogen/metal halide/SVL/IL flood light fitting over exist pole/wall/ceiling including clamps, bolts, nuts and wiring us suitable capacity wires complete. (SR 2010 - 11) Page 28, Item 5.		Each	64.00	130.00	8320.0
B.11	Supplying of L.T. Cables			2 . 4 1 1		
	Supplying of L.T.UG cable having alumining				10000	
Maran	cable with PVC outer sheathing 1.1 KV class (conforming to 1554)					
A)	3.5C x 50 Sqmm XLPE cable	N	Atrs.	2500.00	240.00	
#der	(SR 2010-11) page 69, Item 4(I)( g)	-	'		340.00	850000.00
b)	4C x 16 Sqmm XLPE cable		6	1 97 1	28.	
3.00	(SR 2010-11) page 69, Item 4(I)( d)	M	Itrs.	15000.00	150.00	2250000.00
Giren		+				
8.12	Laying of L.T. Underground cables	+	-			
1	Labour charges for laying of 1.1 KV class UG cable when supplied epartmentally / agency in existing trench GI pipe / stoneware pipe on wall / on pole as required	ed pe				
<b>a)</b> 3	3.5C x 50 Sqmm XLPE cable	M	trs.	2500.00		
0	SR 2010-11) page 69, Item 5(I)(b)	141		2500.00	11.00	27500.00
b) 4	C x 16 Sqmm XLPE cable				,	
STORY TO STORY	SR 2010-11) page 69, Item 5(I)(a)	Mt	trs.	15000.00	8.00	120000.00
		-				
13 E	nd Termination of above cables with glands crimping	g .·	$\pm$			
a) 3.	5C x 50 Sqmm XLPE cable (SR2010-2011)	1				
P	age 71 item 13(d) & page 74 item 20(i) (g)	No	os.	100.00	319.00	31900.00
1.	( UA of 550 50) - 21000	-	-			
) 40	X 16 Sqmm XLPE cable (SR2010-2011)	No	-	600.00		
PE	age 70, item 11 (a) & 74 item 20(f)	140	5.	600.007	112.00	67200.00
Stepenson	(56-4/14)=112.00		-			
20.00	applying and fixing L.T.cast iron pot heads suitable for 1.1KV ass UG Cable filled with necessary bitumen / insulating mpound with terminals, clamps, bolts, nut and washers etc.,					
50	sqmm (SR 2010-11) page 70, Item 10(e)	Nos	-	24.00		
		1408	-	34.00	413.00	14042.00
1000	gging of trench of 0.6 mtr deep x 0.50 mtr wide refilling the nch to the required ground level and consolidating etc., complete per civil SR KSRB 1-2, P-7)		2			
MORNING PROPERTY	soil(hard)					
-		Rmti	r   5	000.00	50.00	250000.00

機 @phsulanta

ದಾಖಲೆಯನ್ನು ಮಾಹಿತಿ ಹಕ್ಕು ಕಾಯ್ದೆ 2005ರ ಅಡಿಯಲ್ಲಿ ನೀಡಲಾಗಿದೆ ಕಾರ್ಯವಾಲಕ ಅಭಿಯಂತರರು ಯೋರ್ಕ್ನಿ-2, ಭಿ.ವಿ.ಎಂ. ನಿ

Sl. No.	Description of Work	Unit	Quantity	Rate in Rs.	Amount in Rs.
	(SR 2010 - 11) Page 70, Item 6(b)				1
8.16	EARTHING				
8.17	Supplying fixing, wiring earth electrode for grounding conduits, I.C.cutouts and other equipments on the meter board using 40mm dia 2.90 thick GI pipe 2.5 mtr long buried in a pit The pit should be filled with equal proportion of salt and charcoal 150mm alround the pipe to complete depth. The connection from the pipe to the conduit etc, is to be established through GI wire of size as oer ISI specification 7.3.3. of IS 732 using 12mm dia bolts, nuts, washers			- 8	
	and checknuts etc, the pipe shall have 16 through holes of 12.2mm dia. (SR 2010-11) page-68, and item-2	Nos.	12.00	3000.00	36000.00
8.18	Supply & laying following GI Flat / Wires as Earthing conductors from equipment to earth stations.				
	AND THE RESIDENCE AND A PROPERTY OF THE PROPER		/		
a)	25 x 6mm G.I.Flat (SR 2010-11)Page 68 and item 3 (a)	Mtrs.	1136.00	75.00	85200.00
			55		
b)	8 SWG G.I Wire (SR 2010-11) Page-75, item 23.I.(c)	Mtrs.	5000.00	20.00	100000.00
				11 2	
8.19	Miscellaneous	14.55		-h - 1	
	The second of th				
8.20	Supplying & laying of RCC Hume pipe of 150 mm dia.	Mtrs.	835.00	495.00	413325.00
		3			13897387.00
	Add Contengencies @ 3%		Wall Control		416921.61
			1-3		14314308.61
8.21	Miscellaneous & Rounding off		The best of the state of the st	to de aminimização por especial de	85691.39
		7	otal Amou	int in Rs.	14400000.00

Balys

Assistant Executive Engineer
Traffic Engineering Cell,

Bruhath Bangalore Mahanagara Palike Bangalore - 560 002. Executive Engineer

Traffic Engineering Cell (Road Infra)
Bruhat Bangalore Mahanagara Palike
Bangalore - 560 002.

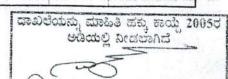
ಧಾಖಲೆಯನ್ನು ಮಾಹಿತಿ ಹಕ್ಕು ಕಾಯ್ದೆ 2005ರ ಅಡಿಯಲ್ಲಿ ನೀಡಲಾಗಿದೆ

> ಕಾರ್ಯಪಾ<del>ರಕ</del> ಅಭಿಯಂತರರು ನಿ ಯೋ-ಕೇ-2, ಬಿ.ಬಿ.ಎಂ.ಪಿ

Project: Proposed Construction of Elevated Corridor by integrating Ejipura Main Road - Inner Ring Road Junction, Sony World Junction and Kendriya Sadana Junction along 100ft. Inner Ring Road, Koramangala, Bangalore

#### Detailed Cost Estimate

SI.	Description of Worls	TY. 7.		Length	Breadth	Depth		Rate in	+
No.	Description of Work	Unit	No.	m	m	m	Quantity	Rs.	Amount in Rs
9.00	ROAD FURNITURE & OTHER WORKS	?				12.7			71 le 12-
9.01	KSRS M800 - 13. Road Marking with Hot Applied Thermoplastic Compound with			- 1	- Ja	3 14		-	
	Reflectrising Glass Beads on Bituminous			Total		1 1			
	Surface: - Providing and laying of hot	74.5		114	100	1			1. 1. 1.
	applied thermoplastic compound 2.5 mm		2.5					1.	
	thick including reflectorising glass beads at			1 : 1				1	
	250 gms per sqm area, thickness of 2.5mm							1	
	is exclusive of surface applied glass beads as			1 - 1	W . K	7.1			1,
	per IRC:35. The finished surface to be level,	6 0	6	1 1 1		100			
	uniform and free from streaks and holes								
	complete as per specifications. MoRT&H					. 10			
	Specification No. 803.		1	1 2	1	. 1			
	(P.No.194, I.No.24.15 of PW,P&IWTD 2012-			0.000	G C P I P Y	100 0 10		the first party	F 15 05
	On Flyover with Approach&Battery limit	t				*4		154	1000
	Centre Lane Marking line		2	1305.00	0.15	••	391.50		
	Edge line	-2.7	4	2610.00	0.15	and the second of all and a	1566.00	1	10 17 -0 1 1 10 - 10 miles
(c)	Directional arrows		10	5.00	0.90	•	45.00		
(4)	Up Ramp			120.53	\$6.5 miles				0.2
	Edge line Directional arrows		2	165.00	.0.15		49.50	-	
(e)			4	2.00	. 0.90	-	7.20	· .	
10	Down Ramp		-		and the same of	M. M. M. M. M. M. M. M. M. M. M. M. M. M			and the same of th
	Edge line Directional arrows	-	2	170.00	0.15	ale i 🕶	51.00	-	
(g)	On Surface	Saure -	4	2.00	0,90	Water Services	7.20		and the second of the second
(0)	Centre Lane Marking line(Both sides)		2	2210.01	0.13	+ 37	222		
STREET, SQUARE, SQUARE,	Edge line			2210.01	0.15		663.00		1. 10
(0)	LHS we make the control for a result in the control of the control	10 = 14 1 mm	2	2210.01	0.15	awar v mise	663.00	/	Live and the second second
-	PHC		2	2210.01	0.15				A
	Below Flyover			2210.01	U.15	-	663.00		4° V
7.00	Towrads Kendriya Sadana upto Ramp End	-	1	282.00	0.15	and the second	42.30		Transfer of America
	Towrads Domlur upto Ramp End		1	360.00	0.15	19 /10 x	54.00		
5, 7.	Below Viaduct		2	627.00	0.15		188.10	40000	189-11-288-171
(c)	Paved Pedestrain crossings	777		100	3/ 4/3/4		100.10	A A	
	Kendriya Sadana Junction		70	3.00	0,50	**	105.00		
	Koramangala BDA Complex Junction		45	3.00	0.50	7/4	67.50		
, T	Koramangala 5th Block Junction		27	3.00	0.50	-	40.50		
y j. e.	Koramangala 60 feet Road Junction		27	3.00	0.50	1	40.50		The state of the s
	Koramangala 8th Main Junction		33	3.00	0.50		49.50		- Norman community
	Sony world Junction		42	3.00	0.50		63.00		
	Ejipura Junction	- 7	39	3.00	0.50	10211-1	58.50	10 100	.,
(d)	Directional arrows		18	5.00	0.90	417 J. E.	81.00		Section of the second
44.5					A SEATT		4896.31		CAPTER STREET
						Say	4897.00	429.84	2104926.00
0.00	No UDDO 000 t Belode - 1	Carro				W.C. F	111111111111111111111111111111111111111		
9.02	No.KRBS 800.1.Painting two coats after filling the surface with synthetic enamel	pdm				AT.		4 10 1	
	paint in approved shades on new plastered	- 1							
	concrete surfaces, with materials, labour	- 1	1		4		7.71		~~
	complete as per specifications. Specification		1				1		
	MoRT&H Chapter 8					- 1	1 .	19.20	think me
							7		



SI.	Description of Work	Unit	No.	Length	Breadth	Depth	Quantity	Rate in	Amount in Rs
No.				m ·	- m	m			
-	(P.No.192, I.No.24.1 of PW,P&IWTD S.R 20	12-13)						1 1 1 1 1	
	For Kerb Painting		1						
	For Road Side Kerb and Median	T-	21304.00	0,45		0.35	3355.38		
	For Pier Protection	,	101	12.50		1.45	1830.63		-
		-		12.00		1.40	5186.01		
- 1	19/4/27	<del></del>				Say	5187.00		21222
8		-	<del>                                     </del>			Say	5187.00	46.76	242565
9.03	Road Delinators				-				PARAMETER PROPERTY.
	Supplying and Installation of delineators	Fach							
	(road way indicators, hazard markers, object markers), 80 - 100 cm high above ground level, painted black and white in 15 cm wide strips, fitted with 80 x 100 mm rectangular or 75 mm dia circular							3	
	reflectorised panels at the top, buried or pressed into the ground and conforming to IRC - 79 and the drawings complete as per specifications. MoRT&H Specification No. 805.								
	(P.No.195, I.No.24.19 of PW,P&IWTD SR 20	12-13)		1					1. 1. 1. 1.
197	For Every 5m interval			4.50	e fa e o	11	4.1	_	
	On Flyover		522		· · · · ·		522	at the state	The second second
	On Surface Road		442.002	-237/4-21	W. Sicer	4	442		A SECTION OF
				0		10.00	964	363.96	350858
8-1		2	de alvies son de monte.	an allegania de la	and the same of th	Turni-L	ave de la	and the state of the state of	
9.04	Retro Reflectorised Traffic Signs		A. Committee					7.5	
	Providing and fixing of Retro-reflecterised cautionary, mandatory, informatory sign as per IRC:67 made of high intensity grade sheeting vide clause 800.1.3, fixed over Aluminium sheeting, 1.5 mm thick supported on a mild steel angle iron post 75mm x 75mm x 6mm firmly fixed to the ground by means of properly designed foundation with M15 grade cement concrete 45cm x 45cm x 60cm, 60cm below ground level as per approved drawing complete as per specifications. MoRT&H Specification	eti a		orginal to the second					
	(P.No.192, I.No.24.2 of PW,P&IWTD SR 201	2-13)	Carlo Carlo	A CONTRACTOR OF STREET	Action of the Contract of the	96.00 pt 11.120	Va. 1 - 1 1 1 - 14		
	60cm circular		9 1 1 1 1 1		y .		•		The second
		Each	52	Sulfation .	, -P	1527 - 10	52.00	6	Be-Unisher
		Each	52	16 16 Vet			52.00	200	The second
	Compulsary ahead or left turn	Each	52	filledesse of Profes		30	52.00	to Assistant	estational in the off
		Each	52	ar year) 💠	- 11 17-	apitani 🔐	52.00	- 1 (0.11)	Law of March
e)	No stopping sign board	Each	52	+			52.00	14.9 - 4.1	罗马 1000
			. 2.5				260.00	2933.28	762653.
				247, 24	1 5	- 1 34			STANT STAN
	90cm equilateral triangle						4		
		Each	28	7 - 0-		-1 1-	28.00		Mary Mary
b)	No Pedestrian crossing sign boards	Each	7		-	-	7.00		10 10 10 10 10 10 10 10 10 10 10 10 10 1
			1.			L = 13	35.00	3418.20	119631.
(iii)	Informatory sign boards						100		A SHOULD BE
		Each	25	-		-	25.00	4310.28	107757.
(a)	ocin men octagon	Dati	20				20.00	1010.60	101707

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SI.	Description of Work		10000	Length	Breadth	Depth	2.44. 11.40.	Rate in	eschales in
No.	Description of Work	Unit	No.	m	m	m	Quantity	Rs.	Amount in Rs
9.05	KSRRB M800 - 20. Tubular Steel Railing on Medium Weight Steel Channel (ISMC					l.			
	Series) 100 mm x 50mm: - Providing, fixing			1		•			
	and erecting 50 mm dia steel pipe railing in								
	3 rows duly painted on medium weight steel			1	-		et et so		
	channels (ISMC series) 100 mm x 50mm,			-					100
	1.2 metres high above ground, 2 m centre to centre, complete as per approved drawings			Annual Control of the			as a series		
	as per specifications. MoRT&H Specification		3 12	1.6					
	No. 808.				7.1				
	category desired								
	(P.No.195&196, I.No.24.24 of PW,P&IWTD	ZD 201	0 12)	1		-	4		
e for all the	For Footpath and between Pier below Flyove		1	9586.80			9586.80		
	To To Company and Secure 11 101 Selow 113000	-	-	5500.00		-		C NAME OF	
-				1			9586.80	1524.96	14619487.0
0.06	KSRRB M800 Road Markers / Road stud	Nos.							
	KSRRB M800 - 35. Providing and fixing of	10					1 .	2 1	1
	road stud 100 x 100 mm, die cast in			†					
	aluminium, resistant to corrosive effect of	9							
	salt and grit, fitted with lense reflectors, installed in concrete or asphlatic surface by								- 1
	drilling hole 30 mm upto a depth of 60mm						0.5		
	and bedded in a suitable bituminous grout					4-1			
1	or epoxy mortar, all as per BS: 873 part 4:					. 4			
entrus.	1973 complete as per specifications.	uda igg	in the street	46 ** * # * (0 * + · · · )	001701 (3	er er	The second	1.4 10 - 10 - 1	an Not
	(P.No.198, I.No.24.41 of PW,P&IWTD SR 201	2-13)		134 P 1 4 5 1	) 			1,04070	
	Spaced at Five meter interval	4.	Alaba ha san mina	• — · ·	alone lat		. 1 5 6	14477	11.00
	For Every 5m Interval	7	She'y	75				Ale Co	7
Anon	L=2610 X 6 = 15660m	1 5 July	material Secretary	erajerenser i v	esanguist as	- 380 11	V-15-1	territate a caretagion	1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -
. Do	No's =2610/5 = 1230*6 Rows	6	522	- 'L		120000	3132		
	on Surface	il tripe s	A salimation	Contractor delinares	rans and	A 112 11	A Property of the	or the adjustment for	consensate part of the part of
	L=2210*4=8840m					Acres		/	And a late
1	No's = 2210/5 = 976*6 Rows	6	976		-		5856	4	1-21-24
	Marian Parameter and Association and the Company	e marite	na számanan	Non-resource and a re-	samehatosa mai	se officions	8988	289.44	2601487.0
	100			2m 1 2 2		_			
9.07		Each	North Carlot		for the same	2 62	(1.490.0)	er on Sent Title	· · · · · · · · · · · · · · · · · · ·
entrant entrant	46. Positioning of a smart flagman with a yellow vest and a yellow cap and a red flag	-12	a allowed yes	erselavit "et		11 11 13 × 11		4	- 10 - 10 - 10 - 10 - 10 - 10 - 10 - 10
2.0	600 x 600 mm securely fastened to a staff 1							Section .	
	m in length for guiding the traffic complete			120 TV	gal Pilan		15-3		
× 3/1 -	as per specifications.		هدور به باداری در در در در در در در در در در در در در	7	en de la como	A. H.		* Vis-1-1	and the same and the
, The	(P.No.200, I.No.24.49 of PW,P&IWTD 2012-1	3)		N. P. A. S. A.	1. E 1. T 1.		75	Maria Car	
	Considering 5 Nos. per day for a period of 30months	6	4500	·		1,0 1	4500.00	263.52	1185840.00
0.08	Providing Over head Gantry	Ası	er Sub	2.00		-	2.00	1783000.00	3566000.0
	200 AC 8	1,000	imate					Telegrania.	
.09	Providing Cantilever Gantry		er Sub	4.00			4.00	276000.00	1104000.0
E		est	imate				4 7 . 4	in the land	
	M. n. d. n		1	77 1 143				Allen Men A	26765210.00
.10	Miscellaneous and Rounding off	LE TAL		Mr. Daylowille	Sand Sand		1 1 1 1	ALC: NO PORT	4790.00

Assistant Executive Engineer Traffic Engineering Cell,

Bruhath Bangalore Mahanagara Palike Bangalore - 560 002.

Executive Engineer

Traffic Engineering Cell (Road Infra) Bruhat Bangalore Mabanjagara Palikeಕಾಯ್ದೆ 2005ರ Bangalore - 5600002ಲ್ಲಿ ನೀಡಲಾಗಿದೆ

Project: Proposed Construction of Elevated Corridor by integrating Ejipura Main Road - Inner Ring Road Junction, Sony World Junction and Kendriya Sadana Junction along 100ft. Inner Ring Road, Koramangala, Bangalore

			1		4,000	ery talket ery a gerige trop	t		
	Over Head & Ca	antile	ever (	antry	Detailed	Estima	tion		
Sl.	Description of work	Unit	No.	Longth	Breadth	D 41	0	+ ,	1
No.		Onit	No.	m	m	m	Quantity	Rate in Rs.	Amount i
	OVER HEAD GANTRY OF SPAN 30M			order transfering	* 14 m 27 ht (1 m)	niminum ex	drivers, respective		
1	KSRRB M2100-2.1 Earthwork in excavation for foundation of structures as per drawing and technical specifications, including setting out, construction of shoring and bracing, removal of stumps and other	Cum	e E			1			
	deleterious matter, dressing of sides and bottom and backfilling with approved material complete as per specifications, B.Mechanical Means (i) Depth upto 3m MORTH Specification No.304				•				
	Add 10% extra for dewatering charges	$\neg \neg$	•	,			• • •		
Part of	(P.No.220, I.No.27.4 of PW, P&IWTD SR 2012-	13)		•					1 7 11
	Gantry	7	3	3.90	3.90	1.80	. 82.13		1372 Hg
				(A)		Say	. 82.50		3661.
2	KSRRB M2100-13 Plain cement concrete M15 with OPC cement @240kgs with 40mm and down size graded granite metal coarse aggregates @ 0.84cum and fine aggregates @0.56cum in open foundation complete as per Drawing and Technical Specifications A.PCC Grade M-15 MORTH Specification No. 1500, 1700 & 2100	ouii					dishark in a gr		
	(P.No.223, I.No.27.24 of PW, P&IWTD SR 201:	2-13)	o pare u	. 37-34-5	THE STATE OF THE S	pre-tational and	eed to be to be highered	Service of the service of	DALLY A LONG AND LABOUR
-1	Gantry	10)	3	3.90	3.90	0.10	4.56	/	rete in the second
-		31	1 5 1	(*	1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	Say	5.00	3892.32	19462.
	KSRRB M2100-14 Reinforced cement concrete M20 with OPC cement @300kgs, with 40mm and down size graded granite metal coarse aggregates @0.64cum and fine	Cum	paggara da						
ii ii	aggregates @ 0.43cum, with superplastisiser @3lts conforming to IS9103-1999 Reaffirmed- 2008, in Open foundation complete as per			Y	:				
	Drawing and Technical Specifications MORTH Specification No.1500,1700 & 2100								
	(P.No.223, I.No.27.25 of PW, P&IWTD SR 2012	-13)	1		7	1 - 10 2 C	1000	TOTAL TAX	
	Column footing		2	3.70	3.70	0.60	16.43	San Day	
	Kunnn Maaa Fa R					Say	16.50	4617.00	76181.0
	KSRRB M220-5.9 Design mix M20 with OPC cement @320kgs, with 20mm and down size graded granite metal coarse aggregates @0.69cum and fine aggregates @ 0.46cum, with superplastisiser @3lts conforming to IS9103-1999 Reaffirmed-2008. RCC Grade M-20 - i) upto 5m height.	Cum		-		-		ದಾಖಲೆಯನ	್ರ ಮಾಹಿತಿ ಹಕ್ಕು
-	(P.No.228, 1.No.28.7.9 of PW, P&IWTD SR 2012	-13)					- 1	0.00	ම්ಯಲ್ಲಿ ನೀಡಲ
- 11		-10)		i			1	ALC: NO.	
	Column upto GL	1	2	2.50	2.50	1.10	13.75		275

(

Sl.	Description of work	Unit	·No.	Length	Breadth	Depth	Quantity	Rate in	Amount
No.				. m	m	m		Rs.	Rs.
	CASTOCAL TO			-17		Say	14.00	5176.44	72470
5	KSRRB M2200-6 Supplying, fitting and placing TMT bar reinforcement in substructure complete as per drawing and Technical specifications complete as per specifications MORTH Specification No.1600 & 2200						•		
	(P.No.230, I.No.28.8 of PW, P& IWTD SR 2012	2-13)							
	Gantry		2						
-	Mat Reinforcement				Unit	t Wt/Rmt	C + MARK TANISH	ter or thorough	- No. 11 Avenue
7.	Main bar 25 nos 12mm dia	3	25	4.40	f	0.89			-
4.4	Distribution bar 25 nos 12mm dia	3	25	4.40		0.89			APPENDED TO ST
	Column pedestal .	10	1	1001	-		200110		
	Main bar 16 nos 16mm dia	3	16	4.50		1.58	341.28		
	Stirrups 8mm dia bar 200mm c/c		7,000				Art.		
	Vertical	3	27	7.40		0.394	236.16		
	Horizontal	3	9	7.40	·	0.394			
	Diagonal	3	9	6.70	34974	0.394			
			T	114	S	Sub Total	1314.84		
	Add 5% for Wastage				: • •		65.74		
0		d.		. 1		Total	1380.58	Kgs	de a mai
	The state of the s				Q	ty in MT	The second secon	68178.24	94128
6	Supplying, fabricating, erecting, and fixing in	MT	1		100				25 7 7
	position, inserts and embedments, Truss, clamps, brackets, insert plates and all miscellaneous steel works as shown in drawing and as directed by the Engineer at all depths, using MS angles, channels, steel beams, rails, tees, plates, flats, rounds squares etc., of various sizes and other structural section confirming IS 2062 grade A, medium class GI pipes etc., including straighting, cutting, fabricating, welding, bending to slope fixing to position, welding to insert plate embeded in concrete and inclusive of 2coats of enamel paint over one coat of metal primer. The rate quoted is to include the cost of all materials, labour, tools, tackets, cranes, devices and plants, wastage etc., as per specifications and drawings complete. Including cost of bolts, nuts, washers, clamps, welding, electrodes, and connections required for the work. Rate to include shims and packing peices etc., complete with all lead and lifts as directed by								
	the Engineer-in-charge;						1-175	5.45	
Š.	(Data Rate)	· · ·		i den.			7 - 3	4 -6 -65	
	Gantry	11			•		1 614.63	1 - 1 - 1	
+ +	Structural steel on pedestal				Unit	Wt/Rmt	10.35	- The Table 1	
	M S Base plate 20mm thick	- 1					1,565	7.38.7	
	3x2.5mx2.5mx0.02mx7850kg/cum = 2943.75	1					2943.75	_	
	Anchor bolt 25mm dia 16 nos 3.42 kg/No		3	16.00	.,	3.42	164.16	16.	
-	Stiffner plate 12mm thick 4 nos per each pedes	tal						11. 11.	
	Vertical Plate 3x4XZ.3mx0.4mx0.012mx7850kg/cum =		-	-		1	1039,97	2 3 10	et entre
	Stiffners	1				Pro A D	4	And the second second	The second second
	3x16X0.1mx0.3mx0.012mx7850kg/cum =	-				903/0	135.65	ಹೆಚ್ಚು ಕಾಯ್ದ	20050
_	Vertical structural sections					1	<del>- 200000  </del>	edund	
								The second secon	

NT.	Description of work	Unit	No.	Lengtl	Breadth	Depth	Quantity	E C C C C C C C C C C C C C C C C C C C	Amount
No.	A SAME AND A SAME AND		77%	m	m	m	2007	Rs.	Rs.
70	Horizontals	111111111111111111111111111111111111111	1 -19		E7 0439	4.118.44		1	
	ISA 65x65x6mm @5.8kg/m	3	16	2.00	0	5.80	556.80		400 100
1	Diagonal sections							12.7.1	
- 1	ISA 75x75x6mm @ 6.8kg/m	3	20	2.68	5	6.80	1081.20	1 1 1 1 1	
	Horizontal structural sections	1	4 -			. 10	- 2 to 2 to	10 to the same of	th Per II
	ISA 75x75x6mm @ 6.8kg/m	1	. 2	34.00	)	.6.80	462.40		
	ISMC 125x65x65mm @13:1kg/m	1	2	34.00	)	13.10	890.80	/	
	Vertical	2 -10			4	157171-1-			*** ********
	ISA 65x65x6mm @5.8kg/m	2	17	1.00	)	5.80	197.20	/	1.00
annie an	Horizontal			en and paint (himself a de de		a magnificant and	m delinding in the farm of	Acoustic Contract	SALE MANUSZAWI CERCO
	ISA 65x65x6mm @5.8kg/m	2	17	2.00		5.80	394.40	W.Y.	7.
1	Diagonal sections			1 200	1 2 1 4 7			200 (100) (100)	-1 1 1
4	Front & Back	2	34	2.24	1	6.80	1035.78		
100	Botom & Top	2	34	2.24	- 1,000	6.80	1035.78		Transport on
	Covering of truss	-4"		17 - 1	4.0	14.	SAT.	A	100
	Ms Plate 5mm thick @ 39.2 kg/Sqm			1.		1. 1			
	Тор	1	34	2.00		39.20	2665.60		
p	Gusset Plate		E		10 1 1 A	11011	6 8 3	1 2 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
-	A-type Vertical Joint	1		***	1,144	4		/	1
	3x20X0.3mx0.4mx0.008mx7850kg/cum =						452.16		5 77
	B-type Top Horizontal Joint		1 1			4.0	1.11	THE R AND	h - 1
	2x7X0.15mx0.15mx0.008mx7850 kg/cum =			- 1			19.78	C	Section 1
	C-type		477			11	e aleat	i,decalumb a	45-14
	2x3X0.30mx0.30mx0.008mx7850 kg/cum =				and the second second		33.91	-	Marie Marie de
	Sides			- 1 N	7 2 5		A household		1 111
	2x17X0.30mx0.30mx0.008mx7850kg/cum =	1. 1	- 2	4- 170	-1 -1 1 -1		197.17	Charles of the control of	
	The second secon			44	7 1 1 8	Total	14568.29	Kgs	The garden
			2.50		Qt	y in MT	14.57	contract of	North Africa
	gradien gewone de gewone betreek werden de de gradien de gewone de				128 801	Say	14.60	72000.00	1051200.
7	KSRRBM800-5.2. Providing and Erecting overhead signs with a corrosion resistant	Sqm						and all a man	
	2mm thick aluminium alloy sheet reflectorised with high intensity retro-		1 1	LYNOY as a section		i saran ne	arries of arrivate co	Les most traditions of	CLASSIC CONTRACTOR
4	reflective sheeting of encapsulated lense type				7 / / / /			1000	
NO F	with vertical & lateral clearance given in	mar n			The second of th	E/2			
	with vertical & lateral clearance given in clause 800.2.2 and 800.2.3 and installed as								and the second
	clause 800.2.2 and 800.2.3 and installed as						-44	19-10	
	clause 800.2.2 and 800.2.3 and installed as per cluse 800.2.7 over a designed support system of aluminium alloy or galvanised steel							2040	
NA 4	clause 800.2.2 and 800.2.3 and installed as per cluse 800.2.7 over a designed support system of aluminium alloy or galvanised steel trestles and trusses of sections and type as						*4	2 (3-4)	
	clause 800.2.2 and 800.2.3 and installed as per cluse 800.2.7 over a designed support system of aluminium alloy or galvanised steel trestles and trusses of sections and type as per structural design requirements and							. 1 de juli	and productions of species
	clause 800.2.2 and 800.2.3 and installed as per cluse 800.2.7 over a designed support system of aluminium alloy or galvanised steel trestles and trusses of sections and type as per structural design requirements and approved plans complete as per							1990	and grant the state of the stat
	clause 800.2.2 and 800.2.3 and installed as per cluse 800.2.7 over a designed support system of aluminium alloy or galvanised steel trestles and trusses of sections and type as per structural design requirements and approved plans complete as per specifications. B.Aluminium Alloy Plate for					Table 1		2000	
	clause 800.2.2 and 800.2.3 and installed as per cluse 800.2.7 over a designed support system of aluminium alloy or galvanised steel trestles and trueses of sections and type as per structural design requirements and approved plans complete as per specifications. B.Aluminium Alloy Plate for Over Head Sign MORTH Specification No.				·	Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Sa			
	clause 800.2.2 and 800.2.3 and installed as per cluse 800.2.7 over a designed support system of aluminium alloy or galvanised steel trestles and trusses of sections and type as per structural design requirements and approved plans complete as per specifications. B.Aluminium Alloy Plate for Over Head Sign MORTH Specification No. 802		÷			Salay - Ave			
	clause 800.2.2 and 800.2.3 and installed as per cluse 800.2.7 over a designed support system of aluminium alloy or galvanised steel trestles and trusses of sections and type as per structural design requirements and approved plans complete as per specifications. B.Aluminium Alloy Plate for Over Head Sign MORTH Specification No. 802  (P.No.193, I.No.24.6 of PW, P&IWTD SR 2012-		·						
	clause 800.2.2 and 800.2.3 and installed as per cluse 800.2.7 over a designed support system of aluminium alloy or galvanised steel trestles and trusses of sections and type as per structural design requirements and approved plans complete as per specifications. B.Aluminium Alloy Plate for Over Head Sign MORTH Specification No. 802  (P.No.193, I.No.24.6 of PW, P&IWTD SR 2012-Covering of truss								
	clause 800.2.2 and 800.2.3 and installed as per cluse 800.2.7 over a designed support system of aluminium alloy or galvanised steel trestles and trusses of sections and type as per structural design requirements and approved plans complete as per specifications. B.Aluminium Alloy Plate for Over Head Sign MORTH Specification No. 802  (P.No.193, I.No.24.6 of PW, P&IWTD SR 2012-		2	34.00		1.00	68.00		
	clause 800.2.2 and 800.2.3 and installed as per cluse 800.2.7 over a designed support system of aluminium alloy or galvanised steel trestles and trusses of sections and type as per structural design requirements and approved plans complete as per specifications. B.Aluminium Alloy Plate for Over Head Sign MORTH Specification No. 802  (P.No.193, I.No.24.6 of PW, P&IWTD SR 2012-Covering of truss		2	34.00	**	1.00	68.00 68.00	6534.06	444312.0
	clause 800.2.2 and 800.2.3 and installed as per cluse 800.2.7 over a designed support system of aluminium alloy or galvanised steel trestles and trusses of sections and type as per structural design requirements and approved plans complete as per specifications. B.Aluminium Alloy Plate for Over Head Sign MORTH Specification No. 802  (P.No.193, I.No.24.6 of PW, P&IWTD SR 2012-Covering of truss	13)	2	34.00	**	1.00		6534.00	444312.0
8 ]	clause 800.2.2 and 800.2.3 and installed as per cluse 800.2.7 over a designed support system of aluminium alloy or galvanised steel trestles and trusses of sections and type as per structural design requirements and approved plans complete as per specifications. B.Aluminium Alloy Plate for Over Head Sign MORTH Specification No. 802  (P.No.193, I.No.24.6 of PW, P&IWTD SR 2012-Covering of truss Top  KSRB 15.18.1: Applying red lead ready	13)	2	34.00		1.00		6534.06	444312.0
8 ]	clause 800.2.2 and 800.2.3 and installed as per cluse 800.2.7 over a designed support system of aluminium alloy or galvanised steel trestles and trusses of sections and type as per structural design requirements and approved plans complete as per specifications. B.Aluminium Alloy Plate for Over Head Sign MORTH Specification No. 802  (P.No.193, I.No.24.6 of PW, P&IWTD SR 2012-Covering of truss Top  KSRB 15.18.1: Applying red lead ready mix priming coat over new steel or other	13)	2	34.00		1.00		6534.06	444312.0
8	clause 800.2.2 and 800.2.3 and installed as per cluse 800.2.7 over a designed support system of aluminium alloy or galvanised steel trestles and trusses of sections and type as per structural design requirements and approved plans complete as per specifications. B.Aluminium Alloy Plate for Over Head Sign MORTH Specification No. 802  (P.No. 193, I.No. 24.6 of PW, P&IWTD SR 2012-Covering of truss Top  KSRB 15.18.1: Applying red lead ready mix priming coat over new steel or other metal surface including preparing the	13)	2	34.00		1.00	68.00		-
8 ]	clause 800.2.2 and 800.2.3 and installed as per cluse 800.2.7 over a designed support system of aluminium alloy or galvanised steel trestles and trusses of sections and type as per structural design requirements and approved plans complete as per specifications. B.Aluminium Alloy Plate for Over Head Sign MORTH Specification No. 802  (P.No. 193, I.No. 24.6 of PW, P&IWTD SR 2012-Covering of truss Top  KSRB 15.18.1: Applying red lead ready mix priming coat over new steel or other metal surface including preparing the surface after throughly cleaning oil, grease,	13)	2	34.00		1.00		್ಷ ಮಾಹಿತಿ ಈಕ	್ತ ಕಾಯ್ದೆ 200
8 ]	clause 800.2.2 and 800.2.3 and installed as per cluse 800.2.7 over a designed support system of aluminium alloy or galvanised steel trestles and trusses of sections and type as per structural design requirements and approved plans complete as per specifications. B.Aluminium Alloy Plate for Over Head Sign MORTH Specification No. 802  (P.No.193, I.No.24.6 of PW, P&IWTD SR 2012-Covering of truss  Top  KSRB 15.18.1: Applying red lead ready mix priming coat over new steel or other metal surface including preparing the surface after throughly cleaning oil, grease, dirt and othe foreign matter, and scoured	13)	2	34.00		1.00	68.00		್ತ ಕಾಯ್ದೆ 200
8 ]	clause 800.2.2 and 800.2.3 and installed as per cluse 800.2.7 over a designed support system of aluminium alloy or galvanised steel trestles and trusses of sections and type as per structural design requirements and approved plans complete as per specifications. B.Aluminium Alloy Plate for Over Head Sign MORTH Specification No. 802  (P.No. 193, I.No. 24.6 of PW, P&IWTD SR 2012-Covering of truss Top  KSRB 15.18.1: Applying red lead ready mix priming coat over new steel or other metal surface including preparing the surface after throughly cleaning oil, grease,	13)	2	34.00		1.00	68.00	್ಷ ಮಾಹಿತಿ ಈಕ	್ತ ಕಾಯ್ದೆ 200

SI.	Description of work	Unit	No.	Length	Breadth	Depth	Quantity	Rate in	Amount i
No.		1 7	10 ST	m	m	m		Rs.	Rs.
(Total	(P.No.128, I.No.15.73 of PW,P&IWTD SR 201	2-13)			and the same of the same		53.5093(4),754	2 163 WE	135-7-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-
	Gantry		12	2.00		8.70	. 208.80		
	Top Truss		2	30.00		1.00	60.00		
-			2	30.00		· 2.00	120.00	_	. 15
	Covering Truss		1		i				
	Ms Plate 5mm thick @ 39.2 kg/Sqm		1	30.00		2.00	60.00		
	l				<u> </u>		448.80	22.68	10179.
	KSRB 15.18.2: Providing and applying enamel metal paint two coats (Excluding priming coat) over new steel or other metal surface brushing to give an even shade after cleaning oil, grease, dirt and other foreign matter, including cost of materails, labour,								
-	complete as per specifications.		5			3	17		
	(P.No.128, I.No.15.74 of PW,P&IWTD SR 201	2-13)					14: "	_	
	Quantity same as Primer Coat						. 68.00	74.52	5067.
								- M. F. A.	
	KSRB 2.4: Refilling available excavated earth around pipe lines, cables in layers not exceeding 20cms in depth, compacting earth deposited layer by ramming after watering with lead upto 50m and lift upto 1.5m including cost of all labour complete as per specifications.			nongona Jakon					
	(P.No.6, I.No.2.11 of PW,P&IWTD SR 2012-13	0		LEWIS !	the state of	3 1	The second second		
	And the second s	,	CHI TAN				61.06	5400	2001
	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4			- the hours	and the state of	tuvi u e	01.00	54700	3294.
	KSRRB M100-4.1: Cost of Haulage including loading and unloading of stone Boulder / Stone aggregates / Sand /Kankar / Moorum KSRRB M100-1: Placing tipper at loading point, loading with front end loader, dumping, turning for return trip, excluding time for haulage and return trip complete as per specifications. MORTH Chapter 1	Cum	1 - month		St.		and during the second	two bases	
	conveying up to 20km by mechanical means.	2700	-	The state of the s	and the contract				manifest the comment
	(P.No.142&148 of PW,P&IWTD S.R 2012-13)						. 21.50	122.47	2633.0
	For 20Km Rs. 2.00 X 1.28 X 20 = (52.00 +	8 8.	182	12.0	4	4.1.	19040	122.11	2000.
	62.20)X1.08=122.47	103 4 101 101 101	·v						night by the 18 th 18 th 18 th
				1 1 1 1 1 1				12.00	1782585:1
12	Miscellaneous and Rounding off			57.1977	E			100	415.0
	CONTROL BY A SECTION OF A SECTION OF THE SECTION OF				/ Tota	l Cost of	Over head	Gantry	1783000.0
	CANTILEVER GANTRY		100000	verily said to	7 1				
1	KSRRB M2100-2.1 Earthwork in	Cum				The state of the s		in the same	
; ; ;	excavation for foundation of structures as per drawing and technical specifications, including setting out, construction of shoring and bracing, removal of stumps and other deleterious matter, dressing of sides and bottom and backfilling with approved material complete as per specifications, B.Mechanical Means (i) Depth upto 3m MORTH Specification No.304	1000					ದಾಖಕನ	మన్న దూమి అడియల్లి	ತಿ ಹಪ್ಪ ಕಾಯೆ ನೀಡಲಾಗಿದೆ '
			į-				A T	ಯ್ಯಪಾಲಕ	esponder of
	Add 10% extra for dewatering charges (P.No.221, I.No.27.4 of PW, P&IWTD SR 2012-	12)						CL-37-2	12,00,00,0
	Cantilever Gantry	13)	1	2.15	2.15	1.50	6.93		33.174
	Cantra ver Gantra v		1.1	6 100	. 10	1 011	60 61.78	0.855	

Sl.	Description of work	Unit	No.	Length	Breadth	Depth	Quantit	y Rate in	Amount
No.	The state of the s			m	m	m		Rs.	Rs.
2	KSRRB M2100-T3 Plain cement concrete M15 with OPC cement @240kgs with 40mm and down size graded granite metal coarse aggregates @ 0.84cum and fine aggregates @0.56cum in open foundation complete as per Drawing and Technical Specifications A.PCC Grade M-15 MORTH Specification No. 1500, 1700 & 2100								
	(P.No.223, I.No.27.24 of PW, P&IWTD SR 201	2-13)	3			14.1			
	Cantilever Gantry		1	2.15	2.15	0.10	0.4	/	1 4 ( 21 MIN 16) MADE ( 44)
	W To B			2.10	2.10	Say			1010
						. Say		3892,32	1946
3	KSRRB M2100-14 Reinforced cement concrete M20 with OPC cement @300kgs, with 40mm and down size graded granite metal coarse aggregates @0.64cum and fine aggregates @ 0.43cum, with superplastisiser @3lts conforming to IS9103-1999 Reaffirmed-	Cum					· #		
	2008, in Open foundation complete as per Drawing and Technical Specifications MORTH Specification No.1500,1700 & 2100		1						
	(P.No.223, I.No.27,25 of PW, P&IWTD SR 2012	2-13)	4-1		100	1 1 1	11. 12. 12.	1	1 1 1 1
	Column footing		1	1.95	1.95	0.40	1.52		77
	enter a company of the contract of the contrac		- 0-10 m		ACT OF ETAMENATURE T	Say		4617.00	9234.
-	KSRRB M220-5.9 Design mix M20 with OPC cement @320kgs, with 20mm and down size graded granite metal coarse aggregates @0.69cum and fine aggregates @ 0.46cum, with superplastisiser @3lts conforming to IS9103-1999 Reaffirmed-2008. RCC Grade M-20 - i) upto 5m height.	Jum		1. ali					
	(P.No.228, I.No.28.7.9 of PW, P&IWTD SR 2012	2-13)			State of the				100
	Column upto GL	20/	1	-0.60	0.60	1.00	0.36	1	
7	The second secon				0.00	Say		5176.44	
	1			77.5		Bay	0,50	5176.44	2588.0
	KSRRB M2200-6 Supplying, fitting and placing TMT bar reinforcement in substructure complete as per drawing and Technical specifications complete as per specifications MORTH Specification No.1600 & 2200	MT							and a Alexander
	(P.No.230, I.No.28.8 of PW, P& IWTD SR 2012-	13)							
	Mat Reinforcement	-0)		100	1				
-	Main bar 10 nos 10mm dia bar		10	2.40	1 . July 1		24.00		-659
_	$10x2.4 = 24.00 \times 0.62 \text{kg/m}$		10	2.10	10 Per 170 - 17		14.88	A CONTRACTOR OF THE PARTY OF TH	Date Sales on
	Distribution bar 10 nos 10mm dia bar		10	2.40			24.00	and the same of th	31.
	$10x2.4 = 24.00x \ 0.62 \text{kg/m}$						14.88	100	
	Column pedestal						14.00	**50	
1	Main bar 4 nos 16mmdia bar	1, 1	4	2.60			10.40		
- 14	$4x2.6 = 10.40 \times 1.57$ kg/m	14					16.33	Kos	
1	Main bar 4 nos 12mmdia bar	30	4	2.60			10.40		and the same of th
14	$1 \times 2.6 = 10.40 \times 0.89 \text{kg/m}$			11 -			9.26		The street of th
111770	Stirrups 10 nos 8mm dia bar		10	2.50			25.00		7 75 2 3 7 7
1	$0x2.5 = 25.00 \times 0.39$ kg/m		P +4)4(P			V-35 12	9.75	and the second s	· · · · · · · · · · · · · · · · · · ·
1			i i	ಖಲೆಯನು.	ಮಹಿತಿಹ	Total	200:65.09	Kgs	
		1			ිරාවූ වැන			68178.24	4438.00
		- 1			The state of the state of	ALL STREET			
		-			~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~	La Contract	- V.K.7	00110.247	1400.0

31.	Description of work	Unit	No.	Length	Breadth	Depth	Quantity	Rate in	Amount
0.			3.4	m	m	m		Rs.	Rs.
6	Supplying, fabricating, erecting, and fixing in	MT			27 V Y 7	7.7			-0.7 (0.1)
	position, inserts and embedments, Truss,			:					
	clamps, brackets, insert plates and all		i i						
	miscellaneous steel works as shown in		1						
	drawing and as directed by the Engineer at		1					2	
	all depths, using MS angles, channels, steel					•		-	
	beams, rails, tees, plates, flats, rounds			ĺ					
	squares etc., of various sizes and other		1 4					İ	
	structural section confirming IS 2062 grade					4			
	A, medium class GI pipes etc., including		7.						
	straighting, cutting, fabricating, welding,								
	bending to slope fixing to position, welding to								
	insert plate embeded in concrete and		•						7474
	inclusive of 2coats of enamel paint over one coat of metal primer. The rate quoted is to			201					
	include the cost of all materials, labour, tools,							ł	
-	tackets, cranes, devices and plants, wastage				= =		- 5		
	etc., as per specifications and drawings				1				
	complete. Including cost of bolts, nuts,								
	washers, clamps, welding, electrodes, and	1				9 4		4	
	connections required for the work. Rate to				"				
1	include shims and packing peices etc.,	.			1		55		
i	complete with all lead and lifts as directed by			1.0	1				
	the Engineer-in-charge.								1
-	(Data rate)				1.00	-	1 1		5 9
_	M S Base plate 16mm thick				-				1
_		1 11 10 1 10	THE STATE OF				and the	A Charles I a selected	aga asa men eta aranz
	0.6mx0.6mx0.016mx7850kg/cum = 45.22 kgs				••		45.22		
+	Anchor Bolt 25mm bolt 750mm long 8nos		8	0.75	1.00 - 0.00		6.00	Fiot	1 1 1
-	0.100	er Type	1 2 9 7	entres to	many sty we by		20.52	Kgs	And the same
	Stiffner plate 12mm thick 4 nos	ou operage.	+59a)	10-20-6	except to a sector of	a Santa (e. j	er i Consultaria	National Contract of	
	4x0.3mx0.15mx0.012mx7850kg/cum		17	*- *** <b>:-</b>	**************************************		16.96	Kgs	AND THE STREET
-  -	NB 300 @ 45Kg/m		<b>1</b> ;	6.00	g kirister i djen e "Lin", e j <b>e se</b> nj	+	6.00	falsomerica	Testine of the control
	and the second s	, V 1	4.365	132	2461		270.00	Kgs	
4	Base Plate 12mm above NB 300	10-0			# v.1		F-12 (1)		
_	2x0.85mx0.85mx0.012mx7850kg/cum = 45.22 kg	gs	esan ewit d		1		136.12	Kgs	Lateral Section
	Stiffner plate			1 - 1 - 1	1.22	-, 1 -	P.		A SECTION
1	4x0.3mx0.15mx0.012mx7850kg/cum						16.96	Køs	risk militarinan sayan
1	NB 80 @ 49.5Kg/m			- 10 a dig 1 m/g	-place - 200	1.		A CONTRACTOR OF THE PARTY OF TH	THE PERSON
5	Horizontal		4	4.30		- I	17.20	ROMESTIC AND	pontación de la compania de la compania de la compania de la compania de la compania de la compania de la comp
	Гор & Bottom		10	0.75	10-00 A		7.50	/	
]	Diagonal	cit house (1)	8	2.05	SALESC METHOD IN	9	16.40	_	
	Proof State	100			1.24		41.10	/	
T			1.00	Re.			2034,45	Trace	
1	NB 50 @ 5.1Kg/m				/	+	2004.40	mgs	N. G. A.
	Vertical		10	1.80		The state of the s	18.00		er françasis.
T			10	1.00	Self-2 holy	-	-	6	
1	NB 100 @ 12.1Kg/m	7					91.80	rgs	Marine Marine
_	Cantilever Supporting Bar		2	1.00	11 1		0.00		THE RESERVE
+	The state of the s		4	1.00			2.00		1
	Covering of Truss						24.20	Ags	
	MS Plate 5mm thick @ 39.2kg/sqm		0	4.00		0.00			
	Trace offine cities & 55.28g/sqin		2	4.30		2.00	17.20		
-							674.24		
+		-11:				Total ·	3330.46		moderate &
+	199				Qty	in MT	3.33		
Ţ		i.				Say ನಾಖಲೆಯನ	3.50	72000.00	252000.

ಸಿನ್ನು ಮಾಹಿತಿ ಹಕ್ಕು ಕಾಯ್ದೆ 2005ರ ಅಡಿಯಲ್ಲಿ ನೀದಲಾಗಿರೆ ಾರ್ಯಪಾಲಕ ಅಭಿಯಂಚರರು

6 of 7

Manaoa Consultants

**E** 

81. Vo.	Description of Work	Unit	SR	Item	Basic Rate	AW	Total Rate in
10.		0.55597ND/A(1	Page No.	No.	in Rs.	8%	Rs.
	Add 10% extra for Dewatering		225	Note1	· 7.50 ✓	1 10 0	
30/0				Total	82.45~	6.60	89.0
	KSRRB M2100 - 17.1. Plain / Reinforced Cement Concrete design mix M25 with OPC cement @340kgs		224	27.30	. 4747.00	379.76	5126.7
84	Providing, casting, erection and assembling of 180 mm thick pre-cast RCC facia panel of M35 grade	Sqm	Data	Rate			6805.0
10	KSRRB M800- Portable barricade in Construction Zone	Each	199	24.44	2866.00	229.28	3095.2
46	Supplying, fabricating, erecting, and fixing in position, inserts and embedments, Truss	MT	Data	Rate	52000.00		52000.0
	: Fabrication Charges				20000.00		20000.0
			in the first	10-2	4		72000.0
17	Providing and fixing Project Display Board of Size 1.80 vertical x 1.60 mtrs. Horizontal made of cold rolled coil 16 Guage	Nos.	81_	8.47 (NHSR 09- 10)	7510.00	450.60	7960.6
	KSRRB M2700-9. Providing, precasting, transportation and placing in position precast post tensioned concrete girders as per drawing and technical specifications complete as per specifications. MoRT&H Specification No. 1800 & 2300		253.00	32.9 ✓	19119.00	1529.52	20648.5
	KSRRB M500-7 Providing and applying tack coat on the prepared black topped surfaces at 2.5kg per 10sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour. HOM of machineries complete as per specifications MORTh Chapter 5	Sqm	173.00	21.70	15.85	1.27	17.1 V
<u> </u>	Vanna assa assa						
	KSRRB 3000 Filling Pot - holes and Patch Repairs with Bituminous Concrete, 40mm KSRRB M3000-5: Removal of all field material, trimming of completed excavation to provide firm vertical faces, cleaning of	Sqm	262.00	35.50	366.50	29.32	395.8
	murface, painting of tack coat on the sides and base of excavation as per clause 500.3, back filling the pot holes with hot bituminous material as per clause 500.4, compacting, trimming and finishing the surface to form a mouth continuous surface, all as per clause 3004.2 complete as per specifications MoRT&H Specification No. 3004.2			8	)		
1	KSRRB 300-50. Scarifying bituminous course 50mm to	Cam	156.00	10 50	99.00	1.70	< .00 =
	75mm thick along with premix carpet / surface dressing by road roller attached with scarifier without disturbing the base and stacking the debris within a lead of 100	Sqm	√ I56.00	19.56	22.00	1.76	23.7
	metres including cost of all labour charges, HOM of machineries complete as per specifications.MORT&H Chapter 3			82			

ದಾಖಲೆಯನ್ನು ಮಾಹಿತಿ ಹಕ್ಕು ಕಾಯ್ದೆ 200: ಅಡಿಯಲ್ಲಿ ನೀಡಲಾಗಿದೆ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂಥರರು ಯೋ-ಕೇ-2: ಬಿ.ಬಿ.ಎಂ.ಪಿ

Sl.	Description of Work	Unit	SR	Item	Basic Rate	AW	Total
No.			Page No.	No.	in Rs.	8%	Rate in Rs.
92	KSRB 14.6-1. Providing and laying heavy duty cobble stones 75mm thick interlock payers, using cement and course sand for manufacture of blocks of approved size,		109.00	14.70 V	707.00	56.56	763.5
	shape and colour with a minimum compressive strength of 281 kg per sqm over 50mm thick sand bed (average thickness) and compacting with plate vibrator having 3 tons compaction force thereby forcing part of sand						
	underneath to come up in between joints, final compaction of payer surface joints into its final level,				1 1 1 1 1 1 1		
	including cost of materials, labour and HOM of machineries complete as per specification. Specification No. KBS						

Belgo

Assistant Executive Engineer

Traffic Engineering Cell,
Bruhath Bangalore Mahanagara Palike
Bangalore - 560 002.

Executive Engineer
Traffic Engineering Cell (Road Infra)
Bruhat Bangalore Mahanagara Palike
Bangalore - 560 002.

ರಾಖಲೆಯನ್ನು ಮಾಹಿತಿ ಹಕ್ಕು ಕಾಯ್ದೆ 2005ರ ಅಡಿಯಲ್ಲಿ ನೀಡಲಾಗಿದೆ

> ್ರಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು ಯೋ-ಕೇ-2, ಬಿ.ಬಿ.ಎಂ.ಪಿ

Project: Proposed Construction of Elevated Corridor by integrating Ejipura Main Road - Inner Ring Road Junction, Sony World Junction and Kendriya Sadana Junction along 100ft. Inner Ring Road, Koramangala, Bangalore

Data Rate for Providing, Casting, Erection and Assembling of 180 mm thick Pre-Cast RCC Facia
Panel

SI	Description	Unit	Quantity	Rate In	Amount in
No.			THE PROPERTY OF THE PARTY OF	Rs.	Rs
	Providing, casting, erection and assembling of 180 mm thick precast RCC facia panel of M35 grade aesthetically finished cruciform shape mechanically stabilized reinforced earth wall to the required line, grade and cross sections with hot dip high adherence strips and panel lugs of required length having width and thickness of 40 x 5mm at specified interval. Panels are to be seated in each other using two numbers EPDM rubber seating pad per panel. vertical joints should be covered with Geotextile filter cloth glued to the panel and horizontal joints to be provided with 25 mm dia. Polyethylene foam joint filler, 160 mm dia. PVC pipe of 10 Kg./cm² wrapped with non woven geo textile with perforation of 5mm dia. at staggered intervals of 10 cm c/c etc., complete as per approved drawing and specification including cost of hot dip high adherence strip, legs, geotextile cloth, EPDM pad, polyethylene foam, joint fillers, tie strips, fasteners and all accessories, coping beam (if any), drainage layer, drain pipe etc cost of all materials, form work, cost of HYSD reinforcement steel				3 <sub>6.3</sub> + 5
	and fabrication design with all lead and lift, loading, unloading, stacking, hire charges of machineries as approved by the Engineer in charge as directed by the Engineer in charge.				and the second s
411	Unit = 1Sqm			Section of Section 2	of the Section of the
a	As per Quotation from Reinforced Earth India Pvt., Ltd. (Quotation enclosed)	Sqm	1.00	4850.00	4850.00
h.					
b	Statuary Levies & applicable Taxes @ 15%				727.50
c	Add for O II. 1.000	La musinha ambiento	S	ub total A	5577.50
d	Add for Over Heads & Contigencies @ 12%  Add for Contractor Profit @10%	( ( ( ) A A B B		SAPLTON STORES	669.30
-	And the Contractor Pront @10%	1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	the control of the same of the	en ide filosoficipo actual de la composito de	557.75
	Cost per Sqm		. i. Si	ub total B	6804.55
100.000		10,000	17.2	Say	6805.00

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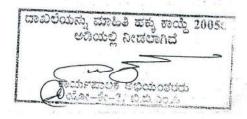
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Assistant Executive Engineer

Traffic Err ing Cell,
Bruhath Bangalore shanagara Palike
Bangalore - 560 002.

Executive Engineer
Traffic Engineering Cell (Road Infra)
Bruhat Bangalore Mahanagara Palike
Bangalore - 560 002.



Project: Proposed Construction of Elevated Corridor by integrating Ejipura Main Road -Inner Ring Road Junction, Sony World Junction and Kendriya Sadana Junction along 100ft. Inner Ring Road, Koramangala, Bangalore

# DATA RATE FOR THE PRECAST SLAB 100MM THICK

Ref: As per PW, P&IWTD SR 2012 - 13

MI.	Consider-10Sqm (Slab Size-0.90x0.60 Description of work	Unit		Lengt	h Breadt	h Depth	Total	Date	I America
No.			-	m	111	m	Quantity	Rate in Rs.	Amoun
1	KSRRB M2200-6. Supplying, fitting and placing TMT bar reinforcement is sub-structure complete as per drawing and Technical Specifications complete as per specifications MORT&H Specification No.1600 & 2200	n g is n					94,	in Ks.	in Rs.
	(P.No.230, I.No.28.8 of PW,P&IWTD S.R	2012-13)				14		-	
	10mm @ 150 C/C		100	1.0	5/		105.00		
	20nos Slab x 5=100Nos		1	1.0	-		105.00	1	
	105x0.62=65.10kg	1		-		100	07.10		
	Distributions 8mm @ 200mm C/C		100	0.5			65.10		
	55x0.39=21.45 kg		1	0.00			55.00		
-2	20nos Slab x 5=100Nos	- A .			-		21.45		
				-	-		86.55	-	-
						Sav	0.087		-
2	KSRRB M2100-15.1. "KSRRB M2100-14	Cum	1 192		1-1-1-	Say	0.10	68178.24	6818.00
	Plain / Reinforced cement concrete M20 with OPC cement @ 320kgs, with 20 mm and down size graded granite metal coarse aggregates @ 0.69cum and fine aggregates @ 0.46cum, with								
	Superplastisiser @ 3lts confirming to S9103-1999 Reaffirmed 2008, in open oundation complete as per Drawing & Technical specifications Case - I: Using Concrete Mixer" MORTH Specification No. 1500, 1700 & 2100								
1	P.No.223, I.No.27.26 of PW, P&IWTD SR	2012-13)	Anna of Jana San San San		/		. 1		
1	For Slab		20	0.90	0.60	0,10	✓1.08		,
+				4		Say	ا.10	<b>√</b> 1939.92	<b>5</b> 434.00
				3				Tota- A	12252.00
I	chours I come	1		-		20 - HILLE			20200
, 1	abour charges for fixing of precast slab						A - 1		
7	P.No.XXXXV, SI No 3 & 5 of PW, P&IWTI	O SR 2012	-13)	16					
_									
IV.	Iason Class I(With Tools)	per day	1	- 49			/1	176.58	177.00
	lazdoor Light /Bisti	per day	2				-2	171.58	343.00
-	ointing in CM(1:3) for drain slab	Cum	20	<b>0.90</b>	<b>v</b> 0.025	<b>√</b> 0.025	<b>0.011</b>		0 20.00
$\overline{}$	laterials:		1						
G	ement required is 35.7% =0.357 cum of ment per cum 0.51t	Qt	2.1				0.57	640.00	367.00

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ಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರೆಡೆ 2

Sl. No.	The state of work	Unit	No.	Length	Breadth	Depth	Total	Rate	Amount
No.		1		m	m	m	Quantity	in Rs.	in Rs.
	Sand 1.07 per cum	Cum					0.01	,	,
	(P.No.II, Sl No 59 of PW, P&IWTD SR 201	12-13)	-				0.01	950.00	11.00
1332	Labour					$\vdash$			
	Mason Class I 0.25per 1.0 cum	each	0.003				0.003	170 50	0.50
	(P.No.XXXXV, SI No 3 & 5 of PW. P&IWTI	D SR 20	2.18)	F 10 0 0 0		100	0.005	176.58	0.50
	Mazdoor/Bisti 0.50per 1.0 cum	-	T	-	2/ 1/1/1/1/1/1/1/1/1/1/1/1/1/1/1/1/1/1/1				
~	(P.No.XXXXV, Sl No 3 & 5 of PW, P&IWTI	D SR 20	2-13)		-1			D	
		each	0.01	7-3			0.0056	171.58	100
	Water man 0.20 per 1.0 cum						0.0000	1/1.50	1.00
8 6	(P.No.XXXXV, Sl No 3 & 5 of PW, P&IWTI	D SR 201	2-13)				Committee Commit		
		each	0.002				0.0023	171.58	0.39
5	Transportation charges (Tractor)	Harris H. I.				- A	0.0020	111.00	0.00
	(P.No.XXXVIII, Sl No 37 of PW, P&IWTD S	SR 2012-	13)				1630		
_	Marie Company	hour	- 4			•	8.00	162.00	1296.00
2		7						Total-B	2195.88
6	Overhead charges @ 10% for item No 3,4&5	,							219.59
7	Add for Contractor Profit @ 10% for item No	0 3,4&5							219.59
	A-SEMENUE.								14887.06
		1					10Sqm	Say	14890.00
	A	and the state of		- 1 1		4	Per Sqm	Day	1489.00

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Assistant Executive Engineer

Traffic Englishering Cell,
Bruhath Bangalore Mahanagara Palike
Bangalore - 560 002.

Executive Engineer
Traffic Engineering Cell (Road Infra)

Traffic Engineering Cell (Road Infra)
Bruhat Bangalore Mahanagara Palike
Bangalore - 560 002.

ದಾಖಲೆಯನ್ನು ಮಾಹಿತಿ ಹಕ್ಕು ಕಾಯ್ದೆ 2005ರ ಅಡಿಯಲ್ಲಿ ನೀಡಲಾಗಿದೆ ಹಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು ರಿಯೋ-ಕೇ-2, ಬಿ.ಬಿ.ಎಂ.ಪಿ

# Project: Proposed Construction of Elevated Corridor by integrating Ejipura Main Road - Inner Ring Road Junction, Sony World Junction and Kendriya Sadana Junction along 100ft, Inner Ring Road, Koramangala, Bangalore

# Data Rate for Anticorbonate Painting

Sl.	Description	Unit	Quantity	Rate In Rs.	Amount ir
1	THE RESIDENCE OF THE PROPERTY	Cottle vo.		- panel in the same of the	Rs
. 1	Anti carbonate painting with approved colour as per specifications		February .		
, d	including cost of materials, labour etc., complete as per specifications and as directed by the Engineer in Charge.				
	The external walls shall be treated with the single component, flexible, elastomeric coating MASTERSEAL 200 H based on acrylic copolymers. The product shall be applied in 2 coats to achieve a total DFT of 150 microns, after the Acrylic primer coat of MASTERSEAL 399 .After the first coat the surface has to be left for 4 to 5 hrs then followed by the application of the second coat.  Unit = 1Sqm		T.		
a	As per Quotation from BASF. (Quotation enclosed)	Sqm	1.00	155.00	155.00
b	Supply & Apply by authorized applicators @ 10%	очи	1.00	195.00	155.00
c	Statuary Levies & applicable Taxes @ 7%			A STATE OF THE STA	15.50
- 1217	TURES 170				10.85
d	Add for Contractor Profit @10%			Sub total A	181.35
	rada for Contractor Profit @10%	REAL PROPERTY.			18.14
Paradalah	Control of the Authority of the Control of the Cont	Arem via total	processor county on a constraint of the constrai	Sub total B	199.49
	Cost per Sqm	100000000000000000000000000000000000000	TO SERVICE AND ADDRESS OF THE PARTY.	Say	

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Assistant Executive Engineer Traffic Eng. ...ring Cell, Bruhath Bangalore Mahanagara Palike

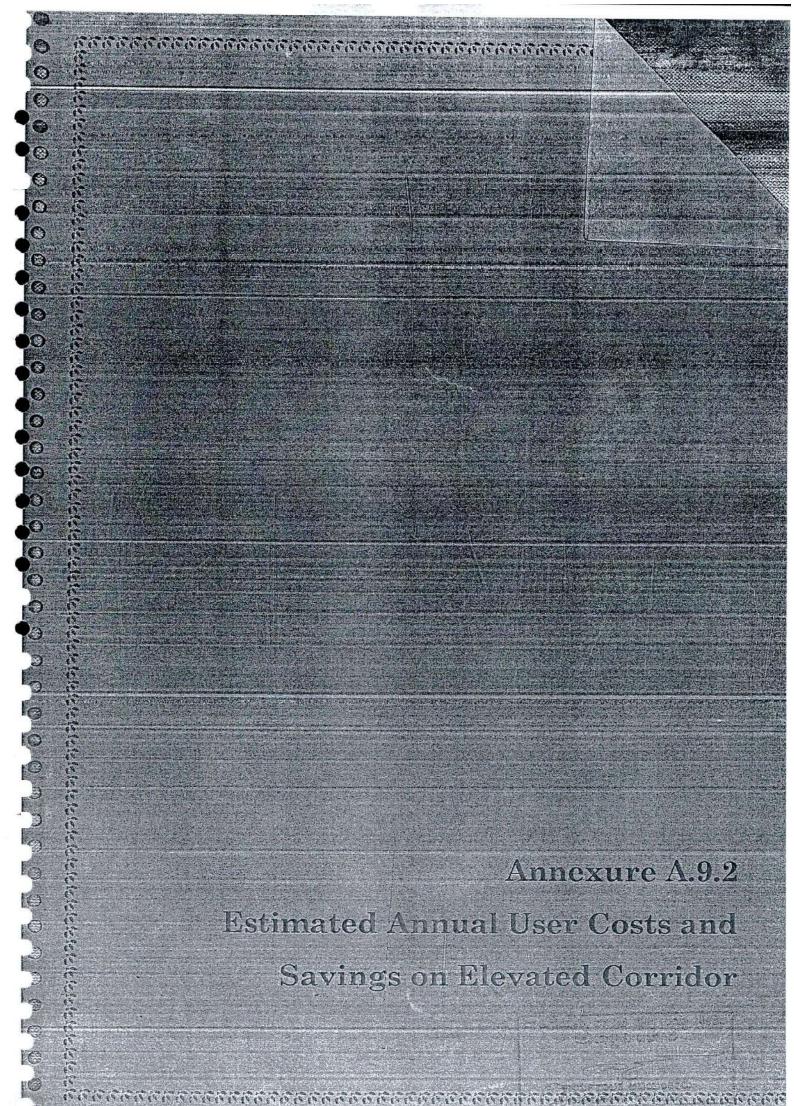
Bangalore - 560 002.

Executive Engineer

Traffic Engineering Cell (Road Infra) Bruhat Bangalore Mahanagara Palike Bangalore - 560 002.

ದಾಖಲೆಯನ್ನು ಮಾಹಿತಿ ಹಕ್ಕು ಕಾಯ್ದೆ 2005ರ ಅಡಿಯಲ್ಲಿ ನೀಡಲಾಗಿದ

> **ತ**ಭಿಯಂತರರು ಯೋ-ಕೇ-2, ಬಿ.ಬಿ.ಎಂ.ಪಿ



And South Transfer

Proposed Construction of Elevated Corridor by integrating Ejipura Main Road - Inner Ring Road Junction, Sony World Junction and Kendriya Sadana Junction along 100ft. Inner Ring Road, Koramangala, Bangalore

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# Estimated Annual User Costs and Savings on Elevated Corridor

Rs. in Lakh

Corridor         Corridor           3065.51         2280.76         19166.99           3181.81         2396.64         19166.99           3181.81         2396.64         19632.76           3502.81         2527.94         19907.16           3564.70         2859.20         21823.39           3676.01         2997.65         23196.41           3676.02         2997.65         23482.86           4222.59         5114.43         26902.20           4353.99         3913.58         27226.78           4586.69         4005.37         28832.79           4714.37         5903.80         30819.15           4984.96         6015.81         31085.55           5123.86         6077.85         31355.22           5569.52         6632.32         35599.82           5604.09         6761.54         356937.85           6154.87         6846.67         37142.00           6760.79         6548.17         39190.30           6937.78         6435.95         39383.26           7382.58         7247.94         41825.29           7558.79         7102.16         42032.29			Vehicle Operation Cost O	VOC		Vehiolo		THOIR I		
Corridor	V. State	100		CO CONTRACTOR OF THE PARTY OF T	STATE OF STA	STORESON OF	Operation 11m	e (VOI)		
11420.43         6074.16         3065.51         2280.76         19166.99           11882.66         6304.21         3181.81         2386.64         19166.99           11882.66         6304.21         3181.81         2386.64         1953.76           12374.25         6543.51         3302.81         2527.94         19907.16           14056.41         7159.51         3564.70         2859.20         21823.39           1 4056.41         7382.74         3676.01         2997.65         23196.41           1 14551.22         6846.65         3790.99         3913.58         23482.86           1 16692.98         7355.96         4222.59         5114.43         26902.20           1 7278.20         8991.95         4586.69         4006.37         28832.79           1 9092.73         8474.56         4714.37         5903.80         30819.16           1 9178.00         8717.22         4984.96         6015.81         31365.22           2 2052.43         9850.60         5569.52         6632.32         35599.82           2 24523.87         1176.59         5997.69         671.54         35788.05           2 24523.87         11869.04         5604.09         6764.67         37142.00 <th>ıear</th> <th></th> <th>The second</th> <th>Surface</th> <th>Saving</th> <th></th> <th>On</th> <th>Elevated At Surface Saving</th> <th>Saving</th> <th>TTL SVG</th>	ıear		The second	Surface	Saving		On	Elevated At Surface Saving	Saving	TTL SVG
11882.66         6304.21         \$181.81         2396.64         19632.76           12374.25         6543.51         3302.81         2527.94         19907.16           13583.41         7159.51         3564.70         2859.20         21823.39           14056.41         7382.74         3676.01         2997.65         23196.41           1         14551.22         6846.65         3790.99         3913.58         23482.86           16692.98         7355.96         4222.59         5114.43         26902.20           17278.20         8991.95         4353.99         3932.26         27226.78           17833.01         9240.95         4586.69         4005.37         28832.79           19092.73         8474.56         4714.37         5903.80         30819.15           19718.00         8717.22         4984.96         6015.81         31355.22           20372.11         9170.40         5123.86         6077.85         31356.22           2214.66         10349.04         5604.09         6761.54         35768.05           24523.87         11522.32         6154.87         39190.30         25241.74           24523.87         11803.03         6760.79         6548.17         39	2013	_	6074.16	3065.51	2280.76		10965 20	4650 98	9550 91	E001 E7
12374,25         6543.51         3302.81         2527.94         1990.1.6           13583.41         7159.51         3564.70         2859.20         21823.39           1 4056.41         7382.74         3676.01         2997.65         23196.41           1 14551.22         6846.65         3790.99         3913.58         23482.86           1 6692.98         7355.96         4222.59         5114.43         26902.20           1 7278.20         8991.95         4353.99         3932.26         27226.78           1 17278.20         8991.95         4358.99         3932.26         27226.78           1 19092.73         8474.56         4714.37         5908.80         30819.15           1 19718.00         8717.22         4984.96         6015.81         31855.22           2 2052.43         9850.60         5569.52         6632.32         3559.82           2 24523.87         1175.59         5997.69         6237.17         359383.26           2 24523.87         11803.03         6760.79         6548.17         39190.30           2 25841.74         12468.00         6937.78         6435.96         39383.26           2 28420.80         13759.85         7558.79         41825.29	2014	11882.66	6304.21	3181.81	2396.64	19532 76	11174 80	47.41.40		0001.07
13583.41         7159.51         3564.70         2859.20         21823.39           14056.41         7382.74         3676.01         2997.65         23182.36           1 44551.22         6846.65         3790.99         3913.58         23482.86           1 6692.98         7355.96         4222.59         5114.43         26902.20           1 7278.20         8991.95         4353.99         3932.26         27226.78           1 7278.20         8991.95         4586.69         4005.37         26832.79           1 9092.73         8474.56         4714.37         5903.80         30819.15           1 9092.73         8474.56         4714.37         5903.80         30819.15           2 20372.11         9170.40         5123.86         6077.85         31365.22           2 2052.43         9850.60         5569.52         6632.32         35937.85           2 2452.87         11175.59         5997.69         6237.17         35190.30           2 2452.87         11803.03         6760.79         6548.17         31800.30           2 2452.87         12468.00         6937.78         441825.22         24242.29           2 28420.80         13759.86         7582.69         7095.81         422	2015	12374.25	6543.51	3302,81	2527.94	19907 16	11380 53	4044.09		6018.09
14056.41         7382.74         3676.01         2997.65         23196.41           1         14551.22         6846.65         3790.99         3913.58         23482.86           16692.98         7355.96         4222.59         5114.43         26902.20           17278.20         8991.95         4353.99         3932.26         27226.78           17833.01         9240.95         4586.69         4005.37         28832.79           19092.73         8474.56         4714.37         5903.80         30819.16           19718.00         8717.22         4984.96         6015.81         31085.55           20372.11         9170.40         5123.86         6077.85         31356.22           22052.43         9850.60         5569.52         6632.32         35599.82           22452.37         11622.32         6164.09         6761.54         35768.05           24523.87         11803.03         6760.79         6548.17         39190.30           25841.74         12468.0         6937.78         6435.95         39383.26           28420.80         13759.85         7247.94         41825.22           28420.80         13759.85         7267.71         42242.29           29256.	2016	100	7159.51	3564.70	ed Gerri	91893 30	19497 04	4004.02		6211.55
1         14551.22         6846.65         3790.99         3913.58         23482.86           16692.98         7355.96         4222.59         5114.43         26902.20           17278.20         8991.95         4353.99         3932.26         27226.78           17833.01         9240.95         4586.69         4005.37         28832.79           19092.73         8474.56         4714.37         5903.80         30819.15           19718.00         8717.22         4984.96         6015.81         31085.55           20372.11         9170.40         5123.86         6077.85         31355.22           22052.43         9850.60         5569.52         6632.32         35599.82           22714.66         10349.04         5604.09         6761.54         35768.05           24523.87         11522.32         6154.87         6846.67         37142.00           25841.74         12468.00         6937.78         6435.95         39383.26           27621.75         12991.24         7382.58         7247.94         41825.29           28420.80         13759.85         7558.79         7102.16         42032.79           29256.52         14096.01         8064.70         7095.81 <td< td=""><td>2017</td><td>14056.41</td><td>7382.74</td><td>3676.01</td><td>18 54x1+</td><td>23196 41</td><td>13973 98</td><td>5550.55</td><td>4961 06</td><td>6965.00</td></td<>	2017	14056.41	7382.74	3676.01	18 54x1+	23196 41	13973 98	5550.55	4961 06	6965.00
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Chapter 10 - Legal Assessment

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# CHAPTER 10 LEGAL ASSESSMENT

# 10.1 Land Acquisition

The Project Area lies in South Eastern Part of Bangalore City in a thickly developed Residential and Commercial Area. 4819.257 Sqm of Land needs to be acquired to realize this Corridor Improvement Scheme. Details of Land Acquisition are given in Drawing No. MC / BBMP / 2618 / ELC – IRR / LAD / 106A, Drawing No. MC / BBMP / 2618 / ELC – IRR / LAD / 106C respectively. There is no Scope for Parking of the Vehicles in Post Construction Scenario of the Project, thus the Project would provide the expected Relief to the traffic proposed.

# 10.2 Enforcement Measures

BBMP has planned to take Precautionary Measures during the Construction Phase to enforce Traffic Diversion and minimizing the effects of various Pollutions. Through the Institutional Framework suggested, BBMP will coordinate with the Traffic Police, BMTC and Utility Operators like BESCOM, BWSSB for the Shifting of Existing Utility Lines, which are going to obstruct the Execution of the Project. Since BBMP is the Obligatory Provider of Citizen Services in the City, it has powers by statue to require other Government and Non Government Agencies to implement Plans in Public Interest.

BBMP has also notified the List of Underpasses and Flyovers that it proposes to construct under JNNURM and thus it is making the Residents and Commercial Establishments aware of the possible disturbances that could emerge on account of the Implementation of the Projects.



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Chapter 11 - Institutional Framework

April 2013

# CHAPTER 11 INSTITUTIONAL FRAMEWORK

# 11.1 Road Network

There are multiple Agencies of the Government that are directly involved and accountable to ensure that the Road Network, as part of the Overall Transport System, is maintained to the Required Standards in the City. The Agencies are Bruhat Bangalore Mahanagara Palike (BBMP) who is directly responsible as the Implementing Agency as well as the Entity vested with the Construction and Maintenance of the Roads in the City. The other important agency is Bangalore Metropolitan Transport Corporation (BMTC), which is State owned Transport Corporation. The study of the current situation, however, reveals that the coordination between BBMP and BMTC shall be improved to enhance the Utilization of the Road Network and also evolve Common Agreed Programmes to decongest the Traffic and build Capacity. The Third Agency having a stake in the Regulation of Traffic on the roads is the City Traffic Police. The Focus of the Traffic Police is to maintain free movement of vehicles and regulate the parking of vehicles to avoid congestion. Due to rapid explosion of number of vehicles in the city, the Traffic Police have resorted to make number of arterial roads within the city as one way thus increasing the Travel Time and Distance for the Road Users including the Bangalore Metropolitan Transport Corporation (BMTC) Buses.

The fourth agency involved in the issue is Bangalore Development Authority (BDA) who constructs and maintains some of the Grade Separators, Ring Roads and Specified Roads within the city. There is no clarity in allocation of construction projects between BDA and BBMP in respect of Grade Separators and Roads. BDA also allots and plans residential and commercial sites in and around Bangalore. When sites are allotted without considering the laying of internal service roads and main roads, vehicle owners have little choice but to resort to make shift arrangements in forming lanes, which after few years become the basis for laying roads. These lanes, which get formed without Soil Study and other Criteria pose major problems when take up for Construction of Proper Roads.

The Government is examining the feasibility of delineating the roles and responsibilities of the Stakeholders engaged in development and maintenance of the Road Network within Bangalore. To channellise into financing for major projects will be improved if the Clear Role Responsibility is defined.

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Institution	Primary Role	Impact on Road Network	Area of cooperation	Severity of non - cooperation
ВВМР	Planning, Development, Financing, Construction, Operation and Maintenance.	Determining Capacity in terms of Volume of Traffic.	the Citizens on Proper	Medium to High
BMTC	Planning, Development, Operation and Maintenance of fleet of Buses to carry Passengers; Route Planning, Scheduling and Upkeep of Transport System.	Traffic Congestions, Blocking of Traffic near Bus Shelters.	Integrated Planning and Development of Road Network, Route	High
BDA	Land Use Planning and Allotment of Sites.	Independent Functioning causes Surprises and Hold ups.	Coordination with BBMP and BMTC to create the Infrastructure in a Coordinated Manner while Allotting Sites and Under rating Construction of Grade Separators and Roads.	Medium
Traffic Police	Regulation of Traffic, Traffic Diversions and Parking Regulations.	Determines the Flow of Traffic, Congestions, Accident Removal Mechanisms and Safety for Road Users:	Participate in Planning and Development of Road-Infrastructure and coordinate with BBMP and BMTC while issuing Regulations in respect of Traffic including Special Occasions.	Medium
Government of Karnataka	Policy making	Bad Road Network, Inadequate Fund Allocation, Improper Planning.	Define the Role and Responsibility of BDA and BBMP in respect of Planning and Development of Road Network within Bangalore.	Establish Inter- Institutional Entity for Planning, Development, Financing, Monitoring and Measuring the Performance of the Sector.

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பெலியில் விறிவில் இது சிலி 2005ப் Bruhaf Bangalore Wahahahagara Palike In the absence of a Coordinating Agency, there are several Constraints in the Integrated and Comprehensive Planning and Delivery of Services (to both Citizens and Businesses). Interdepartmental Coordination is one of the prominent issues and conflict that are becoming difficult to address or resolve even at the level of heads of the Service Delivery Agencies. It is observed that the citizen is often concerned with the quality of service rather than who is delivering the service. The Service Delivery often suffers because more than one agency is involved and there is no mechanism for ensuring Interagency Coordination. The area to be addressed in a critical manner is 'Functional Overlaps & Coordination Requirements'.

To realize the Outcome of Free Flow of Traffic and Accident Free Roads with clean environment, all the above Agencies need to participate and implement plans in an Integrated and Coordinated Manner. The Government of Karnataka represented by the Urban Development Department and the Transport Department has constituted an Inter Institutional Committee with Members drawn from the following to give shape to the Proposal for Coordination and Effective Management of the Road Network and Transport Sector Initiatives.

- Commissioner, BBMP Chairman of the Committee.
- Secretary, Urban Development, GOK.
- Secretary, Transport Department.
- Managing Director, BMTC.
- Director General, Traffic Police.
- Chairman, BDA.

Another Critical Institutional Aspect for the Road Projects is the need to establish a Dedicated Project Management Cell within BBMP to undertake such a Massive and Citizen Sensitive Project.

# 11.2 Rationale for a Project Management Unit

There is a need for an Organization, which could handle Joint Projects among Stakeholders cutting across various Government Entities. Such an Organization should address the needs of the city — "A Greater Bangalore", a Techno Polis and Fast Emerging as an Intelligent City. The Informal Arrangement that was started a few years back in the form of BATF needs to be formalized now by establishing a new organization that would focus on delivering Citizen Services by concentrating on Urban Infrastructure Planning and Execution. A Strategic Plan for the City Development in terms of Urban Infrastructure shall be developed by the proposed Organization along with a clear Road Map with Milestones to translate the Strategy into Actions.

To execute a project with Multiplicity of Stakeholders, Profound Project Management Skills and Inter Disciplinary Approaches are essential. In order to effectively implement, monitor and control the schemes envisaged under the Road Network Initiative, it is strongly recommended that a Project Management Unit (PMU) as an Exclusive Entity responsible for Road Projects be established. Funding Agencies stipulate evidence of Professional Management Skills and Best Practices for Sanction and Disbursal of Funds

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for such of these Schemes. BBMP has readily accepted the Recommendation and it has been suggested that PMU be established as part of BBMP functioning independently to carry out the Road Projects in accordance with JNNURM Guidelines and Reforms Agenda agreed among the Stakeholders.

It has been observed in many Infrastructure Project Implementation Schemes that Cost and Time Overruns could have been avoided if a Separate Dedicated Unit or Cell were vested with the Authority and Powers to deal with the Project Implementation Cycle. There has been a significant improvement in performance of dedicated units wherein Policy, Implementation and Regulation are clearly isolated and delineated. It is proposed that PMU functions as an Execution Agency of Policies framed by BBMP / Government and thus focusing on Deliverables in terms of Performance. Weak Institutional Mechanism coupled with lack of application of Contracting Skills affect the Implementation of Large Infrastructure Schemes. Channeling right competencies required for handling such schemes is vital but found to be non existent under Bundled Institutional Setups created around budgetary focus for expenditure monitoring. Performance Measurement in terms of timely completion and construction as per requirements and specifications, are few aspects that are not given due importance under current functioning of these institutions.

Projects executed as part of many Government Schemes are susceptible to delays on account of slow decision making process and sometimes by the application of Bureaucratic Procedures. Focused Attention and Clearly Defined Roles among Implementation Agencies are seldom noticed in routine schemes funded either through Budgetary Allocations or through External Funding Mechanisms. Systems of the Government remain inflexible and unable to cope up with and address the needs of the Funding Agencies and Contractors to deal effectively with Emerging Situations, Uncertainties and Risks.

While establishing the PMU, its Governance Structure, its inter play with various Internal and External Stakeholders and its Role, Responsibility, Powers, Authority and Liabilities need to be defined. More importantly the Framework should highlight on the Organization Structure, the Profile and Attributes of the Chief Executive Officer and Outsourcing Mechanisms to pool Resources. The Recommendation would lay the basis for the Establishment and Operation of the PMU as well as its future role in respect of similar large Urban Infrastructure Projects in Bangalore City.

The likelihood of achieving the project outcomes as per the Specifications and within the Timeframe Planned will be greatly enhanced if the PMU is mandated to design, develop, implement and oversee the Operation and Maintenance Phases. Performance Orientation and Achievement of Measurable Goals would be the Hallmark of PMU and the knowledge gained should also be gradually transferred to its Contractors, Outsource Partners and Stakeholders.

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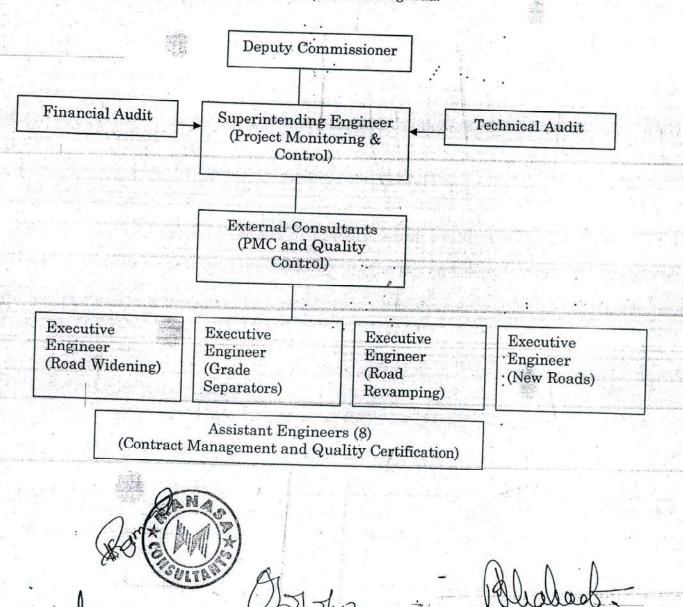
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Executive Engineer

Traffic Engineering Cell (Road Infra)

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PMU should be designed and structured in such a way that it is Independent and allowed to function as an Autonomous Unit and be part of BBMP. Performance Measures of PMU shall be agreed between the Designated State Government Agency and PMU and also in consultation with Major Stakeholders like BBMP, BMTC, Traffic Police, BDA, etc. Performance of PMU should be evaluated based on its Efficiency and Effectiveness Parameters and evolve Initiatives and Projects that are Economically Viable and Politically Sustainable. PMU could have its Resources picked up from Various Constituents of the Government apart from External Professional Pool. An Organization Structure that would primarily meet with the Engineering and Enforcement Aspects of the Project is developed and presented here. The Administrative Functions like Land Acquisition and Arrangement of Finance are to be dealt with by the Inter Institutional Committee recommended as part of the Reforms Agenda.



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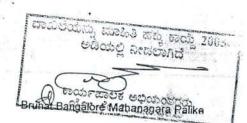
# CHAPTER 12 RISK ASSESSMENT

In a Road Project there are considerable risks involved during the Implementation of the Project. The Risks during the Operation Phase are minimal and restricted to Over Use of the Road (against Design Assumptions) by heavier vehicles and damage to road surface by accidents and by vehicles carrying overload. In the Current Road Projects undertaken by the BBMP, the Time Frame for Completion varies between 6 to 9 months after Mobilization of Site Resources. The Major Risk relates to buy in of the Project from all Stakeholders, especially those affected by the Construction itself. These are Residential and Commercial Establishments who are close to the Construction Site. They are exposed to Noise Pollution, Dust Pollution and Inconvenience caused due to Inability to use their Vehicles on account of Temporary Closure of the Roads.

Internal Risks come mainly from three Sources: the Project, the Organizations Involved and the Relationships among Partners. Most Projects suffer at least temporarily from a Deficient Project Structure: many are launched even though Objectives are not clear, a Business Case had not been completed, and Milestones were only vaguely defined, if defined at all. These Instances of Lack of or Inadequacy in Definition of Scope occur due to pressure to complete the Planning Stage and to go ahead with the Construction early. On the Organizational Side, Lack of Project Control Mechanisms is the Factor that most impede many Projects. Finally, Risks associated with the Relationships among Partners have been the Major Source of Concern present in all Projects, Lack of Definition of Role and Responsibility as the most important Problem for Project Implementation.

The Risks associated with the Road Projects fall into four Categories.

- Multiple Stakeholder Coordination Risk during Execution of Work (very Critical in the Road Projects of Bangalore).
- Project Risk (Clarity in Scope, Clarity in Role and Responsibility).
- Acquisition of Land and Removal of Encroachments while Widening the Drains.
- Shifting of Utilities Perfect Coordination among the Concerned Stakeholders and



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#### 12.2 Stakeholders

The Stakeholders involved in the Bangalore Road Projects are

- BBMP.
- Utility Companies.
- Traffic Police.
- Public Works Department:
- Residents' Association.
- Shop Owners' Association.
- Pollution Control Board.

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#### Role of Traffic Police 12.3

Coordination with the Traffic Police, Liaison with Residents and Shop Owners' Association is a pre requisite before commencing the Construction Phase. Traffic Police will have to plan for Diversions, Construction of Temporary Structures, Regulation of Traffic during Peak Hours with Extra Resources, etc. Communication through Media and Door - to - Door Campaign in the affected areas are proposed to ensure Smooth Construction Phase.

Traffic Police will also have to develop Alternate Routing for the BMTC Buses that ply in the Roads proposed for Revamping. They need to mark the Zones near the Construction Site as 'No Parking' and allocate Routes and Space for the Vehicles engaged in the Construction Work t done yet - tuse, as pared

#### 12.4 Shifting of Utilities

In Bangalore Road Network, the Common Utilities that are encountered during the Revamping or Widening are

- Sewer and Drainage Lines.
- Water Supply Lines.
- Electricity Lines and Structures (Mounted Transformers).
- Telecommunication Lines and Structures.
- Street Lights.
- Parking Signs.
- Post Boxes.
- Signals.

The Utilities are to be shifted in coordination with the Concerned Departments. The Key is in sending them Advance Communication and obtaining their Sign off for Proposed Shifting well ahead of the Construction Phase. Underground Utilities are the main concern and pose a major challenge that will need the Commitment and Cooperation of all the Associated Departments. Shifting of Underground Utilities are to be executed in coordination with BWSSB, KPTCL, BESCOM, BSNL and other Private Telecom Operators like Bharti, Tata, Reliance, etc., which have led Optical Fibre Cables along the existing Roads.

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JNNURM compliant Detailed Project Report for the Proposed Construction of Elevated Corridor by integrating Ejipura Main Road - Inner Ring Road Junction, Sony World Junction and Kendriya Sadana Junction along 100ft. Inner Ring Road, Koramangala, Bangalore

Chapter 12 - Risk Assessment

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# 12.5 Risk Management

	Risk	Stakeholders	Severity of Risk	Solution
	Acquisition of Land	BBMP, Government of Karnataka	Medium	A Combination of Enforcement and Rehabilitation measures is required to notify the affected people and provide Alternate Arrangements for living. In the case of road projects the instances are minimal.
The standard of	Removal of Encroachments	BBMP, BDA, Government of Karnataka	Medium	Legislation followed by proper Enforcement; affected people to be considered for Housing under Basic Services to Urban Poor Plan.
State of the second second second second	Traffic Management	BBMP, Contractors, Traffic Police	High	A Well Coordinated Traffic Management Plan with clearly Defined Roles is required. Participation of Residents and Shop Owners at the Formulation Stage is also recommended.
1 1 50 July 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Accident Free	BBMP, Contractors, Traffic Police	Medium	Proper Deployment of Resource at critical periods of time and Inspection of Vulnerable Structures and Traffic Diversion Routes.
The state of the state of	Dumping of Construction Debris	BBMP, Contractors	Medium	Storage Space shall be allocated along the Construction Site, Instructions for Clearing and Dumping the Debris Outside the Construction Sites shall be issued.

12.6 Internal Risks associated with Road Projects in Bangalore City with Suggested Measures to Address the Risks

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Chapter 12 - Risk Assessment

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Risks Associated	Characteristics of Clients / Users of the Service: Resistance to Change,
with the Project	
itself	Communicating, Unrealistic Expectations. (To overcome BBMP is seeking
	Citizen Participation through Ward Committees and others for Buy In the
1	Project and Speedy Implementation).
9 -	Scope of the Project: Universality or Specificity of the Service, Number of
	Partners Involved, Number of Clients, Size of Budget. (Contract
	Documentation being revamped to define the Role and Responsibility very
	clearly emphasizing on the need to communicate with the Stakeholders at the Critical Times).
	Complexity of the Project: Especially Organizational and Technological
	Complexity. (Consultant would evaluate various assumptions made in the
	Design and Detailed Engineering while executing the Project and provide
	Feedback to BBMP).
	Definition and Structure of the Project: Unclear Objectives, Ill Defined
	Specifications and Functional Requirements, Changes in the Scope or the
	Reach of the Project, Difficulties in Integrating Data or Processes. (Flexibility
	to Accommodate Changes by the Contractors included in the Contract
	Documentation).
Organizational	Lack of Resources: Uncertainty of Funding, Inadequate Resources, Lack of
Risks	Expertise in Complex Resource Management (these may not be critical under
	JNNURM Funding).
	Project Team Competencies: Lack of Experience, Expertise, Stability and
	Communication Skills. (It is proposed to establish a PMU for Road Projects
경우 그 그 사내가 없	within BBMP with Requisite Skills and Experience).
	Management Strategy: Inadequate or Inappropriate Organizational Support
	and Control, Absence of a Châmpion, Lack of Leadership, Unavailability of
	Tested Management Tools and Processes. (Inter Institutional Committee
Photographic Action in the Control of the Control o	proposed to deal with Policy Level Decisions including Release of Funds from
	the State Government).
	Technological Know How: Absence of an Adequate Technological
	Infrastructure and of In House Technological Competencies. (Competencies
	being Upgraded as well as Latest Construction Practices followed in Road
Carbon Constitution of the	- (24GB) - 가입니다 - 이렇는 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -
Relationship	Construction, Material Handling and Disposal of Construction Debris).
Risks	Form of Collaboration: Inadequate or Inappropriate type of Agreement,
TUISKS	Misunderstandings regarding the Content of the Agreement, Inappropriate
	Selection of Partners, etc. (All Contractual Frameworks to define the Role,
	Responsibility and Liability of Various Parties clearly; Contractors to be
	provided with Opportunity to seek Clarification before Accepting the Work).
	Collaborative Process: Problems occurring with Coordination,
X	Communications, Inertia, Dependency, Mistrust, Lack of Consensus or
	Involvement (Change Management Process proposed to be handled by the
1,	PMU).





Chapter - 13

**Environmental and Social Impact** 

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# CHAPTER 13 ENVIRONMENTAL AND SOCIAL IMPACTS

In any Major Developmental Initiative aimed at promoting the interests of the Community or the State / Country, the Associated Environmental Impacts — whether of a Short Term or Long Term Nature, likely to affect the Environment, Ecology and Health of the Community, need to be seriously examined, before embarking on the Proposed Project. The Primary Objectives of the Environmental Impact Assessment (EIA) are to evaluate the Existing Pre Operational Baseline Environmental Status at the Proposed Project Site by Field Studies and Data Collection, and then carry out an Objective Assessment of the Various Impacts on the Environment as a Result of the Proposed Activities.

As "Construction of Elevated Corridor by integrating Ejipura Main Road – Inner Ring Road Junction, Sony World Junction and Kendriya Sadana Junction along 100ft. Inner Ring Road, Koramangala, Bangalore" is one of the major Metropolitan Infrastructure Projects for Bangalore, it is imperative to conduct an Environmental Impact Assessment (EIA) to quantify the Benefits accrued to the Community as a result of the Project, while at the same time analyzing carefully the Impact Aspects due to the Project itself, during Construction and Operation Phase Cycles. As these Data are crucial for the Planning and Successful Implementation of the Project, Various Data (such as Nos. of Tree Cutting, Extent of Air and Noise Pollution, etc.) have been collected from extensive Site Studies in accordance with well established Standard Procedures.

The Existing Road Infrastructure around the Project Corridor have deteriorated remarkably as a result of lack of investment and multifold increase in traffic volume and have to be upgraded to higher service levels in order to reduce transport cost in support of Socio Economic Development.

Discussions have been held with Government and Non Governmental Organizations and a Detailed Site Assessment have been carried out to provide the Basic Background for Impact Identification and Assessment. A Scoping Exercise has also been carried out at the Pre Construction Stage to identify and highlight the Key Issues and Impacts likely to occur during the Construction, Operations and Maintenance Phases of the Project, as well as to identify those Impacts which could, but are unlikely to occur. Practical and Cost Effective Benefit Enhancement and Mitigation Measures have been identified and outlined, taking into account alternative approaches that are appropriate to the situation. A Management and Monitoring Plan has been developed to provide a sound basis for ensuring that the specified benefit enhancement and mitigation measures are fully adopted.

For Planning and Implementation of "Elevated Corridor by integrating Ejipura Main Road – Inner Ring Road Junction, Sony World Junction and Kendriya Sadana Junction along 100ft. Inner Ring Road, Koramangala, Bangalore", we have given due attention to the Environmental and Social Issues. The Various Issues addressed under this Section are as follows.

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#### Environmental Impact 13.1

## 13.1.1 Green Cover

Bangalore City - with its rich flora and abundant green cover and being host to Lalbagh and Cubbon Park, which are renowned Botanical Gardens, is rightly called the "Garden City of India". Bangalore City bagged the Central Government sponsored "Indira Priyadarshini Vruksha Mitra" Award in the late 1980s in recognition of its extensive green cover. But today, lung space is shrinking in the city and core areas have lost green cover with increase in concrete structures. As a part of this Project, to acquire obstruction free area, 286 trees have to be cut in the Project Area. Considering the Benefits of the Project and the Compensatory Afforestation Plan envisaged, it has been observed with management plans consisting of planting of trees in the ratio of 1:2, proactive afforestation for green cover and development of green ribbon in and around the project Air Pollution (compensating the green cover. ) + myour and room

13.1.2 Air Pollution

Air Pollution Level will go up during the Construction Stage due to operation of construction yards, material transport on trucks and due to heavy earth moving machinery exhaust emissions (e.g. SPM, RSPM, NOx, SOx, CO, etc.) from the Construction Site. These are not permanent in nature, but minor, temporary and mitigeatable. In the Post Construction Scenario, the General Level of Air Pollution in the Project Area will be significantly less than the current level due to improved movement of vehicular traffic and removal of idling time and thus this Project ensures better environment. The Consultant has collected data regarding existing Air Quality in and around the Project Area and is given in Table 13.1. All vehicles delivering materials to the site will be covered to avoid spillage of materials. All existing Highways / Roads used by vehicles of the Contractor, or any Sub Contractor or Suppliers of Materials or Plant and similarly Roads, which are part of the Works, will be kept clean and clear of all dust / mud or other extraneous materials dropped by such vehicles. The unloading of materials at construction sites close to settlements will be restricted to night time only. Vehicles and Equipment will be fitted with Exhaust Silencers. During routine service operations, the Effectiveness of Exhaust Silencers will be checked and if found defective will be replaced. Unpaved Haul Roads near / passing through residential and commercial areas to be watered thrice a day. Trucks carrying construction material are to be adequately covered. All Earthworks will be protected in a manner acceptable to the Engineer (such as Barricading the Construction Site) to minimize Dust Nuisance in the surrounding area. The Contractor will take every precaution to reduce the Level of Dust along Construction Sites involving Earthworks, by frequent application of water.

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### **Table 13.1**

Ambient Air C	Quality Monit	coring	
Type of Monitoring	Ambient	Air Quality	
Date of Sampling	17 - 04 -	2013	
Duration of Sampling	24 hrs.		
Instrument used for Monitoring	Respira	ble Dust Sampl	er APM 460 & 411.
Descriptions	Value in p	ıg/m³	1
	Existing	Permissible	
Respirable Particulate Matter	15.7842 (4.0)	120.0	
Suspended Particulate Matter	4.7.1.8	360.0	
Oxides of Sulphur	49.7	80.0	
			4

# 13.1.3 Water and Soil pollution

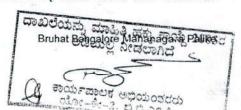
The Surface and Underground Water and Soil Pollution Aspects are not likely to be greatly influenced, unlike Air Pollution Quality by the Construction of Elevated Corridor along 100ft. Inner Ring Road However, there could be Indirect Impact on the Water and Soil Components in the long run.

As the Project Activities need substantial water quantities for construction processing, dust proofing, cleaning of vehicles and batch mixing, etc. there could be considerable demands on water resources available. Necessary arrangements and contingency plans with BWSSB and Arrangement for Supply of Recycled Water should be made to meet the Water Demands, without in anyway affecting the city's normal water supply demands.

All the Proposed Project Components will be in Well Developed Areas of the City with Distinct Land Usage Patterns ranging from Residential to Commercial Activities under Well Established Conditions. As Construction Activities are primarily land based, many Impacts can be identified in the Soil Component in the Proposed Area. Excavation Activity will produce a lot of rubble from excavated soil, needing disposal. The excavated soil / debris will be disposed by covered trucks to avoid Dust Nuisance in the Project and Surrounding Areas. Debris generated due to the dismantling of the existing pavement structure shall be suitably reused in the Proposed Construction, subject to the Availability of the Material and the Approval of Project Engineer. The Contractor shall suitably dispose of Unutilized Debris Material; either through filling up of Borrows Areas created for the Project or at Pre Designated Dump Locations, subject to the Approval of the Project Engineer. Debris generated from different Construction Activities shall be disposed of in such a way that it does not flow into the Surface Water Bodies or form Mud Puddles in the area.

## 13.1.4 Noise Pollution

As the Project involves significant uses of Heavy Machineries, Traffic Diversion, etc. hence Noise Concern will be a major issue during Construction Phase. But the Post Construction Scenario ensures a Better Environment in the Project Area, as the General Level of Noise Pollution in the Project Area will be significantly less than the Current



Chapter 13 - Environmental and Social Impacts

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Level due to Improvement in the Movement in Vehicular Traffic and Removal of Idling Time. The Consultant has collected existing Noise Level Data in and around the Project Area and is given in Table 13.2. To mitigate the Noise Impact, Direct Technical Remedies including Low Noise Road Surface, Road Covers and Roadside Noise Barriers will be provided. Noise Limits for Construction Equipment used in this Project (measured at one metre from the edge of the equipment in free field) such as Compactors, Rollers, Front Loaders, Concrete Mixers, Cranes (movable), Vibrators and Saws will not exceed 75 dB (A), as specified in the Environment (Protection) Rules, 1986. Notwithstanding any other Conditions of Contract, Noise Level from any Item of Plant (s) must comply with the Relevant Legislation for Levels of Noise Emission. The Contractor will ensure that the AAQ Concentrations as these Construction Sites are within the Acceptable Limits of Industrial Uses in case of Hot Mix Plants and Crushers and Residential Uses around Construction Camps. Noisy Construction Operations in Residential and Sensitive Areas (Hospitals, Schools and Religious Places) should be restricted between 0730 hrs. and 1800 hrs. Preventive Maintenance of Construction Equipment and Vehicles would be done to meet Emission Standards and to keep them with Low Noise. Earplugs will be provided to Operators of Heavy Machinery and Workers in near vicinity. Material Transport should be uniformly distributed during nights to minimize Noise Impacts.

Part of the Costs, particularly the Implementation of Environmental Measures is included in the Unit Rates for the Works and is responsibility of the Contractor.

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## **Table 13.2**

# **Existing Noise Level Monitoring**

Date of Sampling
Instrument used for Monitoring
Permissible Limits

17 - 04 - 2013 .

Sound Level Meter Lutron SL - 4001

75 dB (A) – Day Time 70 dB (A) – Night Time

Sl. No.	Time Interval	Noise Level in dB (A)
1	0600 hrs. to 0700 hrs.	70.5
2	0700 hrs. to 0800 hrs.	71.1
3	0800 hrs. to 0900 hrs.	73.4
4	0900 hrs. to 1000hrs.	73.7
5	1000 hrs. to 1100 hrs.	74.2
6	1100 hrs. to 1200 hrs.	74.9
7	1200 hrs. to 1300 hrs.	73.5
8	1300 hrs. to 1400 hrs.	72.7
9	1400 hrs. to 1500 hrs.	72.5
10	1500 hrs. to 1600 hrs.	74.2
11.	1600 hrs. to 1700 hrs.	74.3
12	1700 hrs. to 1800 hrs.	74.5
13	1800 lams, to 1900 lams.	T5.24 1 70 4 (1974)
14	1,900 lams, to 2000 lams.	ETS.Schlagenerskerker
15	2000 Tames, to 2100 Tames.	AT2.5 4 3 4 5 4 5 5 6 5 6 5 6
16	2100 Jams. to 2200 Jams.	ALTOS FINANCIA PARTICIPANT

13.2 Social Impact

The Direct and Indirect Job Opportunities that will be provided by the Project can be considered as a Positive Aspect. The Local People will be directly employed to work at the Construction Sites and others will be employed in Sectors of the Economy, which have been developed by the Road such as the Service Sectors. Some individuals may gain skills that can be applied in other Road Construction Projects

Contract Documentation will be crafted in such a way that the Construction Work does not cause undue Inconvenience to Residents, especially the Sick and Old People. Removal of Construction Debris promptly from the Site falls within the Scope of Work of the Contractor. Asphalting, the Major Work, involved in the Road Construction would invariably be carried out during the nights with Proper Inspection Team supervising the Process.

The table below summarizes the Negative Environmental and Social Impacts and Mitigation / Benefit Enhancement Measures for the Negative Impacts, as well as the responsible body to implement the measures.

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Type of Impact	Mitigation Measure	Responsible Body for Implementation
Impact on Settlement	Minimize the Risk at the Road particularly in a Dense Settlement Area.	Consultant and Contracto
	Allow Affected Persons to Salvage Building Materials and other Assets.	BBMP and Contractor.
	Pay Compensation and Resettle the Affected People.	BBMP.
Impact on Health	Do not Induce Water Related Diseases by creating Temporary and Permanent Water Holding Areas, which favour Mosquitoes.	BBMP and Contractor.
	Minimize Dust Emission by Watering the Road during Construction.	Contractor.
	Put Visible and Appropriate Warning Signs on the Road during Construction.	Contractor.
Impact on Existing Infrastructure	Relocate Power Lines, Telephone Lines and Water Points before Commencing of the Road Construction and in few cases during the Construction Phase.	Utility Companies ar Contractor.
Impact on Cultural, Religious and Archeological Resources	Design Roads to avoid such Sensitive Places.	Design Consultant.
Road Safety during Construction and	Install Road Safety Signs at all Accident Prone Spots as Installation / Erection of Safety Signs.	Traffic Police / Contractor
Operation Phase	Provide Traffic Awareness.	Contractor in collaboration with Traffic Police of the Area and Local NGO.
	Use Clear, Properly Labelled and Meaningful Traffic Signs and Speed Limits, especially at Pedestrian Road Crossing.	Contractor in collaboration with Traffic Police of the Area.
	Assign Traffic Personnel to regulate the Passage of Construction Vehicles (carrying debris as well).	Contractor in collaboration with Traffic Police of the Area.
Application social states of the first section of the section of t	Construct Half of the Road while the other is used for Traffic where feasible.	BBMP and Contractor.
Social Impact from Migrant Workers	Construction Workers will be given Health Awareness.	NGOs in collaboration with the Contractor.
	Avoid accommodating Labour Force in or directly adjacent to Construction Sites.	Contractor:
Medi	Recruit Work Force from the Local Community giving more chances to Women.	BBMP and Contractor.

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Traffic Engineering Cell (Road Infra)
Bruhat Bangalore Mahanagana and Infra)

Bruhat Bangalore Mahanaga Sand Jore - 560 002

Chapter - 14 Financial and Operating Plan ರಾಖಲೆಯನ್ನು ಮಾಹಿತಿ ಪಕ್ಕು ಕಾಯ್ದೆ 2005ರ ಅಡಿಯಲ್ಲಿ ನೀಡಲಾಗಿದೆ Chapter 14 - Financial and Operating Plans

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# CHAPTER 14 FINANCIAL AND OPERATING PLANS

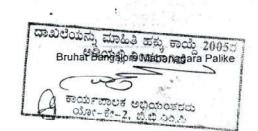
Construction and Maintenance of Road Infrastructure within City Limits is the Obligatory Function of the Local Body, BBMP. The Road Projects when implemented would not generate Additional Revenue for the BBMP. Thus, it is a Social Infrastructure Project attempting to improve the Transport System, which is one of the Backbone Infrastructures for the City's Economy. Traditionally, the BBMP has been undertaking Revamping of Roads, Widening and Construction of Grade Separators based on availability of Funds. Thus, though a Priority List of Roads await Reconstruction, due to Lack of Funds the Condition of the Road Network in the City has become unacceptably bad affecting the normal movement of vehicles. These Characteristics of the Project lend itself for Grants, Aid and Soft Loans. Not withstanding the above Social Aspects, the BBMP would provide appropriate support to the Project by Means of Initial Seed Amount and through Budget Provision to support the Operation and Maintenance of the Road Network once constructed. The Portfolio of Roads that the BBMP would be focusing on is the Arterial Roads that run from North to South as well as from East to West. These are the Feeder Roads to the layers of Ring Roads that surround the Bangalore City.

Since, the BBMP has been implementing Road Projects on an ongoing basis, the Estimation of Costs and Times for the Proposed Projects approved by the BBMP would be Realistic and close to Actual Implementation. The Operating Plan takes into consideration of the Implementation Schedule of each of the Projects.

The BBMP is entitled to receive a Part of the Cess already being levied on Fuel for the Mass Rapid Transit System termed as the Core Transport Sector Initiative. Consideration by the Government to part release the Collection under the Cess would help the BBMP financially to fund the Priority Road Projects.

The Cash Flow Chart (last 5 years on Actual basis and Projections for the next 20 years) and Debt and Loan Schedule furnished by the BBMP are given in Table 14.1 and Table 14.2 respectively.





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			77-74				an a			-ario	10		Œ.								STATE OF	-
						maker 1	Long Term		Situatio	Debt Situation of BBMP (Rs. in Lakh)	MP (Rs.	in Lakh	-							18.899		_
Ĉ.	Details	of Loan	Details of Loan & borrowings	Ings		Overall	10000000000000000000000000000000000000						Re	payme	Repayment Schedule	dule						-
Loan	Source	Year Taken	Original Loan Amount	Terms in brief	loan tenure	Total Loan Outstanding	2009	2010	2011	2012	2013	2014	2015	2016 2	2015 2016 2017 2018	18 2019	2020	2021	2022	2023	2024 2	2025 2026
Loan 1 vij	vijaya bank	2010	7500	10.95		9 7703	8	307	836	1350	1774	1654	1535	1489 1	1370 12	1250 59	591					-
Loan 2 Co	corporation bank	2009	12500	12.25	Little of the Control	5 8308	8 3874	1197	3383	5259	4743	2198			1							-
Loan 3 Co	corporation bank	2010	20000	10.65		9 19804	4	1006	2287	3873	4838	4387	4092	3809	3537. 32	3265 1543	6				1	
Loan 4 ba	syndicate bank	2009	15000	=	•	9 9141	1 1564	1505	4037	3756	3474	3192	2780				-				o name	
Loan 5 ba	syndicate bank	2009	20000	<b>.</b>	9	9 11912	2 1201	5130	51489	4787	4426	4066	1901				1.			- 10-		
Loan 6 ba	syndicate bank	2010	30000	10.75	σ,	9 26342	2	2849	46	969	6552	6145	5739	5484 5	5077 4404	. 40	<del> </del>					
Loan 7 ca	canara bank	2010	12500	12		9 11874	4	1218	2403	302	2810	2600	239	2258 2	2048 48	481	-					-
Loan 8 ca	canara bank	2010	20000	11.25	6	45555	2	4749	5375	12230	11460 10700	10700	9927	9447 8	8679 7903	03						+
Loan 9 ca	canara bank	2010	7500	1	ົ້	7396	9	311	787	1048	1761	1648	1535	1493	1381 1268	68 884	4					-
Loan 10 ca	canara bank	2010	10000	11	6	10201	I	310	1050	1399	2350	2200	2049	1993	1842 1692	92 1160	0	·				
Loan 11 Hu	Hudco Bank	2012	20000	12	6	200000	0					3846	3846	3846 38	3846 3846	46 3846	6 3846	3846	3846	3846	3846 3	3846 3846
Loan 12 Hu	Hudco Bank	2012	24954	12	6	3 23724	4		1818	2424	2424	2424	2424 2	2424 24	2424 2424	24 2424	4 2424	2424	2424			-
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5 Total loan outstanding includes pricipal and interest 4 Original loan amount to cover only principal

	DEIGHIS OF LL	Details of Loans & borrowings	rowings	Aging Analysis (in Years)	s (in Years)
Loan	Source	Year Taken	Total Loan Outstanding	Salves 19	×10 ×10
Loan 1	vijaya bank	2010	7703		
Loan 2	corporation bank	2009	. 8308	ing the second	2.
Loan 3	corporation bank	2010	. 19804		
Loan 4	syndicate bank	2009	9141		
Loan 5	syndicate bank	2009	11912		
Loan 6	syndicate bank	2010	26342		and the SA
Loan 7	canara bank	2010	. 11874		# 150 150 151
Loan 8	canara bank	2010	45555		
Loan 9	canara bank	.2010	7396		
Loan 10	Loan 10 canara bank	2010	10201	Donate and the second s	
Loan 11	Hudco Bank	2012	200000		Lacomatours
Loan 12	Hudco Bank	2012	23724		

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## CHAPTER 15 IMPLEMENTATION PLAN

The entire Project Period has been divided into two parts viz.

- 1. Tendering Stage and Finalisation of Contract.
- 2. Execution of the Project including Utility Shifting.

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The 1st Part will entail a period of 180 Days whereas the 2nd Part will entail a period of 915 Days.

Thus, the Total Time to handover the Project to the BBMP will be 1095 Days from the Date of Notice Inviting Tender.

The Detailed Implementation Plan for the Project is attached in Annexure A.15.1.



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Traffic Engineering Celly

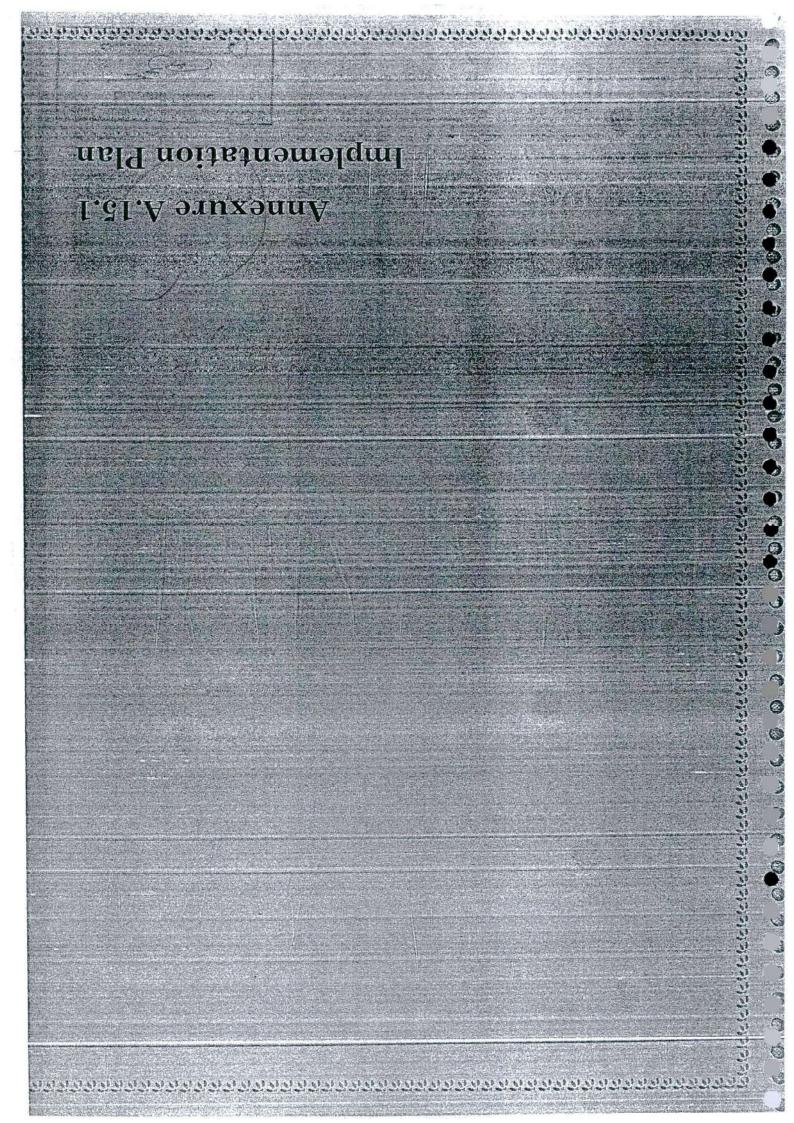
Bruhath Bangalore Mahanagara Palike

Executive Engineer

Traffic Engineering Cell (Road Infra) Bruhat Bangalore Mahanagara Palike Bangalore - 560 002.

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Chapter - 16 Community Participation in the Project

# CHAPTER 16 COMMUNITY PARTICIPATION IN THE PROJECT

Any Infrastructure Development Activities of BBMP are planned and implemented through Community Participation Process. Local Government Institutions at various levels are involved in the Implementation of Projects. Moreover, NGOs are involved to assist BBMP in Social Mobilization Aspects for Planning and Implementation of the Project. As a part of Participatory Development, Beneficiary Groups and User Committees, such as Labour Contracting Society, Market Management Committee, Road User's Committee, Water Management Committee, Local Resident Association, etc. have been consulted under various Projects of BBMB. Involvements of the Private Sector, Local Government Institutions, NGO and Beneficiary Groups have significantly contributed to Smooth Planning, Implementation and Operation / Maintenance of Infrastructure Development Schemes of BBMP at the Local Level. Consultation with various Stakeholders has been an Integral Part of Project Formulation Phase (People have been interviewed along the route, including Elders and Elected Members of the Community, have given a positive reaction to Road Improvement. The Project Corridor is very important in terms of connecting the National and State Highways with Core Areas of the City/ Social Acceptability of the Project Corridor is very high. my moself Ingain, actions of quality granter [ 200 bland.

• This Project will have many Positive Impacts on Beneficiary Livelihoods and in the log Potential Economic Expansion of the Region. Beneficiaries of this Project include Bangalore Metropolitan Transport Corporation (BMTC) Authority, Commuters using this stretch of road, Local People in and around of the Project Area.

Public Opinion with regard to Public Projects cannot be ignored. It plays a very important Role in the Decision Making Process. Given the Chaotic Road Traffic in and around the Project Corridor, Public Opinion Survey has been conducted on the basis of a Sample of Cross Section of Intelligentsia drawn from Lawyers, Doctors, Engineers, Academicians, Journalists, etc. the Opinion Makers in Urban Situation. Interactive Sessions with NGOs and Various Members of the City Public also formed part of the Exercise in this Direction.

Prior Information to the Public, before the Start of the Work, regarding the Project will be given through Paper Notification.

Boards, comprising Important Data regarding the Project (such as Project Name, Name of the Agency executing the Work, Name of Local Government Body taken up the Project, Date of Commencement of the Project, Projected Date to Complete the Work, etc.) for notifying people will be displayed at the major junctions in and around the Project Area.

Adequate Actions to direct and regulate Traffic shall be taken in consultation with BBMP
/ Traffic Police to prevent jamming roads during Construction Period. While planning
alternative routes, care shall be taken to minimize Congestion and Negative Impacts on
Sensitive Receptors such as Schools and Hospitals. Traffic Controls and Diversions
marked with Signs and Lights and Other Measures (flags) should be provided. Prior to

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Chapter 16 - Community Participation in the Project

April 2013

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creating Diversions and Detours, the Citizens will be consulted well in advance through Citizen's Meetings. It should be an informed decision taken through Public Participation. The Temporary Traffic Detour will be cleaned regularly.

- Another significant aspect of the Construction of Elevated Corridor along 100ft. Inner Ring Road would be its Severe Dislocation Effect on the Existing Public Utilities like Electrical System Network (including Street Lighting), Sewerage Lines and Water Supply Network, etc. as the Project Stretch is located in thickly developed Residential and Commercial Area of Bangalore. As the Public Utility Network are very vital for a normal functioning of an Urban Metropolis, a Detailed Survey of Existing Utilities and their Diversion or Reinstallation on a temporary or permanent basis should be planned in a proactive manner and organized with minimum loss of time and inconvenience to the community. Prior Information through Paper Notification will be given to the affected area people before Shifting any Utilities.
- The Project is judged to be Environmentally and Socially Acceptable.

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Chapter – 17 Conclusion Chapter 17 - Conclusion

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## CHAPTER 17 CONCLUSION

- The Project Corridor, located in the South East Quadrant of Bangalore City, is a part of 17.1 100ft. Inner Ring Road and it connects Koramangala with Old Airport Road, Indira Nagar, Marathalli and National Highway No. 4 (Old Madras Road) at Indira Nagar near BDA Shopping Complex through Defence Area on northern side and with Madiwala, National Highway No.7 (Hosur Road), Electronic City on southern side and the Volume of to and fro Vehicular Traffic between Indira Nagar and Electronic City along the Project Corridor is very significant. At present the to and fro Vehicular Traffic between Indira Nagar and Electronic City is moving smoothly between Domlur Flyover and Ejipura Main Road - Inner Ring Road Junction but the same Traffic while moving between Ejipura Main Road - Inner Ring Road Junction and Hosur Road Junction near Kendriya Sadana is facing lot of hindrances to move further due to existence of Cross Roads at almost every 30m across the Project Corridor. Further, many Improvement Proposals have been proposed and are being proposed by Urban Local Bodies in order to improve the Level of Service along Hosur Road Corridor. With this, the only left out link will be between Ejipura Main Road - Inner Ring Road Junction and Hosur Road Junction near Kendriya Sadana that needs immediate attention. In view of these, BBMP wants to elevate the Traffic between Ejipura Main Road – Inner Ring Road Junction and Hosur Road Junction near Kendriya Sadana in order to provide this significant volume of traffic a smooth connectivity and to ease the Vehicular Traffic Movement at Grade in order to reduce the Idle Time and Accidents. As a part of this Elevated Corridor Proposal the Major Junctions that will be tackled along 100ft. Inner Ring Road are
  - Ejipura Main Road Inner Ring Road Junction: Four Arm Junction.
  - · Sony World Junction: Four Arm Junction.
  - Kendriya Sadana Junction Four Arm Junction.

Kendriya Sadana Junction is located at about 500m away from NH - 7 (Hosur Road), Ejipura Main Road - Inner Ring Road Junction is located at about 5.5 km away from NH - 4 (Old Madras Road), the Distance between Kendriya Sadana Junction and Sony World Junction is about 1.3km and the Distance between Sony World Junction and Ejipura Main Road - Inner Ring Road Junction is around 680m.

Traffic Intensity at Ejipura Main Road – Inner Ring Road Junction is 8157 PCU / hr. during Morning Peak Hour between 0900 hrs. and 1000 hrs. and 9303 PCU / hr. during Evening Peak Hour between 1800 hrs. and 1900 hrs.

Traffic Intensity at Sony World Junction is 10920 PCU / hr. during Morning Peak Hour between 0900 hrs. and 1000 hrs. and 11473 PCU / hr. during Evening Peak Hour between 1800 hrs. and 1900 hrs.

Traffic Intensity at Kendriya Sadana Junction is 7455 PCU / hr. during Morning Peak Hour between 0900 hrs. and 1000 hrs. and 6820 PCU / hr. during Evening Peak Hour between 1800 hrs. and 1900 hrs.

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### 17.2 Concept Proposals

The Proposal for Corridor Improvement Scheme includes Junction Improvements by proposing Elevated Corridor by integrating Major Junctions like Ejipura Main Road – Inner Ring Road Junction, Sony World Junction and Kendriya Sadana Junction along with one Up Ramp and one Down Ramp at Kendriya Sadana Junction; Widening of existing Carriageway; Link Improvements such as Provision of Footpath, Pedestrian Crossing Facilities; Construction of Drain; Upgradation of Utilities; Improvement to existing Culvert over Storm Water Drain; Provision of Effective Illumination; Lane Marking; Provision of Studs and Delineators; etc.

4 lanes divided bi directional Elevated Corridor has been proposed along 100ft. Inner Ring Road by integrating Major Junctions like Ejipura Main Road – Inner Ring Road Junction, Sony World Junction and Kendriya Sadana Junction along with one Up Ramp and one Down Ramp at Kendriya Sadana Junction. Slip Road of 10.5m Width and Footpath of minimum Width 2.5m have been proposed on either side at Grade Level. Obligatory Spans of various dimensions based on the existing Site Conditions have been proposed at Ejipura Main Road – Inner Ring Road Junction, Sony World Junction, Koramangala 8th Main Road Junction, Koramangala 60ft. Road Junction, Koramangala 5th Block 1A Cross Road Junction, Koramangala BDA Complex Junction and Kendriya Sadana Junction to take care of the Vehicle Turning Movements at Grade.

### 17.3 Project Cost

As part of DPR, Detailed Cost Estimate has been prepared for the Elevated Structure and Surface Level Roads based on the Detailed Engineering Design. To accommodate the proposed Elevated Corridor Scheme along 100ft. Inner Ring Road, 4819.257 Sqm of land needs to be acquired. The Construction Cost of the Elevated Corridor is Rs. 15223.75 Lakh and the total Cost of the Project including Utility Shifting and Land Acquisition Cost is Rs. 21404.00 Lakh with 30 months as Implementation Period.

17.4 The Proposed Elevated Corridor Scheme along 100ft. Inner Ring Road by integrating Ejipura Main Road – Inner Ring Road Junction, Sony World Junction and Kendriya Sadana Junction after implementation would provide Better Flow to the to and fro Vehicular Traffic commuting between Ejipura Main Road – Inner Ring Road Junction and Hosur Road Junction near Kendriya Sadana along 100ft. Inner Ring Road with Improved Level of Service associated with Reduction in Vehicle Operation Cost (due to Improved Flow Conditions, Improved Speeds, Reduced Delays, Reduced Air and Noise Pollution). The Improvement Proposal would contribute significantly to Urban Transport Infrastructure Facility of Bangalore.

It is very important to preserve and maintain the Infrastructure created for the Corridor Improvement Proposals along 100ft. Inner Ring Road and Street Furniture in good / traffic worthy condition even after the Construction by Periodic and Routine Maintenance as per the Standard Practices to preserve the Precious Infrastructure Assets created.

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As the Roads Revamping proposed under this Study would not be amenable to levy User Charges hence there would be no direct Revenue Generation from the Project. However, there would be significant Saving in both Fuel and Overall Cost to the Road Users that would indirectly increase the Vehicle Population and Economic Activities that add income to the Government.

The Clear Benefits that will be accrued due to the Proposed Elevated Corridor Scheme along 100ft. Inner Ring Road, Koramangala, Bangalore are as follows.

- Improved Traffic Flow along the Project Corridor.
- Improved Traffic Flow allowing greater Volume of Traffic at the Junctions at Grade Level covered by the Elevated Corridor.
- Reduced Congestion resulting in Improved Environment.
- Better Road Safety for all Users including Pedestrians.
- · Good Road Conditions enabling Optimal Speed and Better Fuel Efficiency.
- · Deterred unacceptable Road User Behavior.
- · Saving in Travel Time.
- · Reduced Vehicle Emissions and enhanced Air Quality.
- Saving in Vehicle Operation Cost.
- · Improved Economic and Social Development.

The Estimation of User Benefits in terms of Time Savings and Vehicle Operating Cost Savings has been done as per IRC: SP – 30 "Manual on Economic Evaluation of Highway Projects in India". With the Implementation of Elevated Corridor Scheme, Benefits have been assessed by comparing the User Costs in the 'with' and 'without' Project Scenario. First year Benefit in the Post Elevated Corridor Scenario is Rs. 6750.96 Lakh with 31.48% IRR at the end of year 2033. Hence it is viable to take up the Project.

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Traffic Engineer

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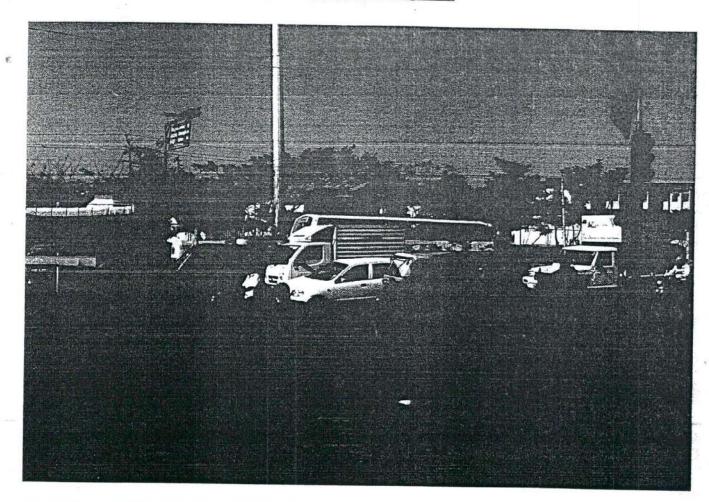
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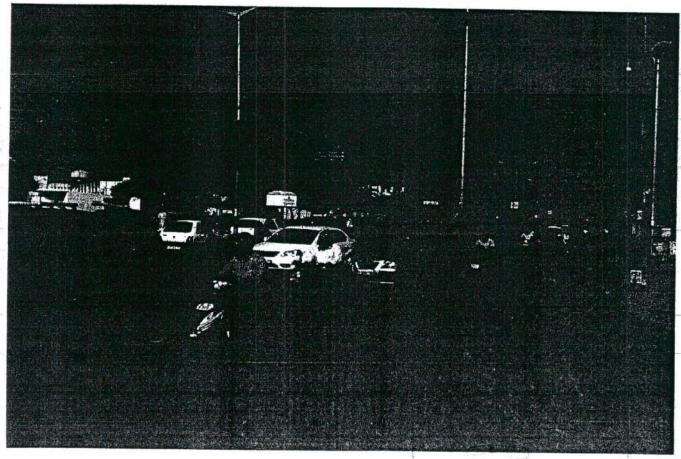
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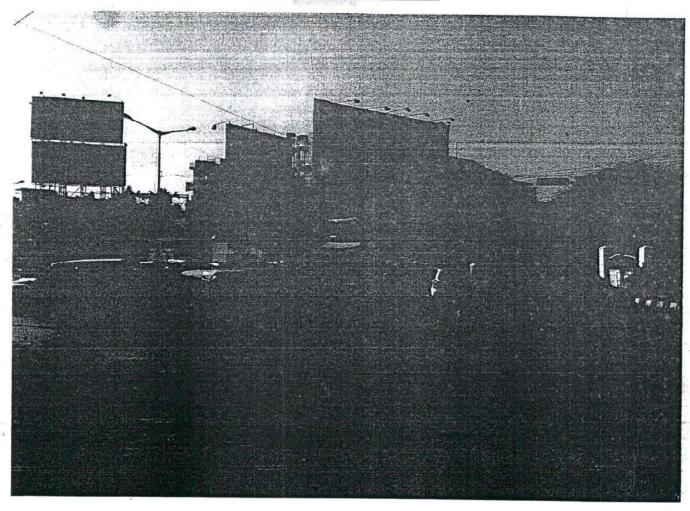
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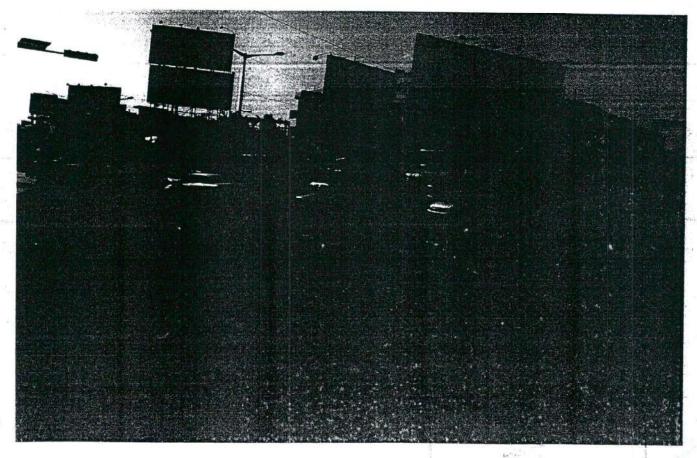
Existing Views of Project Corridor at Ejipura Main Road - Inner Ring Road Junction, Koramangala, Bangalore





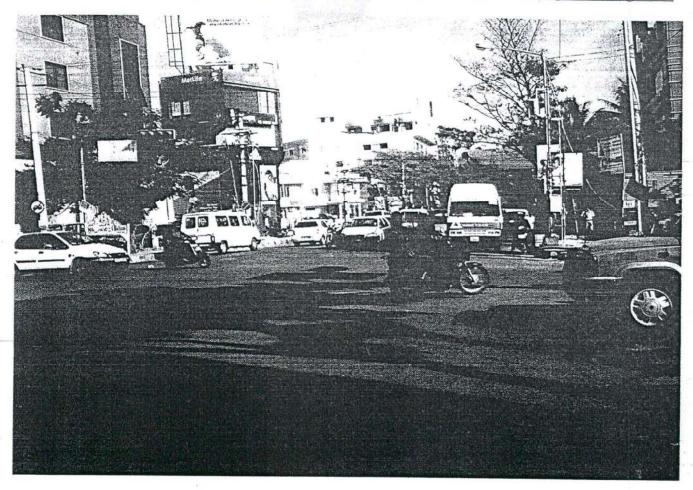
Existing Views of Project Corridor at Ejipura Main Road - Inner Ring Road Junction, Koramangala, Bangalore

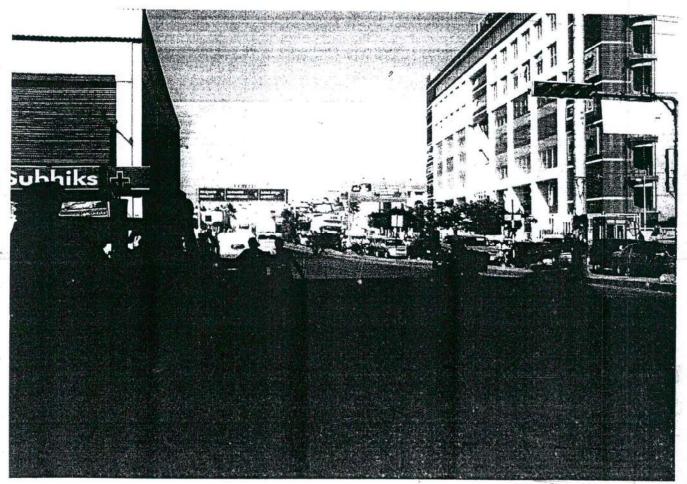




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Existing Views of Project Corridor at Sony World Junction, Koramangala, Bangalore





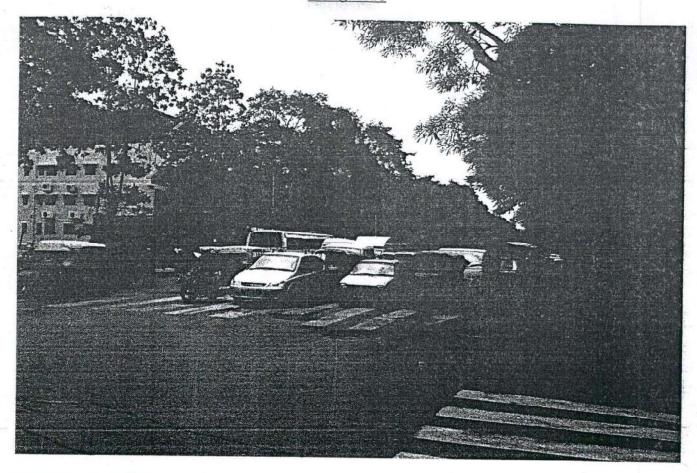
Existing Views of Project Corridor at Sony World Junction, Koramangala, Bangalore



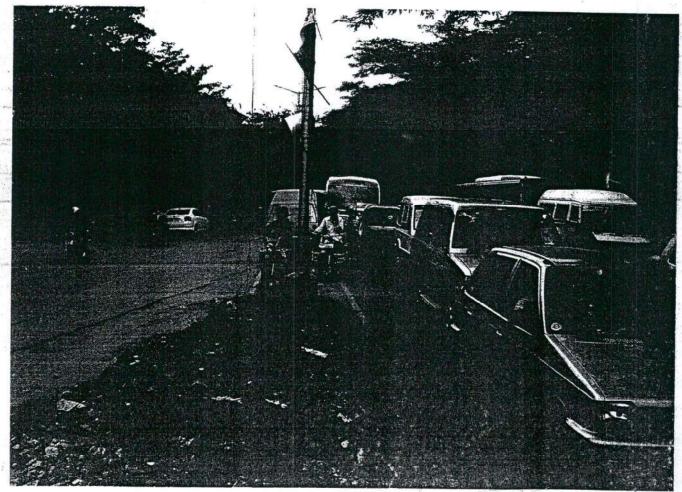


Existing Views of Project Corridor at Kendriya Sadana Junction, Koramangala,

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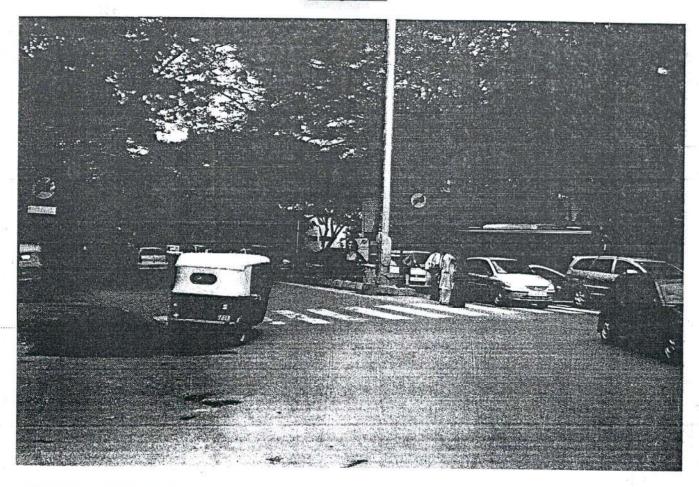


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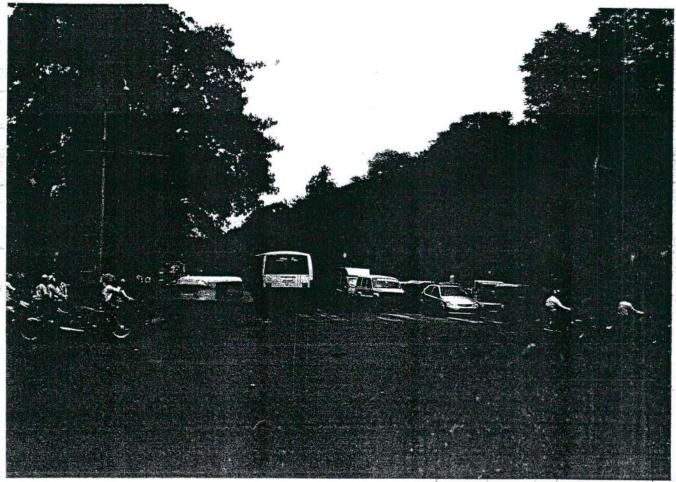


Existing Views of Project Corridor at Kendriya Sadana Junction, Koramangala,

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Chapter - 19 Drawings