



# Report and Recommendation of the President to the Board of Directors

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Project Number: 51274-001  
May 2018

Proposed Loans  
Northern Bangkok Monorail Company Limited  
Eastern Bangkok Monorail Company Limited  
Bangkok Mass Rapid Transit Project (Pink and  
Yellow Lines)  
(Thailand)

This is an abbreviated version of the document approved by ADB's Board of Directors that excludes information that is subject to exceptions to disclosure set forth in ADB's Public Communications Policy 2011.

**Asian Development Bank**



## **CURRENCY EQUIVALENTS**

(as of 27 March 2018)

Currency unit	–	baht (B)
B1.00	=	\$0.032
\$1.00	=	B31.14

## **ABBREVIATIONS**

ADB	–	Asian Development Bank
BSR	–	BSR Joint Venture
BTS Group	–	BTS Group Holdings Public Company Limited
BTSC	–	Bangkok Mass Transit System Public Company Limited
dB(A)	–	A-weighted decibels
EBM	–	Eastern Bangkok Monorail Company Limited
ESIA	–	environmental and social impact assessment
ESMP	–	environmental and social management plan
GDP	–	gross domestic product
km	–	kilometer
LTA	–	lender's technical adviser
MOT	–	Ministry of Transport
MRT	–	mass rapid transit
MRTA	–	Mass Rapid Transit Authority of Thailand
MVA	–	SYSTRA MVA (Thailand)
NBM	–	Northern Bangkok Monorail Company Limited
O&M	–	operation and maintenance
PPP	–	public–private partnership
PSOD	–	Private Sector Operations Department
RATCH	–	Ratchaburi Electricity Generating Holding Public Company Limited
SET	–	Stock Exchange of Thailand
STECON	–	Sino-Thai Engineering and Construction Public Company Limited

## **NOTE**

In this report, "\$" refers to United States dollars.

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## PROJECT AT A GLANCE

<b>1. Basic Data</b>		<b>Project Number: 51274-001</b>	
<b>Project Name</b>	Bangkok Mass Rapid Transit Project (Pink and Yellow Lines)	<b>Department /Division</b>	PSOD/PSIF2
<b>Country</b>	Thailand		
<b>Borrowers</b>	Northern Bangkok Monorail Company Limited Eastern Bangkok Monorail Company Limited		
<b>2. Sector</b>	<b>Subsector(s)</b>	<b>ADB Financing (\$ million)</b>	
✓ Transport	Urban public transport		318.00
		<b>Total</b>	<b>318.00</b>
<b>3. Strategic Agenda</b>	<b>Subcomponents</b>	<b>Climate Change Information</b>	
Inclusive economic growth (IEG)	Pillar 2: Access to economic opportunities, including jobs, made more inclusive	Mitigation (\$ million)	318.00
Environmentally sustainable growth (ESG)	Global and regional transboundary environmental concerns Urban environmental improvement	CO <sub>2</sub> reduction (tons per annum)	50,000
		Climate Change impact on the Project	Medium
<b>4. Drivers of Change</b>	<b>Components</b>	<b>Gender Equity and Mainstreaming</b>	
Partnerships (PAR)	Commercial cofinancing Implementation Private Sector	Some gender elements (SGE)	✓
Private sector development (PSD)	Promotion of private sector investment Public sector goods and services essential for private sector development		
<b>5. Poverty and SDG Targeting</b>		<b>Location Impact</b>	
Geographic Targeting	No	Urban	High
Household Targeting	No		
SDG Targeting	Yes		
SDG Goals	SDG3, SDG9, SDG11		
<b>6. Nonsovereign Operation Risk Rating</b>			
<b>Obligor Name</b>		<b>Final Project Rating</b>	<b>Facility Risk Rating</b>
Northern Bangkok Monorail Company Limited		CONFIDENTIAL INFORMATION DELETED	CONFIDENTIAL INFORMATION DELETED
Northern Bangkok Monorail Company Limited		CONFIDENTIAL INFORMATION DELETED	CONFIDENTIAL INFORMATION DELETED
Eastern Bangkok Monorail Company Limited		CONFIDENTIAL INFORMATION DELETED	CONFIDENTIAL INFORMATION DELETED
Eastern Bangkok Monorail Company Limited		CONFIDENTIAL INFORMATION DELETED	CONFIDENTIAL INFORMATION DELETED
<b>7. Safeguard Categorization</b>	<b>Environment: A</b>	<b>Involuntary Resettlement: A</b>	<b>Indigenous Peoples: C</b>
<b>8. Financing</b>			
<b>Modality and Sources</b>		<b>Amount (\$ million)</b>	
<b>ADB</b>		<b>318.00</b>	
Nonsovereign Local Currency Loan (Regular Loan): Ordinary capital resources		85.99	
Nonsovereign Local Currency Loan (Regular Loan): Ordinary capital resources		86.41	
Nonsovereign Local Currency Loan (Regular Loan): Ordinary capital resources		72.59	
Nonsovereign Local Currency Loan (Regular Loan): Ordinary capital resources		73.01	
<b>Cofinancing</b>		<b>0.00</b>	
Others		0.00	
<b>Others<sup>a</sup></b>		<b>2,642.00</b>	
<b>Total</b>		<b>2,960.00</b>	

<sup>a</sup> Derived by deducting ADB financing and Cofinancing from Total Project Cost.





## I. THE PROPOSAL

1. I submit for your approval the following report and recommendation on (i) a proposed loan of up to B4,950,000,000 (or its equivalent in US dollars) to the Northern Bangkok Monorail Company Limited (NBM), and (ii) a proposed loan of up to B4,950,000,000 (or its equivalent in US dollars) to the Eastern Bangkok Monorail Company Limited (EBM) for the Bangkok Mass Rapid Transit Project (Pink and Yellow Lines) in Thailand.

2. The project entails the construction and operation of the mass rapid transit (MRT) Pink Line and Yellow Line in Bangkok. The Pink Line will operate between Min Buri district in Bangkok and Khae Rai in Nonthaburi province with the total length of about 34.5 kilometers (km). The Yellow Line will operate between Lat Phrao in Bangkok and Samrong in Sumut Prakarn province with the total length of about 30 km. **[CONFIDENTIAL INFORMATION DELETED]**. ADB's participation in the project will enable sustainable development with affordable public transportation, contribute to climate change mitigation, and catalyze commercial financing to the MRT sector through mitigating the ridership risk.

## II. THE PROJECT

### A. Project Identification and Description

3. **Project identification.** Cities generate over 80% of gross domestic product (GDP) in many countries in Asia and the Pacific and are engines of economic growth that have lifted millions from poverty.<sup>1</sup> As urban populations in Asian cities are estimated to increase by 44 million every year, the quality and efficiency of the cities will determine the region's long-term productivity and overall stability.<sup>2</sup> However, as urbanization accelerates with increased population, higher population density, and income growth, there are increasing pressures on its benefits. Motorization and resulting traffic congestion is one of the most serious challenges, and is a major obstacle to productivity because of wasted time and resources.<sup>3</sup> It is also a threat to sustainable growth because of air pollution and greenhouse gas emissions. The number of private cars in Southeast Asia has more than doubled since 2000, and 30 million more passenger cars are expected to be added by 2040. The transport sector accounts for around 60% of the oil consumed and is also the largest source of nitrogen oxide emissions.<sup>4</sup> Further, traffic congestion hinders inclusive growth since the urban poor are often disproportionately affected by environmental issues and are also the worst victims of long commuting hours with poor public transportation.

4. Bangkok is one of the largest cities in Southeast Asia with a population of approximately 6 million for its own metropolis area, and about 14 million including the greater Bangkok areas. It is also famous for its heavy traffic congestion, and some studies name Bangkok as one of the most congested cities in the world.<sup>5</sup> The key policy of the Government of Thailand to tackle the notorious Bangkok traffic is to develop a network of MRT systems.<sup>6</sup> MRT delivers a faster and cheaper option for commuters that contributes to the city's productivity, mitigates air pollution, and

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<sup>1</sup> Asian Development Bank (ADB). 2013. *Urban Operational Plan 2012–2020*. Manila.

<sup>2</sup> ADB. 2008. *Managing Asian Cities*. Manila.

<sup>3</sup> ADB estimates road congestion costs 2%–5% of gross domestic product every year because of lost time and higher transport costs.

<sup>4</sup> International Energy Agency. 2017. *Southeast Asia Energy Outlook 2017*. Paris.

<sup>5</sup> For instance, TomTom Traffic Index ranks Bangkok as the second most congested city in the world ([https://www.tomtom.com/en\\_gb/trafficindex/list?citySize=LARGE&continent=ALL&country=ALL](https://www.tomtom.com/en_gb/trafficindex/list?citySize=LARGE&continent=ALL&country=ALL)).

<sup>6</sup> Mass rapid transit systems are a form of mass transit system, including urban rail, light trams, monorail, and other train systems, which use rolling stock to move large numbers of passengers along fixed routes. The Pink Line and Yellow Line in Bangkok are monorail systems.

reduces greenhouse gas emissions by removing private vehicles from the roads through modal shifts. An affordable public urban transport system is also indispensable for inclusive growth. The first MRT line, the Green Line, commenced operation in 1999 and has been followed by several phases of extensions. There are now five MRT lines in Bangkok and the government is following the Urban Rail Mass Transit Master Plan, a comprehensive MRT development plan which proposes to deliver 14 new urban rail MRT lines and/or extensions in Bangkok.

5. **[CONFIDENTIAL INFORMATION DELETED]**. The overall development of the MRT system still lags far behind other major cities in the region. The total length of the MRT lines in Bangkok is just over 100 km compared with Singapore, which has 200 km, and Shanghai and Tokyo, both with over 500 km. As a result, the proportion of mass transit in the travel of the overall Bangkok metropolitan area is a mere 4% compared with 41% in Tokyo and 29% in Hong Kong, China. Over 50% of travel is by car, which is far higher than in Tokyo (29%) and Hong Kong, China (11%).<sup>7</sup> There is a clear need to develop more MRT lines, in particular feeder lines outside the central business district, to facilitate further modal shifts to public transport.

6. **Project design.** The government selected a public–private partnership (PPP) net cost scheme<sup>8</sup> for the implementation of the MRT Pink Line and Yellow Line, in which the Mass Rapid Transit Authority of Thailand (MRTA) is responsible for the provision of land and right of way, while the private sector invests in civil works, mechanical and equipment systems, and rolling stock, as well as operation and maintenance services. The two lines are feeder monorail lines to feed passengers to other MRT lines which connect to the central business district. They will provide convenient and affordable public transport and mitigate traffic congestion and associated environmental issues through modal shifts. While the government does not provide any guarantee of the ridership, it will extend fixed subsidies during the first 10 years of operation to mitigate the risk and improve the project's financial sustainability. This structure will leverage the private sector's efficiency while reducing the government's fiscal burden, and can be the model for future MRT lines in Bangkok and in other cities in the region. While the tender process was undertaken independently for the two lines, BSR Joint Venture (BSR) won the concession for both the Pink Line and Yellow Line.

7. Competitive long-term financing is one of the main success factors of concession-based MRT projects. However, exposure to ridership risk is the key challenge. The number of passengers during the early years of operation is often difficult to predict, while the ridership normally reaches the projected level in the long run. Although there will be fixed subsidies from the government during the initial years of the project and Thai commercial banks are committed to finance, significant exposure to the ridership remains a major concern for the banks and BSR. The Asian Development Bank (ADB) Private Sector Operations Department (PSOD) has been engaged in discussions with BSR and Thai banks to mitigate this risk. ADB has proposed loans with longer tenor and back-ended repayment profile (ridership ramp-up tranches), which enable the borrower to reduce the repayment obligations following the subsidy period when the exposure to the ridership is most significant. Since the ridership will become more certain over the long term in the later years when the ADB loans become payable, this structure also mitigates ADB's own risk, thus delivering a mutually beneficial solution to all stakeholders.

<sup>7</sup> Krungsri Research. 2017. *Thailand Industry Outlook 2017–19: Mass Rapid Transit Operator*. Bangkok.

<sup>8</sup> Under the PPP net cost scheme, the concessionaire of the project is responsible for the costs of civil works, mechanical electrical works, and operation and maintenance, while it will be entitled to receive the fare revenue from the project. If the fare and other revenues are not sufficient to cover the costs, the government will fill the gap by way of subsidies. In the case of the MRT Pink Line and Yellow Line, the key parameter of the tender was the amount of such subsidies from the government that each bidder needs (i.e., minimum subsidy). Sector Overview (accessible from the list of linked documents in Appendix 2).

8. Further, ADB has been in discussion with the MRTA to ensure the project's compliance with ADB safeguards policies. [CONFIDENTIAL INFORMATION DELETED].

9. **Borrower and sponsor.** BSR is a joint venture comprising BTS Group Holdings Public Company Limited (BTS Group), Sino-Thai Engineering and Construction Public Company Limited (STECON), and Ratchaburi Electricity Generating Holding Public Company Limited (RATCH), which was established to participate in tendering for the Pink Line and Yellow Line. BSR established special-purpose vehicles for each line—NBM for the Pink Line and EBM for the Yellow Line. NBM and EBM are both owned 75% by the BTS Group, 15% by STECON, and 10% by RATCH.

10. The BTS Group is a leading mass transit service provider in Thailand. Its businesses include four main business units: mass transit, media, property, and services. BTS Group operates the MRT Green Line, which was the first MRT system in Thailand, through its subsidiary Bangkok Mass Transit System Public Company Limited (BTSC), which is the concessionaire of the line. The major shareholder of the BTS Group is Keeree Kanjanapas and his family. [CONFIDENTIAL INFORMATION DELETED]. The BTS Group is listed on the Stock Exchange of Thailand (SET), and has a market capitalization of approximately \$3.3 billion.<sup>9</sup> The BTS Group's local credit ratings are *A/Stable* by TRIS Rating.

11. STECON, established in 1962, is among the leading large-scale engineering and construction companies in Thailand. Its key areas of activity are infrastructure, power and energy, industrial, building, and environment. STECON serves both the private and public sectors (including state enterprises) and was the first construction company to be listed on the SET (in 1992). It has a current market capitalization of approximately \$0.8 billion (footnote 10) and its local credit rating is *A-/Stable* by TRIS Rating.

12. RATCH, founded in 2000, is one of the largest private power producers in Thailand. Its key operations are in Thailand, Australia, and the Lao People's Democratic Republic with a total generation capacity of 6,381 megawatts in operation and 693 megawatts in development and under construction. The major shareholder of RATCH is the Electricity Generating Authority of Thailand, holding a 45% stake. Other shareholders are institutional and public investors (55%). RATCH is listed on the SET and has a current market capitalization of approximately \$2.4 billion (footnote 10). RATCH's international credit ratings are *BBB+/Stable* by Standard & Poor's and *Baa1/Stable* by Moody's, and its local credit rating is *AAA/Stable* by TRIS Rating.

13. Integrity due diligence was conducted.<sup>10</sup> [CONFIDENTIAL INFORMATION DELETED]<sup>11</sup>

## **B. Development Impacts, Outcome, and Outputs**

14. **Impacts.** The project is aligned with the following impacts: (i) diversification of transport modality through the addition of two MRT lines in Bangkok; and (ii) improved mobility and accessibility through enhanced MRT network connectivity to address traffic congestion.

<sup>9</sup> Bloomberg (as of 30 April 2018).

<sup>10</sup> ADB. 2003. *Enhancing the Asian Development Bank's Role in Combating Money Laundering and the Financing of Terrorism*. Manila.

<sup>11</sup> [CONFIDENTIAL INFORMATION DELETED].

15. **Outcome.** The project will have the following outcome: expanded operations of green transportation system operated by the private sector in a safe and efficient manner.

16. **Outputs.** The outputs will comprise (i) completion of two MRT monorail lines (Pink Line and Yellow Line), (ii) local employment generated, (iii) local purchase of goods and services, and (iv) gender and diversity in operations supported.

### C. Alignment with ADB Strategy and Operations

17. **Consistency with ADB strategy and country strategy.** The project is consistent with ADB's Midterm Review of Strategy 2020, which includes a focus on private sector development and operations, as well as infrastructure development.<sup>12</sup> ADB's support for the project is also in line with its country partnership strategy for Thailand, 2013–2016,<sup>13</sup> and its country operations business plan, 2018–2020 (footnote 9), both of which promote the support for private sector development and uphold two key core strategic areas for ADB's focus: infrastructure development, and environmentally sustainable development.

18. **Consistency with sector strategy and relevant ADB operations.** The project is in line with ADB's Sustainable Transport Initiative, which promotes a transport system that is efficient, safe, environmentally friendly, and has urban transport as one of the key pillars for ADB operations in the sector.<sup>14</sup> Since motorized transport emissions are a significant contributor of greenhouse gas emissions, the Sustainable Transport Initiative calls for transport solutions that encourage the use of more energy efficient and environmentally friendly modes of transport such as rail.

### D. Project Cost and Financing Plan

19. **Cost.**

[CONFIDENTIAL INFORMATION DELETED].

20. **Subsidy.** A key feature of the project is the government subsidy of B22,500 million for the Pink Line and B25,050 million for the Yellow Line, . The subsidy is paid over a period of 10 years following the commercial operation date in equal installments.

### E. Implementation Arrangements

21. Table 3 summarizes the implementation arrangements.<sup>15</sup>

**Table 3: Summary of Implementation Arrangements**

Aspects	Arrangements
Regulatory framework	The Pink Line and Yellow Line are developed under a public–private partnership net cost scheme under which the MRTA is responsible for provision of land and right of way while the concessionaire invests in civil works, mechanical and equipment systems, and rolling stock, including operation and maintenance services.
Management	The borrowers (NBM and EBM) are established by BTS Group (75%), STECON (15%), and RATCH (10%). BTSC, a subsidiary of the BTS Group, is the project manager.

<sup>12</sup> ADB. 2014. *Midterm Review of Strategy 2020: Meeting the Challenges of a Transforming Asia and Pacific*. Manila.

<sup>13</sup> ADB. 2013. *Country Partnership Strategy: Thailand, 2013–2016*. Manila.

<sup>14</sup> ADB. 2009. *Sustainable Transport Initiative Operation Plan*. Manila.

<sup>15</sup> Details of Implementation Arrangements (accessible from the list of linked documents in Appendix 2).

Aspects	Arrangements
Implementation period	Construction: Q3 2018–Q4 2021 (39-month construction period)
Construction arrangements	
Type of arrangement	The project will be constructed under EPC contracts, each of which is with a fixed-price, date-certain, and turnkey arrangement. STECON will undertake the civil works, and Bombardier is the contractor for electrical and mechanical works as well as the rolling stock. Interfacing of EPC contracts will be managed by the BTSC as the project manager.
Supplier and/or contractor	Bombardier will provide all engineering support services and advice throughout the construction period. The project will use monorail trains equipped with Bombardier's state-of-the-art automatic train control technology for driverless operation.
Operations arrangements	
Revenue structure	NBM and EBM are entitled to receive the fare revenue as well as associated revenues such as advertising on the Yellow Line and leasing space from the Pink Line. Passenger fare rates will be distance based and indexed to the Bangkok consumer price index. <b>[CONFIDENTIAL INFORMATION DELETED]</b> . The government will provide subsidies to NBM of B22.5 billion and EBM of B25.1 billion, to be paid over the first 10 years of the operation of each line.
Operation and maintenance	Operation and maintenance services, including signaling and fare collection systems, will be provided by the BTSC which has a track record as concessionaire and operator of MRT Green Lines. Both lines will operate daily from 6 am to midnight, and service frequency will be at least every 5 minutes during peak hours.
Relevant parties	The MRTA is the key government agency which is the counterpart of the concession agreement and will pay subsidies. Its Thai sovereign rating is <i>Baa1</i> by Moody's, <i>BBB+</i> by Standard & Poor's, and <i>BBB+</i> by Fitch.
Performance monitoring	The borrowers will report on key performance indicators, including the outcome and outputs indicators identified in the design and monitoring framework.

BSR = BSR Joint Venture; BTS Group = BTS Group Holdings Public Company Limited; BTSC = Bangkok Mass Transit System Public Company Limited; EBM = Eastern Bangkok Monorail Company Limited; EPC = engineering, procurement, and construction; MRTA = Mass Rapid Transit Authority of Thailand; NBM = Northern Bangkok Monorail Company Limited; Q = quarter; RATCH = Ratchaburi Electricity Generating Holding Public Company Limited; STECON = Sino-Thai Engineering and Construction Public Company Limited.

Sources: Northern Bangkok Monorail Company Limited and Eastern Bangkok Monorail Company Limited.

## F. Projected Financial and Economic Performance

**[CONFIDENTIAL INFORMATION DELETED]**.

### III. THE PROPOSED ADB ASSISTANCE

#### A. The Assistance

22. ADB's proposed assistance includes (i) a local currency loan not exceeding B4,950 million to NBM, and (ii) a local currency loan not exceeding B4,950 million to EBM.

[CONFIDENTIAL INFORMATION DELETED].

#### B. Value Added by ADB Assistance

23. **Catalytic impact.** ADB's participation in a private sector MRT project signals confidence to other financiers and investors. Traffic congestion and lack of affordable public transport infrastructure have been identified as key constraints on sustainable development of major cities in developing member countries, including Bangkok. To keep up with the investments needed, private sector investors need to raise competitive, long-term financing. Interest from local banks are often sponsor or project specific, and the financing from the local banks will not be sufficient to fund the entire rollout of the MRT projects. Thus the demonstration effect from ADB's participation helps catalyze both domestic and international financiers to the MRT sector. ADB's participation in the MRT project will contribute to climate change mitigation and reduce premature deaths from pollution, currently estimated to be 50,000 deaths per year in Thailand.<sup>16</sup> ADB's extensive environmental and social due diligence will also give a comfort to international banks.

24. **Mitigation of ridership risk.** The ramp-up of the ridership is a key risk in financing MRT projects. The ADB loans will help mitigate this risk. The long tenor and back-ended repayment profile of the ridership ramp-up tranche enables to reduce the scheduled repayment during the first few years after the expiry of government subsidies when the ridership and the resulting cash flows remain uncertain. Therefore, ADB's participation improves the project's cash flow during the riskiest period and thereby enhances the overall bankability of the project.

25. **Promotion of PPP.** ADB's PSOD can support concession-based projects like the Pink Line and Yellow Line, while its Southeast Asia Department can support other lines through public sector funding, such as the South Purple Line. Through this "One ADB" approach, ADB's participation in the project contributes to the promotion of the PPP schemes in the Thai MRT sector, and gives assurances to the government that ADB has the capacity to support regardless of the PPP scheme applied to individual lines, thus providing flexibility with its sector planning.

#### C. Risks

[CONFIDENTIAL INFORMATION DELETED].

### IV. POLICY COMPLIANCE

#### A. Safeguards and Social Dimensions

26. The project is classified category A for environment and involuntary resettlement, and category C for indigenous peoples. Environmental and social impact assessments (ESIAs) for the Pink Line and Yellow Line were prepared in accordance with domestic procedures and were approved by the government in March 2015 for the Pink Line and February 2016 for the Yellow Line. Additional analyses on noise; biodiversity; climate change risks; cumulative and induced

<sup>16</sup> *Bangkok Post*. 2017. The Air We Breathe. 16 January.

impacts; and the public information, participation, and complaints management system were conducted to ensure compliance with ADB's Safeguard Policy Statement (2009). The potential impacts from the project have been identified and effective measures to avoid and mitigate the adverse impacts are in the ESIA addendums, environmental and social management plans (ESMPs), social safeguards compliance audit report, and supplemental social assessment.

27. **Environment.** The Pink Line and Yellow Line will be constructed over existing road networks and pass through commercial and mixed commercial and residential areas. The project design has been optimized to minimize land expropriation, and reduce traffic congestion and disturbance to the public. Noise reduction technology has been included in the design resulting in insignificant noise and vibration impacts. Noise modeling shows that the increase in noise levels during operation will be within the range of 3–5 A-weighted decibels (dB(A)) above the base line, however operating speeds will be much lower than those modelled and therefore operational noise impacts will be lower. The environment, health and safety guidelines for noise in commercial areas and the Thai national standards are both 70 dB(A) and the noise impacts will be within these standards. Potential environmental impacts during construction are short term and localized, and can be effectively mitigated through the implementation of the ESMPs. The implementation arrangements and monitoring and reporting requirements for construction and operation are detailed in the ESMPs. Both the MRTA and the concessionaires have extensive experience in constructing and operating MRT systems. They have established environmental management systems which are implemented by experienced technical staff. Public consultations were held and are reported in the ESIA's. The ESIA's and ESMPs also detail the complaints management structure and activities on information disclosure, consultation, and participation.

28. **Social safeguards.** The project will affect private assets, mainly land and structures, which are being acquired by the MRTA following Thai laws. Land acquisition and resettlement activities commenced when the royal decree was issued in 2014 and 2015, and the compensation started in May–June 2017 prior to ADB's involvement in August 2017. Based on this time line, it is established that land acquisition and resettlement activities are not in anticipation of ADB financing and, therefore, do not fall within the ambit of ADB's Safeguard Policy Statement Safeguard Requirements 2 para. 4. An audit of the land acquisition process was undertaken to determine if there are risks associated with MRTA-led land acquisition and resettlement. An audit report was prepared following the scope and outline of a resettlement plan. The audit found the MRTA practices based on the MOT compensation manual and other applicable national legal frameworks are in line with ADB's Safeguard Policy Statement requirements. The MRTA (i) conducted a census and full asset inventory, disclosed information, and consulted meaningfully with affected people; and (ii) offered compensation payments for land, structure, and lost income due to business disruption at replacement cost. The MRTA is implementing a robust grievance mechanism where requests for changes in design are being implemented to minimize impacts. Continuous monitoring of land acquisition and compensation activities until completion and semiannual external monitoring will be undertaken by a social and resettlement expert reporting directly to ADB. The project will not affect indigenous peoples communities.

29. **Other social dimensions.** The project is classified as having some gender elements. The borrowers will commit to implementing additional measures to promote gender equality in their business activities as set out in the design and monitoring framework. NBM and EBM will comply with national labor laws and, pursuant to ADB's Social Protection Strategy (2001), will take measures to comply with internationally recognized core labor standards. The borrowers will report regularly to ADB on (i) their compliance and that of their contractors with such laws, and

(ii) the measures taken. Information disclosure and consultation with affected people are in accordance with ADB's requirements.<sup>17</sup>

## **B. Anticorruption Policy**

30. NBM and EBM were advised of ADB's policy of implementing best international practice relating to combating corruption, money laundering, and the financing of terrorism. ADB will ensure that the investment documentation includes appropriate provisions prohibiting corruption, money laundering, and the financing of terrorism; and remedies for ADB in the event of noncompliance.

## **C. Investment Limitations**

[CONFIDENTIAL INFORMATION DELETED].

## **D. Assurances**

31. Consistent with the Agreement Establishing the Asian Development Bank (the Charter),<sup>18</sup> ADB will proceed with the proposed assistance upon establishing that the Government of Thailand has no objection to the proposed assistance to NBM and EBM. ADB will enter into suitable finance documentation, in form and substance satisfactory to ADB, following approval of the proposed assistance by the ADB Board of Directors.

## **V. RECOMMENDATION**

32. I am satisfied that the proposed loans would comply with the Articles of Agreement of the Asian Development Bank (ADB) and recommend that the Board approve (i) the loan of up to B4,950,000,000 to the Northern Bangkok Monorail Company Limited; and (ii) the loan of up to B4,950,000,000 to the Eastern Bangkok Monorail Company Limited for the Bangkok Mass Rapid Transit Project (Pink and Yellow Lines) in Thailand, with such terms and conditions as are substantially in accordance with those set forth in this report, and as may be reported to the Board.

Takehiko Nakao  
President

10 May 2018

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<sup>17</sup> Summary Poverty Reduction and Social Strategy, and Safeguards and Social Dimensions Summary (accessible from the list of linked documents in Appendix 2).

<sup>18</sup> ADB. 1966. *Agreement Establishing the Asian Development Bank*. Manila.



## DESIGN AND MONITORING FRAMEWORK

<b>Impacts the Project is Aligned with</b>			
Transport modality diversified through the addition of Mass Rapid Transit (MRT) Pink Line and Yellow Line, and mobility and accessibility improved through enhanced MRT network connectivity to address traffic congestion and for sustainable environment (Government of Thailand 2016) <sup>a</sup>			
<b>Results Chain</b>	<b>Performance Indicators with Targets and Baselines</b>	<b>Data Sources and Reporting Mechanisms</b>	<b>Risks</b>
<b>Outcome</b> Expanded operations of green transportation system	[CONFIDENTIAL INFORMATION DELETED].  c. Annual amount of greenhouse gas emissions avoidance is 50,000 tons of carbon dioxide equivalent by 2025 (2017 baseline: 0)	a–c. Annual development effectiveness monitoring reports	Adverse macroeconomic shock or recession leading to low demand for transportation services
<b>Outputs</b> 1. MRT Pink Line and Yellow Line constructed and installed  [CONFIDENTIAL INFORMATION DELETED].  4. Gender and diversity in operations supported	1a. 34.5 kilometers of Pink Line monorail system with 30 stations is constructed and operational by 2021 (2017 baseline: 0)  1b. 30.0 kilometers of Yellow Line monorail system with 23 stations is constructed and operational by 2021 (2017 baseline: 0)  [CONFIDENTIAL INFORMATION DELETED].  4a. Improved mobility, safety, and security of women (especially expectant mothers), and children, persons with disability, the elderly by providing dedicated parking slots (2 per level) and toilets in the park and ride facilities; adequate security, lighting and elevators (at least one) in stations and dedicated seats (at least 2) in carriages (baseline: 0)  4b. Gender and/or diversity policy adopted by 2020	1a–b. Company annual technical reports and completion certificate from lenders' technical advisor  2–4. Annual development effectiveness monitoring reports from the borrowers	Delayed construction caused by force majeure events
<b>Key Activities with Milestones</b> Outputs 1–4			

1. Achieve financial close by the third quarter of 2018.
2. Complete construction of MRT Pink Line by 2021.
3. Complete construction of MRT Yellow Line by 2021.

**Inputs**

**Pink Line**

Asian Development Bank: B4,949 million loan

[CONFIDENTIAL INFORMATION DELETED].

**Yellow Line**

Asian Development Bank: B4,949 million loan

[CONFIDENTIAL INFORMATION DELETED].

**Assumptions for Partner Financing**

Not applicable

MRT = mass rapid transit.

<sup>a</sup> Government of Thailand. 2016. *Bangkok Mass Transit Master Plan*. Bangkok.

Source: Asian Development Bank.

**LIST OF LINKED DOCUMENTS**

<http://www.adb.org/Documents/RRPs/?id=51274-001-4>

1. Sector Overview
2. Details of Implementation Arrangements
3. Contribution to the ADB Results Framework
4. Country Economic Indicators
5. Summary Poverty Reduction and Social Strategy
6. Safeguards and Social Dimensions Summary

[CONFIDENTIAL INFORMATION DELETED].