

# TERMS OF REFERENCE

## CONSULTING SERVICES FOR THE DETAILED ARCHITECTURAL AND ENGINEERING DESIGN FOR THE METRO MANILA GREENWAYS PROJECT: MAKATI – BONIFACIO GLOBAL CITY SEGMENT PHASE 1 - ELEVATED WALKWAY FROM METRO RAIL TRANSIT BUENDIA STATION TO BONIFACIO GLOBAL CITY

### 1. PROJECT DESCRIPTION AND SIGNIFICANCE

The Government of the Philippines has embarked upon an investment program to significantly improve the quality and performance of public transport and non-motorized transport in view of the worsening traffic conditions in Metro Manila. Through the Department of Transportation (DOTr), an integrated network of mass transit and greenway corridors has been envisioned in the metropolitan area. Figure 1 shows the mass transit network being developed by the Government.

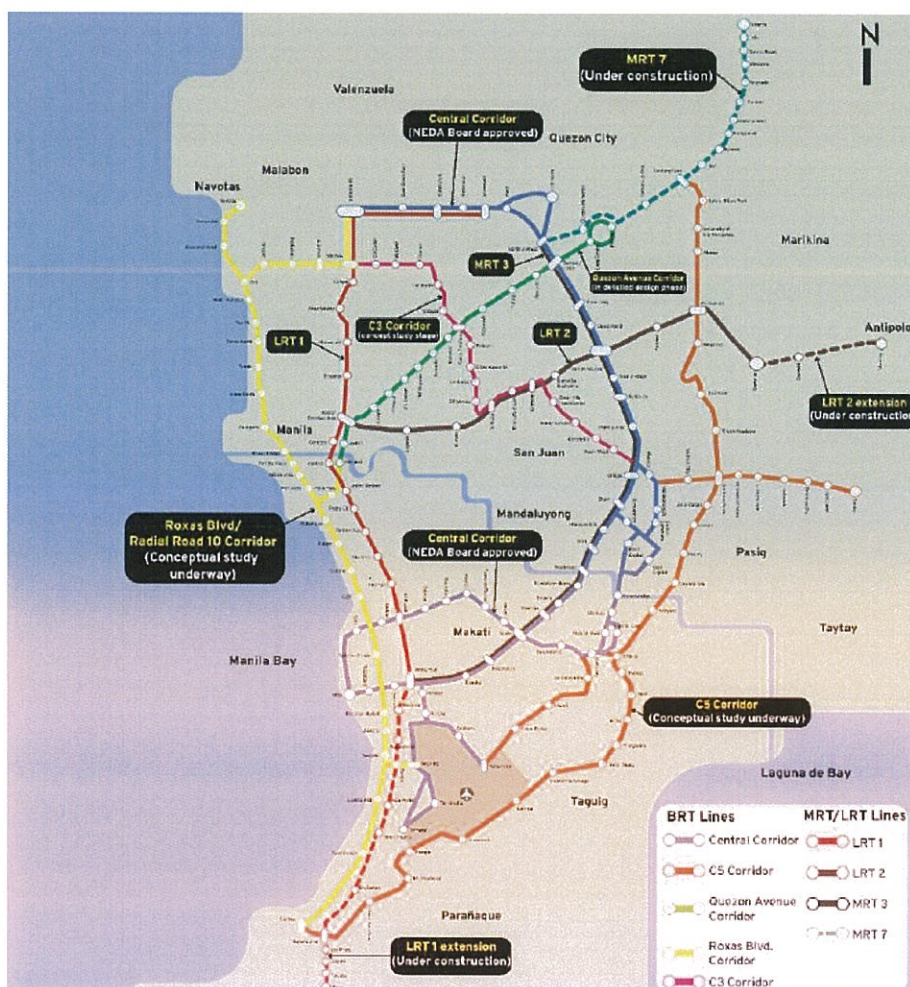


Figure 1. Mass transit network for Metro Manila.

With the support of Asian Development Bank, DOTr has developed a conceptual study for a Phase 1 implementation of a greenway network in Metro Manila. The 2016 *Metro Manila Greenways: Conceptual Study* identified a greenway network that will connect the cities of Pasig (including Ortigas, Greenfields and Kapitolyo), Bonifacio Global City (BGC), Makati, Mandaluyong and Marikina. Figure 2 shows the scope of the Phase I greenways network indicating the major greenway segments.

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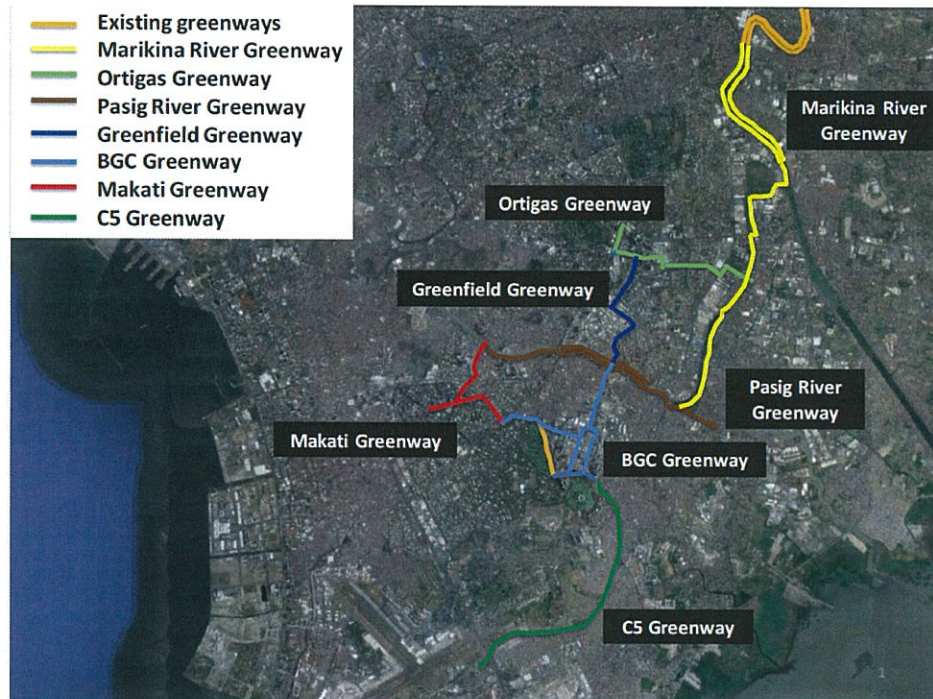


Figure 2. The proposed Phase 1 of the Metro Manila greenway network.

Greenways are enhanced linear pedestrian corridor featuring high-value public amenities that link key origins and destinations in a safe, secure and efficient manner. Greenways in the context of Philippine cities represent a mechanism to reverse the historical inequity of mobility investment that has largely focused only on motorized vehicles.

The DOTr has rolled out and has been implementing the **Metro Manila Greenways Project (MMGP)**. The MMGP aims to enhance the urban environment and the welfare of Metro Manila's residents and visitors by establishing high quality walkways, bikeways and public spaces that can be used for improved mobility and recreation.

On a broader spectrum, MMGP is consistent with the country's international commitments such as the 2030 Sustainable Development Goals, i.e. making cities and human settlements inclusive, safe, resilient and sustainable by investing in public transport, creating green spaces, and getting a broader range of people to be involved in urban planning decisions.

#### **MMGP MAKATI-BONIFACIO GLOBAL CITY SEGMENT**

**Bases Conversion and Development Authority (BCDA)** and DOTr entered into a Memorandum of Agreement for the planning, implementation and funding of the public space/greenway included in the MMGP that may be within or contiguous to the BCDA-owned and controlled lands.

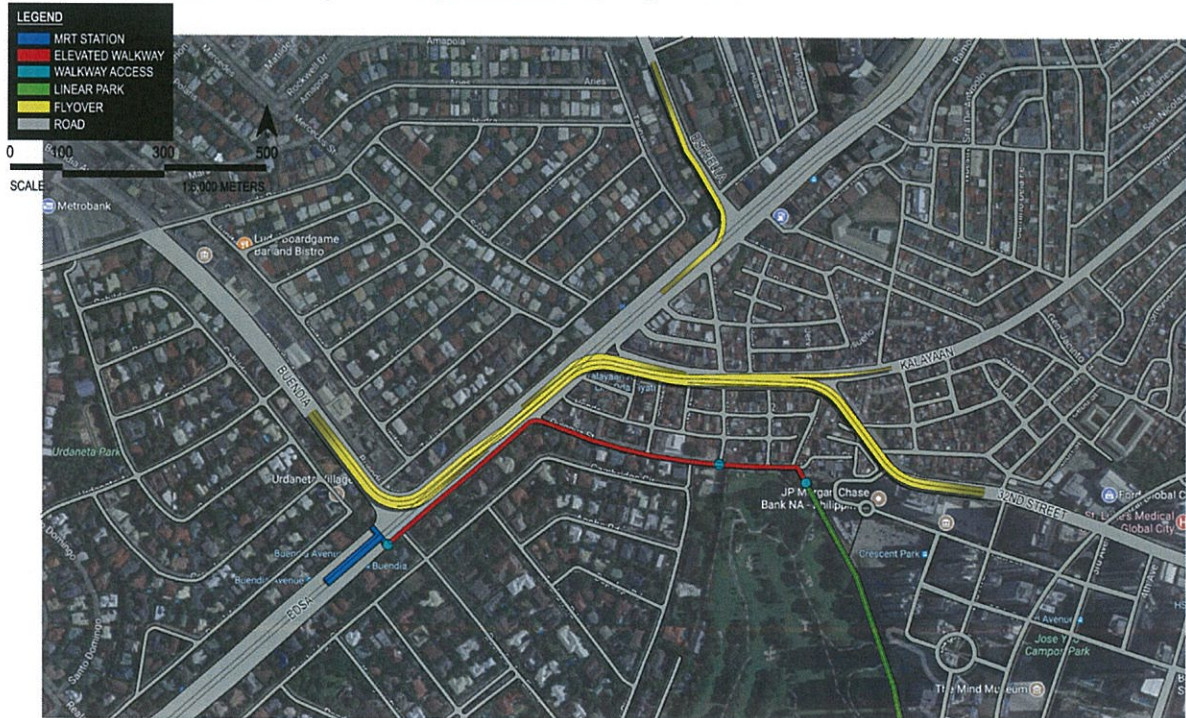
The DOTr, through the BCDA, intends to proceed with the implementation of the MMGP Makati – Bonifacio Global City Segment (MMGP – MBS), it being a major segment of the Metro Manila Greenway Network Phase I.

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MMGP – MBS Phase I shall be the **Construction of an Elevated Walkway from the Metro Rail Transit (MRT) Buendia Station to BGC** with an approximate length of about 1 kilometer.

### Location Map showing the Proposed Route/Alignment



The Project will serve as the pilot demonstration of the MMGP and will represent transformation of the BGC through the development of quality pedestrian facilities that will encourage walking and cycling as an alternative mode of transport.

### Project Area

MMGP – MBS Phase I shall begin from the MRT Buendia Station, and shall particularly connect with the existing walkway being used by the public to move across the station toward the north-bound direction of Epifanio Delos Santos Avenue (EDSA). The Project shall navigate along the north-bound direction of EDSA and turn at Quingua Street at Barangay Pinagkaisahan, Makati City and will continue along such street until it reaches the north-western boundary of BGC. From that point, an at-grade walkway shall be constructed that will terminate at the Zamora Oval inside BGC

Prior to the implementation of the Project, BCDA requires the services of a CONSULTANT to undertake the Detailed Architectural and Engineering Design.

## 2. GENERAL REQUIREMENTS

The following components/requirements shall be considered/included in the preparation of detailed architectural and engineering design for the Project, but not limited to:

- Pedestrian Lane
- Bicycle Lane
- Stairs and Handrails
- Continuous Roofing
- Architectural Cladding for columns, beams, walls, deck, ceiling, stairs, others

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- Non-Skid Floor Material/Finish and Tactile Blocks/Strip
- Way-Finding Signages
- Electrical System
- Mechanical System (Elevators and Escalators)
- Drainage, Sanitary, Plumbing with Plant Irrigation System
- Fire Protection System
- Maintenance and Utility Rooms
- Landscape component
- Removal/relocation/restoration of existing utilities and road infrastructures to be affected by the Project
- Provision of Cable Trays/Racks for affected telecom lines

### **Architectural Design Character**

BCDA advocates Modern Filipino sensibility, manifesting the roots and unique qualities of the Philippine culture and creating a fusion with modern design and architectural aesthetics. Thus, the use of Philippine-inspired architecture is encouraged to showcase the local culture.

The walkway shall be able to create a visual and architectural interest in the variety of the following sections of the walkway: walkway ceiling, columns, way-finding signages, railings and walkway underside, among others, through the play or use of colors, use of patterns/indigenous design, horizontal and vertical banding, changes of materials, textures and use of high quality materials and others.

Generally, design development shall be guided by these strategies:

- Introduce a new, refreshing pedestrian experience by creating a design that stimulates, satisfies and surprises users, complemented with optimum efficiency and functionality.
- Employ visual forms that are inspired by organic materials and natural features particular to the Philippines.
- Harvesting of natural light, maximizing the views of lush greenery, enabling passive cooling and utilizing sustainable and local materials.
- Create a distinct design that will reflect the modern Filipino sensibility, but with a global outlook, and worthy of global distinction.
- The use and incorporation of green building materials in the design.

### **Gender Sensitivity and Responsiveness**

The design should consider gender equality and the satisfaction of women and girls as crucial factors in its success and sustainability. As such, the preparation of detailed architectural and engineering design shall take into account the following to ensure quality and effectiveness, where applicable:

- Incorporate gender-specific objectives into the project design;
- Use gender analysis and sex-disaggregated data to develop gender strategies throughout the project;
- Take action/s to empower and involve women through consultation, participation and decision-making;
- Develop gender-specific strategies to maximize the benefits for poor women and address the impacts on their lives and livelihoods; and
- Monitor the gender objective of the project.

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### 3. SCOPE OF SERVICES

The CONSULTANT shall render the following services, but not limited to:

- 3.1. Conduct applicable Detailed Engineering Surveys and Investigations which includes, but not limited to boundary/route survey, topographic survey, profile leveling, establishment of horizontal and vertical controls, cross section survey, structural/facilities and utilities survey (e.g. water, power, gas, communication lines, etc.), geotechnical investigation, construction materials investigation survey, other field surveys and investigations necessary to carry out the Project.
- 3.2. Coordinate with the concerned utility providers, possible options to be considered in the design, for the removal/relocation of existing utilities that will be affected by the Project. The CONSULTANT shall also responsible in coordinating with the utility providers for the tapping points of the necessary utilities for the Project.
- 3.3. Undertake site development planning, detailed design of the architectural, structural, electrical, mechanical, sanitary, plumbing and drainage system, fire protection system, landscape component and removal/relocation of existing utilities to be affected by the Project.
- 3.4. Provide the following Detailed Design Plans/Drawings and Reports including any revisions and refinements as approved and required by BCDA:
  - a. Detailed Engineering Survey and Investigation Results, Plans/Drawings and Reports;
  - b. Detailed Site Development Plan;
  - c. Detailed Architectural Plans;
  - d. Detailed Structural Plans;
  - e. Detailed Electrical Plans;
  - f. Detailed Mechanical Plans;
  - g. Detailed Sanitary, Plumbing and Drainage Plans;
  - h. Detailed Fire Protection Plans;
  - i. Detailed Landscape Plans including planting details;
  - j. Detailed Plans for the removal/relocation/restoration of existing utilities and road infrastructures;
  - k. Design Analysis which includes basis of designs and design calculations;
  - l. Detailed Technical Specifications which shall include descriptions of work items, material requirements, construction requirements and methods, methods of measurements, and basis of payments. Sampling, testing and inspection requirements, material requirements and delivery schedules, shall be included in the specifications on applicable work items;
  - m. Detailed Bill of Quantities, Cost Estimates including Detailed Unit Price Analyses;
  - n. Cover Sheet, Project Location and Vicinity Map, Drawing Index, Summary of Quantities, General Notes, Legends, Symbols, Definitions and Abbreviations; and
  - o. Other necessary plans/drawings, details and reports that may be required by BCDA.

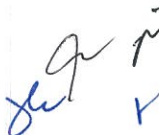


- 3.5. Provide Tender Documents based on the revised Implementing Rules and Regulations of Republic Act No. 9184.
- 3.6. Provide manpower and equipment utilization program, construction methodology, construction schedule and S-Curve for the Project.
- 3.7. Provide manpower requirement, deployment schedule, remuneration cost and miscellaneous expenses for the Construction Management and Supervision of the Project.
- 3.8. Provide the minimum requirements for a construction safety and health program for the Project.

#### **4. RESPONSIBILITIES OF THE CONSULTANT**

The CONSULTANT shall perform the design services to the highest standards of professional and ethical competence and integrity. The CONSULTANT's responsibilities include, but are not limited to the following:

- 4.1. Undertake and provide the detailed architectural and engineering design for the Project that conforms to the provisions of the National Building Code of the Philippines, National Structural Code of the Philippines, Electrical Engineering Law, Mechanical Engineering Law, Plumbing Code, Fire Code, Accessibility Law and other laws and regulations covering safety and environmental concerns and local ordinances and regulations.
- 4.2. Accept full responsibility for the consulting services to be performed under this TOR including applicable warranties on the quality and soundness of the design.
- 4.3. Facilitate and ensure that the design will be approved by the concerned government agencies, local government unit and utility providers.
- 4.4. Keep accurate and systematic records and accounts with respect to the Services in such form and with such details as is customary and sufficient to establish accurately that the costs and expenditures under this TOR have been duly incurred.
- 4.5. Except with the prior written approval of BCDA, it shall neither assign nor sub-contract any part of the professional services under this TOR to any person or firm.
- 4.6. Agree that during or after the conclusion or termination of Agreement, limit its role in the Project to providing the Services herein defined and hereby disqualifies itself and any other contractor, consulting engineer or manufacturing firm with which it is associated or affiliated, whether as owner of more than five percent (5%) of the outstanding capital stock or as proprietor or agent or consultant, from providing goods and services for the Project, without BCDA's prior written approval.
- 4.7. Except with the prior written consent of BCDA, the CONSULTANT or its Principals and Staff shall not at any time communicate to any person or entity any information disclosed thereto for the purpose of the Services, nor shall the



CONSULTANT or its Principals and staff make public any information as to the recommendations formulated in the course of or as a result of the Services.

During the effectivity of the Agreement, the CONSULTANT shall not render its services directly to any person or entity who is or has been an adverse party in any litigation or issue against BCDA or whose business or interest are in conflict with or against the interest of BCDA. This prohibition shall subsist for a period of two (2) years after the expiration of this Agreement.

In all cases, the CONSULTANT who may be indirectly associated with any person or entity that may have a conflict of interest or bias against BCDA and its subsidiaries shall be required to disclose in writing to BCDA the extent of such relationship/dealing in order for BCDA to act accordingly.

- 4.8. Provide on-call services during the bidding process and construction phase of the Project, answer queries/clarifications and provide technical assistance in the modification of the design that may arise during the implementation of the Project at no additional cost to BCDA.

## **5. DATA AND SERVICES TO BE PROVIDED BY BCDA**

- 5.1 BCDA shall provide to the CONSULTANT for reference all available documents pertaining to the Project. Whenever practicable, BCDA shall provide assistance to the CONSULTANT in securing data from concerned government agencies/offices and utility providers.
- 5.2 BCDA shall arrange the free and unimpeded access by the CONSULTANT's personnel to the Project site, the access of which is required for the performance of the services.

## **6. DELIVERABLES**

The deliverables of the CONSULTANT shall include, but shall not be limited to the following:

- 6.1 Signed detailed design plans and drawings on one original A-1 size Mylar Sheet and five (5) other copies in blue print or as required by the approving agencies.
- 6.2 Survey and investigation results and reports, design analysis and calculations, technical specifications, detailed bill of quantities, cost estimates, unit price analysis and tender documents in six (6) sets of A-4 size quality paper.
- 6.3 Manpower and equipment utilization program, construction methodology, construction schedule and S-Curve, construction safety and health program as well as the manpower requirement, deployment schedule, remuneration cost and miscellaneous expenses for the construction management and supervision of the Project in six (6) sets of A-4/A-3 size quality paper.
- 6.4 Draft drawings for submission to BCDA for review or in support of progress payments shall be submitted in three (3) sets of A-3 size quality paper. All other

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