BACKGROUND

50 years of Achievements
Established: 1967

Today’s Firm: Approx. 1,000 staff + 8 Regional Offices

Services: Multi-Disciplinary

Kasumigaseki Building
1968
Nihon Sekkei’s Mission

Create “Future Value “
with respecting
fruitful life of People, nature, Society and history

Adding Future value with continuous “think”
Continuing “think”
Starting from “think”
Nihon Sekkei’s Scope of Services

Flat Organization Maximizes the Power, Integrate them into a Comprehensive Whole

PM/CM/Consultant

Urban Design

Interior Design

MEP Engineering

Structure Engineering

Landscaping Design

Architectural Design
Shinjuku Business District
with Nihon Sekkei

- 1971
- 1974
- 1995
- 1990
- 1995
- 2002
- 2012~21
- Renovation
- i-Land Tower
- 2010
Shinjuku Mitsui Building

- Completion: 1974
- Main Usage: Office (Rental), Supporting Commercial Facilities
- Scale: GFA 179,671sq.m
  55 storeys with 3 Basements
Shinjuku Mitsui Building
-- the plus (+) of future values

• Creating a sunken plaza with abundant green underneath the building as an “Oasis” for office workers. It is a part of the “Green Domino” of the area.

• Even though 43 years have passed since the completion, it still keeps on top level rent in the area, through the renewal of elevators, interior design, and adding value by the Vibration control device and so on.
Precedents of BIPV
First BIPV Building

Innovative Green Design
BIPV with Nihon Sekkei

PV Module TYPE: Monocrystalline : Transparent

20 kWp

1998

Business Investment & Consulting Building
PV Module TYPE: Monocrystalline Opaque

196 kWp
Innovative Green Design
BIPV with Nihon Sekkei

2002
ITOMAN CITY HALL
Innovative Green Design

**BIPV with Nihon Sekkei**

**Sunlight shielding**
- External louver to respond to sun radiation properties regardless of the sun’s orientation
- South side: horizontal louver
- East and west sides: porous PC panel
- North side: vertical louver
- Roof surface: horizontal shelter

**Solar power generation**
- Roof: solar cell shelter
- South side: solar cell louver

**Use of daylight**
- Automatic light controlling by a luminance sensor in the northern offices

**Natural ventilation**
- Large-opening for natural ventilation (single-sliding door and project-out window)
- Route 331 bypass

**Two light-gardens**
- Route for natural ventilation and intake of daylight

**ITOMAN CITY HALL**

**2002**
Innovative Green Design
BIPV with Nihon Sekkei

PV Module TYPE:
Monocrystalline : Opaque

300 kWp

2001
AIST Open Space Lab,
Waterfront of Tokyo
Innovative Green Design
BIPV with Nihon Sekkei

2001
AIST Open Space Lab,
Waterfront of Tokyo
PV Module TYPE:
Multicrystalline : Transparent

11.3 kWp
Innovative Green Design
BIPV with Nihon Sekkei

2004
Nihon University
Science & Technology Dep.
7. Earth, Wind and Power!

Innovative Green Design
BIPV with Nihon Sekkei

Solar Chimney

Cool Heat Tube

Nihon University
Science & Technology Dep.

2004
PV Module TYPE:  
Amorphous Thin Film : Opaque
Innovative Green Design
BIPV with Nihon Sekkei

Day light
Rain water
Use

Evaporate cooling

Natural ventilation

Cool Trench

Shanghai EXPO 2010
JAPAN PAVILION
Innovative Green Design

BIPV with Nihon Sekkei

Shanghai EXPO 2010
JAPAN PAVILION
Innovative Green Design
BIPV with Nihon Sekkei

PV Module TYPE:
Monocrystalline: Transparent

266 kWp

Ajinomoto Stadium

2012
Innovative Green Design
BIPV with Nihon Sekkei

Ajinomoto Stadium 2012
Innovative Green Design
BIPV with Nihon Sekkei
Ajinomoto Stadium 2012
PV Module TYPE:
- Monocrystalline: Opaque
- Multicrystalline: Opaque
- Thin Film: Opaque

650 kWp
Innovative Green Design
BIPV with Nihon Sekkei

Tokyo Institute of Technology 2012
Environmental Energy Innovation bldg.
Innovative Green Design
BIPV with Nihon Sekkei

Tokyo Institute of Technology 2012
Environmental Energy Innovation bldg.
Innovative Green Design
BIPV with Nihon Sekkei

KOFU CITY HALL

PV Module TYPE:
Monocrystalline : Opaque

300 kWp
Innovative Green Design

BIPV with Nihon Sekkei

Vineyards shelf in this region

KOFU CITY HALL
Innovative Green Design
BIPV with Nihon Sekkei

KOFU CITY HALL
2013
Innovative Green Design
BIPV with Nihon Sekkei

PV Module TYPE:
Monocrystalline : Opaque
Amorphous : Transparent

70.9 kWp
Environmental Design (ECO Veil)
Innovative Green Design
BIPV with Nihon Sekkei

Various functions of Eco-vail

Environmental Design (ECO Veil)

Transparent
- Glazing
  - Soundproof
  - Windproof
  - Day light use

Opaque
- Opaque Glazing
  - Glare Prevention
  - Soundproof
  - Windproof

Green
- Shading
- CO2 reduction
- Urban landscape and visual comfort
  - Soundproof
  - Windproof

Amorphous PV
- PV
- Noise Protection
- Wind Protection

Wood & Metal louver
- Shading
- Urban landscape and visual comfort

Monocrystalline PV
- PV
- Noise Protection
- Wind Protection
Distribution of ECO Veil

Environmental Design (ECO Veil)

Tower

Podium

- Amorphous PV
- Monocrystalline PV

- Glazing

- Translucent Glazing
- Amorphous PV
- Monocrystalline PV

Green Wall

Louver

2015
TOSHIMA ECOMUSEE TOWN
ECO Vail Shows various faces time

Environmental Design (ECO Veil)

Morning
Daytime
Sunset
Blooming in Spring
Colored leaves in autumn

Innovative Green Design
BIPV with Nihon Sekkei

TOSHIMA ECOMUSEE TOWN
Environmental Design (ECO Veil)
Innovative Green Design
BIPV with Nihon Sekkei

Environmental Design (ECO Veil)

TOSHIMA ECOMUSEE TOWN 2015