



BUILD BUILD BUILD

METRO MANILA SUBWAY

Pre-Bidding Conference

CP107

17 January 2020

The Metro Manila Subway Project (MMSP) is the first underground railway system in the country.



Project Proponent

Department of Transportation (DOTr)

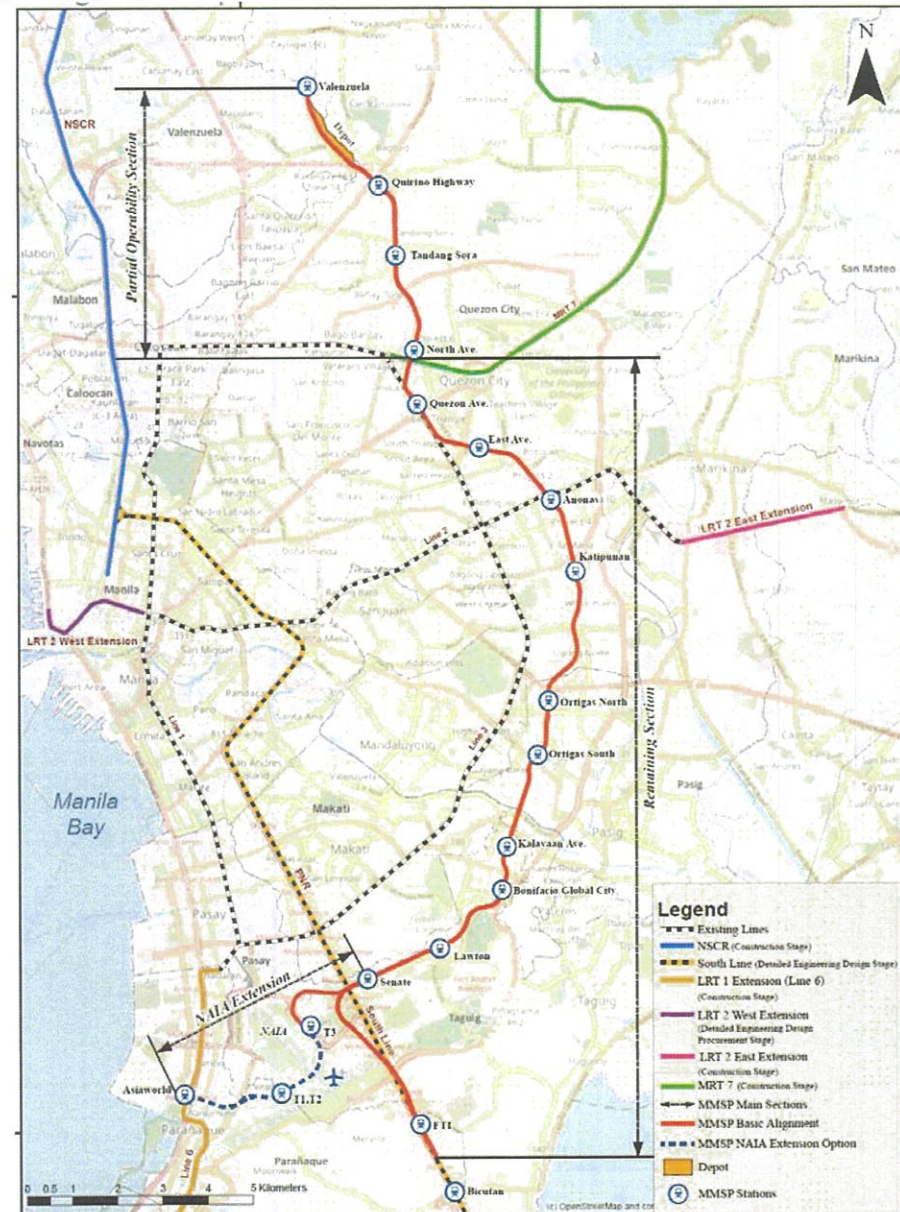


Lending Agency

Japan International Cooperation Agency (JICA)

Loan Amount | JPY 104,530,000,000.00

Total Project Cost | Php 356,964.17M
(LP – Php 265,434.23M;
GOP – Php 91,529.94M)



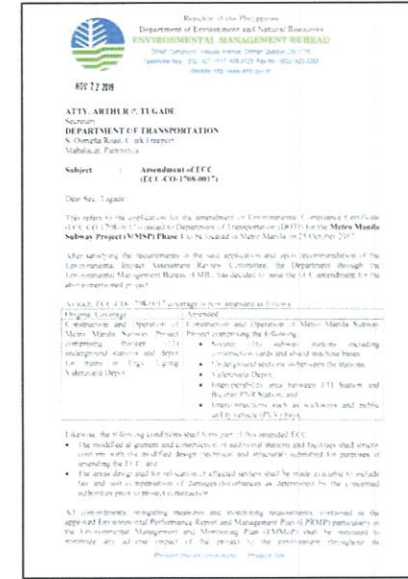
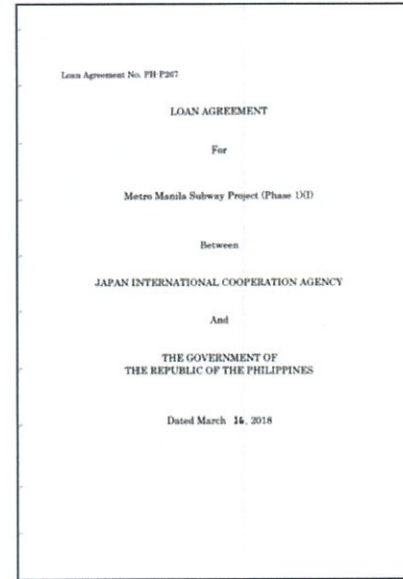
PROJECT MILESTONES

12 September 2017 – NEDA Board Approval

25 October 2017 – Issuance of ECC

16 March 2018 – Signing of Loan Agreement with JICA

22 November 2019 – Issuance of ECC Amendment



PROJECT MILESTONES

21 November 2018 – General Consultancy (*Oriental Consultants Global-JV*)
Contract Signing

20 February 2019 – General Contractor (*Joint Venture between Shimizu Corporation, Fujita Corporation, Takenaka Civil Engineering & Construction Co., Ltd., and EEI Corporation*) for Partial Operability Section Contract Signing

27 February 2019 – Groundbreaking Ceremony

21 December 2019 – Mobilization Ceremony

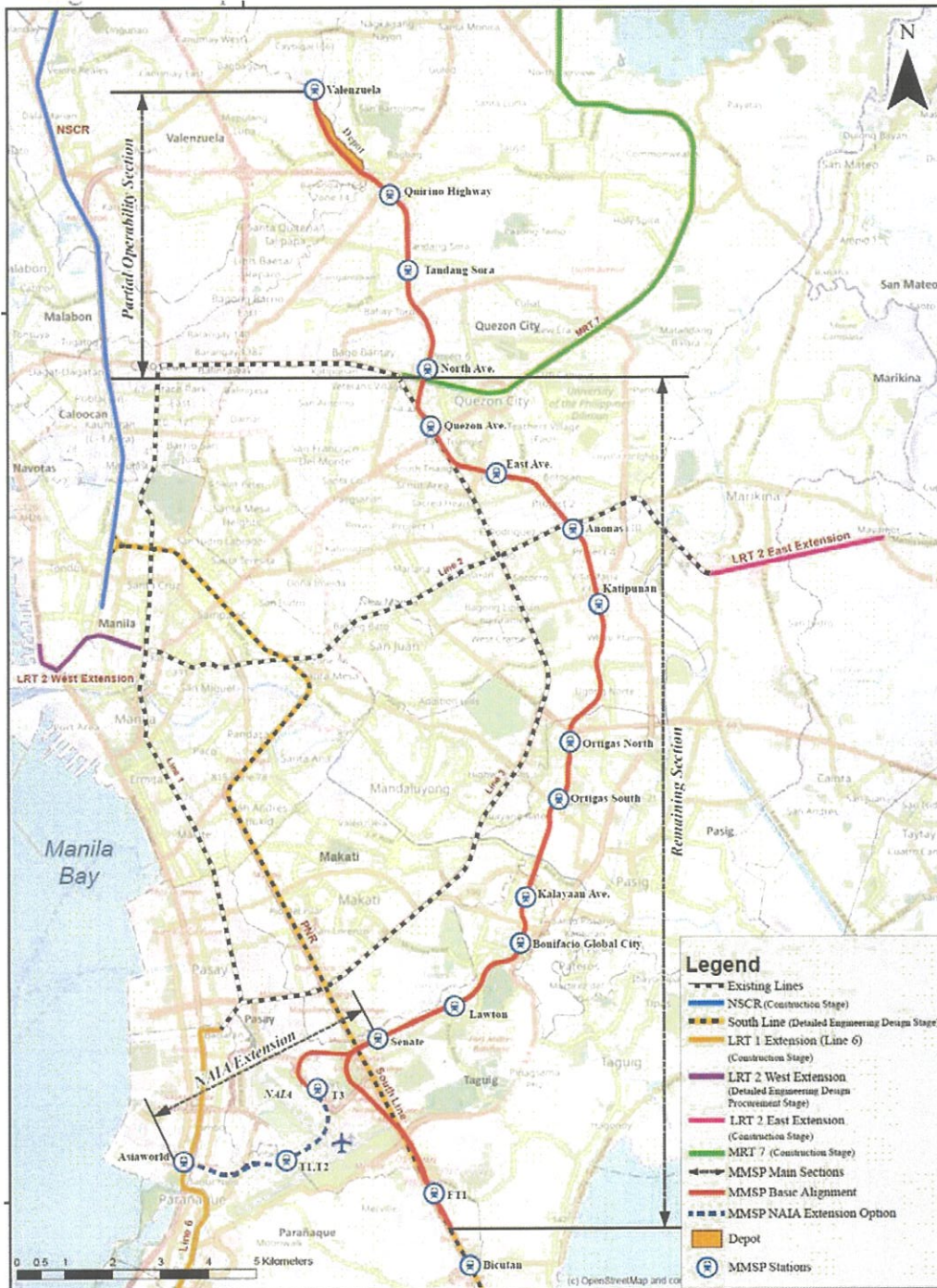


METRO MANILA SUBWAY PROJECT (MMSP) – PHASE I

Passing through seven (7) different cities (Valenzuela, Quezon City, Pasig, Makati, Taguig, Paranaque, and Pasay)

GENERAL PROJECT TIMELINE

ACTIVITY	EXPECTED DATE
Partial Operability (PO) Section Construction	2020
Partial Operability (PO) Section Operation	2022
Remaining Section Construction	2021
Full Section Operation	2025



TECHNICAL PARAMETERS

Route Length: 36 km

Electric Multiple Unit (EMU)

Design Speed (max):

80 – 120 kph

Average Headway: 4 mins

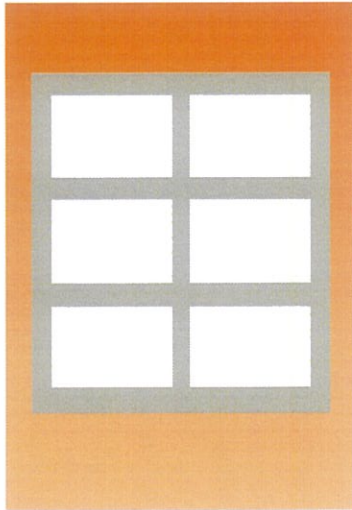
Platform Screen Doors: Full Height

Typical Platform Width: Island (10m), Side (7m)

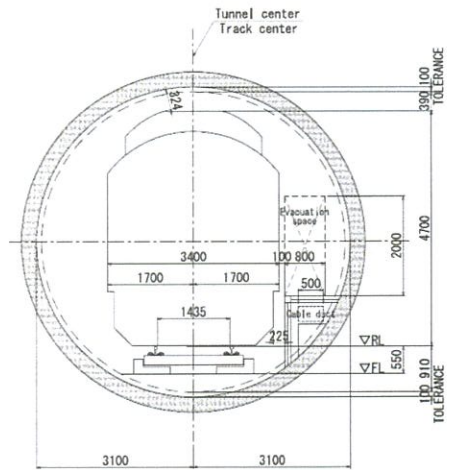
Depot: 30 ha (Brgy. Ugong, Valenzuela)

Signaling: CBTC

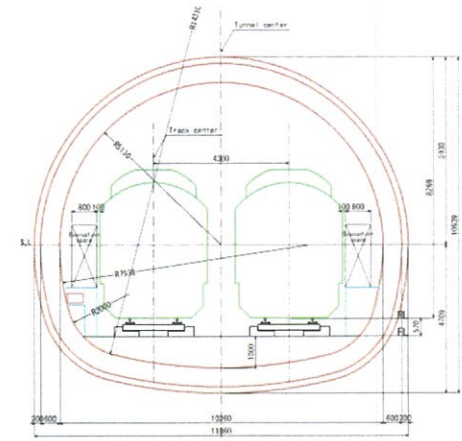
CONSTRUCTION METHODOLOGY



Cut and Cover Method



Tunnel Boring Machine (TBM)



New Austrian Tunneling Method (NATM)



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CP107:

ROLLING STOCK

- The CP 107 will procure 30 x 8-car new Rolling Stock (RS) fleet.
- Each RS will have the following system installed:
 - Radio system;
 - Train protection radio;
 - Signaling systems;
 - Running and stopping assistant system;
 - PSD controller;
 - Public Information System;
 - Dynamic Route Map;
 - LCDs for Advertisements;
 - Passenger car CCTVs monitoring inside driver cab and streaming live to the OCC;
 - Driver Cab CCTVs monitoring at OCC; and
 - Remote monitoring of the TMS at Depot MMS.

➤ The design concepts shall:

- Have increased maintainability
- Maximize availability
- Meet efficient operational and environmental requirements.
- Use of interchangeable, modular components;
- Use of service proven design;
- Avoiding use of equipment that is deemed “black box”;
- Use of extensive and prominent labelling of parts and wires;
- Use of unique serial numbers for traceability of components;
- Focus on low life cycle cost as much as possible;
- Environment and human friendly;
- Minimize human error (in usage);
- Cost efficient (energy and labor); and
- Handicapped people responsive as per the National Council on Disability Affairs - IRR of BP 344.

TECHNICAL SPECIFICATION

Item	Technical Parameters MMSP Rolling Stock
Train Formation	8 cars : 4M4T(Tc+M+M+T+T+M+M+Tc) Tc: Trailer car with driver cab, T: Trailer car, M: Motor car, Mc: Motor car with driver cab ATP: Automatic Train Protection, DSR: Digital Space Radio(GSMR), VVVF: VVVF inverter, CP: Compressor, APS: Auxiliary power Supply, PT: Pantograph, BT: Battery
Car Dimension	Car Length: 20m, Body Width: 2.95m 8 car-set total weight 270 ton (tare)
Body material	Light weight stainless steel or Aluminum Alloy
Maximum Speed	120km/h(Tunnel section 80km/h)
Acceleration / deceleration(km/h/s)	Acceleration:3.3 (Starting) Service deceleration:4.2 Emergency deceleration:4.7
Gauge	Standard Gauge :1,435 mm
Passenger Capacity	2,242 : 414 (Seated) + 1,828(Stand 7passengers/m ²)
Door Type	4 doorways each side, 1,300mm width
Seat Type	Longitudinal seat

TECHNICAL SPECIFICATION cont..

Item	Technical Parameters for NSCR Rolling Stock
Brake system	Regenerative-pneumatic combined brake
Propulsion System	1,500 DCV Overhead Catenary System, VVVF inverter
Air Conditioning/Heater	Roof top type
Passenger Information System	Public address system, visual information on LCD displays above doorways
Auxiliary Power Supply	DC1500V→3-phase 440V•60Hz, single-phase AC220V•60Hz, DC100/24/12V
Passenger saloon Equipment	LED lighting, security camera (CCTV), Interphone between driver's cabin and passenger saloon, wheelchair space Indicator lights and chime (inside and outside) at opening and closing doors Wheel chair (free) space(All cars)
Communication with OCC	Space radio(supplied by CP106)
Signal System	CBTC(supplied by CP106) with ATO and PSD



Sample of Stainless Steel



Sample of Aluminum

SAMPLE PHOTOS



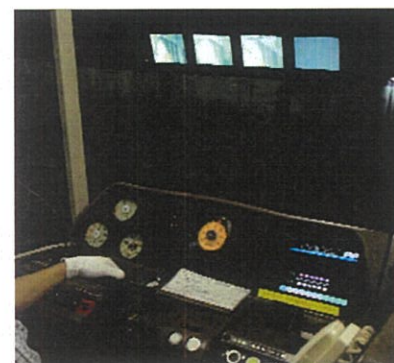
Driver Cab



PSD – for passenger safety



Passenger saloon



CCTV images



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THANK YOU!!!