15 -ാം കേരള നിയമസഭ

13 -ാം സമ്മേളനം

നക്ഷത്ര ചിഹ്നം ഇല്ലാത്ത ചോദ്യം നം. 2257 **03-03-2025 - ൽ മറുപടിയ്ക്ക്**

ചെറായി ദേവസ്വംനട ജംഗ്ഷൻ വികസന പദ്ധതി

ചോദ്യം		ഉത്തരം	
ശ്രീ. കെ.എൻ. ഉണ്ണികൃഷ്ണൻ		**ശ്രീ. എം.ബി. രാജേഷ് (തദ്ദേശ സ്വയംഭരണ - എക്സൈസ് - പാർലമെന്ററികാര്യ വകുപ്പ് മന്ത്രി)**	
(എ)	24.02.2010-ലെ 24-ാമത് ജനറൽ കൗൺസിൽ അംഗീകാരം നൽകിയ ചെറായി ജംഗ്ഷൻ ബൈപ്പാസ് ഉൾപ്പെടെയുള്ള ചെറായി ദേവസ്വംനട ജംഗ്ഷൻ വികസന പദ്ധതി നാളിതുവരെ നടപ്പാക്കാത്തതിന്റെ കാരണം വിശദമാക്കുമോ;	(എ)	ചെറായി ദേവസ്വം നട ബൈപാസ് വികസനം നടപ്പാക്കുന്ന പ്രവർത്തിക്കായി 24/2/2010 ൽ കൂടിയ ജിഡ ജനറൽ കൗൺസിൽ തീരുമാന പ്രകാരം KITCO യെ ചുമതലപ്പെടുത്തിയിരുന്നു. പള്ളിപ്പുറം പഴയ പഞ്ചായത്ത് ഓഫീസിന്റെ കിഴക്കു ഭാഗത്തു നിന്നും ആരംഭിച്ചു വസ്തേരി തോട് പാലത്തിനു സമീപം എത്തിച്ചേരുന്ന വിധത്തിൽ KITCO തയ്യാറാക്കി സമർപ്പിച്ചിരുന്ന നിർദേശം നടപ്പിലാക്കുന്നതിനായി ഡിസ്ട്രിക്ട് കളക്ടർ & ജിഡ സെക്രട്ടറിയും, പഞ്ചായത്ത് പ്രധിനിധികളും പങ്കെടുത്തിരുന്ന ജില്ലാ കളക്ടറുടെ ക്യാമ്പ് ഓഫീസിൽ വച്ച് 18/8/2011 ൽ കൂടിയ യോഗത്തിൽ ധാരണയായിട്ടുള്ളതാണ്. ഇത് പ്രകാരം കമ്മിറ്റി തീരുമാനം പഞ്ചായത്തിൽ നിന്നും സമർപ്പിക്കണമെന്ന് പഞ്ചായത്തിനോട് ജിഡ 21/12/2013 ലെ ജിഡ/1025/2008-vol-ll നമ്പർ കത്ത് പ്രകാരം ആവശ്യപ്പെടുകയും, പഞ്ചായത്തു കമ്മറ്റിയുടെ 24/12/2013 തീയതിയിലെ 2(6) നമ്പർ തീരുമാനമായി പള്ളിപ്പുറം പഴയ പഞ്ചായത്തു ഓഫീസിന്റെ കിഴക്കു ഭാഗത്തു നിന്നും ആരംഭിച്ചു വസ്തേരി തോട് പാലത്തിനു സമീപം എത്തിച്ചേരുന്ന വിധത്തിൽ കിറ്റ്കോയോട് ഭൂമി സംബന്ധമായ വിശദാംശങ്ങളും സർവേ സ്കെച്ചും അടക്കം വിശദമായ റിപ്പോർട്ട് സമർപ്പിക്കണമെന്ന് കത്ത് മുഖാന്തിരം ആവശ്യപ്പെട്ടിരുന്നു. എന്നാൽ ഭൂമി സംബന്ധമായ വിശദാംശങ്ങൾ കിറ്റ്കോ നാളിതുവരെ നല്കിയില്ല.
(ബി)	ജിഡയുടെ ജനറൽ കൗൺസിൽ തീരുമാന പ്രകാരം കിറ്റ്കോ തയ്യാറാക്കി പള്ളിപ്പുറം ഗ്രാമപഞ്ചായത്ത് കമ്മിറ്റി അംഗീകാരം നൽകിയ ഫീസിബിലിറ്റി റിപ്പോർട്ടിന്റെ അടിസ്ഥാനത്തിൽ കിറ്റ്കോ തയ്യാറാക്കി സമർപ്പിച്ച എസ്റ്റിമേറ്റിൽ സ്വീകരിച്ചിട്ടുള്ള	(ബി)	റോഡ് നിർമ്മാണത്തിന് 56,79,390/-, Utility shifting -3,00,000/-, Land Aquisition-4,77,05,000/-, Service Tax/ Unforseen Items എന്നിവ ഉൾപ്പടെ 5,42,00,000/- രൂപയുടെ എസ്റ്റിമേറ്റ് സമർപ്പിച്ചിട്ടുണ്ടെങ്കിലും വിശദമായ സർവ്വേ

	നടപടികൾ എന്തൊക്കെയാണെന്ന് വിശദമാക്കാമോ;		സ്കെച്ച് ലഭ്യമാകാത്തതിനാൽ തുടർ നടപടികൾ സ്വീകരിക്കാൻ സാധിച്ചില്ല.
(സി)	പ്രസ്തുത പദ്ധതിക്ക് സർക്കാരിന്റെ ഭരണാനുമതി ലഭ്യമായിട്ടുണ്ടെങ്കിൽ ആയതിന്റെ പകർപ്പ് ലഭ്യമാക്കാമോ; ഇല്ലെങ്കിൽ ഭരണാനുമതി ലഭ്യമാകാത്തതിന്റെ കാരണം വ്യക്തമാക്കാമോ;	(സി)	പ്രസ്തുത പദ്ധതിക്ക് സർക്കാർ ഭരണാനുമതി നൽകിയിട്ടില്ല. ഭരണാനുമതി നൽകുന്നതിനായി സർക്കാരിൽ ശിപാർശ ലഭിച്ചിട്ടില്ല.
(ഡി)	പ്രസ്തുത പദ്ധതി എന്നത്തേക്ക് ആരംഭിക്കാൻ സാധിക്കുമെന്നും എന്തൊക്കെ നടപടിക്രമങ്ങളാണ് പൂർത്തീകരിക്കേണ്ടതെന്നും വിശദമാക്കാമോ;	(ഡി)	ഈ പദ്ധതിക്കു വേണ്ടി പുതിയതായി സർവ്വേ സ്കെച്ച് തയ്യാറാക്കേണ്ടതും, അതുപ്രകാരം എസ്റ്റിമേറ്റ് പുതുക്കി ജില്ല ജനറൽ കൗൺസിൽ അംഗീകാരത്തോടെ ഭരണാനുമതി ലഭ്യമാക്കിയാൽ മാത്രമേ തുടർ നടപടികൾ സ്വീകരിക്കാനാകൂ.
(ഇ)	പ്രസ്തുത പദ്ധതി സംബന്ധിച്ച ജില്ല ജനറൽ കൗൺസിലിന്റെയും പഞ്ചായത്ത് കമ്മിറ്റിയുടെയും തീരുമാനങ്ങളുടെയും കിറ്റ്കോ സമർപ്പിച്ച എസ്റ്റിമേറ്റിന്റെയും പകർപ്പുകൾ ലഭ്യമാക്കുമോ?	(ഇ)	ജനറൽ കൗൺസിൽ തീരുമാനം, പഞ്ചായത്ത് കമ്മറ്റി തീരുമാനം, കിറ്റ്കോ സമർപ്പിച്ച എസ്റ്റിമേറ്റ് എന്നിവയുടെ പകർപ്പ് യഥാക്രമം Annexure 1, Annexure 2, Annexure3 എന്നിവയായി ഉൾപ്പെടുത്തിയിരിക്കുന്നു.

സെക്ഷൻ ഓഫീസർ

2. To approve the anticipated expenditure of Rs.0.92 crores for Cheriamthuruth road and Rs.1.43 crores for Pizhala road.
3. To obtain detailed estimate for the Cherianthuruth - Chenur bridge and Pizhala - Chenur bridge and to agree in principle the anticipated expenditure of Rs. 9.06 crores and Rs. 3.2 crores respectively for the two bridges.
4. Authorized Secretary, GIDA to take further necessary action as required.

6.0 Improvements to Cherai Devaswom nada Junction
(GIDA/1025/08)

The President Pallipuram Gramapanchayat vide his lr.dt.14.11.09 to Sri. S.Sharma , Hon'ble Minister for fisheries and Registration has requested approval of the proposal submitted by Panchayat for Cherai Devaswom nada Junction by constructing by pass road and acquiring 2.2 acres of land for auto/tempo/taxi/traveler stand. Pallipuram Gramapanchayat vide vide resolution No. V(24) dt.10.11.09 and the President vide lr.no.P-7556/2006 dt.1.12.2009 also requested for sanction of the above proposal and to issue orders freeze the land. This proposal was earlier submitted by the Panchayat and was placed in the 23rd GC held on 06.11.08 wherein it was suggested to consider the proposal along with the Master Plan for GIDA area. The GC has decided to prepare a Master Plan for GIDA area and entrusted KITCO to prepare the same. Therefore KITCO was requested to submit a report on the proposal now submitted by the Panchayat for Cherai Devaswom nada Junction improvement combined with construction of by pass road and parking area for auto/tempo/taxi/traveler including land requirement and land details. KITCO vide their lr.No5892:DP449:GR:2010 dt. 20.02.10 has submitted a feasibility report with details of the study conducted and traffic data. The recommendation as per the report is as follows "Considering the present traffic volume along this road and the developments in the Cherai beach and other developments in the Vypeen area, being envisaged in the master plan, roads need to be widened in general. Proper planned parking area for various vehicles, bus alighting bays are required near this junction. Designated parking area for 2 wheelers and cycles are also to be provided near this junction. The

upcoming/proposed projects in this location, design of circulation and junction in total are being done in detail. Hence exact location and details of land requirement for the total improvement of this junction cannot be finalized at this stage. A comprehensive proposal for the junction improvement including land requirement will be submitted upon completion of the above mentioned analysis and studies". The projects put forward by Panchayat or any department/agency for that matter in GIDA area should also conform to the development pattern/concept formulated for the Master Plan for GIDA area.

The GC may consider the above proposal and the feasibility report by KITCO

Decision taken :

1. **Decided to undertake the Cherai Devaswom nada Junction improvement**
2. **Decided to entrust KITCO to prepare a comprehensive proposal conforming with Master Plan with estimate including detailed land requirement for acquisition of land**
3. **Decided to acquire the land required for the project**
4. **Authorized Secretary to approach Government for sanction based on the comprehensive proposal to be submitted by KITCO and other necessary actions as required.**

7.0 Re - Constitution of Steering Committee for GIDA

(GIDA/206/2006)

The Government have constituted the Goshree Islands Development authority vide G.O.(Ms.) No.114/94/LAD dt.18th May 1994.

Government had earlier constituted a Steering Committee for GIDA comprising of General Council Members of GIDA vide GO (Rt.) No. 636/2002/LSGD dt.22.03.02. Certain changes have occurred as far members of the above committee are concerned. As the Committee is essential to address certain urgent needs of the Authority at times ; the Steering Committee may be re – constituted with the following composition.

1. Minister, Local Self Government and Rural Development : Chairman

പള്ളിപ്പുറം ....പഞ്ചായത്ത് GLM-88H/98

24.12.13 തീയതി നടന്ന സാധാരണ / അടിയന്തിര മീററിംഗിലെ

2(6) ാം നമ്പർ തീരുമാനം

സെക്രട്ടറി ജില്ലയുടെ 1025/2008-Vol-II തീയതി 21-12-13 ലെ കത്ത് കമ്മറ്റിയിൽ വായിച്ച് ചർച്ചചെയ്തു. പള്ളിപ്പുറം ഗ്രാമ പഞ്ചായത്തിലെ ചെറായി ദേവസ്വം നട വികസനവുമായി ബന്ധപ്പെട്ട് ജില്ല ഫണ്ടുപയോഗിച്ച് നടപ്പിലാക്കാൻ ഉദ്ദേശിക്കുന്ന പഴയ പഞ്ചായത്ത് ഓഫീസിന്റെ കിഴക്ക് വശത്ത് നിന്നും ആരംഭിച്ച് വസ്‌തേരി പാലത്തിന് സമീപം എത്തിച്ചേരുന്ന സർക്കാർ ഏജൻസിയായ കിറ്റ്കോയുടെ നിർദ്ദേശം നടപ്പിലാക്കുന്നതിന് പഞ്ചായത്ത് ഭരണസമിതി അംഗീകാരം നൽകി തീരുമാനിച്ചു. ടി വിവരം ജില്ല കളക്ടറെ അറിയിക്കുന്നതിന് സെക്രട്ടറിയെ ചുമതലപ്പെടുത്തിയും തീരുമാനിച്ചു.

OFFICE OF THE PALLIPURAM GRAMA PANCHAYAT CHERAI 683514

ശരി പകർപ്പ്

ഒപ്പ്
പ്രസിഡന്റ്

MIJOY MICHAEL .P
SECRETARY
PALLIPURAM GRAMA PANCHAYAT
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KITCO
the consultants

ESTIMATE REPORT

ON

PROPOSED BYPASS ROAD AT CHERAI JUNCTION

July 2013

Prepared by:

KITCO
the consultants

Femith's, P.B.No. 4407,
Puthiya Road, NH Bypass,
Vennala,
Kochi – 682 028.

KITCO LTD.

GOSHREE ISLANDS DEVELOPMENT AUTHORITY (GIDA)

NAME OF WORK : PROPOSED BYPASS ROAD AT CHERAI JUNCTION

SUMMARY OF COST

Sl. No.	Description	Amount (Rs.)
1	ROAD WORKS	5,679,390.90
2	UTILITY SHIFTING	300,000.00
3	LAND ACQUISITION	47,705,000.00
	TOTAL	**53,684,390.90**
4	UNFORESEEN ITEMS	68,914.05
5	CONSULTANCY AND SERVICE TAX (12.36%)	446,695.05
	GRAND TOTAL	**54,200,000.00**
(Rupees Five Crore and Forty two Lakh Only)		

NAME OF WORK: PROPOSED BYPASS ROAD AT CHERAI JUNCTION

ABSTRACT

Sl.No	Description	Unit	Qty	Rate	Amount
	PART 1- RAOD WORK				
1	Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned, up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness as per MoRTH specification 201 and as per the direction of Engineer in charge	Hec	0.22	44595.00	9,810.90
2	Cutting of trees, including cutting of trunks, branches and removal of stumps, roots, stacking of serviceable material with all lifts and up to a lead of 1000 metres and earth filling in the depression/pit as per MoRTH specification 201 and as per the direction of Engineer in charge				
a.	Beyond 300mm and upto 600mm girth.	EACH	10.00	331.00	3,310.00
b.	Beyond 600mm and upto 900mm girth.	EACH	5.00	567.00	2,835.00
3	Dismantling of flexible pavements and disposal of dismantled materials up to a lead of 1000 metres, stacking serviceable and unserviceable materials separately as per MoRTH specification 202 and as per the direction of Engineer in charge.	CUM	7.00	309.00	2,163.00
4	Excavation for roadwork in soil with hydraulic excavator of 0.9 cum bucket capacity including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transporting to the embankment location within all lifts and lead upto 1000m as per MoRTH specification 301 and as per the direction of Engineer in charge.	CUM	1650.00	43.00	70,950.00
5	Loosening of the ground upto a level of 500 mm below the sub-grade level, watered, graded and compacted in layers to meet requirement of table 300-2 for sub-grade construction as per MoRTH specification 305. 3.4. and as per the direction of Engineer in charge.	CUM	180.00	61.00	10,980.00

6	Construction of sub-grade and earthen shoulders with approved material obtained from borrow pits with all lifts & leads, transporting to site, spreading, grading to required slope and compacted to meet requirement of table No. 300-2 as per MoRTH specification 305 and as per the direction of Engineer in charge.	CUM	785.00	699.00	548,715.00
7	Construction of granular sub-base by providing coarse graded material, spreading in uniform layers with motor grader on prepared surface, mixing by mix in place method with rotavàtor at OMC, and compacting with vibratory roller to achieve the desired density, complete as per clause 401.	CUM	380.00	2529.00	961,020.00
8	Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechanical mix plant carriage of mixed Material by 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 as per MoRTH specification 412 and as per the direction of Engineer in charge.	CUM	380.00	2692.00	1,022,960.00
9	Providing and applying primer coat with bitumen emulsion on prepared surface of granular Base including clearing of road surface and spraying primer at the rate of 0.60 kg/sqm using mechanical means as per MoRTH specification 502 and as per the direction of Engineer in charge.	SQM	1850.00	27.00	49,950.00
10	Providing and applying tack coat with bitumen emulsion using emulsion pressure distributor at the rate of 0.20 kg per sqm on the prepared bituminous/granular surface cleaned with mechanical broom as per MoRTH specification 503 and as per the direction of Engineer in charge.	SQM	4100.00	10.00	41,000.00
11	Providing, laying and rolling of built-up-spray grout layer over prepared base consisting of a two layer composite construction of compacted crushed coarse aggregates using motor grader for aggregates. key stone chips spreader may be used with application of bituminous binder after each layer, and with key aggregates placed on top of the second layer to serve as a Base conforming to the line, grades and cross-section specified, the compacted layer thickness being 75 mm as per MoRTH specification 506 and as per the direction of Engineer in charge.	SQM	350.00	302.00	105,700.00

12	Providing and laying bituminous macadam with 100-120 TPH hot mix plant producing an average output of 75 tonnes per hour using crushed aggregates of specified grading premixed with bituminous binder, transported to site, laid over a previously prepared surface with paver finisher to the required grade, level and alignment and rolled as per clauses 501.6 and 501.7 to achieve the desired compaction as per MoRTH specification 504 and as per the direction of Engineer in charge.	CUM	155.00	8038.00	1,245,890.00
13	Providing and laying bituminous concrete with 100-120 TPH batch type hot mix plant producing an average output of 75 tonnes per hour using crushed aggregates of specified grading, premixed with bituminous binder @ 5.4 to 5.6 per cent of mix and filler, transporting the hot mix to work site, laying with a hydrostatic paver finisher with sensor control to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH specification clause No. 509 complete in all respects	CUM	63.00	11183.00	704,529.00
14	Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads @ 250 gms per sqm area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35 .The finished surface to be level, uniform and free from streaks and holes as per MORTH specification clause No. 803 complete in all respects	SQM	80.00	436.00	34,880.00
15	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 and lead of 1000 metres as per MoRTH specification 202 and as per the direction of Engineer in charge.				
	Cement Concrete Grade M-15 & M-20	Cum	2.00	479.00	958.00
16	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 and lead of 1000 metres as per MoRTH specification 201 and as per the direction of Engineer in charge.				
	Dry Rubble stone masonry	Cum	10.00	265.00	2,650.00

17	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 and lead of 1000 metres as per MoRTH specification 201 and as per the direction of Engineer in charge.				
	Cement Concrete Grade M-20 & above	Cum	1.00	865.00	865.00
18	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 and lead of 1000 metres as per MoRTH specification 201 and as per the direction of Engineer in charge.				
	Rubble stone masonry in cement mortar.	Cum	5.00	382.00	1,910.00
19	Dry rubble masonry Work for Foundation complete as per Drawing and Technical Specifications as per MoRTH specification 1400 & 1405 and as per the direction of Engineer in charge.	CUM	195.00	3814.00	743,730.00
20	Plain Cement Concrete M 20 in Open Foundation complete as per Drawing and Technical Specifications as per MoRTH specification 1500, 1700 & 2100 and as per the direction of Engineer in charge.	CUM	15.00	7639.00	114,585.00
	Sub Total Part 1				**5,679,390.90**
	PART 2 - Shifting Utility				
	Sub Total Part 2		LS		**300,000.00**
	PART 3 - Land Acquisition				
1	Cost for land acquisition,	Cents	65.00	700000.00	45,500,000.00
2	Cost for building 2 Nos	SQM	105.00	12000.00	1,260,000.00
3	Cost for compound wall	RM	315.00	3000.00	945,000.00
	Sub Toatl Part 3				**47,705,000.00**
	Part 1				**5,679,390.90**
	Part 2				**300,000.00**
	Part 3				**47,705,000.00**
	Total				**53,684,390.90**
	Unforeseen items				**68,914.05**
	Add Consultancy and service tax (12.36%)				**446,695.05**
	Grand Total			**Rs.**	**54,200,000.00**

(Rupees Five Crore and Forty two Lakh Only)

NAME OF WORK: PROPOSED BYPASS ROAD AT CHERAI JUNCTION

DETAILED ESTIMATE

Sl. No.	Description	Unit	Length	Breadth	Height	Quantity
1	Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned, up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.	Hec				
	Ch.0/00 to 0/140m widening of existing road	2	140.00	2.75		770.00
	Ch.0/140 to 0/290 new formation	1	150.00	9.00		1350.00
						2120.00
					Say	**0.22**
2	Cutting of trees, including cutting of trunks, branches and removal of stumps, roots, stacking of serviceable material with all lifts and up to a lead of 1000 metres and earth filling in the depression/pit.					
a.	Beyond 300mm and upto 600mm girth.	**Each**		**Ls**		**10.00**
b.	Beyond 600mm and upto 900mm girth.	**Each**		**Ls**		**5.00**
3	Dismantling of flexible pavements and disposal of dismantled materials up to a lead of 1000 metres, stacking serviceable and unserviceable materials separately					
		m3				
	Cutting B.T .edge	2	140	0.15	0.15	6.30
					Say	**7.00**
4	Excavation for roadwork in soil with hydraulic excavator of 0.9 cum bucket capacity including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transporting to the embankment location within all lifts and lead upto 1000m	**m3**				
	Ch.0/00 to 0/140m	2	140.00	2.75	0.60	462.00
	R W	2	140.00	0.70	0.50	98.00
	Ch:0/140 to 0/290m	1	150.00	8.00	0.90	1080.00
						1640.00
					Say	**1650.00**

5	Loosening of the ground upto a level of 500 mm below the sub-grade level, watered, graded and compacted in layers to meet requirement of table 300-2 for sub-grade construction.	**m3**				
	Ch.0/140 to 0/290	1	150.00	8.00	0.15	180.00
					Say	**180.00**
6	Construction of sub-grade and earthen shoulders with approved material obtained from borrow pits with all lifts & leads, transporting to site, spreading, grading to required slope and compacted to meet requirement of table No. 300-2	**m3**				
	Ch.0/00 to 0/140m	2	140.00	2.75	0.20	154.00
	Ch:0/140 to 0/290m	1	150.00	8.00	0.50	600.00
	side shoulder	2	290.00	0.50	0.10	29.00
						783.00
					Say	**785.00**
7	Construction of granular sub-base by providing coarse graded material, spreading in uniform layers with motor grader on prepared surface, mixing by mix in place method with rotavator at OMC, and compacting with vibratory roller to achieve the desired density, complete as per clause 401.					
	Ch.0/00 to 0/140m	2	140.00	2.75	0.20	154.00
	Ch:0/140 to 0/290m	1	150.00	7.50	0.20	225.00
						379.00
					Say	**380.00**
8	Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechanical mix plant carriage of mixed Material by 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.	**m3**				
	Ch. 0/00 to 0/140m	2	140.00	2.75	0.20	154.00
	Ch: 0/140 to 0/290m	1	150.00	7.50	0.20	225.00
						379.00
					Say	**380.00**

9	Providing and applying primer coat with bitumen emulsion on prepared surface of granular Base including clearing of road surface and spraying primer at the rate of 0.60 kg/sqm using mechanical means.	**m2**				
	Ch. 0/00 to 0/140m	2	140.00	2.75		770.00
	Ch: 0/140 to 0/290m	1	150.00	7.00		1050.00
						1820.00
					Say	**1850.00**
10	Providing and applying tack coat with bitumen emulsion using emulsion pressure distributor at the rate of 0.20 kg per sqm on the prepared bituminous/granular surface cleaned with mechanical broom.	**m2**				
	Ch. 0/00 to 0/140m	2	140.00	7.00		1960.00
	Ch: 0/140 to 0/290m	2	150.00	7.00		2100.00
						4060.00
					Say	**4100.00**
11	Providing, laying and rolling of built-up-spray grout layer over prepared base consisting of a two layer composite construction of compacted crushed coarse aggregates using motor grader for aggregates. key stone chips spreader may be used with application of bituminous binder after each layer, and with key aggregates placed on top of the second layer to serve as a Base conforming to the line, grades and cross-section specified, the compacted layer thickness being 75 mm	**m2**				
	Ch. 0/00 to 0/140m	1	140.00	2.50		350.00
					Say	**350.00**
12	Providing and laying bituminous macadam with 100-120 TPH hot mix plant producing an average output of 75 tonnes per hour using crushed aggregates of specified grading premixed with bituminous binder, transported to site, laid over a previously prepared surface with paver finisher to the required grade, level and alignment and rolled as per clauses 501.6 and 501.7 to achieve the desired compaction	**m3**				
		1	290.00	7.00	0.075	152.25
					Say	**155.00**

13	Providing and laying bituminous concrete with 100-120 TPH batch type hot mix plant producing an average output of 75 tonnes per hour using crushed aggregates of specified grading, premixed with bituminous binder @ 5.4 to 5.6 per cent of mix and filler, transporting the hot mix to work site, laying with a hydrostatic paver finisher with sensor control to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH specification clause No. 509 complete in all respects	m3				
		1	290.00	7.00	0.030	60.90
					Say	**63.00**
14	Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads @ 250 gms per sqm area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35 .The finished surface to be level, uniform and free from streaks and holes.					
		m2				
	center line	0.4	290.00	0.10		11.60
	Pedestrian and edge line	2	290.00	0.10		58.00
	LS					10.00
						79.60
					Say	**80.00**
15	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 and lead of 1000 metres	Cum				
	Cement Concrete Grade M-15 & M-20					
	Ls					2.00
					Say	**2.00**
16	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 and lead of 1000 metres	Cum				
	Dry Rubble stone masonry					
						10.00
					Say	**10.00**

17	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 and lead of 1000 metres					
	Cement Concrete Grade M-20 & above	m3				
						1.00
					Say	**1.00**
18	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 and lead of 1000 metres	**m3**				
	Rubble stone masonry in cement mortar.					
				Ls		5.00
					Say	**5.00**
19	Dry rubble masonry Work for Foundation and superstructure complete as per Drawing and Technical Specifications.					
	R/wall foundation	2	140.00	0.70	0.50	98.00
	R/wall super structure	2	140.00	0.50	0.60	92.40
						190.40
					Say	**195.00**
20	Plain Cement Concrete M 20 over R wall complete as per Drawing and Technical Specifications.	**m3**				
	R/wall	2	140.00	0.50	0.10	14.00
						14.00
					Say	**15.00**

NAME OF WORK: PROPOSED BYPASS ROAD AT CHERAI JUNCTION

DATA

1	**Clearing and Grubbing Road Land .**				
	Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned, up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.				
	Unit = Hectare				
	Taking output = 1 Hectare				
	By Mechanical Means				
	In area of light jungle				
	a) Labour				
	Mate	day	0.160	673.00	107.68
	Mazdoor	day	4.000	377.00	1508.00
	b) Machinery				
	Dozer 80 HP with attachment for removal of trees & stumps	hour	10.000	3490.00	34900.00
	Tractor-trolley	hour	1.000	340.00	340.00
	c) Overhead charges @ 0.1 on (a+b)				3685.57
	d) Contractor's profit @ 0.1 on (a+b+c)				4054.12
	Rate per Hectare = a+b+c+d				44595.37
				say	***44595.00***
2	**Cutting of Trees, including cutting of Trunks, Branches and Removal**				
	Cutting of trees, including cutting of trunks, branches and removal of stumps, roots, stacking of serviceable material with all lifts and up to a lead of 1000 metres and earth filling in the depression/pit.				
	Unit = Each				
	Girth from 300 mm to 600 mm				
	a) Labour				
	Mate	day	0.020	673.00	13.46
	Mazdoors for cutting trees including cutting, refilling, compaction of backfilling and stacking of serviceable materials within 1000 metres lead by manual means.	day	0.600	377.00	226.20
	b) Machinery				
	Tractor-trolley	hour	0.100	340.00	34.00
	c) Overhead charges @ 0.1 on (a+b)				27.37
	d) Contractor's profit @ 0.1 on (a+b+c)				30.10
	Rate for each tree = a+b+c+d				331.13
				say	***331.00***
	Girth from 600 mm to 900 mm				

	a) Labour				
	Mate	day	0.040	673.00	26.92
	Mazdoors for cutting trees including cutting, refilling, compaction of backfilling, and stacking of serviceable materials within 1000 metres lead by manual means	day	0.900	377.00	339.30
	b) Machinery				
	Tractor-trolley	hour	0.300	340.00	102.00
	c) Overhead charges @ 0.1 on (a+b)				46.82
	d) Contractor's profit @ 0.1 on (a+b+c)				51.50
	Rate for each tree = a+b+c+d				566.55
				say	***567.00***
3	Dismantling of flexible pavements and disposal of dismantled materials up to a lead of 1000 metres, stacking serviceable and unserviceable materials separately				
	By Mechanical Means				
	Bituminous course				
	a) Labour				
	Mate	day	0.010	673.00	6.73
	Mazdoor	day	0.300	377.00	113.10
	b) Machinery				
	Tractor-trolley	hour	0.380	340.00	129.20
	Farm tractor with ripper @ 60 cum per hour	hour	0.017	366.00	6.22
	c) Overhead charges @ 0.1 on (a+b)				25.53
	d) Contractor's profit @ 0.1 on (a+b+c)				28.08
	Rate per cum = a+b+c+d				308.85
				say	***309.00***
4	**Excavation in Soil using Hydraulic Excavator CK 90 and Tippers with Disposal upto 1000 metres.**				
	Excavation for roadwork in soil with hydraulic excavator of 0.9 cum bucket capacity including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transporting to the embankment location within all lifts and lead upto 1000m				
	Unit = cum				
	Taking output = 360 cum				
	a) Labour				
	Mate	day	0.080	673.00	53.84
	Mazdoor	day	2.000	377.00	754.00
	b) Machinery				
	Hydraulic excavator 0.9 cum bucket capacity @ 60 cum per hour	hour	6.000	1222.00	7332.00
	Tipper 5.5 cum capacity, 4 trips per hour.	hour	16.000	291.00	4656.00
	c) Overhead charges @ 0.1 on (a+b)				1279.58
	d) Contractor's profit @ 0.1 on (a+b+c)				1407.54
	Cost for 360 cum = a+b+c+d				15482.97
	Rate per cum = (a+b+c+d)/360				43.01
				say	***43.00***

5	**Compacting Original Ground**				
	Compacting original ground supporting sub-grade				
	Loosening of the ground upto a level of 500 mm below the sub-grade level, watered, graded and compacted in layers to meet requirement of table 300-2 for sub-grade construction.				
	Unit = cum				
	Taking output = 600 cum				
	a) Labour				
	Mate	day	0.120	673.00	80.76
	Mazdoor	day	3.000	377.00	1131.00
	b) Machinery				
	Tractor with ripper attachment	hour	9.000	366.00	3294.00
	Motor grader for grading	hour	6.000	2247.00	13482.00
	Water tanker 6 KL capacity	hour	4.000	233.00	932.00
	Vibratory roller 8-10 tonne @ 80 cum/hour	hour	7.500	1446.00	10845.00
	c) Material				
	Cost of water	KL	24.000	13.00	312.00
	d) Overhead charges @ 0.1 on (a+b+c)				3007.68
	e) Contractor's profit @ 0.1 on (a+b+c+d)				3308.44
	Cost for 600 cum = a+b+c+d+e				36392.88
	Rate per cum = (a+b+c+d+e)/600				60.65
				say	***61.00***
6	**Construction of Subgrade and Earthen Shoulders**				
	Construction of sub-grade and earthen shoulders with approved material obtained from borrow pits with all lifts & leads, transporting to site, spreading, grading to required slope and compacted to meet requirement of table No. 300-2				
	Unit = cum				
	Taking output = 100 cum				
	a) Labour				
	Mate	day	0.040	673.00	26.92
	Mazdoor	day	1.000	377.00	377.00
	b) Machinery				
	Hydraulic excavator1 cum bucket capacity @ 60 cum per hour	hour	1.670	1222.00	2040.74
	Tipper 10 tonne capacity	tonne.km	175xL	3.00	29400.00
	Add 10 per cent of cost of carriage to cover cost of loading and unloading				2940.00
	Dozer 80 HP for spreading @ 200 cum per hour	hour	0.500	3490.00	1745.00
	Motor grader for grading @ 50 cum per hour	hour	2.000	2247.00	4494.00
	Water tanker with 6 km lead	hour	4.000	233.00	932.00
	Vibratory roller 8-10 tonnes @ 80 cum per hour	hour	1.250	1446.00	1807.50
	c) Material				
	Cost of water	KL	24.000	13.00	312.00
	Compensation for earth taken from private land	cum	100.000	137.00	13700.00

	d) Overhead charges @ 0.1 on (a+b+c)				5777.52
	e) Contractor's profit @ 0.1 on (a+b+c+d)				6355.27
	Cost for 100 cum = a+b+c+d+e				69907.94
	Rate per cum = (a+b+c+d+e)/100				699.08
				say	***699.00***
7	**Granular Sub-Base with Coarse Graded Material (Table:- 400-2)**				
	Construction of granular sub-base by providing coarse graded material, spreading in uniform layers with motor grader on prepared surface, mixing by mix in place method with rotavator at OMC, and compacting with vibratory roller to achieve the desired density, complete as per clause 401.				
	Unit = cum				
	Taking output = 300 cum				
	a) Labour				
	Mate	day	0.400	673.00	269.20
	Mazdoor skilled	day	2.000	408.00	816.00
	Mazdoor	day	8.000	377.00	3016.00
	b) Machinery				
	Mortar Grader 110 HP @ 50 cum per hour	hour	6.000	2247.00	13482.00
	Vibratory roller 8 -10 tonne	hour	6.000	1446.00	8676.00
	Water tanker 6 KL capacity	hour	3.000	233.00	699.00
	c) Material				
	For coarse graded Granular sub-base Materials per table 400-2				
	For grading-I Material				
	53 mm to 26.5 mm @ 35 per cent	cum	134.400	647.00	86956.80
	26.5 mm to 4.75 mm @ 45 per cent	cum	172.800	1009.00	174355.20
	2.36 mm below @ 20 per cent (Coarse Sand)	cum	76.800	137.00	10521.60
	-do- conveyance	cum	384.000	854.00	327936.00
	Cost of water	KL	18.000	13.00	234.00
	Rate per cum for grading-I Material				
	d) Overhead charges @ 0.1 on (a+b+c)				62696.18
	e) Contractor's profit @ 0.1 on (a+b+c+d)				68965.80
	Cost for 300 cum = a+b+c+d+e				758623.78
	Rate per cum = (a+b+c+d+e)/300				2528.75
				say	***2529.00***
8	**Wet Mix Macadam**				
	Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechanical mix plant carriage of mixed Material by 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.				
	Unit = cum				
	Taking output = 225 cum (495 tonnes)				
	a) Labour				
	Mate	day	0.480	673.00	323.04

	Mazdoor skilled	day	2.000	408.00	816.00
	Mazdoor	day	10.000	377.00	3770.00
	b) Machinery				
	Wet mix plant of 75 tonne hourly capacity	hour	9.000	1130.00	10170.00
	Electric generator 125 KVA	hour	6.000	654.00	3924.00
	Front end loader 1 cum capacity	hour	6.000	756.00	4536.00
	Paver finisher	hour	6.000	915.00	5490.00
	Vibratory roller 8 - 10 tonne	hour	6x0.65	1446.00	5639.40
	or				
	Smooth 3 wheeled steel roller @ 8-10 tonnes.	hour	12.000		
	Water tanker 6 KL capacity	hour	3.000	233.00	699.00
	Tipper	tonne.km	495x5	3.00	7425.00
	Add 10 per cent of cost of carriage to cover cost of loading and unloading				742.50
	c) Material (Table 400-11)				
	45 mm to 22.4 mm@ 30 per cent	cum	89.100	717.00	63884.70
	22.4 mm to 2.36 mm @ 40 per cent	cum	118.800	1069.00	126997.20
	2.36 mm to 75 micron@ 30 per cent	cum	89.100	137.00	12206.70
	-do- conveyance	Cum	297.000	854.00	253638.00
	Cost of water	KL	18.000	13.00	234.00
	d) Overhead charges @ 0.1 on (a+b+c)				50049.55
	e) Contractor's profit @ 0.1 on (a+b+c+d)				55054.51
	Cost for 225 cum = a+b+c+d+e				605599.60
	Rate per cum = (a+b+c+d+e)/225				2691.55
				say	***2692.00***
9	**Prime Coat**				
	Providing and applying primer coat with bitumen emulsion on prepared surface of granular Base including clearing of road surface and spraying primer at the rate of 0.60 kg/sqm using mechanical means.				
	Unit = sqm				
	Taking output = 3500 sqm				
	a) Labour				
	Mate	day	0.080	673.00	53.84
	Mazdoor	day	2.000	377.00	754.00
	b) Machinery				
	Mechanical broom @ 1250 sqm per hour	hour	2.800	334.00	935.20
	Air compressor 250 cfm	hour	2.800	300.00	840.00
	Emulsion pressure distributor @ 1750 sqm per hour	hour	2.000	137.00	274.00
	Water tanker 6 KL capacity @ 1 trip per hour	hour	1.000	233.00	233.00
	c) Material				
	Bitumen emulsion @ 0.6 kg per sqm	tonne	2.100	34975.00	73447.50
	-do- conveyance	tonne	2.100	589.00	1236.90
	Cost of water	KL	6.000	13.00	78.00
	d) Overhead charges @ 0.1 on (a+b+c)				7785.24
	e) Contractor's profit @ 0.1 on (a+b+c+d)				8563.77
	Cost for 3500 sqm = a+b+c+d+e				94201.45
	Rate per sqm = (a+b+c+d+e)/3500				26.91

				say	***27.00***
10	**Tack Coat**				
	Providing and applying tack coat with bitumen emulsion using emulsion pressure distributor at the rate of 0.20 kg per sqm on the prepared bituminous/granular surface cleaned with mechanical broom.				
	Unit = sqm				
	Taking output = 3500 sqm			389.85	
	a) Labour				
	Mate	day	0.080	673.00	53.84
	Mazdoor	day	2.000	377.00	754.00
	b) Machinery				
	Mechanical broom @ 1250 sqm per hour	hour	2.800	334.00	935.20
	Air compressor 250 cfm	hour	2.800	300.00	840.00
	Emulsion pressure distributor @ 1750 sqm per hour	hour	2.000	757.70	1515.40
	c) Material				
	Bitumen emulsion @ 0.2 kg per sqm	tonne	0.700	34975.00	24482.50
	-do- conveyance	tonne	0.700	589.00	412.30
	d) Overhead charges @ 0.1 on (a+b+c)				2899.32
	e) Contractor's profit @ 0.1 on (a+b+c+d)				3189.26
	Cost for 3500 sqm = a+b+c+d+e				35081.82
	Rate per sqm = (a+b+c+d+e)/3500				10.02
				say	***10.00***
11	**Built-up-Spray Grout**				
	Providing, laying and rolling of built-up-spray grout layer over prepared base consisting of a two layer composite construction of compacted crushed coarse aggregates using motor grader for aggregates. key stone chips spreader may be used with application of bituminous binder after each layer, and with key aggregates placed on top of the second layer to serve as a Base conforming to the line, grades and cross-section specified, the compacted layer thickness being 75 mm				
	Unit = sqm				
	Taking output = 3000 sqm (225 cum)				
	a) Labour				
	Mate	day	0.400	673.00	269.20
	Mazdoor including for brooming of key aggregates	day	8.000	377.00	3016.00
	Mazdoor skilled	day	2.000	408.00	816.00
	b) Machinery				
	Hydraulic self propelled chip spreader both for aggregates and key aggregates@ 1500 sqm per hour for 3000 x 3 sqm	hour	6.000	2472.00	14832.00
	Bitumen pressure distributor for 3000 x 2 sqm @ 1750 sqm per hour	hour	3.430	1006.00	3450.58
	Tipper 5.5 cum capacity	hour	10.000	291.00	2910.00
	Vibratory roller 8 tonnes	hour	6.000	1446.00	8676.00
	Front end loader 1 cum bucket capacity	hour	6.000	756.00	4536.00

	c) Material				
	Bitumen30 kg per 10 sqm @ 15 kg per 10 sqm for each layer	tonne	9.000	41320.00	371880.00
	-do- conveyance	tonne	9.000	589.00	5301.00
	Crushed stone coarse aggregate passing 53 mm and retained on 2.8 mm sieve @ 0.5 cum per 10 sqm for each layer	cum	300.000	864.50	900.55
	Key aggregates passing 22.4 mm and retained on 2.8 mm sieve @ 0.13 cum per 10 sqm	cum	39.000	1069.00	41691.00
	-do- conveyance	cum	339.000	854.00	289506.00
	d) Overhead charges @ 0.1 on (a+b+c)				74778.43
	e) Contractor's profit @ 0.1 on (a+b+c+d)				82256.28
	Cost for 3000 sqm = a+b+c+d+e				904819.04
	Rate per sqm = (a+b+c+d+e)/3000				301.61
				say	***302.00***
12	**Bituminous Macadam**				
	Providing and laying bituminous macadam with 100-120 TPH hot mix plant producing an average output of 75 tonnes per hour using crushed aggregates of specified grading premixed with bituminous binder, transported to site, laid over a previously prepared surface with paver finisher to the required grade, level and alignment and rolled as per clauses 501.6 and 501.7 to achieve the desired compaction				
	Unit = cum				
	Taking output = 205 cum (450 tonnes)				
	a) Labour				
	Mate	day	0.840	673.00	565.32
	Mazdoor working with HMP, mechanical broom, paver, roller, asphalt cutter and assistance for setting out lines, levels and layout of construction	day	16.000	377.00	6032.00
	Skilled mazdoor for checking line & levels	day	5.000	408.00	2040.00
	b) Machinery				
	Batch mix HMP 100-120 TPH @ 75 tonne per hour actual output	hour	6.000	15906.00	95436.00
	Mechanical broom hydraulic @ 1250 sqm per hour	hour	2.200	334.00	734.80
	Air compressor 250 cfm	hour	2.200	300.00	660.00
	Paver finisher hydrostatic with sensor control @ 75 cum per hour	hour	6.000	2509.00	15054.00
	Generator 250 KVA	hour	6.000	700.00	4200.00
	Front end loader 1 cum bucket capacity	hour	6.000	756.00	4536.00
	Tipper 10 tonne capacity	tonne.km	450 x 5	3.00	6750.00
	Add 10 per cent of cost of carriage to cover cost of loading and unloading				675.00
	Smooth wheeled roller 8-10 tonnes for initial break down rolling.	hour	6.00x0.65*	432.00	1684.80
	Vibratory roller 8 tonnes for intermediate rolling.	hour	6.00x0.65*	1446.00	5639.40
	Finish rolling with 6-8 tonnes smooth wheeled tandem roller.	hour	6.00x0.65*	1073.00	4184.70

	c) Material				
	i) Bitumen@ 3.3 per cent of mix(60-70)	tonne	14.850	41320.00	613602.00
	-do- conveyance	tonne	14.850	589.00	8746.65
	weight of mix = 205 x 2.2 = 450 tonne				
	ii) Aggregate				
	Total weight of mix = 450 tonnes				
	Weight of bitumen = 14.85 tonnes				
	Weight of aggregate = 450 -14.85 = 435.15 tonnes				
	Taking density of aggregate = 1.5 ton/cum				
	Volume of aggregate = 290.1 cum				
	Gradingll(19 mm nominal size)				
	25 - 10 mm 40 per cent	cum	116.040	921.75	106959.87
	10 - 5 mm 40 per cent	cum	116.040	881.50	102289.26
	5 mm and below 20 per cent	cum	58.020	2314.00	134258.28
	-do- conveyance	Cum	290.100	854.00	247745.40
					1361793.48
	d) Overhead charges @ 0.1 on (a+b+c)				136179.35
	e) Contractor's profit @ 0.1 on (a+b+c+d)				149797.28
	Cost for 205 cum = a+b+c+d+e				1647770.11
	Rate per cum = (a+b+c+d+e)/205				8037.90
				say	***8038.00***
13	**Bituminous Concrete**				
	Providing and laying bituminous concrete with 100-120 TPH batch type hot mix plant producing an average output of 75 tonnes per hour using crushed aggregates of specified grading, premixed with bituminous binder @ 5.4 to 5.6 per cent of mix and filler, transporting the hot mix to work site, laying with a hydrostatic paver finisher with sensor control to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH specification clause No. 509 complete in all respects				
	Unit = cum				
	Taking output = 191 cum (450 tonnes)				
	a) Labour				
	Mate	day	0.840	673.00	565.32
	Mazdoor working with HMP, mechanical broom, paver, roller, asphalt cutter and assistance for setting out lines, levels and layout of construction	day	16.000	377.00	6032.00
	Skilled mazdoor for checking line & levels	day	5.000	408.00	2040.00

	b) Machinery				
	Batch mix HMP @ 75 tonne per hour	hour	6.000	15906.00	95436.00
	Paver finisher hydrostatic with sensor control @ 75 cum per hour	hour	6.000	2509.00	15054.00
	Generator 250 KVA	hour	6.000	700.00	4200.00
	Front end loader 1 cum bucket capacity	hour	6.000	756.00	4536.00
	Tipper 10 tonne capacity	tonne.km	450 x5	3.00	6750.00
	Add 10 per cent of cost of carriage to cover cost of loading and unloading				675.00
	Smooth wheeled roller 8-10 tonnes for initial break down rolling.	hour	6.00x0.65*	432.00	1684.80
	Vibratory roller 8 tonnes for intermediate rolling.	hour	6.00x0.65*	1446.00	5639.40
	Finish rolling with 6-8 tonnes smooth wheeled tandem roller.	hour	6.00x0.65*	1073.00	4184.70
	c) Material				
	i) Bitumen@ 5 per cent of weight of mix(80-100)	tonne	22.500	41320.00	929700.00
	-do- conveyance	tonne	22.500	589.00	13252.50
	ii) Aggregate				
	Total weight of mix = 450 tonnes				
	Weight of bitumen = 22.5 tonnes				
	Weight of aggregate = 450 -22.50 = 427.50 tonnes				
	Taking density of aggregate = 1.5 ton/cum				
	Volume of aggregate = 285 cum				
	Grading - II-13 mm (Nominal Size)				
	13.2 - 10 mm30 per cent	cum	85.500	995.67	85129.79
	10 - 5 mm 25 per cent	cum	71.250	881.50	62806.88
	5 mm and below43 per cent	cum	122.550	2314.00	283580.70
	Filler @ 2 per cent of weight of aggregates.	tonne	8.620	72.00	620.64
	-do- conveyance	Cum	285.000	854.00	243390.00
					1765277.72
	d) Overhead charges @ 0.1 on (a+b+c)				176527.77
	e) Contractor's profit @ 0.1 on (a+b+c+d)				194180.55
	Cost for 205 cum = a+b+c+d+e				2135986.04
	Rate per cum = (a+b+c+d+e)/191				11183.17
				say	***11183.00***

KVM

14	**Road Marking with Hot Applied Thermoplastic Compound with Reflectorising Glass Beads on Bituminous Surface**				
	Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads @ 250 gms per sqm area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35 .The finished surface to be level, uniform and free from streaks and holes.				
	Unit = sqm				
	Taking output = 600 sqm				
	a) Labour				
	Mate	day	0.030	673.00	20.19
	Mazdoor	day	0.750	377.00	282.75
	b) Machinery				
	Road marking machine @ 60 sqm per hour	hour	10.000	87.00	870.00
	Tractor-trolley	hour	0.500	340.00	170.00
	c) Material				
	Hot applied thermoplastic compound	Litre	1500.000	137.00	205500.00
	Reflectorising glass beads	kg	150.000	61.00	9150.00
	d) Overhead charges @ 0.1 on (a+b+c)				21599.29
	e) Contractor's profit @ 0.1 on (a+b+c+d)				23759.22
	Cost for 600 sqm = a+b+c+d+e				261351.46
	Rate per sqm = a+b+c+d+e)/600				435.59
				say	***436.00***
15	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 and lead of 1000 metres				
	By Mechanical Means for items No. 202(b)& (c)				
	Cement Concrete Grade M-15 & M-20				
	a) Labour				
	Mate	day	0.020	673.00	13.46
	Mazdoor for loading and unloading	day	0.250	377.00	94.25
	Mazdoor with Pneumatic breaker	day	0.250	377.00	94.25
	b) Machinery				
	Air Compressor 250 cfm with 2 leads of pneumatic breaker @ 1.5 cum per hour	hour	0.670	300.00	201.00
	Tractor-trolley	hour	0.270	340.00	91.80
	c) Overhead charges @ 0.1 on (a+b)				49.48
	d) Contractor's profit @ 0.1 on (a+b+c)				54.42
	Cost for 1.25 cum = a+b+c+d				598.66
	Rate per cum = (a+b+c+d)/ 1.25				478.93
				say	***479.00***

16	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 and lead of 1000 metres				
	Dry rubble masonry				
	a) Labour				
	Mate	day	0.018	673.00	12.11
	Mazdoor for dismantling, loading and unloading.	day	0.450	377.00	169.65
	b) Machinery				
	Tractor-trolley	hour	0.270	340.00	91.80
	c) Overhead charges @ 0.1 on (a+b)				27.36
	d) Contractor's profit @ 0.1 on (a+b+c)				30.09
	Cost for 1.25 cum = a+b+c+d				331.01
	Rate per cum = (a+b+c+d)/ 1.25				264.81
				say	***265.00***
17	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 and lead of 1000 metres				
	Prestressed / reinforced cement concrete grade M-20 & above				
	a) Labour				
	Mate	day	0.050	673.00	33.65
	Mazdoor with Pneumatic breaker	day	0.660	377.00	248.82
	Blacksmith	day	0.250	500.00	125.00
	Mazdoor for loading and unloading	day	0.250	377.00	94.25
	b) Machinery				
	Air Compressor 250 cfm with 2 leads of pneumatic breaker @ 1.00 cum per hour	hour	1.000	300.00	300.00
	Tractor-trolley	hour	0.270	340.00	91.80
	c) Overhead charges @ 0.1 on (a+b)				89.35
	d) Contractor's profit @ 0.1 on (a+b+c)				98.29
	Cost for 1.25 cum = a+b+c+d				1081.16
	Rate per cum = (a+b+c+d)/ 1.25				864.93
				say	***865.00***
18	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 and lead of 1000 metres				
	Rubble stone masonry in cement mortar.				
	a) Labour				

	Mate	day	0.030	673.00	20.19
	Mazdoor for dismantling, loading and unloading.	day	0.750	377.00	282.75
	b) Machinery				
	Tractor-trolley	hour	0.270	340.00	91.80
	c) Overhead charges @ 0.1 on (a+b)				39.47
	d) Contractor's profit @ 0.1 on (a+b+c)				43.42
	Cost for 1.25 cum = a+b+c+d				477.64
	Rate per cum = (a+b+c+d)/ 1.25				382.11
				say	***382.00***
19	**Dry rubble masonry for Foundation complete as per Drawing and Technical Specifications.**				
	Unit = cum				
	Taking output = 5 cum				
	Square Rubble Coursed Rubble Masonry (first sort)				
	a) Material				
	Stone	cum	5.50	420.00	2310.00
	-do- conveyance	cum	6.29	854.00	5371.66
	Through and bond stone	each	35.00	14.00	490.00
	(35no.x0.24mx0.24mx0.39m = 0.79 cu.m)				
	b) Labour				
	Mate	day	0.66	673.00	444.18
	Mason	day	7.50	500.00	3750.00
	Mazdoor	day	9.00	377.00	3393.00
	e) overhead charges 0.1				1575.88
	d) Contractor's profit @ 0.1 on (a+b+c)				1733.47
	Cost for 5 cum = a+b+c+d				19068.20
	Rate per cum (a+b+c+d)/5				3813.64
				say	***3814.00***
20	**Plain Cement Concrete in Open Foundation complete as per Drawing and Technical Specifications.**				
	PCC Grade M20				
	Unit : cum				
	Taking output = 15 cum				
	a) Material				
	Cement	tonne	5.16	5940.00	30650.40
	-do- conveyance	tonne	5.16	323.00	1666.68
	Coarse sand	cum	6.75	2777.00	18744.75
	-do- conveyance	cum	6.75	694.00	4684.50
	40 mm Aggregate	cum	5.40	659.00	3558.60
	20 mm Aggregate	cum	5.40	942.00	5086.80
	10 mm Aggregate	cum	2.70	1063.00	2870.10
	-do- conveyance	cum	13.50	854.00	11529.00

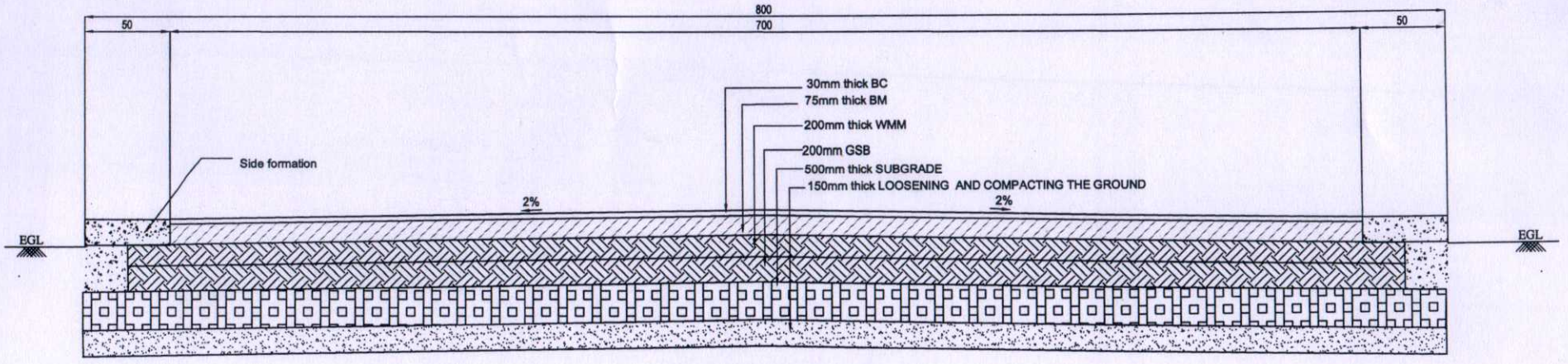
	b) Labour				
	Mate	day	0.86	673.00	578.78
	Mason	day	1.50	500.00	750.00
	Mazdoor	day	20.00	377.00	7540.00
	c) Machinery				
	Concrete mixer (cap. 0.40/0.28 cum)	hour	6.00	218.00	1308.00
	Generator 33 KVA	hour	6.00	349.00	2094.00
	Per Cum Basic Cost of Labour, Material & Machinery (a+b+c)		***6071.00***		
	d) Formwork @ 4 per cent on cost of concrete i.e. cost of material, labour and machinery				3642.46
	e) overhead charges 0.1				9470.41
	f) Contractor's profit @ 0.1 on (a+b+c+d+e)				10417.45
	Cost for 15 cum = a+b+c+d+e+f				114591.93
	Rate per cum = (a+b+c+d+e+f)/15				7639.46
				say	***7639.00***

NAME OF WORK: PROPOSED BYPASS ROAD AT CHERAI JUNCTION

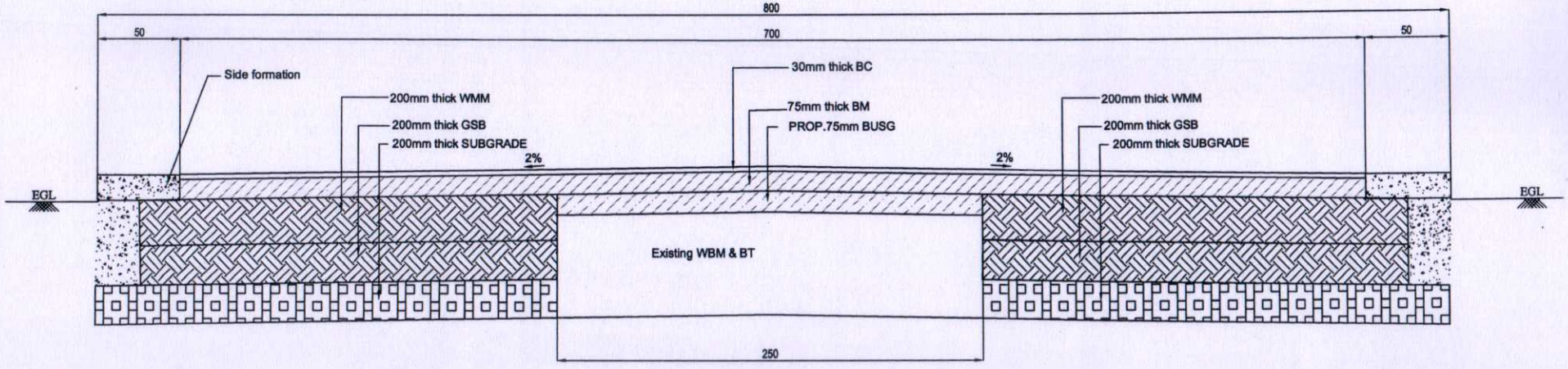
NAME OF WORK: PROPOSED BYPASS ROAD AT CHERAI JUNCTION

CONVEYANCE STATEMENT

Sl. No.	Materials	unit	Source	Length(Km)	Amount/m3
1	Rubble & Broken stone	M3	Angamaly	45.00	854.00
2	Sand	M3	Aluva	35.00	694.00
3	Bitumen	T	Ambalamughal	43.00	589.00
4	Timber	M3	Aluva	35.00	533.00
5	Earth	M3	Pattimattom	56.00	1,030.00
6	Cement & Steel	T	Local	5.00	323.00



TYPICAL CROSS SECTION
NEW FORMATION



TYPICAL CROSS SECTION
WIDENING OF EXISTING ROAD

NOTE:
1. ALL DIMENSIONS ARE IN CM
2. ONLY WRITTEN DIMENSIONS SHOULD BE FOLLOWED

FOR ESTIMATE PURPOSE ONLY

SL.No.	PARTICULARS	INITIAL	DATE
	REVISION		

DESIGNED	
CHECKED	
DRAWN	
CHECKED	
APPROVED	
UNIT:	CM
SCALE:	NTS

CLIENT: GOSHREE ISLAND DEVELOPMENT AUTHORITY

PROJECT: PROPOSED BYPASS ROAD AT CHERAI JUNCTION

TITLE: TYPICAL CROSS SECTION OF ROAD

DRG NO: DP 559 DRG CL 04 001 | SHEET NO: 1 OF 1 | REV. | DATE: 14/07/13

KITCO the consultants
KITCO Ltd.
(Estd. in 1972 by IDBI & Govt. of Kerala)
PUTHIYA ROAD - NH BYPASS, KOCHI - 28

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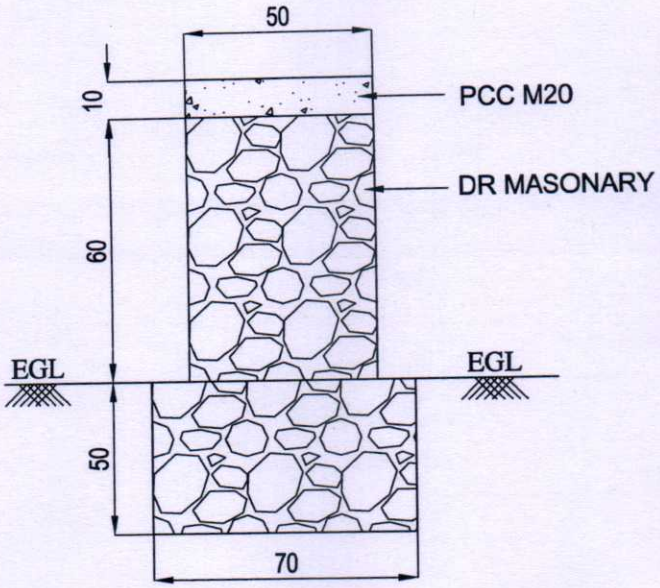

TYPICAL CROSS SECTION OF RET. WALL

NOTE:
1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE IN METERS
2. ONLY WRITTEN DIMENSIONS SHOULD BE FOLLOWED

TENDER PURPOSE ONLY

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KITCO the consultants

KITCO Ltd.
(Estd. in 1972 by IDBI & Govt. of Kerala)
PUTHIYA ROAD - NH BYPASS, KOCHI - 28

CLIENT: GOSHREE ISLAND DEVELOPMENT AUTHORITY

PROJECT: PROPOSED BYPASS ROAD TO CHERAI JUNCTION

TITLE: TYP. DETAILS OF DR RETAINING WALL

DESIGNED	
CHECKED	
DRAWN	CJ
CHECKED	
APPROVED	
SCALE	NTS
UNIT	CM
DATE	14-07-13

DRG NO:	SHEET NO:	REV.
DP 559 DRG CL 04 002	1 OF 1	