



PT GLOBAL WAY INDONESIA



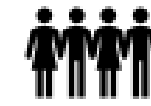
PT GLOBAL WAY FACTORY

LEED V4
BD&C
Innovation
Credit

*Madiun, East
Java
Indonesia*



PROJECT INFORMATION



PT Global Way Indonesia



PT Global Way Factory



Manufacturing



KEY HIGHLIGHTS

- High-efficiency HVAC system
- 100% LED light
- Lighting control system
- Water-efficient systems
- Alternative water source

What is LEED?

- Leadership in **E**nergy and **E**nvironmental **D**esign
- Widely used green building rating system in the world
- Available for building, community and home project types
- Create healthy, highly efficient and cost-saving green buildings
- Globally recognized for sustainability



Educational Program - Guided tour

- This educational program aims at a wide range of target audiences such as public media, professionals, suppliers, students, etc.
- Guided tour program is developed to focus on sustainable buildings in the manufacturing industry, using PT Global Way Factory project as a case study for Indonesia.
- A schedule of the educational tour has been made since the project's early stage. During the project's construction stage, educational activities and presentations were organized and delivered to various types of stakeholders.



TOUR SCHEDULE

PRESENTATION

- **Topic:** LEED Certification for PT Global Way Factory
- **Presenter:** Ms. Thu Nguyen
- **Time:** *TBA later (after LEED certification)*
- **Location:** PT Global Way (Indonesia)
- **Contents:** LEED certification, energy efficiency, indoor air quality, energy-efficient HVAC system, water efficiency and reduction, etc.

KEY ATTENDANTS

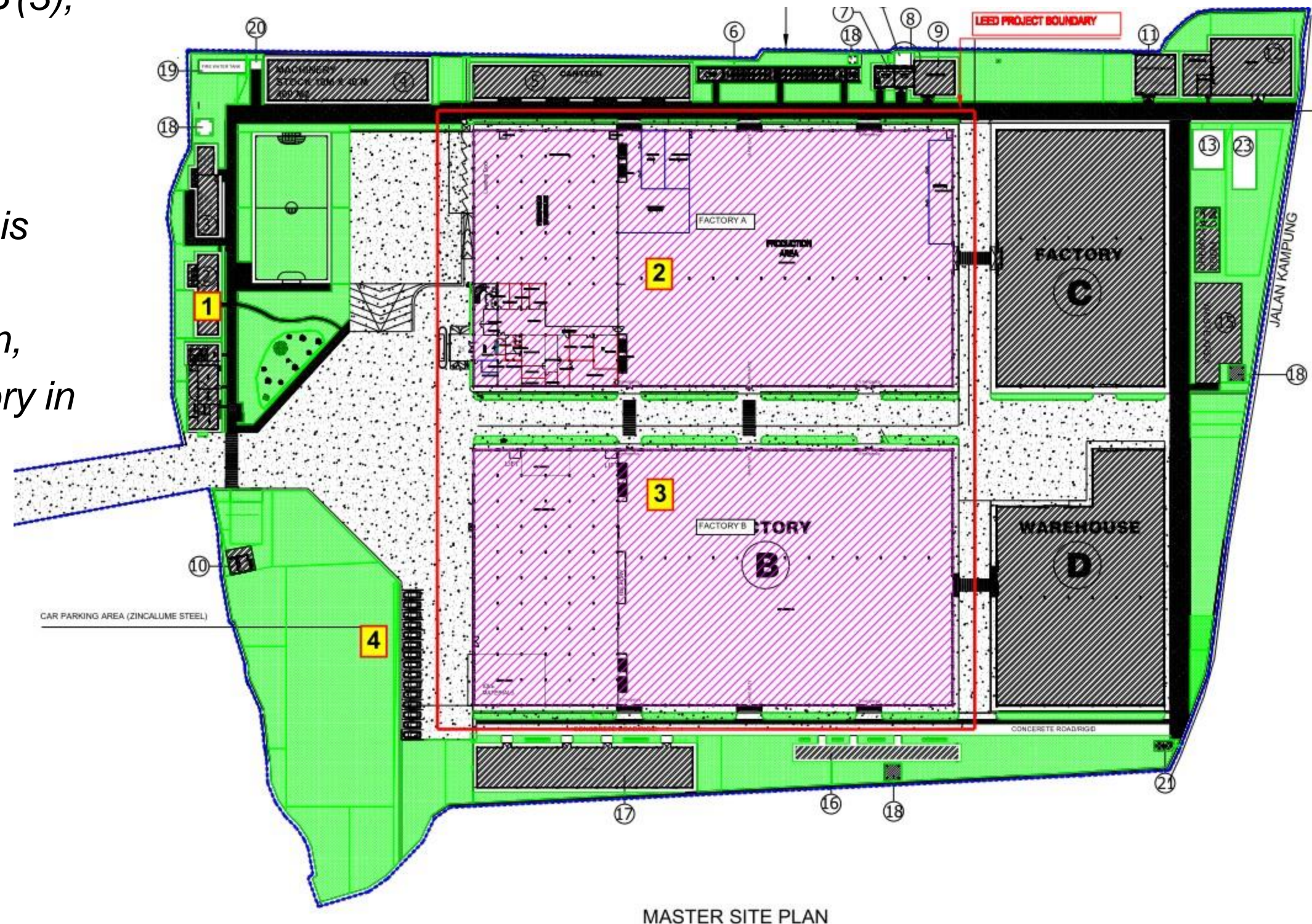
1. Owner's representative – Head of Project Management
2. Owner's project manager
3. Contractor & Sub-contractors
4. Other project team members

Tour Map

Visitors will gather in the meeting room (office). The tour will begin from this area (1) to Factory A (2), Factory B (3), and other areas.

Visitors will have time to relax and listen to the presentation of how this LEED project complies with all requirements for LEED certification, and the true value of a green factory in operation.

- 1 – Office
- 2– Factory A
- 3 – Factory B
- 4 – Car Parking Area



LEED SCORE

No.	Category	Design Points	Construction Points
1	Integrative process	1	0
2	Location and transportation	3	0
3	Sustainable sites	6	0
4	Water efficiency	7	0
5	Energy and atmosphere	8	3
6	Materials and resources	0	0
7	Indoor environment quality	4	1
8	Innovation	3	2
9	Regional Priority	4	0
	TOTAL SCORE	36	6
		42	

PROJECT INFORMATION

Site area	22,094 m ²
GFA	20,056 m ²
Type	Industrial Manufacturing
Floors	02
Location	Madiun City, East Java Province, Indonesia
Owner	PT Global Way Indonesia

Outdoor Water Use

- Native and climate-adapted vegetation
- Automatic irrigation system
- Reclaimed water reuse for irrigation
- 100% reduction of potable water use

Indoor Water Use

- Low flow/flush rate water fixtures
- Reclaimed water reuse for flushing
- 82% reduction of potable water use

Waste Management



Recyclable Waste

- Paper
- Cardboard
- Plastics
- Metals
- Glass



Hazardous Waste

- Batteries
- E-waste



Building Envelope

- Roof

High-SRI metal roof, insulation
- External Wall

150mm-thick brick wall
- Glazing

Solar control glass (air-conditioned spaces)

Component	Factory A	Factory B
Roof Assembly	$U = 3.17 \text{ W/m}^2\text{K}$ (insulation included)	$U = 3.17 \text{ W/m}^2\text{K}$ (insulation included)
External Wall	$U = 2.48 \text{ W/m}^2\text{K}$ (150mm-thick brick wall)	$U = 2.48 \text{ W/m}^2\text{K}$ (150mm-thick brick wall)
External Window	$U_{\text{net}} = 3.95 \text{ W/m}^2\text{K}$ SHGC = 0.46	$U_{\text{net}} = 3.95 \text{ W/m}^2\text{K}$ SHGC = 0.46

Lighting

- 100% LED lights
- Time switch for automatic control
- Occupancy sensors in work areas
- Photo sensors in areas with daylight provision



Lighting system

INDOOR ENVIRONMENTAL
QUALITY

Air Conditioning & Ventilation

High-performance HVAC systems are used for:

- Office: single-split air-conditioners
- Factory: exhaust fans controlled by PLC
- Toilets: exhaust fans



Air-conditioning single-split system



GLOBAL WAY
INDONESIA

GLOBAL WAY INDONESIA