

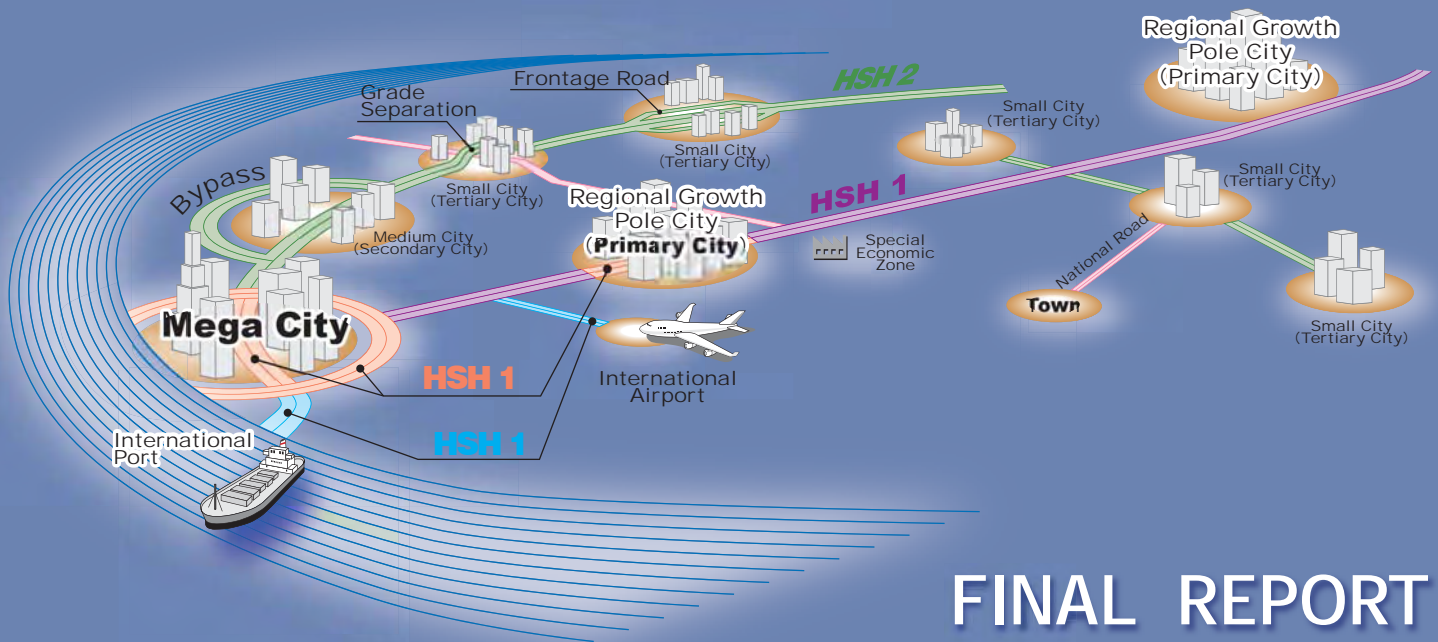


JAPAN INTERNATIONAL COOPERATION AGENCY



REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

The Study of Masterplan on High Standard Highway Network Development In the Republic of the Philippines



FINAL REPORT Project Profile

JULY 2010



CTI ENGINEERING INTERNATIONAL CO., LTD.

EID
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JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

**REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS**

**THE STUDY
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MASTER PLAN
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**FINAL REPORT
PROJECT PROFILE**

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EXCHANGE RATE

February 2010

1 PhP = 1.95 Japan Yen

1 US\$ = 46.31 Philippine Peso

1 US\$ = 90.14 Japan Yen

Central Bank of the Philippines

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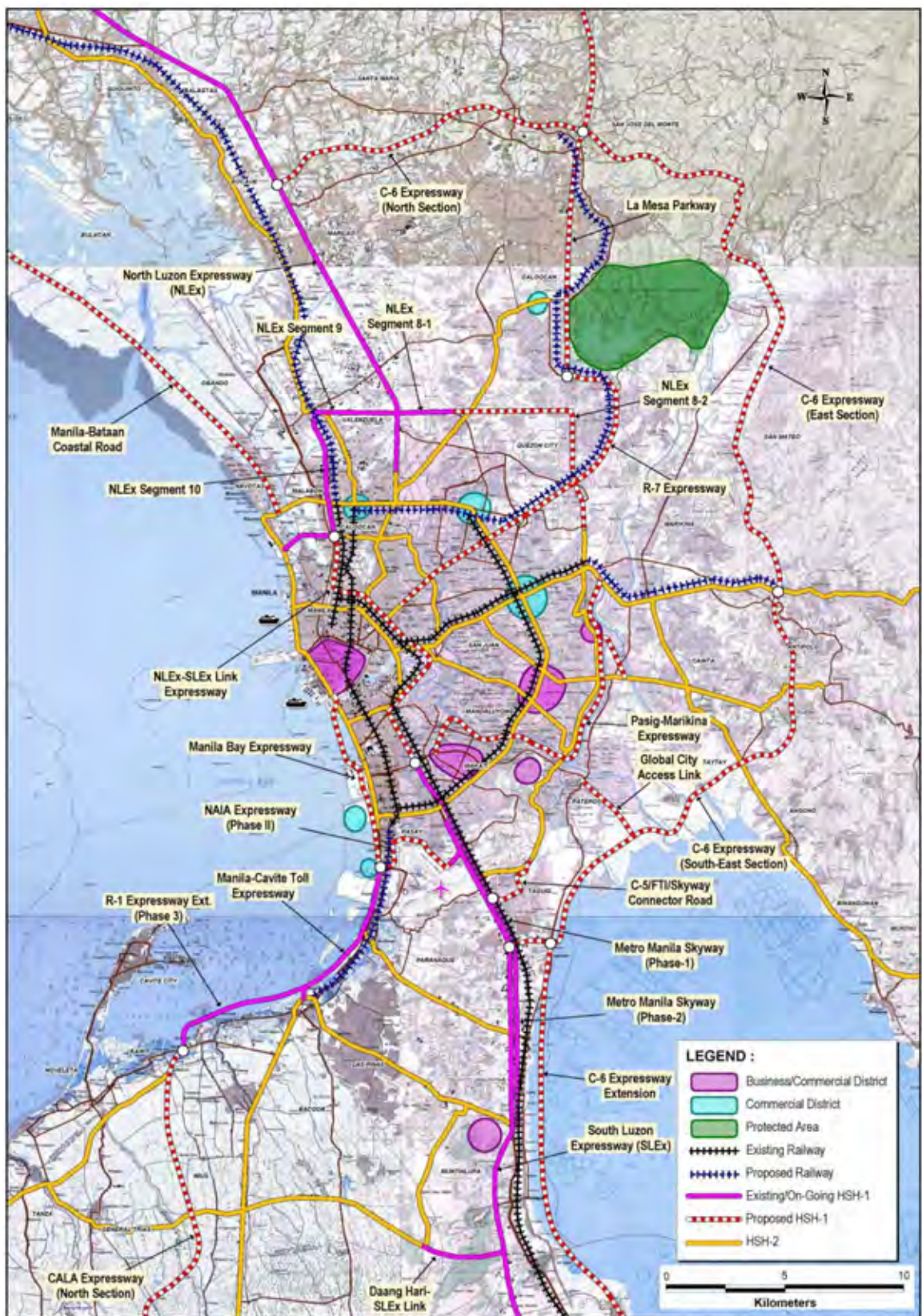
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3. PROJECT PROFILE

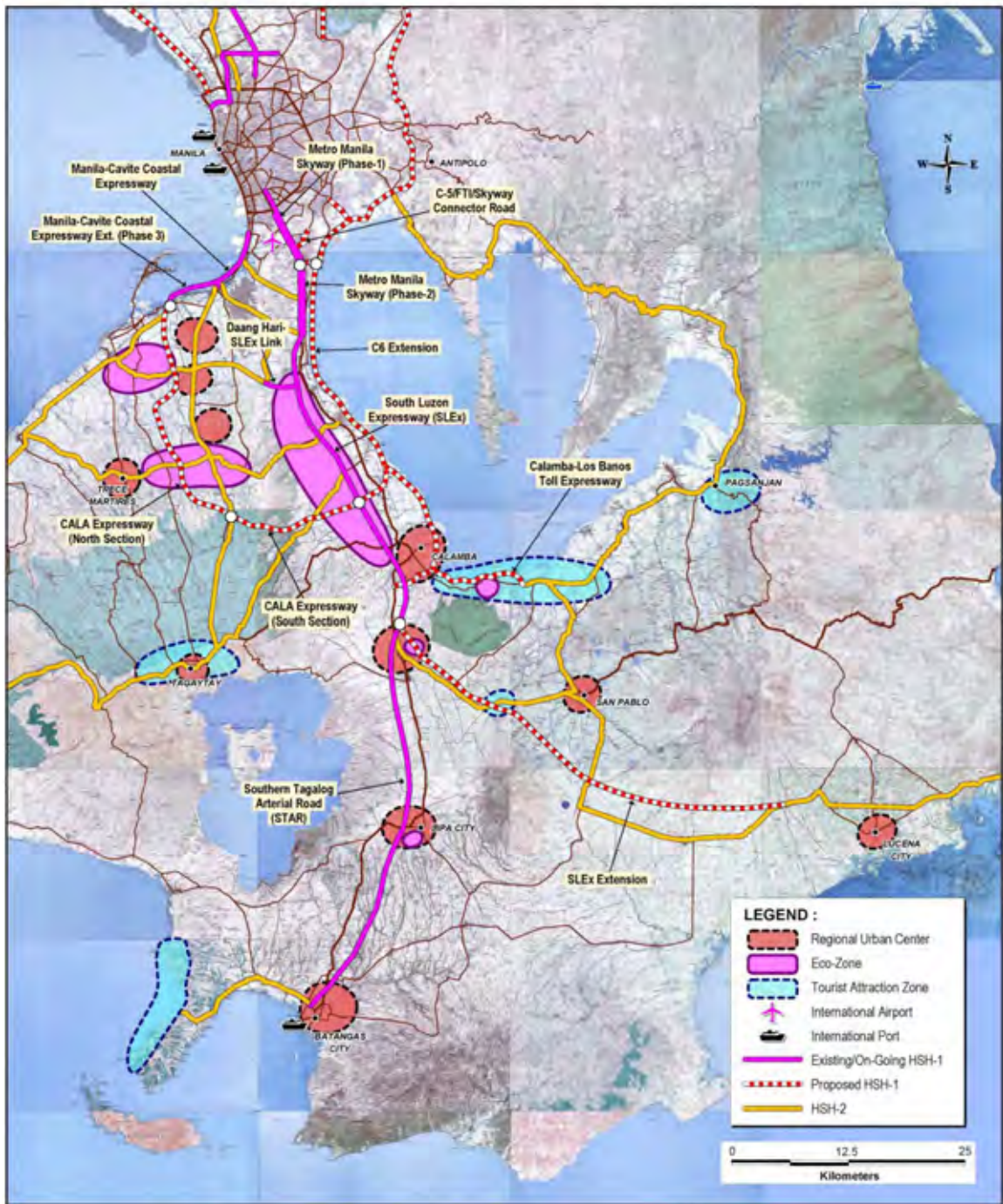
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Proposed HSH Network: North of Metro Manila



Proposed HSH Network: Metro Manila



Proposed HSH Network: South of Metro Manila



Proposed Implementation Plan: Present & On-going Project



Proposed Implementation Plan: Proposed Network in 2020



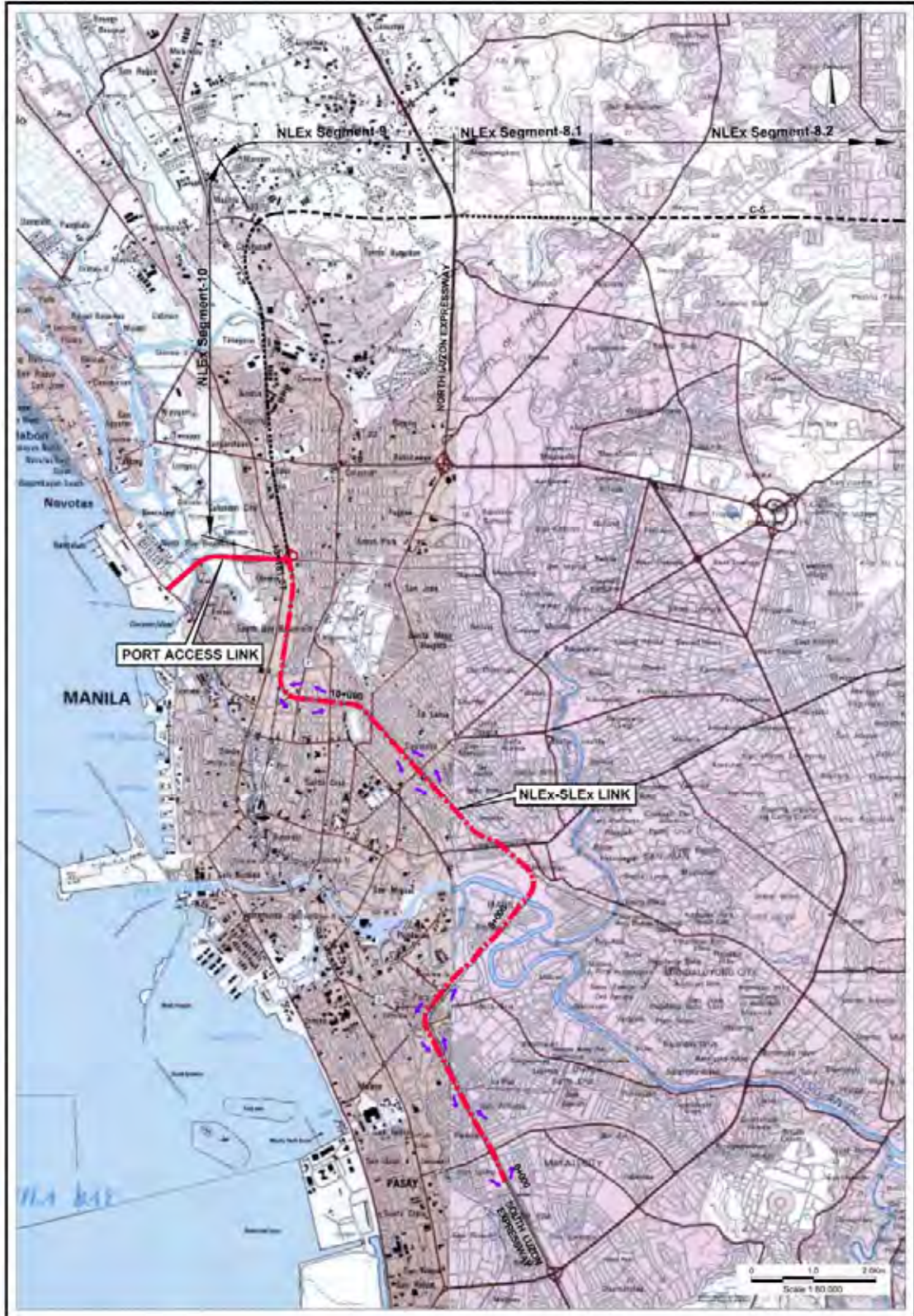
Proposed Implementation Plan: Proposed Network in 2030



Proposed Implementation Plan: Proposed Network Beyond 2030

PROJECT NO. 1

<i>Project Name</i>		NLEX-SLEX Link Expressway
<i>Objectives of the Project</i>		<ul style="list-style-type: none"> · To complete the north-south industrial development beltway transport axis by connecting NLEx with SLEx. · To decongest Metro Manila traffic. · To provide better access to Manila ports.
<i>Project Length</i>		13.35 km
<i>Type of Structure</i>		· All elevated structure
<i>Estimated Project Cost (Billion Pesos at 2010 Prices)</i>	<i>Construction Cost</i>	29.12
	<i>ROW Acquisition</i>	0.99
	<i>Engineering Cost</i>	0.88
	<i>Admin. Cost</i>	0.15
	Total	31.14
<i>O & M Cost (Billion Pesos at 2010 Prices)</i>	<i>Operation Cost per Year</i>	0.175
	<i>Routine Maintenance Cost per Year</i>	0.044
	Total	0.219
	<i>Periodic Maintenance Cost at Every 10 Years</i>	0.582
<i>Estimated Traffic Volume (PCU/day) (Assumed Opening Year: 2015)</i>		90,900
<i>EIRR (Assumed Opening Year: 2015)</i>		19.40%
<i>Priority Group</i>		First



NLEX-SLEX Link Expressway

PROJECT NO. 2

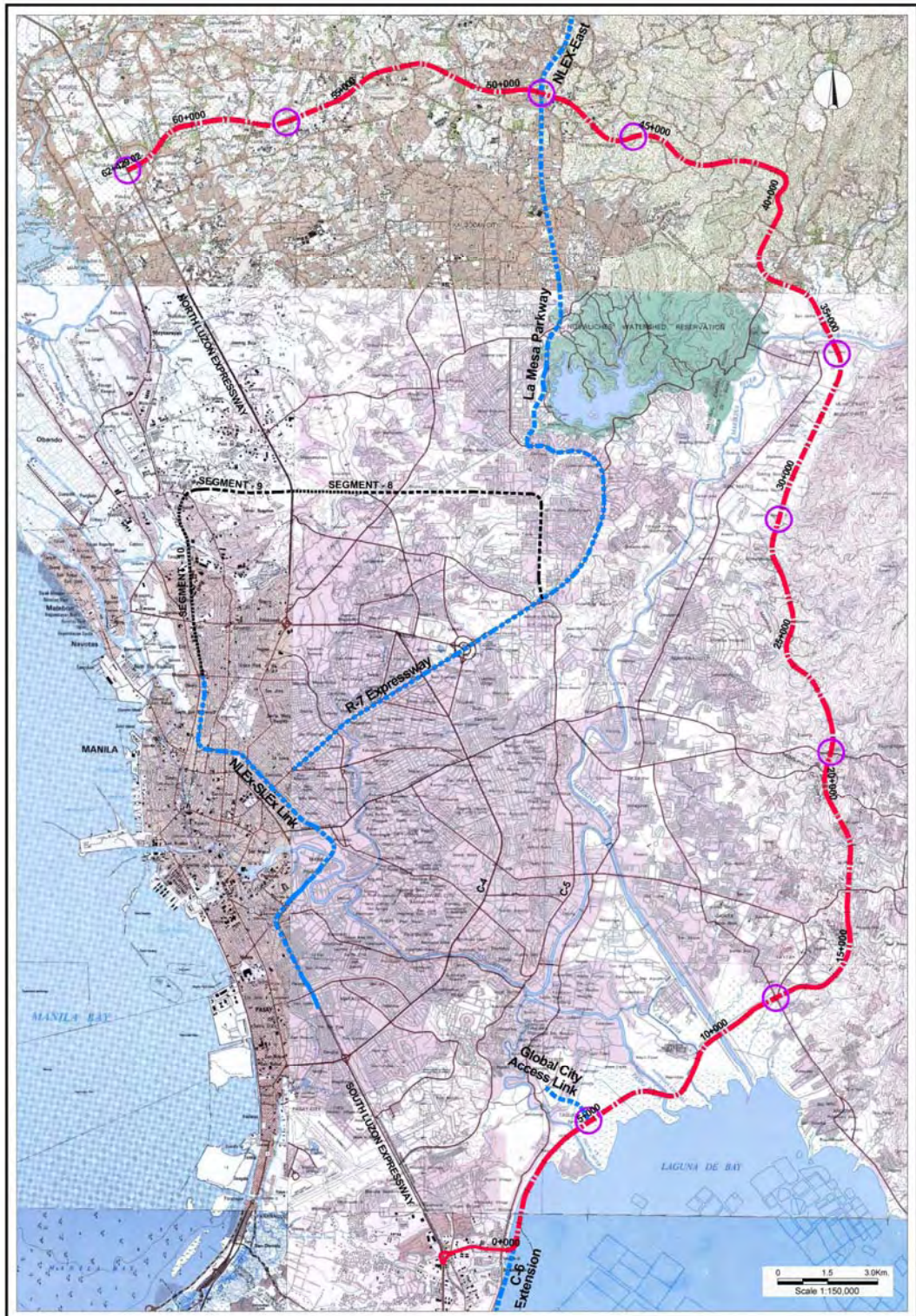
<i>Project Name</i>		NAIA Expressway (Phase 2)
<i>Objectives of the Project</i>		<ul style="list-style-type: none"> · To provide access to three (3) NAIA terminals. · To connect Skyway with Manila-Cavite Coastal Expressway so as to improve route selection flexibility of road users.
<i>Project Length</i>		4.9 km
<i>Type of Structure</i>		· All elevated structure
<i>Estimated Project Cost (Billion Pesos at 2010 Prices)</i>	<i>Construction Cost</i>	11.06
	<i>ROW Acquisition</i>	0.71
	<i>Engineering Cost</i>	0.33
	<i>Admin. Cost</i>	0.06
	Total	12.16
<i>O & M Cost (Billion Pesos at 2010 Prices)</i>	<i>Operation Cost per Year</i>	0.066
	<i>Routine Maintenance Cost per Year</i>	0.017
	Total	0.083
	<i>Periodic Maintenance Cost at Every 10 Years</i>	0.221
<i>Estimated Traffic Volume (PCU/day) (Assumed Opening Year: 2015)</i>		49,100
<i>EIRR (Assumed Opening Year: 2015)</i>		16.66%
<i>Priority Group</i>		First



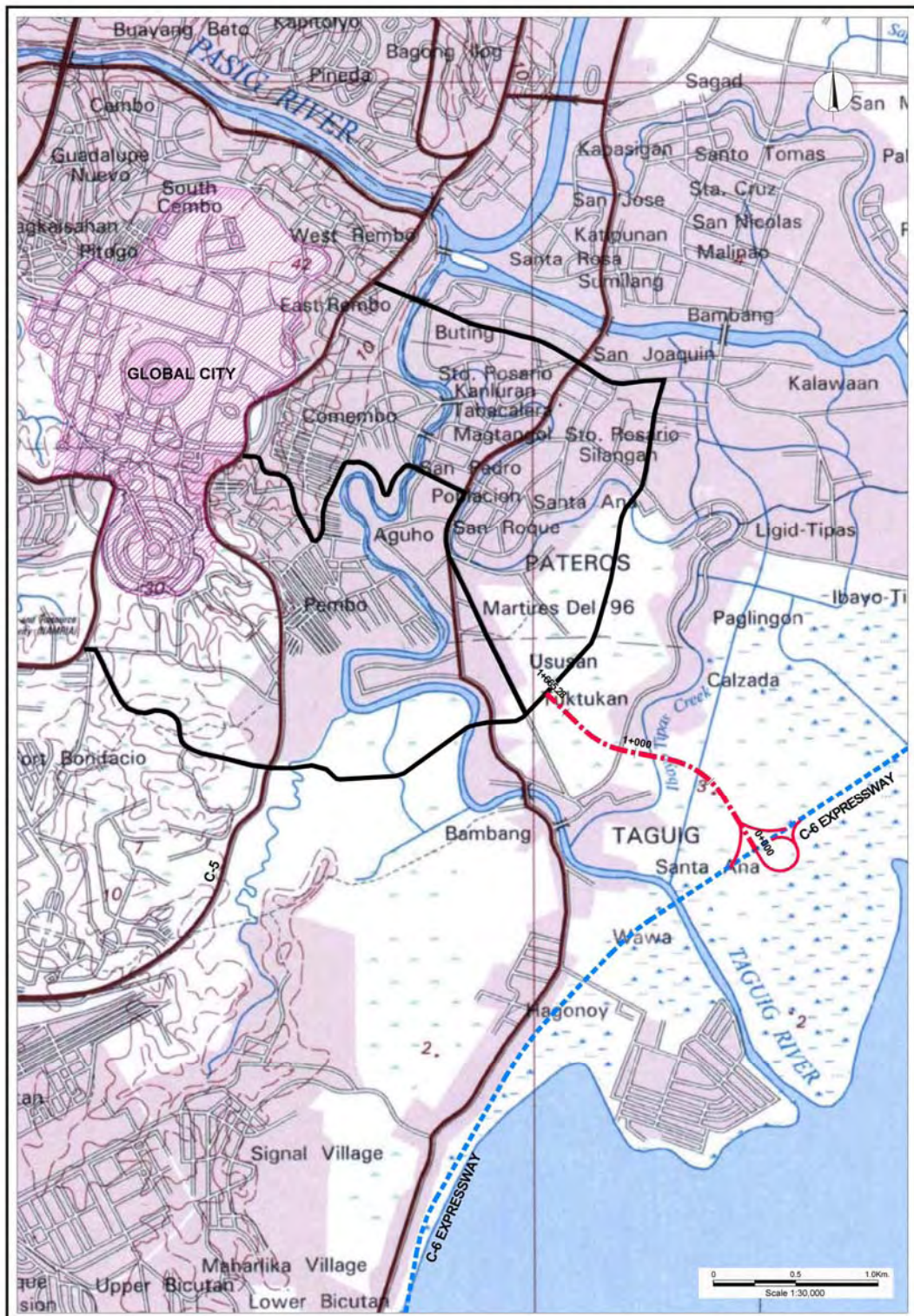
NAIA Expressway (Phase 2)

PROJECT NO. 3

<i>Project Name</i>		C-6 Expressway and Global City Link
<i>Objectives of the Project</i>		<ul style="list-style-type: none"> · To form a backbone urban transport axis. · To distribute traffic from expressways in the radial directions. · To guide sound urbanization and support land development of the eastern Metro Manila area and Rizal Province. · To provide access to Global City from C-6 Expressway
<i>Project Length</i>		66.50 km
<i>Type of Structure</i>		C-6 Expressway: <ul style="list-style-type: none"> · Cut/Embankment - 91% (59.0 km.) · Viaduct/Bridges - 9% (5.8 km.) Global City Link: <ul style="list-style-type: none"> · Cut/Fill
<i>Estimated Project Cost (Billion Pesos at 2010 Prices)</i>	<i>Construction Cost</i>	44.08
	<i>ROW Acquisition</i>	5.35
	<i>Engineering Cost</i>	3.55
	<i>Admin. Cost</i>	1.29
	Total	54.27
<i>O & M Cost (Billion Pesos at 2010 Prices)</i>	<i>Operation Cost per Year</i>	0.701
	<i>Routine Maintenance Cost per Year</i>	0.313
	Total	1.014
	<i>Periodic Maintenance Cost at Every 10 Years</i>	3.182
<i>Estimated Traffic Volume (PCU/day) (Assumed Opening Year: 2015)</i>		50,500-68500
<i>EIRR (Assumed Opening Year: 2015)</i>		24.73%
<i>Priority Group</i>		First



C-6 Expressway and Global City Link



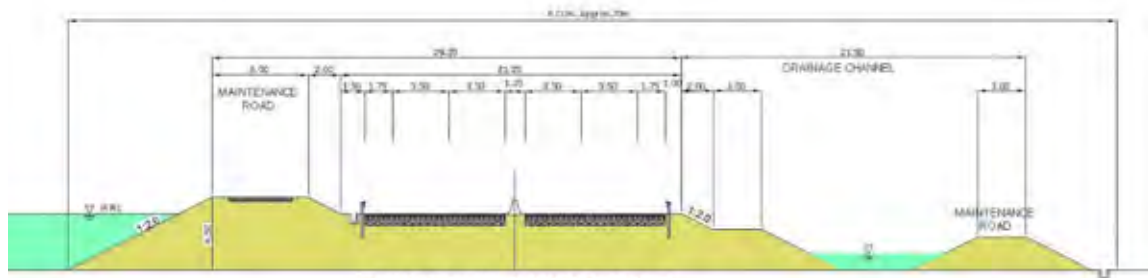
Global City Link

PROJECT NO. 4

<i>Project Name</i>		C-6 Extension (Laguna de Bay Flood Control Dike Expressway)
<i>Objectives of the Project</i>		<ul style="list-style-type: none"> · To decongest traffic on Manila South Road and SLEX. · To contribute to flood control along Laguna de Bay Coastal area and land development.
<i>Project Length</i>		43.6 km.
<i>Type of Structure</i>		· Embankment
<i>Estimated Project Cost (Billion Pesos at 2010 Prices)</i>	<i>Construction Cost</i>	15.37
	<i>ROW Acquisition</i>	1.53
	<i>Engineering Cost</i>	1.23
	<i>Admin. Cost</i>	0.46
	Total	18.59
<i>O & M Cost (Billion Pesos at 2010 Prices)</i>	<i>Operation Cost per Year</i>	0.277
	<i>Routine Maintenance Cost per Year</i>	0.184
	Total	0.461
	<i>Periodic Maintenance Cost at Every 10 Years</i>	1.537
<i>Estimated Traffic Volume (PCU/day) (Assumed Opening Year: 2015)</i>		34,700-35,000
<i>EIRR (Assumed Opening Year: 2015)</i>		42.61%
<i>Priority Group</i>		Second



C-6 Extension (Laguna de Bay Flood Control Dike Expressway)



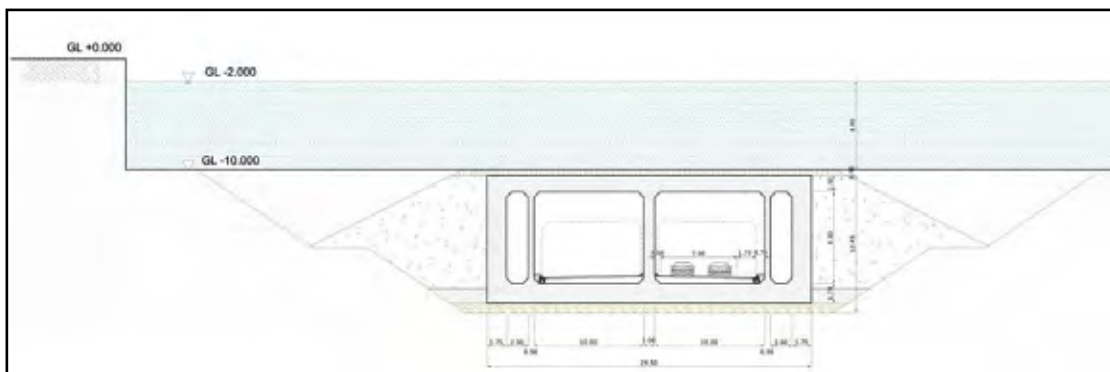
Typical Cross Section

PROJECT NO. 5

<i>Project Name</i>		Manila Bay Expressway
<i>Objectives of the Project</i>		<ul style="list-style-type: none"> · To decongest Metro Manila traffic, particularly Roxas Boulevard. · To provide access to Manila ports.
<i>Project Length</i>		8.0 km
<i>Type of Structure</i>		<ul style="list-style-type: none"> · U-type tunnel · Immersed tunnel
<i>Estimated Project Cost (Billion Pesos at 2010 Prices)</i>	<i>Construction Cost</i>	44.69
	<i>ROW Acquisition</i>	0.29
	<i>Engineering Cost</i>	1.34
	<i>Admin. Cost</i>	0.22
	<i>Total</i>	46.54
<i>O & M Cost (Billion Pesos at 2010 Prices)</i>	<i>Operation Cost per Year</i>	0.134
	<i>Routine Maintenance Cost per Year</i>	0.045
	<i>Total</i>	0.179
	<i>Periodic Maintenance Cost at Every 10 Years</i>	0.894
<i>Estimated Traffic Volume (PCU/day) (Assumed Opening Year: 2015)</i>		64,600
<i>EIRR (Assumed Opening Year: 2015)</i>		5.76%
<i>Priority Group</i>		Second



Manila Bay Expressway



Typical Cross Section of Immersed Tunnel