

Schedules

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SCHEDULE A: Project Site

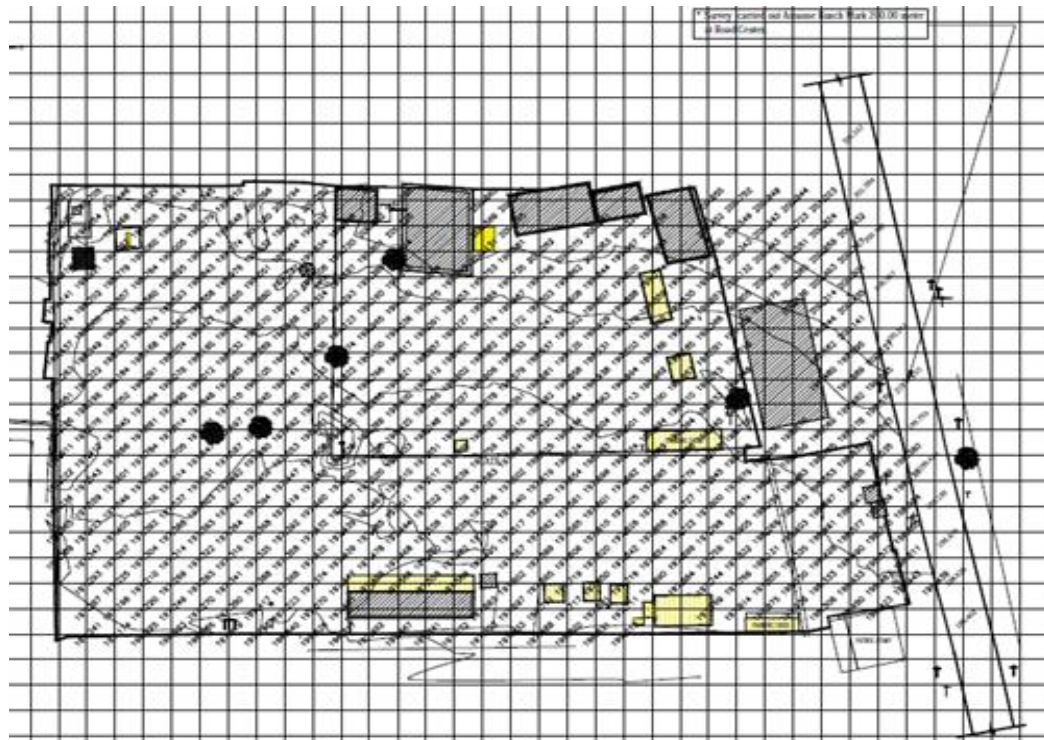
1 Background

Ministry of Road Transport & Highways under its scheme for development of Bus Ports in India, has mandated NHIDCL as Central Executing Agency for development of Bus Ports. Further, Bus Port at Ramnagar has been decided to be undertaken on BOT mode. The proposed bus port is to be constructed after demolishing the existing structure.

2 The Site

- 2.1 Ramnagar is a small town and a municipal board in the Nainital district of Uttarakhand, India. It is located at 29.40°N 79.12°E which is approximately 65 kilometres from Nainital, the headquarters of the district.
- 2.2 Ramnagar is located at the foothills of the Himalayas on the bank of river Kosi and its proximity to Nainital, which is a famous hill station of Northern India. Ramnagar is the gateway to western Kumaon and Garhwal. It is also the commencement point of Kumaon Hills with the nearby town of Haldwani.
- 2.3 The proposed site for the bus terminal is abutting NH 309, situated within the Kosi Forest Range, Ramnagar Reserve Block at 29°23'47.3"N 79°07'32.5"E.





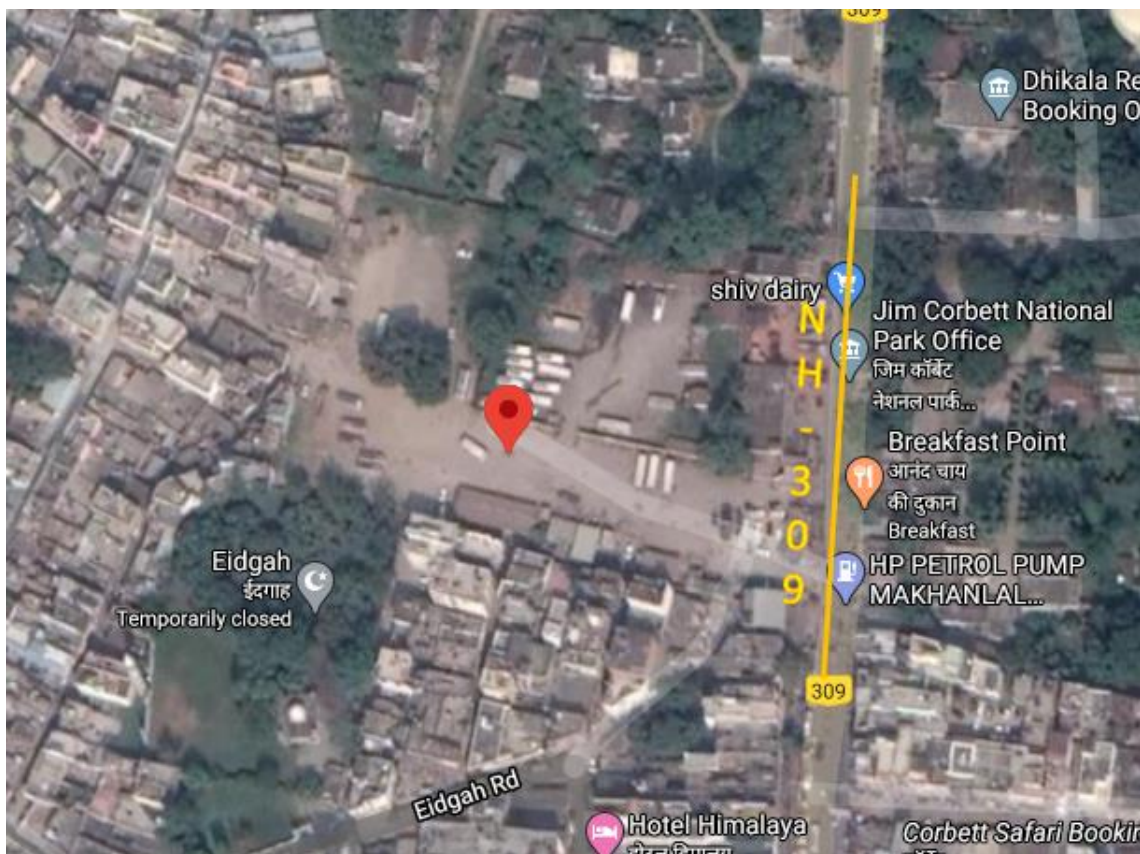
- 2.4 The details of existing structures and Site is given at Annexure-I of Schedule-A.
- 2.5 The dates of handing over the Site to the Concessionaire are specified in Annex-II of this Schedule-A.

Annexure I (Schedule-A)

Site

1. Site

The site for the bus port is abutting NH 309, situated within the Kosi Forest Range, Ramnagar Reserve Block at 29°23'47.3"N 79°07'32.5"E.



Road near Site Location

2. Land

The site is a flat rectangular patch of land.

3. Existing Structures on the Site

SN	Description	QTY	Unit
1	Shed -01	24.62	Sqm
2	Shed -02	65.64	Sqm
3	Shed -03	11.15	Sqm
4	Shed -04	10.09	Sqm
5	Shed -05	12.19	Sqm
6	Shed -06	72.6	Sqm
7	Shed -07	53.46	Sqm
8	Shed -08	4.56	Sqm
9	Shed -09	19.7	Sqm
10	Shed -10	36.58	Sqm
11	Building -01	98.61	Sqm
12	Building -02	46.31	Sqm
13	Building -03	104.44	Sqm
14	Building -04	170.93	Sqm
15	Building -05	41.39	Sqm
16	Building -06	15.44	Sqm
17	Petrol Pump	18.11	Sqm
18	UG Tank	27.45	Sqm
19	Trees	5	NO

Annexure -II
(Schedule-A)

The date of handing over the Site to the Concessionaire

The 90% of the area shall be handed over to the Concessionaire on the Appointed Date and remaining 10% within one month.

SCHEDULE B: Development of Project Bus Port

1. General

The Concessionaire should develop a State-of-the-Art Bus Port with better facilities for passengers/ public and commercial facilities thereby creating a landmark facility with iconic exteriors/ facade. The proposed Bus Port shall be planned and designed as an iconic/ landmark building with contemporary innovative design on the lines of post modernism and design elements such as colonial style using fins, pergolas, glass facia etc. The exterior/ facade of the building could be in combination of glass/ metal/ tile/ fusion of materials and the provision of blocking arrangement shall be preferably used.

2. Broad Scope of Work

The services to be provided by the Concessionaire shall include all activities, physical or efforts, activities otherwise needed to be carried out, in order to comply with the service quality levels and other performance criteria indicated under the Concession Agreement, or with any other requirements of the Concession Agreement. In particular they shall include construction works, operation & maintenance of the various components.

The Concessionaire shall ensure that the Bus Port is constructed in accordance with the design approved by the NHIDCL and in conformity to the Standards and Technical Specifications set forth in Concession Agreement and the Applicable Laws. The broad scope of works is as described below:

3. Construction Works

The Construction works for the Bus Port to be undertaken by the Concessionaire shall include all the construction works as per the Concession Agreement and catering to future requirements which shall include the following:

- (a) The scope of works inter alia includes the detailed design, detailed engineering and preparation of all related good for construction drawings concerned to the execution of the Bus Port.
- (b) Passenger amenities like general shops, parking areas for public, private and intermediate public transport, toilets, drinking water chambers, waiting halls, seating arrangements, dustbins etc.
- (c) Bus Port facilities like bus bays (alighting, boarding and idle parking), circulation area, enquiry counters, information centers, booking and reservation ticket counters, etc.
- (d) Design and construct supporting infrastructure facilities related to Solid Waste

Management, Rain Water Harvesting, Water Supply and Sanitation, Electric Sub Station, Communication System.

- (e) Design and construct any ancillary facility and/or structure required for proper functioning of the bus port or required for passengers comfort or traffic and passenger circulation.

4. Maintenance Work

This includes routine and periodic maintenance activities for the Bus Port excluding Authority Facilities. The routine maintenance will include maintenance of bus and passenger circulation area, terminal building, passenger concourse areas, passenger amenities, parking areas, pavement condition, water supply, drainage and sewerage, solid waste facility, other ancillary building services, mechanical equipments etc. The periodic maintenance shall include maintenance at regular identified intervals for the various bus port components.

5. Operations Management

The operations management is related to the Bus Port Facilities. This includes the following bus port operations:

- (a) Management of inflow and outflow of buses;
- (b) Allocation of bays in the bus port including idle parking of buses;
- (c) Streamlining of traffic flows and circulation pattern;
- (d) Functioning of passenger and crew amenities;
- (e) Collection of lease rentals and other User Charges;
- (f) Information and communication systems including public address system;
- (g) Other bus port operations include functioning of break down services, providing emergency response system, regular security and scheduled inspections;
- (h) Undertaking traffic management measures in internal circulation during routine and periodic maintenance activities.
- (i) Implementing the Management Information System (MIS) that would help in monitoring of the operation and maintenance activities in the bus port.

6. Bus Port Design

The Concessionaire, while designing the Bus Port Facility shall consider and comply with the following planning & design parameters.

The most important design consideration for a bus port is the safety requirements, which can be met by segregating the traffic movements and convert the bus port into an 'active urban street' concept. Pedestrian circulation inside the bus port complex shall be designed in such a manner that no passenger can come on to the bus movement area/s. For efficient working of the bus port and to reduce the noise & air pollution the movement of vehicular traffic in the bus port should be totally unobstructed and the entry & exit of buses as well as the arrival and departure bays shall be

designed in such a fashion that the bus traffic shall not be in conflict with any of the other activities of the bus port.

The interior of bus port should be known for its usefulness, open areas and aesthetics. Bus port shall have high quality seating, flooring, ceiling, lighting etc. Marble wainscoting, aluminium/ S.S. finishes, granite floors, beautiful lighting fixtures, granite and limestone should be incorporated into its art deco design including glow signage.

The key Bus port Facility shall consist of the following:

6.1. Bus Port Transport Infrastructure

The following key bus port facilities shall be provided:

- (a) Bus Bays (for Boarding and Alighting)
- (b) Bus Circulation Area & Approach Roads
- (c) Ticketing Counters/ Reservation Counters/ Enquiry Counters
- (d) Authority administration requirements like Traffic Officer's office, Supervisor Office, Duty List branch etc.
- (e) Concessionaire's Office
- (f) Entry & Exit to the Bus port Facility
- (g) Passenger Entry & Exit to the Bus port Facility
- (h) Interconnecting Subways, Pathways, Foot-over bridges, Ramps between various components, if applicable
- (i) Management Information System including public address system

6.2. Passenger Amenities

The following key passenger amenities are proposed in the bus port:

- (a) Passenger Concourse Area for Boarding & Alighting
- (b) Passenger Platform for Alighting & Boarding
- (c) Public Utilities (Toilets, Drinking Water Chambers etc.)
- (d) Waiting Halls
- (e) High quality Stainless Steel Seating
- (f) Cloak Room & Parcel Room
- (g) Seating Arrangements, Information Signage's, Display Boards
- (h) Dormitories
- (i) Commercial Facilities for the Bus port Facilities like kiosks, canteen, general store etc.
- (j) Kids Activity Area
- (k) Baby Care Room
- (l) Lost and Found Room
- (m) Tourist Information Centres
- (n) Complaint Redressal Room
- (o) Surveillance & Security System (CCTV)
- (p) Parking Area for private vehicles (two wheelers and cars) and intermediate

- public transport like auto rickshaws, taxis along with their approaches, entry and exit, drop-in and drop-off areas, pick-up zones
- (q) Commercial Areas (independent of bus port) like a Mall/High Street shopping, Budget and Business Hotel, Multiplex
- (r) Passenger Information System

6.3. Authority Facilities

As set out in Table 1.1 and clause 8.1 of this Schedule.

6.4. Common Areas & Facilities

The following major supporting infrastructure requirements proposed in the bus port:

- (a) Water Supply and Sanitation Structures
- (b) Water & Sewage Treatment Systems
- (c) Storm Water Drainage
- (d) Rain Water Harvesting Structures
- (e) Solid Waste Management Systems
- (f) Solar Power Plant
- (g) Communication Systems
- (h) Dust suppression system
- (i) Firefighting System
- (j) Landscaped Area
- (k) Electric Sub-Station
- (l) Service lanes for modal transfer from other public and private modes of transport to the bus port

6.5. Any other structure and facilities

Any other structure and facilities to be constructed under the Concession Agreement.

7. Factors to be Considered for Bus port Design

The factors to be considered in the Bus port design by appreciating activity and facility inter-relationship are:

- (a) Segregation of bus port and other traffic
- (b) Segregation of vehicular and passenger traffic and movement
- (c) Segregation of traffic by type, function and direction
- (d) Co-ordination of different activities in terms of functional and spatial interrelationships
- (e) Separate access for bus port and commercial facilities
- (f) Provision of good user and vehicular information
- (g) Provision of necessary and identified facilities to meet requirement of all user groups
- (h) Achieving minimum passenger and vehicular processing time

- (i) Achieving overall functional and space efficiency
- (j) Achieving smooth flow for all types of traffic to and from the bus port

8. Fixed Parameters of the Project

The fixed parameters for the master plan are given in the subsequent sub-sections.

8.1. Area for Development

The minimum area allocation for the Bus port Facility shall be as follows:

Table 1.1: Minimum Area Allocation Statement

SN	Description	Quantity	Unit
1	Bus Port Area		
(i)	Passenger Concourse area	370	sq.m
(ii)	Double Height Waiting area	277	sq.m
(iii)	Control Room and Enquiry Office	30	sq.m
(iv)	Ticket counter	30	sq.m
(v)	Baby Care Room	13	sq.m
(vi)	First Aid room	16	sq.m
(vii)	CCTV security room	31	sq.m
(viii)	Cloak room and Lost & Found room	59	sq.m
(ix)	Toilets	65	sq.m
(x)	Guard room	20	sq.m
	Total Area	1,040	sq.m
2	Bus Bays		
(i)	Boarding Bays	5	Number
(ii)	Alighting Bays	1	Number
(iii)	Idle Bays	4	Number
3	Parking		
(i)	Surface Parking	60	Number of ECS
4	Authority Facilities		
(i)	Workshop Maintenance area	200	sq.m
(ii)	Fuelling area	150	sq.m
(iii)	Authority Office	90	sq.m
(iv)	Staff Dormitory	39	sq.m
(v)	Washing Bays	1	Number

8.2. Bus Port Transport Infrastructure

8.2.1. Bus Entry / Exit to the Bus Port

- (a) The bus circulation pattern in the bus port shall be such that there is no queuing of buses at the entry/ exit gates for buses in the bus port.
- (b) The entry and exit for buses shall be separate from the other vehicles. Speed

breakers shall be provided near the entry and exit gates. The entry and exit locations shall be on the main external road as shown in the indicative concept master plan.

8.2.2. Functional and Geometric Design Dimension Parameters

The following table indicates the minimum dimensions related to functional and geometric design aspects of the bus port components.

Table1.2: Minimum Functional and Geometric Dimensions

SN	Parameter	Minimum Requirement
1	Bus Bay dimension	3.5m x 12.0m clear space along with a minimum stub arm of 1.5m wide
2	Turning radius for bus movement	not less than 12.0m
3	Driveway width for bus	not less than 15.0m
4	Width of the passenger platform, in case of bus bays on only one side of the passenger platform	not less than 9.0 m
5	Clear height of passenger concourse in the boarding area including boarding platforms	not less than 6.0m
6	Driveway width at the bus entry/exit gates	not less than 7.00m

8.2.3. Bus Port Parking Area

- (a) The Intermediate Public Transport (IPT) modes like the auto rickshaws and taxis are the expected modal change for the users apart from the city bus transport. The private modes of transport are two-wheelers, cars and cycles. There should be provision for arrival, departure and parking of these categories of private and public transport.
- (b) Designated parking area shall be allotted for the public and private vehicles along with the drop in and drop off facility.
- (c) The entry and exit for the parking areas of IPT and private vehicles shall be segregated by use of railings or medians.

8.2.4. Service Time at Bays for Buses

- (a) The internal circulation pattern of the buses in the bus port shall be planned such that the minimum service time attained by buses at all times at alighting and boarding bays is at least 5 and 10 minutes respectively.

8.2.5. Pavement for Bus Port

- (a) The Concessionaire shall construct the bus circulation and the parking area along with the approaches/roads to various components in the bus port with rigid pavement.

- (b) The pavement shall be designed for at least 30 years as per Authority requirements and suitable drainage facilities are to be provided.

8.2.6. Idle Parking for Buses

- (a) The idle parking bays are to be earmarked separately within the bus port. However there shall be enough circulation area, to ensure safe movement, turning and manoeuvrability of buses.
- (b) The idle parking bay areas shall be marked and designated with thermoplastic paint along with the provision of appropriate informatory signage's.

8.2.7. Traffic Signs and Signages

The Concessionaire shall provide signages with customer focussed approach. The Concessionaire should consider below mentioned guidelines:

- (a) Adequate number of traffic signs (informatory, cautionary and warning) and signages' shall be provided in the bus port for convenience to crew and users.
- (b) Insofar as possible, architectural elements, landscaping, and other design features shall identify entrances, exits, etc.
- (c) Signs shall be located for maximum visibility at or before all decision points within facilities.
- (d) Signs shall be placed at frequent enough intervals so that the infrequent or new user can readily find his or her way without assistance.
- (e) All signages should comply with relevant standards and codes.
- (f) Signage shall also include items relating to regulatory enforcement (e.g. no smoking, no parking here, etc.).
- (g) Relate outbound passengers to the surrounding community with appropriate signage.
- (h) Pavement markings shall be provided as per there requirement in the bus port area for convenience to crew and users.

8.2.8. Minimum Bus Port Facility Requirements

The following table indicates the minimum bus port facility requirements. These are mandatory to be provided as part of the Bus port Facility.

Table 1.3: Minimum Bus Port Facilities Requirement

SN	Components	Minimum Requirement
1.	Alighting Bays	As per 8.1 above
2.	Boarding Bays	As per 8.1 above
3.	Idle Bays	As per 8.1 above
4.	Washing bays	As per 8.1 above The washing bays should be equipped with washing plant and handed over to Authority for operations and maintenance.
5.	Enquiry offices, Passenger amenities, Ticketing counters	(a) One centralized enquiry office (b) One centralized First aid room, (c) One baby care room for every 20 bus bays, and (d) 3 ticketing counters for every 10 bus bays located close to the bus bays The offices shall have large window for public interface. There shall be enough waiting space in front of the office so as to enable the users to form proper queue and hence maintain orderliness. Railings to divide the queue may be provided in front of the public interface windows. The total area for provision of these services shall be as per 8.1 above.
6.	Cloak Room	As per 8.1 above
7.	Display Boards, Digital Displays and Variable Message Sign Boards	Provide Digital Displays and Variable Message Sign Boards in the bus port at appropriate locations like entry and exit, waiting halls, enquiry counters, and passenger concourse area for providing updated information to the users. Provide adequate numbers of display boards in a bus port area with illumination at appropriate locations for information on bus routes, bus time table, fare lists, location of various passenger amenities in the bus port etc.
8.	Digital Display Clocks	Provide one Digital Display Clocks for every 10 bus bays suspended from the ceiling by suitable holders in the passenger concourse area.
9.	Control room with Public Address System	High Quality announcement booth shall be provided in the control room having area as per 8.1 above. A high quality Public Address System shall be provided in the bus port.
10.	Vacuum Cleaners, Floor Cleaners, Automatic Wipers or superior mechanized cleaning equipment	These shall be provided in adequate number in the bus port for housekeeping activities for ensuring dust free environment
11.	Administration Office Space for Authority (Bus port Manager, Traffic	The total area for provision of these services shall be as per 8.1 above

SN	Components	Minimum Requirement
	Controller Office, Traffic Supervisor along with their respective support staff and other key Authority personnel's)	
12.	Bus Operation and Management Office for Concessionaire	To be provided as per the Concessionaire's organization structure for the O&M of the bus port.
13.	Tow Away Vehicle	The Concessionaire shall make necessary arrangement for tow away vehicles at Bus Port.
14.	Hi-tech Security System	<p>(a) A closed circuit system shall be strategically installed along with Video Analytics and monitoring software as per the requirement of Authority and enforcement agencies for surveillance of the entire bus port. The surveillance system shall have the capability to detect and drill down the particular area where incident is occurring, in shorter span of time to avoid any major mishaps.</p> <p>(b) Dome Cameras with 360 Degree revolving angle as well as fix focused telescopic cameras can be installed, apart from manual security, to monitor the various activities of the bus port from a control room.</p> <p>(c) All the entrances of the bus port complex as well as the total Project facility shall be equipped with security check systems such as X-Ray Screening Machine, Metal Detector etc. to ensure the safety of the passengers/general public as well as the building of the facility.</p> <p>(d) Automatic Number Plate Recognition (ANPR) – The camera installed in entry area and parking areas shall be of ANPR type to track all the vehicle entering and leaving the premises.</p> <p>(e) Control Room – The surveillance feed from all the camera to be relayed live and displayed on the Video wall installed in the Control Room. The sufficient storage space shall be provisioned for data backup of the video feed for at least 30 days or longer as per statutory requirements.</p>
15.	Effluent/ Sewerage Treatment Plant	One ETP/ STP of sufficient capacity to treat the effluent generated in the bus port on daily basis.

8.3. Passenger Amenities

8.3.1. Passenger Entry/ Exit to the Bus Port

- (a) The passenger entry and exit to the bus port shall be separate from the vehicular entry and exit with minimum width of 3.5m.

- (b) The passenger circulation in the bus port shall be such that there is no conflict with bus or other vehicular traffic circulation. The Intermediate Public Transport (IPT) and private parking area shall have a direct connectivity with the passenger concourse area.
- (c) The passenger concourse area for the alighting and the boarding areas in the bus port shall be interconnected for easy accessibility and better modal transfer.
- (d) The passenger amenities set out in para 8.1 shall be conveniently located in the passenger concourse areas for effective utilisation by the users.
- (e) The alighting and boarding platforms including the passenger concourse area for boarding and alighting shall be covered by suitable roofing of steel structure or RCC. The canopy shall extend over the bus bays beyond the edge of the platform by minimum 2m to protect against rain, sun and other weather adversaries.
- (f) Passenger concourse shall have the facilities for differently abled passengers such as ramps for entry/exit, separate toilets/ wash rooms etc.
- (g) Passenger concourse shall be lively designed and provided with facilities such as food courts, rest rooms, family entertainment like games, TV's, restaurants; Bank ATM's, phone booths, location maps, information on tourist destinations & city etc.
- (h) Suitably illuminated signboards and display boards shall be placed indicating the various passenger amenities in the bus port. Any passenger movement in the bus circulation area shall be restrained for safety to passengers and vehicles. It shall have proper illumination and signage's for safe movement of passengers.
- (i) Any entry of IPT and private vehicles in the bus circulation and passenger circulation area shall be prohibited.
- (j) In case the basement parking is provided, it shall have a direct interconnectivity with the passenger concourse areas by means of staircases and ramps/lifts/escalators. Suitable arrangements have to be made in the passenger concourse area interconnectivity with the basement parking area for the physically disabled and handicapped. The interconnectivity arrangements between the bus port areas shall be free of any encumbrances at all times.
- (k) The Concessionaire shall ensure that vehicles entering the bus port are checked before entry;
- (l) The luggage transfer to any part of the bus port area shall be scanned with X-

ray scanning machine as per the requirement of Authority and/or enforcement agencies.

8.3.2. Bus Port Parking Area

- (a) The parking area shall be integrated with the bus port such that there is easy accessibility for the passengers. The parking area shall be suitably segregated into lots for two-wheelers, cars, auto rickshaws and cycles.
- (b) The parking area shall consist of drop in and drop off zones for the various private and IPT vehicles. In case of parking provision for intra-city buses, suitable bus bays shall be constructed near the alighting zone.
- (c) All parking spaces shall be constructed with rigid pavement to withstand vehicle loads and forces due to frequent acceleration and deceleration of vehicles. Parking bays/lots shall have proper cross slope and drainage. They shall be marked with paint as per IRC-35-1997 to demarcate parking and circulation space.
- (d) The minimum dimensions in case of provision of multi-level parking are provided in the following table:

Table 1.4: Minimum Requirements for Multi- Level Parking

SN	Parameter	Minimum Requirement
1	Minimum bay dimensions per car space	Not less than 5.0m long and 2.50m wide
2	Carriageway of pavement for circulation space within parking facilities, in case of one way movement	Not less than 3.75 m
3	Carriageway of pavement for circulation space within parking facilities, in case of two way movement	Not less than 6.0 m
4	Clear Floor Height in case of multilevel parking space	Not less than 3.0m

8.3.3. Minimum Passenger Amenities Requirements

The bus port shall consist of the various passenger amenities. These are to be in adequate number, located and designed for passenger convenience. The following passenger amenities are mandatory to be provided as part of the Bus port Facility. All the passenger facilities shall be provided and maintained as per the provisions set out in the Concession Agreement.

Table 1.5: Minimum Passenger Amenities Requirements

SN	Passenger Amenities	Minimum Total Requirement
1.	Passenger & Concourse Area	Area as per 8.1 above Minimum width of alighting platform shall be 3.0 m

SN	Passenger Amenities	Minimum Total Requirement
		<p>The passenger amenities like waiting halls, toilet blocks, drinking water chambers, canteen, kiosks etc. shall be conveniently located in the passenger concourse areas.</p> <p>The various operational requirements like the Enquiry offices & Ticketing Office along with enclosure for waiting space, administration office for Authority shall be located in the passenger concourse area.</p>
2.	General Waiting Hall	Waiting hall area as mentioned in 8.1 above with adequate seating capacity in the bus port. Kiosk need to be provided in General waiting hall.
3.	Toilet	<p>For every 10 bus bays the following shall be provided:</p> <ul style="list-style-type: none"> (a) WC for Gents : 4 (b) Urinals for Gents : 5 (c) WC for Ladies : 5 (d) WC for Differently abled : 1 <p>The gents and ladies blocks shall have separate access.</p> <p>Provide minimum 3 taps, 3 bevelled edge mirrors (600x450mm) and 3 wash basins in each Gents toilet block.</p> <p>Provide minimum 5 taps, 5 bevelled edge mirrors (600x450mm) and 5 wash basins in each Ladies toilet block.</p>
4.	Cloak Room	Area as mentioned in 8.1 above with lockers, racks and cupboards.
5.	Parking area	The minimum parking area requirement shall be as per 8.1 above including drop-in and drop-off areas. The parking area shall be suitable segregated into lots for various categories of private and IPT vehicles.
6.	Drinking Water Chambers	Provide one drinking water chambers with provision for room temperature drinking water along with cold water for every 10 bus bays. The water chambers are to be evenly distributed in the passenger concourse area. There should also be provision for purification of water. The water quality shall be match with the requirements stipulated by the respective Municipal Corporation or CPHEEO guidelines applicable for drinking water standards.
7.	Seating Arrangements	Modular SS or Hard Plastic Chairs over steel framework, grouted/ fixed to the platform base provided in the bus port. The seating arrangement to be evenly distributed in the passenger concourse area and waiting areas in the bus port. The seating area should be equipped with suitable sized TV, fans, Shoe shine etc.
8.	Dustbins	Provide 1 dustbin for every 3 bays on the platform apart from

SN	Passenger Amenities	Minimum Total Requirement
		those provided near the shops/kiosks etc. The dustbins shall be metal boxes or any other material approved by Authority of 450 mm x 450 mm x 750 mm height with lids, fixed and painted and complete in all respects. The dustbins are to be placed at appropriate locations in the passenger concourse area in the bus port. The dustbins should contain disposable plastic bags so as to ease collection of waste.
9.	Ramps for differently abled	Ramps with proper slope as per NBC codes shall be provided at user entry and exit of bus port, connectivity to parking area and passenger concourse area, interconnectivity between the passenger concourse areas and at any such places adjacent to footsteps following upward and downward gradient in the bus port passenger concourse area. Handrail fixed to walls along the staircase and ramps shall be provided for ease and convenience of passengers.
10.	Public Relations Office	The Concessionaire shall maintain a Public Relations Office (PRO) at a convenient location, so as to provide assistance and any help and assistance to passengers using the bus port as well as to be used as an information dissemination centre in case of emergencies. The office will be manned suitably by a Public Relations Officer who will also co-ordinate with various agencies for smooth running of operations. The office would maintain a Register for lodging any suggestions, recommendations or complaints. Such register shall be available at all times for inspection by the Authority. Any complaint logged should be addressed in accordance so as to meet the performance standard specified.
11.	Wheel Chairs	Atleast 2 wheel chairs for every 10 bus bays shall be provided in the bus port as part of the passenger amenities. These wheel chairs shall be maintained by the Concessionaire as part of his obligations.
12.	Trolley	2 trolleys for every boarding bus bay shall be provided for carrying luggage. Concessionaire shall make arrangement for its maintenance and security.
13.	Information dissemination	<p>(a) The Concession shall provide following information to passengers at the entry point and other at convenient places in the bus port:</p> <ul style="list-style-type: none"> (i) Bus information, (ii) Real time information of bus arrival, (iii) Bus port map/information, navigation, (iv) Intermodal connectivity, (v) Other modes of transport such as Railways, Airport, (vi) you are here etc.. <p>(b) The above information shall be disseminated in</p>

SN	Passenger Amenities	Minimum Total Requirement
		minimum 3 mediums
14.	Passenger Complaint	The Concessionaire shall maintain a passenger complaint office at convenient location or as mobile 'may I Help' executives to register and provide process redressal of passenger complaint as per the directions of the Authority.
15.	Feedback surveys	<p>The Concessionaire shall undertake feedback surveys every quarter to an estimate of 5% of the daily passengers to the bus port and provide the results of the same to the Authority and display at prominent locations in the bus port.</p> <p>The survey format and the day of the survey shall be approved by Authority.</p>
16.	Lost and found	The Concessionaire shall maintain a lost and found room having area as mentioned in 8.1, at a convenient location in the bus port.
17.	Bus Port branding	<p>The Concessionaire shall undertake branding of the bus port as per the directions of the Authority. The following could, be part of the branding of the bus port:</p> <ul style="list-style-type: none"> (a) Logo, (b) Colour scheme (c) Cultural/social/ History - photograph (d) Murals /painting (reproduced) / statue/fountain (e) Music
18.	Free Wifi and Mobile charging ports	The Concessionaire shall provide and maintain Free Wifi and mobile charging ports as per the directions of the Authority. Mobile charging ports shall be provided at convenient points in the concourse area, waiting rooms, seating area, food court etc.

8.3.4. Passenger Amenities (on Commercial basis) within the Bus Port Facility

The Concessionaire shall be allowed to develop passenger amenities (on commercial basis) as part of the Bus port Facilities. The revenue from these passenger amenities shall form the revenue stream for the Concessionaire for a period co-terminus with the Concession Period for Bus Port Facilities.

These passenger amenities shall be a part of the Bus port Facility and shall be in compliance with The Road Transport Corporation Act, 1950, Applicable Laws, Technical Requirements and good engineering practices.

8.3.5. Permitted Activities as a part of Passenger Amenities (on Commercial basis) within the Bus Port

The range of passenger amenities (on commercial basis) that can be developed by the Concessionaire shall include the following:

- (a) Snacks Stall
- (b) Tea / Coffee Stall
- (c) Fruit / Juice Stall
- (d) Fast Food Outlet
- (e) Ice cream Parlour
- (f) Bakery Shop
- (g) Restaurant/ Canteen
- (h) General Store
- (i) Departmental/ Super Store
- (j) Deluxe Waiting Halls
- (k) Dormitories
- (l) Cloak Room
- (m) Stationary/ Book Shop/ Newspaper Stand
- (n) Retail shops for consumer durables
- (o) Chemists Shop
- (p) Hair Dressing Saloon/ Beauty Parlour
- (q) Internet Café
- (r) Phone/ Fax Booths
- (s) Bank ATM's

Any activity not covered under the list shall require prior consent/ approval from the Authority. Any commercial establishment or vendor, selling objectionable items, as notified by Authority or Government of Uttarakhand either presently or in the future should not be allotted any space or allowed to enter the premises of the bus port.

8.4. Authority Facilities

The total area shall be in terms of Clause 8.1 of this Schedule. The breakup of the sub-components is given in the table below:

Table 1.6: Minimum Authority Facilities

SN	Facility	Minimum Total Requirement
1	Dormitory for running crew and other Authority staff	For every 10 bus bays the following shall be provided: (a) Area as set out in the Clause 8.1 of this Schedule. (b) Provide 6 bunk beds with bed mattresses, bed sheets and pillows, 10 chairs and 3 tables
2	Authority Administration Office	The facility to be provided in a minimum area as mentioned in 8.1 above along with the adequate supporting utilities like toilets, furniture etc.
3	Parking Area	The parking area for the various Authority Facilities indicated above shall be provided in the bus port premises. The minimum area shall as per the applicable byelaws and standards.

Note: Each office/ cabin shall have suitable number of electric points, ceiling fans and

tube lights apart from the listed requirements in the above table.

8.5. Common Area and Facilities

8.5.1. Water Supply Structures

The Concessionaire shall provide adequate number of Water Storage and Supply Structures in the form of Over Head Water Storage and Under Ground Water Storage Tanks. Water storage capacity of adequate capacity shall be designed and built as per relevant NBC standards. Apart from meeting the user requirements, water storage shall be maintained for meeting the contingency requirements in case of fire or similar incidents.

The Concessionaire shall also provide pump chamber along with the requisite mechanical, electrical equipment and other accessories installed in a proper enclosure as per relevant standards in a suitable area. The water supply distribution network shall be laid exclusively for the Bus port Facilities.

Sanitation Structures

The Concessionaire shall provide adequate number of sanitation structures along with proper flushing and cleaning arrangement.

8.5.2. Rain Water Harvesting and Storage Structures

The Concessionaire shall mandatorily provide rain water harvesting and rain water storage system as per the Applicable Laws in the bus port. This shall consist of a properly designed network which shall be clean and maintained at all times.

8.5.3. Solid Waste Management System

The Concessionaire shall provide adequate facility for storage of solid waste at the bus port. The facility shall be a proper enclosure and should not be aesthetically unpleasant. All the solid waste from the bus port shall be collected and stored in this facility, before being taken for disposal by relevant authorities.

8.5.4. Fire Fighting System

The technical specification, installation, testing and commissioning of Fire Detection, Alarm And Control System (FAS) shall conform to CPWD General Specifications for Electrical Works Part VI Fire Detection and Alarm System – 2018 and Selection, Installation and Maintenance of Automatic Fire Detection and Alarm System Code of Practice- IS 2189-2008; all amended up to last date.

The firefighting system comprising of wet riser and sprinklers system as per the local requirements and all its equipment shall conform to CPWD General Specifications for Electrical Works – Part –V- (Wet Riser and Sprinkler System), CPWD General

Specifications for Electrical Works (Part I – Internal) 2013; CPWD General Specifications for Electrical Works (Part II – External) 1994; CPWD General Specifications for Electrical Works (Part-IV Sub-Station) 2013, referred relevant IS, National Building Code-2016 and guidelines of Local Fire Services.

8.5.5. Building Management System

Planning, designing, supply, installation, testing and commissioning of BMS required for monitoring and control of various services installed in the building such as Lighting Control and Management System (LCMS), Substation, Lifts, Firefighting, Fire Alarm & PA System, CCTV, water supply system, UPS system, Solar PV Power plant, Basement Ventilation and pressurization system, Fire curtains, Parking Management System etc. BMS shall have storage capacity and database for storing data up to last 5 years. BMS should have suitable detailed analysis and troubleshooting tools and software plug-ins so that effectiveness and proper operation of the systems can be analyzed at any point of time, and the BMS system should also provide with Net Zero Energy calculations and status. It should have feature to calculate the LPD, Lux levels etc. of the building.

8.5.6. Communication System

The Concessionaire shall provide a state-of-art communication system which shall primarily consist of telecommunication and networking equipments. These shall form the basic infrastructure for implementing the Management Information System in the bus port.

Government of Uttarakhand may introduce Global Positioning System (GPS) for its fleet of buses. The Concessionaire shall coordinate with GoUK/ Authority to provide real time information for arrival and departure of Uttarakhand state transport corporation buses. The Passenger information system should provide real time information consistent with design guidelines. To accommodate potential technology requirements, the concessionaire should provide excess capacity in the conduit system. Audio system should also be used as a part of Public Address System. The series of speakers should be located throughout the passenger waiting area.

Different departments/maintenance staff of the Concessionaire should be accessible on call at all times. Preferably walky-talkies and wireless local loop phones shall be provided.

8.5.7. Landscaping Area

The Concessionaire shall plant and maintain the plants, hedges, trees, shrubs and lawns in good and healthy condition. This will include maintenance of the entire garden features of the garden area i.e. lawn, trees, shrubs, hedge, potted plants, flowers beds, creepers etc. and other garden feature including watering hoeing, making of plants basic manuring, trimming and cleaning of hedges/ plants, Beds, spraying of insecticides, fungicides, weeding, mowing, and top dressing of lawn with good earth

and manure and hedge clipping and removal of the garden waste, composting of green waste from plants, trees, lawn mowing etc. as per direction and satisfaction of the Authority.

No area/pocket in the bus port is to be left barren. Adequate landscaping shall be done in the Project Site. This area has to be suitably provided for improving the aesthetics of the bus port. The pockets shall be properly illuminated and railings of suitable type shall be provided to boundary the area. Landscaped area shall be provided as a buffer between the passenger concourse area and the commercial development component.

Total number of trees that are to be removed for development of this bus port may be replanted, as per Applicable Laws in the planned landscaped areas, where feasible.

Displayed of Indoor/ Outdoor decorative plants in good looking ornamental attractive planters in consultation with Authority.

8.5.8. Electricity Supply & Illumination Standards

An electric sub-station shall be separately provided in the bus port for electric supply to the Bus Port. Separate electric meters shall be installed for usage by Authority Facility. The capacity of the substation should be calculated after discussions with Authority (to allow charging of electric buses, in future).

Apart from the electric supply, in case of emergencies, there shall be provision for Standby Diesel Generator Sets of suitable capacity which shall be provided in the bus port in a non-polluting manner for providing electricity to the bus port during power breakdowns and power cuts. The bus port shall be adequately lit as per the minimum approximate illumination standards prescribed. During night time common areas and facilities should be sufficiently illuminated to ensure visibility and safety to users. High mast lighting shall be provided to lit up the bus port area.

Table 1.7: Minimum Illumination Standards

SN	Component	Minimum Illumination (Lux)
1	Passenger Circulation Area	150
2	Bus Platforms	100
3	Interactive Areas (task location)	200
4	Administrative Office	300
5	Corridors	150
6	Restaurant	300
7	Cloak Room	150
8	Toilets	100
9	Waiting Halls	150
10	Signs, maps, displays	200
11	Parking Area	
	a) Surface Parking	50
	b) Basement Parking	100
	c) Ramp	100

SN	Component	Minimum Illumination (Lux)
12	External Lighting	50

8.6. Guidelines for Commercial Facilities Development

The guidelines for commercial facilities development are:

- (a) Minimum conflict points related to the connectivity between the commercial development and the bus port facilities.
- (b) Separate access for bus port and standalone commercial facilities.

The design of the building shall result in a permanent civic architecture that contributes to its context. The design shall not only be a recognizable element of the Bus Port, but also shall be clearly an integral part of the neighbourhoods and community. The architecture and facade shall be designed keeping in view the socioeconomic significance of the city. The external components must be aesthetic and shall display modern architecture and concepts.

8.7. Advertisement within Bus Port

The advertisement space in the Bus Port Facility and Commercial Facility shall be allowed as per the relevant provisions of the Applicable Laws as well as they should abide by any of the court rulings. The advertisements should be aesthetically pleasant, should not be vulgar and should follow censorship laws and rules applicable. The advertisement could be displayed in the bus port in the forms of bill-boards, hoardings, display boards, neon sign boards or variable message sign boards. The advertisement should be functional clean at all times and shall not obstruct any vision or movement of traffic and passengers in the bus port.

The Concessionaire shall adhere to following guidelines:

- (a) Advertising shall not conflict by placement or treatment with, or take priority over, system signing and information.
- (b) Any advertising shall be carefully located so as not to obstruct, cause distraction or retard public movement.
- (c) Advertising shall be located so as not to conflict with legibility of emergency exits or equipment, particularly at platform level.
- (d) Advertising shall be placed so that it cannot be easily defaced or damaged.
- (e) Advertising shall be carefully controlled on all electronic message units that are used for system signing and information.
- (f) Advertising shall be used as design elements, avoiding haphazard displays.

The format and size of advertising shall be compatible with the volumes of the interior

or exterior spaces in which they are located, and shall in all cases be compatible with the architectural expression of the bus port.

SCHEDULE C: Project Facilities

The key Project Facility shall consist of the following:

1. Bus Port Transport Infrastructure

The following key bus port facilities shall be provided:

- (a) Bus Bays (for Boarding and Alighting)
- (b) Bus Circulation Area & Approach Roads
- (c) Ticketing Counters/ Reservation Counters/ Enquiry Counters
- (d) Authority administration requirements like Traffic Officer's office, Supervisor Office, Duty List branch etc.
- (e) Concessionaire's Office
- (f) Entry & Exit to the Bus port Facility
- (g) Passenger Entry & Exit to the Bus port Facility
- (h) Interconnecting Subways, Pathways, Foot-over bridges, Ramps between various components, if applicable
- (i) Management Information System including public address system

2. Passenger Amenities

The following key passenger amenities are proposed in the bus port:

- (a) Passenger Concourse Area for Boarding & Alighting
- (b) Passenger Platform for Alighting & Boarding
- (c) Public Utilities (Toilets, Drinking Water Chambers etc.)
- (d) Waiting Halls
- (e) High quality Stainless Steel Seating
- (f) Cloak Room & Parcel Room
- (g) Seating Arrangements, Information Signage's, Display Boards
- (h) Dormitories
- (i) Commercial Facilities for the Bus port Facilities like kiosks, canteen, general store etc.
- (j) Kids Activity Area
- (k) Baby Care Room
- (l) Lost and Found Room
- (m) Tourist Information Centres
- (n) Complaint Redressal Room
- (o) Surveillance & Security System (CCTV)
- (p) Parking Area for private vehicles (two wheelers and cars) and intermediate public transport like auto rickshaws, taxis along with their approaches, entry and exit, drop-in and drop-off areas, pick-up zones
- (q) Commercial Areas (independent of bus port) like a Mall/High Street shopping, Budget and Business Hotel, Multiplex
- (r) Passenger Information System

3. Authority Facilities

As set out in Schedule B.

4. Common Areas & Facilities

The following major supporting infrastructure requirements proposed in the bus port:

- (a) Water Supply and Sanitation Structures
- (b) Water & Sewage Treatment Systems
- (c) Storm Water Drainage
- (d) Rain Water Harvesting Structures
- (e) Solid Waste Management Systems
- (f) Solar Power Plant
- (g) Communication Systems
- (h) Dust suppression system
- (i) Firefighting System
- (j) Landscaped Area
- (k) Electric Sub-Station
- (l) Service lanes for modal transfer from other public and private modes of transport to the bus port

SCHEDULE D: Specifications and Standards

1. General

- 1.1. The Concessionaire shall comply with the Specifications and Standards set forth in this Schedule for construction of the Bus Port Project.
- 1.2. All the items of work shall be executed as per Central Public Works Department (CPWD) Specifications. Any item or part of the item not covered in CPWD Specifications shall be executed as per relevant IS Codes or Uttarakhand Building Practice Specifications or as per the directions of NHIDCL/ Authority. The design of facilities for the handicapped and the disabled people, like the toilets, bathrooms, ramps shall be designed as per the respective IS Codes. Fly ash as per directives of the Central / State Government to be used wherever applicable.
- 1.3. These codes and specifications shall deem to be bound in this document. The technical specifications for Civil, Mechanical and Electrical installations works are detailed in the subsequent sections.
- 1.4. When an Amended/ Modified/ Added clause supersedes a clause or part thereof in the said specifications, then any reference to the superseded clause shall be deemed to refer to the Amended/Modified clause or part thereof.
- 1.5. If any Amended/ Modified/ Added clause may come in conflict or be inconsistent with any of the provisions of the said specifications under reference, the Amended/ Modified/ Added clause shall always prevail. While carrying out any work the Concessionaire shall ensure that any requirements specific to the site and similar factors are kept in view.
- 1.6. All measurements shall be made in the metric system. The measurements and computations unless/otherwise indicated shall be carried nearest to the following limits.

Length and breadth	:	5 mm
Height, Depth or thickness	:	1 mm
Area	:	0.01 sq.m.
Cubic Contents	:	0.01 cu.m.

2. Design Standards

The Bus Port Project including Project Facilities shall conform to design requirements set out in the following documents/ codes:

- (i) The CPWD Specifications 2009 Vol. I to II hereinafter referred as CPWD Specifications
- (ii) Draft "Guidelines for development of Bus Port" in India enclosed with the bid.
- (iii) IRC Manual for Rigid pavement
- (iv) Manual of Standards and Specifications for Two Laning of Highways (IRC:SP:73 – 2007) published by the Indian Roads Congress and MORTH Specifications for Road and Bridge Works shall be used.
- (v) Code for Practice of Road Signs IRC 67:2001.

- (vi) Standard prevailing designs if not covered above.

Annexure -I*(Schedule- 3)***General Guidelines for Design - Civil Works****1 General**

- 1.1 The work in general shall be carried out in accordance with the CPWD Specifications 2009 Vol. I to II hereinafter referred as CPWD Specifications.
- 1.2 For internal roads, Manual of Standards and Specifications for Two Laning of Highways (IRC : SP : 73 – 2007) published by the Indian Roads Congress and MORTH Specifications for Road and Bridge Works shall be used.
- 1.3 The other codes and standards applicable for the Project are as follows:
- (i) Uttarakhand Building Bye laws 2011 including all the amendments thereafter
 - (ii) Indian Road Congress (IRC) Codes and Standards
 - (iii) CPWD Specifications 2019 Vol. I to II
 - (iv) CPWD General Specifications for Electrical Works Part I Internal - 2013.
 - (v) CPWD General Specifications for Electrical Works Part IV Sub Station – 2013.
 - (vi) CPWD General Specifications for Electrical Works Part VI Fire Detection and Alarm System – 2018.
 - (vii) CPWD General Specifications for Electrical Works Part VII D.G. Sets - 2013.
 - (viii) CPWD General Specifications for Electrical Works Part VIII Gas Based Fire Extinguishing System - 2013
 - (ix) Bureau of Indian Standards (BIS)
 - (x) National Building Codes 2016 and revisions. (NBC);
 - (xi) Local fire regulations
 - (xii) MNRE guidelines for rooftop solar power plant
 - (xiii) Energy Conservation Building Code 2017 and
 - (xiv) Approved zoning plan of the site.
- 1.4 Where the specification for a work is not given, Good Industry Practice shall be adopted to the satisfaction of the Authority's Engineer.
- 1.5 The Concessionaire shall use indigenous products, wherever feasible and shall provide a list of imported products to the Authority with sufficient details.
- 1.6 Statutory fees required to be deposited by the Concessionaire for processing the case, shall be reimbursed by the department.
- 1.7 Approvals/ NOCs / clearances from local bodies and other statutory authorities shall be responsibility of Concessionaire for design, execution and operation of the project or part thereof. All statutory fees/ charges required for obtaining approvals/ NOCs / clearances shall be paid by the Concessionaire.

1.8 All equipment shall be delivered with

- (i) Manufacturer's test certificate,
- (ii) Manufacturer's technical catalogues, and installation / instruction (O&M) manuals.

2 Sound Engineering Practice as per Directions of the Authority

- 2.1 Before commencement of any item of work, the Concessionaire shall correlate all the relevant architectural and structural drawings, and specifications etc. and satisfy himself that the information available is complete and unambiguous. The Concessionaire alone shall be responsible for any loss or damage occurring by the commencement of work based on any erroneous and or incomplete information and no claim whatsoever shall be entertained on this account.
- 2.2 The Concessionaire shall provide permanent bench marks, flag tops and other reference points for the proper execution of work and these shall be preserved till the end of the work. All such reference points shall be in relation to the levels and locations, given in the Architectural and plumbing drawings. On completion of work, the Concessionaire shall submit six prints of — as built drawings to the Authority (Hard & soft copy both).
- 2.3 The Concessionaire should engage approved, licensed plumbers for the work and get the materials (fixtures/fittings) tested as per Applicable Laws at its own cost.
- 2.4 The Concessionaire shall give performance test of the entire installation(s) as per the specifications in the presence of the Authority or his authorized representative before the work is finally accepted and nothing extra what-so-ever shall be payable to the Concessionaire for the test.
- 2.5 The Concessionaire shall conduct his work, so as to minimize the interference with or hinder the progress or completion of the work being performed by the Authority or its representatives.
- 2.6 Sample of building materials, fittings and other articles required for execution of work shall be got approved from the Authority before use in the work. The quality of samples brought by the Concessionaire shall be judged by standards laid down in the relevant CPWD/ BIS specifications. All materials and articles brought by the Concessionaire to the site for use shall conform to the samples approved by the Authority which shall be preserved till the completion of the work.
- 2.7 BIS marked materials except otherwise specified shall be subjected to quality test at the discretion of the besides testing of other materials as per the specifications described for the item/material.

- 2.8 The Concessionaire shall procure the required materials in advance so that there is sufficient time to testing of the materials and clearance of the same before use in the work. The Concessionaire shall provide at his own cost suitable weighing and measuring arrangements at site for checking the weight / dimensions as may be necessary for execution of work.
- 2.9 Regarding testing of civil & electrical materials, the testing of materials shall be conducted in Govt. Laboratory/ Govt. colleges/ IITs/NITs or from the laboratory approved by Authority. The charges of testing of materials in approved laboratory shall be borne by the Concessionaire.

3 Approved Make for Civil Works:

- 3.1 Specification / brands names of materials to be used as per the scope of work are listed here. The Concessionaire should also consider the availability of spares parts/components for maintenance purposes while proposing any brand/manufacturer. The materials of any other brand/manufacturer may be proposed for use by the Concessionaire in case the brands specified below are not available in the market and/or Concessionaire intends to use some other brand better than the brands mentioned in this list. The alternate brand can be used only after the approval of Authority. The list of approved make for Civil Works is given below:

Structural and Civil

SN	Material	Preferred Makes/ Brands/ Manufacturer
1	Ordinary Portland Cement/ Portland Pozzolana Cement	ACC/ULTRATECH/ AMBUJA/NUVOCO / JKCEMENT
2	White Cement	BIRLACEMENT/J. KWHITE TRAVANCORE
3	Reinforcement Steel	SAIL/ TATA STEEL LTD./ RINL/JINDAL STEEL & POWER LTD / JSW / or as approved by the Authority from time to time as primary producer
4	Parallel Threaded Couplers	DEXTRA / G-TECH
5	Re-barring Chemical	HILTI / 3M INDIA
6	Structural Steel	TATA/ JSW STEEL LTD/ SAIL/ JINDAL STEEL & POWER LTD./ RINL
7	Plasticizer, Super Plasticizer Admixtures, Other construction chemicals	M.C. BAUCHEMIE / FOSROC /SIKA BASF
8	AAC Block	AEROCON/BILTECH/JKLaxmi/ MAGICRETE
9	AAC Block Adhesive	ULTRATECH / FERROUS CRETE / BAL ENDURA / AEROCON / J K Laxmi
10	Polymer modified grout cementitious	BAL ENDURA/ WEBBER/ MYK LATICRETE
11	List of RMC producers	ULTRATECH/ NUVOCO / ACC / READY MIX INDIA PVT. LTD OR as Approved by the Authority from time to time
12	Curing Compound	FOSROC / SIKA / PIDILITE / STP / CICO / BASF

SN	Material	Preferred Makes/ Brands/ Manufacturer
13	Expansion Joint- modular	HERCULES / Z-Tech / SANFIELD
WATERPOOFING		
1	Waterproofing Self Adhesive (HDPE)Membrane	GRACE / FOSROC / MYK SCHOMBURG
2	Single Component Liquid PU Elastomeric Membrane (spray applied) for Deck Waterproofing	BASF/SIKA/FOSROC/MYK SCHOMBURG/GRACE
3	Waterproofing Compound (Crystalline) and Swellable Bar	XYPEX / KRYTON / PENETRON / BASF / SIKA / FOSROC / MYK SCHOMBURG / GRACE
4	Polymeric Cementitious Coating	BASF / FOSROC / GRACE / STP / PIDILITE
5	Elastomeric Acrylic UV resistant liquid applied coating	BASF/ FOSROC / SIKA / GRACE
DOOR, WINDOWS & WOODWORK		
1	Laminated Particle Board / Particle board / Laminates / Plywood	MERINO / GREENLAM / CENTURY / DECOLAM/ NOVAPAN / ARCHIDPLY / KITLAM
2	Veneered Particle Board	MERINO/DURO/GREENLAM/KITPLY
3	SS Mesh	GKD / WMW
4	Flush door shutters	GREENPLY/ ARCHIDPLY / DURO / MERINO / KUTTY / JAYNA / CENTURY / KITPLY
5	Glass wool Insulation	UP TWIGA / POLY GLASS / LLOYDS/ OWENSCORNING
6	Rock Wool Insulation	LLOYDS / ROXUL ROCKWOOL
7	Polycarbonate Sheet	GE LEXAN / DANPALON/ GALLINA
8	Decking Steel sheet	TATA STEEL / LLOYDS / JSW
9	Natural wood veneer	SONEAR / GREEN PLY / TRUWOOD / ARCHID
10	Anti-static high-pressure laminate	FORMICA/BAKELITEHYLAM/DECOLAM MERINO /KITMICA
11	Fire Sealant	HILTI / 3M INDIA / FISCHER
12	Extruded Polystyrene Board	STP / SUPREME / OWNESCORNING, SHALIMAR
13	Wooden / Metal / Glaze-fire rated Door Shutters & Acoustic	NAVAIR / KUTTY / GODREJ/ SUKRI / SHAKTIMET
14	UPVC Doors & Windows	ALUPLAST/ENCRAFT/REHAU/FENESTA / LG-HAUSYS
15	Fire rated glass (2 hours fire rating)	GLAVERBEL/SAINTGOBAIN/ PILKINGTON/PYROGUARD/SCHOTT
FINISHING		
1	Melamine Polish	ASIAN PAINTS/ PIDILITE INDUSTRIES/ DULUX/ BERGER/
2	Polyester Powder Coating Shades	NEROLAC / BERGER / AKZONOBEL
3	Wall Putty	BIRLA WHITE / JK WHITE / FERROUSCRETE / BERGER / SAINT GOBAIN
4	Oil Bound Washable Distemper	ASIAN PAINTS / BERGER / NEROLAC / ICI / AKZONOBEL DULUX
5	Acrylic Distemper	BERGER / ASIAN / DULUX / NEROLAC
6	Cement Primer	BP WHITE (BERGER) / DECOPRIME WT (ASIAN) / NEROLAC / AKZONOBEL (DULUX)

SN	Material	Preferred Makes/ Brands/ Manufacturer
7	Steel / Wood Primer	AKZONOBEL (DULUX) / NEROLAC / BERGER / ASIAN PAINT / JENSON & NICHOLSON
8	Adhesives	ANCHOR/DUNLOP/PIDILITE- FEVICOL
9	Premium Acrylic Emulsion paints	DULUX AKZONOBEL / NEROLAC / ASIAN PAINTS / BERGER
10	Textured Exterior Finish	ASIAN (ULTIMA) / BERGER (WEATHER COAT ALL GUARD) / DULUX AKZONOBEL (ULTRA CLEAN) / NEROLAC (EXCEL TOTAL)
11	Synthetic Enamel Paint	ASIAN/BERGER/NEROLAC/AKZONOBEL(DULUX)
12	Epoxy Paint	AKZONOBEL (DULUX) / NEROLAC / ASIAN PAINTS / FOSROC / BERGER
13	Fire Paint	ASIANPAINT/BERGERPAINTS/ SHALIMAR / JOTUN / AKZONOBEL
14	Gypsum Plaster	FERROUSCRETE/ ULTRATECH / INDIA GYPSUM / ELITE (90) OF GYPROC
15	Cement based Ready Mix Plaster	FERROUSCRETE / ULTRATECH / SAINT GOBAIN
16	Pre-Cast GRC Jali	UNISTONE / KERAKROME GRC
17	Polysulphide sealant	FOSROC / SIKA / TUFFSEAL / PIDILITE / WACKER/ DOW CORNING / GE/ STP
18	Silicone / Weather Sealant	WACKER / DOW CORNING / GE
STEEL & ALUMINIUM WORKS		
1	Stainless Steel	SALEM STEEL / JINDAL ALLOYS / SAIL
2	Welding Electrodes	ADVANI-OERLIKON / MODI
3	Dash / Anchoring Fasteners	HILTI / FISHER / BOSCH / AXEL
4	Anodised Aluminium Hardware (Heavy Duty)	HARDIMA/ALUALPHA/PULSE OF LGF SYSMAC / HINDALCO /EVERITE
5	Aluminium Structural Members – Windows, Glazing and Partitions	JINDAL/HINDALCO/NALCO/INDALCO
6	Stainless Steel Railing, Accessories etc (Grade SS 316)	OZONE / GEZE / KICH / DORMA / JINDAL STAINLESS STEEL
7	G. I Steel door frame	SYNERGYTHRISLINGTON/SHAKTIMET /NAVAIR
CEILINGS		
1	False ceiling Grid system	GYPROC/GRIDLINE/RK/GRIDSYSYSTEM
2	False Ceiling – Gypsum	SAINT GOBAIN GYPROC / AMF / BORAL / LAFARGE / INDIA GYPSUM / HUNTER DOUGLAS
3	Metallic False Ceiling	ARMSTRONG / DURLUM / HUNTER DOUGLAS / SAINT GOBAIN
4	Acoustical Tile False ceiling	ARMSTRONG/SAINTGOBAIN/ ECOPHON/ DEXUNE/ANUTONE
5	Calcium silicate ceiling tiles/ Board	GYPROC / AEROLITE / BORAL / HILUX / ARMSTRONG(MYLAR) / EVEREST/ NCL
6	Aluminium Composite Panel	ALUCOBOND / ALPOLIC / ALUDECOR / REYNOBOND
7	Acrylic Solid Surfaces	HANEX / L.G-HIMAC / DUPONT
FLOORINGS/ WALL TILES		

SN	Material	Preferred Makes/ Brands/ Manufacturer
1	Glass Mosaic Tiles	BISAZZA, MRIDUL, OPIO, PALLADIO, ITALIA GLASS
2	Floor & Wall Tiles: Ceramic / Vitrified tiles / Antiskid / Matt / Glazed	KAJARIA / H&R JOHNSON / SOMANY/ ASIAN(AGL) / ORIENTBELL / VARMORA
3	PVC Flooring	ARMSTRONG / TARKETT / LG HAUSYS
4	Laminated flooring	ACTION / TESA / PERGO
5	Engineered stone - Marble / Quartz	ASIAN/JOHNSON/KALINGA/QUTONE
6	Chequered Tiles, Paver Block & Kerb Stone (of Non-Recycled C&D Waste)	OVILITE / UNISTONE / HINDUSTAN / KK / ULTRA / DALAL TILES/ NITCO
7	Tile / Stone Adhesive / Tile Grout	PIDILITE/FERROUSCRETE/BALLENDURA / MYKLATICRETE
8	Floor hardener	PIDITOP 333 BY PIDILITE / FOSROC / SIKKA / IRONITE / FERROK / HARDONITE
9	Epoxy Flooring	FOSROC / SIKKA / CICO / LATICRETE / BASF
10	Heat Resistant Tiles	THERMATEK/ NATIONAL/ THERMAX
11	Floor Trap	JAYNA / CHILLI / NIRALI
GLAZINGS		
1	Glazing Structural / Suspended / Skylight/ clear/ float/ frosted/ mirror	SAINTGOBAIN/PILKINGTON/ GLAVERBELL
2	Clear / Float / Frosted Glass /Mirror	AIS / GLAVERBELL / MODIGUARD / PILKINGTON / SAINT GOBAIN/ ATUL
3	Glass Spider Fittings	DORMA / HAFELE / OZONE
4	Toughened Glass / Hermetically sealed performance glass	SAINT GOBAIN / GUARDIAN GLASS / PILKINGTON / MODIGUARD
HARDWARE		
1	Nuts / Bolts & Screws	GKW / HILTI / ATUL
2	Clamp system for dry stone cladding	HILTI / FISCHER / BOSCH / AXEL
3	Hinges & Brassware	EARL BIHARI / KICH / INDO-BRASS / ASSA-ABLOY/ HAFELE/ GEZE/DORMA
4	MDF Board	NUWOOD/ DURATUFF
5	Vitreous Chinaware	HINDWARE/JOHNSON/CERA/ PARRYWARE
6	All type of hardware and fitting for all type of glazing / doors/ windows etc. including mortise latch & lock, tower bolt, ball bearing butt hinges, friction stay hinges, sliding door bolts, lever handle, magic eye door closer etc.	DORMA / KICH / HAFELE / GEZE / GODREJ / ASSA-ABLOY / HARDWYN / IPSA / DORSET / INGERSOLL RAND / OZONE / HETTICH / EVERITE / LGF SYSMAC
7	Toilet Cubicles	MERINO / GREENLAM / DORMA
8	Hardware for Fire Check Door/ panic bar/ panic trim/ door closer/ hinges/ mortise lock	INGERSOLL RAND / DORMA / GEZE / HAFELE / ASSA-ABLOY / KICH
9	EPDM Gasket	HANU / ANAND / OSAKA

SN	Material	Preferred Makes/ Brands/ Manufacturer
Plumbing & Sanitary		
1	GI Pipes	JINDAL(HISAR)/TATA/SURYA PRAKASH
2	GI Fittings	UNIK / ZOLOTO / SURYA
3	SS Pipes & fittings	JINDAL / VIEGA / J-PRESS
4	HDPE Pipes	RELIANCE / JAIN IRRIGATION / KISAN/ ORIPLAST / SUPREME
5	DI Pipes	ELECTROSTEEL (VEDANTA) / JINDAL / TATA DUCTURA
6	DI Fittings	ELECTROSTEEL(VEDANTA)/KALINGA / TATADUCTURA
7	CI Double flanged sluice valve	KIRLOSKAR / SONDHI / KEJRIWAL
8	Float Valve	LEADER / ZOLOTO / KSB
9	Centrifugally Cast (Spun) Iron Pipes &Fittings	JAYSWAL NECO / RIF / SKF
10	Centrifugally Cast (Spun) Iron (Class LA)Pipes	JAYSWAL NECO / ELECTRO STEEL / TATA
11	CI Manhole covers, Frames & GI Gratings	JAYASAWAL NECO / RIF / SKF
12	SFRC Manhole Covers & Gratings	KK / OCR / PARGATI / T-CON
13	Stoneware Pipes and Gully Traps	PERFECT / PARRY / BURN / ANAND / RK / HIND
14	RCC Manhole covers & Frames	KK MANHOLE / GRATING CO. (P) LTD
15	Gun Metal Valves, Globes	ZOLOTO / CASTLE / KARTAR
16	Sanitary CP Fittings & Accessories	ORIENTALSERIESIIofMARCorequivalent series of: JAQUAR / PARRYWARE / GROHE / KOHLER / CERA / JOHNSON
17	Water Meter	PRIMA / ZOLOTO / LEADER / CAPSTAN
18	Brass Stop & Bib Cock	ZOLOTO / SANT / L&K / LEADER / ASTRAL
19	UPVC/ CPVC Pipe & Fittings	AKG / ASTRAL/ SUPREME / FINOLEX /
20	Non-Return Valve (Check valve) and other kind of Valves	ZOLOTO / SANT / LEADER
21	Brass Ferrules	DHAWAN SANITARY UDYOG / KALSI / ANNAPURNA
22	Insulation for hot water pipes	KAIFLEX / ARMAFLEX / CAREFLEX / LLOYD
23	Insulation for external / exposed hot water pipes	KAIFLEX / ARMAFLEX / CAREFLEX
24	Pipe protection for external water supply pipes	PYPKOTE/ARMAFLEX/MAKPOLYKOTE
25	Stainless Steel Sink	NEELKANTH / NIRALI / CERA / JAYNA
26	RCC Pipes	LAKSHMI / SOOD & SOOD / JAIN &CO./ PRAGATI CONCRETE
27	Dash/ Stud/ Anchor Fasteners	HILTI / CANON / BOSCH / FISCHER
Electrical works		
1	FRLS PVC insulated copper wire / Telephone cable / copper conductor control cable	L&T / Havells / Polycab/ Finolex /RR
2	HT/LT XLPE aluminum cable	Havells/ Polycab/ KEI/ RR

SN	Material	Preferred Makes/ Brands/ Manufacturer
3	Co-axial TV cable	L&T/ Havells / Polycab/ Finolex
4	Steel Conduit	RM CON/ AKG / BEC ISI Marked
5	Conduit fittings	ISI marked
6	PVC Conduit	AKG / Polycab / Prince / Norpak (ISI Marked)
7	L. T. Panel / Meter Board	AdlecMundka/ Control and Switchgears Pvt. Ltd/ Tricolite / SPC Electrotech Ltd/ Ambit Switchgear Pvt Ltd/ Neptune India/Milestone
8	MCB/MCB DB and sheet steel Metalenclosed industrial socket, plug top and Isolators	Legrand/ Siemens/ L&T/ ABB / Schneider
9	Modular type switch/Socket, Telephonesocket, cable TV Antena socket, Electronic fan regulator and GIBoxes	Legrand (Myrius/ Havells (Piccadilly)/ Honeywell (citric) / North West(nova)
10	LED fitting	Philips/ Crompton/ Wipro/ GE/ Zumpobel /Trilux
11	Tube / Vane Axial Flow Fan	Kruger/ Nicotra/ Greenheck/ Airflow/Humidin/ Flaktwood
12	Ceiling Fan / Exhaust fan (BEE- 5 Star)	Crompton Greaves/ Usha/ GEC/ Orient
13	Octagonal steel pole	Bajaj/ Valmont/ Utkarsh
14	Conical / Decorative Poles / Bollards	Bajaj/ Philips / Wipro /Valmont/ Utkarsh
15	Air Circuit Breaker	L&T-U Power/ Siemens-3WL/ ABB-Emax/Schneider- Master pact-NW
16	MCCB	L&T- Dsine/ Schneider- Compact NSX/ABB- Tmax/ Legrand- DPX3/ Siemens
17	Digital Voltmeter/ Ammeter/ Multi-function meter	Schenider- konzerv/ Ducati/ Secure/AE
18	Capacitor	Epcos / L&T/ Schneider/ Siemens /Crompton Greaves.
19	APFC Relay	Epcos/ L&T/ Siemens/ Schneider/ Enercon
20	Power Contactor – AC 3 rating / capacitor duty contactor/ starter / Thyristor module /Harmonic reactors.	Siemens/ L&T/ ABB/ Schneider
21	11 KV HT(VCB) panel OEM	Siemens/ Schneider/ ABB/ CromptonGreaves
22	Distribution Transformer (dry type castresin type)	Crompton Greaves/ ABB/ Schneider/Siemens/ Bharat-Bijlee
23	Distribution transformer (oil type) is-1180, part2	Crompton Greaves/ ABB/ Schneider/Siemens/ Bharat-Bijlee
24	Package Type Substation	ABB/ Schneider/ Crompton Greaves
25	Solar street light fitting	Philips/ Bajaj/ Wipro/ Crompton Greaves
26	Rising mains / bus duct	Legrand/ Schneider/ C&S/ GE
27	Fire Extinguishers	Safex/ Minimex / Superex / Ceasfire
28	Diesel operated Power Generating Engine	Cummins India/ Caterpillar- Perkins
29	AMF Panel	OEM/ OEA of DG Set
30	Alternator	Stamford/ Leroy Somer/ Caterpillar
31	HDPE / DWC pipe	AKG/ Duraline / Rex
32	GI / M. S. Pipe	Jindal (Hissar) / TATA / BST

SN	Material	Preferred Makes/ Brands/ Manufacturer
33	Standard M.S. Fittings & GI fittings	Jainsons Industries / INDUS
34	Ball Valve / Sluice Valve / Check Valve / Pot / Y Strainer / Butterfly Valve	Audco / Kirloskar/ Zoloto/ Advance
35	Pressure Switch	System Sensor / Indfoss / Denfoss
36	LIFTS	M/sOTIS M/sKone M/s Mitsubishi M/s Schindler M/s Johnson Lifts Pvt. Ltd. Chennai The Concessionaire has to give at least three options out of the make mentioned above for lift and the department will be free to select any one of them.
37	BMS Operator Work Station	HP/ Dell / Lenovo /Acer
38	BMS Controller and Power Supply /Software	Siemens / Honeywell EBI / Sauter / TAC(Schneider) / ALC
39	BMS Controller Housing	Enclotek / Rittal
40	Temperature Sensor & Humidity Sensor /Enthalpy Sensor / Lux Sensor / COSensor	Siemens / Invensys / Honeywell / Sontay /Greystone / Sauter / Kele / TAC
41	Pressure Transmitters / Air Velocity Meter	Siemens/ Invensys/ Kele/ Honeywell /Sontay/ Greystone/ Sauter/ TAC
42	Flow Meter	Forbes Marshal/ Kele/ Sontay/ Greystone/Siemens/ TAC/ Honeywell/ Schenitech
43	Differential Pressure Switch	Siemens / Invensys / Honeywell / Sontay /Greystone / Kele / Sauter
44	Ph Sensor / Conductivity / TDS	Forbes Marshal / Endres Hauser / Kele /Sontay / Greystone
45	Flow Switch / Level Switch / LevelIndicator	Siemens / Elektronik / Invensys / Honeywell/ Sontay / Greystone / TAC
46	Current Transducer / Voltage Transducer /Power Factor Transducer / Frequency Transducer	ABB / Southem Transducer / Veris / SETO / Sontay / Greystone
47	Personal Computer	Dell / IBM / HP / Compaq
48	Laser jet Printer	HP / Canon
49	Fire / Sprinkler Main Pump / Jockey Pump	Mather & Platt India Limited / Grundfos /Kirloskar / KSB
50	Diesel Engine	Cummins / Kirloskar / Catepillar
51	Motor	ABB/ Siemens/ Kirloskar / CromptonGreaves
52	Anti-Vibration Mounting	Kanwal Industrial Corporation/ Resistoflex /Ewren
53	Starter	L&T/ Siemens / Crompton/ GE / ABB /BCH
54	Current Transformer (Cast Resin)	AE/ L&T/ Kappa
55	Anti-Vibration Pad	Cori/ Dunlop / Diamond Pipe Support/ EasyflexFlexionics / Resistoflex / Emerald
56	Factory fabricated duct	Waves/ Zeco /Ductofab/ GP Spira
57	Perforated with powder coating M.S. /Hot dipped G.I. cable trays	Vinous/ Indiana/ steelway / Slotco / Pilco
58	Addressable Multicriteria Smoke	Notifier / Siemens / Bosch / Edward.

SN	Material	Preferred Makes/ Brands/ Manufacturer
	Detectors With base / Addressable Duct Type Smoke Detectors With base/ Fault Isolator with base/ Addressable Heat Detectors with base/ Addressable Manual Call points / Addressable Control Module/ Addressable Monitor Module / Sounder/ Hooter cum Strobe/ Fire Alarm Control Panel/ PA System Panel/ Telephone Jack / Hand Set/ Software/ Speaker	
59	Conventional Fire Detection and Alarm System Detector Panels Manual Call Points Hooters	Daksh/Agni/ System Sensor/ Ravel
60	Fire Survival Cable	Fusion Polymer/ Havells/ Bonton/ Rallison/Batra Henlay
61	Thermo plastic (Textile reinforced) Hose Reel ISI Mark	Mitra/ Kesra / Padmini
62	Stainless Steel Brach Pipe	Safex/ Padmini / GETech / New Age
63	Fireman Axe/ Installation Control Valve	Safex/ Padmini / GeTech
64	2-way/4-way FBC	Safex/ NewAge (Mumbai) / GeTech
65	Sprinkler Heads	Tyco/ HD/ omax UL listed
66	Pipe Protection Pypcoat (AW4) Wrapping	IWL/Taxa/ Mac- poly coat
67	Rubber Bellow	Kanwal Industrial Corporation / Resistoflex/ AIP Valves
68	Window Sprinkler	Tyco / HD
69	Deluge Valve	Safex/ Tyco / HD
70	Air release valve	Superex/ GeTech / NewAge / Safex
71	Welding Rods	Ador/ Esab / Essar/ Advani
72	Fastner	Hilti/ Fisher
73	Hose Box(External) (GI Powder Coated)	SPC Electrotech Ltd/ AdlecMundka/Ambit Switchgear Pvt Ltd/ Milestone/ Tricolite
74	Flexible Drop (UL Approved)	Safex / HD / Kofulso (Easy flex)
75	Galvanized Sheet Steel	Tata/ Jindal/ Sail
76	IP Based CCTV system CCTV CamerasBullet, Dome, PTZ Camera Network Video Recorder	Impulse / Mobotix / Avigilon
77	LED TV	Sony/ Panasonic/ Samsung
78	Data Networking System Information Outlet (I/O)Patch Panel, Patch Cords SFP	Rit/Siemon/Panduit
79	Cat-6 /6A Cable	Rit/Siemon/Der Weiser
80	Managed Switch for Data Network, CCTV system	Impulse / Extreme /Arista
81	Data Racks	Der Weiser/Rittal/APC
82	EPABX and IP Phones	Polycom/ Tadiran/ Cisco
83	Telephone Handsets	Beetel/ Binatone/ Panasonic

SN	Material	Preferred Makes/ Brands/ Manufacturer
84	MDF and Telephone Tag Blocks	Krone
85	Boom Barriers	Kaba/ Magnetic/ SEAA/ Makim/ FAAC
86	Solar PV Modules	Vikram/ Tata Solar/ Waaree/ Enkay Solar
87	Inverter (for solar power system)	Kaco/ Delta/ Schneider / SMA
88	Cables for solar power (XLPO/XLPE)	Lapp/ Havells/ Universal/ Polycab
89	String Combiner Box	Hensel/ Schneider
90	0.2 Class ABT Compliant Net Meter	Secure/ L&T/ Schneider
91	Weather Monitoring Station	SMA/ ABB
SOLAR EQUIPMENT		
1	SPV Modules	Schneider/ Moser Baer/ Tata/ BPSolar CEL/ BEL/ Reliance/ GE Solar/ Sanyo PCI/ PANASONIC
2	Power Control Unit(PCU)String PCU	EMERSON/ MITSUBISHI/ SCHNEIDER/ DELTA
MEDIUM VOLTAGE EQUIPMENT		
1	Power Distribution Panel	As mentioned in the sub-station sub head
2	Moulded Case Circuit Breaker (MCCB) 3&4 Pole With rotary operating mechanism	Schneider Electric (Compact NX) ABB (T-Max)/ Larsen & Toubro (D-Sine) Siemens (Sentron-VL)/ GE Power Controls (Record Plus)
3	Miniature Circuit Breaker (MCB)	Schneider Electric (MG)-Multi-9 ABB GE Power Controls/ Hager (L& T) Legrand Siemen
4	Residual Circuit Breaker (RCCB/ RCBO's)	Schneider Electric (MG)-Multi-9 ABB/ GE Power Controls Hager (L& T) Legrand/ Seimens
5	Lamps LED type,Push Button	Vaishno Electricals/ Larsen & Toubro (Esbee)/ Siemens/ Schneider Electri(MG)
6	Power/ Aux. Concessionaire 3 /4 Pole	Schneider Electric(Telemechanique)/ ABB/ GE Power Controls/ Larsen & Toubro/ Siemens
7	Lamps LED type,Push Button	Schneider Electric(MG)/ Vaishno Electricals/ Larsen & Toubro (ESBEE)/ Siemens
8	Electronic Digital Meters (A/V/PF/HZ/KW/KWII) Conzerv (Networkable) L &T	Schneider Electric Secure
9	XLPE insulated PVC sheathed copper conductor Armoured power cable of 1.1KVgrade Polycab	KEI/ HAVELLS/ GRANDLEY
10	LT Jointing Kit/Termination	Raychem MSeal
11	Cable Glands Double Compression with Earthing Links	Comet, Cosmos
12	Bimetallic/ Copper/ Aluminium Cable Lug	Comet/ Dowell's (Biller India Pvt. Ltd.)/ Hax Brass (Copper Alloy India Ltd.)
13	PVC insulated copper conductor stranded flexible Finoles FRLS wire (Pretwisted) KEI	Polycab
14	Polycarbonate Junction Boxes	Hensel/ Clipsal/ Sintex
15	Selector Switch, Toggle Switch	Salzer (L & T)/ Siemens/ Kaycee
16	Timer	Siemens/ L & T/ Schneider Electric-TE
17	Material for Structure	TATA/JINDAL/ SAIL
MISCELLANEOUS		
1	Irrigation Equipment	JAIN IRRIGATION, KISAN, FINOLEX, PLASSON

SN	Material	Preferred Makes/ Brands/ Manufacturer
2	PVC water tank	SINTEX / POLYCON

- 3.2 Only material bearing ISI/BIS certifications ECBC/BEE mark shall be used in the work. Where articles of different designs/ makes bearing ISI/BIS certifications are available.
- 3.3 Where material bearing ISI/BIS certifications marks are not available, material conforming to relevant BIS/ISI shall be used with prior approval of Authority. The decision of Authority about the design/ make to be used in the work shall be final & binding on the Concessionaire.
- 3.4 If the specifications of any item are not available, then the decision of the Authority regarding quality shall be final & binding on the Concessionaire.

Annexure - II*(Schedule-3)***Particular Specification and Condition for E&M Works****1. Scope**

The equipment and work shall be confirm to

- (i) CPWD General Specifications for Heating, Ventilation & Air Conditioning Works 2017;
- (ii) CPWD General Specifications for Electrical Works (Part I – Internal) 2013;
- (iii) CPWD General Specifications for Electrical Works (Part II – External) 1994;
- (iv) CPWD General Specifications for Electrical Works (Part-IV Sub-Station) 2013;
- (v) CPWD General Specifications for Electrical Works (Part-III-LITS & Escalators) - 2003;
- (vi) CPWD General Specification for Electrical Works- Part – V (Wet Riser and Sprinkler System) 2006;
- (vii) CPWD General Specifications for Electrical Works Part VI Fire Detection and Alarm System – 2018;
- (viii) Selection, Installation and Maintenance of Automatic Fire Detection and Alarm System Code of Practice- IS 2189-2008;
- (ix) All amended up to last date of submission of tender, relevant IE rules, relevant IS and as per directions of Authority.
- (x) All the materials used in the work as far as applicable shall comply with the relevant Indian Standard Specifications with all upto date amendments.
- (xi) The Concessionaire shall produce test certificates for their conforming to relevant I.S. specifications.
- (xii) The materials having I.S.I. mark shall have precedence over the ones conforming to I.S. specifications.

2. Climatic Conditions

The equipment supplied shall be suitable for satisfactory performance on its rated capacity at all weather conditions i.e. summer, monsoon and winter of Bus port site.

3. Sub Work - Internal & External Electrical Installation of E&M Works

The work shall be carried out in accordance with tender specifications and the following specifications / rules:

- (i) CPWD General Specifications for Electrical work Part I Internal - 2013, as amended up to date.
- (ii) CPWD General Specifications for Electrical work Part II External - 1994, as amended up to date.
- (iii) The Indian Electricity Act, 2003.
- (iv) National Electrical Code.
- (v) Indian Electricity Rules 1956 amended up to date.

3.1 General

The specifications given below pertain to the internal and external electrical installation work to be carried out in the proposed Bus Port.

3.2 Wiring

- (i) The wires used for the point wiring and power wiring shall be of 650 / 1100 Volts grade FRLS PVC insulated multi stranded copper conductor single core confirming to IS:694:1990.
- (ii) All mounting boxes for plate type accessories shall be of metallic construction and of the same make as that of the plate type switches and accessories.
- (iii) The connections, inter-connections, earthing and inter earthing shall be done by the Concessionaire wherever required for energizing of the installation and nothing extra shall be paid on this account.
- (iv) Conduit shall be in accordance with The National Electrical Code (NEC), local and state requirements. Cable must be separated from any open conductors of power, or Class 1 circuits, and shall not be placed in any conduit, junction box or raceway containing these conductors, per NEC Article 760-29.
- (v) The rupturing capacity of the MCB"s shall be 10 KA. The MCB"s shall be ISI marked.
- (vi) The make of MCB, RCCB etc. shall be the same as that of MCB DB.
- (vii) Three phase MCB DBs shall be provided with three independent neutral bars

for per phase isolation in addition to main neutral link if provided in schedule of quantity.

- (viii) Number of inspection boxes for conduit should be barest minimum, rather these should be avoided.
- (ix) Cutting of brick walls shall be with chase cutting machine only. All repairs and patch works shall be neatly carried out to match the original finish and to the entire satisfaction of the Engineer in Charge.
- (x) All the sub main and circuit wiring includes loose wire for connections inside switch boxes and MCB DB s. No payment for these loose wires shall be made.
- (xi) The connection between incoming switch / isolator and bus bar shall be made with suitable size of thimble and cable at no extra cost.
- (xii) Copper conductor of insulated cables of size 1.5 Sq.mm and above shall be stranded and terminals provided with crimped lugs.
- (xiii) All hardware items such as screws, thimbles, GI wire etc. which are essentially required for completing an item as per specifications will be deemed to be included in the item even when the same have not been specifically mentioned.
- (xiv) All hardware items such as nuts/ bolts/ screws/ washers etc. to be used in work shall be aluminum alloy / cadmium plated iron.
- (xv) Any conduit which is not be wired by the Concessionaire shall be provided with GI fish wire for wiring by some other agency subsequently. Nothing extra shall be paid for the same.
- (xvi) The make of the materials have been indicated in the list of acceptable makes. Alternate makes are not acceptable. The materials to be used in the work shall be got approved by the Engineer in Charge / his representative before its use at site. The E-in-C shall reserve the right to instruct the Concessionaire to remove the material which, in his opinion, is not acceptable.
- (xvii) Modular boxes, switches, sockets, regulators etc. shall be of only one make.
- (xviii) Wherever light fittings are proposed to be provided on the false ceiling, the respective light / fan point wiring will have to be brought up to the terminal of the light fittings / fans by the Concessionaire. Flexible conduits shall be used for drawing wires from MS conduits on ceiling to fittings on false ceiling and nothing extra shall be paid to the Concessionaire for the same.
- (xix) G.I. pipes shall be medium class as per ISI specification and shall be of single piece without any joints.

- (xx) All the light and fans points should be properly earthed with 1.5 sq mm, FRLS PVC insulated copper wire.
- (xxi) Termination of wiring inside the DB's and main board should be done by crimped Copper lugs connections, for which no extra payment will be made.
- (xxii) All metallic parts must be properly bonded to the earth. Earthing lugs shall be provided to all copper earth wires and shall be fixed whenever required by means of anodized bolts and nuts.

3.3 Surge Protection Devices

- (i) SPDs (Surge Protection Devices) shall be of Type II for Panels.
- (ii) SPDs shall be suitable for TT, TNC, TNS or TNC-S earthing systems.
- (iii) SPDs shall provide protection between line to earth (common mode), neutral to earth (common mode) and line to neutral (differential mode).
- (iv) SPDs shall be of the “withdraw able cartridge” type. The base of the SPDs shall be able to accept cartridges of different discharge ratings of I_{max}
- (v) Optional auxiliary contacts for remote indication shall be integrated in the base of the SPDs to eliminate possibility of wrong installation.
- (vi) SPDs shall limit the transient let-through voltage in accordance to IEC 60364.
- (vii) Protection against SPDs short-circuit (in the event of end-of-life of SPDs or/and short circuit at 50hz like neutral disconnection, inversion of Neutral /line) shall be provided by a dedicated miniature circuit breaker that has been tested to co-ordinate with the manufacturer’s SPDs in accordance to IEC 60364.

3.4 Lighting Protection

The following shall be used for lightening protection:

IEC 60598-1	Luminaires – Part 1: General requirements and tests
IEC 60598-2	Luminaires – Part 2: Particular requirements
IEC 60400	Lamp holders for tubular fluorescent lamps and starter- holder
NFPA	National Fire Protection Association

Annexure - III*(Schedule- 3)***List of Applicable Codes**

1.1 The Concessionaire shall use the latest edition of relevant Standards & Specifications for Design and Execution of this project/work. The list of Standards & Specifications provided hereunder is not exhaustive and any other Standard & Specification which are not mentioned in this section are also applicable if required for the completion of work as per the Scope of Work shall be used in consultation with Authority.

1.2 Some of the relevant codes and standards are compiled below:

(i) FOR STRUCTURAL WORKS

SN	CODE	NAME
1	IS: 1893 – 2002	Criteria for Earthquake resistant design of Structures
2	IS: 13920	Ductile detailing of Reinforced Concrete Structures Subjected to Seismic forces.
3	IS: 4326 – 1993	Earthquake resistant Design and construction of Buildings
4	IS: 875 – 1987 (Part I to III & Part V)	Code and Practice for Design Loads (Other than earthquake) for Building and Structures like Dead, Imposed, Wind and other Loads
5	IS: 456 – 2000	Plain and Reinforced Concrete (Code of practice)
6	SP: 16	Design aids for Reinforced Concrete Structure.
7	SP: 34	Handbook on Concrete Reinforcement and Detailing
8	IS: 3370 Part I, Part II and Part IV	Code of practice for Concrete structures for the storage of liquids.
9	IS: 1786	Specification for High Strength Deformed Steel bars and wires for concrete reinforcement
10	IS: 1904	Code and Practice for design and Construction of Foundations in Soils
11	IS: 2950	Code and Practice for Design and Construction of Raft Foundations
12	IS: 800-1980	Code of Practice for general Construction in Steel.
13	IS: 1343-1980	Code of Practice for Pre stressed Concrete.
14	BS 8081:2015 & BSEN-1537-2013 & IS 10270-1982 & IS 14268 class11/ASTM-416	Code of Diaphragm.
15	BS 8110: 1997 class-2 for gravity load. BS 8110: 1997 class-3 for gravity load and lateral load.	Code of PT slab

(ii) FOR PLUMBING WORKS

SN	I.S. Code	Description / Title
1.	IS: 1729	Specification for sand cast iron spigot and socket soil, waste and ventilating pipes, fittings and accessories.
2.	IS:1536	Specification for centrifugally cast (spun) iron pressure pipes for water, gas and sewage.
3.	I.S: 1538 (Part-I to XXIII)	Specification for cast iron fittings for pressure for water, gas and sewage.
4.	I.S:3714	Code of practices for laying C.I pipes
5.	I.S:782	Specification for caulking lead
6.	I.S:1239 (Part-II)	Specification for mild steel tubes, tubular and other wrought steel filling.
7.	I.S:1879	Specification for malleable cast iron pipe fittings.
8.	I.S:4984	High-density polythene pipe for potable water supplies, sewage and Industrial effluents.
9.	I.S:783	Width and depth of trench for R.C.C pipes.
10.	I.S:4127	Width and depth of trench for S.W pipes.
11.	I.S: 780	Specification for sluice valve for water works purposes.
12.	I.S:651	Specification for salt glazed stoneware pipe and fittings
13.	I.S:7558	Code of practice for domestic hot water installation.
14.	I.S: 1742	Code of practice for building drainage
15.	I.S: 2064	Code of practice for selection, installation and Maintenance of Sanitary appliances
16.	I.S:2065	Code of practices for water supply in building
17.	I.S: 2183 (Part-I)	Code of practice for Plumbing in multistoried buildings.
18.	I.S:1239	Specifications for mild steel tubes 104ubular and other wrought steel fittings. (Fifth Revision)
19.	I.S:778	Specifications for copper alloy gate, globe and check valves for water works purposes.
20.	I.S:5312 (Part-I)	Specifications for swing check type reflux (Non-return) valve
21.	I.S : 3114	Code of Practice for laying of C.I. pipes (2nd Rev.)
22.	I.S. : 456	Code of practice for plain and reinforced concrete (3rd Rev.) (Amendment 2)
23.	I.S. : 12820	Code of practice for dimensional requirements of rubber gaskets for mechanical joints and push on joints for use with cast iron pipes and fittings for carrying water, gas & sewage.
24.	I.S. : 1172	Code of basic requirements for water supply, drainage & sanitation (4th Rev.)

SN	I.S. Code	Description / Title
25.	I.S. : 1200 (Part-16)	Code of practice for methods or measurements of building and Civil Engineering works: Part 16 Laying of water and sewer lines including appurtenant items (3rd Rev.)
26.	I.S. : 1200(Part-19)	Code of practice for methods or measurements of building and Civil Engineering works: Part 19 Water supply, plumbing and drains (3rd Rev.)
27.	I.S : 3989	Centrifugally cast (spun) iron spigot and socket soil, waste and ventilating pipes, fittings and accessories (2nd rev.) (Amendment2)
28.	I.S : 13095	Butterfly valves for general purposes
29.	I.S : 458	Precast Concrete pipes (with or without reinforcement) (3rd rev.) (Amendment2)
30.	I.S : 1726	C.I. Manhole covers & frames (3rd rev.)
31.	I.S : 1916	Steel cylinder pipe with concrete lining and coating (1st rev.).
32.	I.S : 12592(part1)	Pre-cast concrete manhole covers and frames: Part 1 Covers (Amendment 3)
33.	I.S : 12592(part2)	Pre-cast concrete manhole covers and frames: Part 2 Frames
34.	I.S : 6392	Steel pipe flanges (Amendment 1)
35.	I.S : 6418	C.I and malleable C.I. flanges for general engineering purposes.
36.	I.S : 4985	Un plasticized PVC pipes for potable water supplies (2nd Rev) (Amendment 2)
37.	I.S : 7181	Horizontally cast double flanged pipes for water, gas and sewage.(1st Rev.) (Amendment 1)
38.	I.S : 210	Grey iron casting. (4th Rev.)
39.	BS EN 1057	Copper pipes
40.	BS EN 1254	Copper Fittings
41.	I.S : 4985	UPVC pipes
42.	I.S : 15778	CPVC pipes
43.	I.S : 8329	Ductile iron

List Codes and References mentioned below is not exhaustive and for reference purpose only. Concessionaire shall follow all the standards and codes mentioned in this schedule or adhere to relevant codes as per site requirement.

SN	CODE	NAME
1.	IS: 1893 – 2016	Criteria for Earthquake resistant design of Structures
2.	IS: 13920-2016	Ductile detailing of Reinforced Concrete Structures subjected to Seismic forces.
3.	IS: 4326 – 1993	Earthquake resistant Design and construction of Buildings
4.	IS: 875 – 2015 (Part I to III & Part V)	Code and Practice for Design Loads (Other than earthquake) for Building and Structures like Dead, Imposed, Wind and other Loads
5.	IS: 456 – 2000	Plain and Reinforced Concrete (Code of practice)
6.	SP: 16	Design aids for Reinforced concrete Structure.
7.	SP: 34	Handbook on Concrete Reinforcement and Detailing
8.	IS: 3370 Part I, Part II and Part IV	Code of practice for Concrete structures for the storage of liquids.
9.	IS: 1786	Specification for High Strength Deformed Steel bars and wires for concrete reinforcement
10.	IS: 1904	Code and Practice for design and Construction of Foundations in Soils
11.	IS: 2950	Code and Practice for Design and Construction of Raft Foundations
12.	IS: 800-2007	Code of Practice for general Construction in Steel.
13.	IS: 1343-1980	Code of Practice for Pre stressed Concrete.
14.	IRC 5 : 1998	Standard specifications and code of practice for road bridges.
15.	IRC 6 : 2014	Standard specifications and code of practice for road bridges.
16.	IRC 24-2010	Standard specifications and code of practice for road bridges.

(iii) FOR FIRE FIGHTING WORKS

SN	I.S. Code	Description / Title
1.	I.S:1239	Specifications for mild steel tubes 106 tubular and other wroughtsteel fittings. (Fifth Revision)
2.	I.S:778	Specifications for copper alloy gate, globe and check valves for water works purposes.
3.	I.S:5312 (Part-I)	Specifications for swing check type reflux (Non-return) valve
4.	I.S:908	Specifications for fire hydrant (2nd Revision)
5.	I.S:5290	Specifications for landing valve
6.	I.S:901	Specifications for coupling double male and female instantaneous pattern for firefighting (3rd revision)
7.	I.S:884	Specifications for first aid hose reel for firefighting (1st Revision)
8.	I.S:903	Specifications for fire hose delivery couplings branch pipe, nozzles

SN	I.S. Code	Description / Title
		and nozzles spanner (3rd revisions)
9.	I.S:933	Specifications for portable chemical from fire extinguisher
10.	I.S:15683	Specifications for fire extinguisher carbon dioxide type.
11.	I.S:2878	Specifications for fire extinguisher carbon dioxide type.
12.	I.S:9972	Specification for sprinkler
13.	I.S:3844	Code of practice for installation and Maintenance of internal fire hydrants and hose reels on promises.
14	I.S : 3114	Code of Practice for laying of C.I. pipes (2nd Rev.)
15.	I.S. : 456	Code of practice for plain and reinforced concrete (3rd Rev.) (Amendment 2)

(iv) FOR I.S. SAFETY CODES

SN	I. S. Code	Description / Title
1.	I.S.660	Safety Code for Mechanical Refrigeration
2.	I.S.659	Safety Code for air conditioning
3.	I.S.3016	Code of Practice for precautions in welding and cutting operations
4.	I.S.818	Code of practice for safety and health requirements in electrical and gas welding and cutting operations
5.	I.S.5216	Code for safety procedure and practice in electrical works
6.	I.S.3696	Safety code for scaffolds and ladders

List of Main Bureau of Indian Standards Codes and Publications with latest revisions and amendments thereto be followed for analysis & design.

SN	Code	Description
LOADS		
1.	IS-875 (Part-1)-1987	Code of practice for design loads (other than earthquake) for buildings and structures – Unit weights of buildings materials and stored materials.
2.	IS-875 (Part 2)-1987	Code of practice for design loads (other than earthquake) for buildings and structures – imposed loads.
3	IS- 875 (part 3) - 1987	Code of practice for design loads (other than earthquake)for buildings and structures – wind loads)
4.	IS-875 (Part5)–1987	Code of practice for design loads (other than earthquake) for buildings and structures – special loads and load combinations.
5.	IS:1893-2002	Criteria for design earthquake resistant design of structures (general provision and buildings).
CONCRETE		
1.	IS:456 – 2000	Code of practice for plain and reinforced concrete.
2.	IS:1786 – 2008	Specification of high strength deformed bars and wires for concrete reinforcement.
3.	IS: 432 (Part-2) – 1982	Specification of high strength deformed bars and wires for concrete reinforcement.

SN	Code	Description
4.	IS:13920 – 1993	Ductile detailing of reinforced concrete structures subjected to seismic forces – code of practice.
5.	IS : 269 – 1989	Specification for ordinary, rapid hardening and low heat Portland cement.
6.	IS: 1489 – 1991	Specification for Portland pozzolana cement
7.	IS: 383 – 1970	Specification for coarse and fine aggregates from natural sources for concrete.
8.	IS : 516 – 1959	Method of test for strength of concrete.
9.	IS: 2645 – 1975	Specification for integral cement water proofing compounds.
10.	IS:3370-2009 Part 1& 2	Liquid retaining structures.
STEEL		
1.	IS:2062 – 1999	Steel for general structural purposes, specification.
2.	IS: 1161 – 1998	Specification of steel tubes for structural purpose.
3.	IS: 800 – 2007	Code of practice for general construction in steel.
4.	IS 4923	Hollow steel section for structural purpose.
5.	IS 1367	Technical specification for Thread bolts
6.	IS 816 - 1969	Code of practice for use of metal ARC welding for general construction in mild steel

(v) List of Reference Standards for Construction Activities

SN	Standard Number	Title
1	SP : 6 (1)	Structural Steel Sections
2	IS : 27	Pig Lead
3	IS : 325	Three Phase Induction Motors
4	IS : 554	Dimensions for pipe threads where pressure tight joints are required on the threads.
5	IS : 694	PVC insulated cables for working voltages up to & including 1100V.
6	IS : 779	Specification for water meters (domestic type).
7	IS : 782	Specification for caulking load
8	IS : 800	Code of practice for general construction in steel
9	IS : 1068	Electroplated coatings of nickel plus chromium and copper plus nickel plus chromium.
10	IS : 1172	Code of Basic requirements for water supply drainage and sanitation.
11	IS : 1367 (Part 1)	Technical supply conditions for threaded steel fasteners: Part 1 introduction and general information.
12	IS : 1367 (Part 2)	Technical supply conditions for threaded steel fasteners: Part 2 product grades and tolerances.
13	IS : 1554 (Part 1)	PVC insulated (heavy duty) electric cables: Part 1 for working voltages up to and including 1100 V.
14	IS : 1554 (Part 2)	PVC insulated (heavy duty) electric cables: Part 2 for working voltages from 33 KV up to and including 11 KV.
15	IS : 1726	Specification for cast iron manhole covers and frames.

SN	Standard Number	Title
16	IS : 1742	Code of practice for building drainage.
17	IS : 2064	Selection, installation and Maintenance of sanitary appliance code of practice.
18	IS : 2065	Code of practice for water supply in buildings.
19	IS : 2104	Specification for water meter for boxes (domestic type)
20	IS : 2373	Specification for eater meter (bulk type)
21	IS:2379	Colour code for identification for pipe lines
22	IS:2629	Recommended practice for hot dip galvanizing on iron and steel
23	IS : 3114	Code of practice for laying of cast iron pipes
24	IS : 4111 (Part 1)	Code of practice for ancillary structures in sewerage system: Part 1 manholes.
25	IS : 4127	Code of practice for laying glazed stoneware pipes.
26	IS : 4853	Recommended practice for radiographic inspection of fusion welded butt joints in steel pipes.
27	IS : 5329	Code of practice for sanitary pipe work above <i>ground</i> for buildings
28	IS : 5455	Cast iron <i>steps</i> for manholes.
29	IS : 6159	Recommended practice for design and fabrication of material, prior to galvanizing.
30	IS : 7558	Code of practice for domestic hot water installations.
31	IS : 8321	Glossary of terms applicable to plumbing work.
32	IS : 8419 (Part 1)	Requirements for water filtration equipment: Part 1 Filtration medium sand and gravel.
33	IS : 8419 (Part 2)	Requirements for water filtration equipment: Part 2 under drainage system.
34	IS : 9668	Code of practice for provision and Maintenance of water supplies and firefighting.
35	IS : 9842	Preformed fibrous pipe insulation.
36	IS : 9912	Coal tar-based coating materials and suitable primers for protecting iron and steel pipe lines.
37	IS : 10221	Code of practice for coating and wrapping of underground mild steel pipelines.
38	IS : 10446	Glossary of terms relating to water supply and sanitation.
39	IS: 11149	Rubber Gaskets
40	IS : 11790	Code of practice for preparation of butt-welding ends for pipes, valves, flanges and fittings.
41	IS : 12183 (Part 1)	Code of practice for plumbing in multistoried buildings: Part I water supply.
42	IS : 12251	Code of practice for drainage of building basements.
43	IS : 5572	Code of practice for sanitary pipe work.
44	BS : 6700	Specification for design, installation, testing and Maintenance of services supplying water for domestic use within buildings and their cartilages.
45	BS : 8301	Code of practice for building drainage

SN	Standard Number	Title
46	BSEN : 274	Sanitary tapware, waste fitting for basins, bidets and baths. General technical specification.
Pipes and Fittings		
47	IS : 458	Specification for precast concrete pipes (with and without reinforcement)
48	IS : 651	Salat <i>glazed</i> stone ware pipes and fittings.
49	IS : 1239 (Part 1)	Mild steel, tubes, tubulars and other wrought steel fittings: Part I Mild Steel tubes.
50	IS : 1239 (Part 2)	Mild Steel tubes, tubulars and other wrought steel fittings: Part 2 Mild Steel tubulars and other wrought steel pipe fittings.
51	IS : 1536	Centrifugally cast (spun) iron pressure pipes for water, gas and sewage.
52	IS : 1537	Vertically cast iron pressure pipes for water, gas and sewage.
53	IS : 1538	Cast Iron fittings for pressure pipes for water, gas and sewage.
54	IS : 1729	Sand Cast iron spigot and socket soil, waste and ventilating pipes, fittings and accessories.
55	IS : 1879	Malleable cast iron pipe fittings.
56	IS : 1978	Line pipe
57	IS : 1979	High test line pipe.
58	IS : 2501	Copper tubes for general engineering purposes
59	IS : 2643 (Part 1)	Dimensions for pipe threads for fastening purposes: Part 1 Basic profile and dimensions.
60	IS : 2643 (Part 2)	Dimensions for pipe threads for fastening purposes: Part 2 Tolerances.
61	IS : 2643 (Part 3)	Dimensions for pipe threads for fastening purposes: Part 3 Limits of sizes.
62	IS : 3468	Pipe nuts.
63	IS : 3589	Seamless or electrically welded steel pipes for water, gas and sewage (168.3 mm to 2032 mm outside diameter).
64	IS : 3989	Centrifugally cast (sun) iron spigot and socket soil, waste and ventilating pipes, fittings and accessories.
65	IS : 4346	Specifications for washers for use with fittings for water services.
66	IS : 4711	Methods for sampling steel pipes, tubes and fittings.
67	IS : 6392	Steel pipe flanges
68	IS : 6418	Cast iron and malleable cast iron flanges for general engineering purposes.
69	IS : 7181	Specification for horizontally cast iron double flanged pipe for water, gas and sewage.
Valves		
70	IS : 778	Specification for copper alloy float gage globe and check valves for water works purposes.
71	IS : 7181	Specification for sluice valves for water works purposes (50 mm to 300 mm size)

SN	Standard Number	Title
72	IS: 1703	Specification copper alloy float valves (horizontal plunger type) for water supply fittings.
73	IS : 2906	Specification for sluice valves for water works purposes (350 mm to 1200 mm size)
74	IS : 3950	Specification for surface boxes for sluice valves.
75	IS : 5312 (Part 1)	Specification for swing check type reflux (non return) valves: part Multi door pattern.
76	IS : 5312 (Part 2)	Specification for swing check type reflux (non return) valves: part Multi door pattern.
77	IS : 12992 (Part 1)	Safety relief valves, spring loaded : Design
Sanitary Fittings		
78	IS : 13095	Butterfly valves for general purposes
79	IS : 771 (Part 1 to 3)	Specification for glazed fire clay sanitary appliances.
80	IS : 774	Specification for flushing cistern for water closets and mina's (other than plastic cistern)
81	IS : 775	Specification for cast iron brackets and supports for wash basins and sinks
82	IS: 781	Specification for cast copper alloy screw down bib taps and stop valves for water services.
83	IS : 1700	Specification for drinking fountains.
84	IS : 2548 (Part 2)	Specification for plastic seats and covers for water closets: Part-1 thermoset seats and covers.
85	IS : 2556 (Part 1)	Specification for vitreous sanitary appliances (Vitreous china):part 1 general requirement.
86	IS: 2556 (Part 2)	Specification for vitreous sanitary appliances (vitreous china) part 2 specific requirements of wash down water closets.
87	IS: 2556 (Part 3)	Specification for vitreous sanitary appliances (vitreous china) part 3 specific requirements of squatting pans.
88	IS: 2556 (Part 4)	Specification for vitreous sanitary appliances (vitreous china) part 4 specific requirements of wash basins.
89	IS: 2556 (Part 6 sec 2))	Specification for vitreous sanitary appliances (vitreous china) part 6 specific requirements of urinals, section 2 half stall urinals.
90	IS: 2556 (Part 6 sec 4)	Specification for vitreous sanitary appliances (vitreous china) part 6 specific requirements of urinals, section 4 partition slabs.
91	IS: 2556 (Part 6 sec 5)	Specification for vitreous sanitary appliances (vitreous china) part 6 specific requirements of urinals, section 5 waste fittings.
92	IS:2556(part 6 Sec 6)	Specification for vitreous sanitary appliances (vitreous china) part 6 specific requirements of urinals, section 6 water spreaders for half stall urinals.
93	IS:2557 (part 7)	Specification for vitreous sanitary appliances (vitreous china) part 7 specific requirements of half round channels.
94	IS 2556 (Part 8)	Specification for vitreous sanitary appliances (vitreous china): Part 8 Specific requirements of siphoning wash down water

SN	Standard Number	Title
		closets.
95	IS : 2556 (Part 11)	Specification for vitreous sanitary appliances (vitreous china): Part 11 Specific requirements for shower rose.
96	IS : 2556 (Part 12)	Specification for vitreous sanitary appliances (vitreous china): Part 12 Specific requirements of floor traps.
97	IS : 2556 (Part 15)	Specification for vitreous sanitary appliances (vitreous china): Part 15 Specific requirements of universal water closets.
98	IS:2692	Specification for ferrule for water services
99	IS : 2717	Glossary of terms relating to vitreous enamelware and ceramic metal systems
100	IS : 2963	Specifications for waste plug and its accessories for sinks and wash basins.
101	IS : 3311	Specifications for waste plug and its accessories for sinks and wash basins.
102	IS : 5961	Specification for cast iron gratings for drainage purposes.
103	IS : 6249	Specification for gel-coated glass fibre reinforced polyester resin bath tubs.
104	IS : 6411	Specification for gel-coated glass fibre reinforced polyester resin bath tubes.
105	IS : 8931	Specification for copper alloy fancy single taps, combination tap assembly and stop valves for water services.
106	IS : 9758	Specification for flush valves and fitting for water closets and urinals.
Pumps & Vessels		
107	IS: 1520	Specification for horizontal centrifugal pumps for clear cold fresh water.
108	IS : 2002	Steel plates for pressure vessels for intermediate and high temperature service including boilers
109	IS : 2825	Code for unfired pressure vessels.
110	IS : 4648 (Part 1)	Code of practice for lining of vessels and equipment for chemical processes v Part 1 : Rubber lining
111	IS : 5600	Specification for sewage and drainage pumps
112	IS : 8034	Specification for submersible pump sets for clear, cold, fresh water
113	IS : 8418	Specification for horizontal centrifugal self-priming pumps.
114	IS : 374	Ceiling fans and regulators (3rd revision)
115	IS : 694	PVC insulated Electric cable for working voltage upto and including 1100 volts.
116	IS : 732	Code of practice for electrical wiring and installation
117	IS : 1255	Code of Practice for installation and Maintenance of Power Cables upto and including 33 KV rating (Second Revision).
118	IS : 1258	Bayonet lamp holders (Third revision)
119	IS : 1293	Three pin plugs and sockets outlets rated voltage upto and including 250 volts and rated current upto and including 160 amps.

SN	Standard Number	Title
120	IS : 1554 (Part - I)	PVC insulated (Heavy Duty) electric cables for working voltages upto and including 1100 volts.
121	IS : 1646	Electrical installation fire safety of buildings (general) Code of practice.
122	IS : 1885	Glossary of items for electrical cables and conductors
123	IS : 1913	General and safety requirements for fluorescent lamps luminaries Tubular
124	IS : 2071	Methods of high voltage testing
125	IS : 2309	Protection of building and allied structures against lightning
126	IS : 2551-	Danger notice plate.
127	IS : 3043	Code of practice for earthing.
128	IS : 3427	AC Metal enclosed switch gear and control gear for rated voltages above 1 KV and up to and including 52 KV.
129	IS : 3480	Flexible steel conduits for electrical wiring.
130	IS : 3837	Accessories for rigid steel conduit for electrical wiring.
131	IS : 4146	Application guide for voltage transformers
132	IS: 4615	Switch socket outlets.
133	IS : 5133 (Part -I)	Boxes for the enclosure of electrical accessories.
134	IS : 5216 (Part-1)	Guide for safety procedures and practices in electrical work.
135	IS : 5424	Rubber mats for electrical purposes.
136	IS : 5578 & 11353	Marking and arrangement of bus bar
137	IS : 7098 - (Part - II)	Cross linked polyethylene insulated PVC sheathed cables. Voltages from 3.3 KV up to and including 33 KV
138	IS : 8130	Conductors for insulated electric cables and flexible cords
139	IS : 8623 - (Part - D	Factory built assemblies of switchgear and control gear for voltages up to and including 1000 V AC and 1200 V D C.
140	IS : 8828	Miniature Circuit Breakers
141	IS : 9537	Rigid Steel Conduits for electrical wiring (Second Revisions)
142	IS:10810	Methods of test for cables.
143	IS : 12640	Earth Leakage Circuit Breakers
144	IS : 13947	Degree of protection provided by enclosures for LV switchgear and control gear.
145	IS : 13947	General requirement for switchgear and control gear for voltage not exceeding 1000 Volts.
146	IS : 15652	Insulating mats for electrical purposes.
147	IS : 1651 & 1652	Stationary cells and batteries lead acid type.
148	IS : 2551-1982	Danger notice plate.
149	IS : 3043 - 1987	Code of practice for earthing.
150	IS : 4146 - 1983	Application guide for voltage transformers
151	IS : 5216 1982 (Part- I)	Guide for safety procedures and practices in electrical work.
152	IS 5:1994	Colours for ready mixed paint and enamels
153	IS 2705 (Part-1) : 1992 (second revision)	Current transformers - Specification General requirements

SN	Standard Number	Title
154	IS 2705 (Part-2) : 1992 (Second Revision)	Current transformers – Specification Measuring Current Transformers
155	IS 2705 (Part-3) : (Second revision)	Current transformers – Specification Protective Current Transformers
156	IS:2705 (part 4) Second revision 1992	Current transformers – Specification Protective Current Transformers for Special Purpose Applications
157	IS 3043 :1987	Code of practice for earthing
158	IE Rules, with amendments upto 1995 :1956	Indian Electricity Rules
159	IS : 2071 - 1974 - 76	Methods of high voltage testing
160	IS : 3427 :1997 IEC:60298,6069 4	AC Metal enclosed switchgear and control gear for rated voltage above 1kv and upto and including 52kv.
161	IS : 12729 :1998	General requirement for switchgear and control gear for voltage exceeding 1000V
162	IS : 13118 :1991	Specification for high voltage alternating current circuit breaker
163	IS: 5578 & 11353- 1985	Marking and arrangement of bus bars
164	IS: 3156	Potential transformer
165	IS: 9385	HV HRC Control Fuse
166	IS: 1248	For measuring instruments
167	IS : 2026 - 1977 to 81 (Part I to IV)	Power Transformers
168	IS : 2551-1982	Danger notice plate.
169	IS : 3043 — 1987	Code of practice for earthing.
170	IS : 4146 — 1983	Application guide for voltage transformers
171	IS : 5216 — 1982 (Part-I)	Guide for safety procedures and practices in electrical work.
172	IS 5:1994	Colours for ready mixed paint and enamels
173	IS 2705 (Part-1) : 1992 (Second Revision)	Current transformers - Specification General requirements
174	IS 2705 (Part-2) 1992 (Second Revision)	Current transformers – Specification Measuring Current Transformers
175	IS 2705 (Part-3) : (Second Revision) 1992	Current transformers – Specification Protective Current Transformers

SN	Standard Number	Title
176	IS 2705 (Part-4) : (Second Revision)1992	Current transformers – Specification Protective Current Transformers for Special Purpose Applications
177	IS 3043 :1987	Code of practice for earthing
178	IE Rules, with amendments upto 1995 :1956	Indian Electricity Rules
179	1EC 44 -1 :1996	Instrument Transformer -P1 : Current Transformer
181	IS:10561 :1977	Power Transformers: General
182	IS 4146: 1983	Application guide for voltage transformers
183	IS:8478: 1978	Application guide for on-load tap changers
184	IS:10028 Part-1: 1985	Code of practice for selection, installation and Maintenance of power transformers: Selection
185	IS:10028 Part -2 : 1981	Code of practice for selection, installation and Maintenance of power transformers: Installation
186	IS:3639 : 1966	Fittings and accessories for power transformers
187	IS:4201: 1983	Application guide for current transformers
188	IS:4257 Part I : 1981	Dimensions for clamping arrangement for bushings 12kV to 36Kv
189	IS:8603 Parts I to 3 : 1977	Dimensions of porcelain transformer bushings for use in heavily polluted atmosphere
190	IS: 554-1985 (Reaffirmed 1996)	Dimensions for pipe threads where pressure tight joints are required on the threads
191	IS: 665 – 1963 (Reaffirmed 1991)	Metal air ducts
192	IS: 659 - 1964	Air conditioning (Safety code)
193	IS: 660 - 1963	Mechanical Refrigeration (Safety code)
194	IS: 694 – 1990 (Reaffirmed 1994)	PVC insulated (HD) electric cables for working voltage upto and including 1100 volts
195	IS: 732-1989	Code of Practice for electrical wiring
196	IS: 780-1984	Sluice valves for water works purposes
197	IS: 822-1970 (Reaffirmed 1991)	Code of procedure for inspection of welds
198	IS: 1239 (Part-I) 1990	Mild steel tube
199	IS: 1239 (Part-II) 1992	Mild steel tubulars and other wrought steel pipe fittings
200	IS: 1255 - 1983	Code of practice for installation and Maintenance of Power Cables upto and including 33 KV rating (Second Revision)

SN	Standard Number	Title
201	IS: 1554 - 1988	PVC insulated (Heavy Duty) electric cables (part-I) for working voltages upto and including 1100 volts
202	IS: 1897 – 1983	Copper bus bar
203	IS: 2379 – 1990	Colour code for the identification of pipelines
204	IS: 2551 – 1982	Danger notice plate
205	IS: 3043 – 1987	Code of practice for earthing
206	IS: 3103 – 1975	Code of practice for Industrial Ventilation
207	IS: 3837 – 1976	Accessories for rigid steel conduit for electrical wiring
208	IS: 4736 – 1986	Hot-dip zinc coating on steel tubes
209	IS: 4894 – 1987	Centrifugal Fan
210	IS: 5133 – 1969	Boxes for the enclosure of electrical accessories
211	IS: 5216 – 1982 (Part-I)	Guide for safety procedure and practices in electrical work
212	IS: 5312 (Part-II) 1984 (Reaffirmed 1990)	Swing – check type reflux Non-return valves for water works
213	IS: 5421 – 1969	Rubber mats for electrical purposes
214	IS: 5578 & 11353– 1985	Marking and arrangement of bus bars
215	IS: 6392 – 1971 (Reaffirmed 1988)	Steel pipe flanges
216	IS: 8623 – 1977 (Part-I)	Factory built assemblies of switchgear and control gear for voltages upto and including 1000 VAC and 1200 VDC
217	IS: 8623 – 1980 (Part-II)	Bus Bar trunking system
218	IS: 8828 – 1996 IEC 898 - 1995	Miniature Circuit Breakers
219	IS: 9537 – 1981	Rigid steel conduits for electrical wiring (Second Revisions)
220	IS: 10810 – 1988	Methods of test for cables
221	IS:13947(Part-II)–1993	Air circuit breakers
222	IS:13947IEC 947 – 2–1989	Molded case circuit breakers
223	IS: 13947 – 1993	Degree of protection provided by enclosures for LV switchgear and control gear
224	IS: 13947 – 1993	General requirement for switchgear and control gear for voltage not exceeding 1000 volts
225	ASHREA	American society of Heating Refrigeration & Air-conditioning books HVAC Systems and Equipment 2008
		HVAC Application 2007
		Refrigeration 2006
		Fundamental 2005
		Indoor air quality 90.1.2007
226	IEC	Relevant Sections
227	ASME, Section VIII	Boiler and Pressure Vessel Code

SN	Standard Number	Title
National Fire Protection Association (NFPA) – USA		
228	No. 70 – 90 or 70 -93	National Electric Code
229	No. 72 – 1993	National Fire Alarm Code
230	No. 101 – 91	Life Safety Code
231	No. 90A	Practice for Smoke Control System
232	No. 76	Telecommunication Facilities
233	No. 318	Clear Room Applications
Underwriters Laboratories Inc. (UL) – USA		
234	UL 50	Cabinets & Boxes
235	UL 268	Smoke detectors for Fire Protective Signaling Systems
236	UL 864	Control units for Fire Protective Signaling Systems
237	UL 268A	Smoke detectors for Duct Application
238	UL 521	Thermal detectors for Fire Protective Signaling Systems
239	UL 228	Door Closers – holders for Fire Protective Signaling Systems
240	UL 464	Audible signaling appliances
241	UL 38	Manually activated Signaling Boxes
242	UL 346	Water floor indicators for Fire Protective Signaling Systems
243	UL 1481	Power supplied for Fire Protective Signaling Systems
244	UL 1076	Proprietary burglar alarm units & systems
245	UL 1791	Visual notifications appliances
Road Works		
246	IRC 5	Standard Specifications and Code of Practice for Road Bridges, Section I – General Features of Design
247	IRC 6	Standard Specifications and Code of Practice for Road Bridges, Section II – Loads and Stresses
248	IRC 11	Recommended Practices for the Design of Layout of Cycle Tracks
249	IRC 19	Standard Specifications and Code of Practice for Water Bound Macadam
250	IRC 112	Standard Specifications and Code of Practice for Road Bridges Section III–Cement Concrete (Plain and Reinforced)
251	IRC 22	Standard Specifications and Code of Practice for Road Bridges, Section VI – Composite Construction
252	IRC 37	Guidelines for the Design of Flexible Pavement
253	IRC 48	Tentative Specifications for Bituminous Surface Dressing Using Pre-coated Aggregates
254	IRC:SP 11	Handbook of Quality Control for Construction of Roads and Runways
255	IRC:SP 11	Handbook of Quality Control for Construction of Roads and Runways
256	IRC:44-2017	Guidelines for Cement Concrete Mix Design for Pavements (Third Revision)

Annexure - IV*(Schedule-D)***Architectural Finishing Schedule**

SN	Room Name	ARCHITECTURAL FINISHES					
		FLOOR		WALL		CEILING	
		Finish	Thickness (in mm) over TOC	Finish	Thickness (in mm)	Finish	Finished Ceiling level from FFL
CONCOURSE LEVEL, Ground Floor and First Floor complete							
1	Bus Port Entrances passageway	Honed finish Granite Flooring	Granite stone 30mm over Screed laid to slope	Vitrified Tile Cladding as per design, upto a height of 3.05 m. Anti-dust paint above upto full height (colour as per design)	10mm tile over 12mm cement mortar	Open Cell Metal ceiling with Fascia on both sides and Anti dust paint above (colour as per design)	3000mm
2	Bus Port Entrances Staircases (Ground to Concourse)	Flamed Granite treads; Polished Granite Risers; Stainless Steel wall mounted and floor mounted Handrails	Tread: 30mm granite over 20mm cement mortar Riser: 18mm Granite over 12mm cement mortar	Vitrified Tile Cladding as per design, upto a height of 3.05 m. Anti dust paint above upto full height (colour as per design)	10mm tile over 12mm cement mortar	Texture Paint (as per approved sample) Thickness 3mm on pre- plastered surface	-
3	Staircase	Flamed Granite treads; Polished Granite Risers; Stainless Steel and Glass floor mounted Handrails	Tread: 30mm granite over 20mm cement mortar Riser: 18mm Granite over 12mm cement mortar	Vitrified Tile Cladding as per design, upto a height of 1.05 m. Anti dust paint above upto full height (colour as per design)	10mm tile over 12mm cement mortar -	-	-
4	Passenger Concourse area- Double height	Honed Granite Flooring (with Tactile strip as per design)	Granite stone 30mm over Screed laid to slope with trenches for AFC as per system Concessionaire's requirement	Vitrified Tile* Cladding as per design, upto a height of 3.65m. Anti dust paint above upto full height (colour as per design)	10mm tile** over 12mm cement mortar	1200 x 600 Open Cell Metal ceiling with Fascia as per design	Minimum 3000mm varying to 4200mm
5	Control Room	Honed Granite Flooring	18mm Granite stone over 20 mm cement mortar	Clear toughened laminated Glass on Concourse side and Cement Plaster finished with Acrylic Emulsion paint elsewhere	300mm skirting in 18 mm thick granite stone on 12mm cement mortar Paint over 12mm plaster	Metal false ceiling (Non – perforated, Powder coated)	3000mm
6	Bus Port Manager Room/offices	Honed Granite Flooring	18mm Granite stone over 20 mm cement mortar	Cement Plaster finished with Acrylic Emulsion paint	300mm skirting in 18 mm thick granite stone on 12mm cement mortar Paint over 12mm plaster	Metal false ceiling (Non – perforated, Powder coated)	3000mm
7	Ticket Office	Raised floor filled with Foam Concrete finished with Granite.	Total 400 mm 30mm Granite over Foam Concrete with trenches as per system Concessionaire's	Clear toughened laminated Glass (as per detail) on Concourse side and Cement Plaster finished with Acrylic	300mm skirting in 18 mm thick granite stone on 12mm cement mortar Paint over 12mm plaster	Metal false ceiling (Non – perforated, Powder coated)	3000mm

SN	Room Name	ARCHITECTURAL FINISHES					
		FLOOR		WALL		CEILING	
		Finish	Thickness (in mm) over TOC	Finish	Thickness (in mm)	Finish	Finished Ceiling level from FFL
		Granite Counter top as per design	requirement	Emulsion paint elsewhere			
8	Enquiry office	Raised floor filled with Foam Concrete finished with Granite. Granite Counter top as per design	18mm Granite stone over 20 mm cement mortar	Clear toughened laminated Glass above counter height & Granite cladding outside below counter height.	12mm glass 30mm granite cladding; maximum depth of cladding 75mm including tolerances	-	-
9	First Aid room	Honed Granite Flooring	18mm Granite stone over 20 mm cement mortar	Vitrified Tile Cladding as per design, upto a height of 1200m.with Acrylic Emulsion paint above upto full height (colour as per design)	300mm skirting in 18 mm thick granite stone on 12mm cement mortar Paint over 12mm plaster	Concrete finished with Anti-dust sealer coat	-
10	CCTV security room	Honed Granite Flooring	18mm Granite stone over 20 mm cement mortar	Cement Plaster finished with Acrylic Emulsion paint	300mm skirting in 18 mm thick granite stone on 12mm cement mortar Paint over 12mm plaster	Concrete finished with Anti-dust sealer coat	-
11	Supervisor Office	Honed Granite Flooring	18mm Granite stone over 20 mm cement mortar	Cement Plaster finished with Acrylic Emulsion paint	300mm skirting in 18 mm thick granite stone on 12mm cement mortar Paint over 12mm plaster	Concrete finished with Anti-dust sealer coat	-
12	Record room/ Cloak room	Honed Granite Flooring	18mm Granite stone over 20 mm cement mortar	Concrete/ Concrete block Wall finished with Anti- dust sealer coat	300mm skirting in 18 mm thick granite stone on 12mm cement mortar Paint over 12mm plaster	Concrete finished with Anti-dust sealer coat	
13	Drivers/ conductors – dormitory	Honed Granite Flooring	18mm Granite stone over 20 mm cement mortar	Concrete/ Concrete block Wall finished with Anti- dust sealer coat	300mm skirting in 18 mm thick granite stone on 12mm cement mortar Paint over 12mm plaster	Concrete finished with Anti-dust sealer coat	
14	Baby Care Room	Honed Granite Flooring	18mm Granite stone over 20 mm cement mortar	Vitrified Tile Cladding as per design, upto a height of 1200 m from FFL& Cement Plaster finished with Acrylic Emulsion paint above upto full height (colour as per design)1200 mm height	300mm skirting in 18 mm thick granite stone on 12mm cement mortar Paint over 12mm plaster	Calcium Silicate board finished with Acrylic Distemper paint	3000mm

SN	Room Name	ARCHITECTURAL FINISHES					
		FLOOR		WALL		CEILING	
		Finish	Thickness (in mm) over TOC	Finish	Thickness (in mm)	Finish	Finished Ceiling level from FFL
15	Sewage Pump Room	Hardonite Industrial floor	Total 400mm 52mm Hardonit Flooring over Foam Concrete filling	Concrete/ Concrete block Wall finished with Anti- dust sealer coat	300mm high skirting in 18mm thick Cement Plaster	Concrete finished with Anti-dust sealer coat	
16	VIP Deluxe toilets, Luxury Lounges	Honed Granite Flooring	18mm Granite stone over 20 mm cement mortar	Concrete block Wall finished with Cement Plaster finished with Acrylic Emulsion paint	300mm skirting in 18 mm thick granite stone on 12mm cement mortar Paint over 12mm plaster	Metal false ceiling (Non – perforated, Powder coated)	3000mm
17	Public Toilets	Honed Granite Flooring	18mm Granite stone over 20 mm cement mortar	Vitrified Tile Cladding as per design, upto a false ceiling height of	10mm tile over 12mm cement mortar	Calcium Silicate false ceiling (Non – perforated, Powder coated)	3000mm
18	Shops	Honed Granite Flooring	18mm Granite stone over 20 mm cement mortar	Concrete block Wall finished with Cement Plaster finished with Acrylic Emulsion paint	300mm skirting in 10mm thick Vitrified Tile on 12mm cement mortar	Concrete finished with Anti-dust sealer coat	3000mm
19	OTE Duct & Cable Gallery	Concrete finished with Anti-dust sealer coat inside					
20	Platform Area	Honed Granite flooring (with 600mm wide 60mm thick flamed granite edge + 30mm Granite over Screed + yellow tile strip + Tactile strip as per design)	Total 150mm at edge sloping to 120mm laid in 1:100 slope away from platform edge	Vitrified Tile Cladding on walls	10mm tile over 12mm cement mortar	1200 x 600 Open Cell Metal ceiling with Fascia as per design	7200mm
21	Columns In platforms area and waiting area			Stainless Steel Cladding on columns including SS seating benches around columns	3mm SS sheet cladding: maximum depth of cladding 25mm including framework columns		
22	Lift	Honed Granite Flooring	18mm Granite stone over 20 mm cement mortar	Granite cladding on Lift walls	30mm granite cladding; maximum depth of cladding 75mm including		

SN	Room Name	ARCHITECTURAL FINISHES					
		FLOOR		WALL		CEILING	
		Finish	Thickness (in mm) over TOC	Finish	Thickness (in mm)	Finish	Finished Ceiling level from FFL
23	DB Panel Room/Panel room	Hardonite Industrial floor	52mm over filling in Screed to match the general flooring level in vicinity	Concrete/ Concrete block Wall finished with Anti- dust sealer coat	300mm high skirting in 18mm thick Cement Plaster	Concrete finished with Anti-dust sealer coat	
24	Undercroft including UPE Duct and Cable Gallery	Screed to slope (to be done by Civil Concessionaire) Finished with Anti-dust sealer coat		Concrete/ Concrete block Wall finished with Anti- dust sealer coat		Concrete finished with Anti-dust sealer coat	
25	Water Tank	Waterproof Compartment (to be made by Civil Concessionaire)		Waterproof Compartment (to be made by Civil Concessionaire)		Waterproof Compartment (to be made by Civil Concessionaire)	
26	Pump Room	Hardonite Industrial floor	52mm (over 150 mm Screed filling with drainage channel if drainage channel is not provided in slab to be done by Civil Concessionaire)	Concrete/ Concrete block Wall finished with Anti- dust sealer coat	300mm high skirting in 18mm thick Cement Plaster	Concrete finished with Anti-dust sealer coat	
27	Chiller Plant Room	Hardonite Industrial floor	52mm (over 150 mm Screed filling with drainage channel if drainage channel is not provided in slab to be done by Civil Concessionaire)	Concrete/ Concrete block Wall finished with Anti- dust sealer coat	300mm high skirting in 18mm thick Cement Plaster	Concrete finished with Anti-dust sealer coat	
28	Auxiliary Sub Station	Hardonite Industrial floor	52mm	Concrete/ Concrete block Wall finished with Anti- dust sealer coat	300mm high skirting in 18mm thick Cement Plaster	Concrete finished with Anti-dust sealer coat	
29	Dosing Plant Room	Hardonite Industrial floor	52mm	Concrete/ Concrete block Wall finished with Anti- dust sealer coat	300mm high skirting in 18mm thick Cement Plaster	Concrete finished with Anti-dust sealer coat	
30	Terrace				Paint over 15mm Cement Plaster		

SN	Room Name	ARCHITECTURAL FINISHES					
		FLOOR		WALL		CEILING	
		Finish	Thickness (in mm) over TOC	Finish	Thickness (in mm)	Finish	Finished Ceiling level from FFL
31	Main Building Outside Walls	-	-	Granite stone/Texture Paint as per design	40mm stone cladding; maximum depth of cladding 75mm including tolerances/ Paint over 15mm Cement Plaster	-	-
32	Boundary Wall			Granite stone/Texture Paint as per design	Paint over 15mm Cement Plaster with 150mm high skirting in 25mm thick Kota Stone and 40mm stone cladding; maximum depth of cladding 75mm including tolerances	-	-
FINISHING SCHEDULE FOR OTHER ITEMS							
S.No	ITEM	SPECIFICATIONS					
1	INTERNAL DOORS IN OFFICES (HEIGHT 2.40 METERE)	(1) Main entrance doors for all rooms: Toughened glass door shutter along with glass partition toward corridor side					
2	TOILET DOORS	Second class teak wood with laminate top flush doors					
3	MAIN ENTRANCE DOOR	Toughened glass door shutter with automatic sliding system					
4	FIRE CHECK DOORS	GF and above- Wooden Fire rated door with shutter of 120 minutes rating with insulation (full glazed fire door shutters with frame of 2 hours rating)					
5	LIFT LOBBY DOOR	SS Steel frame with glazed steel door and having Fire rated glazing of Saint Gobain and with 120 minutes rating					
6	HARDWARE FINISH	SS of matt/ polished finish of Hafele or equivalent					
7	FACADE TREATMENT	Combination of stone cladding/ACP cladding/ texture paint as per elevation details Jalis - GRC Jali based on design as per arch detail.. Structural Glazing - Saint Gobain or equivalent with solar control and thermal insulation (with dual colour scheme for elevation bands) (Approx. 20% of total elevation area) Murals in the façade wall- GRC / WPC of suitable shade and pattern.					
8	TOILET FITTINGS	FAUCETS- All faucets of chrome matt finish of Jaquar or equivalent of international standard SANITARYWARE- Jaquar or equivalent – wall mounted EC , Urinals, Wash Bowl over slab for Wash Basin etc. of international standard.					

NOTES:

1. All design, patterns and actual sizes of materials shall be as per drawings and samples approved.
2. All items to be read in conjunction with relevant technical specifications.
3. Actual dimensions may vary at site, for which Concessionaires shall prepare shop drawing and obtain approval from the Authority Engineer before starting the work.
4. Concessionaire shall coordinate with all designated systems' Concessionaires' for interface requirements and incorporate the min the shop drawings for finishing works.

SCHEDULE E: List of Applicable Permits

The Authority will provide all the necessary support to the Concessionaire to obtain clearances* required for the project. An indicative list of clearances required for the project is provided in the table below:

Table 9.1: Indicative List of Clearances

Building Construction Permission	Local Authority / Municipal Corporation of Ramnagar
Heritage Clearance	Permission from ASI/ relevant Authority
Water & Sewerage Connection	Concerned Authority
Shifting of Services and utilities	State Transport department, Local Authority, PWD
Traffic Management during operation	Traffic Police
Application for PAN, sales tax and other tax registrations etc.	Concerned departments of Government of Uttarakhand and Government of India (GoI)
Electricity connection	Respective Electricity Board in Uttarakhand
Clearance for employing labor-Primary Employer	Labour Commissioner
Clearance for blasting and use of explosives	Commissioner of Explosives and Police Department, GoUK
Employment of migrant labour	Labour Commissioner
Storage of sludge/silt	Uttarakhand State Pollution Control Board
Environmental Clearance	MoEF
License for commercial activities	Concerned Authority
Realignment and channelization of Nallas	Concerned Authority, Uttarakhand PWD
Installation of Lifts	Concerned Authority
Fire safety equipment	Concerned Authority /Police Department
Drains and Sewers	Concerned Authority, Uttarakhand PWD (B&R)
Diesel Generator	Uttarakhand State Pollution Control Board
Labour Camps	District Health Officer
Working in Night Shifts	Concerned Authority, Police Department
Re-routing of vehicular traffic	Concerned Authority, Traffic Police
Completion Cum Occupancy Certificate Stage	
Completion certificate from local authority	
Approval from the Lift Inspector- Required for installing lift in the building	
Consent to operate from State Pollution Control Board	
NOC from Weight and measurement Department as per Legal Metrology Laws	
NOC from explosive department	
NOC from Industry department	
NOC from labour department	

*The above list is indicative and not necessarily complete or accurate. The Concessionaire shall make his / her own assessment of the statutory clearances required and shall be responsible for obtaining all such clearances. The Concessionaire shall at all times, obtain and maintain all Applicable Permits which are required by Applicable Law to undertake the Project. Charges for all permits etc. shall be borne by the Concessionaire.

SCHEDULE F: Format of Bank Guarantee for Performance Security**PROFORMA OF BANK GUARANTEE – I****(To be issued by a Scheduled Bank in India)**

THIS DEED OF GUARANTEE executed on this the ---- day of ----- at ----- by -----

----- (Name of the Bank) having its Head/Registered office at -----
----- hereinafter referred to as “the **Guarantor**” which
expression shall unless it be repugnant to the subject or context thereof include
successors and assigns;

In favour of National Highways & Infrastructure Development Corporation Limited,
hereinafter called Authority (which expression shall include its successors and assigns);

WHEREAS

- A. By the Concession Agreement dated ----- entered into between
Authority and M/s. ----- Limited, a company
incorporated under the Companies Act, 2013 having its registered office at ---
----- hereinafter called “the **Company**”, (“the **Concession
Agreement**”) the Company has been granted the Concession to implement
the project envisaging construction, operation and maintenance of -----
---- on build, operate and transfer basis.
- B. In terms of the Concession Agreement, the Company is required to furnish to
Authority, an unconditional and irrevocable bank guarantee for an amount of
Rs. ----- (Rupees ----- only) as performance security for due and
punctual performance/discharge of its obligations under the Concession
Agreement.
- C. At the request of the Company, the Guarantor has agreed to provide guarantee,
being these presents guaranteeing the due and punctual
performance/discharge by the Company of its obligations under the
Concession Agreement.

NOW THEREFORE THIS DEED WITNESSETH AS FOLLOWS:

1. Capitalised terms used herein but not defined shall have the meaning
assigned to them respectively in the Concession Agreement.
2. The Guarantor hereby guarantees the due and punctual performance by the
Company of all its obligations under the Concession Agreement.
3. The Guarantor shall, without demur, pay to Authority sums not exceeding in
aggregate Rs. ----- (Rupees ----- only), within five (5) days of
receipt of a written demand therefor from Authority stating that the Company
has failed to meet its performance obligations under the Concession
Agreement during the Construction Period. The Guarantor shall have no
obligation to go into the veracity of any demand so made by Authority and
shall pay the amount specified in the demand notwithstanding any direction to

the contrary given or any dispute whatsoever raised by the Company or any other Person.

4. In order to give effect to this Guarantee, Authority shall be entitled to treat the Guarantor as the principal debtor. The obligations of the Guarantor shall not be affected by any variations in the terms and conditions of the Concession Agreement or other documents or by the extension of time for performance granted to the Company or postponement/non-exercise/ delayed exercise of any of its rights by Authority or any indulgence shown by Authority to the Concessionaire and the Guarantor shall not be relieved from its obligations under this Guarantee on account of any such variation, extension, postponement, non-exercise, delayed exercise of any of its rights by Authority or any indulgence shown by Authority provided nothing contained herein shall enlarge the Guarantor's obligation hereunder.
5. This Guarantee shall be irrevocable and shall remain in full force and effect until discharge by the Guarantor of all its obligations hereunder.
6. This Guarantee shall not be affected by any change in the constitution or winding up of the Company/the Guarantor or any absorption, merger or amalgamation of the Company/the Guarantor with any other Person.
7. The Guarantor has power to issue this guarantee and discharge the obligations contemplated herein, and the undersigned is duly authorised to execute this Guarantee pursuant to the power granted under _____.

IN WITNESS WHEREOF THE GUARANTOR HAS SET ITS HANDS HEREUNTO ON THE DAY, MONTH AND YEAR FIRST HEREINABOVE WRITTEN.

SIGNED AND DELIVERED by ----- Bank by the hand of
Shri -----
its ----- and authorised official.

SCHEDULE G: Project Completion Schedule

1 Project Completion Schedule

The Concessionaire shall adhere to the following Schedule for each of the Project Milestones (the "Project Completion Schedule").

Table 5.1: Project Milestones

SN	Project Milestone	Timelines
1	Project Milestone -1	4 months from the Appointed Date
2	Project Milestone -2	10 months from the Appointed Date
3	Project Milestone -3 (Scheduled Construction Completion Date)	18 months from the Appointed Date

Within 15 (fifteen) days of the date of each Project Milestone, the Concessionaire shall notify Authority of such compliance along with necessary particulars thereof.

2 Project Milestone-1

Project Milestone-1 would be deemed to be achieved when the Concessionaire shall have commenced construction of the Bus Port Facility and expended minimum of 15% (fifteen per cent) of the BPF Project Cost set forth in the Financing Documents.

3 Project Milestone- 2

Project Milestone-2 would be deemed to be achieved when the Concessionaire shall have:

- (i) commenced construction of the Bus Port Facility and expended minimum 40% (forty per cent) of the BPF Project Cost set forth in the Financing Documents.
- (ii) expended maximum 25% (twenty five per cent) of the Project Cost of Commercial Facility set forth in the Financing Documents.

4 Project Milestone-3 or Scheduled Construction Completion Date for BPF

Project Milestone-3 would be deemed to be achieved when the Concessionaire shall have

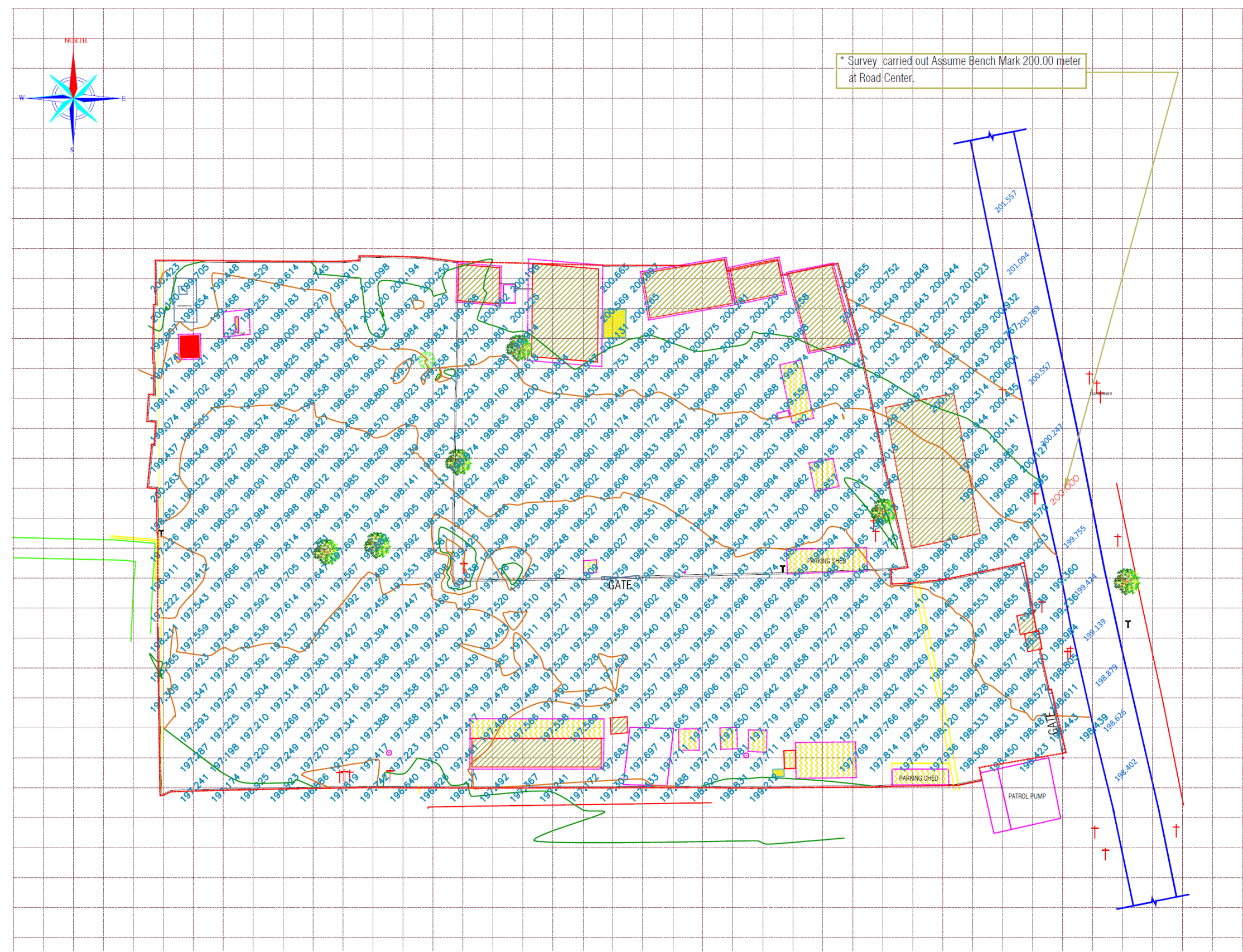
- (i) completed full and final construction and development of the Bus Port Facility in all respect, as defined in this Agreement, evidenced by issuance of Completion Certificate for BPF.
- (ii) expended not more than 85% (eighty five per cent) of the Project Cost of Commercial Facility set forth in the Financing Documents.

5 Extension of period

The Scheduled Construction Completion Date for Commercial Facility or BPF may be extended in terms of this Agreement upon written request to the Authority. Upon extension of any or all of the aforesaid Project Milestones or the Scheduled Construction Completion Date for BPF or the Scheduled Construction Completion Date for Commercial Facility, as the case may be, under and in accordance with the provisions of this Agreement, the Construction Period shall be deemed to have been amended accordingly.

SCHEDULE H: Drawings

Survey Plan



LEGEND

BOUNDARY WALL	—
PROPERTY LINE	—
ROAD	—
DRAIN	—
LIGHT POLE	T
TREE BIG	●
TREE MEDIUM	●
SHED	■
BUILDING	■
ELECTRICAL POLE	+

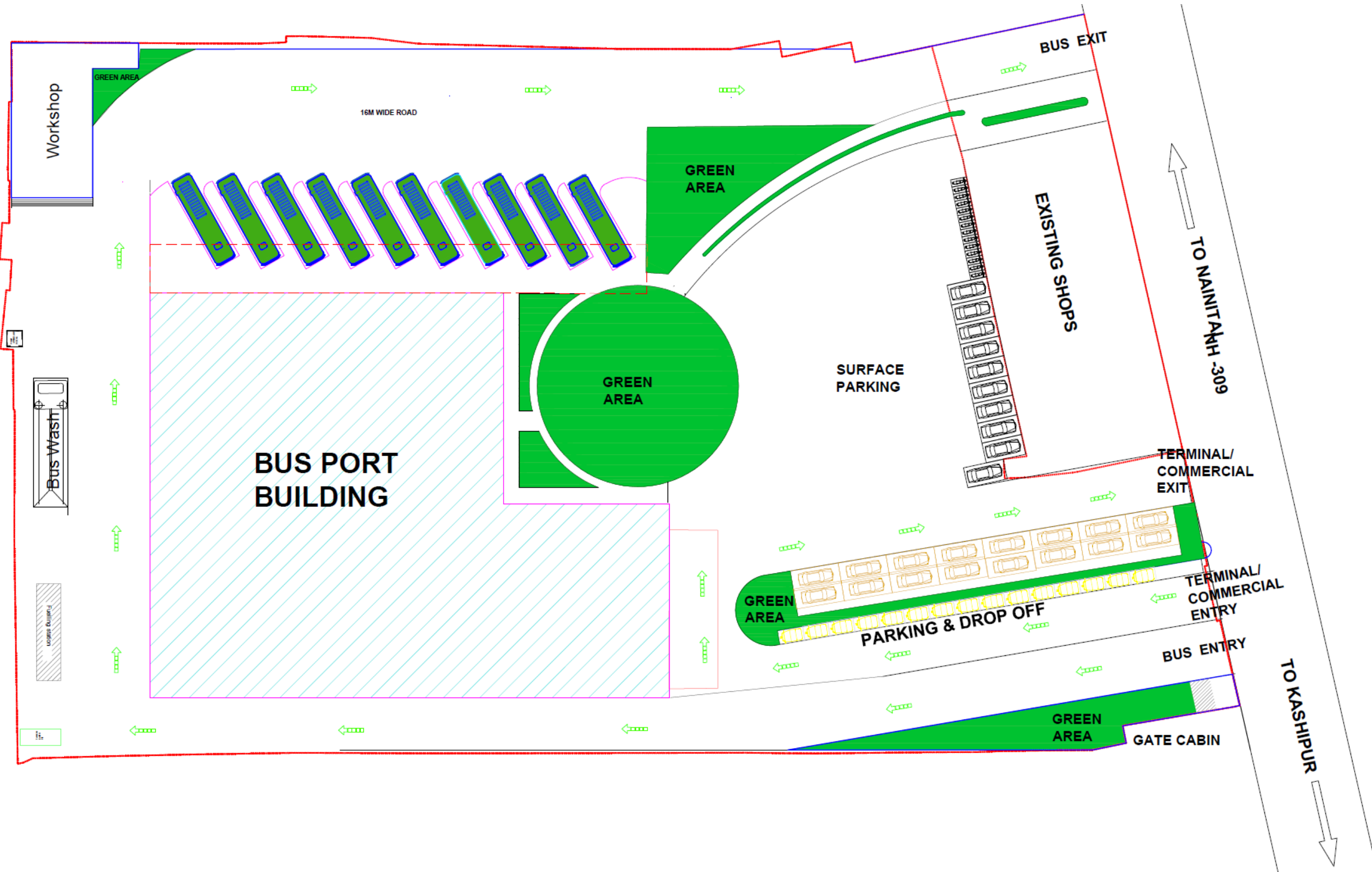
Note:-

- * All levels and Dimensions are in meter.
- * Grid Level 05 X 05 Meter & Contour 1 Meter interval.
- * Survey carried out Assume Bench Mark 200.00 meter at Road Center.

Plot Area

PLOT AREA = 11465,444 Sq.Mt. = 13712.56 Sq.Yd. (2.833 Acre)

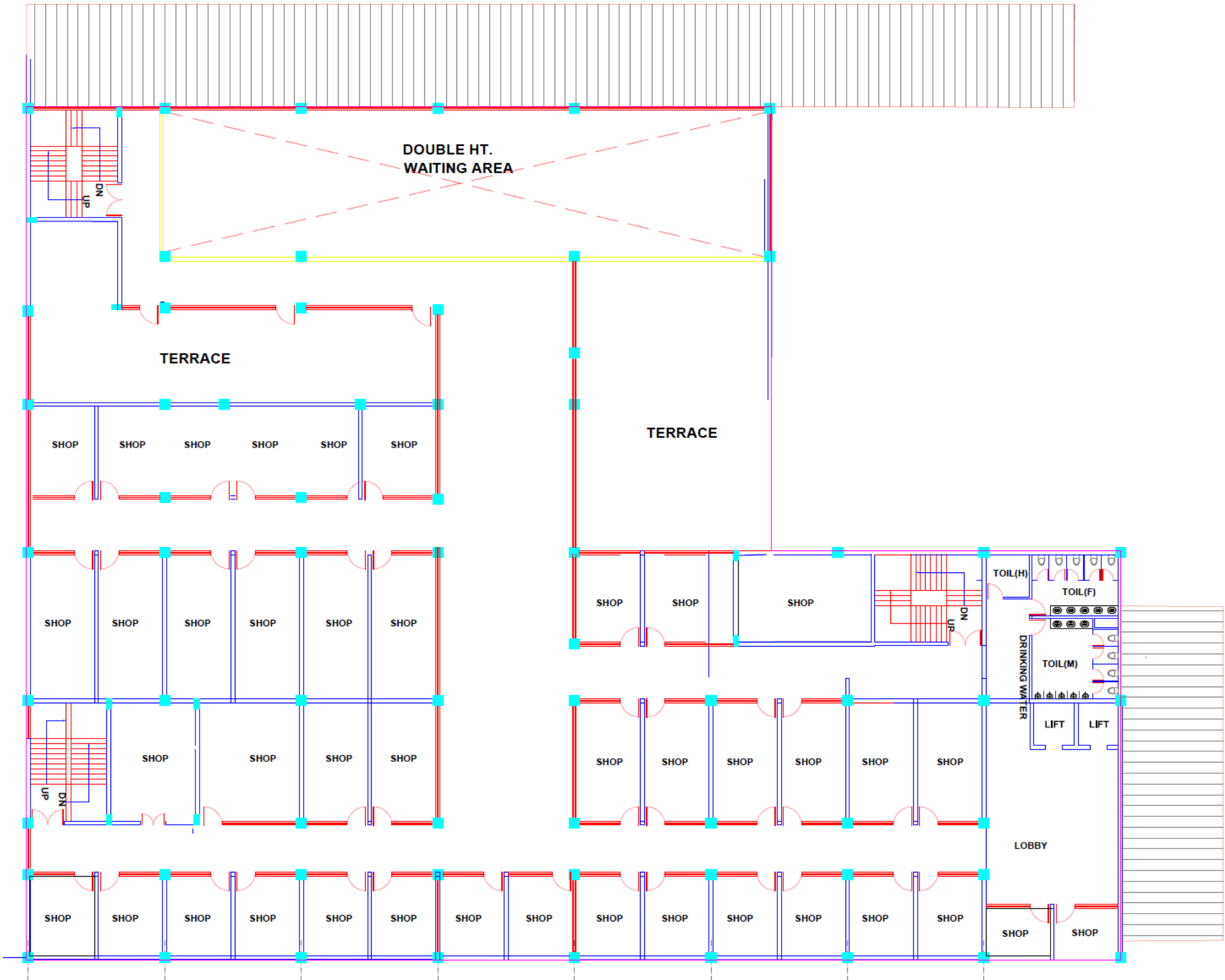
Site Layout Plan



Ground Floor Plan



First Floor Plan



SCHEDULE I: Tests

(See Clause 14.1.2)

1 Schedule for Tests

- 1.1 The Concessionaire shall, not later than 30 (thirty) days prior to the likely completion of the Project, notify the Independent Engineer and the Authority of its intent to subject the Project Bus Port to Tests, and not later than 7 (seven) days prior to the actual date of Tests, furnish to the Independent Engineer and the Authority detailed inventory and particulars of all works and equipment forming part of the Project.
- 1.2 The Concessionaire shall notify the Independent Engineer of its readiness to subject the Project Bus Port to Tests at any time after 7 (seven) days from the date of such notice, and upon receipt of such notice, the Independent Engineer shall, in consultation with the Concessionaire, determine the date and time for each Test and notify the same to the Authority who may designate its representative to witness the Tests. The Independent Engineer shall thereupon conduct the Tests itself or cause any of the Tests to be conducted in accordance with Article 14 and this Schedule-I.

2 Tests

- 2.1 Visual and physical Test: The Independent Engineer shall conduct a visual and physical check of Project Bus Port to determine that all works and equipment forming part thereof conform to the provisions of this Agreement.
- 2.2 Structural Test for bridges: All major and minor bridges and all structures with a span of 15 (fifteen) meters or more constructed by the Concessionaire shall be subjected to the all requisite tests, as recommended by Independent Engineer in accordance with the procedure described in Special Report No. 17: 1996 of the IRC Highway Research Board on Non-destructive Testing Techniques, at two spots in every span, to be chosen at random by the Independent Engineer. All Structures with a span of 15 (fifteen) metres or more shall also be subjected to load testing.
- 2.7 Other Tests: The Independent Engineer may require the Concessionaire to carry out or cause to be carried additional Tests, in accordance with Good Industry Practice, for determining the compliance of the Project Bus Port with Specifications and Standards.
- 2.8 Environmental audit: The Independent Engineer shall carry out a check to determine conformity of the Project Bus Port with the environmental requirements set forth in Applicable Laws and Applicable Permits.
- 2.9 Safety review: Safety audit of the Project Bus Port shall have been undertaken by the Safety Consultant as set forth in Schedule-L, and on the basis of such audit, the Independent Engineer shall determine conformity of the Project Bus

Port with the provisions of this Agreement.

3 Agency for conducting Tests

All Tests set forth in this Schedule-I shall be conducted by the Independent Engineer or such other agency or person as it may specify in consultation with the Authority.

4 Completion/Provisional Certificate

Upon successful completion of Tests, the Independent Engineer shall issue the Completion Certificate or the Provisional Certificate, as the case may be, in accordance with the provisions of Article 14.

SCHEDULE J: Completion Certificate*(See Clauses 14.2 & 14.3)*

- 1 I, (Name of the Independent Engineer), acting as Independent Engineer, under and in accordance with the Concession Agreement dated (the “**Agreement**”), for Development of Bus Port at Ramnagar in the State of Uttarakhand to be executed (the “**Project Bus Port**”) on design, build, finance, operate and transfer (DBFOT) basis, through (Name of Concessionaire), hereby certify that the Tests specified in Article 14 and Schedule-I of the Agreement have been successfully undertaken to determine compliance of the Project Bus Port with the provisions of the Agreement, and I am satisfied that the Project Bus Port can be safely and reliably placed in commercial service of the Users thereof.
- 2 It is certified that, in terms of the aforesaid Agreement, all works forming part of Project Bus Port have been completed, and the Project Bus Port is hereby declared fit for entry into commercial operation on this the day of 20.....

SIGNED, SEALED AND DELIVERED For
and on behalf of the INDEPENDENT
ENGINEER by:

(Signature)
(Name)
(Designation)
(Address)

PROVISIONAL CERTIFICATE

- 1 I, (Name of the Independent Engineer), acting as Independent Engineer, under and in accordance with the Concession Agreement dated (the “**Agreement**”), for Development of Bus Port at Ramnagar in the State of Uttarakhand to be executed (the “**Project Bus Port**”) on design, build, finance, operate and transfer (DBFOT) basis through (Name of Concessionaire), hereby certify that the Tests specified in Article 14 and Schedule-I of the Agreement have been undertaken to determine compliance of the Project Bus Port with the provisions of the Agreement.

- 2 Construction Works that were found to be incomplete and/or deficient have been specified in the Punch List appended hereto, and the Concessionaire has agreed and accepted that it shall complete and/or rectify all such works in the time and manner set forth in the Agreement. (Some of the incomplete works have been delayed as a result of reasons attributable to the Authority or due to Force Majeure and the Provisional Certificate cannot be withheld on this account. Though the remaining incomplete works have been delayed as a result of reasons attributable to the Concessionaire, I am satisfied that having regard to the nature and extent of such incomplete works, it would not be prudent to withhold commercial operation of the Project Bus Port, pending completion thereof.

- 3 In view of the foregoing, I am satisfied that the Project Bus Port can be safely and reliably placed in commercial service of the Users thereof, and in terms of the Agreement, the Project Bus Port is hereby provisionally declared fit for entry into commercial operation on this the day of 20.....

<p>ACCEPTED, SIGNED, SEALED AND DELIVERED For and on behalf of CONCESSIONAIRE by:</p> <p>(Signature) (Name and Designation) (Address)</p>	<p>ACCEPTED, SIGNED, SEALED AND DELIVERED For and on behalf of INDEPENDENT ENGINEER by:</p> <p>(Signature) (Name and Designation) (Address)</p>
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SCHEDULE K: Maintenance Requirements

1. Operations Management

1.1. General

During the maintenance period, the Concessionaire shall undertake the prescribed operations and shall maintain the Bus Port Facilities in accordance with the Concession Agreement. The following goals shall be include in the operation and maintenance strategy for the Bus Port Facilities by the Concessionaire:

- (a) Perform maintenance on routine and periodic basis.
- (b) Provide and operate functional facilities that (i) meet the bus port requirements; (ii) have an environmentally acceptable atmosphere for users of the facility; (iii) ensure the safety of staff and the passengers.
- (c) Identify potential problems early within the context of the planned maintenance system so that corrective action may be planned and completed in a timely manner.
- (d) Establish a maintenance list for planned operation of utilities and maintenance thereof. Follow an orderly program so that maximum operational efficiency is enhanced.
- (e) Conserve energy and resources by ensuring maximum operating efficiency of energy-consuming equipment and systems.
- (f) The users of the bus port are to be provided well-maintained facilities and adequate information.
- (g) Identify and implement possible improvements that will result in more efficient operation.
- (h) Establish data collection systems to develop:
 - (i) uniform reporting formats
 - (ii) use of electronic data processing
 - (iii) supervisory and management control reports
 - (iv) seamless transfer of information between departments through communications and manuals.
- (i) Institute systems for reporting historical data and operating statistics

1.2. Maintenance Works

The Concessionaire shall perform routine and periodic maintenance activities for Bus Port Facilities viz, civil, mechanical and electrical works and equipment, furniture and fixtures for meeting the laid performance standards. For the carried out maintenance works during the maintenance period the Concessionaire shall submit reports as described in subsequent sub-sections. The Concessionaire shall utilize as far as

possible mechanized equipments and methods to perform these obligations. The Concessionaire shall use all possible and updated technology in sanitation, solid waste management and disposal and rainwater harvesting for better upkeep and maintaining the best hygienic conditions in the bus port.

The various Facilities that are to be maintained by the Concessionaire towards fulfilment of its obligations set out in the Concession Agreement include the following:

1.2.1. Key Bus port Facilities

The following key bus port facilities proposed in the bus port are:

- (a) Bus Bays (for Boarding and Alighting)
- (b) Bus Circulation Area & Approach Roads
- (c) Ticketing Counters/ Reservation Counters/ Enquiry Counters
- (d) Authority administration requirements like Traffic Officer's office, Supervisor Office, Duty List branch etc.
- (e) Concessionaire's Office
- (f) Entry & Exit to the Bus port Facility
- (g) Passenger Entry & Exit to the Bus port Facility
- (h) Interconnecting Subways, Pathways, Foot-over bridges, Ramps between various components, if applicable
- (i) Management Information System including public address system

1.2.2. Passenger Amenities

The following key passenger amenities proposed in the bus port are:

- (a) Passenger Concourse Area for Boarding & Alighting
- (b) Passenger Platform for Alighting & Boarding
- (c) Public Utilities (Toilets, Drinking Water Chambers etc.)
- (d) Waiting Halls
- (e) High quality Stainless Steel Seating
- (f) Cloak Room
- (g) Seating Arrangements, Information Signage's, Display Boards
- (h) Dormitories
- (i) Commercial Facilities for the Bus port Facilities like kiosks, canteen, general store etc.
- (j) Baby Care Room
- (k) Lost and Found Room
- (l) Surveillance & Security System (CCTV)
- (m) Parking Area for private vehicles (two wheelers and cars) and intermediate public transport like auto rickshaws, taxis along with their approaches, entry and exit,

- drop-in and drop-off areas, pick-up zones
- (n) Passenger Information System

1.2.3. Common Areas & Facilities

The following major supporting infrastructure requirements proposed in the bus port are:

- (a) Water Supply and Sanitation Structures
- (b) Water & Sewage Treatment Systems
- (c) Storm Water Drainage
- (d) Rain Water Harvesting Structures
- (e) Solid Waste Management Systems
- (f) Solar Power Plant
- (g) Communication Systems
- (h) Dust suppression system
- (i) Firefighting System
- (j) Landscaped Area
- (k) Electric Sub-Station
- (l) Service lanes for modal transfer from other public and private modes of transport to the bus port

1.2.4. Operations Management

The operations management is related to the Bus Port Facilities. This includes the following bus port operations:

- (a) Management of inflow and outflow of buses;
- (b) Allocation of bays in the bus port including idle parking of buses;
- (c) Streamlining of traffic flows and circulation pattern;
- (d) Functioning of passenger and crew amenities;
- (e) Collection of lease rentals and other user charges;
- (f) Information and communication systems including public address system;
- (g) Other bus port operations include functioning of break down services, providing emergency response system, regular security and scheduled inspections;
- (h) Undertaking traffic management measures in internal circulation during routine and periodic maintenance activities.
- (i) Implementing the Management Information System (MIS) that would help in monitoring of the operation and maintenance activities in the bus port.

1.3. Routine Maintenance Works

1.3.1. Maintenance of Bus Circulation Area, Parking Area and Approach Roads

The maintenance of the bus circulation area, parking area and approach roads including

services lanes, if any shall include the planned on-going works and activities required to ensure safety, repair, small defects and to maintain the pavement in the required condition. It also includes carrying out of unscheduled maintenance works occasioned by irregular events such as accidents, natural failures, abnormal weather and the like. The activities of management and maintenance of approach roads and bus circulation area in the bus port shall be carried out by the Concessionaire such that the buses are able to circulate at a certain level of comfort and safety to achieve the required service time at the bays.

Maintenance Standards for Bus Circulation Area, Parking Area and Approach Roads

SN	Item	Service Quality Criteria	Time allowed for repairs or Tolerance permitted
1	Potholes	Maximum 5 numbers in the bus circulation area, parking area, approach roads and service lanes.	Potholes must be repaired within seven (7) days after their detection.
2	Patches	Patches (i) shall be square or rectangular, (ii) shall be level with surrounding pavement, (iii) shall be made using materials with specifications same as those used for the surrounding pavement, and (iv) shall not have cracks wider than three (3) mm.	Non-complying patches must be repaired within seven (7) days after their detection.
3	Cracking in pavement	There shall not be cracks more than 3 mm wide. Maximum allowable cracking shall be 5.0% in the bus circulation area.	Cracks more than 3 mm wide must be sealed within seven (7) days after their detection.
4	Rutting	Rutting shall not be more than 20 mm. Measured on a 2m straight edge. Maximum allowable rutting shall be 1.0% in the bus circulation area.	Rutting above threshold value must be eliminated within fifteen (15) days.
5	Cleanliness of the pavement surface, road surface	The area must always be clean and free of soil, debris, trash, spill off Oil/Lubricants, dead animals and other objects etc. There should not be any standing water on the pavement.	The area must be cleaned daily. Dirt, debris and obstacles must be removed: (a) Within four hours if they pose a danger to traffic safety (b) Within eight hours if they do not pose any danger to traffic safety.
6	Pavement Surface Drainage	No water logging or standing water.	Temporary restoration within one day and permanent restoration within seven days.
7	Traffic Signs, Road/Pavement	These shall be legible, clean and visible at all times.	Any damages/wearing shall be repaired and rectified

SN	Item	Service Quality Criteria	Time allowed for repairs or Tolerance permitted
	Markings		within three days. The damaged and missing signs shall be replaced within fifteen days.
8	Storm Water Drainage System	There should be no silting and lockage in drains. The drains shall be free of any obstacles, solid waste. The drainage appurtenances shall be without any cracks. There shall be no leakages from the pipes. Thorough inspection shall be done before and during the monsoon season.	Obstructions must be cleared within two days after detection. Damages must be repaired within seven days after detection by reconstructing to the adequate shape and size. De-silting operations should be done once in a month with minor repairs if needed. During Monsoon, any blocked vent ways shall be cleaned as soon as possible.
9	Natural and Mechanical Ventilation for multi storey / basement parking	To meet the required illumination level as specified	Any disruption to mechanical ventilation if provided shall be rectified within 24 hours. Arrangements for natural ventilation like skylits, ventilators, shafts etc shall be cleaned after every 5 days.
10	Exit Routes and Stairways	To keep all exit routes and stairways/ramps clear of any obstruction. Provide Inverter/UPS based lighting.	Obstruction to exit routes/stairways/ramps shall be cleared on regular basis and emergency illumination.
11	Damage / Breach to the Compound Wall	No Damage / Breach allowed	Any damage / breach to the boundary wall of the bus port shall be rectified within three (3) days after their detection.
12	Bus Stoppers	Without any damage	Any damage to the bus stoppers shall be rectified within 2 days.

1.3.2. Maintenance of Bus Port Building, Offices, Cabins and Other Structures

The maintenance of the bus port building, offices, cabins and other structures in the bus port serving as passenger and administrative facilities require routine and periodic maintenance. Timely intervention is to be done to maintain the structural adequacy and the aesthetics of the structural elements. During the periodic maintenance, activities like painting shall be done to the walls, roofs, columns and other elements along with joinery, doors, windows, ventilators and other wooden furniture or carpentry works. Building

services like water supply, electric supply, sanitation, ventilation shall function normally at all times.

Maintenance Standards for Bus Port Building, Offices, Cabins Other Structures and Common Areas and Facilities

SN	Item	Service Quality Criteria	Time allowed for repairs or Tolerance permitted
1	Building Exterior and Interior	There should be no cracks, paint wearing, scaling of plaster, deflection of any structural elements like walls, roofs, columns etc. Maximum tolerance of 5 % per 1000 sq.m. area.	Timely intervention within two days of detection of any defects and permanent restoration within fifteen days to maintain structural adequacy and façade beauty.
2	Housekeeping	There should be no accumulation of dust on the floors, furniture, racks, cupboards etc of the offices, cabins and other rooms.	The floors in all the offices, cabins shall be cleaned/wiped daily. Furniture, doors and windows, racks, cupboards shall be dusted daily.
3	Electricity gadgets like bulbs / lamp shades / wiring etc.	Operational at all times	Temporary measures within 8 hours, permanent restoration within 7 days, depending on nature and intensity of work required as decided by NHIDCL/ Authority
4	Utilities like water supply / tap / tap connections / pipe / tanks & overflow / glasses / window panes / all other building furniture	Operational at all times	Timely intervention with Temporary measures within 8 hours, permanent restoration within 7 days, depending on nature and intensity of work required as decided by NHIDCL/ Authority
5	Ventilation	The natural ventilation and air circulation shall not be blocked. The artificial ventilation installations like exhausts, fans, blowers shall function properly.	The ventilators, sky-lites, exhausts, fans, blowers etc shall be cleaned after every two days. Any damage shall be repaired and rectified within seven days.
6	Power Supply, Electrical Installations, Electrical Equipments	Power supply shall be for 24 hours. Standby power arrangements by use of Diesel Generator sets. The electrical systems and arrangements shall be maintained as per the	Timely intervention with Temporary measures within 6 hours, permanent restoration within seven days, depending on nature and intensity of work required

SN	Item	Service Quality Criteria	Time allowed for repairs or Tolerance permitted
		instructions of the installation, operation and maintenance manual of the particular system. Routine maintenance for earthing systems and meters indicating overloading of electrical installations. No loose, open, un-insulated wiring in these areas. Switch Boards, Electric meters are enclosed in boxes and access to authorized persons only.	as decided by NHIDCL/ Authority. Standby power supply by DG sets shall be ready to be operated and should be available 24 hours
7	Bus port Lighting	Operational at all times	Temporary measures within 8 hours and permanent restoration within 7 days of detection.
8	Water Supply, Plumbing Installations	Water Supply shall be for 24 hours. The water shall be disinfected by usage of approved chemicals and should be as per CPHEEO guidelines or Municipal Corporation drinking water standards. The water conveyance network, plumbing appurtenances, pumps and related components shall be checked periodically. If any leakage, corrosion, damages etc is found, it should be replaced. Hydraulic test shall be carried out to detect any leakage in the pipes prior to regular functioning of pipes. All the pipes and fittings shall be painted with anti-corrosive paint to avoid corrosion in future. All the pipes shall be repainted every 3 years.	Timely intervention with Temporary measures within 8 hours, permanent restoration within seven days, depending on nature and intensity of work required as decided by the NHIDCL/ Authority.
9	Internal Drainage	All internal drainage pipes and fittings shall be of cast iron and shall comply with standard specifications. All the pipes and joints shall be checked periodically to detect any leakage and if found, the same shall be repaired as per the relevant IS standard and R&B Specification. All the pipes shall be	Any blockage, silting in these installations shall be rectified within two days of detection. Any damage to sewer system shall be rectified within seven days of detection.

SN	Item	Service Quality Criteria	Time allowed for repairs or Tolerance permitted
		repainted every 3 years.	
10	External Drainage	All the pipes shall be of salt glazed stoneware and laid in slopes as specified and shall comply with standard specifications. All the manhole frames and covers shall be of cast iron of required size and shall comply with standard specifications. Periodical checks shall be carried out for any overflow, breakage or cracking of pipes, blockage, etc through inspection chamber.	
11	Sanitary Installations	All the sanitary vessels shall be of approved Indian make and shall comply with standard specifications. Sanitary vessels are of different materials like GI, copper, stainless steel, etc. All the vessels shall be checked periodically and if found any disturbance like leakage, operational defect it shall be repaired as per the relevant IS standard and R&B Specification.	
12	Communication System (Telecommunication and Networking Systems)	Operational at all times	Temporary measures within 2 days and permanent restoration within 7 days of detection.
13	Fire Fighting Equipment	Operational at all times	Any damage to firefighting equipment installed in the terminal and the parking area shall be attended within two days
14	Item	Service Quality Criteria	Time allowed for repairs or Tolerance permitted shall be rectified within 2 days of detection. Fire extinguishers shall be replaced before the end of its expiry date. The water tank meant for firefighting purpose shall remain flooded with water to

SN	Item	Service Quality Criteria	Time allowed for repairs or Tolerance permitted
			its capacity at all the times.
15	Water Tank	Functional and clean at all times	Water tank shall be cleaned and disinfected every two months (by usage of approved chemicals) to ensure that no inorganic sedimentation takes place.
16	Rain Water Harvesting System	Operational and clean at all times during the monsoon season. Clean during the other seasons of the year	Temporary measures within 2 days, and permanent restoration within 7 days of detection. Rain water system should be desilted/ cleaned before rainy season.
17	Solid Waste Management System	Operational at all times	Temporary measures within 2 days, and permanent restoration within 7 days of detection

1.3.3. Maintenance of Passenger Concourse Area, Subways & Corridor Space etc.

Passenger Circulation & Concourse Area, Subways and Office Corridor Space maintenance shall include the entire house keeping activities requiring routine and periodic maintenance. Annual maintenance shall be done for all electrical and mechanical equipments and accessories like fans, lighting arrangements etc. in these areas.

Maintenance Standards for Passenger Concourse Area, Subways & Corridor Space etc.

SN	Item	Service Quality Criteria	Time allowed for repairs or Tolerance permitted
1	Passenger Platform and Concourse Area, Ramps for handicapped	The platform and concourse areas must always be clean and free of soil debris, trash and other objects. Flooring, skirting, dado tiles should not bear cracks or missing. Oily, greasy surface owing to any spillage shall be cleaned immediately. Use mechanical means like floor wipers, vacuum cleaners etc. for cleaning purposes	Soil debris, trash and other objects shall be removed within 2 hours. Damaged or missing tiles shall be replaced and repaired within three days. The platform shall be wiped after every six hours.
2	Toilets and Urinals	The floor, dado, skirting should be clean and intact without any stains. The toilet and urinal pots, washbasins, cisterns, mirrors, taps shall not be damaged. The exhausts shall work properly. There should not	These shall be cleaned after every four hours with disinfectants. Damaged toilet and urinal pots, washbasins, cisterns, mirrors, taps shall be replaced within seven

SN	Item	Service Quality Criteria	Time allowed for repairs or Tolerance permitted
		be accumulation of water or waste in the toilet blocks. Water supply shall be maintained for 24 hours. Use mechanical means like floor wipers, vacuum cleaners etc for cleaning purposes A minimum of 95% toilets, bathrooms and urinals shall be functional	days of detection. Non-functional Toilets, Urinals, bathrooms shall be demarked with suitable sign boards.
3	Drinking water	Water supply shall be for 24 hours.	Water supply shall be available
4	Chambers	Water quality in all the seasons shall be as per CPHEEO guidelines or Municipal Corporation drinking water standards. The taps and other plumbing fixtures shall not be damaged. A minimum of 95% drinking water chambers shall be functional. 24 hours working of water purification system and water coolers.	for 24 hours. Drinking water quality in all the seasons shall be as per CPHEEO guidelines or Municipal Corporation drinking water standards. The chambers shall be internally cleaned after every six hours to remove any stains, waste etc. Any damaged fixtures or tiles in the water chambers shall be replaced, repaired within seven days of detection. Internal cleaning of water tank for drinking water chambers after every two months. Water purification system and water coolers should be serviced regularly. Any fault should be repaired within 2 days and permanent repairs/replacement should be made within 7 days.
5	Dustbins, spittoons etc.	The dustbins shall contain disposable plastic bags placed along the inner wall of the dustbin. All waste and garbage shall be dumped in a safe place while emptying the dustbin. A minimum of 95% dustbins, spittoons shall be functional.	The dustbin shall be emptied after every six hours or earlier if it is full or if creates foul smell in the neighbourhood.
6	Information Signages and Display Boards	These shall be placed such that they are legible, visible and display updated information. Total number of signages and boards damaged shall not be more than 2% of the total number	These shall be cleaned once in a week. Damaged information signages and boards shall be replaced, repaired within 7 days of their detection. Damaged Warning and Cautionary signage's such as electricity board,

SN	Item	Service Quality Criteria	Time allowed for repairs or Tolerance permitted
			high voltage signs etc shall be repaired within a day of their detection
7	Seating Arrangement	Total number of seats damaged shall not be more than 2% of the total seats.	Any damaged seat shall be repaired, replaced within seven days of detection. These shall be cleaned daily and checked that they are firmly fixed/grouted to the platform with the base.
8	Power Supply, Electrical Installations, Electrical Equipment	Power supply shall be for 24 hours. Standby power arrangements by use of Diesel Generator sets. No loose, open, un-insulated wiring in the bus port. Switch Boards, Electric meters are enclosed in boxes and access to authorized persons only. Routine maintenance for earthing systems and meters indicating overloading of electrical installations	Timely intervention with temporary measures within 8 hours, permanent restoration within 7 days, depending on nature and intensity of work required as decided by Authority.
9	Waiting Halls (Deluxe and General), Dormitories, Rest Rooms	These shall be maintained neat and clean by use of mechanical means like floor wipers, vacuum cleaners etc. The artificial ventilation sources like exhausts, fans, blowers shall function properly.	The floor shall be wiped every four hours. Toilet blocks are to be cleaned after every four hours. There shall be a regular appointment of an attendee in the deluxe A.C. waiting hall
10	Walls	No stains, splits, weathered paint to be left exposed	Any stains, splits, weathered paint on the walls of the bus port buildings, offices, shops, toilets, canteen shall be cleaned within 2 days
11	Flooring, Skirting, Dado finishes	Total damaged area shall not be more than 2% per 1000 sq.m.	Any damaged, missing, crack tiles in Flooring, Skirting, Dado finishes shall be repaired, replaced within seven days of detection
12	Staircases, Subways, Ramps	Clean and fully functional	These shall be cleaned at least twice a day. Damaged handrails, risers or treads shall be repaired within three days after detection.

SN	Item	Service Quality Criteria	Time allowed for repairs or Tolerance permitted
13	Illumination (Lighting)	To meet the required illumination level as specified.	The ventilators, sky-lights etc. serving as source of natural ventilation and other luminaries for artificial lighting shall be cleaned once in seven days to maintain the illumination level.

1.3.4. Maintenance of Landscaped Area

The operator of bus port should maintain the landscaped area in the bus port by ensuring that greenery is maintained owing to proper growth of plants, trees and shrubs. Sprinkler system and drip irrigation can be provided for saving water and water fountains could be used for enhancing the aesthetics of the area.

Maintenance of Landscaped Area

SN	Item of work	Nos./Qty./Frequency Required
(i)	Pruning & trimming of trees/shrubs creepers etc.	Quarter Yearly / need based if they cause hindrances in sight distance, visibility and movement of passenger and vehicular traffic.
(ii)	Hedges Cutting	Monthly
(iii)	Any other item (Horticulture, Civil, Elect, U/F water supply) required for proper maintenance	On need basis / max 7 days of detection
(iv)	Irrigation	Daily in summer season and twice a week during winter and need based
(v)	(i) Manuring (ii) Fertilization	a) Trees/palms - once in every three months b) shrubs/grounds covers –monthly c) Grass -once every three months.
(vi)	Lawn Mowing & trimming of shrubs	Monthly or as and when required.
(vii)	Plant Protection	Pest-Fortnightly Disease control-Fortnightly during rainy season and monthly in other seasons
(viii)	Cultivation & Weeding	Monthly or earlier as per the requirement.
(ix)	Seasonal Flowers	Wherever feasible
(x)	Top dressing with soil &/or manure	Yearly
(xi)	Repair & replacement of plants, levelling etc.	As and when required

1.3.5. Complaint Register

The Concessionaire shall see that complaint register is available in the Public Relation Office at all times. The concessionaire shall hand over the register to Authority / Maintenance Board when asked for.

1.4. Periodic Maintenance Works

Apart from the routine maintenance works, the following periodic maintenance works shall be carried out for the Bus port Facilities indicated above in Section 2 of this Schedule.

Periodic Maintenance

SN	Periodic Maintenance Activities	Time Limit for Maintenance/Renewal
1	Repainting of road furniture, delineators, markings etc.	Once in a year
2	Repainting of bus port Facilities	Once in three years
3	Repainting of carpentry work like joinery, doors, windows, ventilators, wooden furniture in the offices, cabins, booths etc.	Once in three years
4	Plaster Work	Plaster work shall be replaced every 7 years
5	Flooring Works	Glazed tiles and ceramic tiles floor should be replaced every 10 years. Kota stone floor should be replaced every 15 years. China mosaic flooring should be replaced every 10 years.
6	Roofing Works	Roofing sheet should be replaced every 20 years.
7	Water Proofing Works	Water proofing work should be replaced every 12 years.
8	Anti-Termite Treatment	Anti-Termite treatment should be done every 10 years.
9	Water Supply and internal drainage Pipelines	All water supply and internal drainage pipes to be painted with anti-corrosive paint. All pipes to be repainted every 3 years.
10	Resurfacing of Pavement	Cracks and settlements in rigid pavement shall be repaired. Joints to be redone after every three years.
11	Mechanical Equipment	Once in a year and as per manufacturer's installation, operation and maintenance instruction manual.
12	Electrical Equipment	Once in a year and as per manufacturer's installation, operation and maintenance instruction manual.
13	Insects, pests spray management	Once in a year and as per operational requirement.

2. Operations Management

The bus port shall remain operational 24 hours a day and throughout the year. The operations management shall include the following:

- (a) Regular Operations
- (b) Emergency Operations

- (c) Inspections

2.1. Regular Operations

Regular operations shall include the following:

- (a) Permitting smooth and uninterrupted flow of traffic during normal bus port operating conditions.
- (b) Functioning of the various passenger amenities and the parking facilities.
- (c) Functioning of the various building services and utilities.
- (d) Traffic management within the Bus port during routine and periodic maintenance.

The responsibility of the following operations at all times in the bus port shall rest with the Concessionaire:

- (a) Management Information System : Record of Inflow & Outflow of buses
 - (i) Time of Bus Entry & Exit
 - (ii) Origin & Destination of Bus
 - (iii) Arrival & Departure Time of Bus
 - (iv) Display of Bus Arrival & Departure
 - (v) Other Information and database related to operation
- (b) Streamlining the bus traffic flow and internal circulation including bus bay allocation (alighting, boarding and idle)
- (c) Entry and Exit, ramps, interconnecting structures such as subways, bridges etc. for vehicles and passengers
- (d) Tourist Information Centre
- (e) Public Address System
- (f) Passenger Amenities
 - (i) Waiting Halls (General & Deluxe)
 - (ii) Dormitories
 - (iii) Toilets
 - (iv) Drinking Water Chambers
 - (v) Canteen
 - (vi) Kiosks
 - (vii) Parking Area
 - (viii) Cloak Room
 - (ix) Seating Arrangement
 - (x) Display Boards, Variable Message Signs
- (g) Security
- (h) Common Areas & Facilities
 - (i) Water Supply
 - (ii) Sanitation

- (iii) Sewerage
- (iv) Storm Water Drainage
- (v) Solid Waste Management System
- (vi) Rain Water Harvesting
- (vii) Electricity including back-up power supply (diesel generator sets)
- (viii) Lighting
- (ix) Telecommunication and Networking
- (i) Public Relation Office
- (j) Collection of lease rentals from the Commercial Facility and Passenger Amenities (on Commercial basis) within the Bus port Facility and other user charges as set out in Schedule 8.

Regular Operations

SN	Component	Operation
1	Bus port	It shall remain operational 24 hours a day, throughout the year. The bus traffic has to be managed very efficiently especially during the peak hours of the day along with the passenger traffic to ensure that the buses get the desired service time at the alighting and boarding bays. The arrival and departure of the buses shall be as per the bus timetable issued by Authority. The Concessionaire shall ensure that the buses occupy the proper designated bay. The bus bays shall be allocated for the various routes. It shall be ensured that the bus circulation is not in conflict with other vehicular or passenger movement while at entry and exit from the bus port.
2	Information & Communications System, Displays, Public Address System	The announcements and displays of the bus route, arrivals and departures shall be clear, legible, audible and updated at all times. The Information, Warning and Cautionary Signage's if damaged shall be replaced within the allowable time period indicated above. The digital display items shall remain operational for passenger convenience 24 hours a day throughout the year. Any change in the bus timetable, fares, routes etc shall be immediately updated on the respective display, information boards. Information should be in Hindi and English. Public Address System shall remain operational for 16 hrs (5 AM to 9 PM).
3	Tourist Information Centre	The Tourist Information Centre shall remain operational in the bus port for 16 hours (5 AM to 9 PM) in a day with staff throughout the year for the public.
4	Waiting Halls (both deluxe and general), Dormitories, Toilet Blocks and Water Chambers	It shall remain operational 24 hours a day, throughout the year bus port for the public. The passenger traffic has to be managed very efficiently especially during the peak hours of the day to ensure that the passengers get the desired level of service and comfort.

SN	Component	Operation
5	Parking Area	The parking area shall be open to the private and IPT vehicles for 24 hours throughout the year. There shall be 24 hours staffing for parking fee collection. The Concessionaire has to ensure that the vehicles are parked at the designated parking areas for each category of vehicles. Wrongly parked vehicles shall be towed away upon notice.
6	Security	The bus port security staff shall be for 24 hours throughout the year to ensure safe operations during day and night. They shall suitably guard bus port facilities and keep a strict vigil on the passenger movements.
7	Water Supply	Water Supply shall be available for 24 hours at all the desired places like toilets, waiting halls, rest rooms, shops, other commercial facilities, firefighting tank, drinking water chambers, offices and canteen kitchen.
8	Electricity and Lighting	Electricity shall be available for 24 hours. The bus port Facilities shall be illuminated at the required level of illumination. During night times common areas should be sufficiently illuminated to ensure visibility and safety to users
9	Standby Diesel Generator Sets	Standby diesel generator sets to supply power to the bus port must be available at all times in case of disruption or breakdown in power supply.
10	Telecommunication and Networking Equipments	These shall remain functional throughout to maintain interconnectivity between the various bus port Facilities and offices.
11	Bus port Operation and Maintenance Office	This shall remain open for 24 hours a day and throughout the year with staffing in three shifts to ensure the normal functioning of the regular operations of the bus port.

2.2. Emergency Operations

The Concessionaire shall be responsible for minimizing disruption to the traffic in the event of accidents/breakdowns and/or incidents affecting the safety and use of the Project Facility by providing adequate warnings, informatory signs etc. and by maintaining liaison procedures with emergency services. This is achieved by the provision of the following:

- (a) Declare a state of emergency and inform Authority
- (b) Shove back passengers from the affected area
- (c) Co-ordinate with the emergency services and inform them
- (d) Reorganize the operations with proper information, sufficient number of warning, regulatory, information signs, displays or temporary change in bus circulation or passenger circulation.
- (e) Attend to the affected area using manpower, machinery at Concessionaire's disposal

- (f) Clear the affected site and arrange for repairs
- (g) Make a report of the incident to Authority

The Concessionaire shall evolve a comprehensive recovery plan for the restoration of the breakdown in the operations. The plan must be documented by record keeping procedures. The recovery plan shall include the following Facilities:

- (a) Identify and prioritize essential facility functions for recovery
- (b) Procedures for repairs / rebuilding / modifications if any,
- (c) Contingencies for alternate data processing / protection of vital records
- (d) Identify possible alternative traffic circulation / parking plans
- (e) Documentation process for after action reports
- (f) Liasoning with the nearby emergency services such as trauma centers, hospitals, police station, fire brigade office.

2.3. Inspections

The Concessionaire shall program periodic inspections of the bus port, as detailed below, for its smooth operations covering the following elements:

- (a) Primary and Secondary building structure including structural systems, walls, floors, ceilings, doors, windows, lighting etc.
- (b) Building electrical systems, including electrical gadgetry, main switchgear, sub panels, fire alarms, motors, emergency lighting and generators
- (c) Internal and External Lighting in the bus port
- (d) Building mechanical systems, including plumbing, ventilation, exhausts and air conditioning
- (e) Electrical distribution systems, including high voltage distribution systems, underground conduit and switchgear
- (f) Water distribution systems, valves, distribution heads, fire hydrants, underground and overhead water storage tank and pumping chamber. Inspect for corrosion, insulation, deterioration and leakage
- (g) Sewer system, including manholes, storm and domestic sewage and valves. Inspect for general system deterioration, leaks and pipe deterioration.
- (h) Pavement areas both in the bus port.
- (i) Traffic signs and Road Markings.
- (j) Storage areas for potentially hazardous work materials.
- (k) Information System

The Concessionaire shall follow three types of investigations

Visual Inspection	Visual Inspections are broad general inspections carried out quickly and frequently by the maintenance engineers having knowledge of the facility. The purpose of this visual inspection is to report the deficiencies and damages, which could lead to maintenance problems. Such inspections should be frequent. The visual inspection may be carried out by visual assessment with careful observation of the specific object/item of the Project Facility for identification and for quantification of the deficiencies or damages of the Project Facility
Close Inspection	The close inspection may be visual and/or supplemented by standard instrumental aids for assessment of defects/deficiencies of Project Facility with careful observation of specific element(s). The close inspection may be daily/ periodic but it is more intensive and would require detailed examination of element of the Project Facility. It should cover all the aspects of the specific element of Project Facility against a checklist. The close inspections are to be carried out quite frequently depending upon the nature of the element of Project Facility. This inspection is to be carried out by the Maintenance Engineer having good knowledge of facilities of similar nature and theoretical background to analyze the nature, and extent of defects/deficiencies, suggest suitable remedial measures to rectify/remedy them.
Thorough Inspection	A thorough inspection is comprehensive and detailed for assessment of defects/deficiencies of the Project Facility by visual inspection or with aid of standard equipment and non-destructive testing where necessary. Such an inspection is to be carried out on the basis of comprehensive checklist of items related to the materials, condition and situation of the structure etc. The checklist is to be prepared meticulously well in advance of inspection.

FREQUENCY OF INSPECTIONS

The inspection frequency of various items of the Bus port has been indicated in the following table. The frequency of inspection can be suitably revised in consultation with Authority if the emergencies so warrant. This is an indicative list. The same shall be prepared in an exhaustive manner covering all the assets and facilities to be maintained in the bus port in the Operation and Maintenance Manual. The objective and minimum frequency of inspections under normal circumstances shall be as under. If the exigencies arise, the interval of inspection shall be reduced.

Frequency of Inspections

SN	Item	Daily	Monthly	In case of Structural Defects	Before and after rainy season
1	Bus Circulation and Parking Area	◆	C	λ	Λ
2	Passenger Circulation & Concourse Area	◆	C	λ	
3	Ticket Counters, Enquiry and Reservation offices	◆	C	λ	
4	Supporting Infrastructure including Storm water drainage	⊞	C	λ	Λ
5	Water supply and Sanitation, Sewerage System, Rain Water Harvesting, Solid Waste Management	⊞	C	λ	Λ
6	Display Boards, Information Signages	◆	C	λ	
7	Traffic Signs, Pavement Marking	◆	C	λ	Λ
8	Waiting halls, Toilets blocks, other utilities	◆	C	λ	
9	Lighting	◆	C	λ	
10	Mechanical & Electrical Equipment	◆	C	λ	Λ
11	Passenger Amenities & Facilities	◆	C	λ	
12	User Fee Collection System	◆	C	λ	

Legend

◆ Visual inspection

C Close inspection

Λ Thorough inspection

⊞ Visual inspection during rainy season only

COMBINED INSPECTIONS

The Concessionaire shall carryout combined inspections along with Authority on a regular basis. There shall be at least one combined inspection in every two months. However Authority is free to take up any additional inspection without notice to ensure the performance standards.

3. Operation & Maintenance Manual

The Concessionaire shall in consultation with the Authority prepare an Operation and

Maintenance Manual. It shall set out the operation and maintenance standards and details of the operation and maintenance (O&M) activities to be undertaken during the Concession Period as per the requirements of the Concession Agreement.

The Concessionaire shall maintain the Bus Port Facility in traffic-worthy and Passenger worthy condition and the Bus Port's Ancillary Facilities in usable condition throughout the Concession Period or any extension thereof in terms of the Concession Agreement through regular maintenance and preventive maintenance of the various items and elements of the Project Facility.

The Operation and Maintenance Manual, shall include the activities described in this Schedule to the Concession Agreement, amongst other activities required for the regular, periodic, emergency and preventive maintenance during the O&M Period, so that the Bus port is maintained in a manner that at all times it complies with the specifications and standards and at the time of Divestment of Rights and interests by the Concessionaire in terms of the Concession Agreement is sound, durable and in functional condition.

3.1. Reports

During the construction phase, the Concessionaire shall submit the various reports to the NHIDCL/ Authority. During the Operation and Maintenance period the reports and manual shall be submitted to Authority and Maintenance Board. The formats of the reports would be provided by the Concessionaire as part of the Technical Proposal or during the construction phase with approval of the NHIDCL. A total of three copies for each report shall be submitted to the concerned authority.

3.2. Assets Register

The Concessionaire shall carry out a joint inspection along with the NHIDCL to prepare the detailed inventory cum condition surveys of all the assets of the Bus Port. The formats for the surveys would be prepared by the Concessionaire and duly approved by the NHIDCL before the joint survey. The assets register shall include all the assets along with its condition at the time of the joint inspections. It shall be submitted within 45 days of signing of the agreement.

3.3. Detailed Reports

The Concessionaire shall submit a detailed design report based on the master plan. It shall include all the detailed working drawings, detailed structural drawings and detailed architectural drawings for the bus port. The construction shall progress only after the approval of the detailed designs by the NHIDCL. The project implementation schedule, transition plan, circulation and traffic management plan based on the master plan shall also be submitted finally along with the detailed design to the NHIDCL prior to any

construction activity in the bus port. These reports shall be submitted within 90 days of signing of the agreement.

3.4. Construction Progress Report

This report would be prepared on a monthly basis during the construction of the facility. It shall include:

- (a) Inspection Reports relating to construction and functioning of the bus port during the construction period.
- (b) Construction Progress Works
- (c) Quality Assurance and Adherence to material specifications related reports

These reports shall be submitted to the NHIDCL within 7 days of the completion of each calendar month.

3.5. Operation and Maintenance Manual

The Concessionaire shall submit an approved O&M manual as specified in the Concession Agreement before the commencement of the operation of the Bus Port. The Concessionaire shall carryout discussion with NHIDCL/ Authority/Maintenance Board and incorporate modifications recommended by them, prior to the submission of the final O&M manual.

3.6. Construction Report and Modified Assets Register

The Concessionaire shall submit a construction report to Authority, within 30 days of completion of construction activities. It shall contain as-built drawings of bus port. The operations manual is included in this report. The assets register shall be modified based on the upgradation works in the bus port. This report shall be submitted along with the construction report.

3.7. Maintenance Program Report

The Concessionaire shall submit to Authority and Maintenance Board within 28 days prior to the start of each Financial Year, the Maintenance Program Report for each of the facilities and components of the Bus port. It should clearly detail the routine and periodic maintenance activities to be undertaken during the period.

3.8. Monthly Maintenance and Compliance Report

The Concessionaire shall submit a monthly maintenance cum compliance report to Authority and the Maintenance Board for any calendar month within 7 days of the next

calendar month, which shall contain compilation of daily register of inspections and compliances undertaken. It shall give the summary of maintenance activities undertaken in a month. The report shall include the arrangements of men and machinery to undertake the maintenance activities within the stipulated time, and the efficiency of the same. It shall also include the contract value of the works executed during the month, any cost variations occurring due to changes in the law, any other variation which may have become due in accordance with the Concession Agreement, any claims of the Concessionaire, list of items requiring repair or maintenance and a maintenance plan for the next calendar month. The Concessionaire shall review the efficiency of maintenance activities with Authority /Maintenance Board and take necessary arrangements including additional men and machinery, if need arises.

3.9. Progress Report (Quarterly)

The progress report is to be submitted to Authority and Maintenance Board within 10th day of the calendar month. It shall contain details of all meetings, decisions taken, mobilization of resources, physical and financial progress. The report shall clearly contain performance data for the bus port along with the plants/equipments used for the maintenance activities. It shall also include the details of additional resources mobilized or to be mobilized for the projected maintenance activities.

3.10. Handing Over Report

The Handing over Report is the final report to be submitted by the Concessionaire to Authority after completion of the Operation and Maintenance period. The report shall contain the summary of method of operations and maintenance; supervision performed, as built drawings if any, problems encountered and solutions undertaken during the Concession Period. It shall contain an updated assets register incorporating the condition and repair works undertaken for each of the assets.

3.11. Traffic Report

The Concessionaire shall maintain one register for Uttarakhand buses. Based on the information collected daily the Concessionaire shall submit monthly traffic report indicating the daily frequency of buses. The traffic report shall be submitted to the Authority for any calendar month within 7 days of the next calendar month.

SCHEDULE L: Safety Requirements

(See Clause 18.1.1)

1 Guiding Principles

- 1.1 Safety Requirements aim at reduction in injuries, loss of life and damage to property resulting from accidents on the Project Bus Port, irrespective of the person(s) at fault.
- 1.2 Users of the Project Bus Port include motorised and non-motorised vehicles as well as pedestrians involved in, or associated with accidents. Vulnerable Users include pedestrians as well as riders of motorised two-wheelers, bicycles and other vehicles which do not provide adequate occupant protection.
- 1.3 Safety Requirements apply to all phases of construction, operation and maintenance with emphasis on identification of factors associated with accidents, consideration of the same, and implementation of appropriate remedial measures.
- 1.4 Safety Requirements include measures associated with traffic management and regulation such as road signs, pavement marking, traffic control devices, roadside furniture, highway design elements, enforcement and emergency response.

2 Obligations of the Concessionaire

The Concessionaire shall abide by the following insofar as they relate to safety of the Users:

- (a) Applicable Laws and Applicable Permits;
- (b) Manual for Safety in Road Design, issued by MORTH;
- (c) relevant Standards/Guidelines of IRC relating to safety, road geometrics, road signs, pavement marking and roadside furniture;
- (d) provisions of this Agreement; and
- (e) Good Industry Practice.

3 Safety measures During Development Period

The Concessionaire shall endeavour to incorporate the recommendations of the Authority in the design of the Project Bus Port, as may reasonably be required in accordance with Applicable Laws, Applicable Permits, Manuals and Guidelines of

MORTH and IRC, Specifications and Standards, and Good Industry Practice. If the Concessionaire does not agree with any or all of such recommendations, it shall state the reasons thereof and convey them to the Authority forthwith. In the event that any or all of the works and services recommended in the Safety Report fall beyond the scope of Schedule-B, Schedule-C or Schedule-D, the Concessionaire shall make a report thereon and seek the instructions of the Authority for funding such works in accordance with the provisions of Article 18.

4 Safety measures during Construction Period

The Concessionaire shall make adequate arrangements during the Construction Period for the safety of workers and Users in accordance with the guidelines of IRC for safety in construction zones, and notify the Authority and the Independent Engineer about such arrangements.

5 Safety measures during Operation Period

- 5.1 The Concessionaire shall develop, implement and administer a surveillance and safety programme for Users, including correction of safety violations and deficiencies and all other actions necessary to provide a safe environment in accordance with this Agreement.
- 5.2 The Concessionaire shall keep a copy of every FIR recorded by the Police with respect to any accident occurring on the Project Bus Port. In addition, the Concessionaire shall also collect data for all cases of accidents not recorded by the Police but where a vehicle rolled over or had to be towed away. The information so collected shall be summarised in the form prescribed by IRC/ MORTH for this purpose. The Concessionaire shall also record the exact location of each accident within the Bus Port. The aforesaid data shall be submitted to the Authority at the conclusion of every quarter and to the Safety Consultant as and when appointed.
- 5.3 The Concessionaire shall submit to the Authority before the 31st (thirty first) May of each year, an annual report (in ten copies) containing, without limitation, a detailed listing and analysis of all accidents of the preceding Accounting Year and the measures taken by the Concessionaire pursuant to the provisions of Paragraph 5.1 of this Schedule-L for averting or minimising such accidents in future.
- 5.4 Once in every Accounting Year, a safety audit shall be carried out by the authorized representative of the Authority. It shall review and analyse the annual report and accident data of the preceding year, and undertake an inspection of the Project Bus Port. The Safety Consultant shall complete the safety audit within a period of 1 (one) month and submit a Safety Report recommending specific improvements, if any, required to be made to the Project Facilities. Such recommendations shall be

processed, *mutatis mutandis*, and acted upon in the manner set forth in Paragraphs 4 of this Schedule-L.

6 Costs and expenses

Costs and expenses incurred in connection with the Safety Requirements set forth herein, including the provisions of Paragraph 2 of this Schedule, shall be met in accordance with Article 18.

SCHEDULE M: List of Banned Activities

The Project Site or Commercial Facility cannot be used for any activity listed this Schedule. Authority reserves the right to take all appropriate actions (if required) against the Concessionaire to ensure that there is no violation of the same.

- (a) Any product / Service the sale of which is unlawful /illegal or deemed unlawful under any Indian Act or legislation.
- (b) Any product the storage and sale of which may lead to or be considered as a fire hazard; such as fire crackers, industrial explosives, chemicals etc.
- (c) Storage and Sale of liquor and alcohol based drinks or beverages.
- (d) Sale of tobacco and tobacco products.
- (e) Any office of political establishments
- (f) Any religious activities

SCHEDULE N: Transition Plan

(To be submitted by the Bidder)

SCHEDULE O: Deleted

SCHEDULE P: Selection of Independent Engineer

(See Clause 23.1)

1 Selection of Independent Engineer

- 1.1 The provisions of Part II of the Standard Bidding Documents for Consultancy Assignments: Time Based (Volume V) issued by the Ministry of Finance, GOI in July, 1997 or any substitute thereof shall apply, *mutatis mutandis*, for invitation of bids and evaluation thereof save as otherwise provided herein.
- 1.2 The Authority shall invite expressions of interest from consulting engineering firms or bodies corporate to undertake and perform the duties and functions set forth in Schedule-Q and thereupon shortlist 10 (ten) qualified firms in accordance with pre-determined criteria. The Authority shall convey the aforesaid list of firms to the Concessionaire for scrutiny and comments, if any. The Concessionaire shall be entitled to scrutinise the relevant records of the Authority to ascertain whether the selection of firms has been undertaken in accordance with the prescribed procedure and it shall send its comments, if any, to the Authority within 15 (fifteen) days of receiving the aforesaid list of firms. Upon receipt of such comments, if any, the Authority shall, after considering all relevant factors, finalise and constitute a panel of 10 (ten) firms (the **“Panel of Firms”**) and convey its decision to the Concessionaire.
- 1.3 The Authority shall invite the aforesaid firms in the Panel of Firms to submit their respective technical and financial offers, each in a separate sealed cover. All the technical bids so received shall be opened and pursuant to the evaluation thereof, the Authority shall shortlist 3 (three) eligible firms on the basis of their technical scores. The financial bids in respect of such 3 (three) firms shall be opened and the order of priority as among these firms shall be determined on the basis of a weighted evaluation where technical and financial scores shall be assigned respective weights of 80:20.

2 Fee and expenses

- 2.1 In determining the nature and quantum of duties and services to be performed by the Independent Engineer during the Development Period and Construction Period, the Authority shall endeavour that payments to the Independent Engineer on account of fee and expenses do not exceed 2% (two per cent) of the Total Project Cost. Payments not exceeding such 2% (two per cent) shall be borne equally by the Authority and the Concessionaire in accordance with the provisions of this Agreement and any payments in excess thereof shall be borne entirely by the Authority.
- 2.2 The nature and quantum of duties and services to be performed by the Independent Engineer during the Operation Period shall be determined by the Authority in conformity

with the provisions of this Agreement and with due regard for economy in expenditure. All payments made to the Independent Engineer on account of fee and expenses during the Operation Period, shall be borne equally by the Authority and the Concessionaire.

3 Constitution of fresh panel

Not later than three years from the date of this Agreement, and every three years thereafter, the Authority shall prepare a fresh panel of firms in accordance with the criteria set forth in this Schedule-P; provided that the Authority may, at any time, prepare a fresh panel with prior written consent of the Concessionaire.

4 Appointment of government entity as Independent Engineer

Notwithstanding anything to the contrary contained in this Schedule, the Authority may in its discretion appoint a government-owned entity as the Independent Engineer; provided that such entity shall be a body corporate having as one of its primary function the provision of consulting, advisory and supervisory services for engineering projects; provided that a government- owned entity which is owned or controlled by the Authority and/or MORTH shall not be eligible for appointment as Independent Engineer.

SCHEDULE Q : Terms of Reference for Independent Engineer

(See Clause 23.2.1)

1 Scope

- 1.1 These Terms of Reference for the Independent Engineer (the “**TOR**”) are being specified pursuant to the Concession Agreement dated (the “**Agreement**”), which has been entered into between the Authority and (the “**Concessionaire**”) for Development of Bus Port at Ramnagar in the State of Uttarakhand to be executed on design, build, finance, operate and transfer (DBFOT) basis, and a copy of which is annexed hereto and marked as Annex-A to form part of this TOR.
- 1.2 This TOR shall apply to construction of the Project Bus Port.

2 Definitions and interpretation

- 2.1 The words and expressions beginning with or in capital letters used in this TOR and not defined herein but defined in the Agreement shall have, unless repugnant to the context, the meaning respectively assigned to them in the Agreement.
- 2.2 References to Articles, Clauses and Schedules in this TOR shall, except where the context otherwise requires, be deemed to be references to the Articles, Clauses and Schedules of the Agreement, and references to Paragraphs shall be deemed to be references to Paragraphs of this TOR.
- 2.3 The rules of interpretation stated in Clauses 1.2, 1.3 and 1.4 of the Agreement shall apply, *mutatis mutandis*, to this TOR.

3 Role and functions of the Independent Engineer

- 3.1 The role and functions of the Independent Engineer shall include the following:
- (i) review of the Drawings and Documents as set forth in Paragraph 4;
 - (ii) review, inspection and monitoring of Construction Works as set forth in Paragraph 5;
 - (iii) conducting Tests on completion of construction and issuing Completion/ Provisional Certificate as set forth in Paragraph 5;
 - (iv) review, inspection and monitoring of O&M as set forth in Paragraph 6;
 - (v) review, inspection and monitoring of Divestment Requirements as set forth in Paragraph 7;
 - (vi) determining, as required under the Agreement, the costs of any works or services and/or their reasonableness;

- (vii) determining, as required under the Agreement, the period or any extension thereof, for performing any duty or obligation;
 - (viii) assisting Authority in review and inspection of the books of accounts submitted by the Concessionaire to the Authority and the records maintained by Concessionaire as set forth in Paragraph 12
 - (ix) providing all requisite data on monthly basis within a period of 7 days from the close of month, as required by Authority, for updating the project specific website substantially in the format prescribed at **Appendix – IV**
 - (x) assisting the Parties in resolution of disputes as set forth in Paragraph 9; and
 - (xi) undertaking all other duties and functions in accordance with the Agreement.
- 3.2 The Independent Engineer shall discharge its duties in a fair, impartial and efficient manner, consistent with the highest standards of professional integrity and Good Industry Practice.

4 Development Period

- 4.1 During the Development Period, the Independent Engineer shall undertake a detailed review of the Drawings to be furnished by the Concessionaire along with supporting data, including the geo-technical and hydrological investigations, characteristics of materials from borrow areas and quarry sites, topographical surveys and traffic surveys. The Independent Engineer shall complete such review and send its comments/observations to the Authority and the Concessionaire within 30 (thirty) days of receipt of such Drawings. In particular, such comments shall specify the conformity or otherwise of such Drawings with the Scope of the Project and Specifications and Standards.
- 4.2 The Independent Engineer shall review any modified Drawings or supporting Documents sent to it by the Concessionaire and furnish its comments within 15 (fifteen) days of receiving such Drawings or Documents.
- 4.4 The Independent Engineer shall review the detailed design, construction methodology, quality assurance procedures and the procurement, engineering and construction time schedule sent to it by the Concessionaire and furnish its comments within 30 (thirty) days of receipt thereof.
- 4.5 Upon reference by the Authority, the Independent Engineer shall review and comment on the EPC Contract or any other contract for construction, operation and maintenance

of the Project Bus Port, and furnish its comments within 15 (fifteen) days from receipt of such reference from the Authority.

5 Construction Period

- 5.1 In respect of the Drawings and Documents received by the Independent Engineer for its review and comments during the Construction Period, the provisions of Paragraph 4 shall apply, *mutatis mutandis*.
- 5.2 The Independent Engineer shall review the monthly progress report furnished by the Concessionaire and send its comments thereon to the Authority and the Concessionaire within 7 (seven) days of receipt of such report.
- 5.3 The Independent Engineer shall inspect the Construction Works and the Project Bus Port once every month, preferably after receipt of the monthly progress report from the Concessionaire, but before the 20th (twentieth) day of each month in any case, and make out a report of such inspection (the “**Inspection Report**”) setting forth an overview of the status, progress, quality and safety of construction, including the work methodology adopted, the materials used and their sources, and conformity of Construction Works with the Scope of the Project and the Specifications and Standards. In a separate section of the Inspection Report, the Independent Engineer shall describe in reasonable detail the lapses, defects or deficiencies observed by it in the construction of the Project Bus Port. The Inspection Report shall also contain a review of the maintenance of the existing lanes in conformity with the provisions of the Agreement. The Independent Engineer shall send a copy of its Inspection Report to the Authority and the Concessionaire within 7 (seven) days of the inspection.
- 5.4 The Independent Engineer may inspect the Project Bus Port more than once in a month if any lapses, defects or deficiencies require such inspections.
- 5.5 For determining that the Construction Works conform to Specifications and Standards, the Independent Engineer shall require the Concessionaire to carry out, or cause to be carried out, tests on a sample basis, to be specified by the Independent Engineer in accordance with Good Industry Practice for quality assurance. For purposes of this Paragraph 5.5, the tests specified in the IRC or any modification/substitution thereof shall be deemed to be tests conforming to Good Industry Practice for quality assurance. The Independent Engineer shall issue necessary directions to the Concessionaire for ensuring that the tests are conducted in a fair and efficient manner, and shall monitor and review the results thereof.
- 5.6 The sample size of the tests, to be specified by the Independent Engineer under Paragraph 5.5, shall comprise 10% (ten per cent) of the quantity or number of tests prescribed for each category or type of tests in the quality control manuals; provided

that the Independent Engineer may, for reasons to be recorded in writing, increase the aforesaid sample size by up to 10% (ten per cent) for certain categories or types of tests.

- 5.7 The timing of tests referred to in Paragraph 5.5, and the criteria for acceptance/ rejection of their results shall be determined by the Independent Engineer in accordance with the quality control manuals. The tests shall be undertaken on a random sample basis and shall be in addition to, and independent of, the tests that may be carried out by the Concessionaire for its own quality assurance in accordance with Good Industry Practice.
- 5.8 In the event that the Concessionaire carries out any remedial works for removal or rectification of any defects or deficiencies, the Independent Engineer shall require the Concessionaire to carry out, or cause to be carried out, tests to determine that such remedial works have brought the Construction Works into conformity with the Specifications and Standards, and the provisions of this Paragraph 5 shall apply to such tests.
- 5.9 In the event that the Concessionaire fails to achieve any of the Project Milestones, the Independent Engineer shall undertake a review of the progress of construction and identify potential delays, if any. If the Independent Engineer shall determine that completion of the Project Bus Port is not feasible within the time specified in the Agreement, it shall require the Concessionaire to indicate within 15 (fifteen) days the steps proposed to be taken to expedite progress, and the period within which the Project Completion Date shall be achieved. Upon receipt of a report from the Concessionaire, the Independent Engineer shall review the same and send its comments to the Authority and the Concessionaire forthwith.
- 5.10 If at any time during the Construction Period, the Independent Engineer determines that the Concessionaire has not made adequate arrangements for the safety of workers and Users in the zone of construction or that any work is being carried out in a manner that threatens the safety of the workers and the Users, it shall make a recommendation to the Authority forthwith, identifying the whole or part of the Construction Works that should be suspended for ensuring safety in respect thereof.
- 5.11 In the event that the Concessionaire carries out any remedial measures to secure the safety of suspended works and Users, it may, by notice in writing, require the Independent Engineer to inspect such works, and within 3 (three) days of receiving such notice, the Independent Engineer shall inspect the suspended works and make a report to the Authority forthwith, recommending whether or not such suspension may be revoked by the Authority.
- 5.12 If suspension of Construction Works is for reasons not attributable to the

Concessionaire, the Independent Engineer shall determine the extension of dates set forth in the Project Completion Schedule, to which the Concessionaire is reasonably entitled, and shall notify the Authority and the Concessionaire of the same.

- 5.13 The Independent Engineer shall carry out, or cause to be carried out, all the Tests specified in Schedule-I and issue a Completion Certificate or Provisional Certificate, as the case may be. For carrying out its functions under this Paragraph 5.13 and all matters incidental thereto, the Independent Engineer shall act under and in accordance with the provisions of Article 14 and Schedule-I.
- 5.14 Upon reference from the Authority, the Independent Engineer shall make a fair and reasonable assessment of the costs of providing information, works and services as set forth in Article 16 and certify the reasonableness of such costs for payment by the Authority to the Concessionaire.
- 5.15 The Independent Engineer shall aid and advise the Concessionaire in preparing the Maintenance Manual.

6 Deleted

7 Termination

- 7.1 At any time, not earlier than 90 (ninety) days prior to Termination but not later than 15 (fifteen) days prior to such Termination, the Independent Engineer shall, in the presence of a representative of the Concessionaire, inspect the Project Bus Port for determining compliance by the Concessionaire with the Divestment Requirements set forth in Clause 38.1 and, if required, cause tests to be carried out at the Concessionaire's cost for determining such compliance. If the Independent Engineer determines that the status of the Project Bus Port is such that its repair and rectification would require a larger amount than the sum set forth in Clause 39.2, it shall recommend retention of the required amount in the Escrow Account and the period of retention thereof.
- 7.2 The Independent Engineer shall inspect the Project Bus Port once in every 15(fifteen) days during a period of 90 (ninety) days after Termination for determining the liability of the Concessionaire under Article 39, in respect of the defects or deficiencies specified therein. If any such defect or deficiency is found by the Independent Engineer, it shall make a report in reasonable detail and send it forthwith to the Authority and the Concessionaire.

8 Determination of costs and time

- 8.1 The Independent Engineer shall determine the costs, and/or their reasonableness, that

are required to be determined by it under the Agreement.

- 8.2 The Independent Engineer shall determine the period, or any extension thereof, that is required to be determined by it under the Agreement.

9 Assistance in Dispute resolution

- 9.1 When called upon by either Party in the event of any Dispute, the Independent Engineer shall mediate and assist the Parties in arriving at an amicable settlement.
- 9.2 In the event of any disagreement between the Parties regarding the meaning, scope and nature of Good Industry Practice, as set forth in any provision of the Agreement, the Independent Engineer shall specify such meaning, scope and nature by issuing a reasoned written statement relying on good industry practice and authentic literature.

10 Other duties and functions

The Independent Engineer shall perform all other duties and functions specified in the Agreement.

11 Miscellaneous

- 11.1 The Independent Engineer shall notify its programme of inspection to the Authority and to the Concessionaire, who may, in their discretion, depute their respective representatives to be present during the inspection.
- 11.2 A copy of all communications, comments, instructions, Drawings or Documents sent by the Independent Engineer to the Concessionaire pursuant to this TOR, and a copy of all the test results with comments of the Independent Engineer thereon shall be furnished by the Independent Engineer to the Authority forthwith.
- 11.3 The Independent Engineer shall obtain, and the Concessionaire shall furnish in two copies thereof, all communications and reports required to be submitted, under this Agreement, by the Concessionaire to the Independent Engineer, whereupon the Independent Engineer shall send one of the copies to the Authority along with its comments thereon.
- 11.4 The Independent Engineer shall retain at least one copy each of all Drawings and Documents received by it, including 'as-built' Drawings, and keep them in its safe custody.
- 11.5 Upon completion of its assignment hereunder, the Independent Engineer shall duly classify and list all Drawings, Documents, results of tests and other relevant records,

and hand them over to the Authority or such other person as the Authority may specify, and obtain written receipt thereof. Two copies of the said documents shall also be furnished in micro film form or in such other medium as may be acceptable to the Authority.

12. Assistance to Authority in review of book of accounts

- 12.1 Upon receipt of copy of books of accounts from Authority, the Independent Engineer shall review the Escrow account statements with respect to the provisions of the Escrow agreement, books of accounts for information pertaining (a) the traffic count (b) Fee determination thereof, and (c) Project costs, and (d) such other information relating or resulting from other duties and functions of Independent Engineer in accordance with the Agreement, as the Authority may reasonably require and submit its report within 10 days

SCHEDULE R: Fee Related To Project Bus Port in Fee Notification

The Fee Notification released by the Competent Authority would allow the Concessionaire to charge the user charges for the specific facilities to be provided in the Bus Port as set out below:

Table 8.1: Fee for Various Activities

Facility	Maximum Charges for first year of Operation	Escalation of charges*
Parking		
Cycle	Free of charge	Not applicable
2 wheeler	Parking rate of Rs.10 per 4 hours with a maximum of Rs.50 per day.	5% every year rounded off to the nearest rupee
Car Parking	Parking rate Rs.50 per 4 hours with a maximum of Rs.100 per day.	5% every year rounded off to the nearest rupee
Auto Parking	Parking rate Rs.250 per Month.	5% every year rounded off to the nearest rupee
Taxi Parking	Parking rate Rs.500 per Month.	5% every year rounded off to the nearest rupee
Basic Amenities		
WCs and Bathrooms for Gents and Ladies in Waiting Halls (General) and Passenger Concourse Area	Rs.2.00 per use	5% every year rounded off to the nearest rupee
Urinals	Free Service	Free Service
Wheel Chairs	Free Service	Free Service
Drinking Water	Free Service	Free Service
General/ Ladies Waiting Hall	Free Service	Free Service
Value Added Services		
Cloak Room	As per the Indian railways prevailing rates	As per the Indian Railways prevailing rates
Deluxe Waiting Hall	Market determined charges	Market determined charges
Dormitory	Market determined charges	Market determined charges
Trolleys for carrying passenger luggage	Market determined charges	Market determined charges
Entry Fees/Adda Fees & Night Parking Fee for Buses		
Per Entry per bus	Rs.50/ bus/entry	5% every year rounded off to the nearest rupee
Night Parking Fee	Rs.100 / bus/night	5% every year rounded off to the nearest rupee

The years, in the above table, are to be counted from the COD.

*Escalation rate shall be approved by Authority, before making it operational.

SCHEDULE S: Escrow Agreement

THIS ESCROW AGREEMENT (hereinafter the “**Agreement**”) is made on this the....day of.....20__ at -----

BY AND AMONG

M/s _____, a company incorporated under the Companies Act, 2013, having its registered office at _____, (hereinafter referred to as the “**Concessionaire**”, which expression shall, unless the context otherwise requires, include its successors and permitted assigns) of the **ONE PART**;

AND

National Highways & Infrastructure Development Corporation Limited, having its office at PTI Building, 4 Parliament Street, Sansad Marg Area, New Delhi, 110001 (hereinafter referred to as “**NHIDCL**” or “**Authority**”, which expression shall, unless the context otherwise requires, include its successors and assigns) of the **SECOND PART**;

AND

..... having its registered office at..... (hereinafter referred to as the “**Escrow Bank**”, which expression shall, unless the context otherwise requires, include its successors and permitted assigns) of the **THIRD PART**;

WHEREAS

- A. The Authority has entered into a Concession Agreement dated the __ day of _____ 20__ with the Concessionaire (the “**Concession Agreement**”), wherein the Authority has granted Concession for implementation of the Project to the Concessionaire which involves the development, financing, design, construction, operation and maintenance of the Project Facilities in accordance with the provisions thereof.
- B. The Concession Agreement requires the Concessionaire to establish an escrow account, *inter alia*, on the terms and conditions stated therein.
- C. This Agreement sets forth the mandates, terms and conditions and operating procedures for such escrow account.

NOW THEREFORE, in consideration for the foregoing and the respective covenants and agreements set forth in this Agreement, the receipt and sufficiency of which is hereby acknowledged, and intending to be legally bound hereby, the Parties agree as follows:-

1. Definitions and Interpretation

- a) The word, phrases and terms used in this Agreement but not defined shall, unless the context otherwise requires, have the meaning ascribed to them respectively in the Concession Agreement.
- b) The rules of interpretation stated in Clause 1.2 of the Concession Agreement shall apply,

mutatis mutandis, to this Agreement.

- c) The following terms shall, except where the context otherwise requires, have the meaning as hereunder:

“Agreement” means this escrow agreement as of date hereof, including recitals, Appendices and attachments hereto, if any, as may be amended, supplemented or modified in accordance with the provisions hereof.

“Authorised Investment” means any authorized investments which the Authority may, from time to time, permit the Escrow Bank to make from the Escrow Account in accordance with this Agreement.

“Business Day” means a day on which banks are generally open in Delhi for transaction of normal banking business.

“Concessionaire Account” shall mean any bank account(s) of the Concessionaire other than the Escrow Account.

“Concession Agreement” means the Concession Agreement referred to in Recital (A) above and annexed hereto as Annexure , and the same shall include all of its Recitals and Schedules and any amendments made thereto in accordance with the provisions contained in this behalf therein;

“Enforcement Notice” means any enforcement procedure commenced by the Escrow Bank under any of the Security Documents.

“Escrow Account” means an escrow account established in terms of and under this Agreement, and shall include the Sub-Accounts if any.

“Escrow Bank” means _____ [insert name].

“Event of Default” means an Event of Default as defined and detailed in the Concession Agreement and/or the Financing Documents.

“INR” means the lawful currency of India.

“Parties” means the parties to this Agreement collectively and **“Party”** shall mean any of the Parties to this Agreement individually.

“Payment Date” means in relation to any payment, the date(s) specified for such payment.

“Required Balance” means on any date in relation to the Escrow Account, an amount in Indian rupees which if proportionately built over the months, would be sufficient to meet operation and maintenance obligations as per the Concession Agreement on the Payment Date(s).

“Security Documents” means all or any of the documents executed, delivered or furnished to secure the financial assistance under the Financing Documents, including but not limited to the

deed of hypothecation, mortgage deed, equitable mortgage, deed of guarantee, pledge agreement, undertakings, negative lien and other incidental or supplemental documents related thereto.

“Year” means each twelve-month period ending on March 31st.

2. THE ESCROW ACCOUNT

2.1 Escrow Bank to act as a Trustee

- (a) The Concessionaire hereby appoints the Escrow Bank to act as trustee for Authority and the Concessionaire in connection herewith and authorizes the Escrow Bank to exercise such rights, powers, authorities and discretion as are specifically delegated to the Escrow Bank by the terms hereof together with all such rights, powers authorities and discretion as are reasonably incidental hereto, and the Escrow Bank accepts such appointment pursuant to the terms hereof.
- (b) The Concessionaire hereby declares that all rights title and interest in and to the Escrow Account shall be vested in the Escrow Bank and held in trust for Authority and the Concessionaire, and applied in accordance with the terms of this Agreement. No person other than Authority and the Concessionaire shall have any rights hereunder as the beneficiaries of or as third party beneficiaries under this Agreement.
- (c) The rights of Concessionaire to the monies lying to the credit of the Escrow Account are set forth in their entirety in this Agreement and the Concessionaire shall have no other rights against or to the monies in the Escrow Account.

2.2 Acceptance of Escrow Bank

The Escrow Bank hereby agrees to act as such and to accept all payments and other amounts to be delivered to and held by the Escrow Bank pursuant to the provisions of this Agreement. The Escrow Bank shall hold and safeguard the Escrow Account during the term of this Agreement and shall treat the amount in the Escrow Account as monies deposited by the Concessionaire or Authority, as the case may be, with the Escrow Bank. In performing its functions and duties under this Agreement, the Escrow Bank shall act in trust for the benefit of, and as agent for Authority and the Concessionaire or their nominees, successors or assigns, in accordance with the provisions of this Agreement.

2.3 Establishment and Currency of Escrow Account

Within ____ (_____) days from the date of this Agreement, and in any case prior to the Appointed Date, the Concessionaire shall open and establish the Escrow Account with the Escrow Bank by _____. The Escrow Account shall be denominated in Indian rupees.

2.4 Escrow Bank's Fee

The Escrow Bank shall be entitled to receive its fee and expenses in an amount, and at

such times, as may be agreed between the Escrow Bank and the Concessionaire.

2.5 Rights of the Parties

The rights of Authority and the Concessionaire in the monies held in the Escrow Account are set forth in their entirety in this Agreement and Authority and the Concessionaire shall have no other rights against or to the monies in the Escrow Account.

2.6 Substitution of the Concessionaire

The Parties hereto acknowledge and agree that upon substitution of the Concessionaire with the Nominated Company, it shall be deemed for the purposes of this Agreement that the Nominated Company is a Party hereto and the Nominated Company shall accordingly be deemed to have succeeded to the rights and obligations of the Concessionaire under this Agreement on and with effect from the date of substitution of the Concessionaire with the Nominated Company.

2.7 Operating Procedures

The Escrow Bank and the Concessionaire shall agree (after consultation with the Authority) on the detailed mandates, terms and conditions and operating procedures for the Escrow Account but in the event of any inconsistency between this Agreement and such mandates, terms and conditions or procedures, this Agreement shall prevail.

2.8 General

- (a) All inflows and outflows of cash and receivables on account of the deposits and operations and maintenance expenditure that accrue or arise under, in connection with or pursuant to the implementation of the Project under the Concession Agreement shall be credited to or debited from, as the case may be, the Escrow Account.
- (b) All interest, if any, on the balances in the Escrow Account and interest or income received on account of investments related to Corpus Fund, if any, of such balances shall be credited to or deposited in the Escrow Account.
- (c) For the avoidance of doubt it is clarified that all incomes and revenues earned/received by Authority from its transport business, including the running and operation of its bus fleet or otherwise, and the Concession Fee and the Terminal Fee, if any, received by the Authority shall be retained and appropriated by Authority and shall not be deposited by it into the Escrow Account

3. DEPOSITS INTO ESCROW ACCOUNT

3.1 Deposits by the Concessionaire

- (a) The Concessionaire agrees, confirms and undertakes that it shall irrevocably deposit and/or credit the Escrow Account with the amount required to meet the Corpus fund as mentioned in the Concession Agreement, on the next Business Day as far as possible

but not later than the next following Business Day.

- (b) The Concessionaire may at any time make other deposits of its other funds into the Escrow Account, ***provided however that*** the provisions of this Agreement shall apply to such other funds deposited in the Escrow Account by the Concessionaire.

3.2 Proof of Receipts

- (a) The Concessionaire shall ensure that the proof of all receipts during a month is submitted to Authority and the Escrow Bank by the 7th day of the following month.
- (b) The Concessionaire shall be required to furnish to Authority and the Escrow Bank proof of receipts generated in relation to the Project prior to the opening of the Escrow Account, duly certified by its statutory auditors.
- (c) The Concessionaire shall, till such time as all such receivable/receipts referred to under sub-clause 3.2 (b) hereinabove are deposited in the manner mentioned therein, hold all such receivable/receipts in trust and such monies shall not be combined with any other funds or property of the Concessionaire and the Concessionaire shall not adjust, settle or compromise the amount or payment of such receivables/receipt or release wholly or partly any account debtors thereof or allow any credit or discount thereon.

3.3 Interest on Deposits

- (a) The Escrow Bank agrees and undertakes that all interest accruing on the balances of the Escrow Account shall be credited to the Escrow Account. The Escrow Bank shall maintain the Escrow Account in accordance with the terms of this Agreement and its usual practices and applicable regulations and pay the maximum rate of interest payable to its customers on the balance in the said Escrow Account from time to time.
- (b) The Escrow Bank shall ensure that all interest, if any, on the balances of the Escrow Account and interest or income on Authorised Investments made from the Escrow Account, as may be permitted by Authority, shall be credited to or deposited in the Escrow Account.

3.4 Shortfall in Escrow Account

In the event the amounts available in the Escrow Account at any point of time are less than the cash flow requirements pertaining to the O&M Expenditure for the Project, the Concessionaire shall make good such shortfall by crediting the requisite amounts in the Escrow Account

4. WITHDRAWALS FROM THE ESCROW ACCOUNT

4.1 Withdrawals during Concession Period for BPF

At the beginning of every month, or at such shorter intervals as the Authority and the

Concessionaire may by written instructions determine, the Escrow Bank shall withdraw amounts from the Escrow Account and appropriate them in the following order:

- (a) O&M expenses incurred by the Concessionaire for the Bus Port Facility (other than the Authority Facilities), directly or through O&M contractors, if any, subject to the items and conditions in respect thereof as set forth in the Financing Documents;
- (b) Subject to the provisions of the Concession Agreement, the balance in accordance with the instructions of the Concessionaire.

Provided that in the event Authority notifies the Escrow Bank of an Event of Default or Force Majeure Event under the Concession Agreement, the Escrow Bank shall forthwith restrict any payments from the Escrow Account till further notice from Authority.

4.2 Bank Proforma for payments

No later than 60 (sixty) days prior to the commencement of each financial Quarter of the Concession Period, the Concessionaire shall provide to the Escrow Bank, with prior written approval of Authority and through a Bank Proforma, details of the amounts likely to be required for each of the payment obligations set forth in this Clause 4.1; provided that such amounts may be subsequently modified with prior written approval of Authority if fresh information received during the course of the Quarter makes such modification necessary

4.3 Withdrawals upon Termination or Expiry

Notwithstanding anything to the contrary contained in this Agreement, upon the earlier of (i) Issue of Termination Notice; or (ii) Termination/determination of this Agreement; or (iii) The expiry of the Concession Period for BPF, all amounts standing to the credit of the Escrow Account shall be appropriated and dealt with in the following order:-

- (a) All accrued operation and maintenance expenses in respect of the Bus Port Facility (other than the Authority Facilities);
- (b) Subject to the provisions of the Concession Agreement, the balance, if any, on the instructions of the Concessionaire.

4.4 Withdrawals following Event of Default

If the Authority notifies the Escrow Bank that an Event of Default is likely to occur or has occurred, and is continuing, then, until such time as the Authority has notified the Escrow Bank that the Event of Default has been cured or waived under the Concession Agreement, the Escrow Bank shall only make withdrawals from the Escrow Account for Operations and Maintenance Expenditure and shall not make any payments from the Escrow Account to the Concessionaire Account.

5. AUTHORIZED INVESTMENTS

5.1 Power to Invest

The Escrow Bank shall, with the prior approval of Authority, invest, from time to time, the amounts standing to the credit of the Escrow Account in Authorised Investments on the instructions of the Concessionaire, in accordance with the provisions of the Agreement. For avoidance of doubt it is hereby clarified that the Escrow Bank shall neither be bound to nor shall make any investments under the Indian Trusts Act, 1882 without prior express approval of the Authority.

5.2 Procedure for Investments

- (a) All Authorised Investments shall be made and/or realized by the Escrow Bank on the instructions of the Concessionaire, as approved by the Authority from time to time, in accordance with the provisions of this Agreement.
- (b) All documents of title or other documentary evidence of ownership with respect to Authorized Investments made out of any Escrow Account will be held in the custody of the Escrow Bank.

5.3 Realizations

Upon the realization of any investment made under this Clause, the proceeds of such realization shall immediately be credited to the Escrow Account by the Escrow Bank or immediately invested in another Authorised Investment in accordance with the Concessionaire's instructions as approved by the Authority.

5.4 Mandatory Realizations

In the event that the Concessionaire becomes aware that any Authorised Investment has ceased to be an Authorised Investment, the Concessionaire shall immediately instruct the Escrow Bank on a best efforts basis to realize such Authorised Investment on its maturity date or earlier, if possible, under due and punctual intimation to the Authority.

5.5 Escrow Account includes Authorized Investments

Any reference in this Agreement to the balance standing to the credit of the Escrow Account shall be deemed to include a reference to the amount of the Authorized Investments in which all or part of such balance is for the time being invested.

5.6 Interest on Authorized Investments

Any interest or other income received on account of Authorized Investments shall be to the credit of the Escrow Account.

5.7 Enforcement Notice

On receipt of a notice of a Event of Default from the Authority, the Escrow Bank shall realize the Authorized Investments, whether such investments have matured or not on a best effort basis, and apply the proceeds as directed by Authority.

6. OBLIGATIONS OF THE ESCROW BANK

6.1 Escrow Bank as Trustee

The Concessionaire hereby appoints the Escrow Bank to act as trustee for, in the following order of priority, first of the Authority and lastly for or on behalf of the Concessionaire in connection herewith and authorizes the Escrow Bank to exercise such rights, powers, authorities and discretion as are delegated to the Escrow Bank by the terms hereof together with all such rights, powers, authorities and discretion as are reasonably incidental hereto, and the Escrow Bank accepts such appointment pursuant to the terms hereof.

6.2 Communications and Notices

In discharge of its dates and obligations hereunder, the Escrow Bank:

- (a) May, in the absence of bad faith or gross negligence on its part, rely as to any matters of fact which might reasonably be expected to be within the knowledge of the Concessionaire upon a certificate signed by or on behalf of the Concessionaire;
- (b) May, in the absence of bad faith or gross negligence on its part, rely upon the authenticity of any communication or documents believed by it to be authentic;
- (c) Shall, within five (5) Business Days after receipt, deliver a copy to the Authority of any notice or document received by the Escrow Bank in its capacity as the Escrow Bank from the Concessionaire or any other Person hereunder or in connection herewith; and
- (d) Maintain a register of in its office setting forth all receipts into the Escrow Account from whatever source and all withdrawals by the Concessionaire from this Account and all Authorised Investments and returns thereon and shall ensure that an account of inflows to and outflows from this account are furnished to Authority for each month by the 7th of the following month.

6.3 Segregation of Funds

Monies and other property received by the Escrow Bank under this Agreement shall, until used or applied in accordance with this Agreement, be held by the Escrow Bank in trust for the purpose for which they were received, and shall be segregated from other funds and property of the Escrow Bank.

6.4 Notification of balances

At least 7 (seven) business days prior to each Payment Date (and for this purpose the Escrow Bank shall be entitled in rely on an affirmation by the Concessionaire as to the relevant Payment Dates), the Escrow Bank shall notify the lenders Representative of the balances in the Escrow Account and Sub-Accounts as at the close of business on the immediately preceding business day.

6.5 Regulatory approvals

The Escrow Bank shall use its best efforts to procure, and thereafter, maintain and comply with, all regulatory approvals required for it to establish and operate the Escrow Account. The Escrow Bank represents and warrants that it is not aware of any reason why such regulatory approvals will not ordinarily be granted to the Escrow Bank.

7. ESCROW AGREEMENT DEFAULTS

7.1 Following events shall constitute an event of default by the Concessionaire (an “**Escrow Default**”) unless such event of default has occurred as a result of Force Majeure or any act or omission of the Authority and, following a notice of default from the Escrow Bank, the Concessionaire fails to remedy the same:

- (a) the Concessionaire commits breach of this Agreement by causing the Escrow Bank to transfer funds to any other Concessionaire Account in breach of the terms of this Agreement and failing to cure such breach by depositing the relevant funds into the Escrow Account in which such transfer should have been made within a Cure Period of five (5) Business Days of receipt of such notice.
- (b) the Concessionaire commits breach of its obligations under Clause 4, by instructing the Escrow Bank to realize any investment made in breach of Clause 4 and failing to cure such breach by revoking such instructions within five (5) Business Days of receipt of such notice;
- (c) In the case of any other breach, by remedying the same within five (5) Business Days to the satisfaction of the Authority;
- (d) In the case that the Concessionaire fails to provide to the Authority satisfactory evidence to show that all the amounts withdrawn by the Concessionaire from the Escrow Account are utilized exclusively for Operations and Maintenance of the Project; or
- (e) In case the Concessionaire diverts funds drawn from the Escrow Account to a project/activity/usage other than the Project.

7.2 Without prejudice to anything stated under this Agreement, the Concessionaire and the Escrow Bank agree and confirm that any default by either the Concessionaire or the Escrow Bank in the performance of their respective obligations under this Agreement resulting, in the opinion of the Authority, in a breach of this Agreement, shall qualify as an Event of Default under

the Financing Documents/Security Documents/Concession Agreement.

7.3 On occurrence of any event of default specified in this Clause 7, the Escrow Bank shall be obliged to immediately stop all disbursements to the Concessionaire from the Escrow Account and apply the balances from time to time standing to the credit of such account towards satisfaction of the obligations of the Concessionaire under the Concession Agreement and related agreements there under and ensure that the balances in such account are dealt with in accordance with the provision of Clause 4 hereof.

7.4 Upon occurrence of an Escrow Default, the consequences thereof shall be dealt with under and in accordance with the provisions of the Concession Agreement.

8. TERMINATION OF ESCROW AGREEMENT

8.1 Duration of the Agreement

This Agreement shall remain in full force and effect until the end of the Concession Period for BPF, unless terminated earlier by the mutual consent of the Parties or otherwise in accordance with the provisions hereof.

8.2 Substitution of the Escrow Bank

The Concessionaire may, by not less than 45 days prior notice to the Escrow Bank and the Authority, terminate this Agreement and appoint a new Escrow Bank, provided that the new Escrow Bank is acceptable to the Authority and arrangements are made satisfactory to the Authority for transfer of amounts deposited in the Escrow Account to a new Escrow Account established with the successor Escrow Bank.

8.3 Closure of Escrow Account

- (a) The Escrow Bank shall at the request of the Concessionaire made on or after the payment by the Concessionaire of all outstanding amounts under the Concession Agreement including the payments specified in Clause 4 hereinabove, and upon confirmation of receipt of such payments, close the Escrow Account and pay any amount standing to the credit thereof to the Concessionaire. Upon closure of the Escrow Account hereunder, the Escrow Agreement shall be deemed to be terminated.
- (b) Notwithstanding anything to the contrary contained in this Agreement, this Agreement shall remain in full force and effect until the end of the Concession Period; provided, however, if Authority shall certify to the Escrow Bank that the Concession Agreement and/or the Concession has been terminated on account of default of the Concessionaire under this Agreement, then notwithstanding anything to the contrary contained herein, all the amounts standing to the credit of the Escrow Account shall be dealt with in accordance with provisions of Clause 4.

9. CONCESSIONAIRE'S OBLIGATIONS AND COVENANTS

9.1 In addition to other obligations of the Concessionaire set forth in this Agreement and the Concession Agreement, the Concessionaire agrees and undertakes that:

- (a) The Concessionaire shall, in addition to any other books and accounts, maintain in the ordinary course of business the complete and accurate record of all the deposits into and permitted withdrawals from the Escrow Account, the utilisation of the withdrawals and the Authorised Investments and submit monthly statements thereto to the Escrow Bank and the Authority. All such books, records, accounts, documents and instruments relating to the Project/Escrow Account shall be open to inspection by the Escrow Bank and the Authority.
- (b) The Concessionaire shall be responsible for monitoring all accretions, deposits made into and the payments/transfers from the Escrow Account. In the event of a shortage of funds in the Escrow Account, the Concessionaire shall promptly and in any case within three Business Days of the occurrence or knowledge thereof fund such shortfall or likely shortfall in the Escrow Account out of its own sources and also advise the Escrow Bank of any instance/incident which is likely to have a bearing/affect on the Escrow Account and its operation;
- (c) In the event the Concessionaire is unable to complete the Project for any reason whatsoever, it shall make arrangements to bring the requisite investments/monies for timely completion of the Project from its own resources.

9.2 The Authority shall not be liable in any manner whatsoever to any person, including without limitation the Concessionaire, the Lenders, the applicants, allottee, the lessees, their lenders or persons claiming through or under either of them, for any acts or defaults of the Concessionaire, the Escrow Bank or otherwise. The Concessionaire shall ensure that its written agreements with and communications to the applicants/allottees/lessees clearly set out this condition.

10. INDEMNITY

10.1 General indemnity

- (a) The Concessionaire will indemnify, defend and hold Authority and Escrow Bank harmless against any and all proceedings, actions and third party claims for any loss, damage, Cost and expense arising out of any breach by the Concessionaire of any of its obligations under this Agreement or on account of failure of the Concessionaire to-comply with Applicable Laws and Applicable Permits.
- (b) Authority will indemnify, defend and hold the Concessionaire harmless against any and all proceedings, actions and third party claims for any loss, damage, cost and expense arising omit of failure of Authority to fulfill any of its obligations under this Agreement materially and adversely affecting the performance of the

Concessionaire's obligations under the Concession Agreement or this Agreement other than any loss, damage, cost and expense arising out of acts done in discharge of their lawful functions by Authority, its officers, servants and agents.

- (c) The Escrow Bank will indemnify, defend and hold the Concessionaire harmless against any and all proceedings, actions and third party claims for any loss, damage cost and expense arising out of failure of the Escrow Bank to fulfill its obligations under this Agreement materially and adversely affecting the performance of the Concessionaire's obligations under the Concession Agreement other than any loss, damage, cost and expense, arising out of acts done in discharge of their lawful functions by the Escrow Bank, its officers, servants and agents.

10.2 Notice and contest of claims

In the event that any Party hereto receives a claim from a third party in respect of which it is entitled to the benefit of an Indemnity under Clause 10.1 or in respect of which it is entitled to reimbursement (the "**Indemnified Party**"), it shall notify the other Party responsible for indemnify such claim hereunder (the "**Indemnifying Party**"), within 15 (fifteen) days of receipt of the claim and shall not settle or pay the claim without the prior approval of the Indemnified Party, which approval shall not be unreasonably withheld or delayed. In the event that the Indemnifying Party wishes to contest or dispute the claim, it may conduct the proceedings in the name of the Indemnified Party and shall bear all costs involved in contesting the same. The Indemnified Party shall provide all cooperation and assistance in contesting any claim and shall sign all such writings and documents as the Indemnifying Party may reasonably require.

11. DISPUTE RESOLUTION

11.1 Dispute Resolution

- (a) Any dispute, difference or claim arising out of or in connection with this Agreement, which is not resolved amicably, shall be decided finally by reference to arbitration to a Board of Arbitrators comprising one nominee of each Party to the dispute, and where the number of such nominees is an even number, the nominees shall elect another person to such Board. Such arbitration shall be held in accordance with the Rules of Arbitration of the International Centre for Alternative Dispute Resolution, New Delhi (the Rules) or such other rules as may be mutually agreed by the Parties, and shall be subject to the provisions of the Arbitration and Conciliation Act, 1996.
- (b) The Arbitrators shall issue a reasoned award and such award shall be final and binding on the Parties. The venue of arbitration shall be Delhi and the language of arbitration shall be English.

12. MISCELLANEOUS

12.1 Successors and Assignors

This Agreement shall be binding on and shall ensure to the benefit of the Parties and

their respective nominees, successors and permitted assigns/assigns, as the case may be.

12.2 No Set Off

The Escrow Bank agrees not to claim or exercise any right of set off, banker's lien or other right or remedy with respect to amounts standing to the credit of the Escrow Account. For the avoidance of doubt, it is declared by the Escrow Bank that the monies and properties held by the Escrow Bank shall not be considered as part of the assets of the Escrow Bank and being trust property, shall in the case of bankruptcy or liquidation of the Escrow Bank be wholly excluded from the assets of the Escrow Bank in such bankruptcy or liquidation.

12.3 Notices

- (a) All notices or other communications to be given or made under this Agreement shall be in writing, shall either be delivered personally or sent by courier, registered or certified mail or facsimile. The address for service of each Party and its facsimile number is set out under its name on the signing pages hereto. All notices shall be effective upon actual receipt save that where a notice is received after 5.30 p.m. on a Business Day or on a day that is not a Business Day, such notice shall be deemed to be received on the first Business Day following the date of actual receipt. Without prejudice to the foregoing a Party giving or making a notice or communication by facsimile shall promptly deliver a copy of such notice or communication personally, by courier or mail to the addressee of such notice or communication.
- (b) Any party may by notice change the addresses and/or addresses to which such notices and communications to it are to be delivered or mailed. Such change shall be effective when all the Parties have notice of it.

12.4 Waiver

Failure by any Party at any time to enforce any provision of this Agreement or to require performance by other Parties of any provision of this Agreement shall not be construed as a waiver of such provision and shall not affect the validity of this Agreement or any part of it or right of the relevant Party to enforce any provision in accordance with its terms. All remedies available to the Parties under this Agreement, the Applicable Laws or otherwise, shall be cumulative; may be enforced successively or concurrently and the exercise or failure to exercise one or more remedies by any Party shall not limit or preclude the exercise of or constitute a waiver of any other remedies by such Party.

12.5 Severability

If any condition, Clause or provision of this Agreement not being of a fundamental nature, is held to be illegal or unenforceable, the validity or enforceability of the remainder of this Agreement shall not be affected thereby.

12.6 Amendments

No amendment to this Agreement shall be binding unless in writing and signed by the duly authorized representatives of the Parties.

12.7 Governing Law & Language

This Agreement shall be governed by and construed in accordance with laws of India, and the Courts at Delhi shall have jurisdiction over all matters arising out of or relating to this Agreement.

The language of this Agreement is English. All written and printed matter, communications, documentation, proceedings and notices etc. pursuant or relevant to this Agreement shall be in the English language.

12.8 Concession Agreement

The Parties shall comply with their respective obligations under the Concession Agreement in relation to the Escrow Account.

12.9 Priority of agreements

In the event of any conflict between the Concession Agreement and this Agreement, the provisions contained in the Concession Agreement shall prevail over this Agreement.

12.10 Original Document

This Agreement may be executed in four counterparts, each of which when executed and delivered shall constitute an original of this Agreement.

IN WITNESS WHEREOF THE PARTIES HAVE EXECUTED AND DELIVERED THIS AGREEMENT AS OF THE DATE FIRST ABOVE WRITTEN.

SIGNED, SEALED AND DELIVERED

For and on behalf of Concessionaire by:

[THE COMMON SEAL OF.....

Has pursuant to the Resolution

Of its Board of Directors passed in That behalf on the

.....day of201__

Hereunto been affixed in the presence of

.....and.....

Directors who have signed these Presents in token thereof and Secretary/authorized Person who has countersigned the Same in token thereof]

(Signature)

(Name)

(Designation)

Address:

Fax:

Attn:

SIGNED SEALED AND DELIVERED
For and on behalf of Authority by:

(Signature)

(Name)

(Designation)

Address:

Fax:

Attn:

SIGNED, SEALED AND DELIVERED by
..... **Within named Escrow Bank**
By the hand of

An authorized official of the Account Trustee

(Signature)

(Name)

(Designation)

Address:

Fax Number:

Attention:.....

In the presence of:[Two witnesses for each signatory]

(1) _____ (Signature)	(2) _____ (Signature)
_____ (Name)	_____ (Name)
_____ (Designation)	_____ (Designation)
_____ (Address)	_____ (Address)

SCHEDULE T: Panel of Chartered Accountants

1 Panel of Chartered Accountants

Pursuant to the provisions of Clause 33.2.1 of the Agreement, the Authority and the Concessionaire shall prepare a mutually agreed panel of 10 (ten) reputable firms of Chartered Accountants having their registered offices in India (the “**Panel of Chartered Accountants**”). The criteria for preparing such Panel and the procedure to be adopted in this behalf shall be as set forth in this Schedule-T.

2 Invitation for empanelment

2.1 The Authority shall invite offers from all reputable firms of Chartered Accountants who fulfil the following eligibility criteria, namely:

- (a) the firm should have conducted statutory audit of the annual accounts of at least one hundred companies registered under the Companies Act, 1956, of which at least ten should have been public sector undertakings;
- (b) the firm should have at least 5 (five) practising Chartered Accountants on its rolls, each with a minimum experience of ten years in the profession;
- (c) the firm or any of its partners should not have been disqualified or black-listed by the Comptroller and Auditor General of India or the Authority; and
- (d) the firm should have an office in the State or in an adjacent State with at least 2 (two) practising Chartered Accountants on its rolls in such State.

2.2 Interested firms meeting the eligibility criteria shall be required to submit a statement of their capability including the bio-data of all the practising Chartered Accountants on its rolls. In particular, each firm shall be required to furnish year- wise information relating to the names of all the companies with an annual turnover exceeding Rs. 100,00,00,000 (Rs. one hundred crore) whose annual accounts were audited by such firm in any of the preceding 5 (five) Accounting Years.

3 Evaluation and selection

3.1 The information furnished by each firm shall be scrutinised and evaluated by the Authority and 1 (one) point shall be awarded for each annual audit of the companies specified in Paragraph 2.2 above. (For the avoidance of doubt, a firm which has conducted audit of the annual accounts of any such company for five years shall be awarded five points).

- 3.2 The Authority shall prepare a list of all the eligible firms along with the points scored by each such firm and 10 (ten) firms scoring the highest points shall be identified and included in the draft Panel of Chartered Accountants.

4 Consultation with the Concessionaire

The Authority shall convey the aforesaid panel of firms to the Concessionaire for scrutiny and comments, if any. The Concessionaire shall be entitled to scrutinise the relevant records of the Authority to ascertain whether the selection of firms has been undertaken in accordance with the prescribed procedure and it shall send its comments, if any, to the Authority within 15 (fifteen) days of receiving the aforesaid panel.

5 Mutually agreed panel

- 5.1 The Authority shall, after considering all relevant factors including the comments, if any, of the Concessionaire, finalise and constitute a panel of 10 (ten) firms which shall be deemed to be the mutually agreed Panel of Chartered Accountants.
- 5.2 After completion of every five years from the date of preparing the mutually agreed Panel of Chartered Accountants, or such earlier period as may be agreed between the Authority and the Concessionaire, a new panel shall be prepared in accordance with the provisions of this Schedule –T.

SCHEDULE U: Vesting Certificate

1. National Highways & Infrastructure Development Corporation Limited, having its office at PTI Building, 4 Parliament Street, Sansad Marg Area, New Delhi, 110001, (the "Authority") refers to the Agreement dated _____ (the "**Agreement**") entered into between the Authority and _____ (the "**Concessionaire**") for development of Bus Port with Commercial Facilities at Ramnagar (the "**Project**") on design build, finance, operate and transfer ("**DBFOT**") basis.
2. The Authority hereby acknowledges compliance and fulfilment by the Concessionaire of the divestment requirements set forth in Clause 14.6 of the Agreement on the basis that upon issue of this Vesting Certificate, the Authority shall be deemed to have acquired, and all title and interest of the Concessionaire in or about the Project shall be deemed to have vested unto the Authority, free from any encumbrances, charges and liens whatsoever.
3. Notwithstanding anything to the contrary contained hereinabove, it shall be a condition of this Vesting Certificate that nothing contained herein shall be construed or interpreted as waiving the obligation of the Concessionaire to rectify and remedy any defect or deficiency in any of the divestment requirements and/or relieving the Concessionaire in any manner of the same.

Signed this ____ day of _____, 20__ at [_____].

AGREED, ACCEPTED AND SIGNED SIGNED, SEALED AND DELIVERED

For and on behalf of

For and on behalf of

CONCESSIONAIRE by:

Authority by

(Signature)

(Signature)

(Name)

(Name)

(Designation)

(Designation)

(Address)

(Address)

In the presence of:

(1) _____ (Signature)

(2) _____ (Signature)

_____ (Name)

_____ (Name)

_____ (Designation)

_____ (Designation)

_____ (Address)

_____ (Address)

SCHEDULE V: Substitution Agreement

See Clause 40.3.1)

THIS SUBSTITUTION AGREEMENT is entered into on this the day of 20....

AMONGST

1. National Highways & Infrastructure Development Corporation Limited, having its office at PTI Building, 4 Parliament Street, Sansad Marg Area, New Delhi, 110001 (hereinafter referred as "**NHIDCL**" or "**Authority**", which expression shall, unless the context otherwise requires, include its successors and assigns);
- 2 LIMITED, a company incorporated under the provisions of the Companies Act, 2013 and having its registered office at, (hereinafter referred to as the "**Concessionaire**" which expression shall unless repugnant to the context or meaning thereof include its successors and permitted assigns and substitutes);
- 3name and particulars of Lenders' Representative and having its registered office at, acting for and on behalf of the Senior Lenders as their duly authorised agent with regard to matters arising out of or in relation to this Agreement (hereinafter referred to as the "**Lenders' Representative**", which expression shall unless repugnant to the context or meaning thereof include its successors and substitutes);

WHEREAS:

- (A) The Authority has entered into a Concession Agreement dated with the Concessionaire (the "**Concession Agreement**") for Development of Bus Port at Ramnagar.in the State of Uttarakhand to be executed on design, build, finance, operate and transfer basis (DBFOT), and a copy of which is annexed hereto and marked as Annex-A to form part of this Agreement.
- (B) Senior Lenders have agreed to finance the Project in accordance with the terms and conditions set forth in the Financing Agreements.
- (C) Senior Lenders have requested the Authority to enter into this Substitution Agreement for securing their interests through assignment, transfer and substitution of the Concession to a Nominated Company in accordance with the provisions of this Agreement and the Concession Agreement.

- (D) In order to enable implementation of the Project including its financing, construction, operation and maintenance, the Authority has agreed and undertaken to transfer and assign the Concession to a Nominated Company in accordance with the terms and conditions set forth in this Agreement and the Concession Agreement.

NOW IT IS HEREBY AGREED as follows:

1 DEFINITIONS AND INTERPRETATION

1.1 Definitions

In this Substitution Agreement, the following words and expressions shall, unless repugnant to the context or meaning thereof, have the meaning hereinafter respectively assigned to them:

“Agreement” means this Substitution Agreement and any amendment thereto made in accordance with the provisions contained in this Agreement;

“Financial Default” means occurrence of a material breach of the terms and conditions of the Financing Agreements or a continuous default in Debt Service by the Concessionaire for a minimum period of 3 (three) months;

“Lenders’ Representative” means the person referred to as the Lenders’ Representative in the foregoing Recitals;

“Nominated Company” means a (i) company selected by the Lenders’ Representative and proposed to the Authority for substituting the Concessionaire in accordance with the provisions of the Substitution Agreement or (ii) wherever the Selected Bidder/Consortium Members of the Concessionaire are sought to be substituted in accordance Clause 3A of this Agreement, the Concessionaire itself;

“Notice of Financial Default” shall have the meaning ascribed thereto in Clause 3.2.1; and

“Parties” means the parties to this Agreement collectively and “Party” shall mean any of the Parties to this Agreement individually.

1.2 Interpretation

- 1.2.1 References to Lenders’ Representative shall, unless repugnant to the context or meaning thereof, mean references to the Lenders’ Representative, acting for and on behalf of Senior Lenders.

- 1.2.2 References to Clauses are, unless stated otherwise, references to Clauses of this Agreement.
- 1.2.3 The words and expressions beginning with capital letters and defined in this Agreement shall have the meaning ascribed thereto herein, and the words and expressions used in this Agreement and not defined herein but defined in the Concession Agreement shall, unless repugnant to the context, have the meaning ascribed thereto in the Concession Agreement.
- 1.2.4 The rules of interpretation stated in Clauses 1.2, 1.3 and 1.4 of the Concession Agreement shall apply, *mutatis mutandis*, to this Agreement.

2 ASSIGNMENT

2.1 Assignment of rights and title

The Concessionaire hereby assigns the rights, title and interest in the Concession to, and in favour of, the Lenders' Representative pursuant to and in accordance with the provisions of this Agreement and the Concession Agreement by way of security in respect of financing by the Senior Lenders under the Financing Agreements.

3 SUBSTITUTION OF THE CONCESSIONAIRE

3.1 Rights of substitution

- 3.1.1 Pursuant to the rights, title and interest assigned under Clause 2.1, the Lenders' Representative shall be entitled to substitute the Concessionaire by a Nominated Company under and in accordance with the provisions of this Agreement and the Concession Agreement.
- 3.1.2 The Authority hereby agrees to substitute the Concessionaire by endorsement on the Concession Agreement in favour of the Nominated Company selected by the Lenders' Representative in accordance with this Agreement. (For the avoidance of doubt, the Senior Lenders or the Lenders' Representative shall not be entitled to operate and maintain the Project Highway as Concessionaire either individually or collectively).

3.2 Substitution upon occurrence of Financial Default

- 3.2.1 Upon occurrence of a Financial Default, the Lenders' Representative may issue a notice to the Concessionaire (the "**Notice of Financial Default**") along with particulars thereof, and send a copy to the Authority for its information and record. A Notice of Financial Default under this Clause 3 shall be conclusive evidence of such Financial Default and it shall be final and binding upon the Concessionaire for the purposes of this

Agreement.

- 3.2.2 Upon issue of a Notice of Financial Default hereunder, the Lenders' Representative may, without prejudice to any of its rights or remedies under this Agreement or the Financing Agreements, substitute the Concessionaire by a Nominated Company in accordance with the provisions of this Agreement.
- 3.2.3 At any time after the Lenders' Representative has issued a Notice of Financial Default, it may by notice require the Authority to suspend all the rights of the Concessionaire and undertake the operation and maintenance of the Project Bus Port in accordance with the provisions of Article 36 of the Concession Agreement, and upon receipt of such notice, the Authority shall undertake Suspension under and in accordance with the provisions of the Concession Agreement. The aforesaid Suspension shall be revoked upon substitution of the Concessionaire by a Nominated Company, and in the event such substitution is not completed within 180 (one hundred and eighty) days from the date of such Suspension, the Authority may terminate the Concession Agreement forthwith by issuing a Termination Notice in accordance with the provisions of the Concession Agreement; provided that upon written request from the Lenders' Representative and the Concessionaire, the Authority may extend the aforesaid period of 180 (one hundred and eighty) days by a period not exceeding 90 (ninety) days.

3.3 Substitution upon occurrence of Concessionaire Default

- 3.3.1 Upon occurrence of a Concessionaire Default, the Authority shall by a notice inform the Lenders' Representative of its intention to issue a Termination Notice and grant 15 (fifteen) days time to the Lenders' Representative to make a representation, stating the intention to substitute the Concessionaire by a Nominated Company.
- 3.3.2 In the event that the Lenders' Representative makes a representation to the Authority within the period of 15 (fifteen) days specified in Clause 3.3.1, stating that it intends to substitute the Concessionaire by a Nominated Company, the Lenders' Representative shall be entitled to undertake and complete the substitution of the Concessionaire by a Nominated Company in accordance with the provisions of this Agreement within a period of 180 (one hundred and eighty) days from the date of such representation, and the Authority shall either withhold Termination or undertake sSuspension for the aforesaid period of 180 (one hundred and eighty) days; provided that upon written request from the Lenders' Representative and the Concessionaire, the Authority shall extend the aforesaid period of 180 (one hundred and eighty) days by a period not exceeding 90 (ninety) days.

3.4 Procedure for substitution

- 3.4.1 The Authority and the Concessionaire hereby agree that on or after the date of Notice of Financial Default or the date of representation to the Authority under Clause 3.3.2, as the case may be, the Lenders' Representative may, without prejudice to any of the other

rights or remedies of the Senior Lenders, invite, negotiate and procure offers, either by private negotiations or public auction or tenders for the take over and transfer of the Project Bus Port including the Concession to the Nominated Company upon such Nominated Company's assumption of the liabilities and obligations of the Concessionaire towards the Authority under the Concession Agreement and towards the Senior Lenders under the Financing Agreements.

3.4.2 To be eligible for substitution in place of the Concessionaire, the Nominated Company shall be required to fulfil the eligibility criteria that were laid down by the Authority for shortlisting the bidders for award of the Concession; provided that the Lenders' Representative may represent to the Authority that all or any of such criteria may be waived in the interest of the Project, and if the Authority determines that such waiver shall not have any material adverse effect on the Project, it may waive all or any of such eligibility criteria.

3.4.3 Upon selection of a Nominated Company, the Lenders' Representative shall request the Authority to:

- (a) accede to transfer to the Nominated Company the right to construct, operate and maintain the Project Bus Port in accordance with the provisions of the Concession Agreement;
- (b) endorse and transfer the Concession to the Nominated Company, on the same terms and conditions, for the residual Concession Period; and
- (c) enter into a Substitution Agreement with the Lenders' Representative and the Nominated Company on the same terms as are contained in this Agreement.

3.4.4 If the Authority has any objection to the transfer of Concession in favour of the Nominated Company in accordance with this Agreement, it shall within 15 (fifteen) days from the date of proposal made by the Lenders' Representative, give a reasoned order after hearing the Lenders' Representative. If no such objection is raised by the Authority, the Nominated Company shall be deemed to have been accepted. The Authority thereupon shall transfer and endorse the Concession within 15 (fifteen) days of its acceptance/deemed acceptance of the Nominated Company; provided that in the event of such objection by the Authority, the Lenders' Representative may propose another Nominated Company whereupon the procedure set forth in this Clause 3.4 shall be followed for substitution of such Nominated Company in place of the Concessionaire.

3.5 Selection to be binding

The decision of the Lenders' Representative and the Authority in selection of the Nominated Company shall be final and binding on the Concessionaire. The

Concessionaire irrevocably agrees and waives any right to challenge the actions of the Lenders' Representative or the Senior Lenders or the Authority taken pursuant to this Agreement including the transfer/assignment of the Concession in favour of the Nominated Company. The Concessionaire agrees and confirms that it shall not have any right to seek revaluation of assets of the Project or the Concessionaire's shares. It is hereby acknowledged by the Parties that the rights of the Lenders' Representative are irrevocable and shall not be contested in any proceedings before any court or Authority and the Concessionaire shall have no right or remedy to prevent, obstruct or restrain the Authority or the Lenders' Representative from effecting or causing the transfer by substitution and endorsement of the Concession as requested by the Lenders' Representative.

3A. PROCEDURE FOR HARMONIOUS SUBSTITUTION OF CONCESSIONAIRE

For the purpose of the harmonious substitution as detailed herein, an event of "Financial Default" as defined shall be deemed to include situations where the Authority and / or the Senior Lenders have reasons to apprehend, in their considered opinion, that the Concessionaire is likely to face financial distress and is likely to default in the compliance of the terms of the Concession. For the purpose of the harmonious substitution as detailed herein, the term "Nominated Company" shall mean, wherever the Selected Bidder/Consortium Members of the project SPVs/ are sought to be substituted, the current SPV company itself.

Parties therefore agree to following:-

3A.1. Provisions pertaining to substitution of the Concessionaire by the Lenders Representative are contained in Article 40.3 read with the Substitution Agreement set forth in Schedule-V and Article 3.1.1 of the Substitution Agreement in particular Article 3.2 and Article 3.3 of the Substitution Agreement provide for substitution in the event of Financial Default and Concessionaire's Default respectively. It is further clarified that Right of Substitution by the Lender's Representative can be exercised in situations other than those illustrated in Clause 3.2 and Clause 3.3 of the Substitution Agreement. In cases of harmonious substitution as envisaged herein, the provisions contained in Article 3.4 of the Substitution Agreement shall be applicable, and in addition the procedure laid down hereunder shall be applicable.

- a. The Concessionaire shall make a written representation to the Lender's Representative with a copy to the Authority requesting the Lender's Representative to seek approval of the Authority for Substitution. Upon receiving the said request, the Lender's Representative shall make its own assessment regarding the said request and upon being satisfied that it will be in the interest of the Project that the Substitution be effected, Lender's Representative in consultation with the Concessionaire would invite, negotiate

and procure offers either by private negotiations or public auction or tenders, for the said Substitution as defined herein.

- b. Selection of the substitute (company or the Selected bidder/ Consortium Members of such project SPV) and the valuation of the Equity of the Concessionaire would be determined by the Concessionaire and Lenders.
- c. Upon receiving the proposal of the Lender's Representative, the Authority shall satisfy itself about the credentials of the Nominated Company or of the substitute to the Selected bidder/Consortium Members of such projects and accord its concurrence regarding such substitution considering the following.
 - i. In the event that COD has been achieved, the substituting entity should have adequate experience of operating and maintaining completed bus port projects by itself or through its associates/subsidiaries.
 - ii. In the event that COD is yet to be achieved, the substituting entity should have the requisite financial and technical qualifications to bid for a project of at least the same size.

Thereafter, (where the substitution entity is a new company), the nominated company will form an SPV for taking over the project along with all the rights and obligations of the concessionaire under the Concession Agreement.

- d. While concurring with the said proposal of the Lender's Representative, Authority, in its sole discretion, may levy an appropriate penalty not exceeding 1% (one per cent) of the Total Project Cost keeping in view the nature and extent of default as per the procedure to be prescribed for the purpose by the Authority. Provided that no penalty shall be levied on the Concessionaire for non-fulfilment of its obligations where the responsibility for delay in execution or completion for the project is on account of non-fulfilment or delay in fulfillment of the obligations of the Authority, namely, land acquisition, environmental clearances, other statutory/regulatory approvals/ clearances, as the case may be. The Authority shall cure such defaults before the signing of substitution agreement.
- e. Subsequent to such substitution, the Concessionaire shall ensure compliance to the Article 5.3 and Article 7.1 (k) read with the definition of "Change in Ownership" under Article 48.
- f. The Procedure prescribed under other Articles of the Concession Agreement and the Substitution Agreement, except to the extent of this harmonious substitution specified herein, shall be applicable.
- g. The Authority shall stand fully discharged of any claims whatsoever, by the existing Concessionaire where the substitution entity is a new company.

- h. Such substitution is permitted only once during construction Period

4 PROJECT AGREEMENTS

4.1 Substitution of Nominated Company in Project Agreements

The Concessionaire shall ensure and procure that each Project Agreement contains provisions that entitle the Nominated Company to step into such Project Agreement, in its discretion, in place and substitution of the Concessionaire in the event of such Nominated Company's assumption of the liabilities and obligations of the Concessionaire under the Concession Agreement.

5 TERMINATION OF CONCESSION AGREEMENT

5.1 Termination upon occurrence of Financial Default

At any time after issue of a Notice of Financial Default, the Lenders' Representative may by a notice in writing require the Authority to terminate the Concession Agreement forthwith, and upon receipt of such notice, the Authority shall undertake Termination under and in accordance with the provisions of Article 37 of the Concession Agreement.

5.2 Termination when no Nominated Company is selected

In the event that no Nominated Company acceptable to the Authority is selected and recommended by the Lenders' Representative within the period of 180 (one hundred and eighty) days or any extension thereof as set forth in Clause 3.3.2, the Authority may terminate the Concession Agreement forthwith in accordance with the provisions thereof.

5.3 Realisation of Debt Due

The Authority and the Concessionaire hereby acknowledge and agree that, without prejudice to their any other right or remedy, the Lenders' Representative is entitled to receive from the Concessionaire, without any further reference to or consent of the Concessionaire, the Debt Due upon Termination of the Concession Agreement. For realisation of the Debt Due, the Lenders' Representative shall be entitled to make its claim from the Escrow Account in accordance with the provisions of the Concession Agreement and the Escrow Agreement.

6 DURATION OF THE AGREEMENT

6.1 Duration of the Agreement

This Agreement shall come into force from the date hereof and shall expire at the earliest to occur of the following events:

- (a) Termination of the Agreement; or
- (b) no sum remains to be advanced, or is outstanding to the Senior Lenders, under the Financing Agreements.

7 INDEMNITY

7.1 General indemnity

7.1.1 The Concessionaire will indemnify, defend and hold the Authority and the Lenders' Representative harmless against any and all proceedings, actions and third party claims for any loss, damage, cost and expense of whatever kind and nature arising out of any breach by the Concessionaire of any of its obligations under this Agreement or on account of failure of the Concessionaire to comply with Applicable Laws and Applicable Permits.

7.1.2 The Authority will indemnify, defend and hold the Concessionaire harmless against any and all proceedings, actions and third party claims for any loss, damage, cost and expense arising out of failure of the Authority to fulfil any of its obligations under this Agreement, materially and adversely affecting the performance of the Concessionaire's obligations under the Concession Agreement or this Agreement, other than any loss, damage, cost and expense, arising out of acts done in discharge of their lawful functions by the Authority, its officers, servants and agents.

7.1.3 The Lenders' Representative will indemnify, defend and hold the Concessionaire harmless against any and all proceedings, actions and third party claims for any loss, damage, cost and expense arising out of failure of the Lenders' Representative to fulfil its obligations under this Agreement, materially and adversely affecting the performance of the Concessionaire's obligations under the Concession Agreement, other than any loss, damage, cost and expense, arising out of acts done in discharge of their lawful functions by the Lenders' Representative, its officers, servants and agents.

7.2 Notice and contest of claims

In the event that any Party hereto receives a claim from a third party in respect of which it is entitled to the benefit of an indemnity under Clause 7.1 or in respect of which it is entitled to reimbursement (the "**Indemnified Party**"), it shall notify the other Party

responsible for indemnifying such claim hereunder (the “**Indemnifying Party**”) within 15 (fifteen) days of receipt of the claim and shall not settle or pay the claim without the prior approval of the Indemnifying Party, such approval not to be unreasonably withheld or delayed. In the event that the Indemnifying Party wishes to contest or dispute the claim, it may conduct the proceedings in the name of the Indemnified Party and shall bear all costs involved in contesting the same. The Indemnified Party shall provide all cooperation and assistance in contesting any claim and shall sign all such writings and documents as the Indemnifying Party may reasonably require.

8 DISPUTE RESOLUTION

8.1 Dispute resolution

- 8.1.1 Any dispute, difference or claim arising out of or in connection with this Agreement which is not resolved amicably shall be decided by reference to arbitration to a Board of Arbitrators comprising one nominee each of the Authority, Concessionaire and the Lenders’ Representative. Such arbitration shall be held in accordance with the Rules of Arbitration of the International Centre for Alternative Dispute Resolution, New Delhi (the “Rules”) or such other rules as may be mutually agreed by the Parties, and shall be subject to provisions of the Arbitration and Conciliation Act, 1996.
- 8.1.2 The Arbitrators shall issue a reasoned award and such award shall be final and binding on the Parties. The venue of arbitration shall be Delhi and the language of arbitration shall be English.

9 MISCELLANEOUS PROVISIONS

9.1 Governing law and jurisdiction

This Agreement shall be construed and interpreted in accordance with and governed by the laws of India, and the Courts at Delhi shall have jurisdiction over all matters arising out of or relating to this Agreement.

9.2 Waiver of sovereign immunity

The Authority unconditionally and irrevocably:

- (a) agrees that the execution, delivery and performance by it of this Agreement constitute commercial acts done and performed for commercial purpose;
- (b) agrees that, should any proceedings be brought against it or its assets, property or revenues in any jurisdiction in relation to this Agreement or any transaction contemplated by this Agreement, no immunity (whether by reason of sovereignty or otherwise) from such proceedings shall be claimed by or on behalf

of the Authority with respect to its assets;

- (c) waives any right of immunity which it or its assets, property or revenues now has, may acquire in the future or which may be attributed to it in any jurisdiction; and
- (d) consents generally in respect of the enforcement of any judgement or award against it in any such proceedings to the giving of any relief or the issue of any process in any jurisdiction in connection with such proceedings (including the making, enforcement or execution against it or in respect of any assets, property or revenues whatsoever irrespective of their use or intended use of any order or judgement that may be made or given in connection therewith).

9.3 Priority of agreements

In the event of any conflict between the Concession Agreement and this Agreement, the provisions contained in the Concession Agreement shall prevail over this Agreement.

9.4 Alteration of terms

All additions, amendments, modifications and variations to this Agreement shall be effectual and binding only if in writing and signed by the duly authorised representatives of the Parties.

9.5 Waiver

9.5.1 Waiver by any Party of a default by another Party in the observance and performance of any provision of or obligations under this Agreement:

- (a) shall not operate or be construed as a waiver of any other or subsequent default hereof or of other provisions of or obligations under this Agreement;
- (b) shall not be effective unless it is in writing and executed by a duly authorised representative of the Party; and
- (c) shall not affect the validity or enforceability of this Agreement in any manner.

9.5.2 Neither the failure by either Party to insist on any occasion upon the performance of the terms, conditions and provisions of this Agreement or any obligation thereunder nor time or other indulgence granted by a Party to another Party shall be treated or deemed as waiver of such breach or acceptance of any variation or the relinquishment of any such right hereunder.

9.6 No third party beneficiaries

This Agreement is solely for the benefit of the Parties and no other person or entity shall have any rights hereunder.

9.7 Survival

9.7.1 Termination of this Agreement:

- (a) shall not relieve the Parties of any obligations hereunder which expressly or by implication survive termination hereof; and
- (b) except as otherwise provided in any provision of this Agreement expressly limiting the liability of either Party, shall not relieve either Party of any obligations or liabilities for loss or damage to the other Party arising out of or caused by acts or omissions of such Party prior to the effectiveness of such termination or arising out of such termination.

9.7.2 All obligations surviving the cancellation, expiration or termination of this Agreement shall only survive for a period of 3 (three) years following the date of such termination or expiry of this Agreement.

9.8 Severability

If for any reason whatever any provision of this Agreement is or becomes invalid, illegal or unenforceable or is declared by any court of competent jurisdiction or any other instrumentality to be invalid, illegal or unenforceable, the validity, legality or enforceability of the remaining provisions shall not be affected in any manner, and the Parties will negotiate in good faith with a view to agreeing to one or more provisions which may be substituted for such invalid, unenforceable or illegal provisions, as nearly as is practicable to such invalid, illegal or unenforceable provision. Failure to agree upon any such provisions shall not be subject to dispute resolution under Clause 8 of this Agreement or otherwise.

9.9 Successors and assigns

This Agreement shall be binding on and shall inure to the benefit of the Parties and their respective successors and permitted assigns.

9.10 Notices

All notices or other communications to be given or made under this Agreement shall be in writing, shall either be delivered personally or sent by courier or registered post with an additional copy to be sent by facsimile or e-mail. The address for service of each

Party, its facsimile number and e-mail address are set out under its name on the signing pages hereto. A notice shall be effective upon actual receipt thereof, save that where it is received after 5.30 (five thirty) p.m. on any day, or on a day that is a public holiday, the notice shall be deemed to be received on the first working day following the date of actual receipt. Without prejudice to the foregoing, a Party giving or making a notice or communication by facsimile or e-mail shall promptly deliver a copy thereof personally, or send it by courier or registered post to the addressee of such notice or communication. It is hereby agreed and acknowledged that any Party may by notice change the address to which such notices and communications to it are to be delivered or mailed. Such change shall be effective when all the Parties have notice of it.

9.11 Language

All notices, certificates, correspondence and proceedings under or in connection with this Agreement shall be in English.

9.12 Authorised representatives

Each of the Parties shall by notice in writing designate their respective authorised representatives through whom only all communications shall be made. A Party hereto shall be entitled to remove and/or substitute or make fresh appointment of such authorised representative by similar notice.

9.13 Original Document

This Agreement may be executed in three counterparts, each of which when executed and delivered shall constitute an original of this Agreement.

IN WITNESS WHEREOF THE PARTIES HAVE EXECUTED AND DELIVERED THIS AGREEMENT AS OF THE DATE FIRST ABOVE WRITTEN.

SIGNED, SEALED AND DELIVERED
on behalf of

SIGNED, SEALED AND DELIVERED For and
For and on behalf of CONCESSIONAIRE by:

(Signature)

(Name)

(Designation)

(Address)

(Fax No.)

(Email address)

NATIONAL HIGHWAYS AND INFRASTRUCTURE DEVELOPMENT CORPORATION
LIMITED by:

(Signature)

(Name)

(Designation)

(Address)

(Fax No.)

(Email address)

SIGNED, SEALED AND DELIVERED For and on behalf of SENIOR LENDERS by the
Lenders' Representative:

(Signature)

(Name)

(Designation)

(Address)

(Fax No.)

(Email address)

In the presence of:

1.

2.

SCHEDULE W: Procedure for Dispute Resolution Board

The parties to the Concession Agreement mutually agree as follows:

- (1) The Board shall comprise of three Members having experience in the field of construction or have been involved in the Works related to construction and with the interpretation of contractual documents. One Member shall be selected by each of the Authority and the Concessionaire from the list maintained by NHIDCL hosted on its website. In the event the parties fail to select the member within 28 days of the date of the signing of Concession Agreement, in that eventuality, upon the request of either or both parties such Member shall be selected by SAROD within 14 days. The third Member shall be selected by the other two members from the same list. If the two Members selected by or on behalf of the parties fail to select the third Member within 14 days after the later of their selections, then upon the request of either or both parties such third Member shall be selected by SAROD within 14 days. The third Member shall serve as Chairman of the Board.
- (2) The Board shall be constituted when each of the three Board Members has signed a Board Member's declaration of Acceptance as required by the DRB's rules and procedures (which, along with the declaration of acceptance form, are attached as Annexure herewith).
- (3) In the event of death, disability, or resignation of any Member, such Member shall be replaced in the same manner as the Member being replaced was selected. If for any other reason, a Member fails or is unable to serve, the Chairman (or failing the action of the Chairman then either of the other Members) shall inform the Parties and such non-serving Member shall be replaced in the same manner as the Member being replaced was selected. Any replacement made by the parties shall be completed within 28 days after the event giving rise to the vacancy on the Board, failing which the replacement shall be made by SAROD in the same manner as described above. Replacement shall be considered complete when the new Member signs the Board Member's Declaration of Acceptance. Throughout any replacement process, the Members not being replaced shall continue to serve and the Board shall continue to function and its activities shall have the same force and effect as if the vacancy had not occurred, provided, however, that the Board shall not conduct a hearing nor issue a decision until the replacement is completed.
- (4) If either the Authority or the Concessionaire is dissatisfied with any decision of the Board, and/or if the Board fails to issue its decision within 56 days after receipt of all the pleadings (along with the supporting documents) of the parties by the Chairman of the Board or any extension mutually agreed upon by the Authority and the Concessionaire, in such a case, either the Authority or the Concessionaire may, within 28 days after his receipt of the decision, or within 28 days after the expiry of the said

period, as the case may be, give notice to the other party, with a copy for information to the Independent Engineer, of his intention to refer the matter to the Conciliation Committee of Independent Experts (CCIE) of the Authority for Conciliation/amicable settlement.

- (5) It is mandatory to refer all the disputes to DRB before issuance of completion certificate and satisfactory completion of punch list items. No dispute shall be entertained after completion of aforementioned date.
- (6) If the Board has issued a decision to the Authority and the Concessionaire within the said 56 days or any extension mutually agreed upon by the Authority and the Concessionaire and no notice of intention to commence Conciliation by the Conciliation Committee of Independent Experts (CCIE) of the Authority for Conciliation/amicable settlement as to such dispute has been given by either the Authority or the Concessionaire within 28 days after the parties received such decision from the Board, the decision shall become final and binding upon the Authority and Concessionaire.
- (7) Whether or not it has become final and binding upon the Authority and the Concessionaire, a decision shall be admissible as evidence in any subsequent dispute resolution procedure, including any arbitration or litigation having any relation to the dispute to which the decision relates.
- (8) All decision of DRB which have become final and binding or till they have been reversed in subsequent conciliation/Arbitration process shall be implemented by the parties forthwith. Such implementation shall also include any relevant action of the Independent Engineer.
- (9) If during the Concession Period, the Authority and the Concessionaire are of the opinion that the Disputes Resolution Board is not performing its functions properly, the Authority and the Concessionaire may together disband the Disputes Resolution Board and reconstitute it. In that case, a new board shall be selected in accordance with the provisions applying to the selection of the original Board as specified above, except that words "within 28 days after the signing of this Concession Agreement" shall be replaced by the words "within 28 days after the date on which the notice disbanding the original Board became effective".
- (10) The Authority and the Concessionaire shall jointly sign a notice specifying that the Board shall stand disbanded with effect from the date specified in the notice. The notice shall be posted by email to each Member of the Board. A Member shall be deemed to have received the email even if he refuses to have received the same.
- (11) All other terms and conditions of the original Concession Agreement shall remain unaltered/unaffected and the parties shall remain bound by terms and conditions as

contained therein.

Annexure to Schedule [W]

Disputes Resolution Board's Rules and Procedures

1. Except for providing the services required hereunder, the Board Members shall not give any advice to either party or to the Independent Engineer concerning conduct of the Works. The Board Members:
 - (a) Shall have no financial interest in any party to the Concession Agreement, or the Independent Engineer, or a financial interest in the Concession Agreement, except for payment for services on the Board.
 - (b) Shall have had no previous employment by, or financial ties to, any party to the Concession Agreement, or the Independent Engineer, except for fee based consulting services/advisers on other projects, and/or be Retired Government Officers (not connected in whole or part with the project), all of which must be disclosed in writing to both parties prior to appointment to the Board.
 - (c) Shall have disclosed in writing to both parties prior to appointment to the Board any and all recent or close professional or personal relationships with any director, officer, or employee of any party to the Concession Agreement, or the Independent Engineer, and any and all prior involvement in the project to which the Concession Agreement relates;
 - (d) Shall not, while Board member, be employed whether as a consultant or adviser or otherwise by either party to the Concession Agreement, or the Independent Engineer, except as a Board Member, without the prior consent of the parties and the other Board Members;
 - (e) Shall not, while a Board Member, engage in discussion or make any agreement with any party to the Concession Agreement, or with the Independent Engineer, regarding employment whether as a consultant or otherwise whether after the Concession is completed or after service as a Board Member is completed.
 - (f) Shall remain and be impartial and independent of the parties and shall disclose in writing to the Authority, the Concessionaire and one another any fact or circumstance which might be such as to cause either the Authority or the Concessionaire to question the continued existence of the impartiality and independence required of Board Members; and
 - (g) Shall be fluent in the language of the Concession Agreement.
2. Except for its participation in the Board's activities as provided in the Concession

Agreement and in this Agreement none of the Authority, the Concessionaire, and or the Independent Engineer shall solicit advice or consultation from the Board or the Board Members on matters dealing with the conduct of the Works.

3. The Concessionaire shall :
 - (a) Furnish to each Board member one copy of all documents which the Board may request including Concession Agreement, progress reports and other documents pertinent to the performance of the Concession Agreement.
 - (b) In cooperation with the Authority, coordinate the site visits of the Board, including conference facilities, and secretarial and copying service.
4. The Board shall begin its activities following the signing of a Board Member's Declaration of Acceptance by all three Board Members, and it shall terminate these activities as set forth below :
 - (a) The Board shall terminate its regular activities when either (i) issuance of completion certificate and completion of punch list items or (ii) the parties have terminated the Concession Agreement and when, in either case, the Board has communicated to the parties and the Independent Engineer its decision on all disputes previously referred to it.
 - (b) Once the Board has terminated its regular activities as provided by the previous paragraph, the Board shall remain available to process any dispute referred to it by either party. In case of such a referral, Board Members shall receive payments as provided in paragraphs 7(a)(ii), (iii) and (iv).
5. Board Members shall not assign or subcontract any of their work under these Rules and Procedures.
6. The Board Members are Independent and not employees or agents of either the Authority or the Concessionaire.
7. Payments to the Board Members for their services shall be governed by the following provisions :
 - (a) Each Board Member will receive payments as follows :
 - i. A retainer fee per calendar month as specified in the schedule of fee made part of this Schedule and its revision from time to time. This retainer fee shall be considered as payment in full for :

(A) Being available, on 7 days' notice, for all hearings, Site Visits, and

other meetings of the Board.

(B) Being conversant with all project developments and maintaining relevant files.

(C) All offices and overhead expenses such as secretarial services, photocopying and office supplies (but not include telephone calls, faxes and telexes) incurred in connection with the duties as a Board Member.

- ii. A daily fee as specified in the schedule of fee in respect of fee for site visit & meeting, fee for meeting/ hearing not at site and extra charges for days (max. of 02 days for travel on each occasion) other than hearing / meeting days.
- iii. Expenses, in addition to the above, all reasonable and necessary travel expenses (including economy class air fare, subsistence, and other direct travel expenses). Receipts for all expenses in excess of [Rs. 2000/- (Rupees Two Thousand only)] shall be provided.
- iv. Reimbursement of any taxes that may be levied on payments made to the Board Member pursuant to this paragraph 7.

(b) The retainer fee and other fees shall remain fixed for the period of each Board Member's term until revised by NHIDCL.

(c) Phasing out of monthly retainer fee. Beginning with the next month after the completion certificate (or, if there are more than one, the one issued last) has been issued, the Board members shall receive only one-third of the monthly retainer fee till next one year. Beginning with the next month after the Board has terminated its regular activities pursuant to paragraph 4(a) above, the Board members shall no longer receive any monthly retainer fee.

(d) Payments to the Board Members shall be shared equally by the Authority and the Concessionaire. The Authority shall pay members' invoices within 30 calendar days after receipt of such invoices and shall invoice the Concessionaire for one-half of the amounts of such invoices. The Concessionaire shall pay such invoices within 30 days' time period after receipt of such invoices.

8. Board Site Visits :

- (a) The Board shall visit the Site and meet the representatives of the Authority, the Concessionaire and the Independent Engineer at regular intervals, at times of critical construction events, at the written request of either party, and in any case not less than 6 times in any period of 12 months. The timing of Site visits shall be as agreed among the Authority, the Concessionaire and the Board, but failing agreement shall be fixed by the Board.

- (b) Site visits shall include an informal discussion of the status of the construction of the Works. Site visits shall be attended by personnel from the Authority, the Concessionaire and the Independent Engineer.
- (c) At the conclusion of each Site visit, the Board shall prepare a report covering its activities during the visit and shall send copies to the parties and to the Independent Engineer.

9. Procedure for Dispute Referral to the Board :

- (a) If either party objects to any action or inaction of the other party or the Independent Engineer, the objecting party may file a written Notice of Dispute to the other party with a copy to the Independent Engineer stating that it is given pursuant to the Agreement and state clearly and in details the basis of the dispute.
- (b) The party receiving the Notice of Dispute will consider it and respond to it in writing within 14 days after receipt.
- (c) This response shall be final and conclusive on the subject, unless a written appeal to the response is filed with the responding party within 10 days after receiving the response and call upon Independent Engineer to mediate and assist the parties in arriving an amicable settlement thereof. Both parties are encouraged to pursue the matter further to attempt to settle the dispute.
- (d) If the Independent Engineer receiving the Notice of Dispute fails to provide a written response within 14 days after receipt of such Notice or failing mediation by Independent Engineer, either party may require such dispute to be referred to the Board, either party may refer the dispute to the Board by written Request to the Board. The Request for decision shall state clearly and in full detail the specific issues of the dispute (s) to be considered by Board and shall be addressed to the Chairman of the Board, with copies to the other Board Members, the other party, and the Independent Engineer, and it shall state that it is made pursuant to this Agreement.
- (e) When a dispute is referred to the Board, and the Board is satisfied that the dispute requires the Board's assistance, the Board decide when to conduct a hearing on the dispute. The Board may request that written documentation and arguments from both parties be submitted to each Board Member before the hearing begins. The parties shall submit insofar as possible agreed statements of the relevant facts.
- (f) During the hearing, the Concessionaire, the Authority, and the Independent Engineer shall each have ample opportunity to be heard and to offer evidence. The Board's

decision for resolution of the dispute will be given in writing to the Authority, the Concessionaire and the Independent Engineer as soon as possible, and in any event not more than 56 days or any mutually extended period between the Authority and the Concessionaire. The time period of 56 days of issuance of DRB decision will reckon/start from the day of first hearing that begins after submission of complete pleadings (including supporting documents, if any) by the parties.

10. Conduct of Hearings :

- (a) Normally hearings will be conducted at the Site, but any location that would be more convenient and still provide all required facilities and access to necessary documentation may be utilized by the Board. Private session of the Board may be held at any cost effective location convenient to the Board. Video recordings of all hearings shall invariably be made.
 - (b) The Authority, the Independent Engineer and the Concessionaire shall be given opportunity to have representatives at all hearings. Parties should restrain to bring any Advocate/Law Firm during DRB hearings.
 - (c) During the hearings, no Board Member shall express any opinion concerning the merit of the respective arguments of the parties.
 - (d) After the hearings are concluded, the Board shall meet privately to formulate its decision. The private meeting (s) of the Board shall not exceed 3 sittings. All Board deliberations shall be conducted in private, with all Members' individual views kept strictly confidential. The Board's decisions, together with an explanation of its reasoning shall be submitted in writing to both parties and to the Independent Engineer. The decision shall be based on the pertinent Concession Agreement provisions, applicable laws and regulations and the facts and circumstances involved in the dispute.
 - (e) The Board shall make every effort to reach a unanimous decision. If this proves impossible the majority shall decide and the dissenting Member may prepare a written minority report together with an explanation of its reasoning for submission to both parties and to the Independent Engineer.
11. In all procedural matters, including the furnishing of written documents and arguments relating to disputes, site visits and conduct of hearings, the Board shall have full and the final authority. If a unanimous decision on any such matter proves impossible, the majority shall prevail.
12. After having been selected and where necessary approved each Board Member shall sign two copies of the following declaration and make one copy available each to the

Authority and to the Concessionaire.

“BOARD MEMBER’S DECLARATION OF ACCEPTANCE”

WHEREAS

(a) A Concession Agreement (the Concession) for the _____ project [fill in the name of project] has been signed on _____ [fill in date] between _____ [name of Authority] and [name of Concessionaire] (the Concessionaire).;

(b) The provisions of Agreement and Dispute Resolution Board’s rules and procedure provided for establishment and operation of Dispute Resolution Board (DRB).

(c) The undersigned has been selected to serve as a Board Member on said Board;

NOW THEREFORE, the undersigned Board Member hereby declares as follows :

1. I accept the selection as a Board Member and agree to serve on the Board and to be bound by the provisions of Concession Agreement and rules and procedure provided for establishment and operation of Dispute Resolution Board (DRB).
2. With respect to paragraph 1 of Dispute Resolution Board’s Rules and Procedure. said Annex A, I declare
 - (a) that I have no financial interest of the kind referred to in subparagraph (a):
 - (b) that I have had no previous employment nor financial ties of the kind referred to in subparagraph (b); and
 - (c) that I have made to both parties any disclosures that may be required by subparagraphs (b) and (c).
3. I declare that I have ____ no. of Arbitrations (list enclosed) and ____ no. of DRBs (list enclosed) in progress and that I will give sufficient time for the current assignment.

BOARD MEMBER

[insert name of Board Member]

Date :

Schedule of expenses and fees payable to the Member (s) of Dispute Resolution Board

The fee and other expenses payable to the Members of DRB shall be as under :-

SN	Particular	Amount Payable
1	Retainer-ship fee, secretarial assistance and incidental charges	[Rs. 50,000/- per month for one package and maximum of Rs. 75,000/- per month for 2 or more packages]
2(i)	Fee for site visit or meetings at site	[Rs. 25,000/- per day]
(ii)	Fee for meetings/hearings not at site	[Rs. 10,000/- per day]
3	Traveling expenses	Economy class by air, AC first class by train and AC taxi by road
4	Lodging & Boarding	[Rs.15,000/- per day (Metro Cities) ; or Rs. 10,000/- per day (in other cities); or Rs. 5,000/- per day (own arrangement)]
5	Extra charges for days other than hearing/meeting days (travel days maximum of 2 days on each occasion)	[Rs.5,000/-]
6	Local conveyance	[Rs.2,000/-]

Notes:

- (i) Lodging, boarding and travelling expenses will be allowed only for those members who are residing 100 kms away from the place of meeting.
- (ii) Delhi, Mumbai, Chennai, Kolkata, Bangalore and Hyderabad shall be considered as Metro Cities.
- (iii) The above schedule of fee and expenses shall be applicable on or after the date of issue of this circular.
- (iv) The expenses are to be shared equally by the parties i.e. Authority and Concessionaire.

Appendix-I Deleted

Appendix-II Deleted

**Appendix-III: Arbitration Rules of the Society for Affordable Redressal of Disputes
(SAROD) (SAROD' ARBITRATION RULES) Under Clause 44.3.1**

ARBITRATION RULES OF SAROD

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Rule

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PREAMBLE

In order to seek speedy, affordable, just and reasonable Redressal of Dispute/Differences between NHIDCL and Concessionaire/Contractor arising out of and during the course of execution of various contracts, a Society for Affordable Redressal of Disputes (SAROD) has been formed as a Society under Societies Registration Act, 1860 with registration No.S/RS/SW/1044/2013. It has been formed by National Highways and Infrastructure Development Corporation Limited (NHIDCL) and National Highways Builders Federation (NHBF) with founding members as mentioned in the Memorandum of Association of SAROD.

SAROD ARBITRATION RULES Rule

Rule 1 - Scope of Application

- 1.1 Where any agreement, submission or reference provides for arbitration at the Society for Affordable Redressal of Disputes ("SAROD"), or under the Arbitration Rules of the SAROD and where the case is a domestic arbitration shall be conducted in accordance with the following Rules, or such Rules as amended by the SAROD where the amendments take effect before the commencement of the Arbitration. Parties may adopt following clause for inclusion in the contract:-

"Any dispute or difference whatsoever arising between the parties and of or relating to the construction, interpretation, application, meaning, scope, operation or effect of this contract or the validity or the breach thereof, shall be settled by arbitration in accordance with the rules of arbitration of the "SAROD" and the award made in pursuance thereof shall be final and binding on the parties subject to Provisions of The Arbitration and Conciliation Act, 1996".

1.2 These rules shall come into effect from the day of approval by Governing Body of SAROD.

Rule 2 - Definitions

2.1 These Rules shall be referred to as “the SAROD Arbitration Rules”.

2.2 In these Rules:

“**Act**” means the ‘Arbitration and Conciliation Act 1996’ of India and any statutory modifications or re-enactments thereof.

“**SAROD**” means the Society for Affordable Redressal of Disputes.

“**SAROD Arbitrator Panel**” means the list of persons admitted to serve as arbitrators under these Rules.

“**NHIDCL**” means National Highways and Infrastructure Development Corporation Limited.

“**NHBF**” means the National Highways Builders Federation.

“**GOVERNING BODY**” means Governing Body of SAROD as defined in Article 9 of Memorandum of Association.

“**PRESIDENT**” means President of Governing Body of SAROD as defined in Rules & Regulation of SAROD

“**SECRETARY**” means Secretary of SAROD as defined in Rules & Regulation of SAROD.

“**TRIBUNAL**” means either a Sole Arbitrator or all arbitrators when more than one is appointed.

“**PARTY**” means a party to an arbitration agreement,

“**E-Arbitration**” means submission of pleadings, defence statement etc by E-mail and holding of proceedings via video conferencing.

Rule 3 - Notice, Calculation of periods of Time

3.1 For the purposes of these Rules, any notice, including a notification, communication or proposal, is deemed to have been received if it is physically delivered to the addressee or if it is delivered at his habitual residence, place of business or mailing address, or, if none

of these can be found after making reasonable inquiry, then at the addressee's last-known residence or place of business. Notice shall be deemed to have been received on the day it is so delivered.

3.2 For the purposes of calculating a period of time under these Rules, such period shall begin to run on the day following the day when a notice, notification, communication or proposal is received. If the last day of such period is an official holiday or a non- business day at the residence or place of business of the addressee, the period is extended until the first business day which follows. Gazetted public holidays or non- business days occurring during the running of the period of time are included in calculating the period.

3.3 Without prejudice to the effectiveness of any other form of written communication, written communication may be made by fax, email or any other means of electronic transmission effected to a number, address or site of a party.

3.4 The transmission is deemed to have been received on the day of transmission.

Rule 4 - Commencement of Arbitration

4.1 Any party wishing to commence an arbitration under these Rules ("the Claimant") shall file with the Secretary and serve on the other party {"the Respondent"}, a written Notice of Arbitration ("the Notice of Arbitration") which shall include the following:

- a. a request that the dispute be referred to arbitration;
- b. the names, addresses, telephone numbers, fax numbers and email addresses of the parties to the dispute;
- c. a reference to the arbitration clause or any separate arbitration agreement that is invoked and provide a copy of the arbitration clause or arbitration agreement;
- d. a reference to the contract out of which the dispute arises and provide a copy of the contract where possible;
- e. a brief statement describing the nature and circumstances of the dispute;
- f. the relief or remedy sought, including the amount of claim if quantifiable at the time the Notice of Arbitration is filed;
- g. a proposal as to the number of arbitrators (i.e. one or three), if the parties have not previously agreed on the number; and
- h. the name of the Claimant's nominated arbitrator.

4.2 A filing fee of Rs. 10,000/- (Ten thousand) or any amount decided by Governing Body from time to time is payable at the time of filing the Notice of arbitration.

4.3 The date of filing of the Notice of Arbitration with the Secretary is the date of commencement of the arbitration for the purpose of these Rules.

Rule 5 - Response by Respondent

5.1 Within 14 days of receipt of the Notice of Arbitration, the Respondent shall file with the Secretary and serve upon on the Claimant, a Response including

- a. A confirmation or denial of all or part of the claims;
- b. Brief statement of the nature and circumstances of any envisaged counterclaims
- c. A comment in response to any proposals contained in the Notice of Arbitration; and
- d. The name of the respondent's nominated arbitrator.

5.2 A filing fee of Rs. 10,000/- or any amount decided by Governing Body from time to time is payable at the time of filing the Response.

5.3 In case parties have objection to the jurisdiction of Arbitral Tribunal, such objection shall be raised not later than 15 days of the commencement of Arbitration proceedings failing which it will be deemed that parties have waived their right to objection.

Rule 6 - Filing of Case Statements

6.1 Within 30 days after the filing of the Notice of Arbitration, the claimant must file with the Secretary and serve on the Respondent, a Statement of Claimant's Case alongwith all documents to be relied upon by the Claimant.

6.2 Within 30 days after the service of the statement of Claimant's Case, the Respondent must file with the Secretary and serve on the Claimant, a statement of respondent's defence and counterclaim (if any) alongwith all documents to be relied upon by the Respondent.

6.3 Within 30 days after the service of the statement of Respondent's defence, if the Claimant intends to challenge anything in the statement of Respondent's defence and/or counterclaim, the Claimant must then file with the Secretary and serve on the Respondent, a statement of claimant's reply and if necessary, defence to counterclaim.

- 6.4 No further case statements may be filed without the leave of the Tribunal or if a Tribunal has not been appointed, the Secretary.
- 6.5 The Tribunal or if a Tribunal has not been appointed, the Secretary, may upon the written application of a party, extend the time limits provided under this Rule,
- 6.6 Thy party required to file a case statement must at the same time deposit with the Secretary for eventual transmission to the Tribunal an additional copy or additional copies of the case statement, according to the number of arbitrators constituting or who will constitute the Tribunal.

Rule 7 – Contents of Case Statements

- 7.1 The case statements must contain the detailed particulars of the party's claim, defence or counterclaim and must thus contain a comprehensive statement of the facts and contentions of law supporting the party's position.
- 7.2 It must:
- a. Set out all items of relief or other remedies sought together with the amount of all quantifiable claims and detailed calculations.
 - b. State fully its reasons for denying any allegation or statement of the other party.
 - c. State fully its own version of events if a party intends to put forward a version of events different from that given by the other party.
- 7.3 A case statement must be signed by or on behalf of the party making it.

Rule 8 - Default in Filing and Serving Case Statements

- 8.1 If the Claimant fails within the time specified under these Rules or as may be fixed by the Tribunal or by the Secretary, to submit its Statement of Case, the Tribunal or if a Tribunal has not been appointed, the Governing Body may issue an order for the termination of the arbitral proceedings or make such other directions as may be appropriate in the circumstances.
- 8.2 If the Respondent fails to submit a Statement of Respondent's Defence, the Tribunal may nevertheless proceed with the arbitration and make the award.

Rule 9 - Further Written Statements

- 9.1 The Tribunal will decide which further written statements, in addition to the case statement(s) already filed, are required from the parties and shall fix the periods of time for giving, filing and serving such statements.

- 9.2 All such further statements must be given to the Tribunal, filed with the Secretary and served on the Claimant or Respondent, whichever is applicable.

Rule 10 - SAROD to Provide Assistance

- 10.1 At the request of the Tribunal or either party, the Secretary will render such assistance as is required for the conduct of the arbitration, including arranging for facilities, suitable accommodation for sittings of the Tribunal, secretarial assistance or interpretation of these rules.
- 10.2 Any additional expenses incurred or to be incurred for any such arrangements shall be borne by the parties.

Rule 11 - Appointment of Tribunal

- 11.1 The disputes shall be decided by a Sole Arbitrator when the total claim of dispute is Rs. 3 Crores or less.
- 11.2 In all cases of disputes claimed for more than Rs. 3 Crores, the tribunal shall consist of odd number of Arbitrators to be nominated by the parties. The Presiding Arbitrator shall be appointed by the Arbitrators nominated by the parties from amongst the panel maintained by SAROD. For deciding the Presiding Arbitrator, a draw of lots can be carried out from amongst the names suggested by the Arbitrators nominated by the Parties, The eligibility criteria for empanelment of Arbitrators will be decided by the Governing
- 11.3 If a Sole Arbitrator is to be appointed, the Governing Body will appoint the Arbitrator within 21 days from the date the Respondent's Statement of Defence and Counterclaim (if any) is filed or falls due, whichever is earlier. The Governing Body will appoint the Arbitrator from the panel of Arbitrators by draw of lots,
- 11.4 An Arbitrator/Presiding Arbitrator to be appointed under these Rules shall be a person on the SAROD Arbitration Panel as at the date of the appointment,
- 11.5 In the event of any party failing to appoint Arbitrator within 30 days of receipt of the notice of Arbitration, the Governing Body shall appoint the Arbitrator or Presiding Arbitrator as the case may be by a draw of lots.

Rule 12 - Multiparty appointment of the Tribunal

- 12.1 If there are more than 2 parties in the arbitration, the parties shall agree on the procedure for appointing the Tribunal within 21 days of the receipt of the Notice of Arbitration.
- 12.2 If the parties are unable to do so, upon the lapse of the 21 day time period mentioned herein, the Tribunal shall be appointed by the Governing Body as soon as practicable.

Rule 13 - Appointment of Substitute Arbitrator

In the event of the death or resignation of any of the arbitrators, a substitute arbitrator must be appointed by the same procedure as in Rule 11 by which the arbitrator concerned was appointed, failing which, the Governing Body will make the appointment.

Rule 14 - Independence and Impartiality of the Tribunal

- 14.1 The Tribunal conducting arbitration under these Rules shall be and remain at all times independent and impartial, and shall not act as advocate for any party.
- 14.2 A prospective arbitrator shall disclose to those who approach him in connection with his possible appointment, any circumstances likely to give rise to justifiable doubts as to his impartiality or independence.
- 14.3 An arbitrator, once nominated or appointed, shall disclose any such circumstance referred to in Rule 14.2 to the Secretary and/ or to all parties.

Rule 15 - Code of Ethics for Arbitrators

An Arbitrator is a fountain of justice and emblem of equity, fairness and good conscience. Therefore he/she is expected to exhibit a noble conduct. The code of conduct prescribed by the Governing Body has to be adopted.

Appointment

- 15.1 A prospective arbitrator shall accept an appointment only if he is fully satisfied that he is able to discharge his duties without bias, he has an adequate knowledge of the language of the arbitration, and he is able to give to the arbitration the time and attention which the parties are reasonably entitled to expect,
- 15.2 In this code, the masculine includes the feminine.

Disclosure

- 15.3 A prospective arbitrator shall disclose all facts or circumstances that may give rise to justifiable doubts as to his impartiality or independence, such duty to continue thorough out the arbitral proceedings with regard to new facts and circumstances.
- 15.4 A prospective arbitrator shall disclose to the Secretary and any party who approaches him for a possible appointment:

Bias

- (a) Any past or present close personal relationship or business relationship, whether direct or indirect, with any party to the dispute, or any representative of a party, or any person known to be a potentially important witness in the arbitration;
- (b) The extent of any prior knowledge he may have of the dispute.

15.5 The criteria for assessing questions relating to bias are impartiality and independence. Partiality arises when an arbitrator favours one of the parties or where he is prejudiced in relation to the subject matter of the dispute. Dependence arises from relationships between an arbitrator and one of the parties, or with someone closely connected with one of the parties.

15.6 Any close personal relationship or current direct or indirect business relationship between an arbitrator and a party, or any representative of a party, or with a person who is known to be a potentially important witness, will normally give rise to justifiable doubts as to a prospective arbitrator's impartiality or independence. Past business relationships will only give rise to justifiable doubts if they are of such magnitude or nature as to be likely to affect a prospective arbitrator's judgment. He should decline to accept an appointment in such circumstances unless the parties agree in writing that he may proceed.

Communications

15.7 Before accepting an appointment, an arbitrator may only enquire as to the general nature of the dispute, the names of the parties and the expected time period required for the arbitration.

15.8 No arbitrator shall confer with any of the parties or their Counsel until after the Secretary gives notice of the formation of the Tribunal to the parties.

15.9 Throughout the arbitral proceedings, an arbitrator shall avoid any unilateral communications regarding the case with any party, or its representatives.

Fees

15.10 In accepting an appointment, an arbitrator agrees to the remuneration as prescribed in the rules of SAROD, and he shall make no unilateral arrangements with any of the parties or their Counsel for any additional fees or expenses without the agreement of all the parties and the consent of the Secretary of SAROD.

Conduct

15.11 Once the arbitration proceedings commence, the arbitrator shall acquaint himself with

all the facts and arguments presented and all discussions relative to the proceedings so that he may properly understand the dispute.

Confidentiality

15.12 The arbitration proceedings shall remain confidential. An arbitrator is in a relationship of trust to the parties and should not, at any time, use confidential information acquired during the course of the proceedings to gain personal advantage or advantage for others, or to affect adversely the interest of another.

15.13 This Code is not intended to provide grounds for the setting aside of any award.

Rule 16 - Challenge of Arbitrators

16.1 An arbitrator may be challenged if there are circumstances that give rise to justifiable doubts as to his impartiality or independence and also if he or she has committed any misconduct.

16.2 An arbitrator may also be challenged if he does not possess the qualifications required by the agreement of the parties,

16.3 A party may challenge an arbitrator appointed on its nomination or with its agreement only for reasons of which it becomes aware after the appointment has been made.

16.4 A party who intends to challenge an arbitrator shall file with the Secretary and serve on the other party or all other parties, whichever is applicable, a Notice of Challenge.

16.5 The Notice of challenge must be filed and served within 14 days from the appointment of the arbitrator or within 14 days after the circumstances mentioned in Rule 15.1 became known to that party.

16.6 The Notice of Challenge must state the reasons for the challenge.

16.7 The arbitration shall be suspended until the challenge is resolved or decided upon.

16.8 When an arbitrator has been challenged by one party, the other party may agree to the challenge. The arbitrator may also, after the challenge, withdraw from his office. However, it is not implied in either case that there has been an acceptance of the validity of the grounds for the challenge. In both cases, the procedure provided in Rule 11 read with Rule 13, shall be used for the appointment of a substitute arbitrator.

Rule 17 - Decision on Challenge

17.1 If the other party does not agree to the challenge and the arbitrator does not withdraw, the

decision on the challenge will be made by the Governing Body.

- 17.2 If the Governing Body sustains the challenge, a substitute arbitrator shall be appointed or chosen pursuant to the procedure applicable to the appointment of an arbitrator as provided in Rule 11 read with Rule 13. If the Governing Body dismisses the challenge, the arbitrator shall continue with the arbitration.

Rule 18 - Removal of the Tribunal

- 18.1 The Governing Body may on the application of a party remove an arbitrator:
- a. Who is physically or mentally incapable of conducting the proceedings or where there are justifiable doubts as to his ability to do so; or
 - b. Who has refused or failed to use all reasonable dispatch in conducting the arbitration or making an award.
 - c. Who has continuously absented from attending the proceedings for more than 3 sitting without prior permission of Presiding Arbitrator/Governing Body of SAROD.
- 18.2 The arbitrator(s) concerned is entitled to appear and be heard at the hearing of the application to remove him.
- 18.3 Upon the removal of the arbitrator, a substitute arbitrator shall be appointed in accordance with Rule 11 read with Rule 13.
- 18.4 The Governing Body's decision on the application is final and is not subject to appeal or review.

Rule 19 - Re-hearing in the Event of Replacement of the Tribunal

If the sole or presiding Arbitrator is replaced, there shall be a re-hearing. If any other arbitrator is replaced, such re-hearing may take place at the discretion of the Tribunal.

Rule 20 - Jurisdiction of the Tribunal

- 20.1 The Tribunal shall have the power to rule on its own jurisdiction, including any objection with respect to the existence, termination or validity of the arbitration agreement. For that purpose, an arbitration agreement which forms part of a contract shall be treated as an agreement independent of the other terms of the contract. A decision by the Tribunal that the contract is null and void shall not entail ipso jure the invalidity of the arbitration agreement.

- 20.2 The plea that the Tribunal does not have jurisdiction shall be raised not later than in the Statement of Defense. A plea that the Tribunal is exceeding the scope of its authority shall be raised promptly after the Tribunal has indicated its intention to decide on the matter alleged to be beyond the scope of its authority. In either case the Tribunal may nevertheless admit a late plea under this Rule if it considers the delay justified. A party is not precluded from raising such a plea by the fact that he has nominated, or participated in the appointment of an arbitrator.
- 20.3 The Tribunal must rule on an objection that it lacks jurisdiction as a preliminary question upon the objection being raised. It may rule on an objection that it exceeds the scope of its authority either as a preliminary question or in an award on the merits, as it deems just and convenient.
- 20.4 In addition to the jurisdiction to exercise the powers defined elsewhere in these Rules, the Tribunal shall have jurisdiction to determine any question of law arising in the arbitration; proceed with the arbitration not with sanding the failure or refusal of any party to comply with these Rules or with the Tribunal's orders or directions, or to attend any meeting or hearing, but only after giving that party written notice that it intends to do so; and to receive and take into account such written or oral evidence as it shall determine to be relevant, whether or not strictly admissible in law.

Rule 21 – Fees of SAROD and Arbitral Tribunal

Fee Schedule

Registration Fee (Non - Refundable): Rs, 10,000/- or any amount fixed by Governing Body from time to time. The Schedule of Fees and allied expenditure shall be decided by Governing Body.

Rule 22- Transmission of File to the Tribunal

- 22.1 The Secretary shall, as soon as practicable transmit to the Tribunal, a file containing the Notice of Arbitration, the Response and all case statements.
- 22.2 The Tribunal shall as soon as practicable, after consultation with the parties, issue such orders and/or directions as are necessary for the conduct of the arbitration to conclusion, including a timetable for steps to be taken in the arbitration and for the hearing of the arbitration.

Rule 23 - Judicial Seat of Arbitration

- 23.1 Unless otherwise agreed by the parties, the judicial seat of arbitration shall be New

Delhi.

- 23.2 Notwithstanding Rule 22.1 and 22.2, the Tribunal may, unless otherwise agreed by the parties, hold hearings and meetings anywhere convenient, subject to the provisions of Rule 28.2.

Rule 24 - Language of Arbitration

The language of arbitrators shall be English. In case of material existing are in any other language, other than English the same has to be translated to English language.

Rule 25 - Conduct of the Proceedings

The Tribunal shall have the widest discretion allowed by the Act to ensure the just, expeditious, economical and final determination of the dispute. The proceedings shall be conducted from 10.AM to 5PM with a recess of one hour.

Rule 26 - Communication between Parties and the Tribunal

- 26.1 Where the Tribunal sends any written communication to one party, it shall send a copy to the other party or parties as the case may be.
- 26.2 Where a party sends any written communication (including Statements, expert reports or evidentiary documents) to the Tribunal, the same shall be copied to the other party or all other parties, whichever is applicable, and show to the Tribunal that the same has been so copied.
- 26.3 The address of the parties for the purpose of all communications during the proceedings shall be those set out in the Notice of Arbitration, or as either party may at any time notify the Tribunal and the other party or parties, whichever is applicable.
- 26.4 A copy of correspondence between the parties and the Tribunal shall be sent to the Secretary.

Rule 27 - Party Representatives

Any party may be represented by legal practitioners or any other representatives, subject to such proof of authority as the Tribunal may require. The names and addresses of such representatives must be notified to the other party or parties. In case one party is represented by non-legal person, another party will also be represented by non-legal person so as to maintain natural justice.

Rule 28 - Hearings

- 28.1 Unless the parties have agreed on documents-only arbitration, the tribunal shall hold a hearing for the presentation of evidence by witnesses, including expert witnesses, or for oral submissions.
- 28.2 The Tribunal shall fix the date, time and place of any meetings and hearings in the arbitrations on the first hearing, and complete time table pertaining to all the activities of the Arbitration e.g. submission of statement of claim, reply, counter claim, reply therein, admission and denial of documents, visit/inspection of site if any. The tribunal shall stick to the time table with without any deviations unless there are unavoidable circumstances warranting such deviation which will be with the prior permission of the tribunal.
- 28.3 Prior to the hearing, the Tribunal may provide the Parties with matters or questions to which it wishes them to give special consideration.
- 28.4 In the event that a party to the proceedings without sufficient cause, fails to appear at a hearing of which the notice has been given, the Tribunal may proceed with the arbitration and may make the Award after the party present has submitted evidence to prove its case.
- 28.5 All meetings and hearing shall be in private unless the parties agree otherwise.

Rule 29 - Documents Only Arbitration

- 29.1 The Disputes may be decided without an oral hearing if it is so agreed by the parties.
- 29.2.1 Where the parties agree to dispense with oral hearing, the Tribunal must be promptly informed by either of the parties, as soon as is practicable. The Tribunal must also be promptly informed it, at a later stage, the parties or either of them intends to apply for an oral hearing.
- 29.2.2 Parties may seek discovery of documents if they are not satisfied with existence of documents annexed with statement of claim, reply and counter claim by giving self-contained request to the Tribunal justifying the necessity for such documents. Decision of tribunal shall be final and binding upon the parties.

Rule 30 - Witnesses

- 30.1 The Tribunal may require each party to give notice of the names and designations of the witnesses it intends to call and reasons for legal necessity of such witness.
- 30.2 No party shall call any expert witness without the leave of the Tribunal.
- 30.3 Any witness who gives evidence may be questioned by each party or its representative subject to any rulings made by the Tribunal,

- 30.4 A Witness may be required by the Tribunal to testify under oath or affirmation.
- 30.5 Subject to such order or direction which the Tribunal may make, the testimony of witness may be presented in written form, either as signed statements or by duly sworn or affirmed affidavits,
- 30.6 Any party may require a witness to attend an oral examination at a hearing. If the witness fails to attend, the Tribunal may place such weight on the written testimony as it thinks fit, or may exclude it altogether,
- 30.7 The Tribunal shall determine the admissibility, relevance, materiality and weight of the evidence given by any witness.

Rule 31 - Experts Appointed by the Tribunal

- 31.1 Unless otherwise agreed by the parties, the Tribunal may:
- a. appoint one or more experts to report the Tribunal on specific issues;
 - b. require a party to give any such expert any relevant information or to produce, or to provide access to, any relevant documents, goods or property for inspection by the expert.
- 31.2 Unless otherwise agreed by the parties, if a party so requests or if the Tribunal deem it fit, the expert shall, after delivery of his written or oral report, participate in an oral hearing, at which the parties may question him and present expert witnesses in order to testify on the points at issue.
- 31.3 Rule 30.2 shall not apply to an assessor appointed by agreement of the parties, or to an expert appointed by the Tribunal to advise solely in relation to procedural matters.

Rule 32 - Rules applicable to substance of dispute- (1) Where the place of arbitration is situated in India,

- 32.1 In an arbitration, the arbitral tribunal shall decide the dispute submitted to arbitration in accordance with the substantive law for the time being in force in India;

Rule 33 - Closure of Hearing

- 33.1 The Tribunal may inquire of the parties if they have any further proof to offer or witnesses to be heard or submission to make and, if there are none, declare the hearing closed.

33.2 The Tribunal may also, in view of exceptional circumstance, reopen the hearings at any time before the award is made.

Rule 34 - Additional Powers of the Tribunal

34.1 In addition to the powers conferred by the Act, the Tribunal shall also have the power to:-

- a. Allow any party, upon such terms (as to costs and otherwise) as it shall determine, to amend claims or counterclaims;
- b. Extend or abbreviate any time limits provided by these Rules;
- c. Conduct such enquires as may appear to the Tribunal to be necessary or expedient;
- d. Order the parties to make any property or thing available for inspection
- e. Order any parties to produce to the Tribunal, and to the other parties for inspection, and to supply copies of any documents or classes of documents in their possession, custody or power which the Tribunal determines to be relevant;
- f. Make orders or give directions to any party for interrogatories;
- g. Make orders or give directions to any party for an interim injunction or any other interim measure;
- h. Make such orders or give such directions as it deems fit in so far as they are not inconsistent with the Act or any statutory re-enactment thereof or such law which is applicable or these Rules.

34.2 If the parties so agree, the Tribunal shall also have the power to add other parties (with their consent) to be joined in the arbitration and make a single Final Award determining all disputes between them.

Rule 35 - Deposits to Costs and Expenses

35.1 The Tribunal's fees and SAROD administration fees shall be ascertained in accordance with the Schedule of Fees in Force at the time of commencement of the arbitration.

35.2 The Claimant shall deposit with the SAROD half of the fees payable at the time of filing of the Statement of Case. The Respondent shall deposit with the SAROD one- half of the fees payable at the time of filing the Statement of Respondent's Defence and Counterclaim (if any). The balance of fees payable shall be paid 60 days before the date of the final hearing or on such other date that the Secretary may direct.

- 35.3 Where the amount of the claim or the counterclaim is not quantifiable at the time payment is due, the Secretary will make a provisional estimate. The fees will be adjusted in the light of such information as may subsequently become available. If the arbitration is settled or disposed of without a hearing, the amount of the Tribunal's fees and SAROD administration fees shall be finally determined by the Secretary who will have regard to all the circumstances of the case, including the stage of proceedings at which the arbitration is settled or otherwise disposed of.
- 35.4 The Secretary may from time to time direct parties to make one or more deposit(s) towards any further expenses incurred or to be incurred on behalf of or for the benefit of the parties.
- 35.5 All deposit(s) shall be made to and held by the SAROD. Any interest which may accrue on such deposit(s) shall be retained by the SAROD.
- 35.6 If a party fails to make the payments or deposits required or directed, the Tribunal may refuse to hear the claims or counterclaims, whichever is applicable, by the non-complying party, although it may proceed to determine claims or counterclaims by any party who has complied with orders.
- 35.7 The parties shall remain jointly and severally liable to the SAROD for payment of all such fees and expenses until they have been paid in full even if the arbitration is abandoned, suspended or concluded, by agreement or otherwise, before the final Award is made.

Rule 36 - Decision Making by the Tribunal

- 36.1 Where a Tribunal has been appointed, any direction, order, decision or award of the Tribunal must be made by the whole Tribunal or a majority. If an arbitrator refuses or fails to sign the Award, the signatures of the majority shall be sufficient, provided that the reason for the omitted signature is stated.
- 36.2 If there is no unanimity, the same shall be made by the majority arbitrators as well as by the dissenting Arbitrator alone as if acting as a sole arbitrator.
- 36.3 However, in the case of a three-member Tribunal the presiding arbitrator may, after consulting the other arbitrators, make procedural rulings online.

Rule 37 - The Award

- 37.1 It will be mandatory for the parties to submit written synopsis of their arguments respectively which will form part of the arbitral proceedings.
- 37.2 The Tribunal shall assemble at the assigned place in SAROD and shall exercise utmost secrecy and confidentiality in writing the award,

- 37.3 Unless the Secretary extends the time or the parties agree otherwise, the Tribunal shall make its Award in writing within 30 days from the date on which the hearings are closed and shall state the reasons upon which its award is based. The award shall contain the date and shall be signed by the arbitrator or arbitrators.
- 37.4 The Tribunal may make interim awards or separate awards on different issues at different times.
- 37.5 All Awards must be submitted by the Tribunal to the Secretary and they shall be issued through the Secretary.
- 37.6 The Tribunal must deliver to the Secretary number of originals of the award sufficient for the parties and for filing with the Secretary.
- 37.7 The Secretary shall release the award to the parties only upon receipt of sufficient deposits to cover the fees and expenses due to the Tribunal and to the SAROD.
- 37.8 By agreeing to have arbitration under these Rules, the parties undertake to carry out the award without delay.
- 37.9 Stamp duty on award shall be payable by the party in whose favor the award has been pronounced.

Rule 38 - Additional Award

- 38.1 Within 30 days after the receipt of the award, either party, with notice to the Secretary and the other party may request the Tribunal to make an additional award as to claims presented in the arbitral proceedings but omitted from the award.
- 38.2 If the Tribunal considers the request for an additional award to be justified and considers that the omission can be rectified without any further hearings or evidence, it shall notify all the parties within 7 days of the receipt of the request, that it will make and additional award, and complete the additional award within 30 days after the receipt of the request.

Rule 39 - Correction of Awards

- 39.1 Within 30 days of receiving an Award, unless another period of time has been agreed upon by the parties, a party may by notice to the Secretary and the other party request the Tribunal to correct in the Award, any errors in computation, any clerical or typographical errors or any errors of similar nature.

39.2 If the Tribunal considers the request to be justified, it shall make the corrections) within 30 days of receiving the request. Any correction shall be notified in writing to the parties and shall become part of the Award.

39.3 The Tribunal may correct any error of the type referred to in Rule 37.1 on its own initiative within 30 days of the date of the Award.

Rule 40 - Settlement

40.1 If, the parties arrived at amicable settlement of the dispute during the currency proceedings, the parties shall file memo of settlement before the tribunal who shall either issue an order for the termination of the arbitral proceedings or, if requested by both parties and accepted by the Tribunal, record the settlement in the form of an arbitral award on agreed terms. The Tribunal is not obliged to give reasons for such an award,

40.2 The Parties shall:

a. Notify the Tribunal and the Secretary immediately if the arbitration is settled or otherwise terminated:

b. Make provision in any settlement for payment of all the costs of the arbitration and fees and expenses due to the SAROD and the Tribunal.

40.3 If the continuation of the arbitral proceedings becomes unnecessary or impossible for any reason not mentioned in Rule 38.1, before the award is made, the Tribunal shall inform the parties of its intention to issue an order for the termination of the proceedings. The Tribunal shall have the power to issue such an order unless party raises justifiable grounds for objection.

40.4 Copies of the order for termination of the arbitral proceedings or of the arbitral award on agreed terms, signed by the Tribunal, shall be communicated by the Tribunal to the parties through the Secretary.

Rule 41 - Interest

The Tribunal may award interest on any sum awarded at such rate as applicable in fixed deposits of Sate Bank of India in respect of such periods ending not later than the date of the award as the Tribunal considers just.

Rule 42 - Costs

42.1 The Tribunal shall specify in the final award, the costs of the arbitrations and decide which party shall bear them and in what proportion they shall be borne.

42.2 In this Rule, “costs of the arbitration” shall include:

- a. The fees and expenses of the Tribunal and the administration fees of the SAROD as determined by the Secretary in accordance with the Schedule of Fees;
- b. The costs of tribunal appointed experts or of other assistance rendered: and
- c. All expenses which are reasonably incurred by the SAROD in connection with the arbitration.

42.3 The Tribunal has power to order in its Award, that all or part of the legal or other costs (such as legal fees and expenses, costs incurred in respect of party appointed experts etc) of one party shall be paid by the other party.

Rule 43 - Waiver

A party which is aware of non-compliance with these Rules and yet proceeds with the arbitration without promptly stating its objection in writing to such non-compliance shall be deemed to have waived its right to object.

Rule 44 - Exclusion of Liability

44.1 The Tribunal, the President, the SAROD and any of its officers, employees or agents shall not be liable to any party for any act or omission in connection with any arbitration conducted under these Rules,

44.2 After the Award as been made and the possibilities of corrections and additional Awards have lapsed or been exhausted, neither the Tribunal nor the President shall be under any obligation to make any statement to any person about any matter concerning the arbitration, and no party shall seek to make any arbitrator or the President or the SAROD and any of its officers a witness in any legal proceedings arising out of the arbitration.

Rule 45 - General Provisions

45.1 In all matters not expressly provided for in these Rules, the President, the Secretary and the Tribunal shall act in the spirit of these Rules and shall make every reasonable effort to ensure the just, expeditious and economical conclusion of the arbitration.

45.2 The Secretary may from time to time issue Practice Notes on the implementation of these Rules.

Rule 46 - Amendment to Rules

These Rules may from time to time be amended by the Governing Body of SAROD.