

## My Republic Plaza (Green Office Park 6)

by [Yeni Agvira Hermiza](#) / ⌚ 2017-05-31 04:18:47 / International /  
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**Building Type** : Office building < 28m

**Construction Year** : 2014

**Delivery year** : 2015

**Address 1 - street** : Jl. Grand Boulevard, BSD Green Office Park, BSD City 15345  
TANGERANG, Indonesia

**Climate zone** : [Af] Tropical Wet. No dry season.

**Net Floor Area** : 15 832 m<sup>2</sup>

**Construction/refurbishment cost** : 14 673 193 €

**Number of Work station** : 5 Work station

**Cost/m2** : 926.81 €/m<sup>2</sup>

#### Certifications :



## General information

My Republic Plaza (Green Office Park6) is located in foot print area amounted 12,890 m2 has five floors for work space and basement. It also becomes one of part in Green Office Park BSD City which built base on Green Building Concept as one of Sinar Mas Land efforts to brings the environmental protection commitment into reality. It has proven as Green Building with honor "Gold" by GBC Indonesia (Green Building Council Indonesia)

## See more details about this project

<http://www.sinarmasland.com/site/discover-properties/commercial-industrial/bsd-green-office-park>

## Stakeholders

### Stakeholders

**Function** : Construction company

PT. Total Bangun Persada Tbk

## Contracting method

Other methods

## If you had to do it again?

all system are going well as planed. further more it increases efficiency in operational building cost.

## Building users opinion

building more healthy and comfort, increase productivity for occupant

## Energy

### Energy consumption

Primary energy need : 140,00 kWhpe/m<sup>2</sup>.year

Primary energy need for standard building : 250,00 kWhpe/m<sup>2</sup>.year

Calculation method :

### Envelope performance

More information :

Wall of façade GOP 6 has an area about 5.624 m<sup>2</sup>. It had been designed and made from some layers of material for solid layer such as concrete, light brick ACP (aluminum composite panel) and gypsum for inside layers The glass uses 8mm T-Sunlux T-CS 140 #2 + 12mm AS + 6mm Panasap Dark Blue (Bluish Grey). Panasap Dark Blue (Bluish Grey). The Panasap glass can absorb radiation of sun which enters the building about 55% (U-Value Total Solid is 1.89 Watt/m<sup>2</sup>.K). and (U-Value Total Solid and include glazing/transparant is 2.96 Watt/m<sup>2</sup>.K) (OTTV) is about 28.9 W/m<sup>2</sup> and Roof (RTTV) is about 29.7 W/ m<sup>2</sup>. The value is better than National Standard by SNI 03-6389-2000 it is 35 W/m<sup>2</sup>

Building Compactness Coefficient : 2,40

### Real final energy consumption

Final Energy : 117,00 kWhfe/m<sup>2</sup>.year

Real final energy consumption/m<sup>2</sup> : 117,00 kWhfe/m<sup>2</sup>.year

Year of the real energy consumption : 2 016

## Renewables & systems

### Systems

Heating system :

- No heating system

Hot water system :

- Other hot water system

Cooling system :

- Fan coil
- VAV Syst. (Variable Air Volume system)

Ventilation system :

- Natural ventilation

Renewable systems :

- Solar photovoltaic

Other information on HVAC :

using central water cooled system

### Smart Building

BMS :

Monitoring AC, energy consumption, CO<sub>2</sub> Sensor, water and others

Smartgrid :

NA

Users' opinion on the Smart Building functions : can monitor energy consumption building up to date

## Environment

## Urban environment

This building in Green office park area, that have many public facility : supermarket, lake, garden, restaurant and pedestrian to approach people walking to public facility

Land plot area : 13 000,00 m<sup>2</sup>

Built-up area : 60,00 %

Green space : 7 064,00

## Products

### Product

ACP (aluminum composite panel)

ACPINDO

Bpk. Roganda Hp / WA : 081294466666 email : marketing@acpindo.com

<http://www.acpindo.com/p/reynobond.html>

Product category : Gros œuvre / Structure, maçonnerie, façade

light brick ACP (aluminum composite panel) and gypsum for inside layers The glass uses 8mm T-Sunlux T-CS 140 #2 + 12mm AS + 6mm Panasap Dark Blue (Bluish Grey). Panasap Dark Blue (Bluish Grey).

less man power install to building

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Glass

Asahimas

Yudi +62896 8530 6999

<http://asahimas.arwuda.com/id/>

Product category : Gros œuvre / Structure, maçonnerie, façade

glass uses 8mm T-Sunlux T-CS 140 #2 + 12mm AS + 6mm Panasap Dark Blue (Bluish Grey). Panasap Dark Blue (Bluish Grey).

so much choice for glass

## Costs

## Construction and exploitation costs

Total cost of the building : 14 673 193 €

## Energy bill

Forecasted energy bill/year : 16 900,00 €

Real energy cost/m<sup>2</sup> : 1.07

Real energy cost/Work station : 3380

## Health and comfort

## Life Cycle Analysis

Material impact on GHG emissions :

62

Eco-design material : 5%

## Water management

Consumption from water network : 7 800,00 m<sup>3</sup>

Consumption of grey water : 2 335,00 m<sup>3</sup>

Consumption of harvested rainwater : 313,00 m<sup>3</sup>

Water Self Sufficiency Index : 0.25

Water Consumption/m<sup>2</sup> : 0.49

Water Consumption/Work station : 1560

Use of non-potable water for cooling tower and other purposes it use recycles water and storm. The total of water needs is 62 m<sup>3</sup> which supplied by 62% recycle water and 38% clean water.

Rainwater harvesting & percentage in reduction of potable water consumption: the water needs which can supply by the storm are 47m<sup>3</sup>. It is based on assumption that rainfall is 50 mm/day with the percentage of storm 53% in a year.

Water treatment / recycling capacity

The water needs which can supply by recycling water is 25.6 m<sup>3</sup>. It used to supply WC flushing, irrigation, and makeup

Flush garden sprinkler system

Other Specifications

water cooling tower.

The total of water need is (urinal, WC, faucet, shower, irrigation, and make up the cooling tower) 65781 L/day. The water source of recycling water and storm can supply 14939 m<sup>3</sup> and it is replaced

## Indoor Air quality

8707 L/s

## Comfort

**Health & comfort :** Area of natural lighting in buildings GOP 6 include: Toilet Area, Working Space Area, and the Lobby Area. Zoning for Integrated lighting and Day Lighting For Working Space Area Natural lighting percentage was 34%

**Calculated indoor CO<sub>2</sub> concentration :**

Calculation ASHRAE : 8.707 L/s = 18.450 CFM Design 15.500 x 2 wing = 31.000 cfm (cubic feet minute) Fresh air needs is 15,832 CFM. It calculate based on air need per person set by ASHRAE62.1-2007, it is 5.5 l/person or 11 CFM/Person but it already provided

**Measured indoor CO<sub>2</sub> concentration :**

2.Number of Ventilation air per person (CFM/person) Fresh air needs measurement show the result is 15.832 CFM. It was calculated based on air needs per person based on ASHRAE62.1-2007, it is 5.5 l/person or 11 CFM/person. But the building completed with

**Calculated thermal comfort :** The room temperature has been measured and the result show between 24-25°C with humidity between 60.8%-66.8%. It is included into a comfort zone that measured by the psychometric chart

**Measured thermal comfort :** Thermal comfort – design indoor temp and relative humidity The room temperature has been measured and the result show between 24-25°C with humidity between 60.8%-66.8%. It is included into a comfort zone that measured by the psychometric chart

## Carbon

## GHG emissions

**GHG in use :** 103,00 KgCO<sub>2</sub>/m<sup>2</sup>/year

**Methodology used :**

IPCC

**Building lifetime :** 25,00 year(s)

## Building candidate in the category



Energy & Hot Climates



Low Carbon

