



- Name of Project** : **Project Management and Independent Checking Construction of Mass Transit System Project in Bangkok (Red Line: 1)**
- Location** : Bangkok
- Client** : State Railway of Thailand (SRT)
- Project Cost** : 62,353 Million Baht
- Duration** : March 2013 – October 2017
- Narrative Description** :

The State Railway of Thailand (SRT) as the Executing Agency for the Red Line Project (the Project) has implemented the tendering procedure for the Bang Sue – Talingchan Section in December 2007 and the tendering procedure for Bang Sue – Rangsit Section followed thereafter. The cost of construction of Bang Sue – Talingchan Section is financed by the Thai Government while the cost of construction of Bang Sue – Rangsit Section is funded by a JICA ODA Loan from the Japanese Government.

Red Line : Bang Sue - Talingchan Section Construction of the new meter gauge track railway line starts about 800 meters from the north side of existing Bang Sue railway station and stretches along the current south railway line. The railway line run on elevated structure from Bang Sue up to Bang Bumru and starts descending to an at-grade railway line from Bang Bumru station and reach the end of project route in Taling Chan district. Total distance of the route is 15.26 km. Fence will be stretched along both sides of this railway line for the safety purpose, and provided u-turn to facilitate movement of traffic on local road to be constructed along the railway line.

Total distance about 7.70 km. of elevated railway crosses over Jarunsanitwong road, Chaopraya river, Pracharatch road route 1, Krungthaeap –Nonburi, Prachachuen road and Klong Prapa. The end of

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elevated railway line will connect with Red line: Bang Sue – Rangsit route. There are 3 railway stations situated along the route namely: Bang Son Station, Bang Bumru Station and Talingchan Station.

Red Line : Bang Sue - Rangsit Section The route is elevated line starting south of SRT Bang Sue area just before Pradipat intersection heading north through Bang Sue, Bang Khen, Lak Si and Don Muang then lowered to run at-grade level and ended at Rangsit area, 26 km. distance which is not included track to maintenance depot. The railway comprises 3 meter-gauge tracks, width 1 meter, supporting both Commuter and Long Distance Trains propelled either by conventional diesel engines or electric motors energized through Overhead Catenary System. There are 8 stations for initial stage namely: Bang Sue Station, Chatuchak Station, Bang Khen Station, Thung Song Hong Station, Lak Si Station, Kan Kheha Station, Don Muang Station and Rangsit Station. Two future stations have been planned for next stage ie. Wat Samian Nari Station and Lak Hok Station.

SRT had signed Contract 1 and 2 cover Civil construction works, on 18 January 2013 and 31 January 2013 respectively. Contract 3 for E&M Railway System, excluding of track work for Bang Sue-Talingchan Section, will be sign very soon. Contract for Construction Supervision Consultant (CSC) was signed on 26 March 2013. Construction period is 48 months.

- Services Description** :
- The Project Management and Independent checking Consulting Services (PMRL) comprise of:
    - 1) Project Management Consultant (PMC)
    - 2) Independent Checking Engineer (ICE)

The PMRL Services shall be exclusively aiming to give a technical support to SRT to perform efficient and sound management of the project. Hence its role shall work primarily with SRT and have no obligation to direct manage the Construction Supervision Consultant (CSC) and the Contractors. The ICE services shall aim to certify all systems in the Project including civil and architectural works, station facilities and E&M railway works and to confirm all systems are complete and ready for commencement of revenue services.

#### PMRL Organization Structure

The core concept behind PMRL organization chart is that it should be based on tasks and functions which must be completed under the services contract. PMRL therefore watchfully contemplated and prepared the organization structure of the working team.

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The proposed organization structure has been separated into 5 main elements as following;

1) Management group

This group consists of Project Manager and Deputy Project Managers (DPMs), including

1. DPM-Civil,
2. DPM-Railway who will only handle PMC services, while
3. DPM-Project Control will handle both PMC and ICE services, and
4. DPM-ICE will only handle the ICE services.

This management group will work together as the core management team for the services implementation. If it deems necessary, the supporting form head office of consortium members may be requested through the Project Manager or Deputy Project Manager.

2) Project Control/Contract Administration/Finance/Interface & Coordination.

This section mainly will handle the PMC services, except for some positions i.e. Coordination Manager, Coordination-Civil, Coordination-Railway, Chief Document Engineer, Contract and Claim Expert 2 and Quality Assurance Specialist, they will perform both PMC and ICE services by the approximately time sharing of 70 : 30.

This section will perform in the following key functions;

- Document Control
- Scheduling
- Coordination
- Contract/Claim and Legal
- Quality assurance
- Financial/Cost
- Environment/Social Development
- Public/Community Relations
- Procurement

This section will also take the important roles in producing and delivery of the reports and others as specified in the Contract.

3) Civil/Architectural/Station/Facilities

This section will handle the project tasks in relation to Civil works, Structural Works, Architectural Works, Building Services, Fire Safety system, Construction and Utilities.

The section will tackle the project task under supervision of Deputy Project Manager-Civil and their roles will be involved in both services for Project Management and Independent Checking Engineer.

#### 4) Railway Systems

This section will handle all works in relation to Railway systems under supervision of Deputy Project Manager Railway and serve the project for both PMC and ICE services. The sub-sections have been specified to cover all relating railway systems as follows;

- Signaling and Train Control
- Communication
- Power supply
- AFC System
- Rolling Stock
- Trackwork
- Depot/Workshop Equipment
- System Integrating & Interfacing

#### 5) System Assurance/Safety/Security Operation

This section consists of the core positions for ICE services. All staff members will perform only ICE services and they will direct the staff in other sections in execution of the tasks in relation to the ICE work. This section will specific handle the project ICE tasks and consists of the following sub-sections;

- Railway Operation
- Safety System and Emergency
- RAMS and Risk Management
- Security
- Rolling Stock M&O
- Testing and Commissioning

The section will be fully responsible on the ICE services tasks under the supervision of Deputy Project Manager-ICE and the supporting of the relating disciplines shall be required from Civil and Railway System sections.