



CAPABILITY PRESENTATION

**To provide One-Stop End to End Solution for EPC
Green Field Developments and Brown Field
Modification Works.**

10 Feb 17



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Company Information

TANTAWAN CONSTRUCTION AND SERVICE CO., LTD (TCS) heads a group of companies established in 2004 providing the service of :

- Manpower supply for engineers, supervisors and skilled personnel.
- Shop pre-fabrication and Site construction.
- Tool & Equipment Rental Services

TCS is currently able to provide One-Stop End to End Solution for EPC Green Field Developments and Brown Field Modification Works both in Upstream and Downstream Oil & Gas Industries.

Operation Location



Samutprakarn Office

Rayong Workshop

Songkhla Workshop

➤ Address :

- ✓ Head Quarter 699/316 Moo 6, Tai Ban Rd., Tombon Tai-Ban, Aumpher Muang Samutprakarn, Samutprakarn 10280
- ✓ Rayong Workshop : 21 Moo 3 Soi 5, Tombon Nikompattana, Aumpher Nikompattana, Rayong 21180
- ✓ Songkhla Workshop : 613/13 Moo 2, Tombon Phawong, Sonkhla-jana Rd., Aumpher Muang Songkhla, 90100

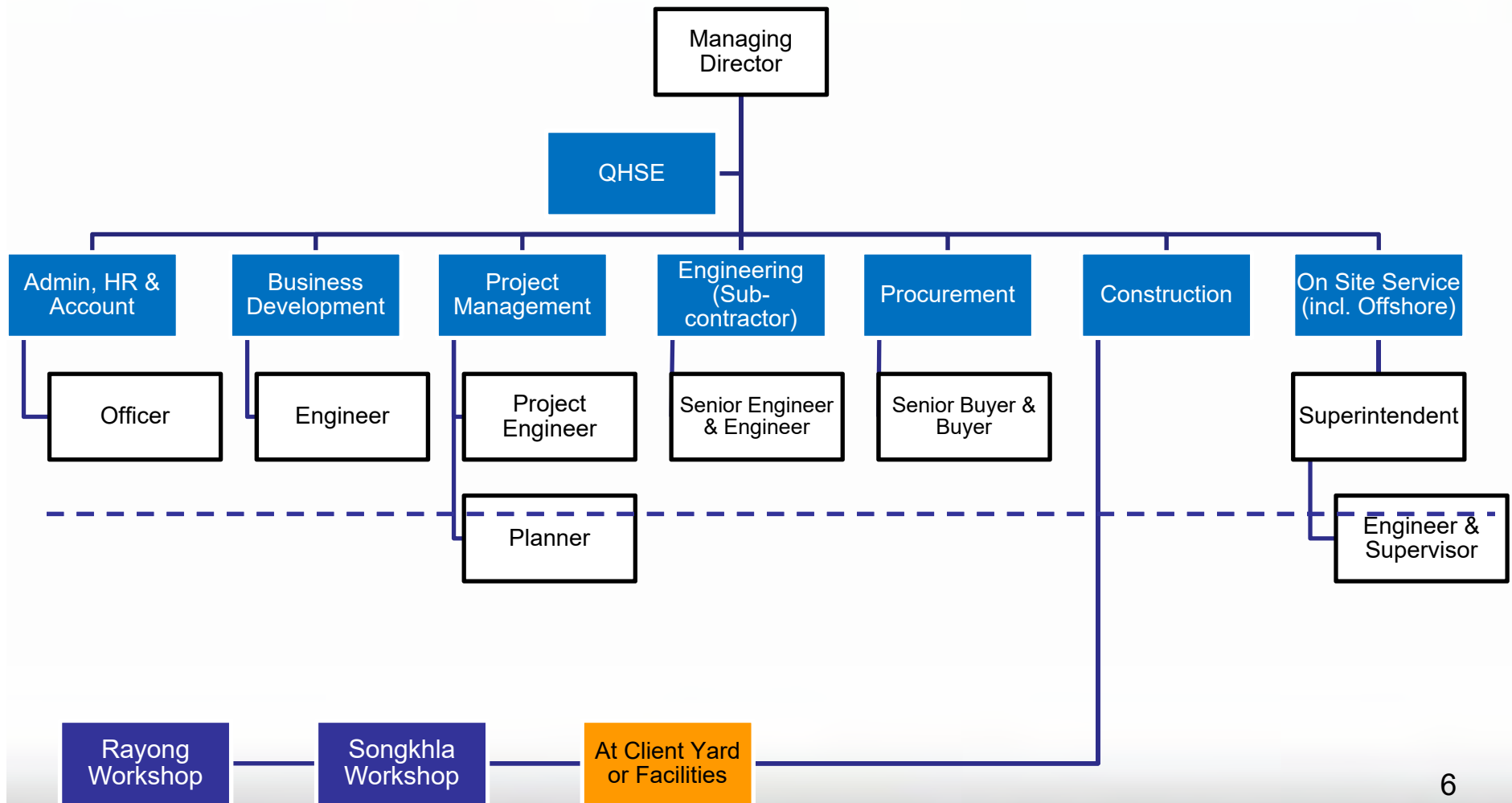


Core Business

Our core business covers the following :

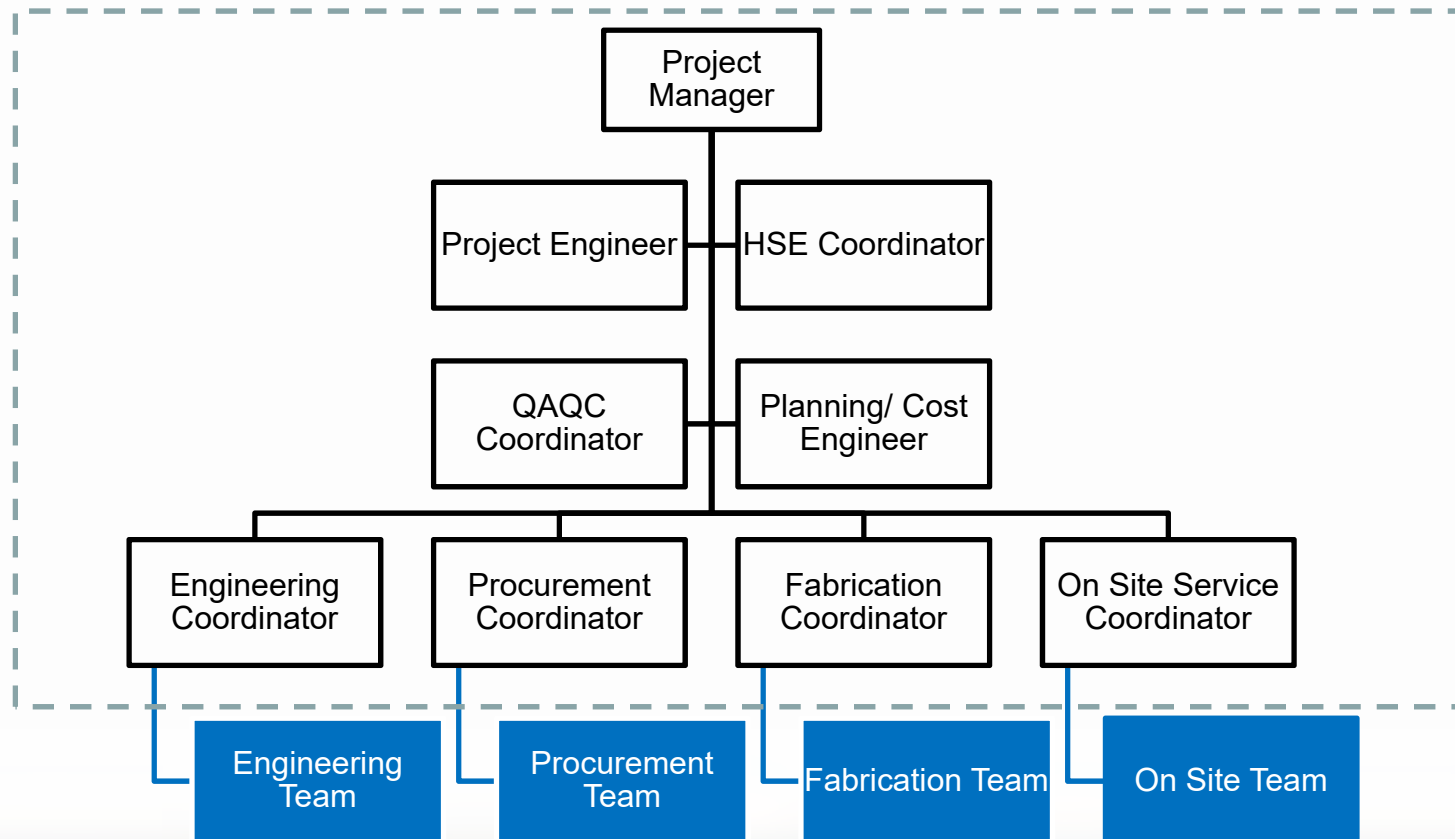
- Offshore Oil & Gas Platforms
- Onshore Oil & Gas Facilities
- Refineries
- Petrochemicals

Organization Chart



Project Management Capabilities

- TCS shall assign a group of Project Management Team (PMT) who have extensive experience for the implementation of offshore oil & gas and other related projects.
- A dedicated PMT shall be assigned to manage the project, typical organization for all projects as shown below :





Engineering Capabilities/ Management

TCS executes Engineering works in collaboration with Engineering Subcontractor managed by experienced professionals from the Oil and Gas Industry.

The Engineering team leaders having extensive experience in their respective fields carrying multi-national works in design firms, operating companies and EPCIC contractors.

Engineering Capabilities

Engineering capabilities are :

- Detailed Engineering and Design
- Fabrication/ Construction Engineering
- Procurement Engineering support
- Packages Engineering
- Site Modifications Engineering



Procurement Capabilities

TCS provides procurement services which include the following :

- Vendor assessment and survey
- Establish Procurement Plan
- Compilation and floating of Request for Quotations
- Bid evaluation
- Selection of vendor and issuance of purchase
- Expediting, Source inspection
- Vendor document control
- Logistics Invoice administration

Construction Capabilities

TCS capabilities are as follows :

- Shop pre-fabrication and Site construction
- Manpower Supply Services
- Tool & Equipment Rental Services
- Other Service with Specialist Sub-contractors i.e. bolt tensioning, chemical cleaning, PWHT etc.





Construction Capabilities/ Rayong Workshop

Workshop details :

- Total area = 24,000 sqm. (15 rai)
- Fabrication shop, blasting/painting shop, hydro-testing area, warehouse and store cover an area of approximately 4,000 sqm.
- Offices for staff cover an area of approximately 140 sqm.
- Offices for clients cover an area of approximately 130 sqm.
- Outdoor material storage and future expansion of approximately 19,000 sqm

Construction Capabilities/ Rayong Workshop



Blasting shop with steel grit recycle unit



Gantry Crane 5 tons x 2 units in Fabrication Shop



Construction Capabilities/ Songkhla Workshop

Workshop details :

- Total area of 14,400 sqm. (9 rai).
- Fabrication shop, blasting/painting shop, hydro-testing area, warehouse and store cover an area of approximately 3,000 sqm.
- Offices for staff cover an area of approximately 100 sqm.
- Offices for clients cover an area of approximately 60 sqm.
- Outdoor material storage and other area of approximately 10,000 sqm.

Construction Capabilities/ Songkhla Workshop



Workshop



**Blasting Shop with steel grit
recycle unit**



Fabrication Shop



Other Facilities & Area



Construction Capabilities/ Manpower Strength

Number of persons in 7 years record (from total 12 years experience)

Manpower Supply

Description	2009	2010	2011	2012	2013	2014	2015	2016
Manpower supply for Onshore Fabrication	250	350	770	1,600	1,330	1,150	970	510
Manpower supply for OFFSHORE works	20	50	70	150	60	40	30	30

Manpower for Lump-sum Fabrication Works

Location	2009	2010	2011	2012	2013	2014	2015	2016
Rayong Workshop							45	65
Songkhla Workshop							30	50
Client Yard (Thai Nippon Steel)	120						50	450



Construction Capabilities/ Manpower Supply Service

TCS continuing services of supplying qualified and experienced personnel for various Clients.

Skill Workforce	Engineer & Supervisor	Quality Control & Safety
<ul style="list-style-type: none"> ➤ FCAW, SMAW, GTAW and GMAW welders ➤ Structure and pipe fitters ➤ Rigger and crane operators ➤ Qualified scaffolders ➤ Electricians and instrument technicians ➤ Mechanical technicians ➤ Blasters & Painters ➤ Civil construction workers ➤ Foremen for all trade ➤ Other technicians and general workers 	<ul style="list-style-type: none"> ➤ Project engineers ➤ QA & QC engineers ➤ Planning engineers ➤ Piping engineers/supervisors ➤ Mechanical engineers/supervisors ➤ E & I engineers/supervisions ➤ Structural engineers/supervisors ➤ Welding engineers ➤ Safety supervisors ➤ Other engineers and supervisors 	<ul style="list-style-type: none"> ➤ Welding inspectors ➤ Structure & Pipe inspectors ➤ E & I inspectors ➤ Mechanical inspectors ➤ Coating inspectors <i>Staff for the above Local (Thailand) and international qualification schemes such as TWS, AWS, CSWIP and NACE, etc.</i> ➤ Safety officer qualified in supervisor, technical and professional level



Construction Capabilities/ On Site Service

TCS executes its services in Onshore and Offshore hook-up, Pre-commissioning, Commissioning and Start-up assistance for Greenfield and Brownfield works in collaboration with our networks of qualified and experienced personnel in the areas of :

- Construction Workpack Development
- Platform Hook-up, Flowline Installation and Testing
- Modification, Revamping and Upgrading of Facilities
- Operation and Maintenance Works.
- Turn-around (shutdown) planning and execution.
- Pre-commissioning, Commissioning and Start-up Assistance
- Completion Management System support.
- Handling, Logistic Support and Management
- Provision of Specialized sub-contractors

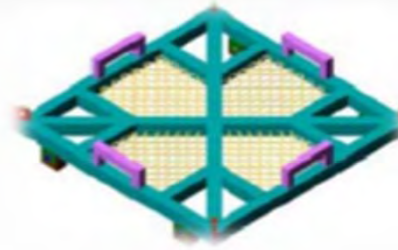
Construction Capabilities/ Work Experience



EXTERRAN & CHEVRON

**Repair of Main
Process Cooler of
Booster Gas
Compressor
Package.**

Scope of work : repair
of damage part →
completed in end
May.16



BPE & PTTEP

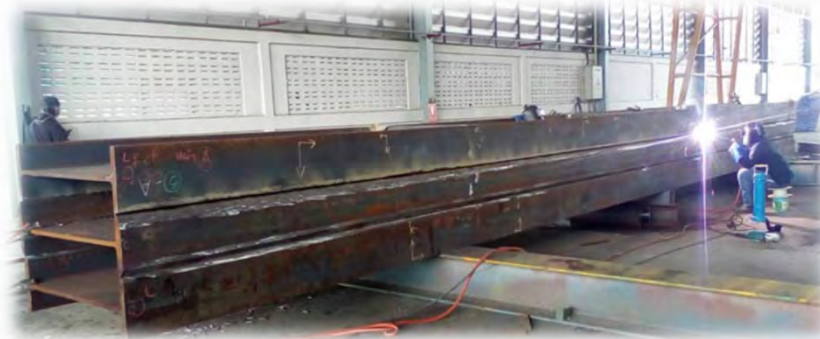
**Steel Pallet Carrier x
120 units**

Scope of work :
material procurement
→ completed in
Jun.16



CAE & Toyo Engg

Blast and painting
pipe support 3,400
sqm → completed in
Dec.16



MAMMOET (Thailand)

**Gantry Beam Fabrication for 12 m. x 2 and 18 m x 2
sets total 64 tons.**

Scope of Work : fabrication, painting → completed 8
Dec.16

Construction Capabilities/ Work Experience



Mubadala Petroleum Container for Load Bank

Scope of Work :
material procurement,
fabrication, painting →
completed 6 Dec.16



Mubadala Petroleum Generator Knock Out Pot 5 units

Scope of Work : material procurement,
fabrication, painting → completed 30 Nov.16



TNS/ PTTEP Zawtika
Modification Work for Piping Manifold 16"
Scope of Work : fabrication and painting →
completed 26 Jan.17



TNS/ PLML
**Provision of Piping Fabrication for
Corroded Piping Replacement →**
completion schedule in Feb..17

Construction Capabilities/ Work Experience



CHEVRON

X-ray Container

Scope of Work : Design, material procurement, fabrication and site install



CHEVRON

Container & Basket 3.7 tons x 11 units

Scope of Work : material procurement, fabrication, load test and painting



CHEVRON

Tube Bundle Container

Scope of Work : material procurement, fabrication, load test and painting.



Construction Capabilities/ Work Experience



CHEVRON
**Lifting Frame for
Air Compressor**

Scope of Work :
material
procurement,
fabrication, load
test and painting.



CHEVRON
**Mini Pump
Transfer Basket**

Scope of Work :
material
procurement,
fabrication, load
test and painting.



CHEVRON
Open Top container

Scope of Work : Repair, NDE load test and
painting.



QTEC
Gas Rack

Scope of Work : Repair, NDE load test and
painting.

Construction Capabilities/ Work Experience



CHEVRON
Nitrogen Gas Rack

Scope of Work : material procurement, fabrication, load test and painting.



CHEVRON
COG Prototype
Staging Platform

Scope of Work : material procurement, fabrication, and painting.



CHEVRON
Scaffolding Box

Scope of Work : material procurement, fabrication, load test and painting.



CHEVRON
Handrail

Scope of Work : material procurement, fabrication, and painting.

Construction Capabilities/ Work Experience

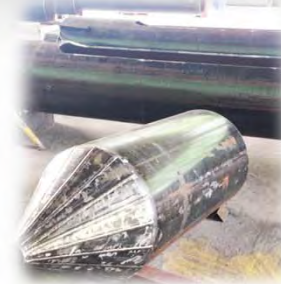


CHEVRON Drop Object Protection

Scope of Work : fabrication and painting →
completed in Jun.16



CHEVRON Hydro Test Box 21 units (total 8.5 tons) Scope of Work : procurement, fabrication and painting → Completed 10 Jan.17



CHEVRON Splitter Conductor

- 1) 7 units x 16 ton = 112 tons
- 2) 8 units x 16 ton = 128 tons
- 3) 10 units x 16 ton = 160 tons

Scope of Work : fabrication and painting
Fabrication duration : **Oct.16 till May.17**



PTTEP HG Waste Container 8 units (total 15 tons)

Scope of Work :
procurement,
fabrication and painting
→ completed 15 Jan
17

Construction Capabilities/ Work Experience

At Client Fabrication Yard



TNS/ PTTEP

WP-36 & WP-37 Pipeline Crossing Sleeper

16 tons x 16 units total 260 tons → completed in Apr.15

Scope of Work : manpower, tool, equipment, consumable and Supervision for Fabrication



TNS/ PTTEP

Fabrication of PTTEP B4D (WPS-14) and A3A (AWP-34) Topside

**Structural and Jacket
→ completed in Jun.16**



Construction Capabilities/ Work Experience

Work In-progress till Jun.17

TNS/ PTTEP Fabrication of PTTEP A3D (AWP-35&36) and B4E (WPS-15&16) Topside Structural and Jacket





Occupational Health & Safety Management System

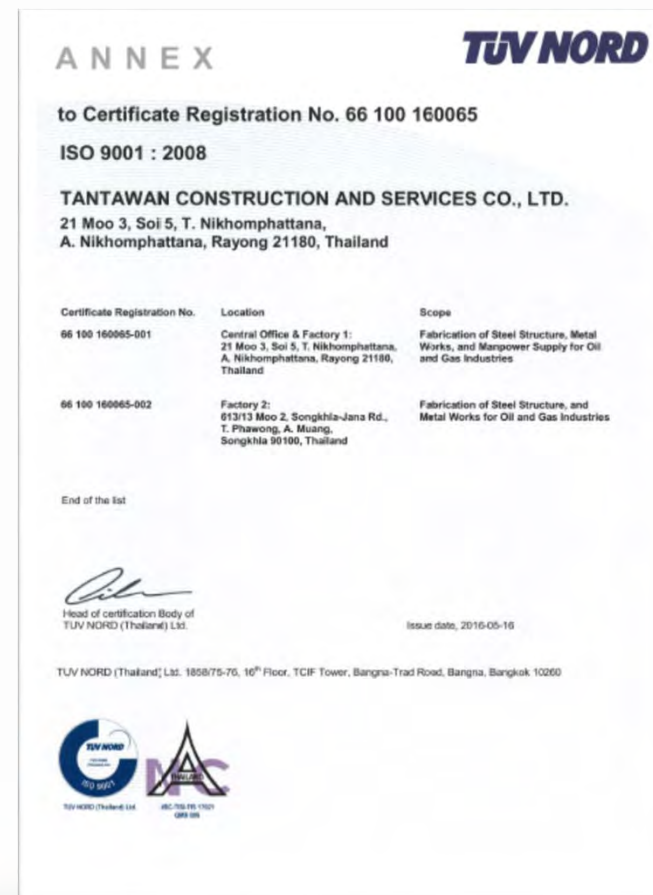


We executed the works and services under OHSAS 18001 Occupational Health & Safety Management System covered Rayong and Songkhla Factory



Quality Management System

We executed the works and services under ISO 9001 Quality Management System covered Rayong and Songkhla Factory



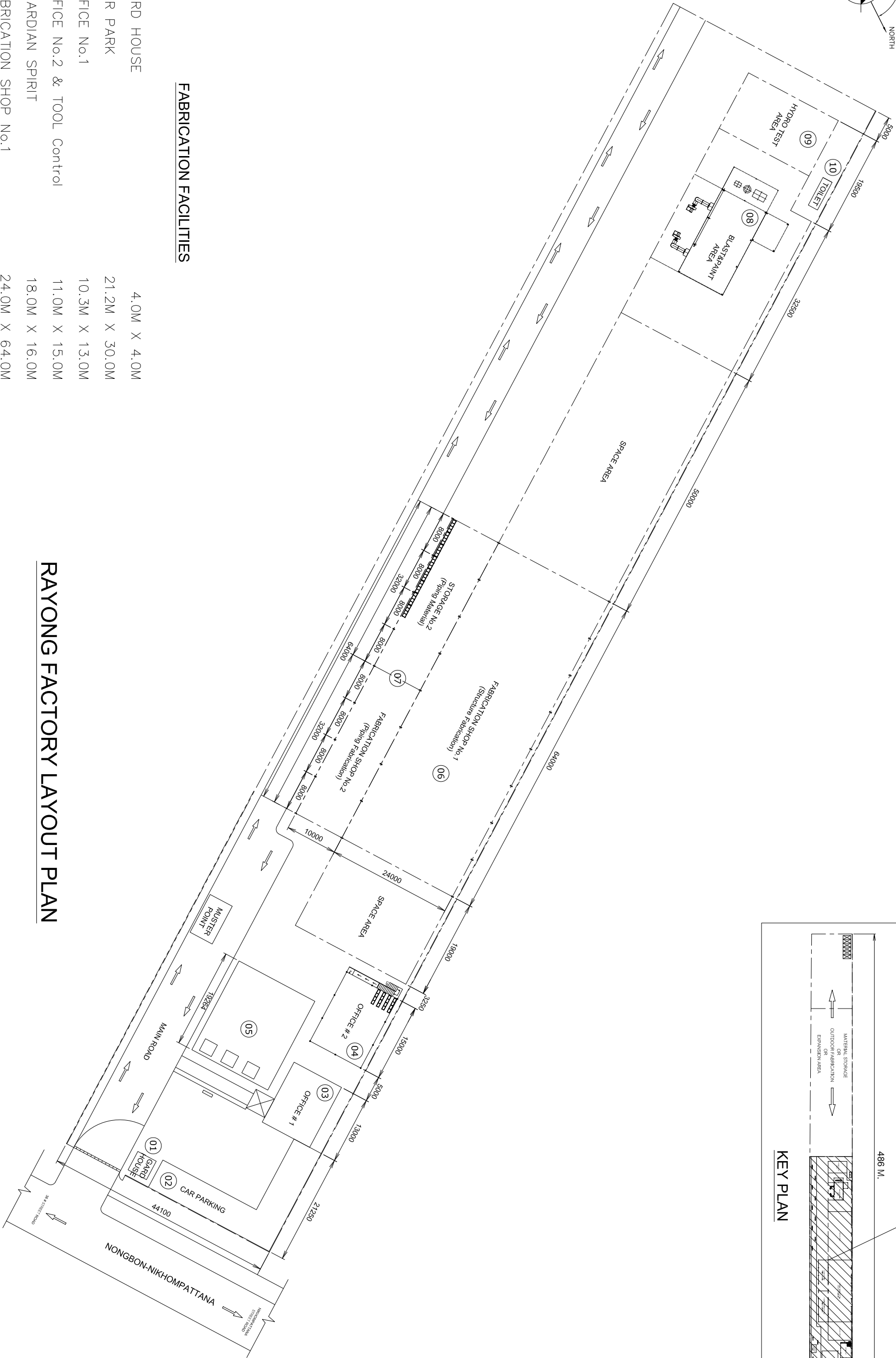
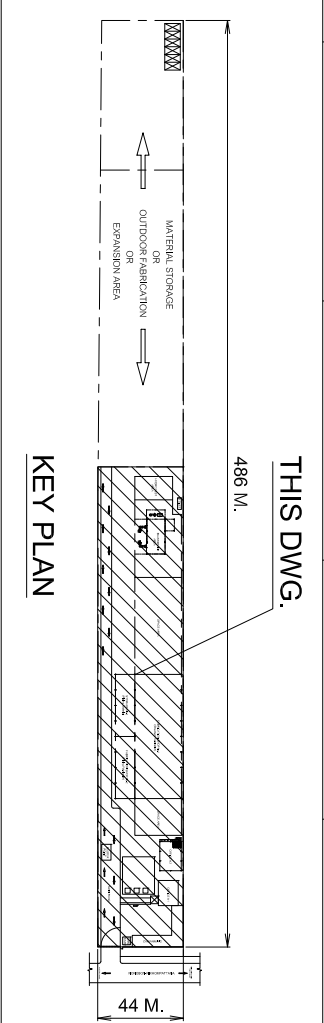
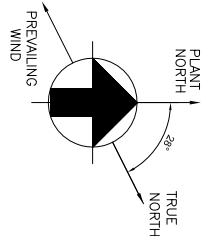


Client List



ATTACHMENT

- 1) Rayong Workshop Lay-out
- 2) Songkhla Workshop Lay-out



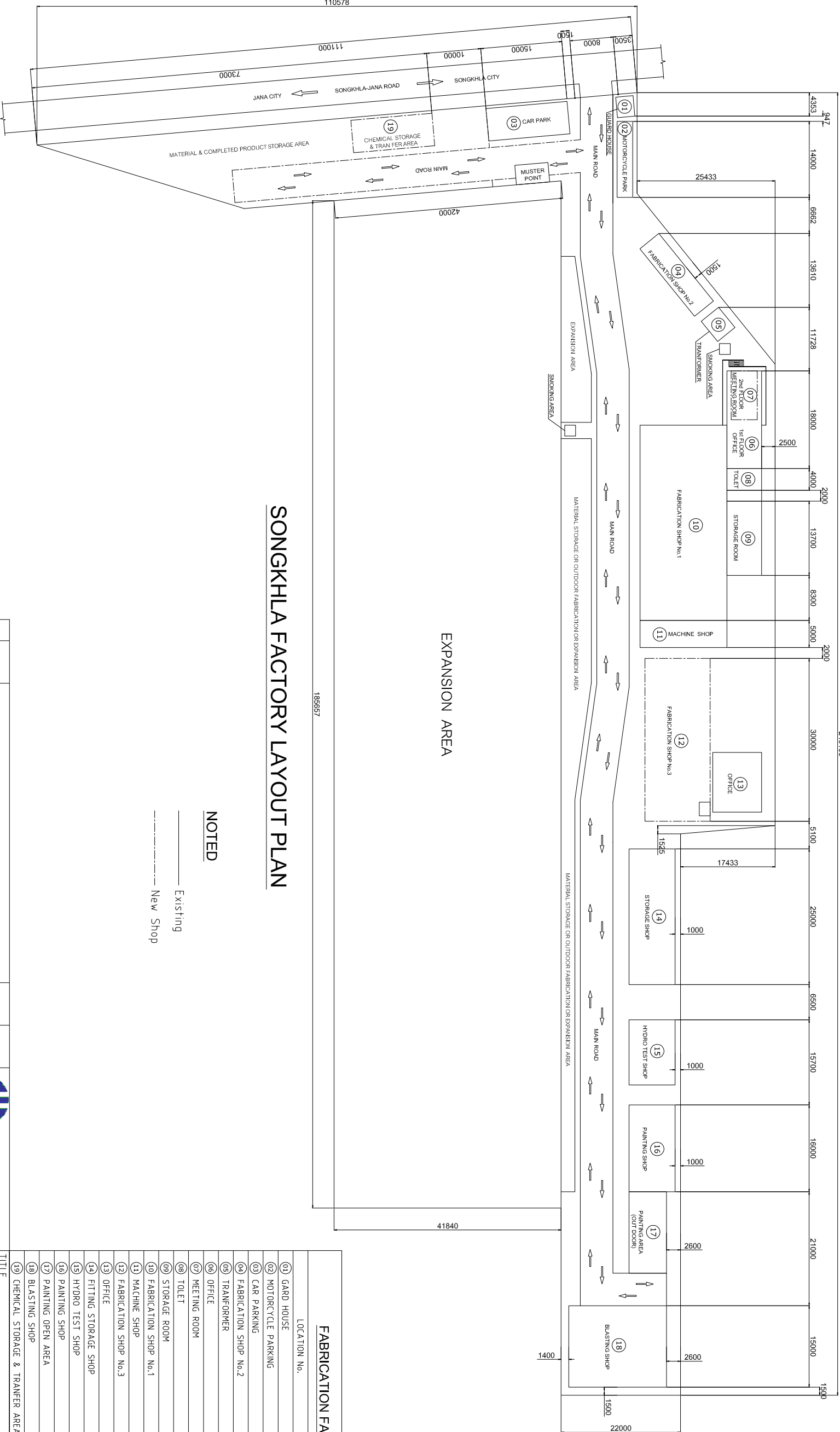
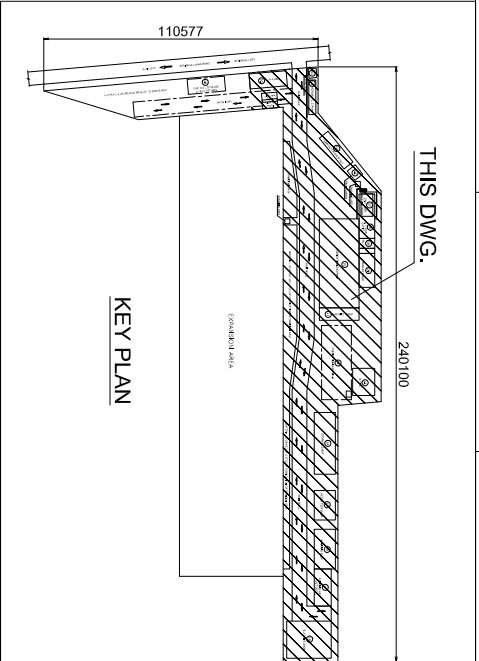
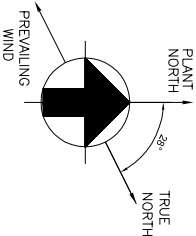
ATTACHMENT 1

FABRICATION FACILITIES

- 01 GARD HOUSE 4.0M X 4.0M
- 02 CAR PARK 21.2M X 30.0M
- 03 OFFICE No.1 10.3M X 13.0M
- 04 OFFICE No.2 & TOOL Control 11.0M X 15.0M
- 05 GUARDIAN SPIRIT 18.0M X 16.0M
- 06 FABRICATION SHOP No.1 24.0M X 64.0M
- 07 FABRICATION SHOP No.2&WAREHOUSE 10.0M X 64.0M
- 08 HYDRO TEST AREA 19.5M X 12.0M
- 09 BLAST & PAINT AREA 21.0M X 30.0M
- 10 TOILET 3.0M X 4.0M

RAYONG FACTORY LAYOUT PLAN

										TITLE	
										RAYONG FACTORY LAYOUT PLAN	
										DOC NUMBER	REV.
										TCS-STD-DWG-FAC-001	00
REV.	DATE	REVISION DESCRIPTION		DRAWN	CHK	ENG CHK	APPROV	PROJECT: COMMON		SCALE	N/A
00											



NOTED

Existing

New Shop

SONGKHLA FACTORY LAYOUT PLAN

FABRICATION FACILITIES

LOCATION No.	SIZING
01 GARD HOUSE	3.8M X 3.2M
02 MOTORCYCLE PARKING	14.0M X 2.9M
03 CAR PARKING	6.0M X 27.5M
04 FABRICATION SHOP No.2	18.0M X 5.3M
05 TRANSFORMER	4.8M X 4.1M
06 OFFICE	18.0M X 6.9M
07 MEETING ROOM	9.0M X 6.0M
08 TOILET	6.9M X 3.0M
09 STORAGE ROOM	12.0M X 6.9M
10 FABRICATION SHOP No.1	36.0M X 16.0M
11 MACHINE SHOP	5.0M X 16.0M
12 FABRICATION SHOP No.3	12.0M X 30.0M
13 OFFICE	11.0M X 9.0M
14 FITTING STORAGE SHOP	25.0M X 8.5M
15 HYDRO TEST SHOP	12.0M X 8.5M
16 PAINTING SHOP	16.0M X 8.5M
17 PAINTING OPEN AREA	15.0M X 6.9M
18 BLASTING SHOP	15.0M X 18.0M
19 CHEMICAL STORAGE & TRANSFER AREA	6.0M X 27.5M

TANTAWAN CONSTRUCTION AND SERVICE CO., LTD.		PROJECT: COMMON		SCALE N/A	
59/73 Moo 2, Tambon Phrasang, Songkhla, 91000		DRAWN		APPROV	
TANTAWAN CONSTRUCTION AND SERVICE CO., LTD.		Narit W.		N/A	
TANTAWAN CONSTRUCTION AND SERVICE CO., LTD.		REVISION DESCRIPTION		REV.	
TANTAWAN CONSTRUCTION AND SERVICE CO., LTD.		DATE		00	
TANTAWAN CONSTRUCTION AND SERVICE CO., LTD.		00		21 Nov 16	
TANTAWAN CONSTRUCTION AND SERVICE CO., LTD.		SONGKHLA FACTORY LAYOUT PLAN		TCS-STD-DWG-FAC-002	
TANTAWAN CONSTRUCTION AND SERVICE CO., LTD.		DOC NUMBER		REV.	
TANTAWAN CONSTRUCTION AND SERVICE CO., LTD.		00		00	

ATTACHMENT 2