

Survey Form 1-1A: Review of Existing Studies, Reports and Plans

Name of Studies /Reports /Plans	Major Problems/Issues Addressed	Major Strategies	Major Proposed Projects/Plans

Essential/ ITEM A (Bold font)

Preferable/ ITEM B

Optional/ ITEM C (Italic font)

Survey Form 1-1B: Ongoing and Planned Projects

Description: Ongoing, planned and proposed projects in the existing reports or studies, or identified by relevant agencies, should be summarized and listed.

Survey Methods: Literature review and interview survey with relevant agencies

Project/Program				Project Status						
	Cost Estimation	Implementing Agency	Brief Description of Project (such as road length or capacity)	Completed	Ongoing / Under Construction	D/D Stage (Fund Committed)	Waiting Fund	Planning (F/S) Stage	On Pipeline or Some Movement	No Progress

Note: Major projects should be depicted in a single project.

Essential/ ITEM A (Bold font)
 Preferable/ ITEM B
 Optional/ ITEM C (Italic font)

Survey Form 1-2A: Outline of Road Network

		Metropolitan Area	Municipal Area	City Core
Road Length	National Highway Length (km)			
	State Highway Length (km)			
	Other Arterial Road Length (km)			
	Secondary Road Length (km)			
Road Density by Road Type	Road Density of Arterial Road (km/km²)			
	Road Density of All Roads (km/km²)			
Major Road Infrastructure	Number of Rotaries			
	Number of Signalized Intersections			
	Number of Flyovers			
	Number of Railway over Bridge			
	Number of Railway Underpass			
	Number of Railway Level-Crossings			

Essential/ ITEM A (Bold font)
Preferable/ ITEM B
Optional/ ITEM C (Italic font)

Survey Form 1-2B: Inventory of Arterial Road Network

Name of Road	Section		Length (Km)	Right of Way (M)	Width of Carriage way (M)	No of Lanes	Width of Footpath		Traffic Volume (PCU/Day)	Parking regulations along roadway	Abutting Land use	Road Surface (G/F/P)*	Remarks Encroachment Existence of roadway hazards, etc.
	FROM	TO					Left	Right					

* G:GOOD, F:FAIR, P:POOR

Essential/ ITEM A (Bold font)

Preferable/ ITEM B

Optional/ ITEM C (Italic font)

Survey Form 1-2C: Inventory of Flyovers and Underpasses

Name of Flyover/ Underpass	Location/ Direction of Flyover/ Underpass	Length (m)	Width (m)	No of Lanes	Width of Footpath (m)		Traffic Volume (PCU/Day)
					Left	Right	

Essential/ ITEM A (Bold font)

Preferable/ ITEM B

Optional/ ITEM C (Italic font)

Survey Form 1-2D: Inventory of Major Intersections

Name of Intersection	Geometric characteristics (shape of intersections, number of lanes, etc.)	Inflow Traffic Volume (PCI/day)	Traffic control devices (such as signalized, etc.)	Existence of pedestrian crosswalks	Existence of Traffic Calming Measures (such as rumble strips, etc.)	Existence of intersection hazards (such as obstructed signals/signs, unregulated intersections that are unsafe for pedestrians, etc.)

Note: Critical intersections should be identified and inventoried, in particular those intersections that are important from the viewpoint of the entire road network or that are heavily congested. It is anticipated that approximately 10-30 intersections will be selected. Available traffic counts should be included or referenced and the requirement for new or updated surveys identified.

Essential/ ITEM A (Bold font)
 Preferable/ ITEM B
 Optional/ ITEM C (Italic font)

Survey Form 1-2E: Inventory of Parking Facilities

Location	Ownership of facility Public/Private/Informal	The number of parking spaces/ Vehicle Types	Parking Tariff	Occupancy rate during peak hours	Condition of street markings	Type of restriction (e.g. for on-street)

Essential/ ITEM A (Bold font)
Preferable/ ITEM B
Optional/ ITEM C (Italic font)

Survey Form 1-2F: Inventory of Traffic Control Facilities

	Metropolitan Area	Municipal Area	City Core
Number of Traffic Signals			
Existence of Area Traffic Control System			
Type of Signal Operation (Automatic or Manual by Police)			

Essential/ ITEM A (Bold font)
Preferable/ ITEM B
Optional/ ITEM C (Italic font)

Survey Form 1-2G: Inventory of Pedestrian Facilities

Location (Street)	Type of Facility (Footpath, Overpass, Underpass)	Length (m)	Width of Footpath		Obstructions (if any)	Continuity of the walkway	Existing pavement conditions	Adequate drainage facilities	Clear markings
			Left	Right					

Essential/ ITEM A (Bold font)

Preferable/ ITEM B

Optional/ ITEM C (Italic font)

Survey Form 1-2I: Inventory of NMV Facilities

Location (Street)	Type of Facilities (NMV Path, overpass, underpass)	Description	<i>Obstructions (if any)</i>	<i>Existing pavement conditions</i>	<i>Adequate drainage facilities</i>	<i>Clear markings</i>	<i>Adequacy of signage/ signaling</i>	<i>Existence of parking restrictions to safeguard pedestrian right-of-way, etc.</i>	<i>Adequacy of NMV and Pedestrian and Vehicle Flow Separation (such as on-street lanes, etc.)</i>

Essential/ ITEM A (Bold font)

Preferable/ ITEM B

Optional/ ITEM C (Italic font)

Survey Form 1-2I: Inventory of Level Crossings

Location (Street)	TVU	Traffic Volume (vehicle/day)	Road Width (m)	Number of Lanes	Number of Closures per day	Total time of Closures	Average Time of Closures	Total Number of Stopped Vehicle	Average Number of stopped vehicles per closures

Essential/ ITEM A (Bold font)

Preferable/ ITEM B

Optional/ ITEM C (Italic font)

Survey Form 1-3A: Availability of Public Transport Types/Para-Transit Modes

	City Core	Urban Area	Suburban Area
Inter-City Bus	(Available or Not-available)		
Large Bus			
Mini Bus			
Taxi			
Auto Rickshaws			
Cycle Rickshaws			
Hand-pull Rickshaws			


Essential/ ITEM A (Bold font)
Preferable/ ITEM B
Optional/ ITEM C (Italic font)

Survey Form 1-3B (1): Inventory of Bus Operation, Maintenance, and Economic and Productivity Indicators

Outline of Bus Operation							
Bus Operator:	Type of Operator (Public, Private, or Association of independent drivers)	Number of Bus Vehicles by Vehicle Types	Number of Bus Routes	Operating Vehicle- Distance (Vehicle-km)	Number of Bus Stops	Number of Bus Terminals	Fare structure

 **Essential/ ITEM A (Bold font)**

 **Preferable/ ITEM B**

 *Optional/ ITEM C (Italic font)*

Survey Form 1-3B (2): Inventory of Bus Operation, Maintenance, and Economic and Productivity Indicators

Bus Operation and Maintenance						Economic and Productivity Indicators				
Bus Operator	Vehicle loads	Vehicle headways	Service period	Typical route speeds	Service reliability	Passengers per vehicle-hour or vehicle-km	Cost for employees per vehicle-hour or vehicle-km	Cost recovery	Passenger transfers	Passenger comfort and safety

Essential/ ITEM A (Bold font)

Preferable/ ITEM B

Optional/ ITEM C (Italic font)

Survey Form 1-3B (3): Economic and Productivity Indicators and Operator Safety Concerns

Operator Safety Concerns						
Bus Operator	Adequacy of safety training programs sponsored or operated by the transport provider	Degree of driver proficiency	Adherence to road regulations	Commitment of management to safety and driver training	Effect of in-vehicle disturbances upon driver performance	Existence of incentives to encourage safe driving and conduct.

Essential/ ITEM A (Bold font)

Preferable/ ITEM B

Optional/ ITEM C (Italic font)

Survey Form 1-3C: Inventory of Para-Transit

Name of Operators	Number and Type of registered vehicles	Fare	Revenue	Cost (operating and fixed)	Operating distance and hours (km and hour)	Average age of vehicles	Condition of vehicles	Type of ownership and degree of regulation	Jurisdictional areas of operators (if any)	License fees and franchise costs

Essential/ ITEM A (Bold font)
Preferable/ ITEM B
Optional/ ITEM C (Italic font)

Survey Form 1-3D (1): Inventory of Major Intermodal Interchanges

Name of interchange facilities	Location	Layout and size of facilities	Determination of capacity and geometric characteristics of pedestrian walkways	Number of daily and hourly (peak) passengers	Number of hourly/daily vehicle movements	Number of transport operators housed	Number of loading berths	Ability of loading berths to accept various bus types

Essential/ ITEM A (Bold font)
Preferable/ ITEM B
Optional/ ITEM C (Italic font)

Survey Form 1-3D (2): Inventory of Major Intermodal Interchanges

Name of interchange facilities	Number of routes serviced	Condition of waiting areas	Level of passenger convenience and comfort	Existence of passenger amenities	Provision of passenger information (static)	Provision of passenger information (real-time)	Clarity of transfer directions	Directness of required transfer movements	Identification of management authority

Essential/ ITEM A (Bold font)
Preferable/ ITEM B
Optional/ ITEM C (Italic font)

Survey Form 1-3E: Inventory of River Transport

Name of Ferry Operator	Type of Operator (public, private, or association of independent drivers)	Boat/Ferry types	Number of Boat/Ferry by Vehicle Types	Number of Boat/Ferry Routes	Number of Passenger by Routes	Number and location of Boat/Ferry Jetties	Fare structure of boat operators

Essential/ ITEM A (Bold font)

Preferable/ ITEM B

Optional/ ITEM C (Italic font)

Survey Form 1-4A: Summary of Traffic Accidents

	5 years ago	4 years ago	3 years ago	2 years ago	1 year ago
Total number of accidents					
involving pedestrians					
involving cyclists					
Involving cars					
Involving buses					
Number of injured or dead					
Number of dead					
Number of injured					
Identification of hazardous locations					
Major accident causes					

Essential/ ITEM A (Bold font)
Preferable/ ITEM B
Optional/ ITEM C (Italic font)

Survey Form 1-4B: Summary of Enforcement

	Municipality Area	Metropolitan Area
Number of Traffic Police		
Existing Traffic Regulations		
Costs and types of violations		
Fines for traffic violations		
Number of police trap activities		
Manner of enforcement		
Organizational structure of enforcement body		

Essential/ ITEM A (Bold font)

Preferable/ ITEM B

Optional/ ITEM C (Italic font)

Survey Form 1-5A: Inventory of Agencies/Organizations Relating to Urban Transport

Name of agency/department	Function and responsibility of agency/department	Relationship to other agency	Organization chart	Number of staffs	Annual budget	Profitability and financial sustainability (only for operators)
State Government						
- Transport Department						
- Public Works Department						
- Regional Transport Authority						
- State Transport Company						
Municipality						
Metropolitan Development Authority						
State Government						
Transport Department						
Bus operators						
Associations of Rickshaws or Taxis						
Ferry operators						
Other relevant agencies (if any)						


Essential/ ITEM A (Bold font)
Preferable/ ITEM B
Optional/ ITEM C (Italic font)

Survey Form 1-5B: Assessment of Planning, Implementation and Coordination Capacity

	Assessment
Planning and Implementation Capacity:	
- Staffing capacity for urban transport planning	
- Data capture capability e.g. systems for periodic traffic data collection	
- Financial resources to implement planned transportation projects	
- Experience in Public-Private Partnerships (PPP)	
Coordination Capability:	
- Control over small private developers in planning supporting infrastructure	
- Systems or processes to integrate transport and urban planning agencies	
- Systems or process to integrate land use plans with transport plans	
- Role and impact of workers/transport operator's unions	
- Division of duties between State Government and Urban Local Bodies (ULB)	
- Planning and Implementation Capacity:	

 Essential/ ITEM A (Bold font)

 Preferable/ ITEM B

 Optional/ ITEM C (Italic font)

Survey Form 1-6A: Inventory of Environmental Monitoring Data

	Standard	Location 1	Location 2	Location 3	Location 4	Location 5
Ambient Air Quality Data						
NOx						
SOx						
Pb						
Noise						
Water Quality						

Essential/ ITEM A (Bold font)

Preferable/ ITEM B

Optional/ ITEM C (Italic font)


Survey Form 1-7A: Typical Urban Transport Issues

Issue	Severity
Traffic Congestion	
City-Wide Traffic Congestion	
Traffic Congestion on Major Roads at Peak Hours	
Narrow Streets Contributing to Congestion	
Waiting or Parked Vehicles Contributing to Congestion	
Slow Vehicles (Bicycle, Cycle Rickshaw, Auto Rickshaw, Two wheeler) Contributing to Congestion	
Existing Bus Systems	
Lack of (Public) Bus Operator	
Lack of Bus Routes (i.e. bus routes are far from residence/commercial area)	
Lack of Bus Vehicles	
Poor Maintenance of Publicly Operated Bus Vehicles (e.g. level of breakdowns and pollution generation)	
Poor Maintenance of Privately Operated Bus Vehicles	
Proliferation of Disorganized Private Bus Services (including mini buses)	
Low Profitability of Bus Operators	
Lack of Bus Driver Training	
Parking	
Major Streets are too Narrow for Parking	
Problems Caused by Parking of Private Vehicles	
Problems Caused by Parking/Waiting of Rickshaws and Auto-Rickshaws	
Lack of Parking Areas at Station/Bus Terminals	
Lack of Land for Off-Street Parking Lots	
Lack of Regulations for Parking Measures (including development control standards)	
Parking Policy and Guidelines	
Traffic Safety	
Vehicle-Vehicle Accidents	
Accidents Involving Pedestrians	
Accidents Involving Cyclists	
Accidents Involving Auto/Cycle Rickshaws	
Level of Driver Education Training/Licensing	
Enforcement	
Enforcement of Illegal Traffic Movements or Speeding	
Enforcement of Illegal Traffic Parking	
Enforcement of Unlicensed Private Vehicle Motorists	
Enforcement of Illegal Bus/Para-Transit Operators	
Lack of Enforcement Resources (traffic police and equipment)	
Environmental	
Air Pollution	
Traffic Noise	
Planning and Implementation Capacity	
Guidance for Making City Transport Policy/Plans	
City Master Plans Do Not Reflect Actual Situation on the Ground	
Lack of Sufficient Urban Transport Planners within the City Government	
City Officials Dealing with Transport Planning Lack Experience or Training in Transport Planning	
Lack of Data Collection Capability e.g. Periodical Traffic Surveys (inc. traffic volume survey)	
Lack of Financial Resources to Implement Planned Transportation Projects	
Lack of Knowledge of Public-Private Partnerships (PPP)	


Issue	Severity
Coordination Capability	
Small Private Developers Do Not Make Strategic Provision for Transport Infrastructure	
Transport and Urban Planning Agencies Do Not Coordinate or Integrate Plans and Processes	
Land Use Plans are Not Coordinated with Transport Plans	
Workers/Transport Operator's Unions Obstruct Improvements	
Division of Duties between State Government and Urban Local Bodies (ULB) is Not Clear	
Transport/Traffic Regulations	
Bus/Paratransit (Auto-Rickshaw, Cycle Rickshaw) Operators are Not Adequately Regulated	
Para Transit Vehicles are Not Adequately Regulated	

Survey Form 2-1A: Population and Socio-Economic Situation

	Total in Metropolitan Area	Total in Municipality Area	Ward 1	Ward 2	Ward 3	Ward 4.....
Population						
Number and size of household						
Population growth trend						
Population density						
Number of Workers by category						
Main Workers						
Cultivator						
Agriculture						
Labour						
Household industry						
others						
Marginal Workers						
Non workers						
Average personal income						
Average Household Income						
Fuel Price		-	-	-	-	-

 Essential/ ITEM A (**Bold font**)

 Preferable/ ITEM B

 Optional/ ITEM C (*Italic font*)

Survey Form 2-1B: Vehicle Ownership Data

	Total in Metropolitan Area	Total in Municipality Area	Ward 1	Ward 2	Ward 3	Ward 4.....
Number of Registered Vehicles by Type						
Passenger Vehicle						
Small Passenger Vehicle						
Small Truck						
Heavy Truck						
Auto Rickshaws						
Cycle Rickshaws						
Buses						
Mini Bus						
Motorcycles (two wheeler)						
Number of households having Bicycle						
Number of households having Scooter, Motorcycle, Mope						
Number of households having Car, Jeep, Van						
Number of Licensed Drivers by License Type						

Essential/ ITEM A (Bold font)

Preferable/ ITEM B

Optional/ ITEM C (Italic font)

Survey Form 2-2A: Traffic Count Surveys (Screen Line Survey and Cordon Survey)

Location:	Section (To/From):		Date/Month/Year:
Count Station No.	Direction:		Day:
	Road Name & No:		

[illegible]

Survey Form 2-2B: Traffic Count Survey (Intersection Turning Movement Survey)

Location:	Direction From:		Date/Month/Year:
Count Station No.	Direction	Right Turn/Straight/Left Turn	Day:
Road Name & No:			

	PASSENGER VEHICLES								GOOD VEHICLES				GRAND TOTAL
	HEAVY FAST	LIGHT FAST				SLOW		TOTAL	HEAVY FAST	LIGHT FAST		TOTAL	
	BUS	MINI BUS	CAR	2-WHEEL	3-WHEEL	CYCLE	OTHERS		TRUCK	LCV	OTHERS		
6-7 am													
7-8 am													
8-9 am													
9-10 am													
10-11 am													
11-12 am													
12-1 pm													
1-2 pm													
2-3 pm													
3-4 pm													
4-5 pm													
5-6 pm													
.....													

Essential/ ITEM A (Bold font)

Preferable/ ITEM B

Optional/ ITEM C (Italic font)

Survey Form 2-2C: Queue Length Survey

[illegible]

*G = Start of Green, R = Start of Red, ZS = Start of Zero Queue, ZE = End of Zero Queue

Essential/ ITEM A (Bold font)

Preferable/ ITEM B

Optional/ ITEM C (Italic font)

Survey Form 2-2D: Travel Speed and Time Survey

Name of Road :	From	To
From Km :	To km :	No. of Trip:
		Date :
		Time:

Sl. No.	Distance		Control Points	First Stop Watch		Second Stop Watch		Cause of Delay
	Km	M		Journey Time		Delay Time		
				Min.	Sec.	Min.	Sec.	

Survey Form 2-3A (1): Household O-D Survey

Household Summary

Date/Day : _____		Enumerator : _____				Sample No:	
1.Address		2. Head Of The Household:					
		3.Numbers Of Family Members					
		4.Vehicles Owned:		Passenger Car	2- Wheeler	Bicycle	Auto
		5 Years Ago					
Pin No: Tel.:		Present					

5. Details Of Household Members										
Member No	Sex M/F	Age	Occupation*	Monthly Income (Rs.)		Monthly Expenditure On Transport (Rs.)		Availability of Driver License	Working/School Location	
				5 Years Ago	Present	5 Years Ago	Present			
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										

*Occupation: 1.Govt.Service, 2.Pvt. Service, 3.Business, 4.Student, 5.House-Wife, 6.Retired Person, 7. Unemployed

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Survey Form 2-3A (2): Household O-D Survey

Trip Summary

[illegible]

Note: ¹Referring to the numbers described in “5. Details of Household Members”
²1.Bus, 2.Mini Bus, 3.Car, 4.Two-wheeler (motorcycle). 5.Three-wheeler (Auto-rickshaw), 6.Bicycle, 7.Railway, 8.Walk
³ Put zone number
⁴ 1.Going to work, 2.Going to school, 3.Going home, 4.Shopping, 5.Leisure, and 6.Business

Essential/ ITEM A (Bold font)

Preferable/ ITEM B

Optional/ ITEM C (Italic font)

Survey Form 2-3B: Roadside O-D Survey

[illegible]

Note: 1.Bus, 2.Mini Bus, 3.Car, 4.Two-wheeler (motorcycle). 5.Three-wheeler (Auto-rickshaw), 6.Bicycle, 7.Railway, 8.Walk

² Put zone number

³1.Going to work, 2.Going to school, 3.Going home, 4.Shopping, 5.Leisure, and 6.Business

Essential/ ITEM A (Bold font)

Preferable/ ITEM B

Optional/ ITEM C (Italic font)

Survey Form 2-4A: Public Transport and Freight Vehicle Movement Survey

[illegible]

Note: ¹ Put zone number

Essential/ ITEM A (Bold font)

Preferable/ ITEM B

Optional/ ITEM C (Italic font)

Survey Form 4-1: New Development Areas

Name of Development Area	Land Area (km ²)	Target Year	Number of Future Residential Population	Number of Future Labour Force

Essential/ ITEM A (Bold font)

Preferable/ ITEM B

Optional/ ITEM C (Italic font)

Survey Form 7-1A: Longlist of Proposed Projects

Project Code	Project Title	Implementing Agency	Estimated Cost	Current Status	Project Description

Essential/ ITEM A (Bold font)

Preferable/ ITEM B

Optional/ ITEM C (Italic font)

Survey Form 7-4A: Scoring of Longlist Projects

		Project Importance (1-3)									Constraints (0,1)				Priority (low, Medium, High)
Code	Project/Program	Consistency with Overall Policy Framework	Consistency with Future Framework for Transport Network	Impact on Reducing Traffic Congestion	Promotion of Public Transport	Impact on Enhancing Safety	Cost Effectiveness	Level of Commitment by Relevant Agencies	Degree of Support from Transport Users	Score	Whether the transport measure can be implemented within the timeframe of the CMP	Whether land acquisition and resettlement are manageable	Whether environmental impact is adverse	Total Score	

Essential/ ITEM A (Bold font)

Preferable/ ITEM B

Optional/ ITEM C (Italic font)

Survey Form 7-5A: Examination of Financing Options

Code	Project Title	Implementing Agency	Estimated Cost (Million Rupee)	Financial Options				Remarks
				Funding by the Local Government	Funding by the Central Government	Private Sector Finance	Funding by Donor Agencies	

Essential/ ITEM A (Bold font)

Preferable/ ITEM B

Optional/ ITEM C (Italic font)