GOVERNMENT OF THE PEOPLE'S REPUBLIC OF BANGLADESH
Urban Development Directorate (UDD)

INCEPTION
REPORT

"**Transportation Surveys for Roadways and Waterways; Package-03 under Preparation of Development Plan for Meherpur Zilla Project.**"

CONSULTANT

GEOMARK LIMITED

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Executive Summary

This Inception Report marks the initial phase of the Transportation Survey for Meherpur District, outlining the project's objectives, methodology, and planned activities. The survey is designed to develop a comprehensive Transportation Master Plan, addressing the district's current challenges and future needs. It aims to enhance connectivity, reduce congestion, and promote sustainable socio-economic development through well-informed planning and interventions.

The report establishes the framework for the project, detailing the scope, timeline, and key deliverables. It emphasizes a multi-faceted approach to data collection, covering roadways and waterways, and leveraging modern tools such as GIS-enabled mobile applications and Kobo Toolbox. These technologies will facilitate efficient data gathering, processing, and visualization, ensuring accuracy and reliability.

Initial reconnaissance surveys and stakeholder consultations have already provided valuable insights into the district's transportation landscape. Challenges identified include traffic congestion, poor road infrastructure, and gaps in access to essential services like healthcare and education. These findings will inform the design of subsequent survey activities and ensure the project remains aligned with local priorities.

The Inception Report highlights the objectives and scope of the project, deployment of resources, review of relevant reports and collection, review of relevant data and traffic survey design. Key milestones include the successful initiation of reconnaissance surveys, engagement with local authorities, and the development of a detailed work plan for the upcoming phases.

This project is expected to deliver actionable recommendations for infrastructure improvements, policy formulation, and capacity building. By integrating advanced methodologies and local insights, the Transportation Master Plan will support Meherpur District's long-term development vision, fostering improved mobility, economic growth, and a higher quality of life for its residents.

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1. Introduction

Transportation is a primary driver of socio-economic development, shaping connectivity, accessibility, and the overall quality of life for communities. In Meherpur District, located in southwest Bangladesh, the growing demands of urbanization and economic activities underscore the need for a well-planned and sustainable transportation system. To address these challenges, a comprehensive Transportation Master Plan is being developed, with this Inception Report marking the initial phase of the project.

This report outlines the objectives, scope, and methodology for conducting a detailed Transportation Survey. The survey aims to assess the district's current transportation infrastructure, analyze traffic patterns, and identify gaps in connectivity. By leveraging modern tools, such as GIS-enabled applications and digital survey platforms, the project will ensure efficient and accurate data collection, forming a robust foundation for future planning.

Stakeholder engagement is a cornerstone of this initiative, ensuring that the survey aligns with the priorities of local communities and authorities. Initial reconnaissance efforts and consultations have already identified critical issues, including traffic congestion, deteriorating road conditions, and limited access to essential services. These findings provide valuable insights for shaping the survey's focus and subsequent analysis.

The Inception Report serves as a roadmap for the project, detailing the approach to systematically collect and analyze data on vehicular movement, road conditions, and socio-economic factors influencing transportation. By addressing both immediate challenges and long-term needs, the Transportation Master Plan aims to enhance mobility, support economic growth, and improve the quality of life for the residents of Meherpur District.

1.1 The Project Location

Meherpur is a district in southwest Bangladesh that lies in the northwest of Khulna Division. Its borders are to the east and west, respectively, with the districts of Chuadanga and Kushtia in Bangladesh and the Indian state of West Bengal. Meherpur was a Nadia district subdivision prior to independence. The district is 716.08 square kilometers (276.48 square miles) in size.
Meherpur Sadar Upazila, Mujibnagar Upazila, and Gangni Upazila are the three upazilas that make up Meherpur district. Meherpur, which is home to more than 0.8 million people, is a significant hub for trade and agriculture in the area. The district headquarters is located in the town of Meherpur, which is also the largest town in the district.

Meherpur's historical significance and rich cultural legacy are well-known. There are numerous historic sites and ruins in the area. The yearly Baruni Mela, which is conducted in honor of the Hindu god Shiva, is one of Meherpur's most colorful and bright celebrations.

Meherpur's economy is based mostly on agriculture, with a sizable section of people working in farming and associated fields. Rice, wheat, and jute are just a few of the crops that may be produced in the area because of its rich soil and temperate temperature. The non-agricultural sector has grown significantly in the region in recent years, as evidenced by the opening of a number of small and medium-sized businesses. With a profusion of picturesque lakes and rivers, verdant forests, and undulating hills, Meherpur is renowned for its natural beauty. Numerous wildlife sanctuaries, such as the Kanaighat Wildlife Sanctuary, which is home to a wide variety of species, are located in the district.

Meherpur's public services and infrastructure are both deficient. Additionally, the district is vulnerable to frequent natural catastrophes like cyclones and floods, which can result in significant damage and fatalities.
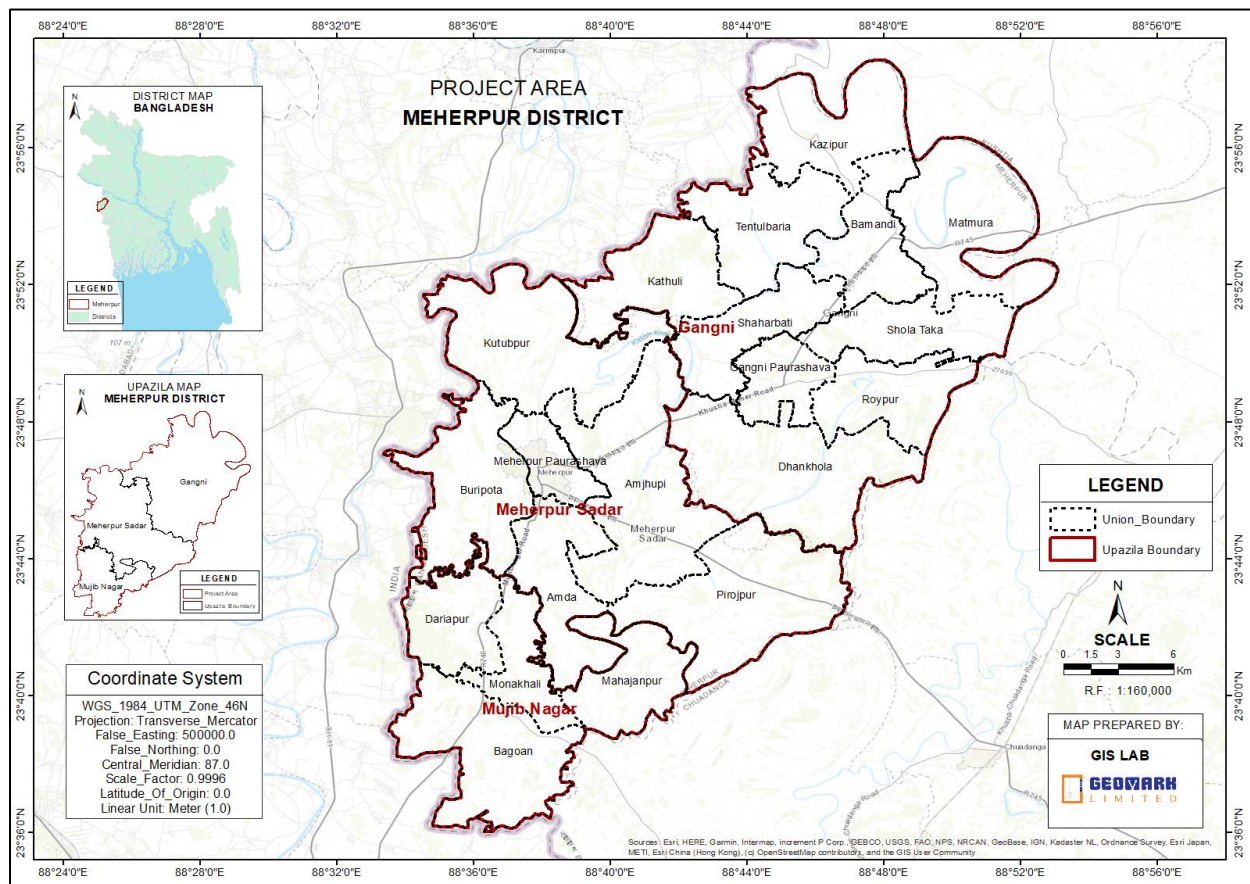
Figure 1: project Area

1.3 Project Commencement

The contract for consultancy services between Urban Development Directorate (UDD), the Client and Geomark Limited, the Consultant, was signed on December 02, 2024.

1.4 The Consultant

GEOMARK LIMITED is a brand name with specific focus to the Planning and IT Enabled Services (ITES) specializing in the geospatial applications including Advance topographical survey, Socioeconomic Survey, Planning, Data Entry, GIS, CAD, LIS, MIS, AM/FM, processing of remote sensing data, digital mapping/surveying using GPS, geo-spatial solutions and so forth.

GEOMARK LIMITED has vast experience on transportation survey through smart device, data processing, data analysis and report writing.

2. Project Overview

2.1 Objectives of the Survey

The principal objectives of the traffic and transportation surveys in Meherpur are articulated as follows:

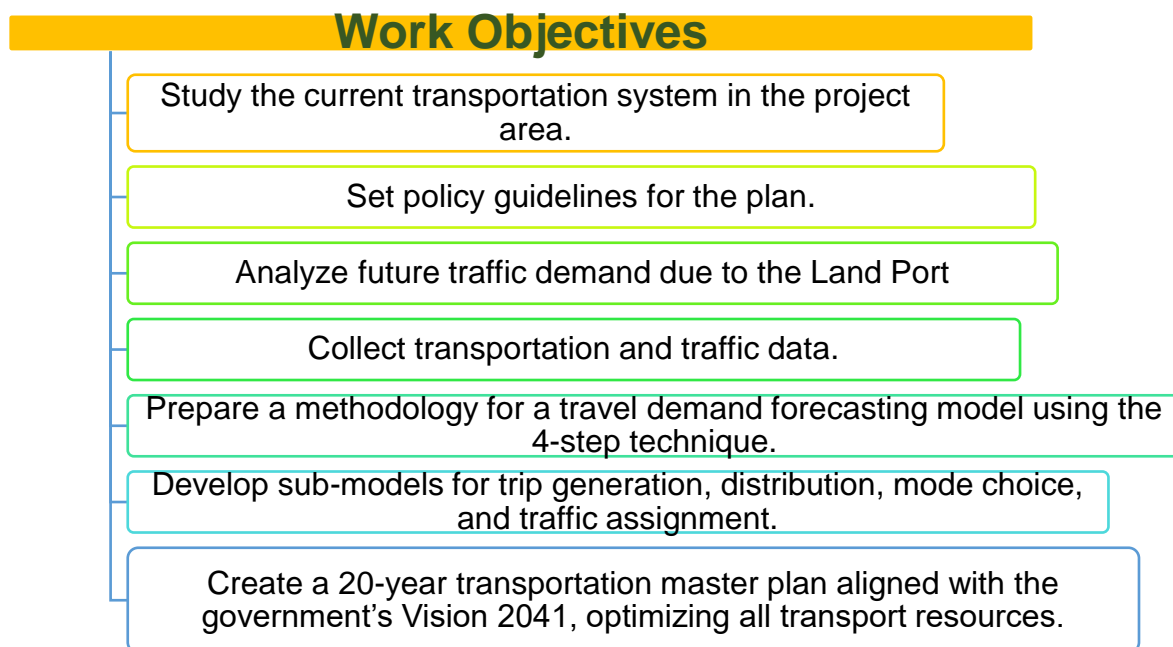|	
Investigate Travel Behavior:	Gather nuanced data on travel behaviors through methodologically rigorous household surveys and interviews, aimed at elucidating the purpose of trips, modes of transport employed, and frequency of travel. This information is vital for forecasting future transportation requirements based on demographic shifts.
Analyze Traffic Patterns:	Scrutinize vehicular movement and traffic volumes at strategically significant locations to elucidate peak and off-peak dynamics. This analysis is imperative for identifying congestion points and circulation patterns, which are crucial for future transportation planning.
Evaluate Existing Transportation Infrastructure:	Conduct a comprehensive assessment of the current state of roads, intersections, and transportation facilities to identify deficiencies and opportunities for enhancement. This evaluation will encompass detailed documentation of pavement types, road conditions, and accessibility metrics.
Engage and Collaborate with Stakeholders:	Cultivate dialogue and collaboration with stakeholders, encompassing local government entities, community organizations, and the general public, to ensure that their perspectives and needs are duly incorporated into the planning process.
Synthesize Data for Comprehensive Analysis:	Ensure the seamless integration of data derived from various surveys into a cohesive database. This integration will facilitate an exhaustive analysis of the interrelationships between transportation infrastructure, land use patterns, and traffic dynamics, thus contributing to a more holistic comprehension of transportation phenomena.
Forecast Future Transportation Demand:	Utilize the amassed data to project future transportation needs predicated on anticipated population growth, urbanization, and economic expansion. This endeavor will culminate in the development of a 20-year transportation demand prediction model.
Inform Policy and Planning Initiatives:	Equip local authorities and planning agencies with empirically supported recommendations for transportation policy formulation and infrastructural investments. The objective is to engender a sustainable transportation framework that aligns with overarching regional development goals.
Assess Goods Movement:	Conduct a thorough examination of goods movement within the region, encompassing an analysis of the types of goods transported and the modalities employed. Understanding freight patterns will inform logistics planning and identify necessary infrastructural enhancements.

Figure 2: Objectives of the Survey

By accomplishing these objectives, the surveys will substantially contribute to the formulation of a comprehensive transportation master plan for Meherpur, addressing both contemporary challenges and prospective opportunities inherent in the region's transportation landscape

2.3 Scope of Work

The consultant will conduct all necessary traffic and transport surveys and studies for the project, prepare working paper on the relevant fields under study, and also assist the UDD team members in preparation of final plan and all relevant report still completion of the project. The consultant will extend all necessary assistance particularly in gathering and procuring all relevant traffic and transportation related attribute and spatial data of relevant feature within the project area; GIS database operation and management, analysis and preparation of all maps and reports till completion of the project.

The consultant will collect all relevant data and information through digital survey and upload the collected data to website instantly through online communication device; at the end of each month submit a report containing all information have been uploaded to website and ensure that all data and information are accessible to viewer.

Figure 3: Work Objectives

Work Objectives

- Study the current transportation system in the project area.
- Set policy guidelines for the plan.
- Analyze future traffic demand due to the Land Port
- Collect transportation and traffic data.
- Prepare a methodology for a travel demand forecasting model using the 4-step technique.
- Develop sub-models for trip generation, distribution, mode choice, and traffic assignment.
- Create a 20-year transportation master plan aligned with the government's Vision 2041, optimizing all transport resources.

The consultant will be responsible for quality of data and information collected, data processing, cleaning and editing, and presentation into tabular form including preparation of working paper as required by PD. The consultant will deliver all raw and processed data along with working papers containing guidelines for preparing the planning package.

2.3 Activities to Date

The following milestones have been achieved so far:

- The consultant has formed the team, setup office for the project as well as prepared the schedule of the project.
- The first kick off meeting was held with the client on Wednesday, December 11, 2024 at the head office of UDD and subsequently a series of meetings were held between the consulting team and the site office of UDD.
- The consulting team has paid a visit to the project site. During the visit, they have collected these information/ data or performed the following activities:
  - Identified the major stakeholders. They are:
    - Roads and Highways Department (RHD)
    - Local Government Engineering Department (LGED)
    - Bangladesh Railway (BR)
    - Bangladesh Water Development Board (BWDB)
    - DC Office, Meherpur
    - UNO/ Land Offices (Meherpur, Gangni, Mujibnagar)
    - Pourashava Offices (Meherpur, Gangni, Mujibnagar)
  - Had meetings with:
    - Project Director, in the UDD HQ (Dhaka),
    - Upazila Engineer, Meherpur Upazila Parishad
    - Upazila Nirbahi Officer, Gangni & Mujibnagar Union Parishad
    - Locals people throughout the project area

Consulting team has performed reconnaissance survey on the following sites:

- ➢ Chowgacha, Gangni
- ➢ Vatpara (Kuthi)
- ➢ Tentulbaria
- ➢ Kumaridanga West
- ➢ Kumaridanga
- ➢ Rajapur
- ➢ Rajarpara Hemayetpur
- ➢ Hemayetpur Bazar
- ➢ Charchara Bazar
- ➢ Baradi Bazar
- ➢ Kutirghat, Ujolpur
- ➢ Borobazar, TNT More

➢ Mohajanpur Bazar

➢ Gopalnagar, Shibpur

➢ Bisshonathpur Koborsthan More

➢ Koborsthan More, Shibpur

➢ Kulbaria

• Compiling the aforementioned progresses, the consulting team has submitted the mobilization report on December 11, 2024.

• The consultant team has already received valuable comments from the client and prepared the responses about how they were addressed as accompanied in the inception report.

• All available secondary data were collected and reviewed for

• The consulting team has performed a thorough review on the available important literature (national policies and plans) related to transportation of the country.

• Finally, the consulting team has adopted the exact survey methodology and planning required to develop the travel demand forecasting model for this project.

3. Project Administration

3.1 Consultant's Organization

Geomark Ltd. is brand with specific focus to the emerging IT Enabled Services (ITES) specializing in the geospatial applications including consultancy on engineering & Architectural Design, Transportation Survey & Planning, Planning GIS, LIS, MIS, AM/FM, processing of remote sensing data, digital mapping/surveying using GPS, geo-spatial and textual data conversion, application software and web page/solutions development and so forth. Apart from ITES, provides professional consulting services particularly for undertaking research and development studies/projects covering and not limited to land, natural resources, environment, urban/real estate development, infrastructure development, institution and organization studies, land related legislation study, human resources development studies, general education related studies, and so forth.

The agreement between Urban Development Directorate (UDD) and consultant Geomark ltd. Has been held on 2nd December, 2024 for Package-03: Transportation Surveys for Roadways and Waterways under Preparation of Development Plan for Meherpur Zilla Project.

3.2 Mobilization of the Consultant's Team

The consultant has initiated their project activities with immediate action. The successful initiation of the Transportation Surveys for Roadways and Waterways project in Meherpur District required the strategic mobilization of a multidisciplinary consultant team. This phase emphasized the timely deployment of skilled professionals, allocation of logistical resources, and establishment of coordination mechanisms to ensure the project's smooth execution.

Personnel Deployment

Team Formation: Assemble a team of experts, including transportation engineers, surveyors, data analysts, GIS specialists, and project managers. Each member will be assigned specific roles to ensure effective project execution.

Roles and Responsibilities: Clearly define the roles and responsibilities of each team member, including tasks related to data collection, analysis, model development, and training. This clarity will help in efficient task management and coordination.

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Project Management Plan

Milestones and Deliverables: Establish key milestones and deliverables with specific deadlines to monitor progress and ensure timely project completion. Examples include deadlines for data collection phases, model development stages, and final report submission.

Resource Allocation: Allocate resources, including manpower, equipment, and budget, to support various project activities. Ensure that resources are utilized efficiently and effectively to achieve project goals.

Initial Meeting

Stakeholder Engagement: Conduct an initial meeting with local stakeholders such as the Mayor, Union Parishad (UP) Chairman, and Councillors. This meeting will introduce the project, gather local insights, and secure stakeholder support, facilitating smoother project implementation.

Local Insights: Gather information on local transportation issues, infrastructure needs, and community concerns. This engagement will help tailor the project to address specific local needs.

3.2.1 Deployment Process

The deployment of the consultant's team was carried out systematically to ensure readiness for immediate project activities:

1. **Preparation Phase**
   - Conducted orientation sessions for all team members to align on project objectives, methodologies, and expected outcomes.
   - Procured necessary equipment, including GPS-enabled tablets, mapping software, and survey tools.

2. **On-Site Deployment**
   - Established a local project office in Meherpur District to serve as the coordination hub for field operations.
   - Deployed key personnel to initiate reconnaissance activities and stakeholder engagements.

3. **Field Team Training**
   - Training on the use of digital tools, data collection techniques, and engagement protocols will be done.
   - Conducted mock surveys to refine the team's approach and address potential challenges.

3.2.3 Coordination Mechanism

A clear reporting and coordination structure was established to streamline communication and ensure accountability:

- **Weekly Progress Reviews:**

    Team members report progress and challenges to the Project Manager, enabling real-time adjustments to the work plan.

- **Stakeholder Collaboration:**

    Regular updates and feedback loops are initiated with local representatives, including municipal authorities and community leaders.

- **Digital Integration:**

    All collected data will be uploaded to a central database, allowing for real-time monitoring and quality assurance

3.3 Initial Works & Meetings

1. *Work Schedule:* Preparation and adjustment of work schedule is done with Microsoft Project.
2. *Questionnaire preparation:* Questionnaire has been prepared according ToR. Different questionnaires have been prepared for different types of surveys.
3. *Online data collection software preparation:* For transportation data collection an online free software named KoboToolbox and GIS enabled mobile application MerginMaps will be used.
4. *Survey Activities:* Team formation is in progress. As soon as the inception report will be approved, the team will be mobilized to the field.

4. Work Schedule and Staffing

The work plan for the Transportation Surveys for Roadways and Waterways project in Meherpur District has been meticulously designed to ensure systematic and comprehensive data collection, analysis, and reporting. This plan outlines the timeline, activities, roles, and responsibilities for each phase of the project, ensuring alignment with the project objectives and delivering actionable insights for the preparation of the development plan.

4.1   Work Plan

As per TOR, the assignment is to be completed within 14 months.

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Work Plan

ID	SL	Activity	Duration	Start	Finish
1		**Transport Survey**	**296 days**	**Mon 02-12-24**	**Thu 29-01-26**
2	*	Contract Agreement	1 day	Mon 02-12-24	Mon 02-12-24
3	1	Mobilization of Team	9 days	Tue 03-12-24	Sun 15-12-24
4	1.1	• Personnel Deployment	2 days	Tue 03-12-24	Wed 04-12-24
5	1.2	• Project Management Plan	1 day	Thu 05-12-24	Thu 05-12-24
6	1.3	• Initial Meeting	2 days	Sun 08-12-24	Mon 09-12-24
7	1.4	• Reconnaissance Survey	4 days	Mon 09-12-24	Sun 15-12-24
8	2	Inception Report	11 days	Tue 17-12-24	Tue 31-12-24
9	2.1	• Collections of Information	2 days	Tue 17-12-24	Wed 18-12-24
10	2.2	• Existing Maps and Statistics	2 days	Thu 19-12-24	Sun 22-12-24
11	2.3	• Development Plans	2 days	Sun 22-12-24	Tue 24-12-24
12	2.4	• Compile Preliminary Findings	2 days	Tue 24-12-24	Thu 26-12-24
13	2.5	• Submission of Inception Report	3 days	Thu 26-12-24	Tue 31-12-24
14	3	Survey Report on Completion of Survey Work, Database Preparation, Editing and Finalization and Linking of all Attribute and Spatial Database (GIS Database Link and Upload the Data on Web Site)	96 days	Wed 01-01-25	Sun 25-05-25
15	3.1	• Training Surveyors of Separate Teams for Separate Surveys	5 days	Wed 01-01-25	Tue 07-01-25
16	3.2	• Field Surveys	8 days	Tue 07-01-25	Sun 19-01-25
17	3.3	• Vehicle Registration Data Collection	7 days	Sun 19-01-25	Tue 28-01-25
18	3.4	• Road Condition Survey	15 days	Tue 28-01-25	Tue 18-02-25
19	3.5	• Traffic Volume and Origin-Destination Surveys	8 days	Tue 18-02-25	Thu 27-02-25
20	3.6	• Critical Traffic Junction Surveys	8 days	Sun 02-03-25	Tue 11-03-25
21	3.7	• Trip Generation Surveys	10 days	Tue 11-03-25	Tue 25-03-25
22	3.8	• Travel Behavior Studies	9 days	Tue 25-03-25	Thu 17-04-25
23	3.9	• Goods Movement Studies	9 days	Thu 17-04-25	Tue 29-04-25
24	3.10	• Travel time and Speed Survey	10 days	Wed 30-04-25	Wed 14-05-25
25	3.11	• Bus, Rail & Launch Survey	7 days	Wed 14-05-25	Sun 25-05-25

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Legend:
Task | Split | Milestone | Summary | Project Summary | Inactive Task | Inactive Milestone | Inactive Summary | Manual Task | Duration-only | Manual Summary Rollup | Manual Summary | Start-only | Finish-only | External Tasks | External Milestone | Deadline | Progress | Manual Progress

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Work Plan

ID	SL	Activity	Duration	Start	Finish
26	4	**Interim Report on Data Processing, Analysis, Interpretation, Presentation and Formulation of Working Paper**	**51 days**	**Mon 26-05-25**	**Sun 10-08-25**
27	4.1	• Data Management	10 days	Mon 26-05-25	Sun 15-06-25
28	4.2	• Data Analysis	10 days	Sun 15-06-25	Sun 29-06-25
29	4.3	• Data Processing	10 days	Sun 29-06-25	Sun 13-07-25
30	4.4	• Forecasting and Scenario Analysis	10 days	Sun 13-07-25	Sun 27-07-25
31	4.5	• Assistance in preparation of Regional Plan and Sub-Regional Structure Plan at Regional Scale	11 days	Sun 27-07-25	Sun 10-08-25
32	5	**Assistance in Preparation of Urban and Rural Plan, Detailed Area Plan, Sectoral Plan, Contingency Plan, and Development Control Plan**	**50 days**	**Mon 11-08-25**	**Thu 16-10-25**
33	5.1	• Prepare Urban and Rural Area Plans	10 days	Mon 11-08-25	Sun 24-08-25
34	5.2	• Develop Sectoral and Contingency Plans	10 days	Sun 24-08-25	Sun 07-09-25
35	5.3	• Create Action Plans for Bankable Projects	15 days	Sun 07-09-25	Sun 28-09-25
36	5.4	• Submit Comprehensive Report on Urban and Rural Planning Assistance	15 days	Sun 28-09-25	Thu 16-10-25
37	6	**Technology Transfer and Training**	**10 days**	**Sun 19-10-25**	**Thu 30-10-25**
38	6.1	• Survey Work Training	2 days	Sun 19-10-25	Mon 20-10-25
39	6.2	• Model Operation	4 days	Mon 20-10-25	Sun 26-10-25
40	6.3	• Model Maintenanc	2 days	Sun 26-10-25	Tue 28-10-25
41	6.4	• Model Application	2 days	Tue 28-10-25	Thu 30-10-25
42	7	**Report on Development of 20-year Prediction Model for Detailed Transportation System on at upazila level including Pourashava, union and growth center and publishing on website.**	**66 days**	**Sun 02-11-25**	**Thu 29-01-26**
43	7.1	• Strategy Development for Plan Formulation	25 days	Sun 02-11-25	Thu 04-12-25
44	7.2	• Infrastructure Development & Traffic Management	20 days	Thu 04-12-25	Wed 31-12-25
45	7.2	• Policy Recommendations & Implementation Strategy	21 days	Wed 31-12-25	Thu 29-01-26

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Legend:
- Task
- Split
- Milestone
- Summary
- Project Summary
- Inactive Task
- Inactive Milestone
- Inactive Summary
- Manual Task
- Duration-only
- Manual Summary Rollup
- Manual Summary
- Start-only
- Finish-only
- External Tasks
- External Milestone
- Deadline
- Progress
- Manual Progress

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4.2   Staffing Schedule:

The project staffs have been mobilized right after the contract signing and the project activities were commenced along with the staff mobilization. The professionals engaged in the project will be working in the following schedule:

No	Name of Staff	Staff-month input by month[1]												Total Staff-month input		
		1	2	3	4	5	6	7	8	9	10	11	12	Home	Field[2]	Total
1	Dr. Quazi Sazzad Hossain													5	1	6
2	Dheman Mallick													2	2	4
3	Md. Saifur Rahman														8	8
													Total	7	11	18

5. Review of Relevant Reports

After discussion with UDD, the consulting team has identified the following documents to be relevant and required to be reviewed for this project:

5.1 Sustainable Development Goals (SDGs)

The report was prepared by General Economics Division (GED) under the Support to Sustainable and Inclusive Planning (SSIP) Project under Planning Commission. The report was published in February, 2016.

There are 17 Sustainable Development Goals with 169 associated targets. The goals are as follows:

Sustainable Development Goals (SDGs)
Goal 1: End poverty in all its forms everywhere
Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture
Goal 3: Ensure healthy lives and promote well-being for all at all ages
Goal 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
Goal 5: Achieve gender equality and empower all women and girls
Goal 6: Ensure availability and sustainable management of water and sanitation for all
Goal 7: Ensure access to affordable, reliable, sustainable and modern energy for all
Goal 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
Goal 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation
Goal 10: Reduce inequality within and among countries
Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable
Goal 12: Ensure sustainable consumption and production patterns
Goal 13: Take urgent action to combat climate change and its impacts[1]
Goal 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development
Goal 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

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Goal 16: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

Goal 17: Strengthen the means of implementation and revitalize the global partnership for sustainable development

Among these goals the Consultant team finds out some targets which may be related to the project. Some these targets are fully/partially aligned with the *"Eighth Five Year Plan"*

Targets of the Sustainable Development Goals (SDGs)
Goal 1: End poverty in all its forms everywhere
Target 1.1: By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than $1.25 a day
Target 1.a: Ensure significant mobilization of resources from a variety of sources, including through enhanced development cooperation, in order to provide adequate and predictable means for developing countries, in particular least developed countries, to implement programmes and policies to end poverty in all its dimensions
Goal 5: Achieve gender equality and empower all women and girls
Target 5.c: Adopt and strengthen sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls at all levels
Goal 6: Ensure availability and sustainable management of water and sanitation for all
Target 6.5: By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate
Target 6.6: By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes
Goal 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
Target 8.1: Sustain per capita economic growth in accordance with national circumstances and, in particular, at least 7 per cent gross domestic product growth per annum in the least developed countries
Target 8.2: Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value added and labour-intensive sectors
Target 8.3: Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small- and medium-sized enterprises, including through access to financial services

Target 8.9: By 2030, devise and implement policies to promote sustainable tourism that creates jobs and promotes local culture' and products

Target 8.a: Increase Aid for Trade support for developing countries, in particular least developed countries, including through the Enhanced Integrated Framework for Trade-Related Technical Assistance to Least Developed Countries

Goal 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

Target 9.1: Develop quality, reliable, sustainable and resilient infrastructure, including regional and trans-border infrastructure, to support economic development and human well-being with a focus on affordable and equitable access for all

Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable

Target 11.2: By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons

Target 11.4: Strengthen efforts to protect and safeguard the world's cultural and natural heritage

Target 11.7: By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, in particularly for women and children, older persons and persons with disabilities

Target 11.a: Support positive economic, social and environmental links between urban, peri-urban and rural areas by strengthening national and regional development planning

Target 11.b: By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015-2030, holistic disaster risk management at all levels

Goal 12: Ensure sustainable consumption and production patterns

Target 12.2: By 2030, achieve the sustainable management and efficient use of natural resources

Goal 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development

Target 14.2: By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans

Target 14.5: By 2020, conserve at least 10 per cent of coastal and marine areas, consistent with national and international law and based on the best available scientific information
Goal 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss
Target 15.1: By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements
Target 15.2: By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally
Goal 16: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels
Target 16.6: Develop effective, accountable and transparent institutions at all levels
Target 16.7: Ensure responsive, inclusive, participatory and representative decision- making at all levels
Target 16.10: Ensure public access to information and protect fundamental freedoms, in accordance with national legislation and international agreements
Goal 17: Strengthen the means of implementation and revitalize the global partnership for sustainable development
Target 17.11: Significantly increase the exports of developing countries, in particular with a view to doubling the least developed countries' share of global exports by 2020
Target 17.16: Enhance the global partnership for sustainable development, complemented by multi-stakeholder partnerships that mobilize and share knowledge, expertise, technology and financial resources, to support the achievement of the sustainable development goals in all countries, in particular developing countries
Target 17.17: Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships

The literature review has presented the excerpts from two major reports regarding the developing Bangladesh especially emphasizing aspects relating to transportation and particularly to this project. From this discussion, it is also highlighted the components, strategies and priorities that fall in tandem with the aim and objectives of this Project. The final travel demand forecasting model and its suggested sustainable transportation system plan will reflect all these issues highlighted in the literature review.

6 Collection and Review of Relevant Data

Apart from conducting literature review on major documents related to the Project, substantial amount of secondary data was also amassed for this project. The following subsections lists the relevant data sources and the description of data that the consulting team found to be relevant for this project.

6.1   Collection of Transportation Maps

The collection of transportation maps for Meherpur District is vital for understanding the current state of its transportation infrastructure and planning for future needs. These maps provide a detailed visualization of the district's roadways, waterways, public transit routes, and connectivity patterns, forming the foundation for a comprehensive Transportation Master Plan.

6.1.1 Road Network Map

The Road Network Map prepared by the Local Government Engineering Department (LGED) is a primary resource for understanding the transportation infrastructure in Meherpur District. This map provides detailed information about the existing road network, including road types, conditions, and connectivity, which are essential for transportation planning and infrastructure development.

**DISTRICT MAP OF
MEHERPUR DISTRICT
KHULNA DIVISION**

INDIA

Naudapara Godovin GC

Kazipur

Karamdi GC

Tentulbaria

Bamondi

Bamundi Hat

Motmura

Kathuli

Sholmari Hat

Shaharbati

Sholotaka

Garabaria Hat

Kutubpur

GANGNI

Gangni Hat

Raipur (Gangni)

Dhankhola

KUSHTIA DISTRICT

MEHERPUR

MEHERPUR SADAR

Buripota

Amjhupi

Amda

Barai Hat

Dariapur

Dariapur Hat

Pirojpur

Mohajanpur

To Chuadanga

Monakhali

MUJIBNAGAR

Mohajanpur Hat

CHUADANGHA DISTRICT

Bagoan

Anandabash Hat

N

SCALE

R.F. 1: 2,10,000

LEGEND

Administrative Boundaries	Physical Infrastructures	Socio-Economic Infrastructures	Natural Features	Agricultural Infrastructures
International Boundary	National Highways	Growth Centre	Wide River with Sandy Area	Embankment
District Boundary	Regional Highways	Rural Market	Khal / Small River	
Upazila Boundary	Zila Road	Police Station	Water Bodies	
Union Boundary	Upazila Road(Pucca)	Upazila Health Complex	Forest Area	
Municipal Boundary	Upazila Road((Katcha)	Family welfare Centre	Hill Area	
Administrative HQs	Union Road (Pucca)	Post Office		
District HQ	Union Road (Katcha)	College		
Upazila HQ	Railway Network	High School		
Union HQ				

Compiled from : SPOT Image 1989-90, Aerial Photgraph 1983-84,
Topographic Maps, Thana Maps, B.B.S and Field Checking.
Projection : Lambert's Conformal Conic
Data Source : GPS Field Survey 1999

PREPARED BY : GIS UNIT
LOCAL GOVERNMENT ENGINEERING DEPARTMENT

Map: Existing Road Network Map of LGED

6.1.2 Rail Network Map

The Rail Network Map of Bangladesh provide crucial insights into the existing railway infrastructure, routes, stations, and connectivity within the country. While Meherpur itself does not have an extensive rail network, it is important to consider nearby railway connections and how they link Meherpur to other districts and major cities. This is essential for transportation planning, infrastructure development, and improving connectivity.

Darshana to Meherpur Rail Project: The Darshana to Meherpur Rail Project aims to enhance the connectivity between the Darshana Junction (located on the main railway line connecting Dhaka and Khulna) and Meherpur. This project would provide significant improvements in transportation, supporting both passenger and freight services, and is critical for promoting socio-economic development in the region.

Following two map shows Bangladesh Railway Network by Corridor and Bangladesh Railway Master Plan (Phase Period 2016-2020).

The Bangladesh Railway Network by Corridor Map provides a comprehensive view of the major railway corridors that connect different regions within Bangladesh.

The Bangladesh Railway Master Plan (Phase Period 2016-2020) was developed to guide the expansion, modernization, and improvement of the railway infrastructure in Bangladesh. The master plan outlines a series of strategic initiatives aimed at enhancing the railway network's capacity, efficiency, and connectivity to support the country's socio-economic development.

These maps show the upcoming Darshana to Meherpur Rail Route. There would be six stations along the line -- at Darshana, Bastopur, Kanaidanga, Mujibnagar, Monakhali and Meherpur.

GEOMARK
LIMITED

Transportation Surveys for Roadways and Waterways;
Preparation of Development Plan for Meherpur Zilla Project.

Map: Bangladesh Railway Network by Corridor

Map: Bangladesh Railway Master Plan (Phase Period 2016-2020)

7. Project Planning and Mobilization

The **Reconnaissance Survey** for the transportation study in Meherpur District is an essential early step that helps gather preliminary information, identify key issues, and set the foundation for detailed surveys. Below is a detailed approach to conducting the reconnaissance survey:

Objectives of the Reconnaissance Survey:

1. **Preliminary Assessment:** Identify major transportation routes, infrastructure, and facilities in Meherpur District.

2. **Stakeholder Engagement:** Engage with local authorities, representatives, and communities to understand local transportation needs, priorities, and challenges.

3. **Identification of Key Issues:** Identify potential bottlenecks, congested areas, critical junctions, and locations requiring immediate attention or further investigation.

4. **Preliminary Data Gathering:** Collect initial data on traffic flow, road conditions, transport infrastructure, and socio-economic factors impacting transportation.

Steps carried out in Conducting the Reconnaissance Survey:

1. **Mobilization of Survey Team:**

   • Deploying key personnel, including project managers, surveyors, GIS specialists, and data analysts.

   • Providing training on the objectives, methodology, and scope of the survey.

   • Ensuring all survey equipment, including GPS devices, cameras, and data collection forms, are ready for use.

2. **Initial Site Visit:**

   • Conducting field visits to key transportation nodes like highways, local roads, bus stations, and intersections.

   • Observing and record road conditions, traffic flow, and infrastructure status (e.g., bridges, culverts, signage).

   • Taking photographs and geo-tag locations to build an initial database.

Figure: Condition of Footpath in Gangni
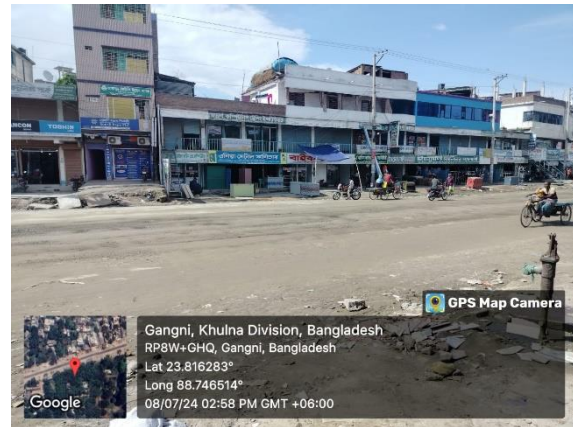
Figure: Road Condition of Gangni Upazila Bazar
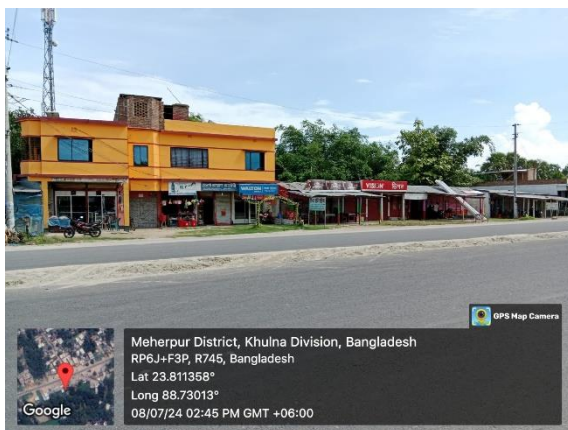
Figure: Condition of Road Median in Kushtia-Meherpur Highway

Figure: Condition of village road in Meherpur
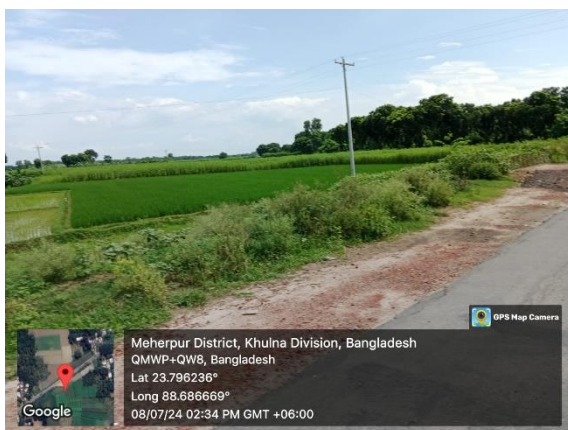
Figure: Condition of Road Edge in Kushtia-Meherpur Highway
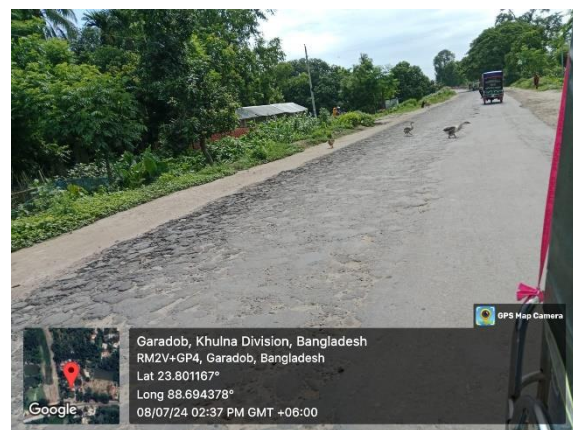
Figure Condition of Road Edge in Garadob
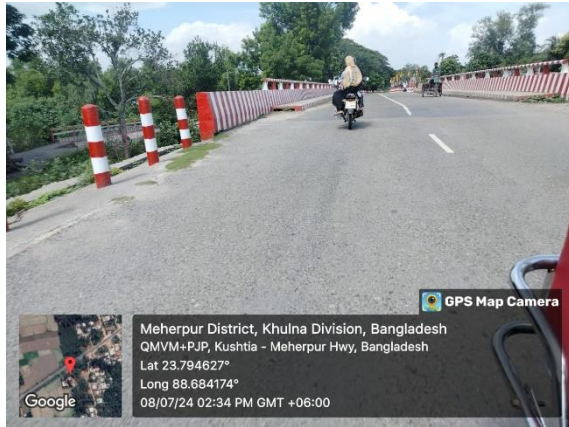
Figure: Condition of Bridge in Kushtia-Meherpur Highway

Figure: Condition of under-construction Gopalpur Bridge in Kushtia-Meherpur Highway
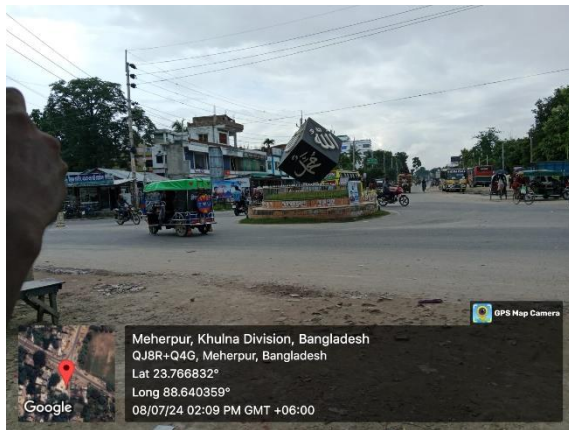
Figure: Important intersection in Chuadanga- Meherpur Highway
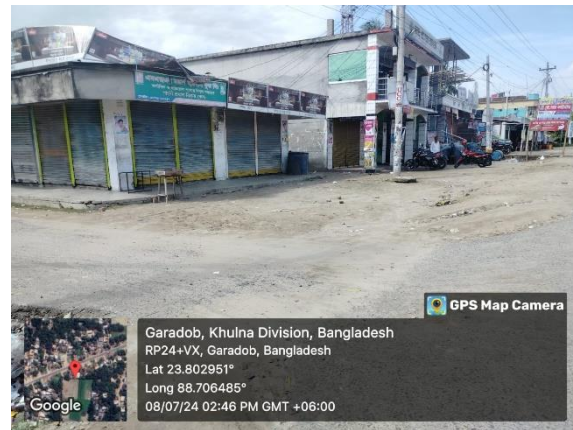
Figure: Condition of T-intersection in Garadob

3. **Stakeholder Meetings:**
   - Holding meetings with local authorities, community leaders, and other stakeholders.
   - Discussing transportation challenges, priorities, and opportunities.
   - Gathering local knowledge about transportation issues, such as road safety, congestion points, and seasonal problems (e.g., flooding, road wear).

Figure: Upazila Engineer, Mr. Sabbir-Ul-Islam, Meherpur Upazila Parishad and Consultant Team

4. **Focus Group Discussions (FGDs):**
   - Organizing FGDs with local residents, transport operators, and business owners.
   - Discussing transportation-related challenges, travel behavior, and local needs.
   - Gathering qualitative insights on transport demand, public transport usage, and freight movement.

Figure: Focus group discussion with Bus Drivers

Figure: Focus group discussion with Auto Drivers

5. **Tea stall meeting:**

A tea stall meeting was held near Gangni Chottor, involving participants engaged in various informal professions within the area. The participants identified several challenges and proposed solutions, summarized as follows:

a. Educational Institutions:

   The participants emphasized a lack of quality primary education institutions in the region. Additionally, they expressed a strong preference for establishing a public university in Meherpur to enhance educational opportunities.

b. Congestion and Infrastructure Issues: The area around Gangni Chottor is heavily congested due to informal economic activities on footpaths and poor road conditions. A significant portion of the highway is obstructed by easy bike parking, further worsening traffic flow. The participants recommended expedited road reconstruction and the organized relocation of informal activities to ensure proper traffic management and a well-maintained environment.

c. Healthcare and Economic Development:

   The participants stressed the need for improved healthcare facilities and enhanced income opportunities. One attendee noted that agriculture and foreign remittances are the primary sources of income for the Gangni area, underscoring the importance of supporting these sectors for sustainable growth.

Figure: Tea stall meeting

6. **Data Collection on Traffic Volume and Flow:**
   - Conducting preliminary traffic counts at selected key points (e.g., busy intersections, markets, transport hubs).
   - Observing and preparing document for traffic types (passenger, freight, non-motorized transport) and peak traffic hours.

7. **Identification of Critical Locations:**
   - Identifying areas that require urgent attention or further investigation, such as:
     - Overcrowded junctions or intersections
     - Roads with poor maintenance or infrastructure gaps
     - Areas with high accident rates or road safety issues
     - Inadequate public transportation services or coverage

8. **Environmental and Socio-Economic Factors:**

- Gathering basic socio-economic data that may influence transportation, such as population density, employment centers, economic activities, and accessibility to services.

- Observing environmental factors that may impact transportation, such as agricultural zones with heavy transport usage.

Output of the Reconnaissance Survey:

- **Mobilization Report**: A comprehensive report summarizing the findings, with key observations on the existing transportation infrastructure, issues, and initial recommendations.

- **Visual Documentation**: Maps, photographs, and geo-tagged data collected during site visits.

- **Stakeholder Insights**: A summary of feedback from local authorities, businesses, and residents on transportation needs and challenges.

This reconnaissance survey sets the stage for the more detailed data collection and analysis to follow, ensuring that the transportation study is grounded in local context and priorities.

8 Traffic Survey Design

The objectives of the traffic survey are two folds. Firstly, it provides idea about the existing traffic demand available supply in the form of infrastructure and services. Secondly, it acts as the input for the travel demand forecasting model that is to be constructed as the output of the project which will enable **Project Team** to analyze various traffic scenarios with respect to changed network as well as land use scenarios. The following sub sections elaborate the survey requirements along with the survey design.

8.1   Survey Requirement and Types

According to the TOR, the consultant team will be responsible to construct a 20-year prediction model for transportation of the project area. A simple four-step travel demand-forecasting model will be constructed with the survey data that will determine the travel demand on the future road network of Meherpur Zilla.

8.1.1 Seasonal Transport Survey

Seasonal Transport Survey is a data collection process aimed at understanding the variations in transportation patterns, demands, and challenges that occur during different seasons. It focuses on how seasonal factors such as weather conditions, holidays, festivals, and agricultural cycles affect transportation systems, including passenger and freight movements. Seasonal Transport Survey in Meherpur will help to identify the Traffic Analysis Zone (TAZ) of Meherpur. The following map shows the location of seasonal transport load-unload points. A structured Questionnaire is developed to conduct the Seasonal Transport Survey.
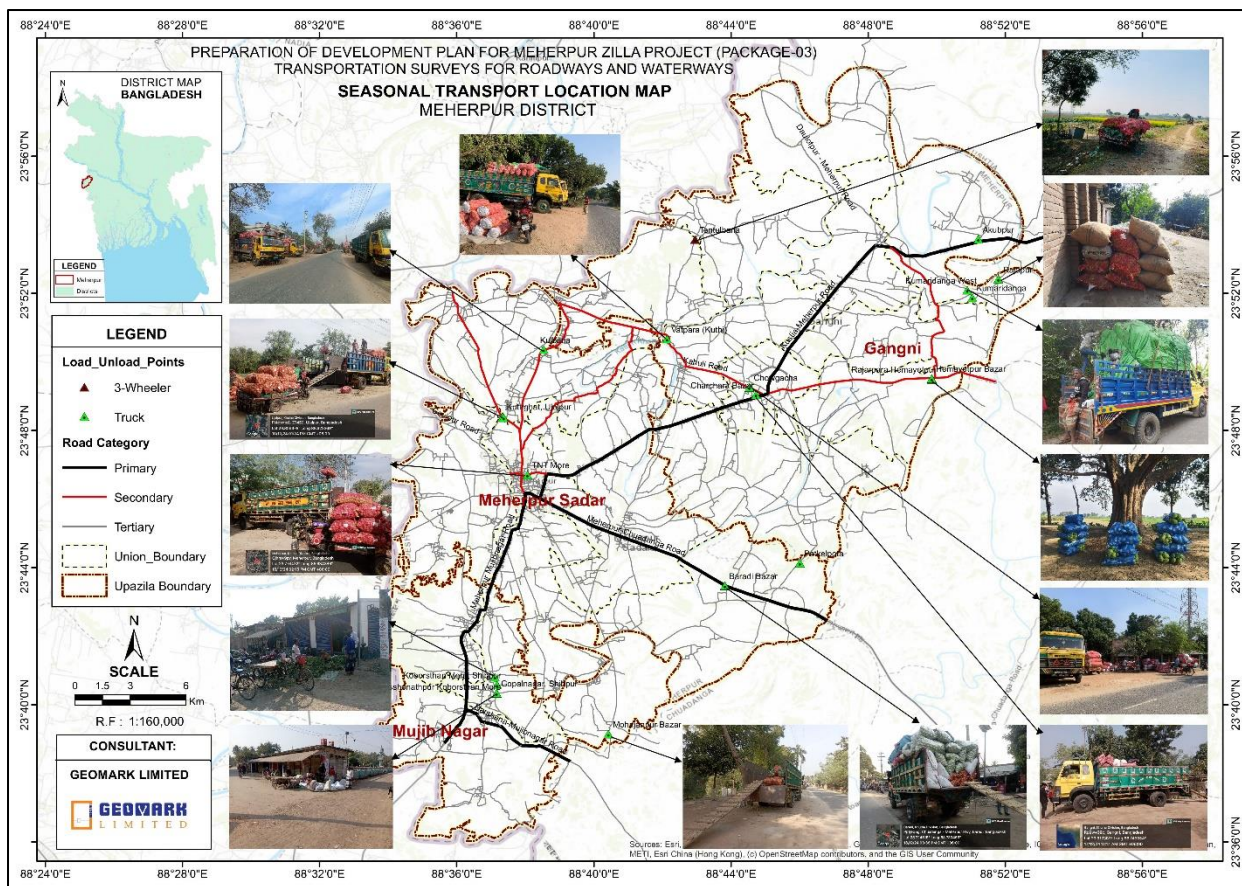
Figure: Seasonal Transport Location Map

Image: Seasonal Transport Origin-Destination (O-D) Pilot Survey

8.1.2 Road Condition Survey

This will document existing roads within the project area, noting pavement type (e.g., asphalt, concrete), condition (e.g., good, fair, poor), width, and potential for future extension.

Establish a road network hierarchy (e.g., primary roads, secondary roads, local streets) and analyze the current circulation pattern, including connectivity and accessibility. A structured Questionnaire is developed to conduct the survey

8.1.3 Traffic Volume and Origin-Destination (O-D) Survey

Conduct traffic volume surveys at major intersections and river ghats during peak and off-peak periods, both day and night. This will involve counting vehicles and classifying them by type.

Perform Origin-Destination (O-D) surveys to understand where trips are coming from and going to. Divide the project area into zones based on land use homogeneity to capture a representative sample of traffic patterns.
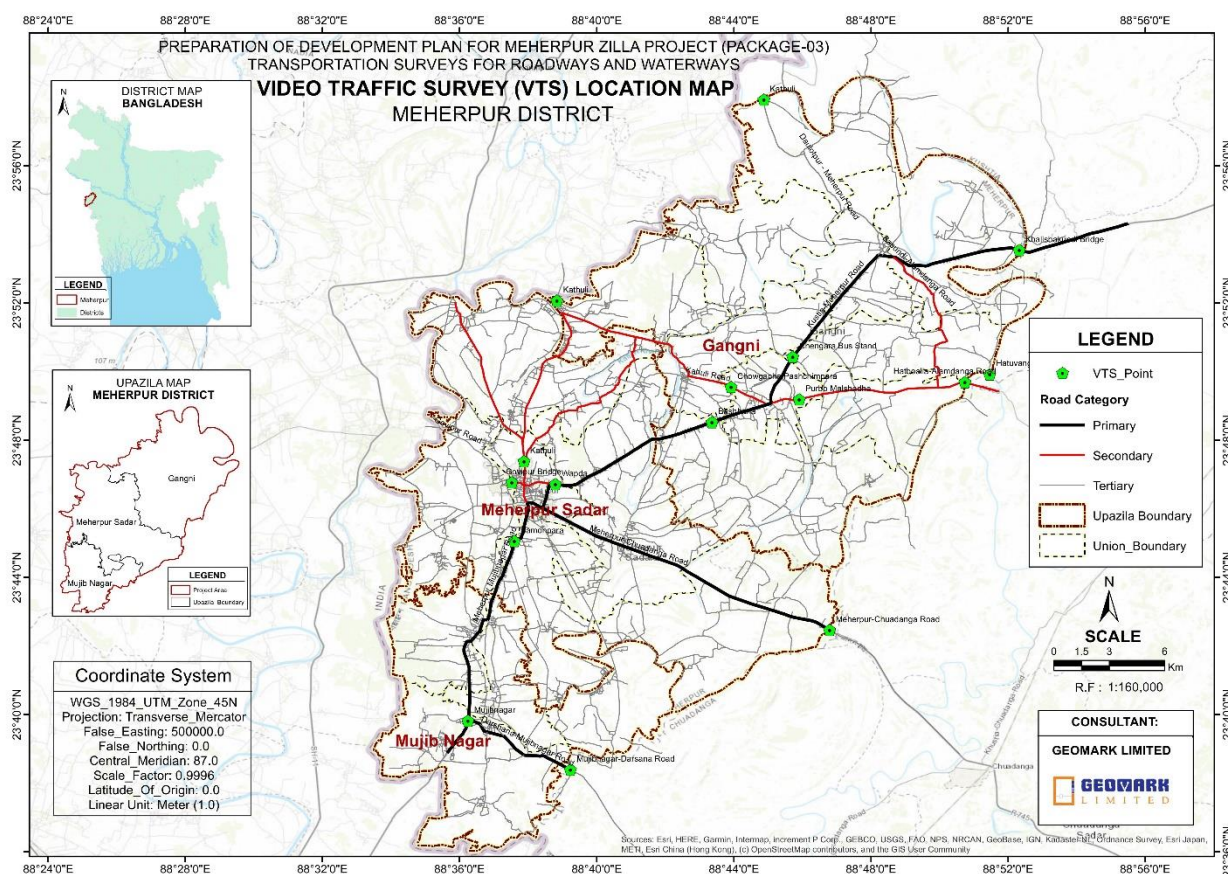
Figure: Tentative Location Map for Video Traffic Survey

8.1.4 Study of Critical Traffic Junctions

This will examine critical traffic junctions to identify congestion points, safety issues, and inefficiencies. Graphically illustrate conditions at these junctions to facilitate analysis and planning of improvements.

8.1.5 Trip Generation Survey

Conduct surveys at different locations within the project area to understand trip generation rates. This involves collecting data on the number of trips generated by different land uses (e.g., residential, commercial, industrial).

Divide the project area into traffic zones based on land use homogeneity to ensure accurate and representative data collection.

8.1.6 Travel Behavior Study

Conduct household interviews to gather data on travel behavior and patterns. This includes information on trip purposes (e.g., work, school, shopping), modes of transport used, trip frequencies, and travel times.

The number of questionnaires to be administered in consultation with the Project Director (PD) to ensure a statistically significant sample.

8.1.7 Goods Movement and Mode of Shipment Study

This will analyze the movement of goods within the project area, including the volume and types of goods transported and the modes of shipment used (e.g., road, rail, water).

This study will inform freight planning and help identify infrastructure and policy needs to support efficient goods movement.

8.1.8 Land Port Study

Detail traffic volumes and movements at adjacent land ports (e.g., Benapole, Bhomra, Dharshana) will be done. This includes both passenger and freight traffic.

Analyzing future traffic movement and demand generated by the land port, considering factors such as trade growth, border policies, and infrastructure developments will help to forecast the traffic of a port in Meherpur District.

9. Conclusion

The Inception Report for the Transportation Survey of Meherpur District has successfully outlined the framework, objectives, and methodologies for the comprehensive survey, which will play a pivotal role in shaping the district's future transportation master plan. The initial phase of the project has been marked by a thorough understanding of the district's transportation dynamics, including traffic patterns, infrastructure conditions, and socio-economic factors influencing mobility.

The detailed work plan, clear identification of key stakeholders, and well-defined objectives set forth in this report ensure that the survey will be conducted systematically and with a focus on achieving tangible, actionable outcomes. By leveraging advanced tools such as GIS-enabled mobile applications and Kobo Toolbox, the survey will collect reliable and high-quality data that will inform future infrastructure development and policy decisions.

Furthermore, the involvement of local stakeholders and the integration of their feedback into the planning process ensures that the survey remains relevant to the needs and priorities of the community. This collaborative approach will enhance the effectiveness of the project and ensure that the resulting transportation master plan is both practical and sustainable.

The inception report also highlights the importance of a phased approach to data collection, with a clear roadmap for the subsequent stages of the survey. By addressing the current challenges and anticipating future transportation needs, the survey will provide critical insights that will guide the development of an efficient, sustainable, and accessible transportation system for Meherpur District.

In conclusion, the Inception Report has laid a solid foundation for the successful execution of the Transportation Survey. The outcomes of this survey will contribute to improving transportation infrastructure, enhancing mobility, and supporting the broader socio-economic development of Meherpur. The project is poised to deliver valuable insights that will drive long-term improvements in the transportation landscape of the district.

Annexure: Questionnaire

URBAN DEVELOPMENT DIRECTORATE (UDD)
Preparation of Development Plan for Meherpur Zilla Project (Package-03)
Transportation Surveys for Roadways and Waterways
Seasonal Transport Origin-Destination (OD) Interview Survey

Section 1: Survey Information
1. Surveyor Name:
2. Date of Survey:
3. Location (Coordinate):
   Location importance:
4. Time:
5. Weather:　　□ Sunny　　□ Rainy　　□ Foggy

Section 2: Respondent Information
1. Respondent: □ Transport Operator　　□ Driver　　□ Helper　　□ Farmer
   □ Daily Wage Worker　　□ Other: _____
2. Gender: □ Male　　□ Female　　□ Other
3. Age Group: □ Under 18　□ 18-25　□ 26-35　□ 36-45　□ 46-60　□ Above 60

Section 3: Trip Details
1. Vehicle Type: □ 3-wheeler　□ Medium Truck　□ Large Truck　□ Other: _____
2. Trip Origin (Location/Address):
3. Trip Destination (Location/Address):
4. Trip Route:
5. Time (Start, End):
6. Distance (Approximate): _____ Km
7. Commodity type:
8. Quantity: □ Weight (Kg) _____　　□ Count (Pcs) _____
9. Trip Frequency (in this season):
   □ Daily　　□ 2-3 times a week　□ Weekly　　□ Monthly　　□ Occasionally
   If daily, count of trip_____
10. Trip Duration (One Way):
11. Trip Cost (One Way):
    □ Cash　　□ Due
    If Due, payment schedule_____
12. Which year did the process start?
13. Vehicle Operation Type? □ Owner Operated　　□ Rented　　□ Other: _____

Section 4: Seasonal Transport Challenges
1. Do you face any difficulties in transportation during this season? □ Yes　　□ No
2. If yes, what are the major challenges? (Multiple responses allowed)
   - Poor road conditions (e.g., muddy, potholes, flooded roads)
   - Limited availability of transport modes
   - Higher transport fares
   - Congestion/Traffic jams
   - Safety concerns (e.g., accidents, slippery roads)
   - Long waiting times for transport
   - Weather-related delays (rain, fog, etc.)

- Other: _____

3. How do you cope with these challenges?

- Change travel time
- Use alternative routes
- Use alternative transport modes
- Avoid trips unless necessary
- Other: _____

4. What improvements do you think are needed to address these challenges?

- Road repairs and maintenance
- Better drainage systems
- Availability of affordable transport options
- More public transport services
- Road safety measures
- Other: _____

Section 5: Additional Comments

1. Any other suggestions or comments regarding seasonal transportation challenges in your area?

Section 6: Transport Operator

1. Does the Padma Bridge have any impact on trip route? ☐ Yes   ☐ No
2. If yes, what are the impacts? _____

3. Places of transport operator basic need:

   ☐ Food _____   ☐ Resting place _____   ☐ Use of toilet _____

4. Have you ever faced a situation where goods were not accepted due to delivery failure?
   ☐ Yes   ☐ No
   If yes, what were the reasons?
   ☐ Late delivery   ☐ Damaged goods   ☐ Incorrect items   ☐ Other: _____

5. What actions do you take when goods are not accepted?
   ☐ Return to sender ☐ Store temporarily ☐ Attempt re-delivery ☐ Other: _____

URBAN DEVELOPMENT DIRECTORATE (UDD)
Preparation of Development Plan for Meherpur Zilla Project (Package-03)
Transportation Surveys for Roadways and Waterways

Road Condition Survey

Surveyor Name: Start Coordinate: End Coordinate: Date:

Name of the Road		
Road Link ID		
Link Length (in KM)		
Characteristics:		
Right of Way (in m)		
Existing Width (in m)		
On regular roads, Median?	1. Present 2. Not Present	
If 1. Yes, width of the Median (in m)		
Median type:	1. Mountable 2. Unmountable 3. Railing	
Median type (construction material)	1. Stone Blocks 2. Cement Concrete 3. Stone Rubble Masonry 4. Wall 5. Others (Please specify)	
Other Details	Direction 1: Left	Direction 2: Right
C/W or Black Top width (m) if median exists		
C/W or Black Top width (m) if no median exists		
No of U-turns with GPS location		
Pavement Type* (if there is more than one pavement type in the survey area, mention all of them)		
Footpath (m) if no footpath put 0		
Service Road Width (m) if no service road put 0		
Hard/Earthen Shoulder (m)		
Drainage (Yes/No)		
Abutting Land Use (Broad)**		
Encroachment if any (appx. In m)		
Significant on street parking	1. Free 2. Paid 3. Not Present	1. Free 2. Paid 3. Not Present
Plantation	1. Present 2. Not Present	1. Present 2. Not Present
Number Junctions/Intersections on this link: (mention T Junction Direction wise)	T-Jn (no.)	T-Jn (no.)
	4 or more arm Jn. (no)_____	4 or more arm Jn. (no)_____
Road Markings:		
Lane Marking	1. Present 2. Not Present	
Pavement Edge Strips	1. Present 2. Not Present	
Pedestrian Crossings	1. Present 2. Not Present	
Any other marking (specify)	1. Present 2. Not Present	
Street Lighting?	1. Present 2. Not Present	
If Yes, Type:	1. Tungsten Filament bulb 2. Tubular Fluorescent 3. Sodium 4. Others	

Page **1** of **2**

Bridges/ Viaduct	1. Present 2. Not Present	
If Yes, Type: Mention Number	<50m	>100m
Para-Transit Facility /Stand (Yes/No)		
Road Cross Section		

*Pavement Type: 1. Asphalt (Bitumen) 2. Concrete 3. Reinforced Concrete 4. WBM 5. Brick 6. Earthen
** Abutting Land Use: 1. Agriculture 2. Residence 3. Commercial 4. Mixed 5. Vacant 6. Others
(specify)_____

Important Notes:
1. In general case, link length is 500 m (for one form) for National Highways/Regional Road and 250 m (for one form) for other roads.(if component is symmetrical).
2. In case of major change in road sections, enumerator should close the previous sheet and start a new one from the changed point.
3. Photographs should be taken for verification and for documents in all sections.

URBAN DEVELOPMENT DIRECTORATE (UDD)
Preparation of Development Plan for Meherpur Zilla Project(Package-03)
Transportation Surveys for Roadways and Waterways
Origin - Destination (OD) Interview Survey

Road Link/Road Name:…………………………………………………. Survey Stations:……………………………………………………………………. Date: [   ][   ]

Interviewer:……………………………………………………………. Supervisor:……………………………………………………………………………

(1) Vehicle Type[a]	(2) Origin	(3) Destination	(4) No of Passenger	(5) Commodity Categories[c]	(6) Weight (in Ton)	(8) Passenger Information
Vehicle :	Where are you travelling from/Origin? …………………………… ……………………………. Why were you there/purpose?[b] …………………………………	Where are you travelling to/Destination? …………………………… ……………………………. Why are you going there/purpose?[b] ……………………………………	Number : [ ][ ]		_____Ton	Male: Female: Adult: Children:
Driver/ Passenger:	Journey Start Date: [ ][ ] Time : [ ][ ]	Expected Journey Arrival Date: [ ][ ] Time : [ ][ ]			Distance: _____Km	
Vehicle :	Where are you travelling from? …………………………… ……………………………. Why were you there? ……………………………………	Where are you travelling to? …………………………… ……………………………. Why are you going there? ……………………………………	Number : [ ][ ]		_____Ton	Male: Female: Adult: Children:
Driver/ Passenger:	Journey Start Date: [ ][ ] Time : [ ][ ]	Expected Journey Arrival Date: [ ][ ] Time : [ ][ ]			Distance: _____Km	
Vehicle :	Where are you travelling from? …………………………… ……………………………. Why were you there? ……………………………………	Where are you travelling to? …………………………… ……………………………. Why are you going there? ……………………………………	Number : [ ][ ]		Ton	Male: Female: Adult: Children:
Driver/ Passenger:	Journey Start Date: [ ][ ] Time : [ ][ ]	Expected Journey Arrival Date: [ ][ ] Time : [ ][ ]			Distance: _____Km	
Vehicle :	Where are you travelling from/Origin? …………………………… ……………………………. Why were you there/purpose?[b] …………………………………	Where are you travelling to/Destination? …………………………… ……………………………. Why are you going there/purpose?[b] ……………………………………	Number : [ ][ ]		_____Ton	Male: Female: Adult: Children:
Driver/ Passenger:	Journey Start Date: [ ][ ] Time : [ ][ ]	Expected Journey Arrival Date: [ ][ ] Time : [ ][ ]			Distance: _____Km	
Vehicle :	Where are you travelling from/Origin? …………………………… ……………………………. Why were you there/purpose?[b] …………………………………	Where are you travelling to/Destination? …………………………… ……………………………. Why are you going there/purpose?[b] ……………………………………	Number : [ ][ ]		_____Ton	Male: Female: Adult: Children:
Driver/ Passenger:	Journey Start Date: [ ][ ] Time : [ ][ ]	Expected Journey Arrival Date: [ ][ ] Time : [ ][ ]			Distance: _____Km	

a. Vehicle Class :
1 Pedestrian
2 Bicycle
3 Rickshaw/Battery Rickshaw
4 Rickshaw Van (Peddle/Battery)
5 Battry Easy-Bike/Auto
6 Motorcycle
7 Motorized 3-wheeler/CNG
8 Private Car
9 Utility Vehicle/4-Wheel Drive/Jeep
10 Human hauler/Leguna/Tempo
11 Micro-Bus/NOAH
12 Mini-Bus (36 seated)
13 Standard Bus/Large Bus (52 seated)
14 Double-Decker/Articulated Bus
15 SGV/Pick-up/SCV
16 Medium Truck/MCV (2-Axle)
17 Large Truck/LCV (3 axle)
18 Container/Trailer (>3 axle)
19 Tanker/Tank-Lorry
20 Others

b. Why were you there
1. Your Residence
2. Your Workplace
3. Own/Employer Business
4. Recreation/Social
5. Education Purpose
6. Shopping
7. Healthcasre/Treatment
8. Other

c Commodity Class:
1. Agricultural Pro. (rice, corn, wheat, vegetable, fruit, etc.).
2. Forest Prod. (log, timber, plywood, etc).
3. Fishery Product (fresh fish, frozen fish, fish prod.).
4. Mineral (coal, Iron, Salt, etc.)
5. Construction material Metals (MS rod, CI sheets, GP sheets, etc).
6. Petroleum (diesel, petrol, octane, etc.).,
7. Construction materials (sand, gravel stone, brick, asphalt, Re-bar)
8. Grocery (flour, sugar, edible oil, etc.)
9. Machinery and equipment,
10. Electronics (radio, TV, Fridge, etc.),
11. Consumer goods (cloth, garments, shoes, etc.)
12. Jute and Jute goods
13. Hide, skin and leather
14. Others (specify)

URBAN DEVELOPMENT DIRECTORATE (UDD)
Preparation of Development Plan for Meherpur Zilla Project (Package-03)
Transportation Surveys for Roadways and Waterways

Bus Terminal Infrastructure Survey

Surveyor Name: _____ Terminal Name: _____ Date: _____

1. Important Parameters:

   A. Number of Road Access to the Terminal: _____
   B. Width of the access roads: _____
   C. Private Parking Capacity (m^2): _____ No. of cars can be parked: _____
   D. Number of Platforms: _____
   E. Operation and Management (by whom):_____

2. Passenger Amenities:

   A. Number of Ticket Counter: _____
   B. Availability of Waiting Room: _____
   C. Capacity of Waiting Room: _____
   D. Seating facility at Waiting Room:_____
   E. Availability of Canteen: _____
   F. Availability of Toilet:_____

3. Freight Facilities:

   A. Availability of dedicated freight booking counter: Yes/No
   B. Availability of dedicated freight staff: Yes/No

4. Public Transport access to the Terminal: 1) Bus 2) Electric Auto Rickshaw 3) Rickshaw
5. Platform Infrastructure:

SLN	Aspects	Excellent	Good	Fair	Poor
A	Availability of shelters on platforms				
B	Platform cleanliness				
C	Overall condition of platform				

6. Ticketing and Information Services:

SLN	Aspects	Excellent	Good	Fair	Poor
A	Availability of ticket counters				
B	Quality of information provided				
C	Presence of digital display boards (Y/N)				

7. Accessibility and Transportation Services:

SLN	Aspects	Excellent	Good	Fair	Poor
D	Wheelchair accessibility (Y/N)				
E	Presence of ramps and elevators (Y/N)				
F	Pedestrian walkways				

8. Safety and Security:

SLN	Aspects	Excellent	Good	Fair	Poor
A	Presence of security personnel				
B	Surveillance cameras (Y/N)				
C	Fire safety measures (Y/N)				
D	Presence of first aid facilities (Y/N)				
E	Availability of fire extinguishers (Y/N)				

9. Passenger Services

SLN	Aspects	Excellent	Good	Fair	Poor
A	Baggage handling services (Y/N)				
B	Lost and found services (Y/N)				
C	Services for passengers with special needs (Y/N)				
D	Availability of vendors and shops (Y/N)				
E	Overall Cleanliness of the Terminal				

10. Schematic Layout plan of the bus terminal:

URBAN DEVELOPMENT DIRECTORATE (UDD)
Preparation of Development Plan for Meherpur Zilla Project (Package-03)
Transportation Surveys for Roadways and Waterways

Traffic Volume Sheet

Name of Road: ....Road No.: ....Direction: From..To:.......................................Code: ....

Station Name: ....Station Number:...............................Date: .... Weather: .... Enumerator: ....Supervisor: ....

Hours Counted	Non-Motorized					Motorized														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	Pedestrian	Bicycle	Rickshaw /Battery Rickshaw	Rickshaw Van (Peddle/ Battery)	Battery Easy Bike/Auto	Motorcycle	Motorized 3-wheeler /CNG	Private Car	Utility/4-wheel Drive/Jeep	Human Hauler/Leguna/Tempo	Micro Bus/NOAH	Mini-Bus	Large Bus	Articulated Bus/Double-Decker Bus	SGV/Pickup /Small Covered Van	Medium Truck/MCV (2-Axle)	Large Truck/LCV (3-axle)	Container/Trailer (>3 axle)	Tanker/ Tank Lorry	Others

HOUSEHOLD INTERVIEW SURVEY DATA SHEETS
URBAN DEVELOPMENT DIRECTORATE (UDD)
Preparation of Development Plan for Meherpur Zilla Project (Package–03) Transportation Surveys for Roadways and Waterways

Section A: General Information of Household

01 Survey No.:	Unique ID	02. Date:	12. Monthly Income Level of HH (Total in Taka):
03. Surveyor Name:	Supervisor:	Field Coordinator:	1=<20,000 2=20,000-40,000 3= 40,000-60,000 4=60,000-80,000 5=80,000-100,000 6=>100,000
05. Name of Household Head:		06. Mobile No.(HH):	
07. Address: House No: Village/Mahallah:	Road Name: Ward No: Landmark(Local Name):	08.TAZ:	
13. Vehicle Ownership (Number of Vehicle):	Private Car:.........Motorcycle:.........Bicycle:.........Microbus:.........Others (specify):.............	09. Northing: 10. Easting :	04. Codifier Number:

14: Household Member Information

(Note: enter HH Head first, then the rest of the members in descending order of age)

SL#	14.1: Name of HH Members	14.2: Relation with HH Head (Code R)	14.3: Age	14.4: Gender 1=Male 2=Female	14.5: Occupation (Code O)	14.6: Individual Monthly Income	14.7: Education (Code E)	14.8: Trip Make? 1=Yes 2=No	14.9: Type of Driver License Owned (Code L)	14.10: Employment Sector (Code ES)	14.11: Usual Workplace/School (Code W)	14.12: How many days you Work/Study from Home per week?
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												

Code R:
1= HH Head
2= Spouse
3= Daughter/Son
4= Parents/Parents In Law
5= Siblings of HH Head or Spouse
6= Grandchildren
7= Other Relative
8= Non Relative

Code O:
1= Student
2= Public Employee
3= Private Employee
4= Business
5= Agriculture/Farmer
6= Housewife
7= Unemployed
8= Retired
9= Not Applicable
10= Other (Occupation)
11. Labour
12. Self Employment

Code E:
1= Below Primary
2= Six-Ten
3= SSC
4= HSC
5= BA/BSc
6= MA/MSc
7= Vocational
8= Madrasha
9= Not Applicable
10= Others

Code L:
1= Non-Professional
2= Professional
3= No License

Code W:
1= Home
2= Out of Home

Code ES:
1. Agriculture, forestry and fishing
2. Mining and Quarrying
3. Manufacturing unit
4. Electricity, gas, steam and air conditioning supply
5. Water supply; sewerage, waste management and remediation activities
6. Construction
7. Wholesale and retail trade; repair of motor vehicles and motorcycles
8. Transportation and Storage
9. Accommodation and food service activities
10. Information and communication
11. Financial and insurance activities
12. Real estate activities
13. Professional, scientific and technical activities
14. Adm The colour denotes that you have to collect this information.
15. Public administration and defense; compulsory social security
16. Education
17. Human health and social work activities
18. Arts, entertainment and recreation
19. Other service activities
20. Activities of households as employers
21. Activities of extraterritorial organizations and bodies
22. Others

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Transportation Surveys for Roadways and Waterways;
Preparation of Development Plan for Meherpur Zilla Project.

Section B: Trip Record of Each Member of HH

01. Survey No.:	02 Name of Trip Maker	03 Serial Number (from SL# of List of Household member section (14)	04 Survey Date:

05. How many trips did you make during the last work day?

Trip No. 1

06. Trip Beginning Time:	Trip Ending Time:
07. Origin (Code OD)	08. Destination (Code OD)
09. Origin-Address:	10. TAZ
11. Destination Address:	12. TAZ

13. Which mode of the transport did you use for this trip?

Code T	14. 1st Mode	15. Duration (min)
	16. 2nd Mode	17. Duration (min)
	18. 3rd Mode	19. Duration (min)
	20. 4th Mode	21. Duration (min)
	22. 5th Mode	23. Duration (min)
	24. Main Mode	25. Total Duration (min)

26. Origin	27. Destination	28. Cost

29. Frequency of the Trip (Code F)
30. Trip Purpose (Code P):

Trip No. 2

31. Trip Beginning Time:	Trip Ending Time:
32. Origin (Code OD)	33. Destination (Code OD)
34. Origin-Address:	35. TAZ
36. Destination Address:	37. TAZ

Which mode of the transport did you use for this trip?

Code T	38. 1st Mode	39. Duration (min)
	40. 2nd Mode	41. Duration (min)
	42. 3rd Mode	43. Duration (min)
	44. 4th Mode	45. Duration (min)
	46. 5th Mode	47. Duration (min)
	48. Main Mode	49. Total Duration (min)

50. Origin	51. Destination	52. Cost

53. Frequency of the Trip (Code F)
54. Trip Purpose (Code P):

Trip No. 3

55. Trip Beginning Time:	Trip Ending Time:
56. Origin (Code OD)	57. Destination (Code OD)
58. Origin-Address:	59. TAZ
60. Destination Address:	61. TAZ

Which mode of the transport did you use for this trip?

Code T	62. 1st Mode	63. Duration (min)
	64. 2nd Mode	65. Duration (min)
	66. 3rd Mode	67. Duration (min)
	68. 4th Mode	69. Duration (min)
	70. 5th Mode	71. Duration (min)
	72. Main Mode	73. Total Duration (min)

74. Origin	75. Destination	76. Cost

77. Frequency of the Trip (Code F)
78. Trip Purpose (Code P):

Trip No. 4

79. Trip Beginning Time:	Trip Ending Time:
80. Origin (Code OD)	81. Destination (Code OD)
82. Origin-Address:	83. TAZ
84. Destination Address:	85. TAZ

Which mode of the transport did you use for this trip?

Code T	86. 1st Mode	87. Duration (min)
	88. 2nd Mode	89. Duration (min)
	90. 3rd Mode	91. Duration (min)
	92. 4th Mode	93. Duration (min)
	94. 5th Mode	95. Duration (min)
	96. Main Mode	97. Total Duration (min)

98. Origin	99. Destination	100. Cost

101. Frequency of the Trip (Code F)
102. Trip Purpose (Code P):

Trip No. 5

103. Trip Beginning Time:	Trip Ending Time:
104. Origin (Code OD)	105. Destination (Code OD)
106. Origin-Address:	107. TAZ
108. Destination Address:	109. TAZ

Which mode of the transport did you use for this trip?

Code T	110. 1st Mode	111. Duration (min)
	112. 2nd Mode	112. Duration (min)
	113. 3rd Mode	114. Duration (min)
	115. 4th Mode	116. Duration (min)
	117. 5th Mode	118. Duration (min)
	119. Main Mode	120. Total Duration (min)

121. Origin	122. Destination	123. Cost

124. Frequency of the Trip (Code F)
125. Trip Purpose (Code P):

Trip No. 6

126. Trip Beginning Time:	Trip Ending Time:
127. Origin (Code OD)	128. Destination (Code OD)
129. Origin-Address:	130. TAZ
131. Destination Address:	132. TAZ

Which mode of the transport did you use for this trip?

Code T	133. 1st Mode	134. Duration (min)
	135. 2nd Mode	136. Duration (min)
	137. 3rd Mode	138. Duration (min)
	139. 4th Mode	140. Duration (min)
	141. 5th Mode	142. Duration (min)
	143. Main Mode	144. Total Duration (min)

147. Origin	148. Destination	149. Cost

145. Frequency of the Trip (Code F)
146. Trip Purpose (Code P):

Code OD: 1= Home, 2= Workplace, 3= Work Issues, 4= School/University, 5= Shopping, 6= Medical, 7= Pers= 8= Social, 9= Accompaniment, 10= Leisure, 11= Others

Code T: 1= Pedestrian, 2= Bicycle, 3= Rickshaw/Battery Rickshaw, 4= Rickshaw Van (Peddle/Battery), 5= Battery Easy Bike/Auto, 6= Motorcycle, 7= Motorised 3 wheelers/CNG, 8= Private Car, 9= Utility/4-wheel Drive/Jeep, 10= Human Hauler/Leguna/Tempo, 11= Micro Bus/NOAH 12= Mini-Bus (36 seat), 13= Large-Bus (52 seat), 14= Anti-Bus/Double Decker Bus, 15= SGV/Pickup/SCV, 16= MT/MCV (2-axle), 17= LT/LCV (3-axle), 18= Container/Trailer (>3 axle), 19= Tanker/Tank Lorry, 20= Car (rent), 21= Motorcycle (U/P), 22= Others

Code F: 1= Occasionally/Less than 1 time per month, 2= 1~3 times per month, 3= Once in a week, 4= 2~4 times per week, 5= Every work day, 6= Everyday

Code P: 1=To home, 2= To Work, 3= To School, 4= To market/Shop, 5=Social/Relative or Friend visit, 6= Recreation/Leisure, 7= Relig 8= Medical/Hispital, 9= Business, 10= Salesman/Delivery, 11= Others (please specify), 12= Interchnage