Company making a world beautiful

Nuriplan
Nov 3, 2010 Won Korea Facility Management Association’s Grand Prize(City Design sector)
Oct 26, 2010 Won Public in KOSDAQ Stock Market
Aug 27, 2010 Acquired KEITI’s Environmental Mark Certificate
Jul 31, 2010 Won Nano-Innovating competition Lighting project – Finalist
Jun 29, 2010 Acquired Professional Construction/Mechanical Facilities Works License
Jun 5, 2010 Won Hitachi Renewal Project
May 31, 2010 Acquired FT Construction Works License
May 26, 2010 Won 2012 Seoul Expo ROD(Euro Digital Gallery) project
May 25, 2010 Won Ball Ballroom lighting nightshade Lighting project
May 3, 2010 Received Excellent Taxpayer Citation(Director of the National Tax Service)
Feb 25, 2010 Won Nubikru Bridge/Removal project
Aug 30, 2009 Won Nightshade Lighting project for Jinyang Bridge - Guemgang Bridge

Touched by Nuriplan, revealing the beautiful world
Introducing new aesthetics in lighting

Innovation code of 21st century, DESIGN! Cities are being redesigned. Roads and bridges are changing into cultural spaces rather than just a mode of transportation. To keep pace with the recent spread of interest towards 'cityscape' and importance of environmental conservation, we at Nurplan are doing our best to make a pleasant and beautiful cityscape with a principle that city structures are the base for living, as well as a resting place.

We promise trust beyond No.1.

We have set ourselves as the No. 1 professional cityscape company with over a hundred nightscape lighting facility installation for major bridges, parks, and national cultural assets including: Gayang Bridge in Seoul; Gwangan Bridge and Gupo Bridge in Busan; Yongdusan of Jeju-do; and Anapji and Cheomseongdae of Gyeongju.
Consisting of professionals from electrical engineering, design, construction, and civil works, Nurplan Co., Ltd is dedicated in creating beautiful city environments and promises to fulfill customer satisfaction with our Design Lab (established in 2001) and Technology Development Department at the center.

We bring light through creativity and innovation.

With our management philosophy of 'Serving Country through Landscape' and 'Creativity and Innovation' upfront, Nurplan Co., Ltd has accumulated great experience in fields such as bridge lighting, structure lighting, and park lighting, and accomplished the great achievement of receiving the Industrial Service Medal in 2005 and winning the Minister of Commerce, Industry and Energy Award at the Korea Design Awards. Nurplan continuously strives to reform into a global environmental cityscape company by concentrating our capabilities at creating value for our customers without being satisfied at what we have already achieved, nor stopping.

Chairman Lee, Sang woo
The Power of Nuriplan - Awards

Industrial Service Medal
Minister of Construction and Transportation - Citation (04)
Minister of Construction and Transportation - Citation (05)
Public Design Expo - Special Prize
Director of the National Tax Service - Citation
Design Awards - Excellence Prize
Seoul Sarang Citizens Awards - Gangbyeon Expressway
Seoul Sarang Citizens Awards - Dongsen Pedestrian Bridge

Seoul Sarang Citizens Awards - Seoul City Hall
Kyungin Ibb Customer Satisfaction Award
Gyeonggi-do Mayor - Appreciation Plaque
Geoje Bridge - Excellence Prize
YTN - Silver Prize
Gimhae-si - Excellence Award
Namnhae County Office - Appreciation Plaque
Dasan-Ayung Bridge - Excellence Prize
KSCS

Deoksugung 2-gil - Winner
Donghukgwan Pedestrian Overpass - Honorable Mention
Gayang Bridge - Gold Prize
Mapo, Yeongdong Bridge - Excellence Award
Bangpo Bridge - Winner
Banghwa Bridge - Bronze Prize
Bucheon-si Mayor - Appreciation Plaque
Vision Management CEO - Grand Prize
KSPB - Participation Prize

Nuriplan - Making the World Beautiful
Gangbyeon Expressway - Winner
Gangbyeon Expressway - Winner 2
Construction Works - Grand Prize
Seoul Fortress Wall - Winner
Seoul Mayor - Citation
Seonyu Bridge - Silver Prize
Seonyu Bridge - Silver Prize 2
Samcheok Mayor - Appreciation Plaque
Seobyeon Bridge - Winner
Sokcho - Appreciation Plaque
Sokcho New Waterway - Winner
Ansan National Highway 42 - Winner
Ansan National Highway 42 - Citation
Ansan Hwajeong-cheon - Winner
Yanhwasa Bridge - Winner
Yeoju-gun Governor - Appreciation Plaque
Olympic Bridge - Participation Prize
Wonhyo Bridge - Winner
Uijeongbu Mayor - Appreciation Plaque
Incheon Mayor - Citation
Yeoju-gun Mayor - Citation
Yeoju-gun Mayor - Citation 2
Cheonan-gun - Excellent Work
Pohang - Appreciation Plaque
Hannam Bridge - Excellent Work

Sokcho Mayor - Citation
Sokcho New Waterway - Winner
Ansan National Highway 42 - Winner
Ansan National Highway 42 - Citation
Ansan Hwajeong-cheon - Winner
Yanhwasa Bridge - Winner
Yeoju-gun Governor - Appreciation Plaque
Olympic Bridge - Participation Prize
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Uijeongbu Mayor - Appreciation Plaque
Incheon Mayor - Citation
Yeoju-gun Mayor - Citation
Yeoju-gun Mayor - Citation 2
Cheonan-gun - Excellent Work
Pohang - Appreciation Plaque
Hannam Bridge - Excellent Work
The Power of Nuriplan - Certificates
# Intellectual Rights

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The Power of Nuriplan - PPS (Public Procurement Service) Registered Superior Products

LED Lighting

NIM-90NI12W

NIM-CS1.5W-A

NIM-CS6W-A
LINE LED Lighting

NIM-12P-350
NIM-24P-700
NIM-36P-1000

www.nuriplan.com
The Power of Nuriplan - PPS(Public Procurement Service) Registered Superior Products

LINE LED Lighting

NIM-S18-250-F
NIM-S18-250-WH
NIM-S36-500-F
NIM-S36-500-WH
NIM-S54-750-F
NIM-S54-750-WH
NIM-S72-1000-F
NIM-S72-1000-WH
Stainless Street Light Pole

NRSL-12-01-A  NRSL-09-01-B  NRSL-09-01-C  NRSL-09-01-D  NRSL-09-01-E  NRSL-09-01-F  NRSL-09-01-G  NRSL-09-01-H  NRSL-09-01-I
The Power of Nuriplan

LED Lighting Fixture

NIM-FL23W

Vehicle Guard Fence

NRB 201P

NRB 202
U-City (U-Construction-Technology) Business

Integrated Pillar-shape U-Pole

- Development Objectives and Expected Effects
  - Overview
    Facilitates emergency warning light and emergency intercom system at crime-ridden areas and possible hazard sites with CCTV surveillance camera for crime prevention. Secures/Supports safety of citizens in real-time via monitoring/recording the site when in emergency situations. Also provides text information service via LED electronic board.
  - Development Direction and Strategy
    - Secures safety of citizens under emergency situations and prevents crime by recording the site
    - CCTV, security lighting, LED electronic board and various enclosures are installed in modulated standards, aiming towards expandable models
    - Possibility of organic linkage with existing integrated control center for CCTV
    - Follow Seoul's guideline for public design
    - Economic price and modulation for distribution and spread
  - Expected Effects
    - Improved function of Seoul CCTVs, prototype development for optimal specifications and functions to be applied for bicycle roads.
    - Improvement of safety for citizens and enhancement of cityscape with integrated enclosure/pole

- Features and Services
  - Safety Service
    - Control center monitors/records visual information from CCTV
    - Warning light flashes when emergency call is made, camera preset feature, and voice data transmission/record to control center via emergency intercom.
  - Information Notice
    - Surrounding condition and public information displayed through LED electronic board
  - Facilities Integration
    - Control for expanded street light, air pollution measuring, environmental sensor, integrated installation of enclosure and pole for street facility.
Street Informational Medium: U-Smart Post

Development Objectives and Expected Effects
- Overview
  Various contents are composed with bi-directional information exchange method for touchscreen.
  Hands-on service for citizens and foreigners wanting information about city.
- Development Direction and Strategy
  - Familiar and convenient functioning operation increases benefit for citizens
  - Arranged focusing on general services (phone, web, map)
  - Follows Seoul’s guideline for public design
  - Development of maintenance and revenue making model with communication service provider
  for promoted management
- Expected Effects
  - Lead U-Tour projects led by Seoul
  - Hands-on aspect and maintenance revenue making can be anticipated which are current issues
  proposed by the U-City project

Features and Services
- Information Notice
  - Surrounding area map search and pedestrian navigation
  - Tourist guide (multi-language support) and link to Seoul call center (global center)
  - Public services such as district PR, cultural events
  - Web search, E-Mail check, Photo Mail
  - Local stores guide and search
- Phone
  - Low cost VoIP-based public phone service
  - Payable with transportation card
- Making Revenue
  - Mobile Coupon
  - Mini-site like store information
  - Booth Ads
- Others
  - Various u-City, street facilities control enclosure integrated into booth structure

U-Smart Post
Dimension: (W)2400 × (H)1200 × (D)2450

Booth Type
Indoor Type
Safe Driving Notifier

Development Objectives and Expected Effects
- Overview
  Display speed of over-speeding vehicles within School Zone by detecting vehicle speed, and warns to slow down through floor LED warning sign.
- Development Direction and Strategy
  - Transportation safety service for marginalized citizens
  - Follows Seoul's guideline for public design
- Expected Effects
  - Accident prevention by increasing attentiveness by securing daytime/nighttime visibility
  - Prevention of hazardous incidents and reduce risk of accidents by alerting drivers and pedestrians on crosswalk

Features and Services
- Safety service for drivers and pedestrians
  - Prevention of speeding while in School Zone and leads to slow driving
  - Accident alert for children when on crosswalk through visibility and attentiveness
Imaginative Children's Park U-System

Park combined with state-of-the-art IT infrastructure and ubiquitous services to enhance living amenities and improve quality of life. Environmentally friendly u-system for park which humans, nature, and culture coexist.

- **Sensor-type Piano Fountain** | Connected to floor fountain. Used as soft LED lighting at normal times. Special lighting and sound when certain piano keys are pressed.

- **Digital Sign Wall** | Edutainment, participation and hands-on digital display linked to sensor provides interactive state-of-the-art play service in real time.

- **U-trelles** | LED linked with pressure sensitive floor blocks create various lighting with Full Color LED, displaying constellation-like images of the sky.

- **Guide Gate** | Installed at the park entrance. Sign Board using high brilliance LED for soft and bright lighting and guide words during nighttime.

**Expected Effects**
- Transforms children’s park into fun playground that fosters creativity and imagination
- Happiness index of families and local communities increased by creating themed playground
Landscape Lighting

Lighting display work using lights from night scenery is called Landscape Lighting. Lighting is no longer a mere tool for shedding light in the dark, but newly reforms night scenery and recreates images to each object's unique characteristics.
LED Lighting | Lighting aesthetics designs the light midst city. A magic that urges light to freely move among structures and spaces, Nuriplan's lighting aesthetics adds value to the city. City now becomes special.

Bridge Lighting | Unique character of basic bridge structure is embossed, and city's identity is created bestowing the image of local landmark with rich sceneries. Also, lighting is controlled to limited brightness for safety of drivers.

Structure Lighting | Structures are no longer simple buildings, it is now the symbol and facade of the city. Structure lighting not only adds visibility to buildings but also adds dimensional effect to cityscape by colorful nightscape.

Park Lighting | Park's characteristics are planned considering harmony with sky, stones, and ground from a visual perspective. Lighting is facilitated to provide a relaxing atmosphere for people visiting the park for resting, as well as preventing crimes.
Sokcho New Waterway

Namhang Bridge  Jangan Bridge  Seonyudo Pedestrian Overpass

Daejeon Expo Bridge  Danyang Gosu Bridge  Goyangsi Lake Park

Namji Bridge  Geum Bridge  Sokcho New Waterway

Namhang Bridge  Jangan Bridge  Seonyudo Pedestrian Overpass
U-City / Landscape Lighting / Landscape Facilities / Environmental Wood Pattern Barrier / Nuri Steelcon Lining Board
U-City / Landscape Lighting / Landscape Facilities / Environmental Wood Pattern Barrier / Nuri Steelcon Lining Board

National Assembly Building

Seoul History Museum

Mokpo Culture and Arts Center

Development Bank Training Institute

Uiwang City Hall

Deoksugung 2-ga
Nuriplan puts the environment above all else before installing manufactured goods. We positively utilize new techniques and promote environmentally friendly construction sites to minimize environmental impact, and to safe-guard all people. Meeting becomes rich and beautiful when nature and roads become one.
Nuriplan will uphold the 
environment-first principle, uniting nature and structure.

Guard Fences
Design Guardrails
Design Fences
Bridge Name Columns
Sculptures
Landscape Design
Scenery (Culture) Sound-absorbing Walls
Basis for Performing Actual Vehicle Crash Test

Vehicle Guard Fences Classification

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<tr>
<td>(for cars)</td>
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</tbody>
</table>

Post Collision Movement of Vehicle

No overturn of vehicle during and after collision. Breakaway speed after collision has to be above 60% of impact velocity. Breakaway angle after collision has to be below 60% of impact angle.

Structural Performance
When crashed by vehicle, deformation length of POST at collision shall be below 110cm for guardrails, and below 30cm for vehicle guard fences.

Evaluation Basis for Passenger Protection Function

<table>
<thead>
<tr>
<th>Standard Item</th>
<th>Unit</th>
<th>Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Passenger Impact Velocity (THV)</td>
<td>M/S</td>
<td>9 (33)</td>
</tr>
<tr>
<td>Passenger Acceleration Velocity (PHV)</td>
<td>g</td>
<td>20</td>
</tr>
</tbody>
</table>

Performance Standards for Guardrails and Vehicle Guard Fences
Vehicle Guard Fence

Structure installed on roads or bridges to help reduce personal injuries of passengers as well as damages to vehicle at collision. Also, prevents vehicles from running out of the road or getting onto sidewalks, when straying away from normal driving course.

NRB-101, SB4 Class (Road-side)

- V-notch shape applied to post connection, for absorption of shock power at collision
- Sufficient higher beam thickness for strength reinforcement (T=4mm)
- Composite post with concrete applied partially for enhanced hardness

Before Collision

Guardrail (NRB-101,SB4 Class) Collision Test

Passenger Protection Performance Evaluation

Passenger Car

Hardness Performance Evaluation

Truck

Before Passenger Car Collision

Passenger Protection Performance After Passenger Car Collision

Before Truck Collision

Hardness Performance After Truck Collision
NRB-201P, SB4 Class (Bridges)

Product Description

1. High applicability at curve sections
   - Easily applied for curved bridge, flared bridges, and ramp bridges

2. Harmony with surrounding landscape
   - Harmonizes with surrounding landscape by allowing installation of design panels between top and bottom floor beams.

3. Excellent Construction Capacity
   - Easy installation of simply assembling bolts connecting post and rail.

4. Easy Maintenance
   - Convenient anchor-type bolt assembly allows easy maintenance compared to sink-in types, for new installation or when replacing.

Vehicle Guard Fence (NRB-201P, SB4 Class) Collision Test

Passenger Car Collision

Hardness Performance Evaluation

Truck Collision
NRB-202, SB5 Class (Bridges)

Product Description

1. First in the country, SB5 class guard fence with dual aluminium floor beam
2. Additional installation of rail accessory on top allows versatile use of guard fence as guardrails (H=1,100mm and over)
3. Convenient installation and maintenance thanks to simple assembly structure (Patent registered)

3 stage shock absorbing system
- High strength aluminium material with hardness and softness
- Reflector attached for improvement of visibility at daytime and nighttime

Vehicle Guard Fence (NRB-202, SB5 Class) Collision Test

Passenger Protection Performance Evaluation

Hardness Performance Evaluation
Pedestrian Overpass, front of Seoksu Station (contest winner, 2006)

Gwangjucheon Bridge Landscape Improvement (contest winner, 2007)

Osan Bridge (contest winner, 2007)
Dongdaemun-gu Baebong Road Overpass (contest winner, 2008)

Neungsan Underpass (contest winner, 2008)

Gwangjucheon 2nd Bridge Landscape Improvement (contest winner, 2009)
Gwangjucheon 3rd Bridge Landscape Improvement (contest winner, 2009)
Guard Fences / Landscape Lighting / Design Guardrails / Design Fences / Bridge Name Columns / Sculptures

- Hwaseong: Jeongok Bay
- Andong-si: Yeonga Bridge
- Gasan-dong: Entry Overpass
- Gyeonggi-do Construction Head Office: Pungdeokcheon sa-geori
- Yeongju: Yeongilgyo
- Gwangju: Yangnimgyo
- Uijeongbu: Jungnangcheon Pedestrian Bridge
- Wonju: Chiakgyo
- Icheon: Bokha 2-gyo
- Yongin: Administration Town
- Seoul: Doksan-dong Entry Overpass

www.nuriplan.com
Guard Fences / Landscape Lighting / Design Guardrails / Design Fences / Bridge Name Columns / Sculptures
Gangneung: Sinnigyo

Dongducheon: Sangpegyo

Seoul: Baebong Road Overpass

Seongnam: Bundangcheon Pedestrian Bridge

Gwangju Metropolitan City: Yangnimgyo

Gwangju Metropolitan City: Seoseokgyo

Andong: Yeongga Bridge

Taebaek: O2 Resort

Goseong-gun: Geojin 1-gyo

Osan: Namchon Bridge

Gwangju Metropolitan City: Seoseokgyo

Gangneung: Sinnigyo

Yongin: Gugal Sewage Treatment Plant

Andong: Yeongga Bridge

Gwangju Metropolitan City: Seoseokgyo

Seongnam: Bundangcheon Pedestrian Bridge

Gwangjin-gu Office: Jungnangcheon Sports Park Pedestrian Overpass

Taebaek: O2 Resort

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Environmental Wood pattern Barrier

Improved light-weight product without weaknesses of AL sound-absorbing walls and wooden sound-absorbing walls. Our environmental wood pattern barrier is an environmentally sound product made with materials from wastes to promote low carbon, green growth.
**Product Description**

- Environmentally sound, low carbon, green growth product made with materials from wastes
- Reduced CO₂ discharge, use of non-toxic stabilizer
- Unique durability boasts semi-permanent use
- Recyclability greatly promotes energy saving and environment protection
- Use of wood patterned surface creates harmony with surrounding environment

**Components**

- Installation time and cost reduced thanks to easy and very convenient assembly of sound-absorbing walls.
- Internal structure imitates the shape of a bee hive, improving efficiency of noise absorption
Sound-absorbing Panel Patent Registration

- Primary closing (10) formed toward the source of the noise, to certain height (h1), to block noise.
- Secondary closing (20) formed below the Primary closing, with space between, to a different height (h2).
- Third closing (30) formed below the Secondary closing, with space between, to a different height (h3).
- Primary opening (40) formed in between the Primary closing and the Secondary closing to absorb noise.
- Secondary opening (50) formed in between the Secondary closing and the Third closing to absorb noise.
- Primary sound-absorbing space (60) formed for soundproofing by absorbing and circulating noise flown-in through the Primary opening.
- Secondary sound-absorbing Space (70) formed for soundproofing by absorbing and circulating noise flown-in through the Secondary opening.
- Rear section (90) corresponding to the front part consisted of the Primary, Secondary, Third closing and the Primary, Secondary opening.
- Primary union (100) connected to base of the bottom end of sound-absorbing wall or other sound-absorbing panel.
- Secondary union (110) of another sound-absorbing panel connected to allow disconnection of the Primary union.
- Reinforcement (80) to maintain hardness of inter space formed by the Primary and Secondary union, and to reduce weight.
- Sides (120;130) forming exposed portions by exposing the Primary and Secondary unions.
- Sound-absorbing material to absorb circulating noise, or noise introduced into sound-absorbing space (140:140).
- Support formed to support sound-absorbing material (150).
- Projected part to secure circulating space for noise while supporting back of sound-absorbing material (160).
- Number of frontal installation of formed at opening (170).
- Frontal exterior material formed to enclose sound-absorbing space to allow sound absorption(190).
Nuri steel Lining Board

- Steelcon is a compound structure that combines tensile force of steel and compressive force of concrete on the top portion.
- Bearing force increased against upper side loadings, complete improvement of anti-fatigueness and slip-resistance

Comparison of Lining Board

<table>
<thead>
<tr>
<th>Nuri Steelcon Lining Board</th>
<th>H Lining Board</th>
<th>Standard Lining Board</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990 x 750 x 200</td>
<td>1990 x 985 x 200</td>
<td>1990 x 750 x 200</td>
</tr>
</tbody>
</table>

Steelcon Lining Board

<table>
<thead>
<tr>
<th>Steelcon A-type</th>
<th>Steelcon B-/C-type</th>
<th>Ascon</th>
</tr>
</thead>
<tbody>
<tr>
<td>Designed Load: DB24</td>
<td>Designed Load: DB24</td>
<td>Designed Load: DB24</td>
</tr>
<tr>
<td>B-type</td>
<td>C-type</td>
<td>Reinforced type</td>
</tr>
</tbody>
</table>
Advantages of Steelcon Lining Board

Steelcon Value
- Complete improvement of sliding and noise
- Competitive price (10%~35%)
- Durability, excellent load bearing capacity (hardness: 2.5 times, durability: fatigue test 2 million times)

Steelcon Application
- Subway and railway works, temporary bridge slab, underpass, multi-floored building construction work
- Flooring of mid-sized building (warehouses, plants)
- Temporary dock for bay, military pontoon and temporary bridge, deck material for barges
- Facilities on weak foundation

<table>
<thead>
<tr>
<th>Improved Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improved Structural Performance</td>
</tr>
<tr>
<td>Improved Safety</td>
</tr>
<tr>
<td>Realization of Low Cost</td>
</tr>
<tr>
<td>Environmentally-friendly (noise, vibration)</td>
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</tbody>
</table>

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Existing coated lining board product

MMA (Methyl Metha Acrylate)
Existing metal lining board+MMA coat (4mm)

MSK (special emulsion, frame, filling material)
Existing metal lining board+MSK coat (10mm)
Steelcon lining board installation site

Subway

Seoul Metro Pilot Installation-1

Seoul Metro Pilot Installation-2

Subway Site-1

Subway Site-2

Subway Site-3

Temporary bridge site

Marangchigyo

Wonchanggyo

Ehwagyo

Hamangyo

Underpass Site

Eungbongno-Dongbu Expressway connecting road underpass lining board installation 1
Pedestrian Overpass

Yongin Gugal Pedestrian Overpass

Gimpo Yanggok District Pedestrian Overpass 3-gyo

Gimpo Yanggok District Pedestrian Overpass 1-gyo

Gwangjucheon Pedestrian Overpass

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