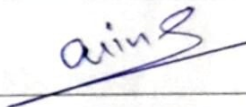




ASHOKA DHANKUNI-KHARAGPUR TOLLWAY LTD.



**ENVIRONMENT, SOCIAL AND
SAFETY MANAGEMENT PLAN
(ESSMP)**

As per IFC Guideline and SBIM requirement

		
Prepared by	Reviewed and Recommended By	Approved by
Pankaj Hinge HSE Officer	Anil Shimpi HSE Head	Mr. Ashvani Verma Project Incharge



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Chapter – I: Brief Introduction of Project

SCOPE OF THE PROJECT

The National Highways Authority of India (NHAI) has been entrusted with the development, maintenance and management of National Highways under the National Highways Development Project (NHDP), which includes the North-South & East-West Corridors among others. NHAI has started the road widening of Six laning of Dhankuni-Kharagpur section of NH-6 from KM: 17+600 to KM: 129+00 in the state of West Bengal to be executed as BOT (Toll) on Design, Build, Operate & Transfer (DBFO) pattern under NHDP Phase-V.

The Contract for the Construction of this project was awarded to M/s. Ashoka Dhankuni Kharagpur Tollway Ltd for execution of the above project. An agreement dated 20th June, 2011 has been entered between NHAI and Ashoka Dhankuni Kharagpur Tollway Limited.

THE SALIENT FEATURES OF THE CONTRACT:

Name	:	Six laning of Dhankuni- Kharagpur Section of NH-6 from Km 17.600 to Km 129.000 in the state of West Bengal to be executed as BOT (Toll) project on DBFOT pattern under NHDP Phase V
State	:	West Bengal
District Covered	:	Howrah, East Medinipur, West Medinipur
Concession Agreement	:	20.06.2011
Client	:	National Highways Authority of India
Concessionaire	:	Ashoka Dhankuni Kharagpur Tollway Ltd.
Independent Engineer	:	Aarvee Associates Architects Engineer & Consultant Pvt. Ltd.
Concession Period	:	25 years from the Appointed Date
Cost of the Project	:	1396.18 Cr. (as per Tender)
EPC Cost	:	2016.00 Cr.
Scheduled Six laning period	:	910 days from the Appointed Date
Appointed Date	:	01.04.2012

Ashoka Dhankuni Kharagpur Tollways Limited (ADKTL)
Environment, Social and Safety Management Plan (ESSMP)

Length of the Road	: 111.40 Km. - 6 Laning
Length of the Service Road	: 59.850 Km Continuous Service Road + 26.200 Slip Ramp
Entry/ Exit ways	: EXIT : 24 Nos (LHS), 24 Nos (RHS) ENTRY : 24 Nos (LHS), 24 Nos (RHS)
Vehicular Underpass	: New Proposed: 21 Nos VUP + 8 Nos PUP.
Pedestrian Underpass	: New Proposed: 8 Nos PUP. To be rehabilitated : 1 no
Flyover to be Rehabilitated	: 2 Nos.
Foot Over Bridge	: Proposed : 1 No.
Pedestrian Subway to be Abandoned	: 10 Nos.
Slab/ Box Culvert to be Constructed	: New : 33 Nos.
Slab/ Box Culvert to be Widened	: 52 Nos.
Hume Pipe Culverts to be Widened	: 68 Nos,
Minor Bridge	: Reconstruction: 4 Nos. New: 1 No. New Service Road Bridge : 16 Nos.
Major Bridge	: Reconstruction: 1 No. New: 3 Nos. To be completed: 1 No. To be rehabilitated : 10 Nos.
ROB	: To be reconstructed / rehabilitated: 2 Nos. To be rehabilitated : 4 Nos.
Realignment of Cross Roads	: 4 Locations
Retaining Structures to be Provided	: 33.680 Km.
Toll Plaza	: 02 Nos.
Major Junction Improvements	: 04 Nos.
Highway Lighting	: 50.300 Km
Longitudinal Drain	: 51.250 Km
Truck Lay-Bye	: 6 Nos.
Bus Lay-Bye	: 66 Nos.

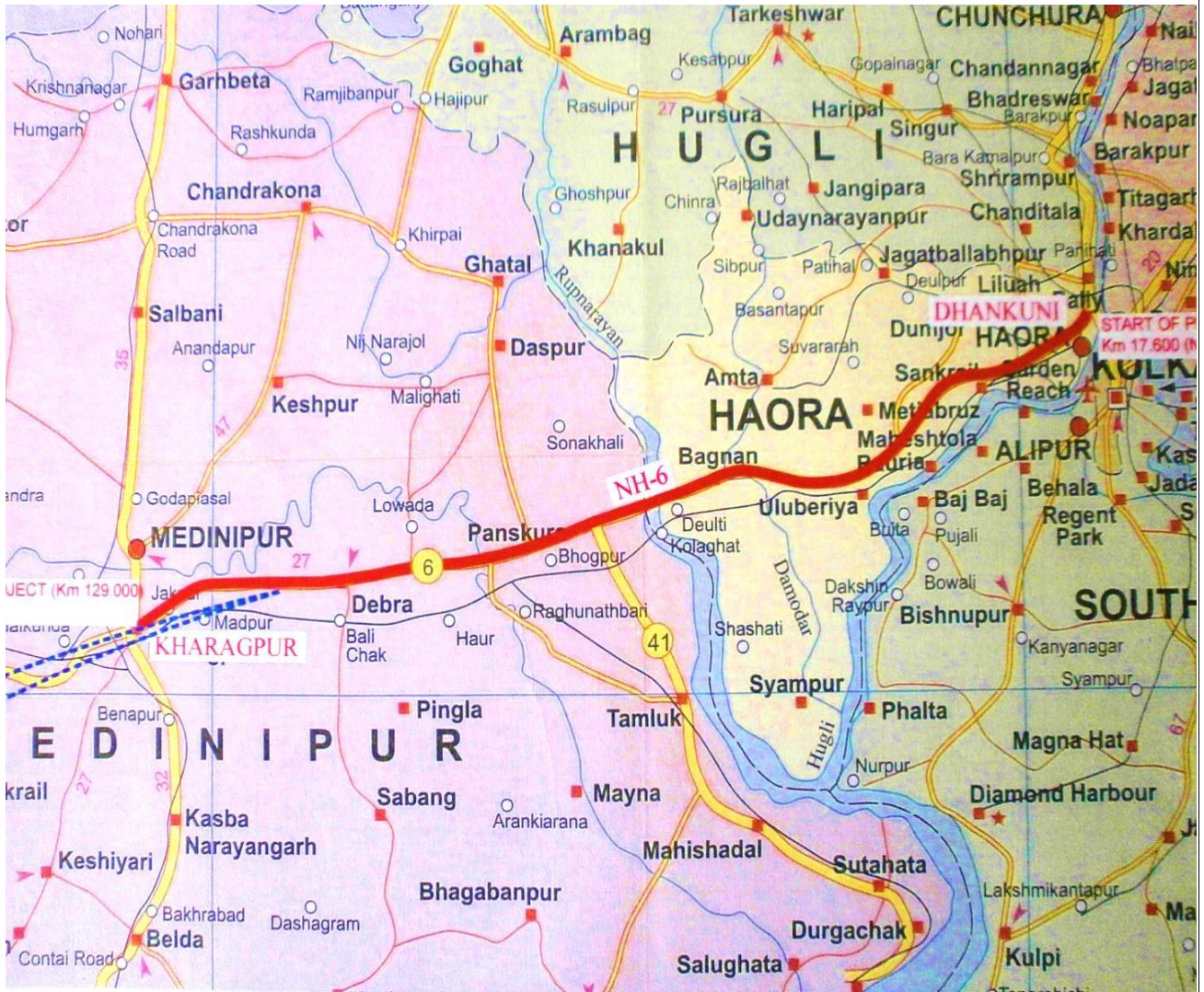
SUMMARY OF PROJECT FACILITIES:

Sl. No.	Item of Work	Unit	Total Scope	Hold due to LA/Enc/Utility	Front Available	Total completed	Balance for working	Remarks
A	Project Facility							
1	Medical / Traffic Aid Post Building	No	1		1	1	0	
2	Advance Traffic Management System							
a	Emergency Call Box - ECB	No	51	6	45	0	45	Foundation & guard frame completed
b	Variable Message Sign - VMS @ Km 29 & 46	No	2	0	2	1	1	
c	Close Circuit Television – CCTV @ Km 26 & 35+250	No	2	0	2	0	2	
d	Meteorological Station - MS @ Km 35+250 Toll plaza	No	1	0	1	0	1	
e	Advance Traffic Counter and Classifier - ATCC @ Km 35+250 Toll plaza	No	1	0	1	0	1	
f	Control Centre - CC @ Km 35+250 Toll plaza	No	1	0	1	0	1	
3	Highway Lighting	Rmt	38800	12635	26165	19400	6765	
		No	3105	1061	2044	1277	767	
4	Traffic Road Signs Board	No	711	336	375	272	103	
5	Thermoplastic Painting	Sqm	67442	21415	46027	25013	21014	
6	W-beam Crash Barrier	Rmt	48560	18122	30438	27398	3040	25.68, & 58.9,66.45 underpass location
7	M S Guard Railing Fixing	Rmt	34130	9727	24403	23012	1391	
	M S Guard Railing Painting	Rmt	34130	9727	24403	21861	2542	
8	Bus Bay	No	37	26	11	11	0	
	Bus Shelter	No	37	26	11	11	0	
9	Truck Lay Bye	No	3		3	3	0	
	Toilet Block & water drinking	No	3		3	2	1	
10	Minor Junction Improvement	No	136	73	63	63	0	
	Major Junction Improvement	No	26	20	6	6	0	
11	Footpath	LKM	77	62	15	13	2	
12	Median Plantation	No	8932	0	8932	8932	0	
13	Avenue Plantation	No	5867	0	5867	5867	0	
14	Misc.				0		0	
	Existing Gantry (18.500, 25.200,27.150)	No	3		3	3	0	Repairing balance
	Hectometer (200 M Stone)	No	406	144	262	262	0	

Ashoka Dhankuni Kharagpur Tollways Limited (ADKTL)
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Kilometer	No	66	19	47	47	0
5th Kilometer Stone	No	14	0	14	14	0
Boundry Stone	No	544	334	210	0	210
Cat's eye Fixing	No	48326	7184	41142	2189	38953
Delineator Fixing	No	872.00	0	872	0	872

Map :



Chapter – II : Policy and Objective



QHSE Policy

We, at ASHOKA BUILDCON LTD. are committed to become an icon in infrastructure development, through innovation, professionalism, active leadership in product quality and sustained growth by delivering value to our customers.

We shall conduct our operations in a manner so that we protect people, property and the environment by identifying, controlling and reducing all associated risks to a level As Low as Reasonably Practicable.

This will be achieved by :-

1. Our commitment to continual improvement of quality, environmental, occupational health and safety management system performance.
2. Commitment to prevention of pollution, injury and ill health.
3. Complying with all applicable legal and contractual requirements.
4. Adopting state of art technology available.
5. Communicating and consulting all associated stakeholders for establishing organizational objectives.


Ashok Katariya
Chairman

Date: 1st August 2013



This Policy will be implemented by the ADKTL project Site and Management prior to commencement of construction of the Project. A copy will be provided to every employee of the company and will form part of the contract with sub-contractors engaged in activities associated with design, preconstruction, construction and operation and maintenance.

Objectives and Targets



Quality, Health, Safety and
Environmental Objectives

- To improve planning
- To reduce customer complaints
- To enhance motivation of employees
- To improve skills through training
- Complying with all the statutory rules and regulations
- Minimising Air, Land and Water Pollution and preventing injury and ill health.

Ashoka Buildcon Limited

Ashoka House, Ashoka Marg, Nashik 422 011, Maharashtra, India.

Chapter – III : Organizational Set up

Project Site HSE Organization Chart:



ROLES & RESPONSIBILITIES

The responsibility of implementation of the Environmental Management Plan rests with the following personnel involved in the implementation of the project.

PROJECT DIRECTOR

The Project Director is responsible for the overall implementation of the project. In the present case, the EPC contractors are also members of the SPV, VHPL, and hence the Project Director is responsible for undertaking the engineering, procurement and construction of the project.

- Guiding the formation of Policy & its Approval

- Giving the guideline for the Budget & its Approval

- Review of the safety & Environment Procedure & its Approval

- To provide guideline for All legal aspect of project & comply all environment legal rules & regulation.

- To provide guidance for the implementation of OHSAS & EMS System

PROJECT INCHARGE / SR. GENERAL MANGER

The Project Incharge / Sr. General Manager is responsible for the overall implementation of the project. The Project Incharge / SGM is responsible for undertaking the engineering, procurement and construction of the project. The SGM shall oversee the implementation of the ESSMP by assigning the necessary resources and periodically review the effective use of the ESSMP on site.

HSE Officer:-

- Implementing the HSE&S Manual, Environment Safety and Social Management Plan, Emergency preparedness plan and EPC HSE-Work Instructions;

- Train the workers and employee as per the training programs ;

- Prepare the HSE Training program as per the site specific requirement;

- Provide the Safety & Environmental awareness /Induction training to employee (EPC and subcontract employees) after getting the formal information from the HR & Admin Department;

- Carry out HIRA (Hazard identification and risk assessment) & EAI (Environmental Aspects and its Impacts) and prepare mitigation measures and approve it from Head- HSE&S

- ;

- Identify the IDLH /Risk and guide to process owner of risk for control measures.

- Daily Safety Observation Tour, Work place Monitoring, Safety Findings to be recorded & Informed to site Project Incharge and Process Owners;

- Conducting Safety Committee Meeting including preparation of agenda, near miss & accidents reports & forward to Corporate Office before 3rd of every month;

- Monthly HSE Report sending to be sent HSE- Corporate Manager before 3rd day of every month;

- Emergency preparedness plan and its effectiveness report (i.e. Mockdrill Report) on quarterly basis;

- Visit the labour camp, Workers canteen to do the audit on welfare provided and required.

- Accident reporting within 12 hours as per the Corporate guidelines to concern Govt.

Authority and Head- HSE & S.

RESIDENT ENGINEER (RE) - ROAD AND BRIDGE WORKS

The Project Engineer - Road Works shall be responsible for implementation of the ESSMP during the construction of the road works. He being responsible for day to day operations with regards to road works shall supervise and oversee construction activities such as site clearances, stripping of top soil, excavations. Filling and laying material etc. which necessitates the operation of construction equipment and machinery at the site.

These activities would have environmental effects in terms of impairment to noise and air quality, tree cutting and severances and hence shall be responsible for implementing the ESSMP in the day to day activities of road construction. The Project Engineer – Bridge Works shall be responsible for implementation of the ESSMP during the construction of bridge works. These activities would necessitate diversion of roads, cutting of trees and diversion to natural drainage paths which would have a bearing on the environmental quality of the area. The RE (bridge works) shall be responsible for implementation of ESSMP with respect to environmental aspects during bridge construction.

SITE ENGINEERS/SUPERVISORS

The site engineers/supervisors report to the RE and are responsible for day to day operations of construction works in their respective areas. They supervise and oversee the construction activities and hence shall be made responsible for ground the ESSMP and minimize the impacts during construction. Some of the key aspects that shall be taken up by the site engineers/ supervisors shall include periodic sprinkling of water in inhabited areas during transportation of material and operation of construction machinery.

SUBCONTRACTORS

Sub contractors shall be sensitized on environmental aspects as they form part of the road construction in terms of transportation, earthwork, concrete and form work.

The environmental effects due to and transportation of material, debris removal and residues shall be properly conducted to minimise damage to the environment. The site engineers/supervisors shall be responsible for monitoring the implementation of ESSMP at this level.

Overall Responsibility - All Employees

Overall responsibility for the environment, social, occupational health and safety management system lies with the Project Head of the SPV who will establish and maintain an organisational structure that defines roles, responsibilities, and authority to implement the ESSMP. This will include the designation of in-house personnel during the different phases of the Project as described below.

The HSE &S activities will be carried out by SPV, EPC and/or O&M contractor and third parties. All these activities will be undertaken under contract with company and will be supervised by company which will ensure that all contracts include terms and conditions requiring contractors to adopt management systems which comply with the ISO 14001,

OHSAS 18001 and with the ESSMP requirements.

Various Committees and Working

Project site management has formed various committees to implement the ESSMP smoothly. To address and resolve the issues related to Safety, Health, Environment, mess, labour camp, Employees grievances and public grievances, These committees will meet on following schedules

Sl. No.	Name of Committee	Committee Head/Chairman	Functional Responsibility	Frequency
01.	HSE Committee	Project In-Charge	HSE Officer	Monthly
02.	Canteen Committee	Project In-Charge	Base Camp HR In-Charge	Monthly
03.	Grievance Committee	Project In-Charge	Site HR Office/ Liaisoning Officer	Quarterly
04.	Emergency Response Team	Camp In-Charge/Project Manager	HSE Officer/ HSE Supervisor	Quarterly

All the Committees do meet as per the Frequency stipulated and necessary decisions & implementations are monitored strictly by the Committee members. Also the grievances are resolved on priority.

HSE Committee - ADKTL		
HSE Committee Chairman	Project In charge	Mr. Ashvani K. Verma
HSE Secretary	Sr. HSE Officer	Mr. Dipak Girase
Member	EQA Manager / Engineer	Dr. Sunil Khare, Mr. Prem S. Rai, Mr. K.K. Ram, Mr. Anil K. Sharma, Mr. Nitin Bobade & Mr. Bruce Kuriakose
Member	HR & Admin In charge	Mr. Makrand Kortikar
Member	Store In charge	Mr. Sachin Laad
Member	P&M In charge	Mr. Ganesh Kumar
Member	Sub-Contractor In charge	Mr. Samse Alam (DRA)

ASHOKA BUILDCON LTD.	
EMERGENCY CONTACT NUMBERS	
AMBULANCE	9800002082/83 (DHULAGORI) 9800002085/86 (DEBRA)
HOSPITAL	9836437666/9836886688 (033) 71205050 (WEST BANK HOSPITAL)
FIRE	101, 033 – 22521165 (Head Qtr.) 033 – 26668111/2 (Div. Head Qtr.)
POLICE	100, 033-26616400 (Control Room)
HSE DEPT.	8420112246
HR & ADMIN DEPT.	8420187897



ENVIRONMENTAL MANAGEMENT COMMITTEE

CHAIRMAN : Mr. Ashvani Verma (Project Incharge)

MEMBERS : Mr. P.S.Rai (EQA), Mr. K.K. Ram (EQA),

: Mr. Sachin Laad (Stores Dept) : Mr. Bruce K. (QA/QC Lab)

: Mr. Ganesh Kumar (P&M Dept) : Mr. Deepak Girase (HSE)

SECRETARY : Mr. Makrand Kortikar (HRD)



Chapter – IV : Statutory Clearances / License Details

Legal and Regulatory Requirements and Applicable International Standards :

Company and its EPC, Sub-contractors are governed by the various legislative rules and regulation set by Ministry of Environment and Forest (MoEF) and concerned pollution control boards.

The following Rules and Regulation are applicable for ADKTL Project :-

- MOEF Requirement Road construction -- EIA Report & Environment clearance from MOEF- Not Applicable
- Environment Protection Act :1986 - -- Applicable
- The Water (Prevention & control of pollution) Act, 1974 - -- Applicable
- The Water (Prevention & Control of pollution) Cess Act, 1977, including rules, 1978 - -- Applicable
- The Air (Prevention & control of pollution) Act, 1984 - -- Applicable
- The Hazardous Waste (Management & Handling) Rules, 2000 - -- Not Applicable
- Manufacture, Storage & Import of Hazardous Chemicals Rules, 1989 - -- Applicable
- Forest clearance for tree cutting (Local, State and Center if required) -- Applicable
- Local authority or *Grampanchayat* permission (NOC) for establishment of plant - -- Applicable
- District Industry Center permission for industry - -- Applicable
- Factory Act: 1948 (Crusher VSI & HMP) Plant Establishment - -- Applicable
- State Factory Rule (Director of Industrial Safety and Health requirement) - -- Applicable
- Building and Other Construction worker Act, 1996 -Not Applicable
- The Mines & Minerals Act, 1957 -- Not Applicable
- Mineral Concession Rules, 1960 - -- Not Applicable
- Land acquisition Rule-1998 -- Not Applicable
- Petroleum Rules, 1976 (Petroleum & Explosive Department) - -- Applicable
- The Indian Electricity Rules, 1956 - -- Applicable
- Batteries Act, 1989 - -- Applicable
- Minimum Wages Act, 1948 - -- Applicable

Various Statutory Clearances / Licenses have been obtained by ADKTL. The latest Renewed Copy, Renewal Applications which are under process and the Legal Matrix are attached below:

Legal Matrix (Camps) :

The Quarterly Legal Compliance report under Environment protection Act and Consent to Operate permissions /licenses is also done as per the following Format for the same:

Name of Project: Ashoka Dhankuni Kharagpur Tollways Limited					Date: 2/2/2015	
Sr.No.	Location of camp / Detail Address as per aggrement	Name of Incharge	P &M Details with Capacity			
1	Camp 26	Mr. P. S. Rai	RMC 30 cum/Hr's & WMM 160 TPH			
2	Camp 27	Mr. P. S. Rai	Office only			
3	Camp 48	Mr. P. S. Rai	DG Set 125 KVA			
			RMC 30 cum/Hr's			
4	Camp 56	Mr. P. S. Rai	WMM 200 TPH			
			HMP 200 TPH			
			DG Set 125 KVA			
5	Camp No 126	Mr. Shamse Alam (DRA)	WMM 200 TPH, HMP 160 TPH, RMC 30 cum/hr's, DG set 125 kv & 500 kv x2			
Sr.No	Name of the Licensing/ Registration Authority	Purpose	Number and Date of Registration/License	Validity Period		Update on any issue if any
1	Camp - 26			From	To	
1.1	Village Permission	NOC for WMM	-	-	-	One time permission
1.2	West Bengal Pollution Board	For Consent to establishment of RMC & WMM	CO05/6-PCB/HOW/89-13	8/4/2014		
1.3	West Bengal Pollution Board	For consent to operate of RMC	069/2-PCB/HOW/89-2013	12/2/15	30/09/16	
1.4	Factory License	Applied	-	-	-	-
1.8	WBE Act	NOC for Electricity		-	-	One time permission-
1.9	Battery Act	Yes				
2	Camp - 27			From	To	
2.1	Village Permission	NOC	-	-	-	One time permission

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2.5	WBE Act	NOC for Electricity	<u>WBE- 412349</u>	-	-	One time permission-
2.9	WBE Act	NOC for Electricity	-	-	-	One time permission-

Ashoka Dhankuni Kharagpur Tollways Limited (ADKTL)
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Sr.No	Name of the Licensing/ Registration Authority	Purpose	Number and Date of Registration/License	Validity Period		Update on any issue if any
				From	To	
3	Camp - 48, Village			From	To	
3.1	Baganan Village-Gramphanchayat Village	NOC				One time permission
3.2	West Bengal Pollution Board	For Consent to establishment of RMC	NOC-006/3-PCB/ HOW/ 42(09)-11	14/04/11	31/08/16	
3.3	West Bengal Pollution Board	For consent to operate of RMC & WMM	C025/1-PCB/HOW/234-11	4/3/15	31/05/16	
3.4	Factory License		18795	13/08/13	31/12/14	
3.8	WBE Act	NOC for Electricity	-	-	-	One time permission-
4	Camp - 56, Village			From	To	
4.1	Village Permission	NOC For Crusher, WMM and HMP	-	28/01/11		One time permission
4.2	West Bengal Pollution Board	For Consent to establishment of RMC & WMM	NOC-007/10-PCB/ HOW/ 43(09)-11	14/10/11	31/12/13	
4.3	West Bengal Pollution Board	For Consent to operate of WMM & HMP	CO15/2-PCB/HOW/85-2013 dated 20-2-2015	30/09/14	30/09/16	
4.4	Factory License	-	<u>18794</u>	13/08/13	31/12/14	-
4.5	Diesel pump	Explosive licence	P/PC/WB 14/2792 (P277039)	20/11/13	30/09/14	Applied
4.10	WBE Act	NOC for Electricity	-	-	-	One time permission-
4.11	Battery Act	Yes				
5	Tree Cutting Permission			From	To	
5.1	DFO-Permission Section-1 (17.600 to 72.000) Howrah	For tree cutting	54/HSFD/2011-12	31/01/12		One time permission
5.2	DFO-Permission Chainage (98.600 to 129.000) Howrah	For tree cutting	44/DB	12/12/11		One time permission
5.3	DFO-Permission	For tree cutting	159/PR-17	9/11/11		One time

Ashoka Dhankuni Kharagpur Tollways Limited (ADKTL)
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	Chainage CH 74 to CH 98.6Kolaghat to Rohila					permission
6	Labour License			From	To	
6.1	Ministry of Labour, Kolakata	Labour license	46/L(179)2011/ E-3	31/07/12	8/9/14	

Labour, WC, Minimum Wages, Contractor Labour, Employment License Details:-

The Company, SPV and EPC will base the employment relationship on the principle of equal opportunity and fair treatment, and will not discriminate with respect to any aspects of the employment relationship, such as recruitment and hiring, compensation (including wages and benefits), working conditions and terms of employment, access to training, job assignment, and promotion, termination of employment or retirement, and disciplinary practices.

The Company takes measures to prevent and address harassment, intimidation, and/or exploitation, especially in regard to women. The Company will ensure that all workers receive notice of dismissal and severance payments mandated by Indian labour law and collective agreements in a timely manner.

All outstanding back pay and social security benefits and pension contributions and benefits will be paid

- (i) On or before termination of the working relationship to the workers,
- (ii) Where appropriate, for the benefit of the workers, or
- (iii) Payment will be made in accordance with a timeline agreed through a collective agreement. Where payments are made for the benefit of workers, workers will be provided with evidence of such payments.

The Company will provide a grievance mechanism for worker to raise workplace concerns. The company will inform the workers of the grievance mechanism at the time of recruitment and make it easily accessible to them. In Project office and Camp area grievance box for easy and immediate communication. The Company will provide a safe and healthy work environment, taking into account inherent risks in its particular sector and specific classes of hazards in the project work areas, including physical, chemical, biological, and radiological hazards, and specific threats to women. The client will take steps to prevent accidents, injury, and disease arising from, associated with, or occurring in the course of work by minimizing, as far as reasonably practicable, the causes of hazards.

We are already in possession with the License for 1000 manpower & 300 Contract Labour in this project and an application has been filed in the O/o The Dy. Chief Labour Commissioner (C), GoI, Bhubaneswar for another 300 manpower increase in this project. We do also cover the Workmen Compensation act, 1923.

A number of Safety Signage's are on display near Educational Institutions along with several Safety Alert Signage's along the Project Stretch. Also we have provided Hard Barricading near High Risk Areas/Deep Excavation Areas along the Stretch.

NOTICE

RATE OF WAGES	UNSKILLED	RS 332.00	PERDAY
मजदुरी की दर	अकुशल	₹ ३३२.००	प्रतिदिन
মজদুরীর দর	अकुशल / अदक्ष	টাকা ३३२.००	প্রতিদিন
	SEMISKILLED	RS 367.00	PERDAY
	अर्धकुशल	₹ ३६७.००	प्रतिदिन
	अर्धकुशल/अर्धदक्ष	টাকা ३६७.००	
	SKILLED	RS 404.00	PERDAY
	कुशल	₹ ४०४.००	प्रतिदिन
	कुशल	টাকা ४०४.००	প্রতিদিন
HOURS OF WORK	8 Hrs		
कार्य का समय	८ घन्टे		
কাজের সময়	৮ ঘন্টা		

WAGES PERIOD	MONTHLY
मजदुरी काल	मासिक
বেতনের তারিখ	মাসিক

DATE OF PAYMENT OF WAGES	7th OF EVERY MONTH
मजदुरी भुगतान को तिथी	प्रति माह की ७ तारिख
পারিশ্রমিক প্রদান করিবার তারিখ	প্রতি মাসে ৭ তারিখ

**NAME AND ADDRESS OF INSPECTOR
HAVING JURISDICTION**
न्यायक्षेत्रीय निरिक्षक अधिकारी का नाम एवं पता
আইনী এজিয়ার পরিদর্শনকারীর নাম ও ঠিকানা

Mr RAJENDRA HEMROM
Labour Enforcement Officer
2nd M. S. Building 5th Floor
Nizam Palace A J C Bose Road
Kolkata (W.B.)

**DATE OF PAYMENT OF
UNPAID WAGES**
अदत्त मजदुरी भुगतान को तिथी
অদেয় পারিশ্রমিক প্রদান করিবার তারিখ

10th OF EVERY MONTH
प्रति माह की १० तारिख
প্রতি মাসে ১০ তারিখ



Chapter V: All HSE Policies

Further we do follow the Applicable Policies & Guidelines framed by the Management and those are summarized below :

Sr. No.	Document Details	Document Code	Main objective of Document
1	Integrated Management System Manual	ACL/IMS (L-1)	1. Apex manual for IMS and ISO Standard requirement interlinking of clauses.
			2. Level One (L-1) Document for all Department heads. In this manual Scope, Company Profile and SPV companies and detailed procedure related to QMS, EMS & OHSAS has been mentioned.
			3. ACL Document control procedural guideline.
2	HSE Work Instruction	ACL /IMS/HSE/01	HSE Work Instruction for CO-HSE department, In CO-HSE department is having 10 Process. This Manual is applicable for All ACL-HSE Department with their defined Roles and responsibility.
3	Environment Social & Safety Management System Manual	ACL/ESSMSM (L-2)	1. Guideline for the Environment, Social & Safety Management as per the National Rule and Regulations applicable for the National Highway Projects & IFC Performance Standard.
			2. This Manual for ready reference for SPV & EPC contractor for implementation at project site.
4	Environment & Social management Plan - Standard operating Procedure	ACL/ESMP (L-2)	1. Operating procedure for SPV/ EPC to attend the Environment and Social issues related to National Highway Construction.
			2. Role & Responsibility has defined to take care of the process related environmental issues and resolve the E&S issue on the priority.

Sr. No.	Document Details	Document Code	Main objective of Document
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6	Guideline for Traffic Management Plan	ACL/HSE&S/ESMP/GTMP/01	Safety of road users and project workers is a vital requirement which has to be attended during the contract period under the contract agreement; site design, planning, traffic diversion and procurement management are key controls for reducing the accidents caused by the vehicles.
7	PPE Matrix for road & bridge construction worker	ACL/HSE&S/ESMP/PPE Matrix/01	<p>1. Awareness of employees about the use of PPE's as per their working activity.</p> <p>2. Information of PPE's about their life, IS Code and approx market rate.</p> <p>3. Guidance of process owners and store, purchasing staffs to communication with suppliers and workers</p>
8	Emergency Response Plan	ACL/HSE&S/ERP/01	<p>1. To define and implement an effective organization to respond and manage emergency to protect life, environment and properties</p> <p>2. To provide an effective and efficient response to and control emergency that may occur.</p> <p>3. To identify the individuals responsible for directing the activities required to contain, control and manage an emergency situation.</p>
9	Tree Plantation Guideline for National Highway Projects	ACL/HSE&S/ESMP-TPGNHP/01	<p>1. Reducing the impacts of air pollution</p> <p>2. Natural noise barrier</p> <p>3. Arrest of land erosion</p> <p>4. Providing much needed shade during the daytime</p> <p>5. Prevention of vehicle glare from vehicles coming from opposite direction</p> <p>6. Enhancement of an esthetic view of the corridors</p> <p>7. Climatic amelioration</p> <p>8. Defining of ROW especially at sharp curves during night.</p>

Sr.	Document	Document Code	Main objective of Document
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No.	Details		
10	Guideline for Grievance Redressal Mechanism for SPV/EPC	ACL/HSE&S/ESMP-GGRM/01	1. To establish, maintain and improve the employee-employer relationship.
			2. To facilitate for the restoring/improving the living of displaced persons.
			3. To anticipate and avoid, or where avoidance is not possible, minimize adverse social and economic impact from land acquisition or restrictions on land use in consultation with the NHA and State revenue Department.
11	IT Disaster response plan	ACL/HSE&S/IT-DRP/01	1. To define and implement an effective organization to respond and manage emergency to protect life, environment and properties.
			2. To provide an effective and efficient response to and control emergencies that may occur.
			3. To achieve the zero down time.
12	Guideline for Disposal of Construction Waste	ACL/HSE&S/ESMP/GDCW/01	1. Guideline for site people to dispose the construction waste during the construction of road activity.
13	Environment Monitoring Plan	ACL/HSE&S/ESMP/GEMP/01	1. Guideline for to monitor the Ambient Air Quality, Noise, Stack monitoring during the construction phase, Normal water & Drinking water quality.
15	<u>Guideline for Tool Box</u>	ACL/HSE&S/TOOL BOX TALK/01	ACL Corporate HSE department has prepared the 67 HSE related training modules for SPV /EPC's HSE Office for the implementation of HSE Training at Working site.
			One Consolidated Tool Box Talk on 22 Topic has been prepared for SPV /EPC Contractor's HSE Officer for the implementation.
16	<u>Guideline for Monsoon Safety</u>	Soft copy	ACL Corporate HSE department has prepared the Monsoon Safety for SPV /EPC contractor.

Sr. No.	Document Details	Document Code	Main objective of Document
17	AVOIDING DANGER FROM OVERHEAD POWER LINES	Soft copy	This guidance is for people who may be planning to work near overhead lines where there is a risk of contact with the wires, and describes the steps you should take to prevent contact with them. It is primarily aimed at employers and employees who are supervising or in control of work near live overhead lines, but it will also be useful for those who are carrying out the work.
18	Safety Posters for awareness of SPV and EPC employees	Soft copy	<u>1. Camp Entrance safety posters</u> <u>2. Canteen related safety posters</u> <u>3. Office Entrance & Premises safety posters</u> <u>4. P&M, Workshop & Premises safety posters</u> <u>5. P&M, Plant area safety posters</u> <u>6. QA/QC Lab related safety posters</u> <u>7. Security Cabin related safety posters</u> <u>8. Store, storage related safety posters</u>

Chapter – VI : Project Chainage wise Hot Spot Challenges:-

Locations of Villages					
N.	Location/ (Km)	Name of Village	S.N.	Location/ (Km)	Name of Village
1	17.500	Dhankuni	39	75.000	Kolaghat
2	23.000	Jagdipur	40	76.600	Haldia Mod
3	27.600	Katliya	41	78.000	Pansila
4	31.000	Sakedra	42	78.800	Deulia
5	31.800	Alampur	43	80.600	Baradabar
6	33.800	New Korola	44	81.800	Devibar
7	34.000	Dhulagarh	45	83.300	Jiahda
8	39.000	Paniada	46	84.000	Siddha
9	39.400	Jodabadtale	47	85.000	Diglabar
10	40.000	Kulai	48	86.000	Dhuliara
11	41.000	Dhamisa	49	87.600	Kaliswar
12	41.800	Bauria	50	89.400	Mechogram
13	42.000	Raghudevpur	51	90.000	Kanakpur
14	42.500	Bolarampota	52	91.400	Panskura
15	44.000	Surikhali	53	92.600	Janabar
16	44.200	Labutala	54	96.000	Ratulia
17	44.800	Kahitala	55	98.000	Haur Rly Station
18	45.000	Basudebpur	56	100.000	Srirampur
19	46.500	Kholisani Malpara	57	101.000	Matbishunupur
20	47.900	Jagatpur	58	104.000	Nutan Bazar
21	48.600	Mansatala	59	104.500	Dhamtor
22	49.600	Tantiberia	60	107.000	Dalapatipur
23	51.000	Uluberia	61	108.000	Debra
24	55.000	Hispur	62	111.400	Panigerya
25	57.500	Parola	63	112.200	Arjuni Talpukur
26	58.000	Srirampur	64	112.500	Baramoil
27	59.400	Tulsiberia	65	114.000	sanjoria
28	59.800	Kashyappur	66	115.000	Harina
29	60.000	Madhavpur	67	116.800	Basantapur
30	63.000	Bagnan	68	117.200	Sultanpur
31	63.800	Amta	69	120.000	Palagarh
32	65.300	Tenpur	70	121.200	Munimgarh
33	66.800	Nabasan	71	123.400	Lachhamapur
34	68.000	Eashwarpur	72	125.800	Manipur
35	70.000	Deulti	73	126.500	Jakpur
36	71.000	Noupala	74	126.800	Krishnagar
37	71.100	Tamultala	75	126.900	Patpacha
38	71.400	Motimala	76	127.300	Uttar Simla

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**ASHOKA DHANKUNI KHARAGPUR TOLLWAYS LTD
6 LANING OF DHANKUNI TO KHARAGPUR SECTION OF NH6
Religious Structures: Shifting / Relocation Required**

Sl. No.	Description	SIDE	Mouja / Village	Religious Structure	Photographs	Status
District - Howrah						
1	24+450	RHS	Salap	Temple		Service Road
2	24+500	RHS	Salap	Temple		Service Road
3	46+400	RHS	Malpara	Mosque		PUP At Km. 46.425
4	63+200	RHS	Bagnan	Mosque		VUP At Km. 63.200
5	63+480	LHS	Bagnan	Temple (Ma Kali temple)		PUP At Km. 63.500




Religious Structures: Shifting / Relocation Required

Sl. No.	Description	SIDE	Mouja / Village	Religious Structure	Photographs	Status
District - East Medinipur						
6	80+115	RHS	Bardabar, PS: Kolaghat	Temple		Service Road
7	80+515	RHS	Bardabar, PS: Kolaghat	Temple		Service Road
8	80+525	RHS	Bardabar, PS: Kolaghat	Temple		Service Road
9	83+230	LHS	Uttarjinda, PS: Panskura	Temple		MCW
10	83+330	RHS	Uttarjinda, PS: Panskura	Temple		MCW

Religious Structures: Shifting / Relocation Required

Sl. No.	Description	SIDE	Mouja / Village	Religious Structure	Photographs	Status
11	83+700	RHS	Siddha	Mosque (Siddha Mosque)		MCW
12	84+180	LHS	Siddha, PS: Panskura	Temple		MCW
13	84+310	RHS	Diglabar, PS: Panskura	Temple		MCW
14	84+890	RHS	Diglabar, PS: Panskura	Temple		MCW
15	86+010	LHS	Dhuliara, PS: Panskura	Temple		MCW

Religious Structures: Shifting / Relocation Required

Sl. No.	Description	SIDE	Mouja / Village	Religious Structure	Photographs	Status
16	86+035	LHS	Dhuliara, PS: Panskura	Temple		MCW
17	88+880	LHS	Dakshin Mechogram	Temple		Service Road
District -West Medinipur						
18	110+190	LHS	Dharikapuri	Temple (Chandapuri Temple)		MCW

HOT SPOT PHOTOGRAPHS



School-CH-NO.31+260 LHS

HOT SPOT PHOTOGRAPHS



School-CH-NO.33+440 LHS

HOT SPOT PHOTOGRAPHS



School CH-NO.38+700 LHS

HOT SPOT PHOTOGRAPHS



Hospital CH-NO.39+200 LHS

HOT SPOT PHOTOGRAPHS



School-CH-NO.26+280 RHS

HOT SPOT PHOTOGRAPHS



School CH-NO.26+020 LHS

Safety Control Measures at Hot Spot

ADKTL - Road Accident CAPA Report				
Ch	No of accident	Reason of Accidents	Existing Safety Facilities	Spot Evidence
25	6	These accidents occurred only due to negligence of drivers (drunk & drive, over speed, carelessness, micro sleep etc.).	This area is currently PUP under construction. Traffic diverted on service road, we have provided different signboards such as "Go Slow - Work in Progress" (at every 600 mtr distance), "Overtaking Prohibited", "Speed Limit - 40". Construction area is fully barricaded by concrete block & bamboo stick with caution & reflective tapes, for speed reducing purpose we have provided rumble strips with white thermo plast painted & cat's eyes on it & 2 nos of traffic marshal has been provided for safe crossing of pedestrians.	
26	12	Six lane has been already completed at these locations. Since this is a straight road and these accidents occurred only due to negligence of drivers (drunk & drive, over speed, wrong overtaking, carelessness, non-fitness of vehicle, micro sleep etc.).	We have already provided permanent signboards, metal beam crash barrier & guard rails. The leftover work is RHS Service road work (pending due to land acquisition), LHS road marking and cat's eye fixing	
28	6	This area has huge industrial area so that lot of heavy vehicles are parked at MCW & service road. Due to this unauthorized parking on service road, local peoples are interacting with the MCW for the short movements also wrong side driving. We have informed to Traffic police dept. for above such mater. They have instructed us to provide "No Parking" boards at these locations. 8 nos of boards have been installed at these locations. But the Police Dept. hasn't taken any action for removing unauthorized parking.	This area was under construction for box culverts work, now road construction activities completed. We have already provided permanent signboards & guard rails. The leftover work is road marking and cat's eye fixing	
30	6			
88	7		These areas are under construction for VUP work and traffic is playing on service roads. We have already provided "Go Slow - Work in Progress", "Overtaking Prohibited", "Speed Limit - 40". Construction area is fully barricaded by concrete block & bamboo stick with caution & reflective tapes, for speed reducing purpose we have provided rumble strips with white thermo plast paint & cat's eyes on it & 4 nos of traffic marshal has been provided for safe crossing of pedestrians at both VUPs.	
90	10	These accidents occurred only due to negligence of drivers (drunk & drive, over speed, carelessness, micro sleep etc.).		
98	8	Six lane has been already completed at these locations. Since this is a straight road and these accidents occurred only due to negligence of drivers (drunk & drive, over speed, wrong overtaking, carelessness, non-fitness of vehicle, micro sleep etc.).	We have already provided permanent signboards except informatory board and cat's eyes will be fixed.	
101	7	Recently traffic diverted on VUP and PUP. After that no accidents occurred in the past 35 days (you can check Accident report - Oct 2014)	This area was under construction for VUP & PUP work, now road construction activities are completed and traffic playing on VUP & PUP and service roads. We have already provided metal beam crash barrier & permanent signboards. The leftover work is road marking and cat's eye fixing	
33	12	Recently traffic diverted on VUP and PUP. After that no accidents occurred in the past 35 days (you can check Accident report - Oct 2014)	These areas were under construction for VUP & PUP work, now road construction activities completed and traffic playing on VUP & PUP and service roads. We have already provided metal beam crash barrier, permanent signboards & guard rails. The leftover work is road marking and cat's eye fixing	
34	19			
35	16			
36	13	Six lane has been already completed at these locations. Since this is a straight road and these accidents occurred only due to negligence of drivers (drunk & drive, over speed, wrong overtaking, carelessness, non-fitness of vehicle, micro sleep, unauthorized pedestrian crossing on MCW, pedestrians are hopping over the metal beam crash barriers etc.). These accidents reasons are reflected in last three months road accident reports.	We have already provided permanent signboards, brifen wire rope & guard rails. The leftover work is KM-37 RHS Service road work (pending due to land acquisition), and cat's eye fixing	
37	14			
38	5			
39	6			

Letter Submitted to Local Traffic Police against traffic violation by local public



Ashoka Dhankuni Kharagpur Tollway Ltd.

ADKTL/DHK-KGP/NHA/2-I/3003

Date: -08.12.2014

To,
The GM (T) & Project Director,
National Highway Authority of India
Project Implementation Unit,
2nd Floor A-Block, White House 119,
Park Street, Kolkata-700016

प्रति निम्नंक
Received on
समय
Time
Not verified
एन.एच.ए.आई., प.आई., कोलकाता
NHAI, PIU, Kolkata

Office of the DM Howrah
15 - 2014
Contents not verified
Initials

Sub: Six laning of Dhankuni - Kharagpur Section of NH6 from KM: 17.600 to KM: 129.000 in the state of West Bengal to be executed as BOT (Toll) project on DBFOT pattern under NHDF Phase-V- Unauthorized parking of HMV on Main Carriageway & Service Roads, leading to accidents & deteriorating road surface.

Dear Sir,

We have constructed designated "Truck Lay Bye" areas at 6 locations for parking of trucks along the Project Highway as per provisions in Concession Agreement. Apart from the above, there exist parking lots along the Project Highway at some other locations managed by private parties. In the usual course of business, the Truck owners/drivers are required to use these areas for parking of the vehicles.

However, the truck owners/drivers do not take advantage of the provisions and very often make unauthorized parking of the vehicle on the Main carriage way and Service road at several locations which interalia includes the following major locations.

- Saraswati Bridge to Dhalagarh Toll Plaza (both sides of the main carriageway & service road)
- Near Khanpara (KM: 37 both sides)
- Panihara, Kharagpur bound (KM: 37 LHS)
- Nimdigli market, Kharagpur bound (KM: 50 LHS)

By their actions, the Truck owners/drivers not only violate the traffic rules but also narrows down the effective width of the Main carriage way and the Service Road leading to serious traffic jams/dislocation, zig zag movement of vehicles on the road during the peak hours leading to accidents. In many cases, the road user/driver are damaging the street light poles, pedestrian guard rails, kilometer stones, signage boards and other fixtures also of the Project Highway because of such unauthorized actions.

Besides, such unauthorized actions pollute the environment and the spillages of oil disintegrate the bituminous surfaces leading to deterioration of the road pavement. The very purpose of constructing the subject project thus gets lost.

The issue has been discussed with you and IE on several occasions during the site visit/inspections.

We now request you to take up the issue with the appropriate authorities in the administration so as to prevent such unauthorized actions of the truck owners/drivers by taking recourse to some punitive measures and or administrative actions to safe guard the interest of the users of the road.

Regd Office : 206, 2nd Floor, 79, Daryaganj, New Delhi - 110002, Delhi, India
Corporate Office : Ashoka House, Ashoka Marg, Nashik 422 011, Maharashtra, India • Tel +91 253 3011705
Fax +91 253 2422704 • corporate@ashokabuildcon.com • www.ashokabuildcon.com
CIN: 144529MPL30111910015000

We provided reflective radium tapes on the metal beam crash barrier, Guard railings, and street light posts etc. for better night visibility

Sample pictures of Road Safety on NH6



Sample pictures of white reflective stripes, RPM, repainted kerb with black & yellow color, 1 feet delineator with reflective tapes fixed on kerb etc.. at the end of three lane road.



Ashoka Dhankuni Kharagpur Tollways Limited (ADKTL)
Environment, Social and Safety Management Plan (ESSMP)

ADKTL-WATER BODIES DETAILS			
Ch. No.	River/Lake/Pond/Nalas/Culverts	Preventive Measures during construction	During Operation phase
18+200	Service Road Bridges	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
18+500	Box Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
18+774	Box/slab culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
18+350 to 21+350	Pond area	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
19+100	Box Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
19+462	Box/slab culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
19+929	Box/slab culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
20+500	Box Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
20+550	Box/slab culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
21+037	Service Road Bridges	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
21+050	Box/slab culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
21+427	Box/slab culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
22+462	Hume Pipe Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
22+966	Box/slab culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
23+689	Hume Pipe Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
24+116	Box/slab culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
24+847	Box/slab culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
25+230	Box/slab culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
25+440	Box/slab culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
25+707	Hume Pipe Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
26+012	Hume Pipe Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
26+250	Hume Pipe Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
27+605	Hume Pipe Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
27+980	Box/slab culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
28+030	Box Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
28+600	Box Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
28+920	Box Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
28+950	Service Road Bridges	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
28+975	Service Road Bridges	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
28+980	Box Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
29+300	Box Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
29+500	Box/slab culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
29+750	Box Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
30+050	Box Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
30+590	Box/slab culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
30+300	Box Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
30+450	Box Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
30+800	Box Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
31+131	Box/slab culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
31+250	Hume Pipe Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
31+673	Hume Pipe Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
32+611	Hume Pipe Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
33+419	Hume Pipe Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
33+425	Hume Pipe Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
34+005	Service Road/Minor Bridges	Embakment protect area sheet pilling	Cleaning and maintainace half yearly

Ashoka Dhankuni Kharagpur Tollways Limited (ADKTL)
Environment, Social and Safety Management Plan (ESSMP)

ADKTL-WATER BODIES DETAILS			
Ch. No.	River/Lake/Pond/Nalas/Culverts	Preventive Measures during construction	During Operation phase
35+658	Box/slab culvert	Embakment protect area sheet piling	Cleaning and maintainace half yearly
36+328	Service Road/Minor Bridges	Embakment protect area sheet piling	Cleaning and maintainace half yearly
37+960	Hume Pipe Culvert	Embakment protect area sheet piling	Cleaning and maintainace half yearly
38+379	Hume Pipe Culvert	Embakment protect area sheet piling	Cleaning and maintainace half yearly
39+646	Hume Pipe Culvert	Embakment protect area sheet piling	Cleaning and maintainace half yearly
40+270	Box/slab culvert	Embakment protect area sheet piling	Cleaning and maintainace half yearly
40+274	Box Culvert	Embakment protect area sheet piling	Cleaning and maintainace half yearly
40+710	Box/slab culvert	Embakment protect area sheet piling	Cleaning and maintainace half yearly
40+720	Box/slab culvert	Embakment protect area sheet piling	Cleaning and maintainace half yearly
41+830	Hume Pipe Culvert	Embakment protect area sheet piling	Cleaning and maintainace half yearly
42+007	Hume Pipe Culvert	Embakment protect area sheet piling	Cleaning and maintainace half yearly
42+320	Box/slab culvert	Embakment protect area sheet piling	Cleaning and maintainace half yearly
42+639	Box/slab culvert	Embakment protect area sheet piling	Cleaning and maintainace half yearly
42+947	Box/slab culvert	Embakment protect area sheet piling	Cleaning and maintainace half yearly
42+320	Box Culvert	Embakment protect area sheet piling	Cleaning and maintainace half yearly
42+639	Box Culvert	Embakment protect area sheet piling	Cleaning and maintainace half yearly
42+947	Box/slab culvert	Embakment protect area sheet piling	Cleaning and maintainace half yearly
43+585	Box Culvert	Embakment protect area sheet piling	Cleaning and maintainace half yearly
44+032	Hume Pipe Culvert	Embakment protect area sheet piling	Cleaning and maintainace half yearly
44+625	Hume Pipe Culvert	Embakment protect area sheet piling	Cleaning and maintainace half yearly
44+905	Hume Pipe Culvert	Embakment protect area sheet piling	Cleaning and maintainace half yearly
45+689	Box/slab culvert	Embakment protect area sheet piling	Cleaning and maintainace half yearly
45+856	Hume Pipe Culvert	Embakment protect area sheet piling	Cleaning and maintainace half yearly
46+173	Box/slab culvert	Embakment protect area sheet piling	Cleaning and maintainace half yearly
46+601	Box/slab culvert	Embakment protect area sheet piling	Cleaning and maintainace half yearly
46+830	Major Bridges	Embakment protect area sheet piling	Cleaning and maintainace half yearly
47+772	Box/slab culvert	Embakment protect area sheet piling	Cleaning and maintainace half yearly
48+032	Box/slab culvert	Embakment protect area sheet piling	Cleaning and maintainace half yearly
48+515	Service Road/Minor Bridges	Embakment protect area sheet piling	Cleaning and maintainace half yearly
48+826	Box/slab culvert	Embakment protect area sheet piling	Cleaning and maintainace half yearly
49+700	Service Road/Minor Bridges	Embakment protect area sheet piling	Cleaning and maintainace half yearly
50+190	Box/slab culvert	Embakment protect area sheet piling	Cleaning and maintainace half yearly
50+600	Box Culvert	Embakment protect area sheet piling	Cleaning and maintainace half yearly
50+603	Hume Pipe Culvert	Embakment protect area sheet piling	Cleaning and maintainace half yearly
51+020	Box Culvert	Embakment protect area sheet piling	Cleaning and maintainace half yearly
51+134	Box/slab culvert	Embakment protect area sheet piling	Cleaning and maintainace half yearly
51+600	Box Culvert	Embakment protect area sheet piling	Cleaning and maintainace half yearly
51+610	Box Culvert	Embakment protect area sheet piling	Cleaning and maintainace half yearly
52+070	Hume Pipe Culvert	Embakment protect area sheet piling	Cleaning and maintainace half yearly
52+511	Box/slab culvert	Embakment protect area sheet piling	Cleaning and maintainace half yearly
52+711	Hume Pipe Culvert	Embakment protect area sheet piling	Cleaning and maintainace half yearly
52+900	Hume Pipe Culvert	Embakment protect area sheet piling	Cleaning and maintainace half yearly
53+686	Hume Pipe Culvert	Embakment protect area sheet piling	Cleaning and maintainace half yearly
54+165	Box/slab culvert	Embakment protect area sheet piling	Cleaning and maintainace half yearly
54+437	Hume Pipe Culvert	Embakment protect area sheet piling	Cleaning and maintainace half yearly

Ashoka Dhankuni Kharagpur Tollways Limited (ADKTL)
Environment, Social and Safety Management Plan (ESSMP)

ADKTL-WATER BODIES DETAILS			
Ch. No.	River/Lake/Pond/Nalas/Culverts	Preventive Measures during construction	During Operation phase
55+400	Box Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
55+647	Box/slab culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
56+326	Hume Pipe Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
56+432	Hume Pipe Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
56+550	Box Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
56+615	Box Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
56+976	Box/slab culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
57+150	Box Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
57+145	Box Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
58+015	Hume Pipe Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
58+310	Hume Pipe Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
58+575	Box Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
58+600	Box Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
59+015	Hume Pipe Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
59+300	Box Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
59+310	Box Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
59+600	Box Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
59+618	Box Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
60+115	Box Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
60+150	Box Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
60+550	Major Bridges	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
60+115	Box Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
60+150	Box Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
60+550	Major Bridges	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
61+867	Box/slab culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
63+532	Hume Pipe Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
63+795	Hume Pipe Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
63+975	Hume Pipe Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
64+725	Hume Pipe Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
65+645	Box/slab culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
66+838	Box/slab culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
67+250	Box Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
67+265	Box Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
69+585	Hume Pipe Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
71+531	Hume Pipe Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
71+850	Hume Pipe Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
73+500	Major Bridges	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
74+695	Hume Pipe Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
75+522	Service Road/Minor Bridges	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
76+245	Hume Pipe Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
76+802	Hume Pipe Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
79+231	Box/slab culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
79+840	Hume Pipe Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
80+597	Box/slab culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
81+573	Box/slab culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly

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ADKTL-WATER BODIES DETAILS			
Ch. No.	River/Lake/Pond/Nalas/Culverts	Preventive Measures during construction	During Operation phase
82+743	Box/slab culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
83+560	Hume Pipe Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
84+069	Box/slab culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
84+980	Hume Pipe Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
85+453	Box/slab culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
87+010	Box/slab culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
87+450	Box Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
88+150	Box Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
88+233	Hume Pipe Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
89+325	Box/slab culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
89+960	Hume Pipe Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
90+340	Hume Pipe Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
91+000	Hume Pipe Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
91+640	Box/slab culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
92+280	Hume Pipe Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
93+550	Hume Pipe Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
93+670	Hume Pipe Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
93+680	Hume Pipe Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
99+810	Box/slab culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
100+850	Box/slab culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
101+580	Box/slab culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
101+950	Hume Pipe Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
103+750	Hume Pipe Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
104+680	Hume Pipe Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
105+700	Hume Pipe Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
106+850	Hume Pipe Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
108+260	Hume Pipe Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
108+380	Hume Pipe Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
109+050	Box/slab culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
111+250	Hume Pipe Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
112+910	Box/slab culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
113+350	Hume Pipe Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
114+550	Hume Pipe Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
117+680	Hume Pipe Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
119+050	Hume Pipe Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
119+155	Hume Pipe Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
119+335	Hume Pipe Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
119+650	Hume Pipe Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
119+950	Hume Pipe Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
120+300	Box Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
121+400	Box Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
123+640	Hume Pipe Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
125+230	Hume Pipe Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
125+250	Box Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
126+070	Box Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly
127+555	Hume Pipe Culvert	Embakment protect area sheet pilling	Cleaning and maintainace half yearly

Details of Structures

CHAINAGE		Type of STR.	Type of construction	SIDE	Status
AS PER C. A.	As per Site				
18+200	18+200	S/R Br.	New	LHS	Not found at site
18+200	18+200	S/R Br.	New	RHS	Not found at site
18+500	18+490	Box	New	LHS-SR	Completed
18+500	18+490	Box	New	LHS-MCW	Completed
18+500	18+490	Box	New	RHS-SR	Completed
18+500	18+490	Box	New	RHS-MCW	Completed
18+774	18+774	Box	Widen	LHS	Completed
18+774	18+774	Box	Widen	RHS	Completed
20+200	19+095	VUP	New	B/S	Completed
19+100	19+150	Box	New	LHS-SR	Completed
19+100	19+150	Box	New	LHS-MCW	Completed
19+100	19+150	Box	New	RHS-SR	Completed
19+100	19+150	Box	New	RHS-MCW	Completed
19+462	19+462	Box	Widen	LHS	Completed
19+462	19+462	Box	Widen	RHS	Completed
19+929	19+929	Box	Widen	LHS	Completed
19+929	19+929	Box	Widen	RHS	Completed
20+500	20+150	Box	New	LHS-SR	Completed
20+500	20+150	Box	New	LHS-MCW	Completed
20+500	20+150	Box	New	RHS-SR	Completed
20+500	20+150	Box	New	RHS-MCW	Completed
20+550	20+550	Box	Widen	LHS	Completed
20+550	20+550	Box	Widen	RHS	Completed
21+037	21+037	S/R Br.	New	LHS	Completed
21+037	21+037	S/R Br.	New	RHS	Completed
21+050	21+427	Box	Widen	LHS	Completed
21+050	21+427	Box	Widen	RHS	Completed
22+462	22+462	HPC	Widen	LHS	Completed
22+462	22+462	HPC	Widen	RHS	Not Started due to LA
22+966	22+966	Box	Widen	LHS	Completed
22+966	22+966	Box	Widen	RHS	Completed
23+689	23+689	HPC	Widen	LHS	Not found at site
23+689	23+689	HPC	Widen	RHS	Not found at site
23+831	23+831	ROB	New	LHS	Work Delayed due to Approach PROW land including for via duct span not available hence access to the site and encumbered movement of crane activity shifting not possible due to non-availability of land.
24+116	24+116	Box	Widen	LHS	MCW Completed, SR - WIP Delay Due to Land acquisition

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					and presence of electric poles
24+116	24+116	Box	Widen	RHS	Completed
24+847	24+847	Box	Widen	LHS	Completed
24+847	24+847	Box	Widen	RHS	Completed
25+230	25+230	Box	Widen in SR	LHS	Balance due to Electric cable crossing.
25+230	25+230	Box	Widen	RHS	Completed
25+440	25+440	Box	Widen	LHS	Completed
25+440	25+440	Box	Widen	RHS	Completed
19+100	25+680	PUP	New	B/S	Structure completed. Traffic playing of RHS and WIP on LHS (Work Delay due to LA & Enc.
25+707	25+707	HPC	Widen	LHS	Not found at site
25+707	25+707	HPC	Widen	RHS	Not found at site
26+012	26+012	HPC	Widen	LHS	Completed
26+012	26+012	HPC	Widen	RHS	Completed
26+012	26+012	Box	New-COS	LHS-SR	Completed
26+012	26+012	Box	New-COS	LHS-MCW	Completed
26+012	26+012	Box	New-COS	RHS-SR	completed
26+012	26+012	Box	New-COS	RHS-MCW	Completed
26+250	26+250	HPC	Widen	LHS	Not found at site
26+250	26+250	HPC	Widen	RHS	Not found at site
26+425	26+380	FOB	New	LHS	WIP - Work delay due to encroachment and resistance from local public.
26+425	26+380	FOB	New	RHS	WIP Work delay due to encroachment and resistance from local public.
27+570	27+570	VUP	New	B/S	Hold due to IOCL Pipe line
27+605	27+605	HPC	Widen	LHS	Balance due to LA
27+605	27+605	HPC	Widen	RHS	Balance due to LA
27+980	27+980	Box	Widen	LHS	Completed
27+980	27+980	Box	Widen	RHS	Balance due to LA
28+300	28+300	Box	New	LHS-SR	Completed
28+300	28+300	Box	New	LHS-MCW	Completed
28+300	28+300	Box	New	RHS-SR	WIP, Work delay due to electrical pole existence and Land acquisition
28+300	28+300	Box	New	RHS-MCW	Completed
28+600	28+600	Box	New	LHS-SR	Completed
28+600	28+600	Box	New	LHS-MCW	Completed
28+600	28+600	Box	New	RHS-SR	Balance due to LA & Electric pole
28+600	28+600	Box	New	RHS-MCW	Completed
28+950	28+950	S/R Br.	New	LHS	Slab work in progress. Work delay due to non-shifting of utilities due to non-availability of land free from encroachment.
28+950	28+950	S/R Br.	New	RHS	Slab work in progress. Work delay due to non-shifting of utilities due to non-availability of land free from



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					encroachment.
29+500	29+500	Box	Widen	LHS	Completed
29+500	29+500	Box	Widen	RHS	Completed
29+750	29+750	Box	New	LHS-SR	Completed
29+750	29+750	Box	New	LHS-MCW	Completed
29+750	29+750	Box	New	RHS-SR	Completed
29+750	29+750	Box	New	RHS-MCW	Completed
30+050	30+050	Box	New	LHS-SR	Completed
30+050	30+050	Box	New	LHS-MCW	Completed
30+050	30+050	Box	New	RHS-SR	Balance due to LA & Electric pole
30+050	30+050	Box	New	RHS-MCW	Completed
30+300	30+180	Box	New-COS	LHS-SR	Completed
30+300	30+180	Box	New-COS	LHS-MCW	Completed
30+300	30+180	Box	New-COS	RHS-SR	Balance due to Electric pole obstruction & LA
30+300	30+180	Box	New-COS	RHS-MCW	Completed
30+450	30+440	Box	New	LHS-SR	Completed
30+450	30+440	Box	New	LHS-MCW	Completed
30+450	30+440	Box	New	RHS-SR	Balance due to Electric pole obstruction & LA
30+450	30+440	Box	New	RHS-MCW	Completed
30+590	30+590	Box	Widen	LHS	Completed
30+590	30+590	Box	Widen	RHS	Balance due to LA
30+800	30+800	Box	New	LHS-SR	Completed
30+800	30+800	Box	New	LHS-MCW	Completed
30+800	30+800	Box	New	RHS-SR	Balance due to LA
30+800	30+800	Box	New	RHS-MCW	Completed
31+131	31+131	Box	Widen	LHS	Completed
31+131	31+131	Box	Widen	RHS	Balance due to LA
31+250	31+250	HPC	Widen	LHS	Not found at site
31+250	31+250	HPC	Widen	RHS	Not found at site
31+600	31+600	VUP	New	B/S	LHS -completed and RHS -WIP (Delay due to Encroachment)
31+673	31+673	HPC	Widen	LHS	Completed
31+673	31+673	HPC	Widen	RHS	Completed
28+920	32+520	Box	New	LHS-SR	Completed
28+920	32+520	Box	New	LHS-MCW	Completed
28+920	32+520	Box	New	RHS-SR	Completed
28+920	32+520	Box	New	RHS-MCW	Completed
32+611	32+611	HPC	Widen	LHS	Completed
32+611	32+611	HPC	Widen	RHS	Completed
33+000	32+996	PUP	New	B/S	Completed
33+419	33+419	HPC	Widen	LHS	Completed
33+419	33+419	HPC	Widen	RHS	Completed
34+005	34+001	MNB	Rec.	LHS	Completed
34+005	34+001	MNB	Rec.	RHS	Completed
34+005	34+001	S/R Br.	New	LHS	Completed



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34+005	34+001	S/R Br.	New	RHS	Completed
34+050	34+033	VUP	New	B/S	Completed
34+250	34+250	Box	Widen	LHS-SR	Completed
34+250	34+250	Box	Widen	RHS-SR	Completed
35+658	35+658	Box	Widen	LHS	Completed
35+658	35+658	Box	Widen	RHS	Completed
36+328	36+328	S/R Br.	New	LHS	Completed
36+328	36+328	S/R Br.	New	RHS	Completed
28+980	36+990	Box	New	LHS-SR	Completed
28+980	36+990	Box	New	LHS-MCW	Completed
28+980	36+990	Box	New	RHS-SR	Balance due to LA
28+980	36+990	Box	New	RHS-MCW	Completed
37+960	37+960	HPC	Widen	LHS	Not found at site
37+960	37+960	HPC	Widen	RHS	Not found at site
38+050	38+065	VUP	New	B/S	Balance due to LA and Electric Sub-station
38+379	38+379	HPC	Widen	LHS	Balance Due to electricals cables
38+379	38+379	HPC	Widen	RHS	Completed
39+646	39+646	HPC	Widen	LHS	Completed
39+646	39+646	HPC	Widen	RHS	Completed
40+274	40+274	Box	Widen	LHS	Completed
40+710	40+710	Box	Widen	LHS	Completed
41+830	41+830	HPC	Widen	LHS	Completed
41+830	41+830	HPC	Widen	RHS	Completed
41+920	41+929	VUP	New	B/S	Balance due to encroachment & LA
42+007	42+007	HPC	Widen	LHS	Completed
42+007	42+007	HPC	Widen	RHS	Completed
42+320	42+320	Box	Widen	LHS	Completed
42+320	42+320	Box	Widen	RHS	Completed
42+639	42+639	Box	Widen	LHS	Completed
42+639	42+639	Box	Widen	RHS	Completed
42+947	42+947	SC	Widen	LHS	Completed
42+947	42+947	SC	Widen	RHS	Completed
29+300	43+585	Box	New	LHS	Completed
29+300	43+585	Box	New	RHS	Completed
44+032	44+032	HPC	Widen	LHS	Completed
44+032	44+032	HPC	Widen	RHS	Completed
44+625	44+625	HPC	Widen	LHS	Completed
44+625	44+625	HPC	Widen	RHS	Head wall balance due to LA
44+905	44+905	HPC	Widen	LHS	Completed
44+905	44+905	HPC	Widen	RHS	Completed
45+856	45+856	HPC	Widen	LHS	Completed
45+856	45+856	HPC	Widen	RHS	Completed
44+950	44+937	VUP	New	B/S	Balance due to encroachment & LA

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45+183	45+183	SC	Rec	LHS	SR Completed. MCW balance due to VUP @ km44.937 not started
45+183	45+183	SC	Rec	RHS	SR Completed. MCW balance due to VUP @ km44.937 not started
45+689	45+689	SC	Widen	LHS	Completed
45+689	45+689	SC	Wid.	RHS	Completed
46+173	46+173	SC	Widen	LHS	Completed
46+173	46+173	SC	Wid.	RHS	Completed
46+400	46+426	PUP	New	B/S	Balance due to encroachment & LA
46+601	46+601	SC	Wid.	LHS	Completed
46+601	46+601	SC	Wid.	RHS	Balance due to encroachment & LA
46+830	46+830	MJB	New	LHS	Completed
Additional	47+547	MNB	New	LHS	Completed
Additional	47+547	MNB	New	RHS	Completed
47+772	47+772	SC	Wid.	LHS	Completed
47+772	47+772	SC	Wid.	RHS	Completed
48+032	48+032	SC	Widen	LHS	Completed
48+032	48+032	SC	Wid.	RHS	Completed
48+500	48+495	PUP	New-COS	B/S	WIP, Delay due to change of PUP to LVUP (under COS)
48+515	48+515	S/R Br.	New	LHS-SR	Completed
48+515	48+515	MNB	New	LHS-MCW	Completed
48+515	48+515	S/R Br.	New	RHS-SR	Completed
48+515	48+515	MNB	New	RHS-MCW	Completed
48+826	48+826	Box	Wid.	LHS	Completed
48+826	48+826	Box	Wid.	RHS	Completed
49+700	49+700	MNB	New	LHS-SR	WIP, Work was held up due to delay in decision of PUP at Km 48.495.
49+700	49+700				P1-A2= Slab Completed
49+700	49+700	MNB	New	RHS-MCW	A1-P1= 2 girder complete out of 3
49+700	49+700				P1-A2= Slab Completed
49+700	49+700	MNB	New	RHS-SR	A1-P1, Bal. due to LA
49+700	49+700				P1-A2= Slab Completed
50+190	50+190	SC	Widen	LHS	Completed
50+190	50+190	SC	Wid.	RHS	Completed
50+500	50+525	VUP	New	B/S	Balance due to encroachment, utility
50+603	50+603	HPC	Widen	LHS	Balance Due to LA
50+603	50+603	HPC	Widen	RHS	Balance Due to LA & Electrical pole.
50+600	51+020	Box	New	LHS	Completed
50+600	51+020	Box	New	RHS	Balance Due to LA & Electrical pole.
51+134	51+134	SC	Widen	LHS	Completed
51+134	51+134	SC	Wid.	RHS	Completed
51+600	51+610	Box	New	LHS	Completed

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51+600	51+610	Box	New	RHS	Completed
52+077	52+070	HPC	Widen	LHS	Completed
52+077	52+070	HPC	Widen	RHS	Completed
52+511	52+511	SC	Widen	LHS	Completed
52+511	52+511	SC	Wid.	RHS	Completed
52+711	52+711	HPC	Widen	LHS	Completed
52+711	52+711	HPC	Widen	RHS	Completed
52+900	52+900	HPC	Widen	LHS	Not found at site
52+900	52+900	HPC	Widen	RHS	Not found at site
53+686	53+686	HPC	Widen	LHS	Completed
53+686	53+686	HPC	Widen	RHS	Completed
54+165	54+165	SC	Widen	LHS	Completed
54+165	54+165	SC	Wid.	RHS	Completed
54+437	54+437	HPC	Widen	LHS	Completed
54+437	54+437	HPC	Widen	RHS	Completed
54+700	54+738	PUP	New	B/S	Completed
54+753	54+753	SC	Rec	LHS	Completed
54+753	54+753	SC	Rec	RHS	Completed
55+400	55+400	Box	New	LHS	Completed
55+400	55+400	Box	New	RHS	Completed
55+647	55+647	SC	Rec	LHS	Completed
55+647	55+647	SC	Rec	RHS	Completed
55+900	55+847	VUP	New	B/S	Completed
56+326	56+326	HPC	Widen	LHS	Completed
56+326	56+326	HPC	Widen	RHS	Completed
56+432	56+432	HPC	Widen	LHS	Completed
56+432	56+432	HPC	Widen	RHS	Completed
56+550	56+615	Box	New	LHS	Completed
56+550	56+615	Box	New	RHS	Completed
56+976	56+976	SC	Widen	LHS	Not Started due to electric cable and LA
56+976	56+976	SC	Wid.	RHS	Not Started due to electric cable and LA
57+150	57+145	Box	New	LHS	Completed
57+150	57+145	Box	New	RHS	Completed
58+015	58+015	HPC	Widen	LHS	Completed
58+015	58+015	HPC	Widen	RHS	Completed
58+310	58+310	HPC	Widen	LHS	Completed
58+310	58+310	HPC	Widen	RHS	Completed
58+600	58+575	Box	New	LHS	Completed
58+600	58+575	Box	New	RHS	Completed
59+000	58+931	VUP	New	B/S	Structure completed, Approach WIP, Balance due to Encroachment and Utility
59+300	59+310	Box	New	LHS	Completed
59+300	59+310	Box	New	RHS	SR Completed. MCW in progress
59+600	59+618	Box	New	LHS	Completed



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59+600	59+618	Box	New	RHS	SR Completed. MCW Balance due to LA & electric pole
60+150	60+115	Box	New	LHS	Completed
60+150	60+115	Box	New	RHS	Completed
60+550	60+550	MJB	New	LHS	Completed
61+867	61+867	Box	Widen	LHS	Completed
61+867	61+867	Box	Wid.	RHS	Completed
63+200	63+164	VUP	New	B/S	Balance due to Encroachment, Mosque
63+500	63+457	PUP	New	B/S	Balance due to Encroachment, Mosque
63+532	63+532	HPC	Widen	LHS	Completed
63+532	63+532	HPC	Widen	RHS	Completed
63+795	63+795	HPC	Widen	LHS	Completed
63+795	63+795	HPC	Widen	RHS	Completed
64+725	64+725	HPC	Widen	LHS	Completed
64+725	64+725	HPC	Widen	RHS	Completed
64+950	64+915	VUP	New	B/S	Balance due to Land Acquisition
65+645	65+645	Box	Widen	LHS	Completed
65+645	65+645	Box	Widen	RHS	Completed
66+570	66+450	PUP	New	B/S	Slab Completed, Traffic running on LHS and RHS Approach work in progress. - Work delay due to Land dispute / Encroachment & Utility
66+838	66+838	SC	Widen	LHS	Completed
66+838	66+838	SC	Wid.	RHS	Completed
67+250	67+265	Box	New	LHS	Completed
67+250	67+265	Box	New	RHS	Completed
69+585	69+585	HPC	Widen	LHS	Completed
69+585	69+585	HPC	Widen	RHS	Completed
69+800	69+780	VUP	New	B/S	Balance due to Land Acquisition & utility
71+531	71+531	HPC	Widen	LHS	Completed
71+531	71+531	HPC	Widen	RHS	Completed
71+850	71+850	HPC	Widen	LHS	Completed
71+850	71+850	HPC	Widen	RHS	Completed
72+950	72+961	PUP	Rehab w/o wid.	B/S	Completed
74+300	74+175	PUP	New	B/S	Completed
74+695	74+695	HPC	Widen	LHS	Completed
74+695	74+695	HPC	Widen	RHS	Completed
73+500	73+500	MJB	New	LHS	Completed (Roopnarayan Bridge)
73+500	73+500	MJB	New	RHS	Completed (Roopnarayan Bridge)
75+522	75+522	S/R Br.	Widen	LHS	Completed
75+522	75+522	S/R Br.	Widen	RHS	Completed
76+245	76+245	HPC	Widen	LHS	Completed
76+245	76+245	HPC	Widen	RHS	Completed
76+802	76+802	HPC	Widen	LHS	Completed

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76+802	76+802	HPC	Widen	RHS	Completed
78+500	78+500	VUP	New	B/S	Balance due to Deolia Bazar LA & Encroachment
79+231	79+231	Box	Widening	LHS	Completed
79+231	79+231	Box	Widening	RHS	Not applicable
79+840	79+840	HPC	Widen	LHS	Completed
79+840	79+840	HPC	Widen	RHS	Completed
80+597	80+500	Box	Widening	LHS	Completed
80+597	80+500	Box	Widening	RHS	In Progress
81+573	81+573	Box	Widening	LHS	Not applicable
81+573	81+573	Box	Widening	RHS	Not applicable
82+743	82+642	Box	Widening	LHS	Completed
82+743	82+642	Box	Widening	RHS	Completed
83+560	83+560	HPC	Widen	LHS	Not applicable
83+560	83+560	HPC	Widen	RHS	Not applicable
84+069	83+970	Box	Widening	LHS	Completed
84+069	83+970	Box	Widening	RHS	Completed
84+980	84+742	HPC	Widen	LHS	Completed
84+980	84+742	HPC	Widen	RHS	Completed
85+453	85+445	Box	Widening	LHS	Completed
85+453	85+445	Box	Widening	RHS	Completed
87+010	87+010	Box	Widening	LHS	Completed
87+010	87+010	Box	Widening	RHS	Completed
87+450	87+480	Box	New	LHS	Completed
87+450	87+480	Box	New	RHS	Completed
88+150	88+150	Box	New	LHS	Completed
88+150	88+150	Box	New	RHS	Completed
88+233	88+233	HPC	Widen	LHS	Completed
88+233	88+233	HPC	Widen	RHS	Completed
88+800	88+890	VUP	New	B/S	Delay due to Over Head Line, Mechogram , Encroachment & LA
89+325	89+321	Box	Widening	LHS	Completed
89+325	89+321	Box	Widening	RHS	Completed
89+960	89+960	HPC	Widen	LHS	Completed
89+960	89+960	HPC	Widen	RHS	Yet to Start
90+140	90+100	VUP	New	B/S	Slab completed & Approach work in progress
90+340	90+340	HPC	Widen	LHS	Completed
90+340	90+340	HPC	Widen	RHS	Completed
91+000	91+000	HPC	Widen	LHS	Completed
91+000	91+000	HPC	Widen	RHS	Completed
91+500	91+550	VUP	New	B/S	Decision for change in location and VUP to PUP required, not a major jn, only pedestrian crossing
91+640	91+640	Box	Widening	LHS	Completed
91+640	91+640	Box	Widening	RHS	Completed

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92+280	92+280	HPC	Widen	LHS	Completed
92+280	92+280	HPC	Widen	RHS	Completed
93+550	93+550	HPC	Widen	LHS	Not found at site
93+550	93+550	HPC	Widen	RHS	Not found at site
93+670	93+670	HPC	Widen	LHS	Not found at site
93+670	93+670	HPC	Widen	RHS	Not found at site
93+680	93+680	HPC	Widen	LHS	Not found at site
93+680	93+680	HPC	Widen	RHS	Not found at site
94+050	94+330	VUP	New	B/S	Slab completed & Approach work in progress, RHS service constructed in partial width due to land constraint and DHK side Service road stopped due to obstruction of TMC office
99+810	99+810	Box	Widening	LHS	Completed
99+810	99+810	Box	Widening	RHS	Completed
100+850	100+890	Box	Widening	LHS	Not applicable
100+850	100+890	Box	Widening	RHS	Completed
101+100	101+562	VUP	New	B/S	Completed
Additional	101+240	HPC	Widen	RHS	Completed
Additional	101+240	HPC	Widen	RHS	Completed
101+580	101+580	Box	Widening	LHS	Not applicable
101+580	101+580	Box	Widening	RHS	Not applicable
Additional	101+900	HPC	Widen	LHS	Completed
Additional	101+900	HPC	Widen	RHS	Completed
101+950	101+950	HPC	Widen	LHS	Completed
101+950	101+950	HPC	Widen	RHS	Completed
103+750	103+750	HPC	Widen	LHS	Completed
103+750	103+750	HPC	Widen	RHS	Completed
104+680	104+680	HPC	Widen	LHS	Completed
104+680	104+680	HPC	Widen	RHS	Completed
105+700	105+700	HPC	Widen	LHS	Completed
105+700	105+700	HPC	Widen	RHS	Completed
106+850	106+850	HPC	Widen	LHS	Completed
106+850	106+850	HPC	Widen	RHS	Completed
108+260	108+280	HPC	Widen	LHS	Completed
108+260	108+280	HPC	Widen	RHS	Completed
108+350	108+802	VUP	New	B/S	Completed
108+380	108+380	HPC	Widen	LHS	Deleted
108+380	108+380	HPC	Widen	RHS	Deleted
109+050	109+090	Box	Widening	LHS	Completed
109+050	109+090	Box	Widening	RHS	Completed
111+250	111+250	HPC	Widen	LHS	Completed
111+250	111+250	HPC	Widen	RHS	Completed
112+910	112+963	Box	Widening	LHS	Completed
112+910	112+963	Box	Widening	RHS	Completed
113+350	113+355	HPC	Widen	LHS	Completed



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113+350	113+355	HPC	Widen	RHS	Completed
114+550	114+550	HPC	Widen	LHS	Completed
114+550	114+550	HPC	Widen	RHS	Completed
Additional	116+220	HPC	Widen	LHS	Completed
Additional	116+220	HPC	Widen	RHS	Completed
117+680	117+680	HPC	Widen	LHS	Completed
117+680	117+680	HPC	Widen	RHS	Completed
119+050	118+982	HPC	Widen	LHS	Not applicable
119+050	118+982	HPC	Widen	RHS	Completed
119+155	119+010	HPC	Widen	LHS	Not applicable
119+155	119+010	HPC	Widen	RHS	Completed
119+335	119+347	HPC	Widen	LHS	Not applicable
119+335	119+347	HPC	Widen	RHS	Completed
119+650	119+650	HPC	Widen	LHS	Not applicable
119+650	119+650	HPC	Widen	RHS	Completed
119+950	119+950	HPC	Widen	LHS	Not applicable
119+950	119+950	HPC	Widen	RHS	Completed
120+300	120+300	Box	New	LHS	Cancel due to Irrigation issue
120+300	120+300	Box	New	RHS	Cancel due to Irrigation issue
121+400	121+320	Box	New	LHS	Cancel due to Irrigation issue
121+400	121+320	Box	New	RHS	Cancel due to Irrigation issue
123+640	123+640	HPC	Widen	LHS	Not found at site
123+640	123+640	HPC	Widen	RHS	Not found at site
125+250	124+900	Box	New	LHS	Cancel due to Irrigation issue
125+250	124+900	Box	New	RHS	Cancel due to Irrigation issue
125+230	125+230	HPC	Widen	LHS	Not found at site
125+230	125+230	HPC	Widen	RHS	Not found at site
126+070	126+070	Box	New	LHS	Completed
126+070	126+070	Box	New	RHS	Completed
128+730	126+910	Box	New	LHS	1/2 Completed
128+730	126+910	Box	New	RHS	Completed
127+555	127+555	HPC	Widen	LHS	Not applicable
127+555	127+555	HPC	Widen	RHS	Completed
127+400	128+210	VUP	New	B/S	Completed
128+270	128+270	MJB	new	RHS	Completed
128+680	128+380	Box	New	LHS	Completed
128+680	128+380	Box	New	RHS	Completed
128+850	128+850	Box	New	LHS	Deleted
128+850	128+850	Box	New	RHS	Deleted
128+950	128+950	Box	New	LHS	Deleted
128+950	128+950	Box	New	RHS	Deleted

VUP/PUP APPROACHES LENGTH

Sr.	Type of Structure	Approaches Chainage	Total Length (M)	Remark
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No.		From	To		
1	VUP @ KM 19.095	18.820	19.360	540	
2	PUP @ KM 25.680	25.450	25.890	440	
3	VUP @ KM 27.555	27.200	27.960	760	
4	VUP @ KM 31.580	31.140	32.020	880	
5	PUP @ KM 32.996	32.700	33.300	600	
6	VUP @ KM 34.033	33.680	34.360	680	
7	VUP @ KM 38.065	37.740	38.420	680	
8	VUP @ KM 41.929	41.600	42.250	650	
9	VUP @ KM 44.937	44.510	45.380	870	
10	PUP @ KM 46.426	46.210	46.610	400	
11	LVUP @ KM 48.495	48.180	48.810	630	
12	VUP @ KM 50.525	50.190	50.860	670	
13	PUP @ KM 54.700	54.400	55.000	600	
14	VUP @ KM 55.900	55.500	56.200	700	
15	VUP @ KM 58.900	58.600	59.240	640	
16	VUP @ KM 63.200	62.850	63.400	550	
17	PUP @ KM 63.457	63.400	63.750	350	
18	VUP @ KM 64.915	64.450	65.350	900	
19	PUP @ KM 66.450	66.150	66.750	600	
20	VUP @ KM 69.780	69.500	70.100	600	
22	PUP @ KM 72.961	In Bridge approaches			
23	PUP @ KM 74.300	In Bridge approaches			
24	VUP @ KM 78.500	78.240	78.780	540	
25	VUP @ KM 88.890	88.620	89.140	520	
26	VUP @ KM 90.100	89.820	90.400	580	
27	PUP @ KM 91.640	91.340	91.760	420	
28	VUP @ KM 94.330	93.960	94.570	610	
29	VUP @ KM 101.562	101.320	101.820	500	
30	VUP @ KM 108.802	108.520	109.080	560	
31	VUP @ KM 128.210	127.800	128.550	750	
		TOTAL		17220	

Plantation Details

Sl. No.	Chainage		Length	Median Plantation
	From	To		No of Plants at Site
1	18+000	18+350	350	
2	18+350	18+890	540	160
3	18+890	19+000	110	
4	19+000	19+360	360	
5	19+360	20+000	640	222

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6	20+000	21+000	1000	336
7	21+000	22+000	1000	431
8	22+000	23+000	1000	312
9	23+000	23+330	330	163
10	23+330	24+000	670	
11	24+000	24+190	190	
12	24+190	24+470	280	88
13	24+470	24+680	210	
14	24+680	24+870	190	
15	24+870	25+000	130	
16	25+000	26+000	1000	10
17	26+000	27+000	1000	13
18	27+000	28+000	1000	369
19	28+000	28+070	70	
20	28+070	29+000	930	584
21	29+000	30+000	1000	573
22	30+000	30+350	350	96
23	30+350	31+000	650	
24	31+000	32+000	1000	297
25	32+000	33+000	1000	60
26	33+000	34+000	1000	0
27	34+000	34+570	570	
28	34+570	35+000	430	283
29	35+000	36+000	1000	0
30	36+000	37+000	1000	0
31	37+000	38+000	1000	47
32	38+000	39+000	1000	68
33	39+000	40+000	1000	0
34	40+000	41+000	1000	0
35	41+000	42+000	1000	74
36	42+000	42+400	400	
37	42+400	43+000	600	317
38	43+000	44+000	1000	521
39	44+000	44+250	250	573
40	44+250	45+000	750	
41	45+000	45+350	350	0
42	45+350	46+000	650	564
43	46+000	46+170	170	160
44	46+170	46+730	560	
45	46+730	47+000	270	159
46	47+000	48+000	1000	549
47	48+000	48+190	190	227
48	48+190	48+850	660	
49	48+850	49+000	150	227
50	49+000	50+000	1000	438
51	50+000	50+170	170	135
52	50+170	50+830	660	
53	50+830	51+000	170	135
54	51+000	52+000	1000	260
55	52+000	53+000	1000	275
56	53+000	54+000	1000	514

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57	55+000	56+000	1000	70
58	56+000	57+000	1000	37
59	57+000	58+000	1000	170
60	58+000	59+000	1000	128
61	59+000	60+000	1000	255
62	60+000	61+000	1000	120
63	61+000	62+000	1000	215
64	62+000	63+000	1000	299
65	64+000	65+000	1000	204
66	65+000	66+000	1000	276
67	66+000	67+000	1000	130
68	67+000	68+000	1000	400
69	68+000	69+000	1000	192
70	69+000	70+000	1000	53
71	70+000	71+000	1000	324
72	71+000	72+000	1000	397
73	72+000	73+000	1000	480
74	77+960	78+160	200	21
75	79+000	79+900	900	279
76	80+520	82+600	2080	525
77	84+050	85+898	1848	527
78	86+010	87+340	1330	191
79	87+440	88+520	1080	250
80	89+280	89+620	340	118
81	90+550	92+620	2070	266
82	92+930	93+220	290	67
83	94+660	95+000	340	108
84	95+280	95+950	670	139
85	96+480	97+040	560	238
86	97+490	98+080	590	180
87	98+140	99+150	1010	337
88	99+580	100+000	420	97
89	100+000	101+000	1000	140
90	102+000	103+000	1000	350
91	103+000	103+960	960	225
92	104+060	104+760	700	40
93	105+000	106+000	1000	223
94	106+100	107+000	900	196
95	107+000	107+520	520	76
96	107+860	108+080	220	45
97	109+280	110+000	720	25
98	110+000	111+000	1000	46
99	111+000	112+000	1000	12
100	112+000	112+450	450	11
101	112+955	114+020	1065	50
102	114+100	115+000	900	10
103	115+000	116+000	1000	0
104	116+000	117+000	1000	0
105	117+000	118+000	1000	0
106	118+000	119+000	1000	80
107	119+000	119+250	250	0

108	121+650	122+000	350	0
109	122+000	122+850	850	0
110	127+800	128+200	400	0
Total Plants = 17862				




Avenue Plantation







Chainage		SIDE	Length	NOS
From	To			
72+000	72+500	LHS	500	84
72+500	72+540	LHS	40	13
72+000	72+500	RHS	500	142
77+330	77+415	LHS	85	96
77+645	77+700	LHS	55	20
77+600	77+700	RHS	100	75
124+800	125+260	RHS	460	339
104+800	105+000	LHS	200	28
105+000	105+610	LHS	610	129
106+000	106+150	LHS	150	35
106+200	106+560	LHS	360	79
106+620	106+920	LHS	300	72
106+970	107+120	LHS	150	37
107+250	107+340	LHS	90	20
107+380	107+520	LHS	140	35
107+560	107+620	LHS	60	18
109+290	109+330	LHS	40	15
109+430	109+490	LHS	60	23
109+730	109+770	LHS	40	12
109+890	109+940	LHS	50	18
100+020	104+760	LHS	4740	463
93+160	93+670	LHS	510	138
94+500	94+670	LHS	170	26
94+920	95+000	LHS	80	26
95+170	95+380	LHS	210	41
95+930	96+140	LHS	210	56
96+210	96+320	LHS	110	28
96+380	96+420	LHS	40	6
96+630	96+660	LHS	30	8
96+940	97+120	LHS	180	40
98+700	98+780	LHS	80	16
99+000	99+390	LHS	390	72
99+710	100+020	LHS	310	61
96+210	96+280	LHS	70	6
95+380	95+530	LHS	150	53
96+360	96+380	LHS	20	4

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96+720	96+750	LHS	30	10
96+760	96+910	LHS	150	12
97+010	97+130	LHS	120	40
97+250	97+300	LHS	50	15
98+290	98+390	LHS	100	25
102+050	102+730	RHS	680	126
94+620	94+850	RHS	230	92
94+950	95+040	RHS	90	10
95+000	95+300	RHS	300	58
96+130	96+600	RHS	470	135
96+130	96+800	RHS	670	208
120+390	120+800	RHS	410	418
121+670	122+030	RHS	360	360
97+630	98+340	RHS	710	260
98+340	99+030	RHS	690	219
98+030	99+500	RHS	1470	91
99+630	100+070	RHS	440	147
100+170	100+390	RHS	220	79
100+410	100+450	RHS	40	13
100+850	100+940	RHS	90	22
102+750	103+030	RHS	280	61
103+320	103+430	RHS	110	27
103+030	103+180	RHS	150	42
130+510	130+780	RHS	270	76
Total Scope			22731	
Tree Planted			4880	
Balance			17851	

QHSE Awareness Posters are displayed at project site

Poster	Poster	Poster
 <p>Use of PPE'S Awareness</p>	 <p>Emergency Response procedure</p>	 <p>Electric Shock, Danger</p>

 <p style="text-align: center;">Waste Disposal</p>	 <p style="text-align: center;">Save Energy</p>	 <p style="text-align: center;">Save Environment and do the correct disposal</p>
 <p style="text-align: center;">Safety Awareness Poster</p>	 <p style="text-align: center;">Access and its passkey</p>	 <p style="text-align: center;">Electrical Safety Rules</p>
 <p style="text-align: center;">Energy Saving Reminder</p>	 <p style="text-align: center;">Restricted Entry</p>	 <p style="text-align: center;">Physical & Electrical Safety</p>
 <p style="text-align: center;">To operate FE</p>	 <p style="text-align: center;">Caution Board</p>	 <p style="text-align: center;">Electric Danger</p>

Chapter – VII: Natural Resources

Minerals, Aggregates and Soil resource management

Land use Change and Loss of productive/top soil

To the extent non-agricultural areas to be used as borrow areas
 Top soil to be preserved and laid over either on the embankment slope for growing

vegetation to protect soil erosion.

The Stockpile shall be designed such the slope does not exceed 1:2 (Vertical to horizontal) and the height of the pile will be restricted to 2m

To prevent any compaction of soil in the adjoining productive lands, the movement of construction vehicles, machinery and equipment will restricted to corridor

The stored topsoil will be utilized for:

Top dressing of the road embankments and fill slopes.

Filling up of tree pits, proposed part of compensatory plantation.

The contractor shall be responsible for working out haul roads with the minimal loss of productive soils, in consultation with the Supervision Consultants

Slope protection and Soil erosion due to construction activities, earthwork, and cut and fill etc.


Prepare Construction schedule for bridges during non-monsoon season.

Bio-turning of embankments to protect slopes.

Slope protection by providing frames, dry stone pitching, masonry retaining walls, planting of grass and trees.

The side slopes of all cut and fill areas will be graded and covered with stone pitching, grass and shrub as per design specifications.

Soil erosion at earth stockpiles

Soil Erosion Protection		
Sl. No.	Ch no.	Photographs
1	55+847 VUP	
2	60 Damodar Bridge DHK End LHS	

		
3	60 Damodar Bridge KGP End RHS	

The earth stockpiles to be provided with gentle slopes to prevent soil erosion. Retention wall/bund to be provided around the storage areas for excavated soil and other construction material to check the flow of solid with storm water in case of rain;

Borrow areas

Non-productive, barren lands, upland shall be used for borrowing earth with the necessary permissions/consents from land owner and necessary local authorities.
 Depths of borrow pits to be regulated (should not more than 2 Meter).
 Topsoil to be stockpiled and protected for use at the rehabilitation stage.
 Silted/Sediment Lakes, Ponds should be selected as borrow area;
 Use of fly Ash should be done at embankments and other earth work to reduce the use of Borrow area
 Transportation of earth materials through covered vehicles.
 No Borrow area to be located within ROW
 IRC recommended practice for borrow pits (IRC 10: 1961).
 Borrow areas not to be dug continuously.
 To the extent borrow areas shall be sited away from habituated areas. Borrow areas shall be leveled with salvaged material or other filling materials which do not pose contamination of soil. Else, it shall be converted into fishpond in consultation with land owner/community.
 Rehabilitation of the borrow areas as per Guidelines for redevelopment of Borrow Areas.

Quarry Operations

Aggregates will be sourced from existing licensed quarries only.

Copies of consent/ approval / rehabilitation plan for a new quarry or use of existing source will be verified and their regular compliance to be checked.
The quarry operations will be undertaken within the rules and regulations in force in the state.

Borrow Areas and Quarries Management Plan:

The sources for borrow materials, metal quarry and sand quarry shall identified and samples should be tested to determine their suitability.

Location of source of supply of materials for embankment of sub-grade and the procedure for excavation or transport of material shall be in compliance with the environmental requirements of the MoRTH and as specified in IRC:10-1961.

The following precautions have to be taken

To restrict unauthorized borrowing by the contractor No borrow area shall be opened without permission of the supervision Consultant.

The borrowing shall not be carried out from cultivable lands, unless and until, it shall be agreed upon by the supervision consultant that there is no suitable uncultivable land in the vicinity for borrowing or private landowners are willing to allow borrowing on their fields.

To avoid any embankment slippage, the borrow areas Will not be dug continuously, and the size and shape of borrow pits will be decided by the Supervision Consultant.

Redevelopment of the borrow areas to mitigate the impacts will be the responsibility of EPC and Sub Contractor.

Precautionary measures as the covering of vehicles will be taken to avoid spillage

During transport of borrow materials. The unpaved surfaces used for the haulage of borrow material will be maintained properly.

The haul roads and borrows areas will be managed and maintained. Since dust rising is the only impact along the haul roads sprinkling of water will be carried out twice a day along such roads during their period of use.

Borrowing of earth shall be carried out at location recommended as follows:

Non-Cultivable Lands: Borrowing of earth will be carried out up to a depth of 2.0 m from the existing ground level. Borrowing of earth shall not be done continuously. Ridges of not less than 8m width shall be left at intervals not exceeding 300 m. Small drains shall be cut though the ridges, if necessary, to facilitate drainage. Borrow pits shall have slopes not steep than 1 vertical in 4 horizontal.

Productive Lands: Borrowing of earth shall be avoided on productive lands. However, in the event of borrowing from productive lands, under circumstances as described above, topsoil shall be pressed in stockpiles. The conservation of topsoil shall be carried out. At such locations, the depth of borrow pits shall not exceed 45 cm and it may be dug out to a depth of not more than 30 cm after stripping the 15 cm top soil Aside. Elevated lands: at locations where private owners desire their fields to be leveled, the borrowing shall be done to depth of not more than 2 m or up to the level of surrounding fields.

Borrow Pits Along Roadside: Borrow pits shall be located 5m away from the toe of the embankment.

Depth of the pit should be such that the bottom of the pit shall not fall within an imaginary

line of slope 1 vertical to 4 horizontal projected for the edge of the final section of the bank. Borrow pits should not be dug continuously. Ridges of not less than 8 m width should be left at intervals not exceeding 300 m. Small drains should be cut through the ridges to facilitate drainage.

Community/Private Ponds: Borrowing can be carried out at locations, where the private owners (or in some cases, the community) desire to develop lands (mostly low-lying areas) for pisciculture purposes and for use as fishponds.

Borrow Areas Near Settlements: Borrow pit location shall be located at least 1 km from villages and settlements. If unavoidable, they should not be dug for more than 30 cm and should be drained.

Compaction of soil due to movement of vehicles and equipments.

Construction vehicles, machinery, and equipment to be stationed in the designated ROW to avoid compaction.

Approach roads/haulage roads shall be designed along the barren and hard soil area to reduce the compaction.

Transportation of quarry material to the dumping sites through heavy vehicles shall be done through existing major roads to the extent possible to restrict wear and tear to the village/minor roads.

Damaged village roads/haul road should be restored immediately;

Land taken for construction camp and other temporary facility shall be restored to its original conditions;

Provision of dedicated path within the site for exclusive entry and exit of the construction vehicles;

Contamination of soil due to leakage/spillage of oil, bituminous and non bituminous debris generated from demolition and road construction.

Construction vehicles and equipment will be maintained and refueled in such a fashion that oil/diesel spillage does not contaminate the soil.

Fuel storage and refueling sites to be kept away from drainage channels/ water bodies (river, pond lakes, community water resources).

Unusable construction demolition debris shall be dumped in ditches and low lying areas.

Waste oil and oil soaked cotton/ cloth shall be stored in containers labeled 'Waste Oil' and 'Hazardous' sold off to MoEF/SPCB authorized vendors;

Oil, grease, fuel and chemicals should be stored on concrete plat form with HDPE sheet,

Non-bituminous wastes to be dumped in borrow pits with the concurrence of landowner and covered with a layer of topsoil conserved from opening the pit.

Scarified bituminous should be milled and reused on embankment and other rural roads;

Bituminous wastes will be disposed off in an identified dumping site approved by the State Pollution Control Board

Soil quality monitoring to be under taken as per monitoring plan, SPCB, MoEF requirements

Contamination due to use of fly ash

Use and disposal of fly ash as per fly ash notification.

Fly ash to be used sandwiched between good earth layers after the proper approval from NHAI Consultant / Independent Engineer / NHAI PIU.

Water resource strategy

Construction water

Source the requirement of water preferentially from ground water but with prior permission from the concerned authority.

Take all precaution to minimize the wastage of water in the construction process/ operation. Water intensive activities should not to be undertaken during summer period (April, May June)

Monitor and Measure the Water

Alteration in surface water hydrology due to embankment

Existing drainage system to be maintained and further enhanced.

Provision of adequate size and number of cross drainage structures.

Sections of the corridor to be raised suitably along flood prone areas with the cross drainage structures and adequate side drains to be built.

Siltation in water bodies due to construction activities/earthwork

Bridge construction in non-perennial streams to be limited to the dry season.

Silt/Sediment trap to be provided.

Embankment slopes to be modified suitably to restrict the soil debris entering water bodies.

Provision of Silt fencing shall be made at water bodies.

Silt/sediment should be collected and stockpiled for possible reuse as surfacing of slopes where they have to be re-vegetated;

Construction material and demolition waste of existing bridges etc shall be periodically removed and no material shall be stored at the river bed during monsoon or water flow in the rivers;

Natural flow of the river should not be disturbed;

Earthworks and stone works to be prevented from impeding natural flow of rivers, streams and water canals or existing drainage system.

Deterioration in Surface water quality due to leakage from vehicles and equipments

No vehicles or equipment should be parked or refueled near water-bodies, so as to avoid contamination from fuel and lubricants;

Oil and grease traps and fueling platforms to be provided at re-fueling locations.

All chemicals and oil shall be stored away from water and concreted platform with catchment pit for spills collection;
Construction material and other waste from river bed/ channel, other water bodies should be removed,
Storage of material shall be away from the water bodies,
All equipment operators, drivers, and warehouse personnel will be trained in immediate response for spill containment and eventual cleanup.
Construction camp to be sited away from water bodies
Wastes must be collected, stored and taken to approved disposal site only.
Water quality shall be monitored periodically as per the requirement of SPCB/ MoEF/EIA.

Air Quality improvement

Climate and Air Quality

Site Project In-charge will
Do Compensatory Plantation (1:3) and as per the guideline of Divisional forest department.
Tree Plantation Guideline is attached
Do the additional plantation on river banks, borrow areas and sensitive locations will also prevent deterioration of the local climatic conditions
Avoid use of wood as fuel in labor camps and Project site office etc.
Make Provision of kerosene and/or LPG gas for cooking at labor camp;
Do Plantation of pollutant absorbing trees at congestion locations and /or whenever applicable.
Make Provision of junctions at major intersections and flyovers, ROB for congestion free movement of traffic as per Schedule-B of concession Agreement.

Dust generations due to construction activities and transport, storage and handling of construction materials.

Site development during construction of Project office, Labor Camps, HMP, WMM, Crusher Plants, Stockyard etc.
Transportation, loading and unloading of loose and fine materials through covered vehicles.
Storage areas to be located downwind of the habitation area.
All stockpiles to be covered while uncovered stockpiles and transfer points will be periodically water sprinkled to minimize fugitive dust generation.
Dust generating activities to be avoided in conditions of high wind (particularly during summer season) and loose construction material to be covered at construction site
Vehicle speed to be restricted to 15 km/hr at site, haul roads to minimize potential for dust generation in the surroundings
Trucks/ dumpers to be covered by tarpaulin sheets during off site transportation of friable construction materials and spoil
Water sprinkling on unpaved roads within the Proposed Project site and Haul road to avoid dust generation;
Housekeeping of the area (Project site, Camp site, Labor camps, Stockyard, etc) to be maintained by deputing sweepers to remove dirt/debris from the floors/sites on daily basis

Water sprinkling on earthworks, unpaved haulage roads and other dust prone areas at regular interval.

Development of green belt around Crushers, and other Plants and Machineries

Provision of PPEs to workers.

Emissions from vehicles, equipment and Machineries

Regular maintenance of machinery and equipment

Preventive Maintenance Schedule and All Machinery Should have it own History Sheet

Ensure that all the vehicles entering the site will have valid PUC (Pollution under control) certificate; Idling should not be allowed. Machinery to be turned off when not in use
Crusher, RMC Plant, asphalt mixing plants, CRMB Plant at downwind (1km) direction from the nearest settlement.

All Plant and Machinery Such as Crusher, WMM, HMP, RMC, DG Set & CRMB Plant licensed by the Local Authority, SPCB and Factory Inspectorate shall be used.

Diesel generators meant for emergency power supply to be regularly maintained so as to ensure that emissions from fuel combustion remain at design levels. Also to ensure stack height of 1.5 m above the roof level of the shed meant for diesel generators to meet the stack height requirement as specified by CPCB;

Low sulphur fuel to be used for operation of DG set and other plants and machineries.

Regular Ambient air quality and stack monitoring should be carried out as per the ACL – Environmental Monitoring Plan for Road Project, Camp sites, & Toll Plaza. ACL –Environment monitoring Plan for Air, Water, Soil and Noise is prepared

Noise from construction vehicle, equipment and machinery.

All equipment to be timely serviced and properly maintained & carry out the preventive maintenance of machineries and vehicles.

Bottlenecks to be removed, major intersections to be provided with interchange / flyovers as per schedule-B Concessions Agreement.

Construction equipment and machinery to be fitted with noise silencers and maintained properly.

Timing of noisy construction activities shall be done during night time and weekends when there are no activities by the sensitive receptor, concurrent noisy operations may be separated to reduce the total noise generated, and if possible re-route traffic during construction to avoid the accumulation of noise beyond standards. Else provision of temporary noise barrier at sensitive locations;

Initiation of multi-layered plantation, to serve as mitigation option for operation phase

Provision of rubber puddings/ noise isolators at equipment /machinery used for construction;

Noise prone activities need to be restricted to the extent possible during night to reduce the noise impact. There is also requirement of providing make shift noise barriers surrounding the high noise generating construction equipment;

Site workers working near high noise equipment to use personal protective devices to

minimize their exposure to high noise levels;
 Honking restrictions near sensitive receptors;
 Noise monitoring should be carried out as per ACL Environmental Monitoring Plan
 In high noise area, use of Ear Plug / Ear Muff is compulsory.

Sr. No.	Particular	Impact	Reason	Mitigation/Enhancement
1	Meteorological factors and climate	Meager Impacts	Conversion of land into paved surface	Avenue of tree plantation
2	Dust generation	Short term	Site clearance activities, removal of trees and loading/unloading of construction material	Sprinkling of water Use of tarpaulin to cover the fine material Construction plant will be installed in downwind direction
3	Gaseous pollutants	Long term	Construction plant, vehicles etc.	All the vehicles should be warranted with Pollution under control certificate. Proper maintenance of the vehicles.

Plantation

Forest & Plantation:

According to the Environmental Protection Act (enacted by MoEF, GoI), the entire linear stretches of roadside plantation along the state/national highways were declared as protected forest. Although the land is under the control of Public Works department, due to its protected status, approval of Central or State government for using the land for widening and rehabilitation must be granted. The above act was amended in 1980 in an attempt to check the rapid deforestation occurring throughout India. At the State level the Government was empowered to declare reserve and protected forest and was also given the authority to acquire land for extension and preservation of the forest. The Act was modified in 1998 by the MoEF. The spirit behind the act was conservation of natural forest and not strip plantation lost.

In case of the road side plantation, the clearance now may be given by the concerned regional offices of the MoE&F, irrespective of the area of plantation lost. While issuing the approval, the normal provision of compensatory afforestation, it stipulates a condition that for every tree cut at least two trees should be planted.

Flora and Fauna :

The trees to be cleared in course of construction should be replaced by double in number.

Species suitable to the locality and climate should be planted.

Two-year-old seedlings of fast growing species are chosen. Advance plantation prior to the road construction will help in establishment of the plantations. The species like *Mangifera indica*, *Azadirachta indica*, *Acacia auriculiformis*, *Ficus bengalensis*, *Ficus religiosa* etc should be planted. The budget for such afforestation should be provided.

Multi row planting should be encouraged than single row. The vegetal cover along the row near to the settlements should cover at least 10 meters both sides.

Plantation

Depending on the availability of Right of way, plantation pattern should be as follows:

1. The first row along the highways will be of small to medium sized ornamental trees.
2. Subsequent rows, depending on the availability of width, will comprise of ornamental and or shade bearing species of more height than those in the first row.
3. planting of dwarf shrub in the median, provide glare free travel to the road user during night time.
4. Planting of herbaceous species are ground cover in the median , special landscape and the embankment slopes.
5. Turfing with grass in the median , special landscape and embankments.

Tree plantation on the road side:

The first and second row of plantations along the highway, except the last row, should be worked out based on the land availability of the RoW along the various sections. Following are recommended species for Roadside plantation :

Sr. No.	Soil	Botanical Name	Local Name	Flowering month/Colour
1	Normal loamy soil	<i>Acacia auriculiformis</i>	Vilayati babool	Sep-Oct/yellow
2		<i>Bauhinia Sps</i>	Kachnar	Femar/pink
3		<i>Cassia fistula</i>	Amaltas	May/Yellow
4		<i>Cassia nodosa</i>	Cassia	May-june/pink
5		<i>Delonix regia</i>	Gulmohar	May/yellow
6		<i>Jacaranda mimosarfolia</i>	Jacaranda	April/blue
7		<i>Peltophorum ferrugineum</i>	peltophorum	Oct/yellow
8		<i>Cordial dictma</i>	lasoda	
9	Water logged areas	<i>Syzygium cumini</i>	Jamun	
10	Alkaline soils	<i>Terminalia arjun</i>	Arjun	
11		<i>Albizzia lebbek</i>	Kalasisiris	
12		<i>Pongamia pinnata</i>	Kanji	
13		<i>Terminalia arjun</i>	Arjun	

Species recommended for second and Subsequent row:

Sr. No.	Soil	Botanical Name	Local Name
1	Normal Loamy Soil	<i>Albizzia lebbek</i>	kalasisiris
2		<i>Pongamia pinnata</i>	kanji
3		<i>Terminalia arjun</i>	Arjun
4		<i>Malia azadiracta</i>	Bakain
5		<i>Dalbergia sissoo</i>	Shisham
6		<i>Gravilea robusta</i>	Silver Oak

Tree plantation



Quarry and Borrow Earth Development

ADKTL will follow the Government norms for Quarry and borrow earth material requirement for the project. In this project we have plan to utilize the fly ash which is easily available in this area. We have planned to utilize the fly ash instead of stone / aggregate. The stones are purchasing from authorized vendors. Borrow earth has been identified as per National Highway Authority of India and Independent Engineer. After extraction of the soil the borrow earth will be developed as per owner's requirement. Most of times we are redeveloping the borrow earth by using top soil / black cotton soil or sometimes making a water reservoir.



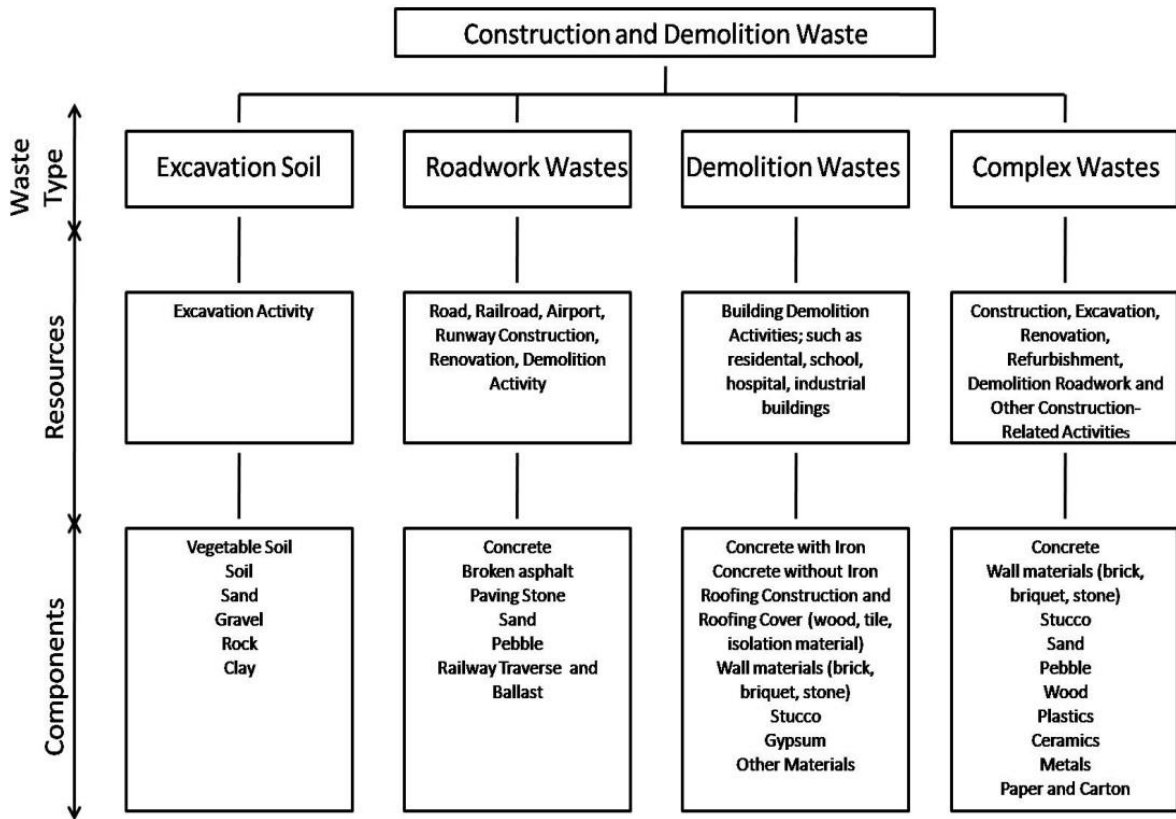
Status of Rehabilitation of Borrow Areas

Sl.No	Borrow Area No	Chainage	Side	Lead in Km	Area Proposed Sqm	Date of Sampling	Approved Quantity in Cum	Date of Approval	Suitability of Material	RFI No. Date of Inspection	Remarks
1	6	98+080	LHS	2.000		20.10.2011	65550	21.11.2011	Embankment	--	Amended
2	7	98+000	LHS	2.500		10.11.2011	12138	18.11.2011	Embankment	--	Rehabilitation in Progress
3	8	108+840	LHS	0.700		05.11.2011	162000	24.12.2011	Embankment	224	Rehabilitation in Progress
4	11	106+820	LHS	0.700		08.12.2011	5850	26.12.2011	Embankment	480	Rehabilitation in Progress
5	13	100+800	RHS	1.500		16.02.2011	3000	30.12.2011	Embankment	576	Rehabilitation in Progress
6	21	96+200	LHS	1.000		21.04.2012	10500	04.05.2012	Embankment	1065	Rehabilitation in Progress
7	23	114+880	LHS	6.000		20.01.2012	30150	06.04.2012	Embankment	1189	Rehabilitation in Progress
8	26	129+500	LHS	1.500		31.01.2012	7380	17.02.2012	Embankment	1401	Rehabilitation in Progress
9	27	129+500	LHS	3.000		31.01.2012	6144	17.02.2012	Embankment	1401	Rehabilitation in Progress
10	28	129+500	LHS	3.000		31.01.2012	3037	17.02.2012	Embankment	1401	Rehabilitation in Progress
11	29	114+000	LHS	1.300		02.02.2012	18000	17.06.2012	Embankment	1423	Rehabilitation in Progress
12	30	109+350	LHS	0.200		09.02.2012	3750	17.02.2012	Embankment	1617	Rehabilitation in Progress
13	33	120+400	RHS	0.900		19.02.2012	3000	06.03.2012	Embankment	1620	Rehabilitation in Progress
14	34	116+200	LHS	0.500		25.02.2012	3750	06.03.2012	Embankment	2232	Amended
15	37	112+000	LHS	0.500		13.03.2012	3000	05.04.2012	Embankment	2630	Rehabilitation in Progress
16	40	82+500	LHS	1.500		24.04.2012	12000	09.05.2012	Embankment	4190	Amended
17	41	127+350	RHS	0.100		11.05.2012	4680	22.05.2012	Embankment	4658	Rehabilitation in Progress
18	42	87+000	RHS	0.800		12.05.2012	6000	17.05.2012	Embankment	4660	Rehabilitation in Progress
19	46	86+000	RHS	1.000		28.05.2012	7440	06.06.2012	Embankment	5191	Rehabilitation in Progress
20	50	128+820	RHS	1.520		20.02.2013	7500	02.03.2013	Embankment	17307	Rehabilitation in Progress

Camp Dismantling Procedure

After the completion of project work we need to dismantle the plant set-up, camps and offices constructed for project work. There are various environmental impacts during dismantling procedure. Following waste is generated during dismantling procedure and its disposal method is as follows

- | | |
|---|--|
| <ul style="list-style-type: none"> Asphalt Concrete and concrete blocks Brick, tile and masonry materials Ferrous metal Non-ferrous metals: copper, aluminum ... etc Untreated lumber Plywood, OSB and particle board Gypsum wallboard scrap Paper and cardboard Beverage containers Insulation Rigid foam Glass Carpet and pad | <ul style="list-style-type: none"> Trees and shrubs Soil Plumbing fixtures Windows Doors Cabinets Architectural fixtures Millwork, paneling and other similar interior finishes Electric fixtures, motors, switch gear and other similar equipment HVAC equipment, duct work, control systems, switches and other similar equipment Others as appropriate |
|---|--|



STORAGE AND HANDLING:

A. Site Storage

Remove materials for recycling and recovery from the work locations to approved containers or storage area as required. Failure to remove waste or recovered materials will be considered cause for withholding payment and termination of Contract.

Position containers for recyclable and recoverable waste materials at a designated location on the Project Site. If materials are sorted on site, also provide a sorting area and necessary storage containers.

Change-out loaded containers for empty containers, as demand requires.

If recovered materials are stored on-site for project duration provide adequate security from pilferage.

B. Handling

Deposit indicated recyclable, and recoverable materials in storage areas or containers in a clean (no mud, adhesive, solvents, petroleum contamination), debris-free condition. Do not deposit contaminated materials into the containers until such time as such materials have been cleaned.

Insure all recovered materials are made safe for handling and storage.

If the contamination chemically combines with the material so that it cannot be cleaned, do not deposit into the recycle containers. In such case, request resolution by the C&D Quality Manager for disposal of the contaminated material. Directions from the C&D Quality Manager do not relieve the Contractor of responsibility for compliance with all legal and regulatory requirements for disposal, nor shall such directions cause a request for modification of the Contract.

PROJECT CONDITIONS:

A. Environmental Requirements:

Transport recyclable and recoverable waste materials from the Work Area to containers and carefully deposit in the containers without excess noise and interference with other activities, to minimize noise and dust.

The Contractor shall ensure adequate erosion control and storm water control, if required, to prevent or minimize the negative impact to its surrounding environment.

Provide measures to insure the containment of lead-based paint and dust, nails, asbestos-based products and any biological contaminants that may affect environmental health and safety conditions.

B. Site Condition:

Signs and instructions should be clear, and easy to understand. All recycling containers should be clearly labeled and lists of acceptable and unacceptable materials will be posted throughout the site. Whenever possible, they should be in multiple-languages, especially in Spanish, and in graphic symbols.

The Contractor shall ensure the safety of all personnel involved in the C&D process.

A C&D site management plan shall be created including: work areas, materials processing areas, materials storage and disposal areas, worker hand-washing and changing stations, first aid and medical information.

RECYCLED MATERIALS:

The following materials are collected for recycling

Asphalt

Concrete and concrete blocks

Tile and masonry materials

Ferrous metal

Non-ferrous metals: copper, aluminum ... etc

Untreated lumber

Plywood, OSB and particle board

Gypsum wallboard scrap

Paper and cardboard

Beverage containers

Insulation

Rigid foam








Glass

Carpet and pad

Trees and shrubs

Soil

Corrective Measures

Types of waste generated	Environmental and Health Impact	Photographs	Corrective Actions
Concrete Waste	Land Contamination		<ul style="list-style-type: none"> - Opportunities for recovered materials reuse and recycling on site, - Leave no unnecessary or unstable projections. Reduce by periodically spraying demolition works with water.
	Air Pollution		
Waste Bricks	Land Contamination		<ul style="list-style-type: none"> - Reuse at other locations 
Waste Cables	Land Contamination		Collection and Sell to Authorized dealer
Waste glass, WASTE CONTAINER, SACK, BIN & SKIP	Potential contamination, hazardous materials	 <p style="text-align: center;">(a)</p>  <p style="text-align: center;">(b)</p>  <p style="text-align: center;">(c)</p>	<p>Recovered Materials for reuse on or off site,</p> <p>Opportunities for recovered materials reuse and recycling on site,</p> <p>Surplus recovered materials not being reused or recycled,</p> <p>Pallet or pallet boxes and packaging of recovered materials to leave site for reuse or recycling,</p> <p>Materials,</p>

Chapter – VIII : Environment Monitoring / Water Testing

The project site Environmental performance is monitored, measured and verified by the Govt. approved and accredited Environmental Laboratory. Every quarter, the Environmental Analysis (Water, Air & Noise) has been carried out at our Project Site.

Environmental Monitoring Plan for Toll Plaza, Road & Bridge Project

1. Ambient Air Quality (SPM, RPM, CO, SO₂, NO_x)		
1A	During construction phase , In the project camp boundary Four Samples from South, North, East and west sides One sample near admin and project office.	Over 24 hours continuous duration, Frequency :- quarterly basis Total five samples
1B	During construction phase & operation phase, Village, Urban area, Signal etc	Over 24 hours continuous duration, Frequency :- quarterly basis One sample
1C	During operation phase - At Toll plaza surrounding area	Frequency :- quarterly basis One sample
1D	During operation phase - At Suitable Intersection	Frequency :- quarterly basis One sample
2. Ambient Noise		
2A	During construction phase , In the project camp boundary Four Samples from South, North, East and west sides One sample near Admin and proeject office.	Over 24 hours continuous duration, Frequency :- quarterly basis Total five samples
2B	During construction phase & operation phase, Village, Urban area, Intersection (Signal) etc	Over 24 hours continuous duration, Frequency :- quarterly basis One sample
2C	During operation phase At Toll plaza surrouning area	Quarterly basis - One sample
2D	DG Set (Above 50 KVA)	Quarterly basis - One Sample
2E	During construction phase , Crusher	Quarterly basis - One Sample
2F	During construction phase , HMP Plant	Quarterly basis - One Sample
2G	During construction phase , WMM Plant	Quarterly basis - One Sample
2H	During construction phase , RMC Plant	Quarterly basis - One Sample
2I	CRMP Plant	Quarterly basis - One Sample
3. Stack Monitoring (PM, CO, SO₂, NO_x) During construction phase ,		
3A	DG Set (Above 50 KVA)	Quarterly basis - One Sample
3B	Hot Mix Plant - Stack	Quarterly basis - One Sample
4. Water quality (pH, Odour, TDS, TSS, O&G, Sulphide, Sulphate, COD, BOD and O&G, Heavy Metals etc) During construction phase ,		
4A	RMC Waste water and Treated water	Quarterly basis- One Sample

4B	Down stream of Camp-Leachet
5. Drinking Water quality as per WHO Standard, During const	
5A	Labour camp
5B	Project camp and Office
6. Soil Quality (pH, Alkalinity, Acidity, Sulphite, C, N, P, K	
6A	Labour camp
	Project camp and Office

Consultancy Details for Environmental Monitoring



ANALYSTS & ENGINEERS PVT. LTD.

Enviro Analysts & Engineers Private Limited

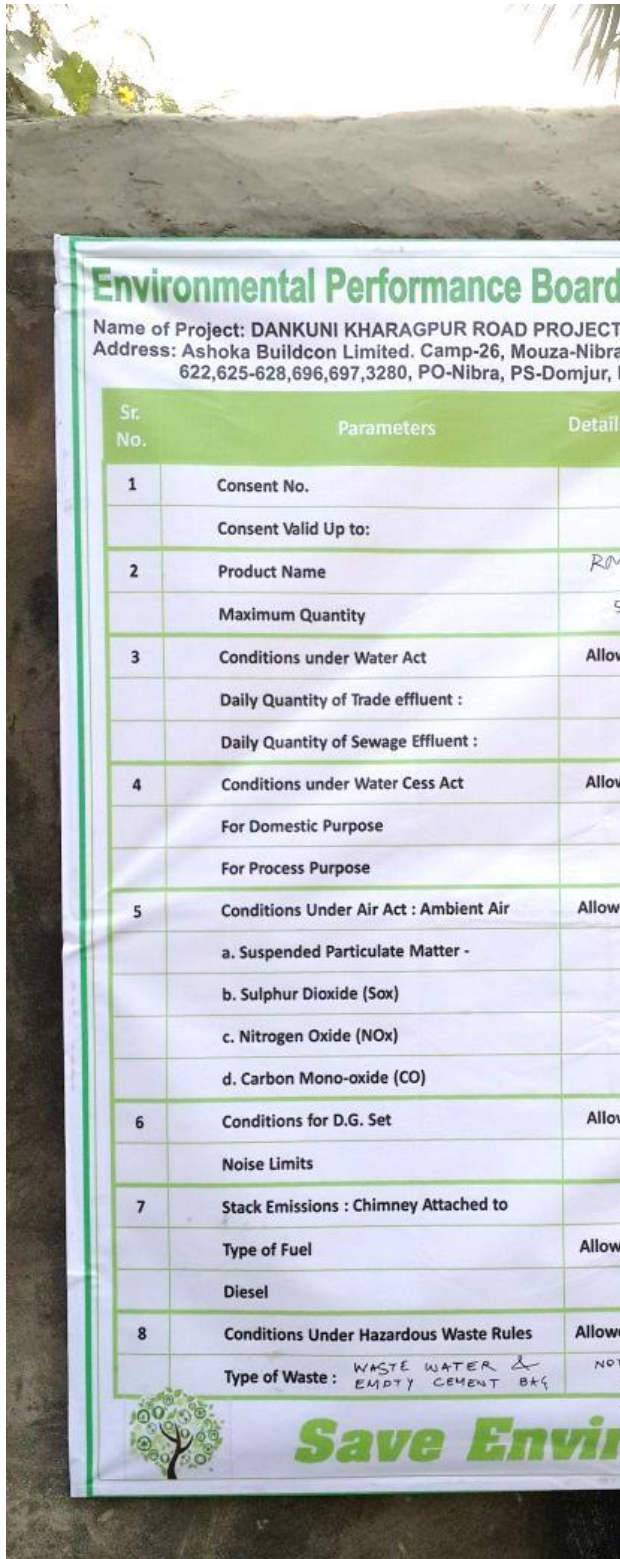
H. K. Desai (Managing Director)
 B - 1003, Enviro House, 10th Floor, Western Edge II, W. E. Highway, Borivali East, Mumbai - 400066, Maharashtra, India
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 Fax: +(91)-(22)-28541290





Environment Performance Board



Locations for Environmental monitoring

Sr.No	Description	Sample	Location
Camp 26			
1	Ambient Air quality Monitoring	1	RMC & WMM plant
2	Noise Monitoring	1	RMC & WMM plant
3	DG Set Stack Monitoring - 125 KVA	1	RMC & WMM plant
Office 27			
4	Drinking Water analysis for portability test	1	Office 27
Camp 48			
5	Ambient Air quality Monitoring	1	RMC Plant
6	Noise Monitoring	1	RMC Plant
7	DG Set Stack Monitoring - 125 KVA	1	RMC Plant
8	Waste water Analysis	1	RMC Plant
9	Drinking Water analysis for portability test	1	Camp 48
Camp 56			
10	Ambient Air quality Monitoring	1	Hot mix plant
11	Noise Monitoring	1	Hot mix plant
12	HMP Stack Monitoring	1	Hot mix plant
13	DG Set Stack Monitoring - 500 KVA	1	Hot mix plant
14	Drinking Water analysis for portability test	1	Camp 56
Toll plaza KM:35+220			
15	Ambient Air quality Monitoring	1	Toll plaza
16	Noise Monitoring	1	Toll plaza
17	DG Set Stack Monitoring - 125 KVA	1	Toll plaza
18	Drinking Water analysis for portability test	1	Toll plaza
Toll plaza KM: 112+450			
19	Ambient Air quality Monitoring	1	Toll plaza
20	Noise Monitoring	1	Toll plaza
21	DG Set Stack Monitoring - 125 KVA	1	Toll plaza
22	Drinking Water analysis for portability test	1	Toll plaza
Working location			
23	Ambient Air quality Monitoring	1	KM 23
24	Ambient Air quality Monitoring	1	KM 60
25	Noise Monitoring	1	KM 23
26	Noise Monitoring	1	KM 60
Surface water test			
27	Surface water test	2	Damodar River & Kansavati River

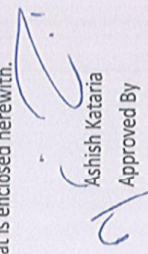
Chapter – IX : Safety Performance

PPE Matrix:

Personal Protective Equipment	Working Location details	Life of PPE	IS Code	Approx Prices in Rs
 Safety Helmet	Is compulsory for all working activities	One & half year	IS:2925-1984	200- 350
 Safety Shoes	Is compulsory for all working activities	One & half year	IS .1989 –1 986 (Pt.2)	350- 750
 Reflective Vest	Is compulsory for all working activities	Three Months		150- 300
 Dust Mask	Is compulsory for Crusher, WMM, HMP, CRMB and RMC Workers and employees	Ten Days	IS 9473 – 2002	15- 65
 Ear Plug	Is compulsory for Crusher, WMM, and HMP. CRMB, RMC and DG Set. Workers and employees	Ten Days	IS 9167 – 1979	10-70
 Ear Muff	is compulsory if Noise Level is high greater than 85 db	Two Year	IS 9167 – 1979	350-1250
 Safety goggle	Is compulsory for Crusher, WMM, and HMP. CRMB, RMC and DG Set. Workers and employees	Six Months	IS 8940 – 1978 / IS 1179 – 1967	150- 350
 Cotton Coverall / Dungaree	Petrol pump operator and fuelling operator	One year	IS 8519 – 1977	350 - 500
 Hand Gloves	Store Person- Cotton Hand Gloves for Bitumen & Concrete laying – Rubber Hand gloves For Electrical work – Shock proof Hand gloves For Welding Work – Heat proof	Ten Days Six Months One Year One Year	IS 4770 – 1968 / IS 2573 – 1986/ IS 6994 – 1973 part I	10- 25 30- 60 150-450 100- 200
 Gumboot (Thermal Proof)	Is compulsory for Bitumen & Concrete laying activity Rubber-gumboot)	Six Months		300 - 500
 Welding Glass	Is compulsory for all welding and cutting activity	One year	IS 8940 – 1978 / IS 1179 – 1967	150- 300
 Full Body Harness	Is compulsory for working at height above 1.8 M Should be compulsory for Bridge workers who are working at height.	Two Years	IS 3521 – 1999	750 – 1250

Note: - After issuing the PPE to worker/staff, Self declaration letter should taken from worker/Staff. If Employee/staff/worker found without PPE'S at work zone area or during the working, He will be penalised and warning letter will be issued immediately. Warning letter format is enclosed herewith.

Anilkumar Shimpi
 Prepared, Checked and recommended By


 Ashish Kataria
 Approved By

Tool Box Talk Form :

Sign of Area Incharge / Supervisor
HSE Officer **Section Incharge**

















HSE Training

Conducted By :	
Location:	
d :	Job Related Problem Areas/Concerns

Training are given to employees on various aspects of Environment, Safety and Health. Various training modules are prepared and Training are given as per the training calendar prepared by site safety supervisor and corporate HSE Team

List of Training Modules

Selection of topic by tick (√):

Selection of topic by tick (√):							Sr. no.	Training Topic	
								ROAD WORKER SAFETY DURING WORKING DVD DuPont Sustainable Solution	
(√)	(√)	(√)	(√)	(√)	(√)	(√)	3	VEHICLE & POWERPOINT DuPont Sustainable Solution VEHICULAR DRIVER CERTIFICATION A License To Drive - (Hindi Version) DVD DuPont Sustainable Solution	
(√)	(√)	(√)	(√)	(√)	(√)	(√)	4	SAFE DRIVING Real, Real – Life - DVD DuPont Sustainable Solution	
(√)	(√)	(√)	(√)	(√)	(√)	(√)	5	DEFENSIVE DRIVING A Crash Course (Hindi Version) DVD DuPont Sustainable Solution	
								PRO ACTIVE SAFETY ATTITUDES RAGOR Number One (Hindi Version) DVD By Coastal RAIL SAFETY Railway Safety Precautions (Hindi Version) DVD By Coastal	
(√)	(√)	(√)	(√)	(√)	(√)	(√)	8	SAFETY ORIENTATION It Takes a Winning Attitude (Hindi Version) DVD By Coastal	
(√)	(√)	(√)	(√)	(√)	(√)	(√)	9	AWARENESS ON FIRE, FIRE EXTINGUISHERS By CASEFIRE	
(√)	(√)	(√)	(√)	(√)	(√)	(√)	10	BREATH OF AIR By VENUS SAFETY & HEALTH PVT.LTD.	
(√)	(√)	(√)	(√)	(√)	(√)	(√)	11	HSE for Sustainable Growth National Safety Council	
Attendees:							12	ESMS:- Standard Operating Procedure	
Name of Employee							Designation	13	ESSMS:- Environment Safety and Social Management System FIRE FIGHTING, RESCUE, SAFETY AND PPE's BY FOREMCO
							14	CONVEYOR SAFETY General Type Safe Operating Procedure Operating Precautions	
							15	CRANE OPERATING SAFETY PRECAUTIONS	
							16	5S AWARENESS TRAINING PROGRAMME	
							17	ELECTRICAL SAFETY AWARENESS TRAINING	
							18	EMERGENCY RESPONSE PLAN	
							19	FIRE EXTINGUISHERS AND ITS USE	
							20	FIRST AID ON ROAD ACCIDENTS	
							21	AWARENESS ON HIRA	
							22	TRAINING PROGRAMME ON MSDS	
							23	SAFETY PRECAUTIONS AT WORK ZONE	
							24	QHSE MANAGEMENT SYSTEM	
							25	TRAINING ON MACHINE GAURDING	
							26	GENERAL SAFETY RULES AND USE OF PPE	

Ashoka Dhankuni Kharagpur Tollways Limited (ADKTL)
Environment, Social and Safety Management Plan (ESSMP)

Sr. no.	Training	35	IT	Programing and support	Visual defect - Radiation Hazard	3
27	ENVIRONMENTAL IMPACTS OF CONSTRUCTION AND SITE CONTROL PRACTICES	36	IT	Refilling of ink in cartridge	Exposure to ink	2
		52	Milling machine	Scratch for exiting road	object from machine	2
28	WORKING AT HEIGHTS	54	SURVEY	Working along the road site	Struck Hazard	2
		55	SURVEY	Movement on road for Survey	Struck hazard	2
29	SAFE STORAGE AND HANDLING OF GAS CYLINDER	56	EQA	Tree Cutting	Falling/ Engulfment	2
		57	EQA	Wood Transportation	Struck and Trip Hazard	2
30	Monsoon Safety Tips	58	EQA	Excavation	Slippery	2
		59	EQA	Excavation	Cave inn /collapse of sides	2
31	IFC HSE Management Systems	60	EQA	Excavation	Radioactive, gases, Vapors	2
		61	EQA	Concreting	Mechanical	2
32	Environmental Aspects of Construction	62	EQA	Loading/unloading of cements	Inhalation of dust particles	3
		63	EQA	EXCAVATION	Falling of person under the pits, minor injury, injury requiring first aid	2

IDLH / HIRA and Control Measures

ASHOKA BUILDCON LTD, ASHOKA HOUSE, ASHOKA MARG,ASHOKA NAGAR, NASHIK – 422								
Health, Safety and Environment Work Instructions								
Doc. No.: FR/CO/DO/PR/HSE/03		REF: WI/CO/DO/PR/HSE/27		Pages				
Issue No: 02		Issue Date:1 st Aug, 2013		Rev. No.: 00		Revisi		
Title : Hazard Identification, Risk Assessment and determining controls (Risk Register)								
SITE:		Road Project						
Sr. No.	Dept/ Area	Activity	Hazard					
1	Store	Diesel Store Yard	Fire / explosion					
2	Store	Computer Operating	Electric shock due the current leakage					
3	Store	Storage of Diesel	Fire explosion					
4	Store	Transporting -Internal Truck & dumper	Trap / engulfment					
5	Store	Shuttering stacking	Trap / Struck					
6	Store	Cement Bag Stacking	Trap / Engulfment					
7	Store	Consumable Items Stacking	Trap / engulfment					
8	Store	Waste Oil Separation & Storing	Fire / explosion					
9	Store	Office work - Office chair & table	Back pain					
10	Store	Office work - Continuous working on Computer	Visual defect - Radiation Hazard					
11	Q. C. LAB	Testing, usage of chemicals	Inhalation of gases/ vapors					
12	Q. C. LAB	Handling of cubes	Fall of objects / Body Injury	3	2	6	Low	Working SOP No.02
13	Q. C. LAB	Aggregate Test / Soil Test	Exposure of Dust	3	2	6	Low	Use of Proper PPE (Dust mask, Goggle)
14	Q. C. LAB	Bitumen Test	Exposure of Gas / Dust					
15	Q. C. LAB	Sample Collection from side	Trap / Struck / Fall hazard					
16	Q. C. LAB	Storage of Chemical	Fall /skin irritation due to Leakage					
17	Q. C. LAB	Working on the CBR Machine	Exposure of High Noise / Vibration					
18	Q. C. LAB	Heating of Chemical & material on Hot plate	Exposure of Heat					
19	Q. C. LAB	Handling of Benzene & Flammable Chemicals in Laboratory	Fire / Explosion					
20	Q. C. LAB	Bitumen dry material	Inhalation / skin irritation					
21	Q. C. LAB	Handling Bitumen Cube	Burn / Injury					
22	HR & Admn.	Office work - Office chair & table	Back pain					
23	HR & Admn.	Office work - Continuous working on Computer	Visual defect - Radiation Hazard					
24	HR & Admn.	Travelling for Out Duty	Accidents					
25	Canteen	Cooking (Leakage of Gas)	Fire Hazard					
26	P & M	Running of DG Set	Exposure of High Noise					
27	P & M	working at height	Fall Hazard					
28	P & M	Electrical maintenance	Slip, Trips & falls, electric shock from electrically operated machines					
29	P & M	Maintenance of machines	Minor injury while working with un guarded machines					
30	P & M	Vehicle movement (Truck, Dumper, Excavator, Earth movers)	Serious accident while the movement					
31	P & M	Material handling Loading / Unloading Process	Falling of material,					
32	P & M	Cutting and Welding Operation	FIRE HAZARD					
33	P & M	Cutting and Welding Operation	Electric Shock / gas inhalation/Radiation	3	3	9	Low	SOP No.27
34	IT	Installation of system and maintenance	Electric Shock	3	2	6	Low	

Risk Matrix

Severity	High	4	4
		3	3
		2	2
		1	1
	Low	0	1

Colour Code	Rating	Probability		
		High	16 to 20	HIGH IMPACT RISK – Mu
		Moderate	10 to 15	MODERATE RISK – Conduct fo
Low	< 9	LOW RISK – Some e		

Environmental Aspect Impact and Control Measures

Doc. No.: FR/CO/DO/PR/HSE/01 REF.: WI/CO/DO/PR/HSE/28

Title : Identification of Environmental Aspects and Impacts and control

SITE						
Sr. No	Dept/ Area	Activity	Aspect	Direct / Indirect D/I	Impact	Condit
1	HR/ADMIN	House Keeping	Dust Inhalation	I	Air Pollution	N
2	HR/ADMIN	Urinal Facility	Biodegradable waste generation	I	Water Pollution and Land Contamination	AN
3	HR/ADMIN	Depositing of Bio-degradable waste	Biodegradable waste generation	D	Contamination of land and water	N
4	HR/ADMIN	Usage of Electricity	Usage of Natural Resources	D	Resource wastage	N
5	EQA	Concreting	Generation of Cement Dust	I	Air Pollution	N
6	P & M	DG Set Running	Generation of Noise	D	Noise Pollution	N
7	P & M	Transportation of vehicles	Generation of Noise	D	Noise Pollution	N
8	P & M	Drilling / Cutting	Fumes and Sound generation	D	Noise Pollution	AN
9	P & M	Welding, Gas Cutting	Fumes and Sound generation	D	Air Pollution	N
10	P & M	Preventive Maintenance	Usage of Oil, Diesel	D	Land Contamination	N
11	P & M	Running of RMC Plant : Loading of Aggregate to Feeding point by Dozen	Generation of Dust	D	Air Pollution	N
12	P & M	Running of RMC Plant : Loading of Aggregate to Feeding point by Dozen	Generation of Noise	D	Noise Pollution	N
13	P & M	Running of Conveyor Belt	Generation of Dust	D	Air Pollution	N

		Manufacturing of RMC-				
14	P & M	Diesel Distribution	Leakages, Spillages	D	Land Contamination	AN
15	P & M	Depositing of Non-bio-degradable waste	Electrical wastages, wire pieces etc.	D	Contamination of land and water	N
16	P & M	D.G. Set Chimney Operation	Chimney height, air pollution	D	Smoke Emission (Air Pollution)	N
17	P & M	Maintenance work	Wastage after the maintenance such as Oil soak cotton waste, Engine oil container	D	Land Contamination	N
18	P & M	Maintenance work	Waste Oil generation	D	Land Contamination	N
19	P & M	Transportation of RMC by TM	Dust generation	D	Air Pollution	N
20	P & M	TM Cleaning	waste water generation	D	Water pollution	N
21	P & M	Vehicle Movement	Dust generation	D	Air Pollution	N
22	RMC-Operation	Manufacturing of RMC- Transportation of Aggregate by Dumper	Generation of Dust	D	Air Pollution	N
23	RMC-Operation	Manufacturing of RMC- Transportation of Aggregate by conveyor belt	Generation of Dust	D	Air Pollution	N
24	RMC-Operation	Manufacturing of RMC - Feeding of cement	Generation of Dust	D	Air Pollution	N
25	RMC-Operation	Manufacturing of RMC - Washing of RMC Plant	Generation of waste water	D	Water Pollution	N
26	RMC-Operation	Use of Admixtures	Generation of Empty barrels of Admixture	D	Land Contamination	N
27	RMC-Operation	Use of Cement Bags	Generation of waste cement bags	D	Land Contamination	N
28	ROAD MAINTENANCE	Repair Work of Block & Panel Crack	Dust Inhalation	I	Air Pollution	AN

Ashoka Dhankuni Kharagpur Tollways Limited (ADKTL)
Environment, Social and Safety Management Plan (ESSMP)

29	ROAD MAINTENANCE	Concreting	Damage of top Soil	D	Land Contamination	N	N	2	1	1	1	2	Low	
30	STORE	Storage of Chemicals	Leakages, Spillages	I	Land Pollution	AN	YES	3	1	1	1	3	Low	Chapter No. 10 _Environment Management Manual for RMC Manual (Selling to Authorized vender)
31	STORE	Storage of Cement Bags	Generation of Dust	D	Air Pollution	N	YES	2	1	1	1	2	Low	
32	STORE	Transporting	Dust generation	D	Air Pollution	AN	NA	2	1	1	1	2	Low	Chapter No.06 _ Environment Management Manual for RMC Manual (Vehicle Movement)
33	STORE	Transporting	Use of Natural Resource	I	Air/ Natural Resource	N	NA	1	1	1	1	1	Low	
34	STORE	Storage of Diesel	Spillage of diesel	I	Air, Land	N	NA	1	2	1	1	2	Low	Chapter No. 10 _Environment Management Manual for RMC Manual (Selling to Authorized vender)
35	STORE	Cement Loading/Unloading	Generation of Dust	I	Air, Land	N	NA	1	2	2	1	4	Low	
36	STORE	Diesel Distribution	Leakages, Spillages	D	Land Contamination	AN	NA	1	2	1	1	2	Low	
37	STORE	Storage of LPG cylinders	Leakages, Spillages	D	Air Pollution	E	NA	2	1	1	1	2	Low	
38	STORE	Diesel storage	storage	D	Plant & Machinery.	N	Y	2	1	1	1	2	Low	Chapter No. 10 _Environment Management Manual for RMC Manual
39	STORE	Usage of paper	Improper & unplanned paper consumption	D	Resource wastage	N	N	1	1	1	1	1	Low	
40	STORE	Usage of Electricity	Consumption of Energy	D	Resource wastage	N	N	1	1	2	1	2	Low	

Memorandum :

ASHOKA CONCESSIONS LTD, ASHOKA HOUSE, ASHOKA MARG,ASHOKA NAGAR, NASHIK- 422011			ASHOKA
Health, Safety and Environment Work Instructions			
Doc. No.: ABL/FR/CO/DO/PR/HSE/12	REF.: WI/CO/DO/PR/HSE/23	Pages: Page 1 of 1	
Issue No: 01	Issue Date: 4 th Jan, 2014	Rev. No.: 00	Revision Date : 4 th Jan, 2014
Title : Violation Letter			
<p>MEMORANDUM</p> <p>PROJECT: - Memo. No:</p> <p>Department:</p> <p>CONTRACTOR/A.B.L.: Date: Time: Ch. No:</p> <p>NAME OF EMPLOYEE:</p> <p>DESIGNATION/TRADE:</p> <p>MEMORANDUM NO: (A) 1st [] (B) 2nd [] (C) 3rd [] (D) 4th []</p> <p>TYPE OF VIOLATION (To be Written by HSE Officer):- (HSE Officer shall attach the evidence of violence such as photograph and IOC issued)</p> <ul style="list-style-type: none"> • Not using the following PPE on duty time. (Use {√} mark as proper violence option below.) <p>1) SAFETY JACKET. <input type="checkbox"/> 2) SAFETY HELMET. <input type="checkbox"/> 3) NOSE MASK. <input type="checkbox"/> 4) SAFETY SHOES. <input type="checkbox"/> 5) HAND GLOVES. <input type="checkbox"/> 6) GOGGLES. <input type="checkbox"/> 7) EAR PLUG. <input type="checkbox"/> 8) RUBBER HANDGLOVES <input type="checkbox"/> 9) WELDING SCREEN. <input type="checkbox"/> 10) SAFETY BELT. <input type="checkbox"/> 11) GUMBOOT. <input type="checkbox"/></p> <ul style="list-style-type: none"> • Any other violence :- • Department Head action against the violator:- <p style="text-align: center; margin-top: 20px;"> Sign of employee Sign. Of DH/ Supervisor Sign of HSE Officer Sign of Project In charge </p> <p style="text-align: center;">HSE & S and HR & Admin. Department</p> <hr/> <p>Head HSE & S Comments:-</p> <p>DGM (HR & Admin.) Comments:-</p> <p>IMS Director Comments:-</p> <p>1st Violation – Warning and information for employee personal file. 2nd Violation – Counseling by project in charge/safety committee. 3rd Violation – Will be treated as monetary loss one day. 4th Violation – Will be treated as suspension letter or final counseling by IMS director.</p> <p>I. It should be against the Risk Register, Environmental Impact Register, Risk is IDLH (immediate danger to life and health) and legal requirement. II. Site HSE Officer should write a report and after comments from DH and project in charge should sent to head HSE & S and DGM - HR & Admin.</p> <div style="text-align: right; border: 2px solid black; padding: 5px; margin-top: 10px;"> MASTER COPY ONLY IF IN RED </div>			
Management Representative			
Issued By			

Incident Reporting :

ASHOKA BUILDCON LTD, ASHOKA HOUSE, ASHOKA MARG,ASHOKA NAGAR, NASHIK -422 011		ASHOKA	
Health, Safety and Environment Work Instructions			
Doc. No.: FR/CO/DO/PR/HSE/08 REF.: WI/CO/DO/PR/HSE/32		Pages: 1 of 1	
Issue No: 02	Issue Date: 1st Aug, 2013	Rev. No.: 00	Revision Date : 1st Aug, 2013
Title: Incident / Accident Investigation Report			
"Incident " Report			
Name of Project:-		Report No.:	
Location:		Date:	
Description of the Incident / Accident / Near miss: what happened -Attach Incident photographs and Use attachment such as sketch if necessary)			(Explain
Reported By:		Signature:	Time of incident:
			Date:
Estimate of Loss Potential (What injuries / losses might have occurred.)			
Injuries: -			
Property / Equipment Damage:			
Environmental Damage: --			
Others: -			
IMMEDIATE CAUSES		BASIC CAUSES	
1. SUBSTANDARD ACTS/PRACTICES		2. SUBSTANDARD CONDITIONS	
A. Operating equipment without authority	<input type="checkbox"/>	A. Inadequate guards or barriers	<input type="checkbox"/>
B. Failure to warn / secure / barricading	<input type="checkbox"/>	B. Defective tools, equipment, substances	<input type="checkbox"/>
C. Operating / working at improper speed	<input type="checkbox"/>	C. Inadequate tools, equipment, substances	<input type="checkbox"/>
D. Defeating / removing a safety device	<input type="checkbox"/>	D. Poor access	<input type="checkbox"/>
E. Using defective equipment	<input type="checkbox"/>	E. Inadequate warning system or notice	<input type="checkbox"/>
F. Using equipment improperly	<input type="checkbox"/>	F. Fire and explosion hazards	<input type="checkbox"/>
G. Failure to use PPE properly	<input type="checkbox"/>	G. Substandard housekeeping	<input type="checkbox"/>
H. Improper loading or positioning	<input type="checkbox"/>	H. Hazardous gases, dust, fumes	<input type="checkbox"/>
I. Improper lifting/loading/Material Handling	<input type="checkbox"/>	I. Excessive noise	<input type="checkbox"/>
J. Improper replacement/position for task	<input type="checkbox"/>	J. Radiation exposures / Extrem Temperature	<input type="checkbox"/>
K. Servicing equipment in operation	<input type="checkbox"/>	K. Inadequate ventilation / illumination	<input type="checkbox"/>
L. Horseplay	<input type="checkbox"/>	L. Weather conditions	<input type="checkbox"/>
M. Drinkings or drugs	<input type="checkbox"/>	M. Other (specify) _____	<input type="checkbox"/>
N. Failure to Comply with PTW	<input type="checkbox"/>		
O. Others(specify)	<input type="checkbox"/>		
3. PERSONAL FACTORS		4. JOB/SYSTEM FACTORS	
A. Capability	<input type="checkbox"/>	A. Inadequate Leadership	<input type="checkbox"/>
B. Lack of Knowledge	<input type="checkbox"/>	B. Inadequate Engineering	<input type="checkbox"/>
C. Lack of Skill	<input type="checkbox"/>	C. Purchasing	<input type="checkbox"/>
D. Stress	<input type="checkbox"/>	D. Inadequate Maintenance	<input type="checkbox"/>
E. Motivation	<input type="checkbox"/>	E. Tools & Equipment	<input type="checkbox"/>
		F. Procedures & Practices	<input type="checkbox"/>
		G. Wear & Tear	<input type="checkbox"/>
		H. Abuse or Misuse	<input type="checkbox"/>
		I. Inadequate Supervision	<input type="checkbox"/>
Action/s Taken:			
Name of Department Head:-		Signature:	Date /Time:
Name of Safety Officer:-		Signature:	Date /Time:
Suggested Further Actions (where appropriate) - To prevent recurrence			
HSE committee Secretary:		Signature:	Date:
Comments/Recommendations:			
Project Incharge :		Signature:	Date:
Distribution: Original Copy (Signed) -with Project site, Scan colour copy:- Head HSE&S, Insurance Head, DGM- HR& Admin			
Management Representative			
Issued By			

Smpj

**MASTER COPY
ONLY IF IN RED**

Road accident statistics

Ashoka Concessions Ltd. Ashoka House, Ashoka Marg Nashik Format -ACL /FR/HSE/07 National Highways Authority of India															
National Highway No : 222. Month : Oct-2014															
Sr. No.	Date	Time of Accident pm /am	A Accident Location	B Nature of Accident	C Classification of accident	D Causes	E Road features	F Road conditions	G Intersection type	H Weather conditions	No. of affected persons			Remarks	
											Fatal	Grievous	Minor		Non Injured
1															
2															
3															
4															
5															

A : Urban/Rural and details of surrounding land use.
 B : 1) Overturning 2) Head on collision 3) Rear end collision 4) Collision brush side :swift 5) Right turn collision 6) Skidding 7) Others (Pl. Specific)
 C : 1) Fatal 2) Grievous injury 3) Minor injured 4) Non injury.
 D : 1) Drunken 2) Over-speeding 3) Vehicle out of control 4) Fault of driver of motor vehicle / driver of other vehicle 5) Defect in mechanical condition of motor vehicle.
 E : 1) Single lane; 2) Two Lane; 3) Three Lane or more without central divider (median); 4) four lanes or more with central divider.
 F : 1) Straight road 2) Slight curve 3) Sharp curve 4) Flat road 5) Gentle incline 6) Steep incline 7) Hump & dip.
 G : 1) T Junction 2) Y Junction 3) Four arm junction 4) Staggered junction 5) Junction with more than four arms 6) Round about junction 7) Manned rail crossing 8) Unmanned rail crossing.
 H : 1) Fog 2) Mist/fog 3) Cloudy 4) Light Rain 5) Heavy Rain 6) Hail or sleet 7) Snow and strong wind 8) Dust storm 9) Very Hot 10) Other extraordinary weather condition.

Awards

Monthly Safety Awards

Objective-

1. To promote improvements in workplace safety.
2. 100% incident free zone.
3. To create awareness in employees.
4. To change the attitudes and behaviours of employees.
5. To enhance motivation of employees.

Criteria for the monthly safety award to the Employee:		Ranking	
1	100% use of PPE's		
2	Implementation of site safety measures		
3	Positive Attitude- Employee must demonstrate a positive attitude about safety, Health & Environment.		
4	Leadership/Initiative- Employee must possess leadership/initiative, employee actively raises and closed safety issues.		
5	Punctuality- Employee must be in good standing with maintaining Safety Health & Environment policy on time and attendance.		
6	Job Performance- Employee must be fulfil the job requirement.		
7	Promotion of Safety – Innovative ideas created by employee to improve safety, Health & Environment.		
8	Relationships- To maintain good relationship with supervisors, co-workers etc.		
9	Performance- Effectiveness and implementation on safety , Health & Environment & motivate to other employees for safety.		
10	Authorise- Employee should be authorised for the particular work. (eg. Driver should be license holder).		
11	Contribute to safety in the work area- Employee should be participate in safety week or any safety programmes.		
12	Communication- Employee recognizes a recurring safety hazard at work area, and communicates the hazard to their supervisor, Safety officer and others, and takes action to properly secure the area from the hazard,		
13	Reporting- Employee must be report about unsafe act, unsafe condition & identification of Hazard/risk to supervisor, safety officer		
14	Near miss reporting		
15	Employee must be non violating of HSE practices.		

Total Marks obtained

%

Percentage for wining Safety Awards.

60 % to 70% - Employee failed for award
70% to 75% - Employee nominate for award
75 % to 85 % - Good Employee
85 % to 90% - Best Employee
90% and above - Excellent Employee

Waste Management Register

ASHOKA BUILDCON LTD
DHANKUNI-KHARGPUR NH6 ROAD PROJECT
WASTE MANAGEMENT REGISTER

FR/CO/DO/PR/HSE/06
Issue No: 1 Date: 02/08/2013
Rev No: 0 Date: 02/08/2013
Page No: 1 of 1

Date: 2/2/2015
For the Month: January 2015

SR NO	Identification of waste	Generation of waste (kg) month	Disposal of waste in month Proof for disposal, Challan of Authorized vendor if any	Balance Quantity of waste on site	Location of storage / Designated Area	Action plan for the Disposal
1	Paper waste/wood waste					
2	Plastic waste					
3	Kitchen waste					
4	Waste Grease					
5	Waste Lubricant Oil					
6	Waste Cable, Rubber pipe					
7	Glass/Bulbs/Tube lights					
8	Concrete Block					
9	Metal/MS/SS/Tin					
10	Paint waste					
11	Batteries					
12	Electronic Waste (cd-rc parts)					
13	Cotton					
14	Waste Oil filter & Air filter					

Sign of Store Incharge

Sign of HSE Officer

Chapter – X : Emergency Response Plan/ District Disaster Management Plan

The Emergency Response plan is necessary as a moral and legal obligation of management to protect the safety people, property and environment. The objective of this "Emergency Response Plan" is to provide the organizational guidelines and directions to ensure fast and effective response in any emergency situation in order to save life, property and environment.

At any time, it may be necessary to minimize harm to personal, the environment and business operations. Please remember that saving life and property is only possible if the emergency response procedure is effectively followed. This plan shall be followed in all cases of emergency. Therefore, it is imperative that every employee must be familiar and knowledgeable of what to do in case of emergency.

We have formed our Emergency Response Team in each Base Camp to combat with the Emergency situations.



ASHOKA BUILDCON LTD.	
EMERGENCY CONTACT NUMBERS	
AMBULANCE	9800002082/83 (DHULAGORI) 9800002085/86 (DEBRA)
HOSPITAL	9836437666/9836886688 (033) 71205050 (WEST BANK HOSPITAL)
FIRE	101, 033 – 22521165 (Head Qtr.) 033 – 26668111/2 (Div. Head Qtr.)
POLICE	100, 033-26616400 (Control Room)
HSE DEPT.	8420112246
HR & ADMIN DEPT.	8420187897

First Aid Points Summary		
Sr. No.	Location	First aider
1	Camp Office(Store Room)	Mr. Manoj Sharma
2	HMP Plant / Work Shop	Mr. Sunil Sharma
3	With Bitumen browser	Concern person
4	With Ambulance	Ambulance- Paramedical staff
5	Toll Plaza Office	Plaza Paramedical staff

Fire Points Summary			
Sr. No.	Location	Fire Extinguishers	Fire Buckets
Fire Point No. 01	Diesel Storage Yard	5 kg ABC type – 2 nos.	2 nos.
Fire Point No. 02	HMP plant	5 kg ABC type – 2 nos.	2 nos.
Fire Point No. 03	Bitumen Plant	5 kg ABC type – 2 nos.	2 nos.
Fire Point No. 04	Canteen	5 kg ABC type – 1 nos.	-
Fire Point No. 05	QA/QC Lab / Office	5 kg ABC type – 2 nos.	-

അപകടം സംഭവിക്കാൻ കഴിയുന്ന ഉപകരണങ്ങളുടെയും കമ്പനികളുടെയും പട്ടിക

Accident due to heavy equipment/machinery

1. Department involved in this emergency : Plant & Machinery, Toll Plaza
2. Equipment needs to handle this emergency: Crane, Toe-van, Ambulance, ERT Vehicle etc.
3. Contact Details for this Emergency

Sr.No	Equipment Details	Service Supplier Name /Name of Driver (Company has its own equipment)	Contact Number
1	Crane	ABL	8420283061
2	Hydra	ABL	9733712203
3	Tow-Van	Rajendra Bind	9831756808
4	ERT/Patrolling Vehicle	ABL	9800002082
5	Ambulance	ABL	9800002083
6	Hospital	West Bank Hospital	9836437666

Accidents due to fly rock during excavations/drilling.

1. Department involved in this emergency : Execution Department, Plant & Machinery
2. Equipment needs to handle this emergency: Ambulance, ERT /Patrolling Vehicle etc.
3. Contact Details for this Emergency

Sr.No	Equipment Details	Service Supplier Name /Name of Driver (Company has its own equipment)	Contact Number
1	ERT/Patrolling Vehicle	ABL	9800002082
2	Ambulance	ABL	9800002083
3	Crane	ABL	8420283061

Fire & explosion to fuelling station and Store

1. Department involved in this emergency : Store, Execution Department, Plant & Machinery
2. Equipment needs to handle this emergency: Ambulance, ERT /Patrolling Vehicle etc.
3. Contact Details for this Emergency

Sr.No	Equipment Details	Service Supplier Name /Name of Driver (Company has its own equipment)	Contact Number
1	Crane	ABL	8420283061
2	Hydra	ABL	9733712203
3	Fire brigade		033-22521165/26668111/2
4	ERT/Patrolling Vehicle	ABL	9800002082
5	Ambulance	ABL	9800002083
6	Hospital	ABL	9836437666/9836886688
			(033) 71205050
			West Bank Hospital

Road Accident

1. Department involved in this emergency : Store, Execution Department, Plant & Machinery, Toll Plaza

2. Equipment needs to handle this emergency: Ambulance, ERT /Patrolling Vehicle etc.

3. Contact Details for this Emergency

Sr.No	Equipment Details	Service Supplier Name /Name of Driver (Company has its own equipment)	Contact Number
1	Crane	ABL	8420283061
2	Hydra	ABL	9733712203
3	Fire brigade		033-22521165/26668111/2
4	ERT/Patrolling Vehicle	ABL	9800002082
5	Ambulance	ABL	9800002083
6	Hospital	ABL	8420283061

Chemical Spill

1. Department involved in this emergency : Store, Plant & Machinery

2. Equipment needs to handle this emergency: Chemical Spill Kit, ERT /Patrolling Vehicle etc.

3. Contact Details for this Emergency

Sr. No	Equipment Details	Service Supplier Name /Name of Driver (Company has its own equipment)	Contact Number
1	Contaminate drums to collect the chemical Spill	Mr. K. Mahapatra	8420119386
		Mr. Kamlesh	8420112188
2	Spill Kit (Absorbent Pillows, Absorbing pads)	Mr. Santanu Barai	8420112188




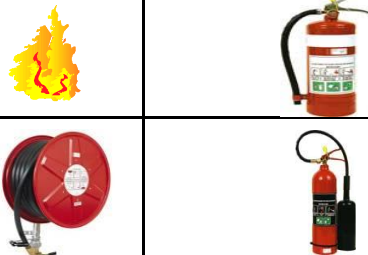

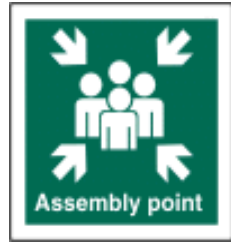
Robbery

1. Department involved in this emergency : Accounts, Store, Toll Plaza

2. Equipment needs to handle this emergency: Patrolling Vehicle etc.

3. Contact Details for this Emergency

Sr. No	Agency /Authority Details	Name and Address of police station	Contact Number
1	Security Head	Mr. Poonam Arjapure	8420112175
2	Police		033-26616400
3	Corporate office		0253-6633705
4.	NHAI Officials		033-22268131

EMERGENCY PROCEDURES	
<p>REMOVE Anyone in immediate danger</p>	<p>ONLY IF SAFE TO DO SO!</p>
<p>ALERT Others in immediate area Fire Wardens Activate Whistle, Air Horn, Bell, Siren etc. 3 times for 30 sec. Other Tenants and Adjacent Neighbours</p>	 
<p>RING THE EMERGENCY SERVICES Fire Brigade, Police or Ambulance. <i>Advise Site:</i> <i>Advise address:</i> <i>Advise nearest cross street:</i> <i>Provide your Name & phone number.....</i> <i>Provide details of incident.....</i></p> <p style="text-align: center;">DO NOT HANG UP UNTIL THE ADDRESS HAS BEEN REPEATED</p>	
<p>CONTAIN THE FIRE Use correct Fire Extinguisher or Fire Hose Reel Turn OFF Electricity, Air Conditioning Close doors and windows to contain fire</p> <p style="text-align: center;">ALL IF ONLY IF SAFE TO DO SO!</p>	
<p>EVACUATE Proceed to the nearest exit. Gather together at Exit, if safe to do so, <i>then</i> Evacuate via exit and proceed to the Assembly Area</p>	
<p>ASSEMBLY AREA Conduct Head count, Roll call. Report to the Emergency Services -Advise missing, provide details of incident. Do not leave the Emergency Assembly Area or attempt to re-enter the building until given the "All Clear" by the Emergency Services. Long siren of 1 minute.</p>	

Disaster Management Plan

Natural Calamity	Possibilities	Disaster Contact Numbers	Action to be taken
Flood	No	<p>Natural Disaster, Office –In-Charge, Howrah 033-26412961/ 26413367 033-26412024</p> <p>Natural Disaster, Office –In-Charge, Paschim Medinipur 03222-275571/275427 03222-275570</p>	<p>WHEN INSIDE OFFICE OR HOME</p> <p>If ordered to evacuate or if rising water is threatening, leave immediately and get to higher ground!</p> <p>IF CAUGHT OUTDOORS:</p> <ul style="list-style-type: none"> – Go to higher ground immediately! Avoid small rivers or streams, low spots, canyons, dry riverbeds, etc. – Do not try to walk through flowing water more than ankle deep! – Do not allow children to play around streams, drainage ditches or viaducts, storm drains, or other flooded areas! <p>IF IN A VEHICLE: DO NOT DRIVE THROUGH FLOODED AREAS! Even if it looks shallow enough to cross. The large majority of deaths due to flash flooding are due to people driving through flooded areas. Water only one foot deep can displace 1500 Kgs ! Two feet of water can EASILY carry most automobiles! Roadways concealed by floodwaters may not be intact,</p>
Earthquake	Yes	<p>Natural Disaster, Office –in-Charge, Howrah 033-26412961/ 26413367 033-26412024</p> <p>Natural Disaster, Office –In-Charge, Paschim Medinipur 03222-275571/275427 03222-275570</p>	<p>Protection during an earthquake:</p> <ul style="list-style-type: none"> • Know in advance where the safest spots are at home, at work or at school, so you can go to one of these places as soon as you feel a quake. • Indoors, the safest places are beneath sturdy furniture, beside a solid inside wall, or inside an inner hallway. • Avoid windows. Stay away from heavy objects that can fall from ceilings, shelves and cupboards, or top-heavy furniture that could tip over. Never use an elevator. • If you're outdoors, stay in the open, away from trees, buildings and power lines. • You could be driving when a quake hits. Stop your car away from overpasses, bridges and power lines and stay inside your vehicle. • Once you're in a safe place protect your head and hold on until all motion stops. Lock your wheels if in a wheelchair. • All members of the family – especially children – should know what to do when an earthquake hits. A

Natural Calamity	Possibilities	Disaster Contact Numbers	Action to be taken
			practice drill once a year is an excellent safety measure.
Cyclone	Yes	<p>Natural Disaster, Office –In-Charge, Howrah 033-26412961/ 26413367 033-26412024</p> <p>Natural Disaster, Office –in-Charge, Paschim Medinipur 03222-275571/275427 03222-275570</p>	<p>During the Cyclone:</p> <ul style="list-style-type: none"> - Continue to listen to your battery-powered radio for all warnings and advice - Stay safe inside and keep yourself and your family calm - Shelter in the strongest part of the building, this is often the bathroom, toilet or hallway - Mattresses and blankets may protect you - Beware of the calm eye / centre of the cyclone- stay inside!
Lightning	Yes	<p>Natural Disaster, Office –In-Charge, Howrah 033-26412961/ 26413367 033-26412024</p> <p>Natural Disaster, Office –In-Charge, Paschim Medinipur 03222-275571/275427 03222-275570</p>	<p>WHEN INSIDE: Avoid using the telephone (except for emergencies) or other Electrical appliances. Do not take a bath or shower.</p> <p>IF CAUGHT OUTDOORS: Go to a safe shelter immediately such as inside a sturdy building. A hard top automobile with the windows up can also offer fair protection. If you are boating or swimming, get out of the water immediately and move to a safe shelter away from the water. If you are in a wooded area, seek shelter under a thick growth of relatively small trees.</p>

Chapter – XI : Community Engagement Plan

During the construction phase & operation phase, Project affected family/person (PAF/PAP) may get employment in EPC / SPV as per project requirement. At Road Development Projects there is always requirement of manpower and labours during the construction and operation phase, where PAP can get employment. Whenever there is manpower requirement, the company gives the priority to Local community / PAP / PAF.

Company /EPC / SPVs will make a provision of employment for local community and PAP as per capabilities, education and experience, some trades are as follows:

Security	Cook	Machine Helper
Flagmen	Office Boy/Peon	Skilled Labour
Gardener	Driver/Helper	Unskilled Labour

List of Local Community Employed at Project site						
Sr.No	Name of Person	Category (LC/PAP)	Address	Designation	Employed Under ADKTL Or Sub-Contractor	Salary
1	Srikanta Malick	LC	Vill + P O - Banitabla, Uluberia, Howrah 711316, West bengal	Admin Asst	ATR	9042
2	Kaberi Mondal	LC	Vill + P O - Banitabla, Uluberia, Howrah 711316, West bengal	Computer Opt	ATR	8430
3	Tauran Singh	LC	Vill - Jamberia, P O - Kushberia, Ulubrita, Howrah	Office Boy	ATR	9900
4	Anukul Parui	LC	Vill + P O - Khariamoynapuri, P S - Uluberia, Howrah	Sweeper	ATR	7680
5	Ashok Singh	LC	Vill + P O - Juyargarh, Uluberia, Howrah	Sweeper	ATR	7180
6	Abhishek Mondal	LC	Vill + P O - Kushberia, Uluberia, Howrah	HR Asst	ATR	8610
7	Bapi Maiti	LC	Vill -Kaminachak, P.S-Deriachak, Purba Medinipur 721151, West Bengal	IT Asst.	ATR	13060
8	Biswajit Halder	LC	Vill-Sukharia,P O - Somra, Hooghly 712123, West Bengal	Stote Helper	ATR	7400
9	Ashok Patra	LC	Vill + P O - Banibon, Howrah 711316, West Bengal	T M Helper	ATR	6370
10	Ranjit Kumar mahato	LC	Vill-Uhupiri, P O - Tulin, Purulia 723212, West Bengal	Loader Opt.	ATR	13560
11	Satyajit Das	LC	Vill-Kajibasan, P O - Baikunthapur, Purba Medinipur 721442, West Bengal	DG Opt.	ATR	8370

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12	Ujjal Adhikari	LC	Vill-Gholemaguri, P O - Mohadole, Purba Medinipur 721634, West Bengal	Lab Asst.	ATR	10510
13	Chranjit Mondal	LC	Vill- Domjur,P.O-Nibra, Howrah 711409, West Bengal	LMV Driver	ATR	8270
14	Palash jana	LC	Vill + P O - Satapukhuria, Paschim Mednapur 721457, West Bengal	P & M supervisor	ATR	7120
15	Arun Kanti kar	LC	Vill+P.O-Purbaitara, Purba Medinipur , West Bengal	Supervisor	ATR	10410
16	Nirmal Pal	LC	Vill+P.O-Kalidan, Purba Medinipur , West Bengal	Electrician	ATR	8270
17	Chandan De	LC	Vill + P O - aakapara, Paschim Mednapur 721436, West Bengal	Cook Asst.	ATR	9610
18	Subhomoy Maiti	LC	Vill + P O - Ganderpukur, Hoogly 712409, West Bengal	Trainee Eng.	ATR	11810
19	Goutam Das	LC	Vill+P.O-Shyampur, Purba Medinipur , West Bengal	Survey asst.	ATR	8740
20	Laltu Singharoy	LC	Vill-Majheraati, P O -Uluberia, Howrah 711316, West Bengal	LMV Driver	ATR	8350
21	Souvik Halder	LC	Vill-Panchpota P O -Kharua rajapur, North 24parganes, 743245, West Bengal	Store asst.	ATR	8475
22	Dulal Das	LC	Vill-Banasrigouri, P O -Akandabari, Midnapur 721650, West Bengal	Cook Asst.	ATR	9660
23	Tarachanda Maity	LC	Vill-Kaanpur, P O -Tulsibari, Howrah, West Bengal	Mess Helper	ATR	9020
24	Sanjib Paul	LC	Vill-Balarampur, P O -kantapukur, Howrah 711303, West Bengal	Supervisor	ATR	8270
25	Biswajit Chakroborty	LC	Vill-54 aihwinidutta nagar, P O - Uttara para, Hoogly 700 021, West Bengal	Survey asst.	ATR	8270
26	Animesh Adhikary	LC	Vill+P.O-Maguri Uttar Sai, Purba Medinipur 721152, West Bengal	Store asst.	ATR	8475
27	Sunil Adhikari	LC	Vill+P.O-Maguri Uttar Sai, Purba Medinipur 721152, West Bengal	Store Asst.	ATR	8475
28	Jaypada Biswas	LC	Vill-Ghoshnagar, P.S-Mayllrhot, Nadia	TM Driver	ATR	9810
29	Somnatth Roy	LC	Vill+P.O-Purbaitara, Purba Medinipur 721634, West Bengal	W.B.Opt.	ATR	8475
30	Durga pada Mishra	LC	Kanthal Para, Kanchor para, Bhandargacha, Amta-1, Uluberia, Howrah	Driver	ATR	8650
31	Sanjoy kar	LC	Vill+P.O-Purbaitara, Purba Medinipur 721634, West Bengal	Mess Supervisor	ATR	7730
32	Sk. Abdul Hai	LC	Vill+P.O-Barunda, Bagnan, Howrah-711303	Supervisor	ATR	12039
33	Sk. Saidul	LC	Vill+P.O-Barunda, Bagnan, Howrah-711304	Liasoning Asst.	ATR	14950
34	Sk. Kamruz	LC	Vill + P O - Uluberia, Howrah	Mess	ATR	10500

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	Zaman			Supervisor		
35	Bholanath Das	LC	Vill+P.O-Barunda, Bagnan, Howrah-711303	Cook	ATR	9000
36	Gouranga Mondal	LC	Vill+P.O-Barunda, Bagnan, Howrah-711303	Mess Helper	ATR	6500
37	Prasanta Das	LC	Vill + P O - Banitabla, Uluberia, Howrah 711316, West bengal	Mess Helper	ATR	6500
38	Bijali Das	LC	Vill + P O - Banitabla, Uluberia, Howrah 711316, West bengal	Cook Helper	ATR	5000
39	Gita Rana	LC	Vill + P O - Banitabla, Uluberia, Howrah 711316, West bengal	Cook Helper	ATR	5000
40	Santi Adak	LC	Vill + P O - Banitabla, Uluberia, Howrah 711316, West bengal	Cook Helper	ATR	5000
41	Saraswati Dhara	LC	Vill+P.O-Bauria, Howrah, West bengal	Cook Helper	ATR	5000
42	Ranjib Shee	LC	Vill+P.O-Purbaitara, Purba Medinipur 721634, West Bengal	HR Asst	ATR	7420
43	Suman Kr. Das	LC	Vill+P.O-Purbaitara, Purba Medinipur 721634, West Bengal	Asst. EQA	ATR	11610
44	Raju Maity	LC	Vill -Kaminachak, P.S-Deriachak, Purba Medinipur 721151, West Bengal	Computer Opt	ATR	7500
45	Surojeet Jana	LC	Vill+P.O-Barunda, Bagnan, Howrah-711303	Office Boy	ATR	6500

Community Engagement Register							
SI No.	Name Of Facilitator	Location	Mode of Facilitati on Provided	Type of Facilitation	Details of Facilitation	Amount	Remark
1	Anand Bhawan Deaf and Blind School	Vill-Jagatpur, PO- Brindabanpur, Dist.-Howrah, West Bengal, PIN-711316	Cash	We provided Rs. 15000/- cash	Purchase of tape recorder & repairing of inverter	15000	
2	Uluberia Municipality	Uluberia, Howrah	Cash	We provided Rs. 5000/- cash	Clothes distribution for the poor people	5000	
3	Anand Bhawan Deaf and Blind School	Vill-Jagatpur, PO- Brindabanpur, Dist.-Howrah, West Bengal, PIN-711316	Cheque	We provided Rs. 11000/- cheque	For Annual Day function of Anand Bhawan Deaf and Blind School	11000	
4	Nimdighi Sporting Club	Vill-Nimdighi, PO-Uluberia, Dist.-Howrah, West Bengal	Cash	We provided Rs. 10000/- cash	For a poor girl's marriage	10000	

Ashoka Dhankuni Kharagpur Tollways Limited (ADKTL)
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5	We build kuccha drain as per the village people requirement out of service road at KM-89 Panskura region.						
6	Approach road developed at KM-33+000 LHS & RHS, 38+900 LHS as per the requirement of village people						
7	As per the request of two house members approach road has been created at KM:92+350 RHS (Panskura) due to low-level rise of the house from road surface.						
8	Build kuccha drain as per the village people requirement out of service road at KM-89 Panskura region.						
9	As per the requirement of local people a new mosque has been created at KM:52 LHS						
10	As per the request from Bharat Gas depot approach road has been created at KM: 54+100 LHS						
11	Footpath provided for Gurudwara Public School, Alampur (KM:31+100 LHS)						
12	As per the request from villagers of Nirikigiri, we created new pocket road/approach road about 300 mtr at KM-77 LHS						
13	As per the requirement of village people, we developed village road near KM-47+800 RHS to KM-48+080 LHS						
14	Water flood occurred at KM-119 to KM-124. We provided JCB for remaking "bandh" (small mud walling around water areas) for smooth traffic movements from water on the road						

Chapter – XII: Bio-Diversity

The organization has implemented the directives and guidelines stipulated in environment clearness issued by MoEF and State Pollution Control Board, Govt. of West Bengal. During the construction phase, various adverse impacts on the ecosystem are anticipated in the surrounding areas of the project in terms of increased noise levels, land vibrations during tunneling and blasting, release of air and water pollutants, etc. Mammals are the most vulnerable group affected by these negative impacts, which affect their movement, behavior and breeding habit. To avoid and minimize the negative impacts of these activities, we do follow strict guidelines as below:

Strict instructions (warnings) have been imposed on the workers at project sites to ensure that they do not harvest any species and/ or produce from the forests and cause any danger or harm to the animals and birds at project territory and forest section.

Minimum levels of noise during construction activities are maintained.

The fuel wood to the labours are not provided from tree cutting meant for the purpose and/or the provision made for the supply of the free/subsidized kerosene/LPG from the depots being set up for this purpose to avoid forest degradation and destruction of animal habitats.

To avoid the deterioration of water quality and release of pollutants into the river, proper sanitation facilities and garbage disposal bins have been provided to the workers camp areas.

The interference of human population would be kept to a minimum in the adjacent forested areas and no labour camps have been set up in the vicinity of forests and wilderness areas.

We strictly adhere to the rules and regulations of the Wildlife (Protection) Act (1972), Biological Diversity Act (2002), Forest (Conservation) Act (1980), Environment (Protection) Act (1986) and guidelines of State Biodiversity Conservation Strategy Action Plans for the preservation of habitats and protection of wild animals.

In case any wildlife found having taken up a refuge in any space in project territory, all construction labours have been instructed to leave that place immediately, trained personnel from Department of Forests and Wildlife Warden's office and approved experts shall be intimated for rescue of such wildlife. Any construction activities to be taken up only after any trapped wildlife find its safe escape.

It has been ensured that the noise levels are kept as minimum as possible in the project area, particularly where human and wildlife habitats are located. For the strict blasting regime, i.e. controlled blasting under constant and strict surveillance are being followed:

Some of the implemented methodologies for reduction and mitigation of noise so as to cause as little disturbance to the animals as possible are given below:

Only well maintained/new equipment that produces lesser noise has been installed at the work sites.

The best way to control the noise is at source. Certain equipment that needs to be placed permanently at one place like generators, etc. are housed in enclosed structures to cut off the noise.

The heavy equipments, like rotating or impacting machines, are mounted on anti-vibration mountings.

Wherever combustion engines are required, they are fitted with silencers.

There are provisions of wind barrier around three sides of storage piles. All storage piles are wetted and covered with plastic sheets. The grading operation remains suspended when speed of wind is very high.

Chapter – XIII : Cultural Heritage

In this project corridor, there is neither any Tribal Community nor Cultural Heritage in the immediate vicinity of the RoW (up to 500 Mtrs).

Chapter – XIV : Checklist of Report Submitted to HO

The detail descriptions of the Reports submitted to HO as per the Frequency are displayed below:

ACL Formats:

Sr. No.	ACL Format No	Detail Description	Frequency
01.	<i>ACL/FR/HSE/01</i>	Environment & Social Management Plan	Quarterly
02.	<i>ACL/FR/HSE/02</i>	Land Acquisition Summary Report	Quarterly
03.	<i>ACL/FR/HSE/03</i>	Hot Spot Details And Issue Report	Quarterly
04.	<i>ACL/FR/HSE/04</i>	Legal Matrix Report	Monthly
05.	<i>ACL/FR/HSE/05</i>	Legal Compliance	Quarterly
06.	<i>ACL/FR/HSE/06</i>	Project Water Consumption Report	Quarterly
07.	<i>ACL/FR/HSE/07</i>	Road Accident Summary Report	Monthly
08.	<i>ACL/FR/HSE/08</i>	ACL-HSE-Monthly Report	Monthly
09.	<i>ACL/FR/HSE/09</i>	Incident Report Format	As and when happen immediate within in 24 hrs
10.	<i>ACL/FR/HSE/10</i>	Tree Plantation	Quarterly
11.	<i>ACL/FR/HSE/11</i>	NCR-HSE Complaint Summary Report	Monthly
12.	<i>ACL/FR/HSE/12</i>	Emergency Report (Mock Drill Report)	Quarterly
13.	<i>ACL/FR/HSE/13</i>	Road Project GHG Tool	Monthly
14.	<i>ACL/FR/HSE/14</i>	Complaint Register	Monthly

HSE Work Instruction Report Formats :

Sr. No.	Work Instruction Format No	Detail Description	Frequency
01.	<i>FR/CO/DO/PR/HSE/01</i>	Environment Aspects & Impacts Register	Monthly
02.	<i>FR/CO/DO/PR/HSE/02</i>	Environment Management Program	Monthly
03.	<i>FR/CO/DO/PR/HSE/03</i>	Hazard Identification, Risk Assessment & Determining Controls (Risk Register)	Monthly
04.	<i>FR/CO/DO/PR/HSE/04</i>	Occupational Health & Safety Management Program	Monthly
05.	<i>FR/CO/DO/PR/HSE/05</i>	Legal Matrix Register	Monthly
06.	<i>FR/CO/DO/PR/HSE/06</i>	Waste Management Register	Monthly
07.	<i>FR/CO/DO/PR/HSE/07</i>	Waste Water Statistics Register	Monthly
08.	<i>FR/CO/DO/PR/HSE/08</i>	Incident/Accident Investigation Report	As and when happen immediate within in 24 Hrs
09.	<i>FR/CO/DO/PR/HSE/09</i>	Monthly HSE Report	Monthly
10.	<i>FR/CO/DO/PR/HSE/10</i>	HSE & S Monthly Meeting Agenda – HSE – MOM Format	Monthly
11.	<i>FR/CO/DO/PR/HSE/11</i>	Weekly HSE Report	Monthly

Last, but not the least, We are glad enough to declare that our organization is IMS certified with Greenhouse Gases Certification.

CERTIFICATE OF REGISTRATION

THIS IS TO CERTIFY THAT THE
INTERGRATED MANAGEMENT SYSTEMS OF

Ashoka Buildcon Ltd.

Head Office:
Ashoka House, Ashoka Marg,
Nashik Maharashtra 422 011
INDIA

Has been assessed and registered as complying with the requirements of the International Standards shown below for the following Goods and Services: -

Design, Development, Construction of Roads, Bridges, Industrial Buildings, Residential & Commercial Complexes, Production & Sale of Ready-Mix Concrete, Operations & Maintenance of Road Infrastructure Projects, Power Infrastructure Projects.



ISO 9001:2008



ISO 14001:2004



OHSAS 18001:2007

Ashoka

Tony Wilde
Group Chairman
ISC Pty Ltd, A.B.N. 31 245 846 984

Registration No:	QMS/R91/0014	EMS/R91/0014	OHS/R91/0014
Original Registration Date:	10-Dec-2009	22-Oct-2007	15-Jul-2008
Recertification Date:	15-Oct-2013	15-Oct-2013	15-Oct-2013
Expiry Date:	15-Oct-2016	15-Oct-2016	15-Oct-2016



ISC Pty Ltd., Unit 2/10 Gladstone Road, Castle Hill NSW 2154, Sydney, Australia.

This certificate is valid for 3 years from the date of certification on the condition that audits are conducted and paid for as per the Certification Agreement. Should this condition not be met, cancellation procedures will be initiated and the client will be removed from the JAS-ANZ register. This Certificate remains the property of International Standards Certifications Pty Ltd and must be returned upon request. It must not be altered in any way. Intentional misuse of this certificate will result in cancellation without prior notification. Certificates can be checked through certcheck@isc-worldwide.com



ISO 14064.1:2006

CERTIFICATE OF VERIFICATION

ISO 14064.1:2006 • Greenhouse Gases Part 1

THIS IS TO CERTIFY THAT
THE GREENHOUSE GASES OF

Ashoka Buildcon Ltd.

Ashoka House, Ashoka Marg,
Nashik 422 011,
Maharashtra
INDIA

Has undergone the verification process and has been verified as complying with the requirements of the Standard shown above for the following Verification Statement:-

Verification of Greenhouse Gas Emission and Removals at the Organization Level for Quantification and Reporting as per ISO 14064 Part - 1.

Ashoka Buildcon Ltd. has established 2013 as its base year for GHG inventory in accordance with GHG policy of measuring, monitoring and minimizing its GHG inventory. The GHG inventory for the base year is 24,541 Tonnes of CO₂ and 3,257 Tonnes of "CO₂ under Direct Emission and Energy Indirect Emissions respectively" for the period January to December 2013.

Tony Wilde
Group Chairman
ISC Pty Ltd, A.B.N. 31 245 846 984

Registration Number: GIBG089100014
Verification Date: 08-Apr-2014

ISC Pty Ltd, 2/10 Gladstone Road, Castle Hill NSW 2154, Sydney, Australia.



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