



SCHEMATIC PRECAST SYSTEM

SISTEM PANEL SERBAGUNA



SPS TECHNOLOGY

Changing The World We Live In

www.sps-patent.com



OUR SPS TECHNOLOGY

“Teknologi SPS telah teruji di Pusat Penelitian dan Pengembangan Sumber Daya Air dan telah memiliki Hak Paten, Hak Cipta, Hak Kekayaan Intelektual, dan Lisensi Internasional”

“SPS technology has been tested at the Water Resources Research and Development Center and has Patent Rights, Copyright, Intellectual Property Rights, and International Licenses.”

“SPS Technology is a patented construction innovation, demonstrating exceptional capabilities through rigorous testing, and suitable for global infrastructure development.”

ING Anggara M.
Patent Holder

WARNING

NOTICE OF INTELLECTUAL PROPERTY PROTECTION

Unauthorized use, replication, or derivation of patented technologies, designs, and components is strictly prohibited. Infringement will result in severe legal consequences, including substantial financial penalties.

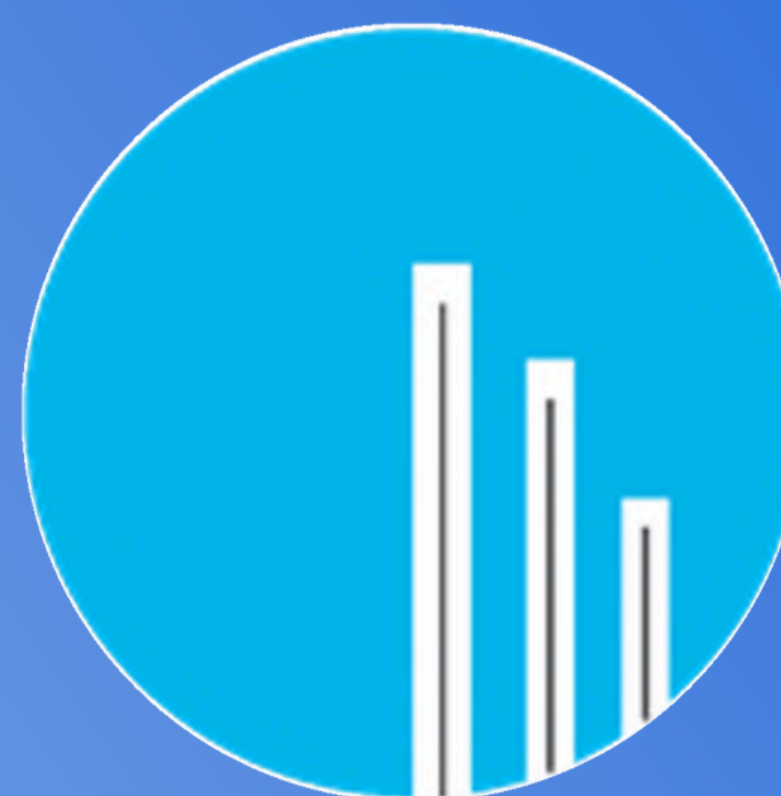
PERINGATAN RESMI PEMBERITAHUAN HUKUM TENTANG PERLINDUNGAN KEKAYAAN INTELEKTUAL

DENGAN INI DITEGASKAN BAHWA :

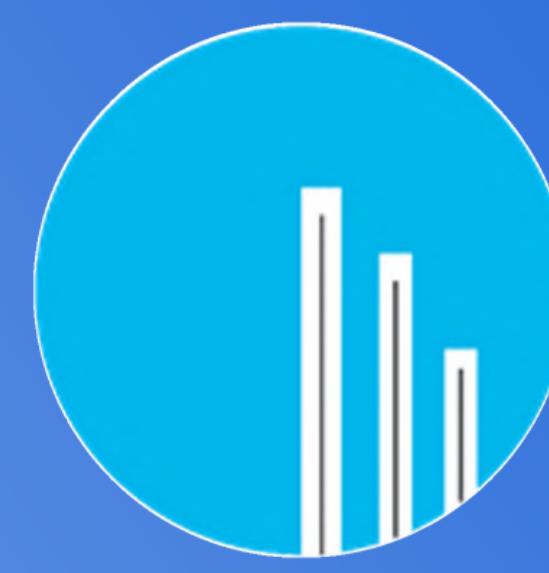
Setiap penggunaan, penduplikasian, atau penciptaan turunan tanpa izin terhadap teknologi, desain, komponen, atau karya lain yang telah memperoleh perlindungan paten SECARA TEGAS DILARANG berdasarkan ketentuan hukum yang berlaku.

Pelanggaran terhadap hak kekayaan intelektual ini akan mengakibatkan SANKSI HUKUM BERAT, termasuk namun tidak terbatas pada:

1. **GUGATAN PERDATA** dengan tuntutan ganti rugi materiil dan immateriil sesuai undang-undang;
2. **TUNTUTAN PIDANA** yang dapat berakibat pada denda maksimal dan/atau sanksi pemidanaan;
3. **PENYITAAN** dan/atau penghancuran produk ilegal terkait.



DAFTAR ISI



<u>KATA PENGANTAR</u>	(5)
<i>Greeting</i>	
<u>PEMEGANG PATEN</u>	(6)
<i>Patent Holder</i>	
<u>TEKNOLOGI SPS</u>	(7)
<i>SPS Technology</i>	
<u>SERTIFIKAT DAN HASIL UJI PUSLITBANG</u>	(8)
<i>Certificates and Test Results Of The Center For Research And Development</i>	
<u>KOMPONEN SPS</u>	(11)
<i>SPS Components</i>	
<u>METODE PEMASANGAN</u>	(12)
<i>Installation Method</i>	
<u>STABILITAS SPS</u>	(13)
<i>SPS Stability</i>	
<u>PERBANDINGAN KONTRUKSI TEKNOLOGI SPS</u>	(16)
<i>Comparison of SPS Technology Construction</i>	
<u>JENIS APLIKASI SPS</u>	(22)
<i>Types of SPS Applications</i>	
<u>PROYEK SPS</u>	(24)
<i>SPS Project</i>	
<u>INOVASI SPS</u>	(50)
<i>SPS Inovation</i>	



KATA PENGANTAR PEMEGANG PATEN

Greeting from Paten Holder

Teknologi SPS merupakan teknologi modern berbasis pracetak yang telah diuji oleh Pusat Penelitian dan Pengembangan Pantai dan Sumber Daya Air, Kementerian Pekerjaan Umum dan Perumahan Rakyat Republik Indonesia.

Sistem Panel Serbaguna (SPS) telah memiliki hak cipta, hak paten, hak kekayaan intelektual, dan lisensi internasional. Konstruksi SPS dapat diterapkan pada berbagai proyek, di antaranya sebagai dinding penahan tanah (DPT), tanggul, *groundsill*, revetment, pemecah gelombang (*breakwater*), bendungan (*dam*), saluran inlet-outlet, dan lain sebagainya. Konstruksi SPS menjadi solusi tepat guna yang mampu menggantikan konstruksi konvensional.

Sistem Panel Pracetak Serbaguna (SPS) memiliki keunggulan dalam efisiensi dan efektivitas waktu, pelaksanaan, serta biaya, dengan capaian stabilitas konstruksi yang baik. Konstruksi SPS hadir sebagai solusi berbasis precast untuk mengoptimalkan hasil terbaik melalui pelaksanaan konstruksi yang cepat, hemat biaya, kualitas terjamin, dan umur konstruksi yang panjang.

Teknologi SPS ini dapat menjadi solusi signifikan untuk percepatan pembangunan nasional.

The SPS technology is a modern precast-based technology that has been tested by the Research and Development Center for Coastal and Water Resources of the Ministry of Public Works and Public Housing of the Republic of Indonesia.

The Schematic Precast System (SPS) holds copyrights, patents, intellectual property rights, and international licenses. SPS construction can be applied to various projects, including as soil retaining walls, embankments, *groundsills*, revetments, breakwaters, dams, inlet-outlet channels, and more. SPS construction provides an effective solution capable of replacing conventional construction methods.

The Schematic Precast Panel System (SPS) excels in efficiency and effectiveness in terms of time, implementation, and cost, achieving good construction stability. SPS construction offers a precast solution to optimize the best outcomes through fast construction, cost-effectiveness, guaranteed quality, and a long service life of the structure.

This SPS technology can be a significant solution for accelerating national development.

Bali, May 2025

Patent Holder of Schematic Precast System (SPS) Technology

I Nyoman Gede Anggara M.



“Teknologi SPS telah teruji dan memiliki paten teknologi konstruksi yang dapat berkembang dan bersaing secara global”

"SPS technology has been tested and has a construction technology patent that can develop and compete globally"

ING Anggara M.

Pemegang Paten

Paten Holder

SPS (SISTEM PANEL SERBAGUNA)

SPS (Schematic Panel System)



“Panel Beton Pra-Cetak yang Sistematis dan Serbaguna untuk Berbagai Jenis Proyek Konstruksi”

“Systematic and Versatile Precast Concrete Panels for Various Types of Construction Projects”

- Suatu **solusi yang sistematis untuk pekerjaan konstruksi berskala menengah hingga besar** dan/atau pekerjaan konstruksi dengan tingkat kesulitan alam yang tinggi.
- Dalam beberapa tahun terakhir, SPS juga diminta ikut terlibat **merancang beberapa project strategis masa depan di manca negara seperti Inggris, Australia, Fiji, Malaysia dan UEA.**
- Merupakan hasil temuan murni putera bangsa Indonesia dengan tingkat kandungan dalam negeri (TKDN) **minimal sebesar 70%**
- **Telah terdaftar hak cipta, hak paten, hak kekayaan intelektual (HKI), dan bukti prioritas dari Kemenkumham RI**
- **Telah memiliki international licensing agreement** untuk wilayah Amerika Serikat, Kanada dan Kepulauan Karibia serta wilayah Oceania (Fiji, Papua New Guinea, Kep. Solomon, Malaysia, Australia, dll)
- A systematic solution for medium to large scale construction work and/or construction work with a high level of natural difficulty.
- In the last several years, SPS has been asked to participate in designing several strategic future projects abroad such as England, Australia, Fiji, Malaysia and the UAE.
- It is a pure discovery by the sons of the Indonesian nation with a minimum domestic content level (TKDN) of 60%
- Has registered copyright, patent rights, intellectual property rights (HKI), and proof of priority from the Indonesian Ministry of Law and Human Rights
- SPS had an international licensing agreement for the United States, Canada and the Caribbean Islands as well as the Oceania region (Fiji, Papua New Guinea, Solomon Islands, Malaysia, Australia, etc.)

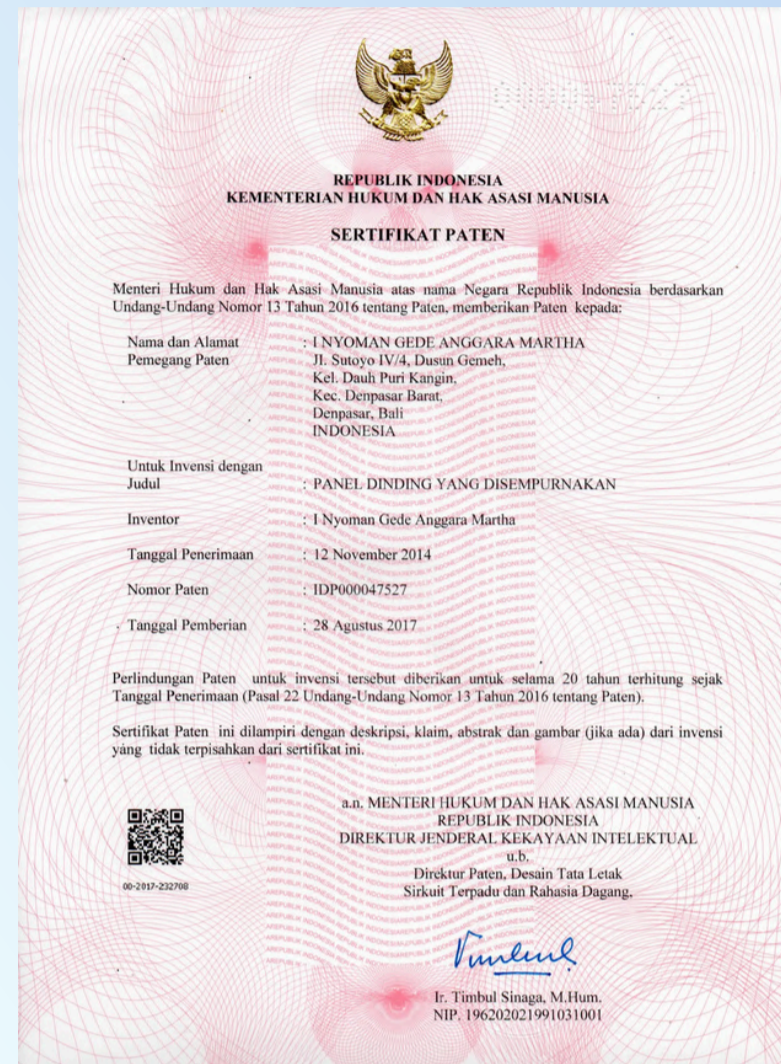


SPS (SISTEM PANEL SERBAGUNA)

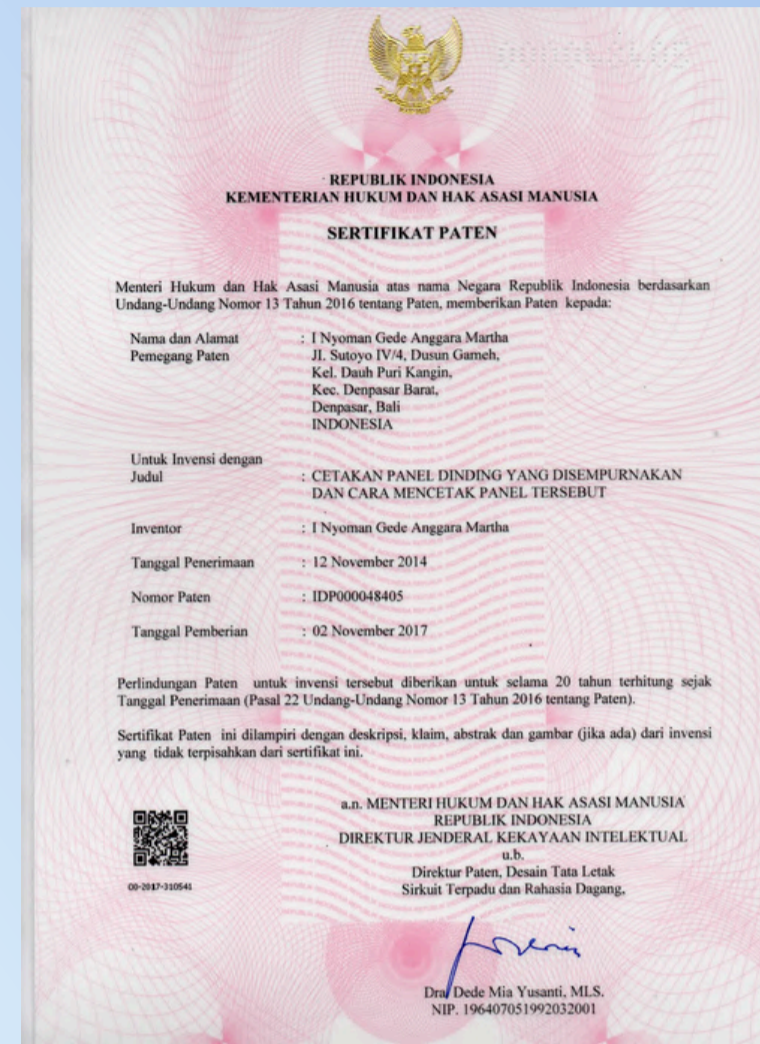
SPS (Schematic Panel System)

TECHNOLOGY PATENT

CERTIFICATE



IDP000047527



IDP000048405



IDP000071499

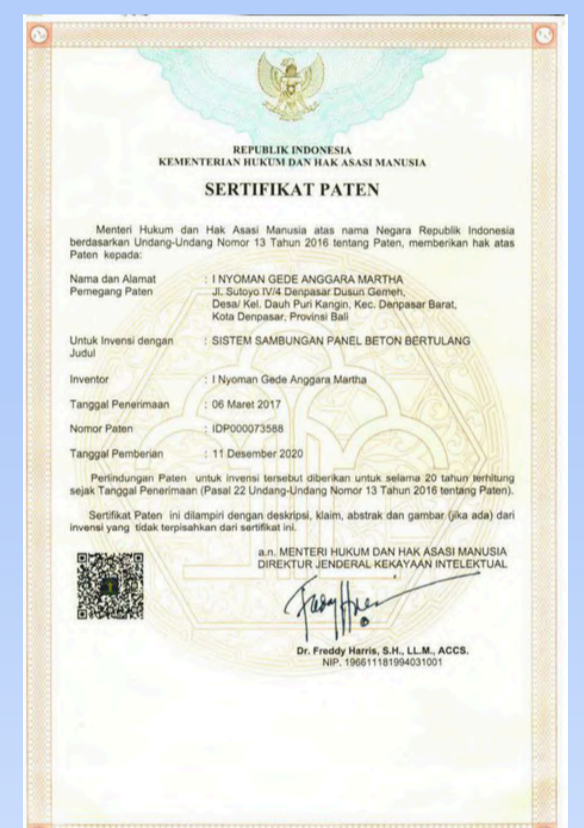


IDP000047605

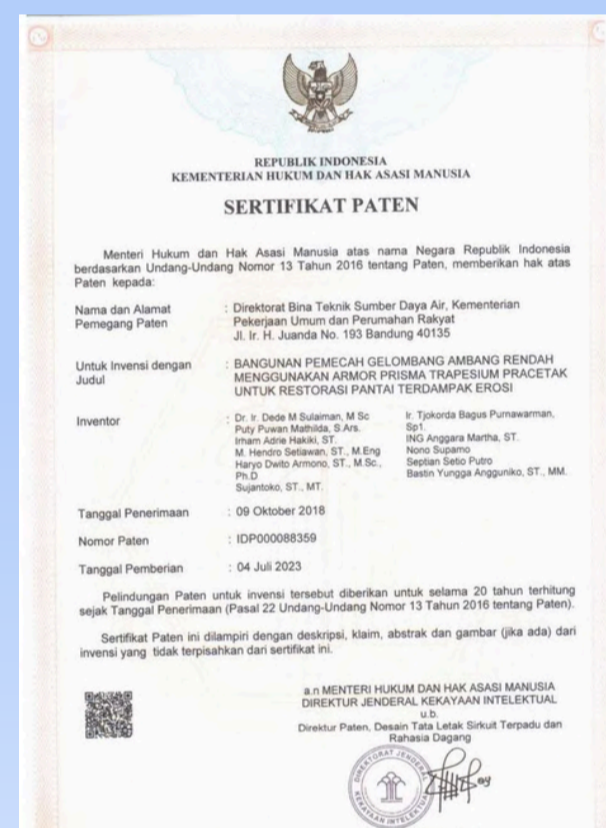
CERTIFICATE



IDP000073456



IDP000088359



IDP000073588

MERK CERTIFICATE



IDM000688499



IDM000625987

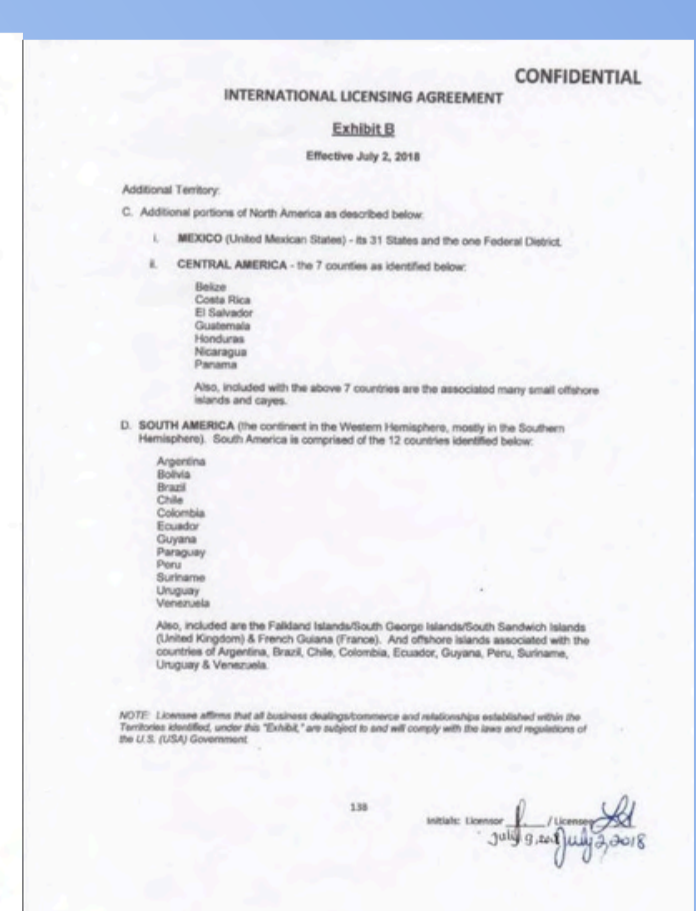
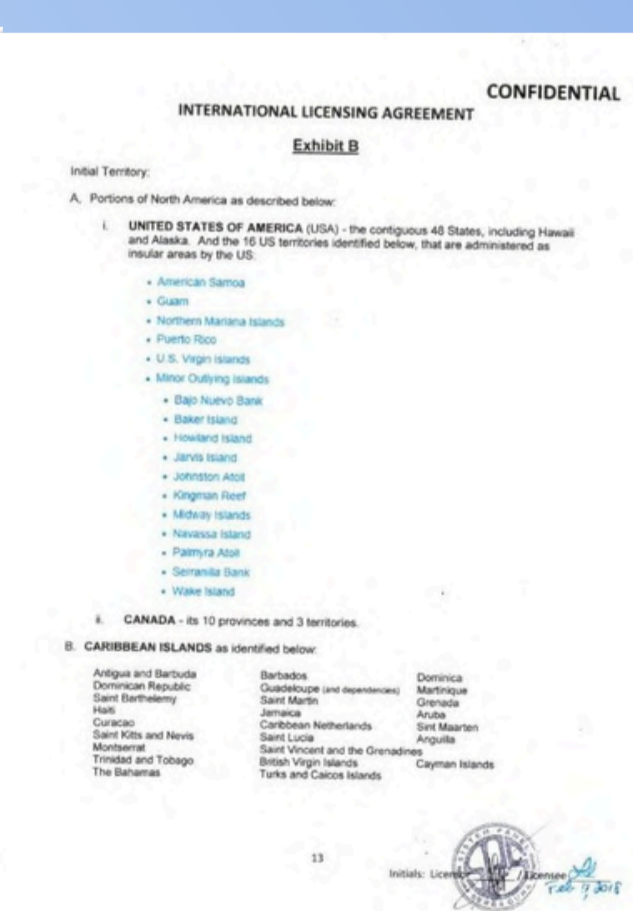
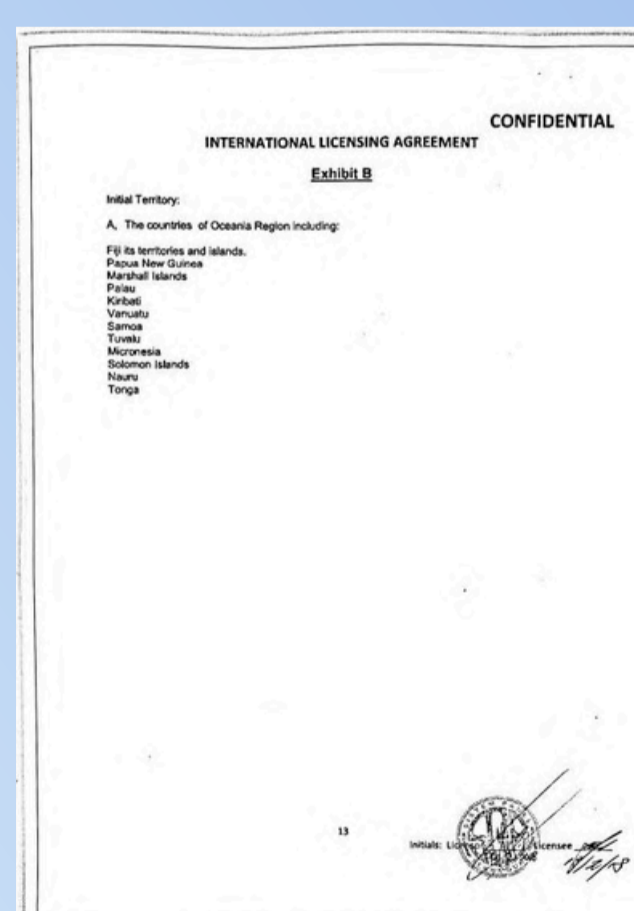


IDM000627079

INTELLECTUAL PROPERTY RIGHT SPS PANEL INTERNATIONAL LICENSES



HKI. 3-HI. 05. 07 194
 HKI. 3-HI. 05. 07 195
 HKI. 3-HI. 05. 07 196



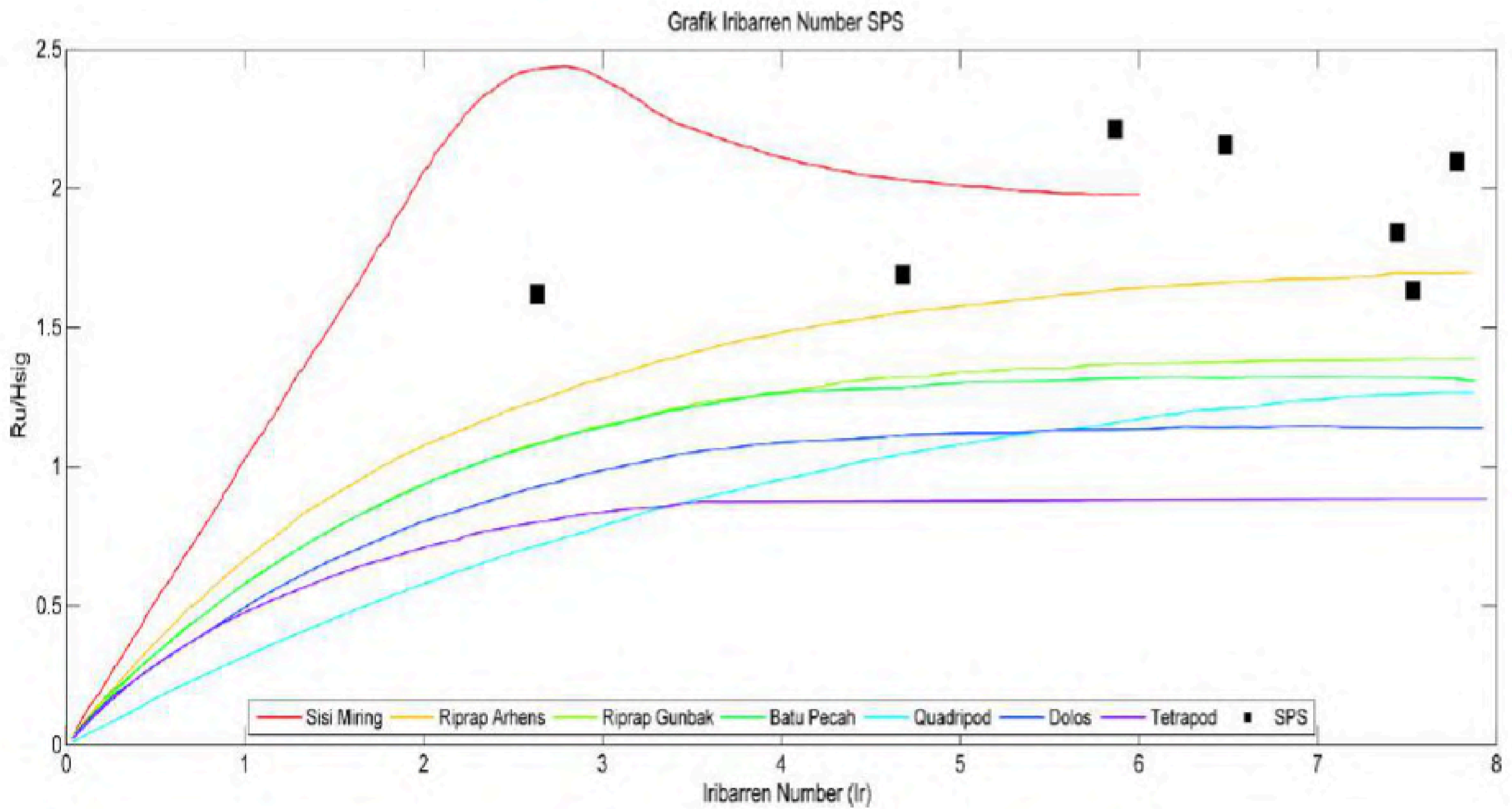
INym Gede Anggara M.

TEST RESULTS OF THE CENTER FOR RESEARCH AND DEVELOPMENT OF WATER RESOURCES

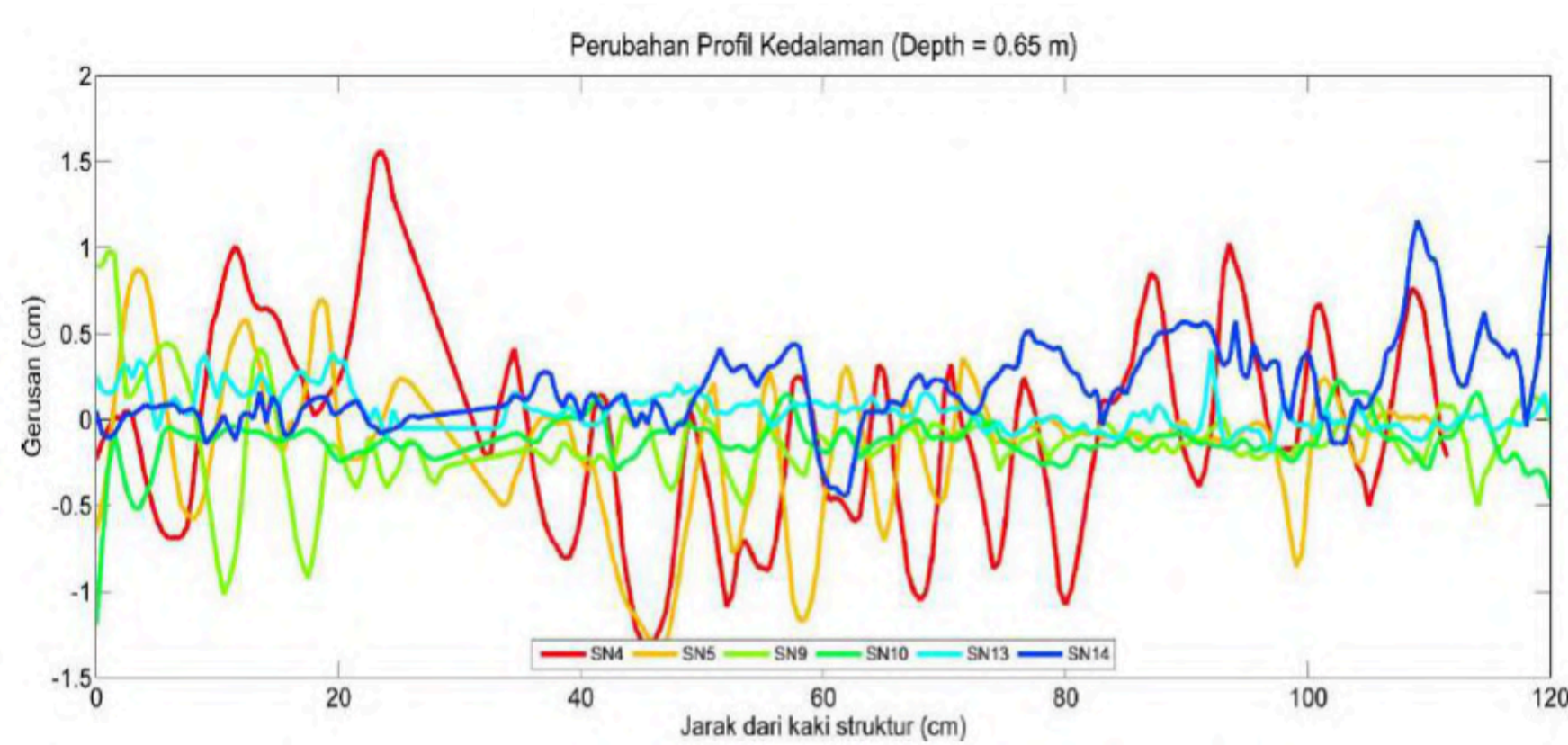


KEMENTERIAN PEKERJAAN UMUM DAN PERUMAHAN RAKYAT
BADAN PENELITIAN DAN PENGEMBANGAN
PUSAT PENELITIAN DAN PENGEMBANGAN SUMBER DAYA AIR

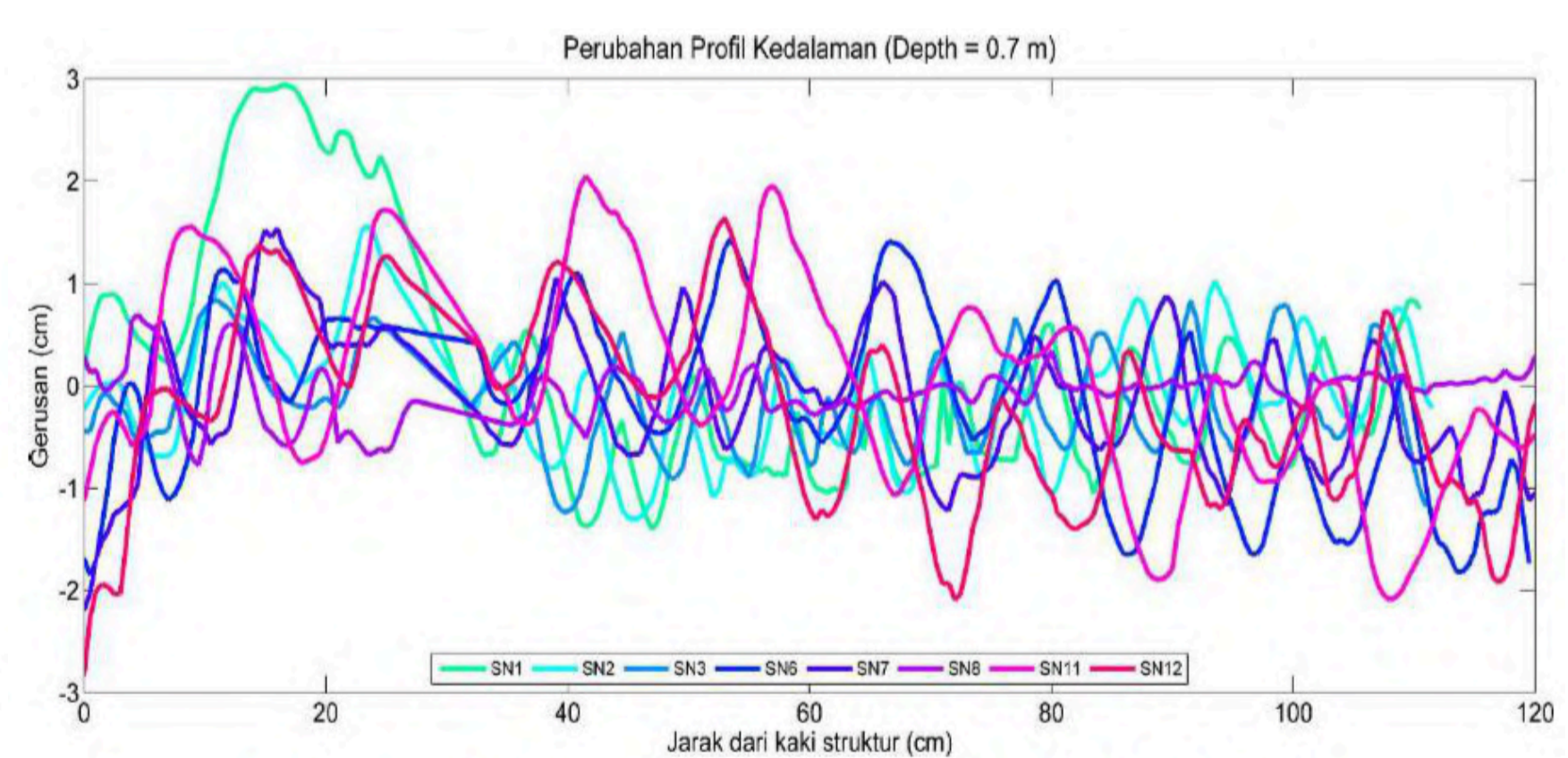
Jalan Ir. H. Juanda 193 Bandung 40135. Telp. (022) 2504053, 2501554, 2500507, 2501083 Fax. (022) 2500163 PO Box 841 E-mail: pusair@pu.go.id Http://www.pu.go.id



Grafik Iribarren Sistem Panel Serbaguna



Perubahan Profil Kedalaman untuk Skenario Kedalaman 0.65 m



Perubahan Profil Kedalaman untuk Skenario Kedalaman 0.7 m

Bandung, November 2019
 Kepala Pusat Litbang Sumber Daya Air

Prof. R. Dr. Ir. Eko Winar Irianto, MT
 NIP. 19660502199021001



SKEMA PELAKSANAAN KONSTRUKSI

Construction Schema

Beberapa skema pelaksanaan konstruksi SPS sebagai berikut:

1. Pihak paten SPS sebagai EPC (Engineering, Procurement and Construction)

- Proyek dan pelaksanaannya menjadi tanggung jawab pihak Paten SPS sepenuhnya
- Pihak Paten SPS bertanggung jawab penuh kepada pemilik proyek

2. Pihak Paten SPS memberikan ijin tertulis kepada konsultan sebagai perencana dan/atau kontraktor dan dapat juga memberikan dukungan kepada pelaksana/kontraktor jika dilakukan lelang.

- Pihak Kontraktor bertanggung jawab penuh terhadap proyek
- Pihak Paten SPS memberikan usulan usulan dan arahan arahan
- Pihak Paten SPS bertanggung jawab sebatas pada design dan produk produk milik Paten

Pihak Patent SPS membuka peluang seluas luasnya kepada semua Konsultan dan Kontraktor yang ada untuk bekerjasama dalam pelaksanaan konstruksi SPS.

Some of the SPS construction implementation schemes are as follows:

1. SPS Patent as EPC (Engineering, Procurement and Construction)

- The project and its implementation are the full responsibility of SPS Patent Party
- SPS Patent Party is fully responsible to the project owner

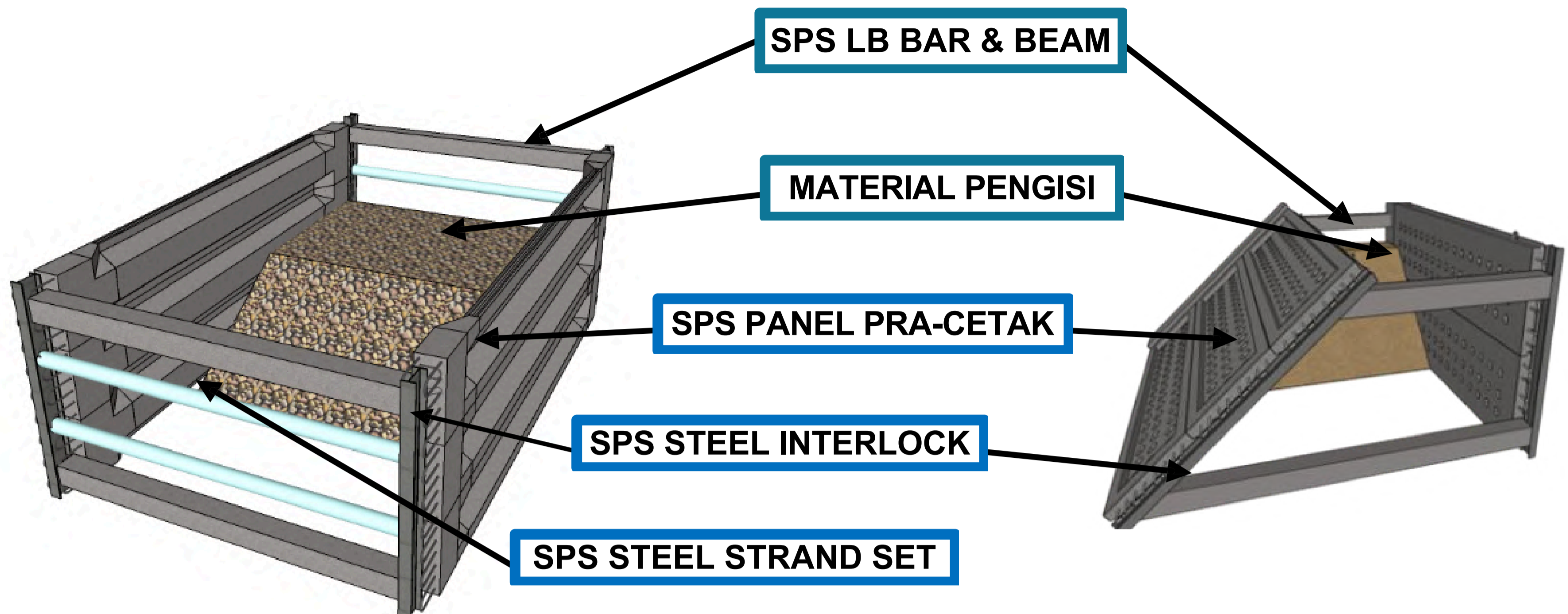
2. SPS Patent provides written permission to the consultant as a planner and/or contractor and can also provide support to the implementer/contractor if an auction is held.

- The Contractor Party is fully responsible for the project
- SPS Patent Party provides proposals and directions
- SPS Patent Party is responsible only for the design and products owned by Patent

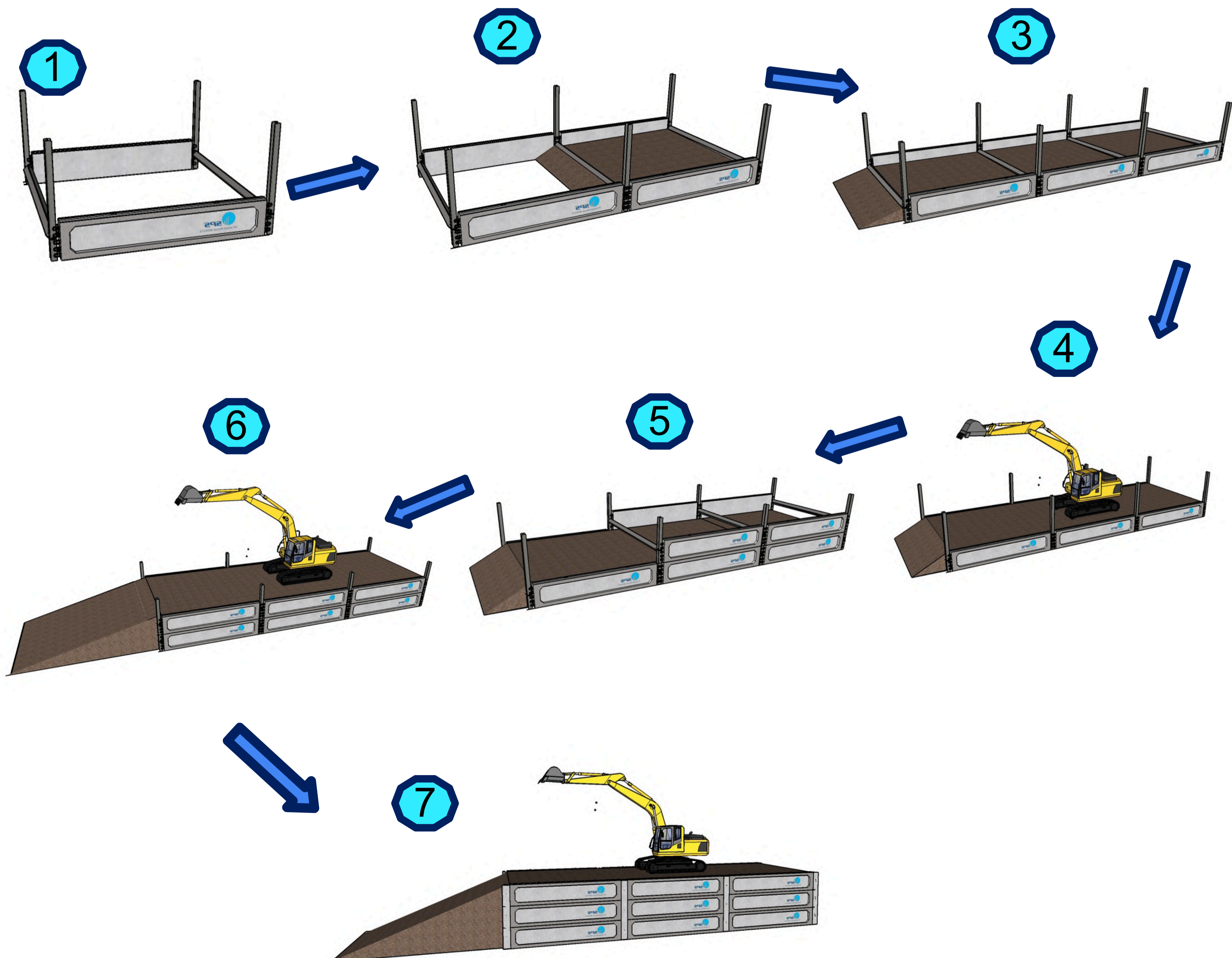
SPS Patent Party opens up opportunities as widely as possible to all existing Consultants and Contractors to collaborate in the implementation of SPS construction.

KOMPONEN UTAMA SPS

SPS Main components

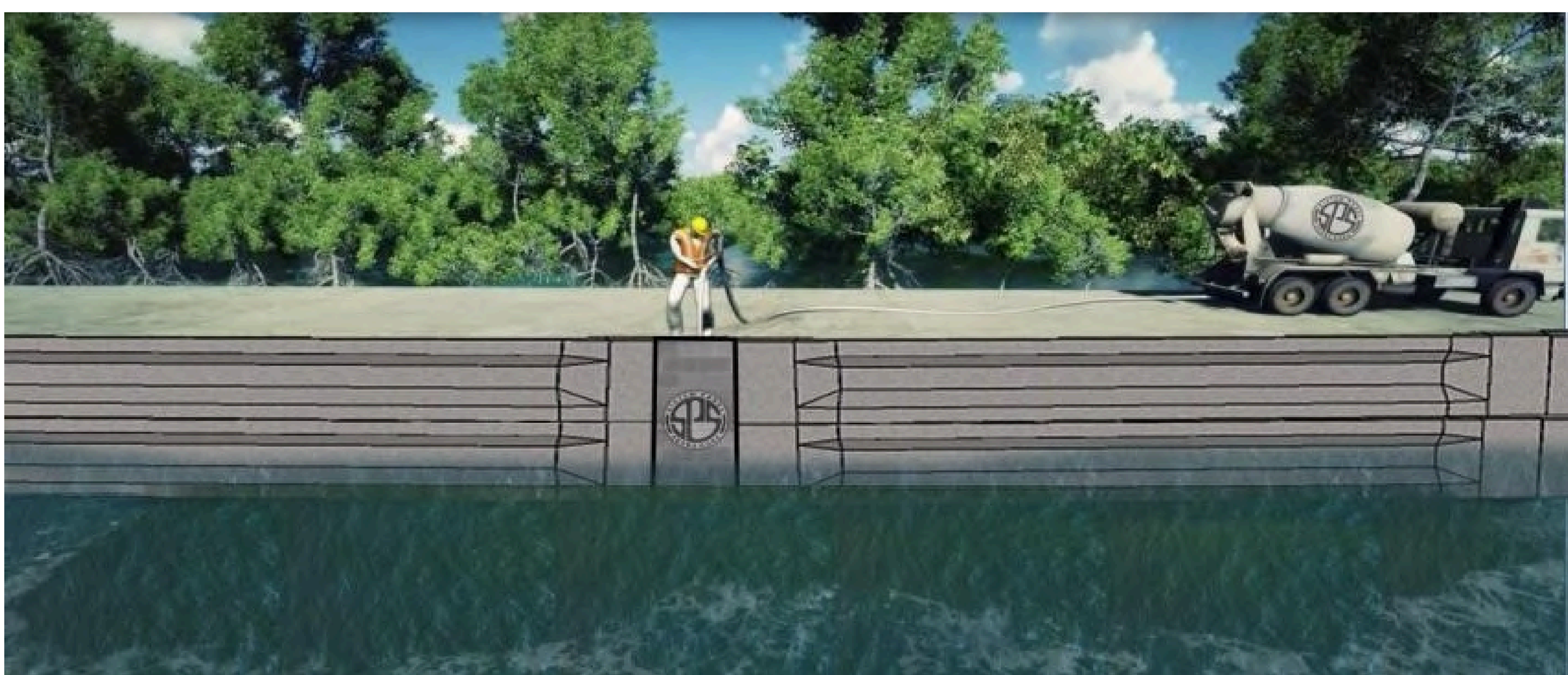
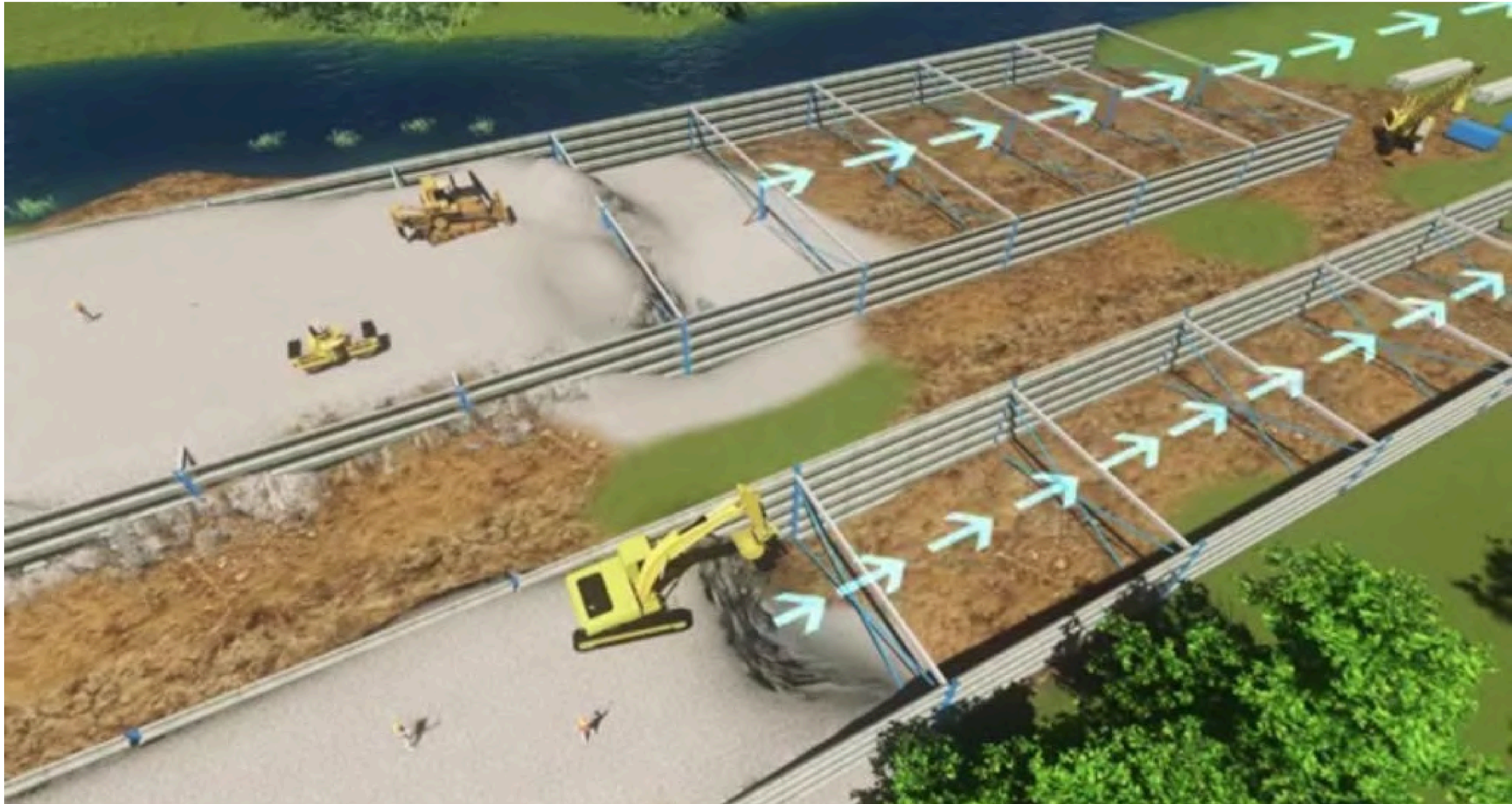


SPS DESIGN (3D CONSTRUCTION SEQUENCE)



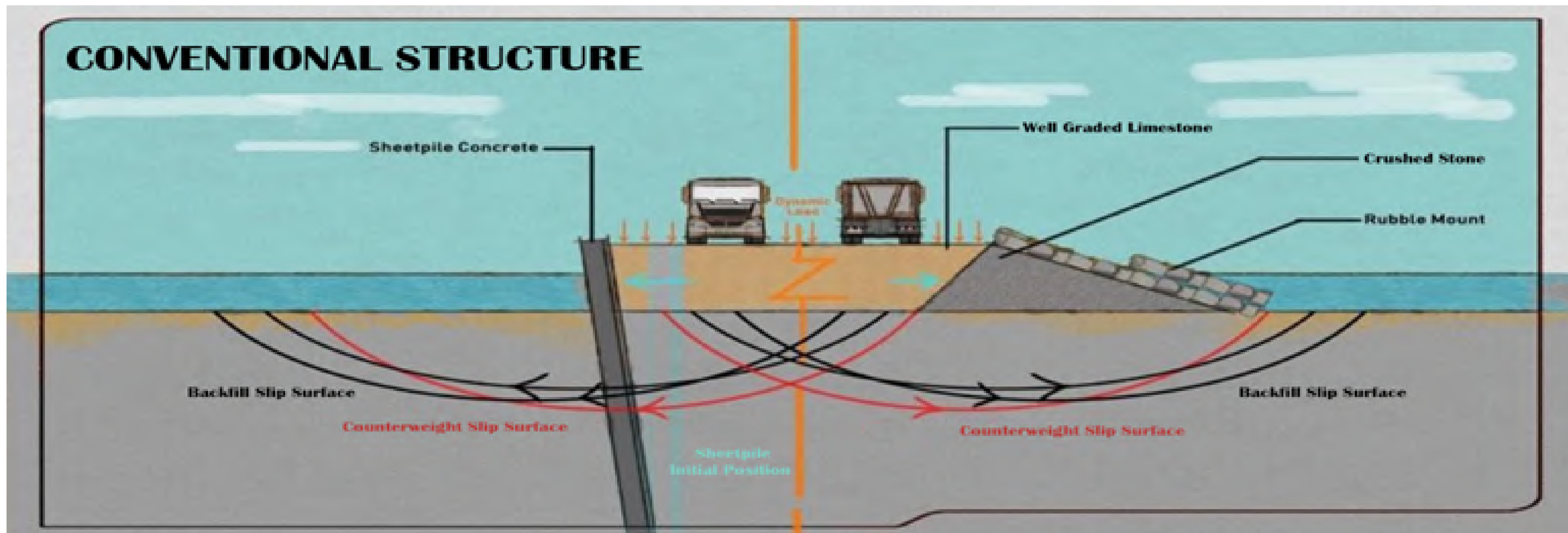
KONSTRUKSI DAN INSTALASI SPS

SPS Construction and Installation



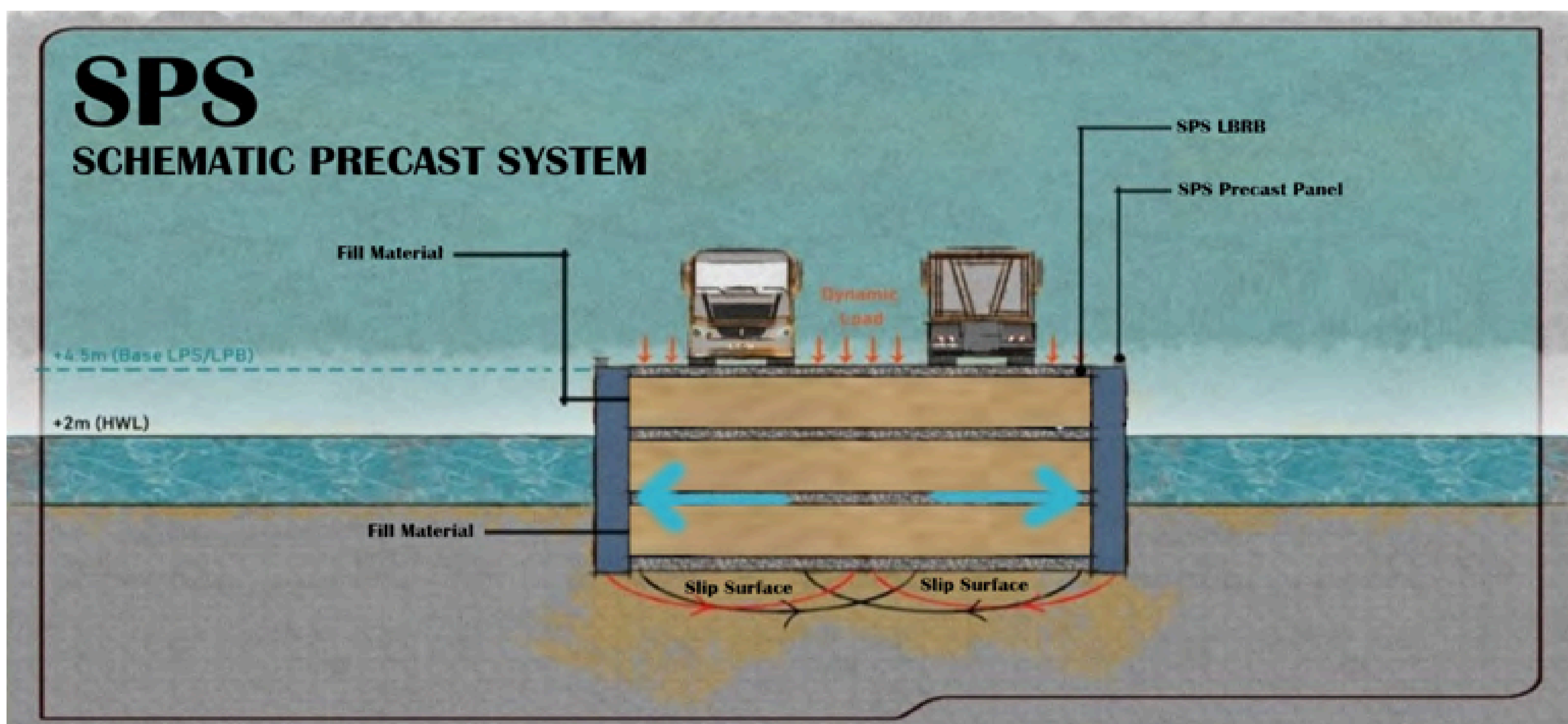
ILUSTRASI KONSEP: BIDANG GESER DAN PERGERAKAN LATERAL

Illustration of Shear Shape Concept



Dynamic Load Effects:

- Reduced Density of **Backfill**
- Reduced Density of **Counterweight**
- Not being bound makes it prone to movement
- Difficult to design or prone to produce significant or non-zero overturning moment



Dynamic Load Effect:

- **Backfill** Density Remains
- **Counterweight** Density Remains
- Confined Effect on SPS: fill material is held tightly
- The designed to achieve near-zero or zero overturning moment

**SPS Technology, Implementing
Soil Structure Interaction (SSI)**

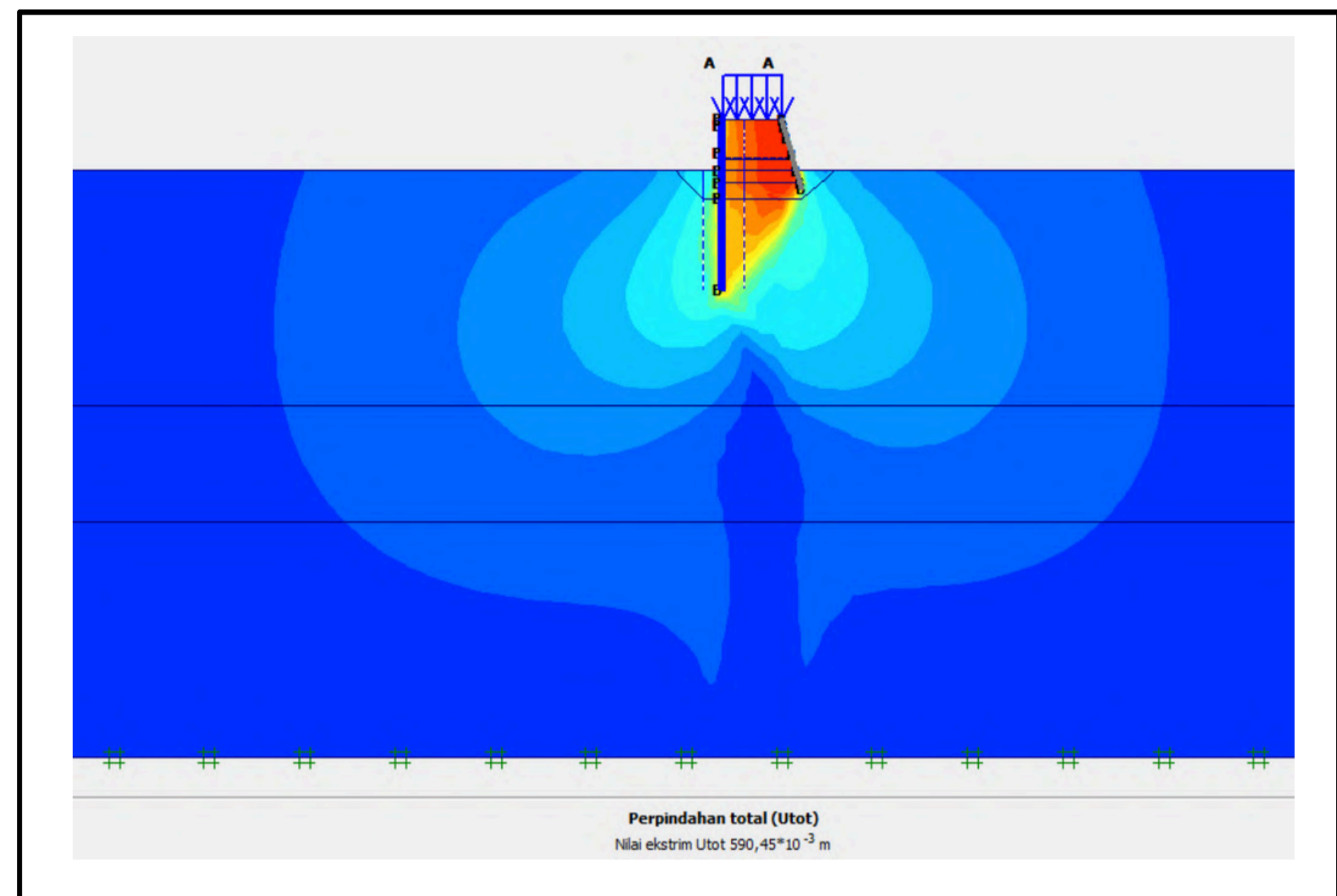
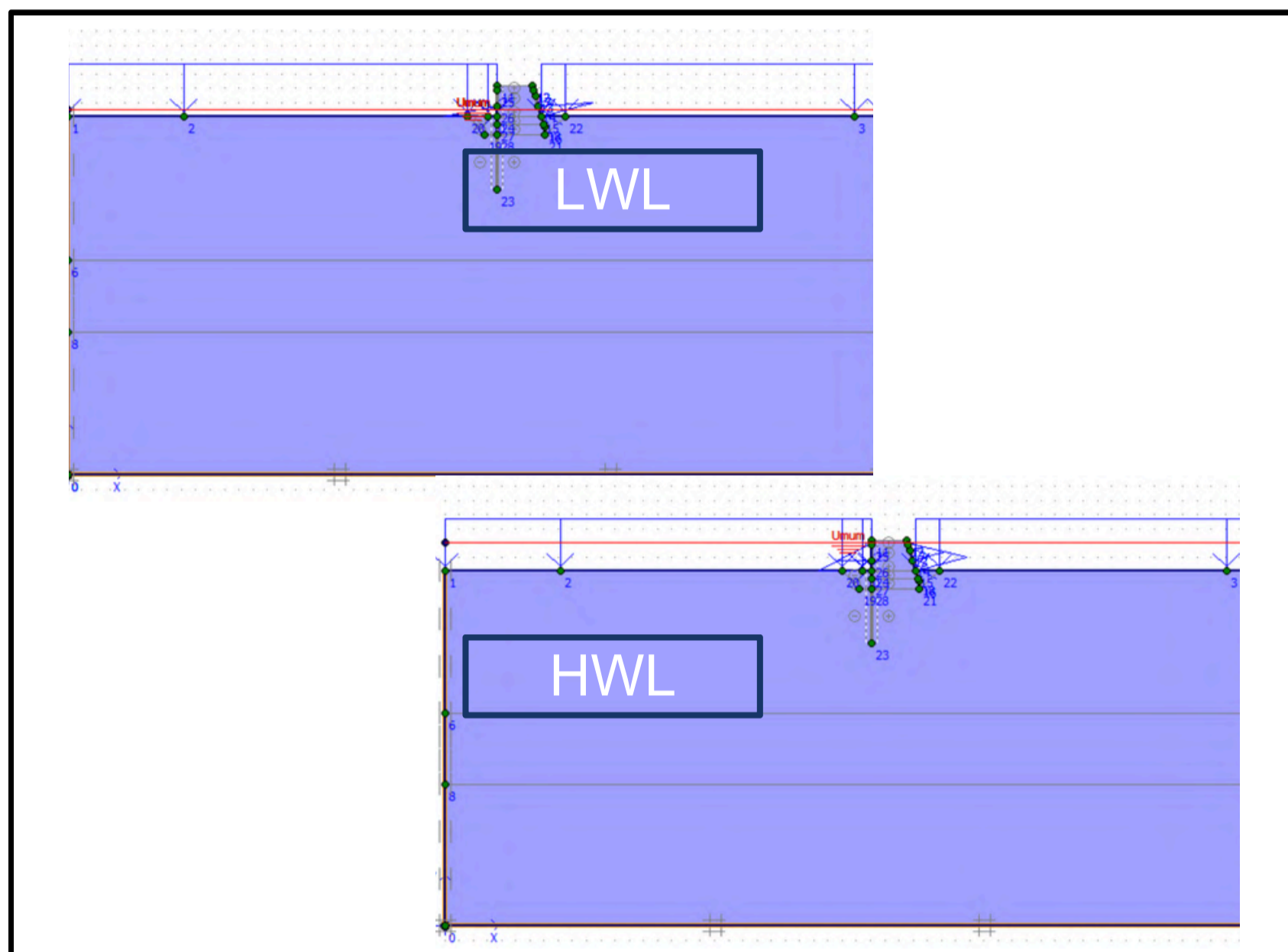
COMPARATIVE CALCULATION OF STRUCTURE STRENGTH CCSP AND SPS 2D FINITE ELEMENT MODELING METHOD



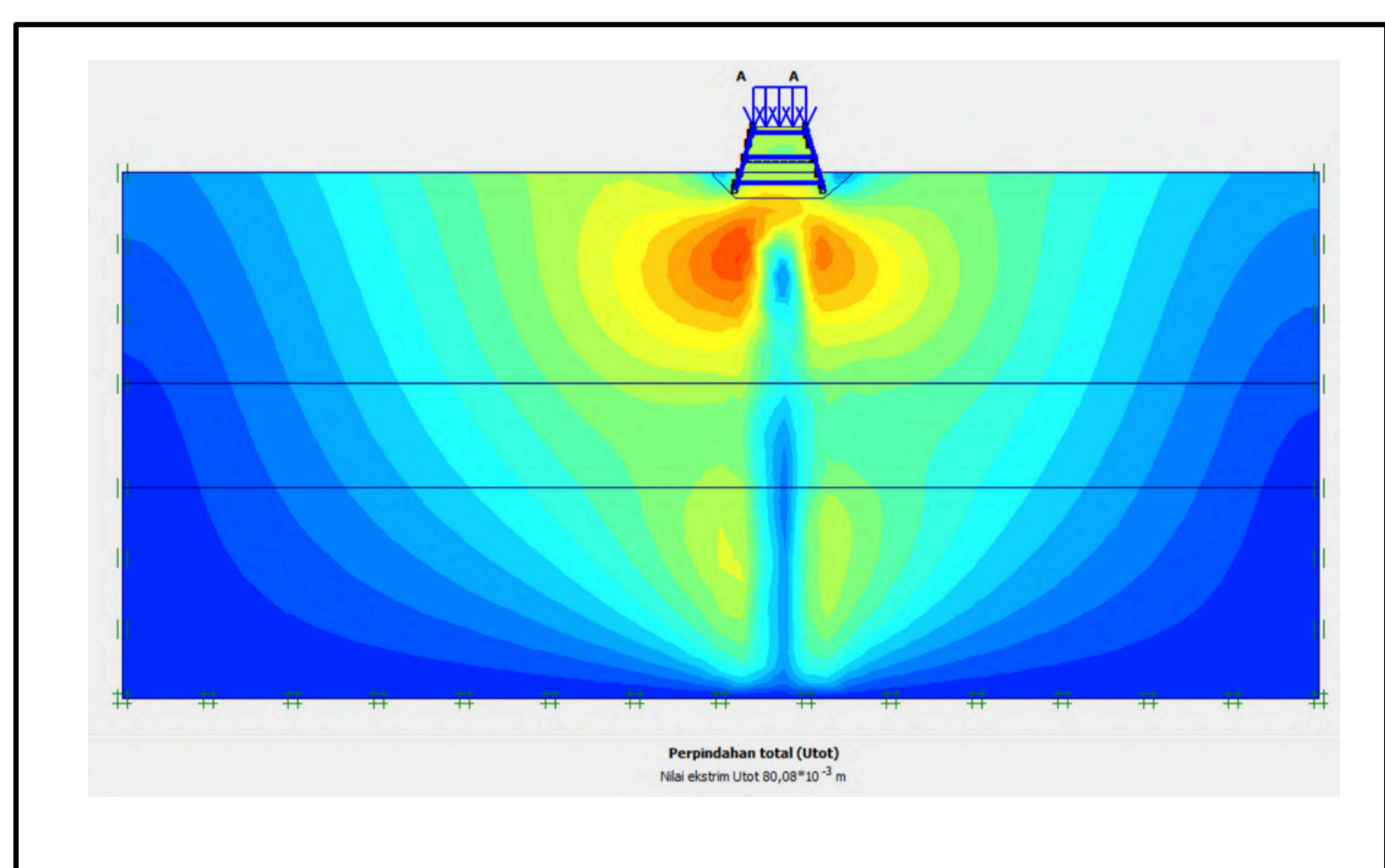
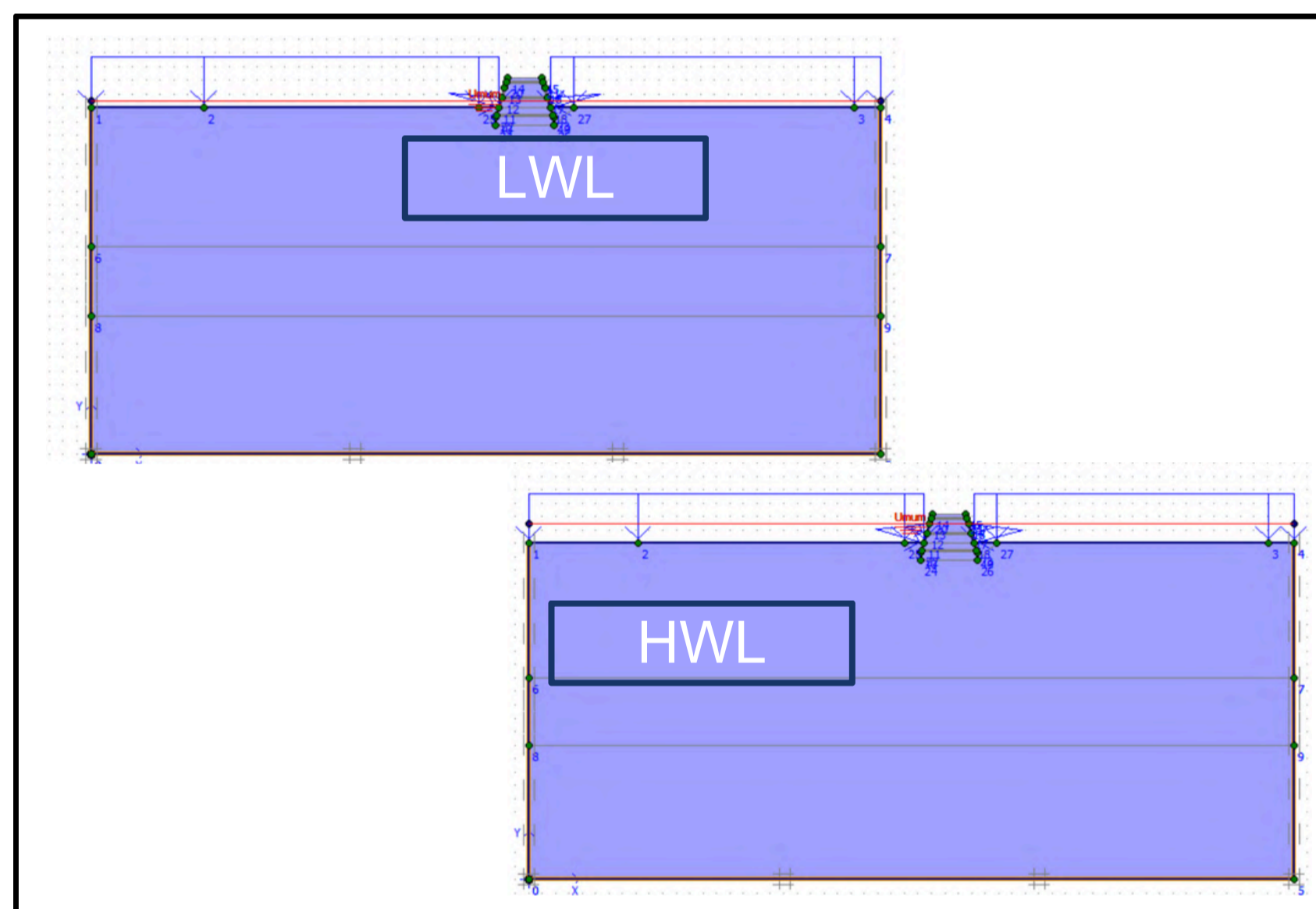
CASE STUDY: Construction of the North Java Coast Sea Wall

Scope:

Analysis of Safety Factor (SF) and Deformation of Excavation and Construction Plane in LWL and HWL conditions



Final Modeling of CCSP Design Construction: Deformation 590 mm SF= 1.329



Final Modeling of SPS Design Construction: Deformation 80.1 mm SF= 1.863

Modeling Conclusion

- The Safety Factor (SF) obtained for each stage of SPS construction work (obtaining the Target SF => 1.8~2) this value is greater than the Safety Factor (SF) of CCSP construction (obtaining the Target SF => 1.3~1.5).
- Obtaining the magnitude of displacement (vertical and horizontal) and estimated settlement/total displacement due to static load (self-load) and dynamic load that applies on the surface of the SPS and CCSP Systems
- The following is a video link of the sea wall concept with SPS: <https://youtu.be/K2XuuQ3D5Cs>

SPS (SCHEMATIC PANEL SYSTEM)

Retaining Wall Solution Assessment Results SPS Vs Conventional Retaining Wall

Recapitulation of the scores for soil retaining structures

No.	Jenis Konstruksi	Biaya Konstruksi	Waktu Pelaksanaan	Kemudahan Pelaksanaan	Daya Dukung Tanah	Mutu, Kualitas, dan Geometri	Daya & Kemampuan Konstruksi	Luas Lahan yang Diperlukan	Penggunaan Alat	Penyerapan Tenaga	Material Isian	Dampak Sosial	SKOR TOTAL
1	SPS	5	5	4	5	5	5	4	3	3	4	5	48
2	Concrete Sheet Pile	1	3	4	3	5	4	4	2	3	5	4	38
3	Retaining Wall	2	2	3	2	4	4	4	3	3	5	4	36
4	Pasangan Batu Kali	4	2	3	1	3	2	3	4	4	4	3	33
5	Pasangan Beronjong	4	3	4	2	2	1	3	3	4	4	1	31
6	Timbunan Tanah	5	5	5	4	1	1	2	2	2	1	2	30

ASSESSMENT WAS CONDUCTED BY: CONSTRUCTION MANAGEMENT TEAM, UDAYANA UNIV. BALI (2014)

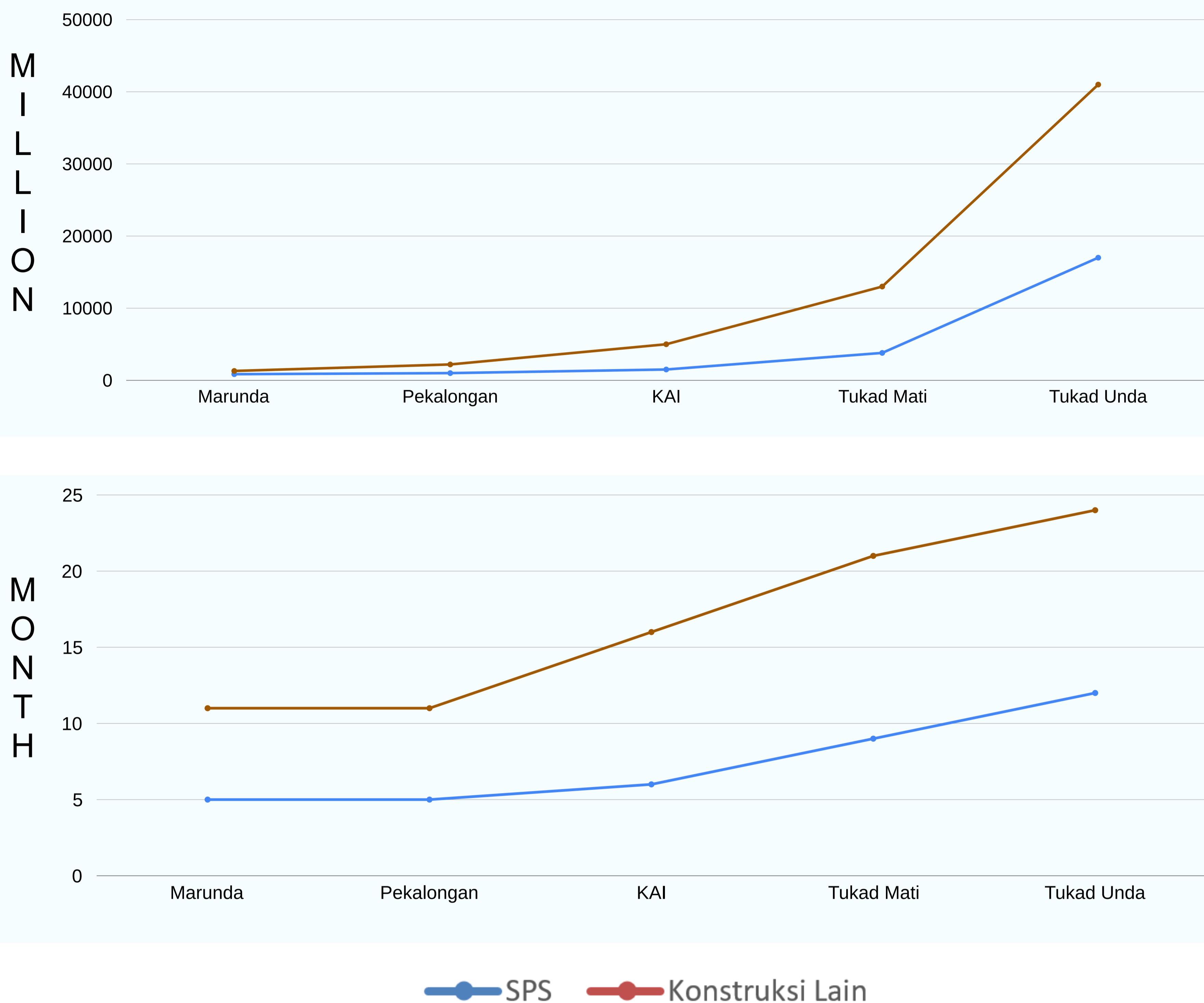
*** Assessment information:**

1. **Very less**
2. **Less**
3. **Enough/Relative**
4. **Good**
5. **Very Good**

* Note: The assessment results above are an assessment of small-scale work, so if calculated on a larger scale / long term (e.g. 25 years or more) which includes time and costs (the impact of routine maintenance, rework, social and environmental), then the use of SPS will be much better and very profitable.

SPS (SCHEMATIC PANEL SYSTEM)

Comparison of Project Cost & Construction Time SPS vs Other Construction Systems



Note:

1. The table is made based on real data from projects that have been worked on using SPS construction.
2. The data is arranged in such a way from the project with the smallest to the largest financing value.
3. The comparative construction is a conventional construction with the lowest financing value.

Conclusion:

1. The efficiency of using SPS construction will be very large if used on large projects / projects with large financing values, both time and cost efficiency.
2. The smaller the project value, the smaller the efficiency obtained, it is even possible that the use of SPS will not be efficient if the project is very small in scale.

SPS (SISTEM PANEL SERBAGUNA) SPS (Schematic Panel System)



Construction Costs	Contruccion time	Ease of Implementation	Soil Bearing Capacity	Quality, Grade, and Geometry	
Cheap (compared to equivalent structures)	Fast	Easy	Can be installed on soil with good or low bearing capacity	Very good, Because it has been perfectly fabricated	
Power and Construction Capability	Land Area Required	Use of Heavy Machine	Man Power needed	Filling material	Social impact
Very good, no need for dewatering, the top can be used as a work road or inspection road after the structure is completely installed.	A little	Not Many	A litte	Many, but regular, can use local materials.	Very low

SPS (SCHEMATIC PANEL SYSTEM)

Comparison of Project Financing Value and Construction Time SPS vs Other Construction (Pile)



Comparison in Engineering Value (with sheetpile) Sheetpile vs SPS

Construction Costs	Construction time	Ease of Implementation	Soil Bearing Capacity	Quality, Grade, and Geometry
Expensive	Pretty Fast	Easy, need to be careful for good results	Can be installed on soil with good or low bearing capacity (requires anchor piles for low bearing capacity soil)	Very good, stable and strong construction

Power and Construction Capability	Land Area Required	Use of Heavy Machine	Man power needed	Filling material	Social impact
Good, it does not require dewatering, but the top of the construction cannot be used directly for activities (additional construction is needed, for example if a road is to be built).	A little	Pretty much	Pretty much	No need	Low

Comparison in Engineering Value (with Retaining Wall) Retaining Wall vs SPS

Construction Costs	Construction time	Ease of Implementation	Soil Bearing Capacity	Quality, Grade, and Geometry
Expensive	Long	Quite easy	Need good soil bearing capacity	Stable and sturdy construction, small seepage

Power and Construction Capability	Land Area Required	Use of Heavy Machine	Man power needed	Filling material	Social impact
Construction in swampy areas is difficult (requires dewatering), the upper part of the construction cannot be used directly for activities.	Little (efficient)	Relatively little	Pretty much	No need	Low

SPS (SCHEMATIC PANEL SYSTEM)

Comparison of Project Financing Value and Construction Time SPS vs Another Construction

Concrete Sheet Pile vs SPS (Proyek Marunda : 2022)

	Harga per m'	Metode	Teknis	Schedule
CCSP	Rp. 30.611.000,00	<ol style="list-style-type: none"> 1. Tidak memerlukan dewatering 2. Bagian top konstruksi tidak dapat digunakan sebagai jalan akses 	<ol style="list-style-type: none"> 1. Memerlukan tanah keras 2. Jika terjadi dinamic load konstruksi bergerak 	7 Bulan
Precast Modular	Rp. 20.241.900,00	<ol style="list-style-type: none"> 1. Dalam kondisi berair, perlu upaya khusus untuk melakukan pengecoran pada gap antar panel 2. Bagian top konstruksi dapat digunakan sebagai jalan akses 	<ol style="list-style-type: none"> 1. Tidak memerlukan tanah keras 2. Konstruksi saling terikat sehingga ketika terjadi dinamic load konstruksi tidak bergerak 	6 Bulan

Perbandingan pada volume pekerjaan yang sama

DPT Boredpile vs SPS (Proyek Marunda : 2022)

TIPE	Harga per m'	Metode	Teknis	Waktu
DPT Bored Pile	Rp. 31.057.022,93	<ol style="list-style-type: none"> 1. Pemancangan boredpile mencapai tanah keras untuk mendapatkan daya dukung. 2. Konstruksi berfungsi meningkatkan stabilitas dan menahan muka air 	<ol style="list-style-type: none"> 1. Memerlukan tanah keras 2. Membutuhkan alat berat untuk pemancangan 3. Konstruksi dilakukan secara <i>on site</i> 	128 hari
SPS	Rp. 29.139.863,52	<ol style="list-style-type: none"> 1. Konstruksi SPS monolit, system berperan sebagai pondasi itu sendiri. 2. Konstruksi SPS selain meningkatkan stabilitas dan menahan muka air, pada top konstruksi dapat digunakan untuk jalan akses 	<ol style="list-style-type: none"> 1. Tidak memerlukan tanah keras 2. Membutuhkan alat berat untuk pemasangan komponen 3. Komponen SPS dapat dipabrikasi (precast) 	84 hari

Perbandingan pada volume pekerjaan yang sama

CONCRETE RETAINING WALL (Conventional)



TANDA SAH CAPAIAN TINGKAT KOMPONEN DALAM NEGERI

Sesuai dengan Peraturan Menteri Perindustrian No. 16/M-IND/PER/2/2011 tentang Ketentuan dan Tata Cara Penghitungan Tingkat Komponen Dalam Negeri, hasil verifikasi atas capaian Tingkat Komponen Dalam Negeri (TKDN) adalah sebagai berikut:

Jenis Produk	:	Beton Precast
Tipe	:	Panel Precast
Spesifikasi	:	6000-1500 mm s/d 12000-1500 mm; K350
Kode HS	:	68101990
Merk	:	LISA ; DUSASPUN ; WITERA
Nilai TKDN	:	62,23%
Terbilang	:	Enam puluh dua koma dua tiga persen
Standard Produk	:	SNI 6880:2016
Sertifikat Produk	:	040/GIS-S5/Rev-00/II/2021
No. Laporan	:	LPA-0846/PK-3055/PTKDNKOM-INFRAS/II/23


Kementerian Perindustrian
REPUBLIK INDONESIA

TANDA SAH CAPAIAN TINGKAT KOMPONEN DALAM NEGERI

Sesuai dengan Peraturan Menteri Perindustrian No. 16/M-IND/PER/2/2011 tentang Ketentuan dan Tata Cara Penghitungan Tingkat Komponen Dalam Negeri, hasil verifikasi atas capaian Tingkat Komponen Dalam Negeri (TKDN) adalah sebagai berikut:

Jenis Produk	:	Beton Precast
Tipe	:	Panel Precast
Spesifikasi	:	6000-1500 mm s/d 12000-1500 mm; K350
Kode HS	:	68101990
Merk	:	LISA ; DUSASPUN ; WITERA
Nilai TKDN	:	62,23%
Terbilang	:	Enam puluh dua koma dua tiga persen
Standard Produk	:	SNI 6880:2016
Sertifikat Produk	:	040/GIS-S5/Rev-00/II/2021
No. Laporan	:	LPA-0846/PK-3055/PTKDNKOM-INFRAS/II/23

yang telah ditandatangani oleh Kementerian Perindustrian dan berlaku 3 tahun terhitung sejak tanggal tanda sah,
diberikan kepada:

Nama Perusahaan	:	PT. Lisa Concrete Indonesia
Alamat	:	Jl. Raya Kupang Jaya No. 1 E, Kel. Sonokwijenan, Kec. Sukomanunggal, Surabaya
NPWP	:	01.070.845.1-052.000
Bidang Usaha	:	Industri Barang dari Semen dan Kapur untuk Konstruksi (KBLI: 23953)
No. Tanda Sah	:	1961/SJ-IND.8/TKDN/2/2023

Jakarta, 28 Februari 2023
Kepala Pusat Peningkatan Penggunaan Produk Dalam Negeri


#43757


Nita Kumalasari



SPS (SCHEMATIC PANEL SYSTEM)

SPS Utilization Application

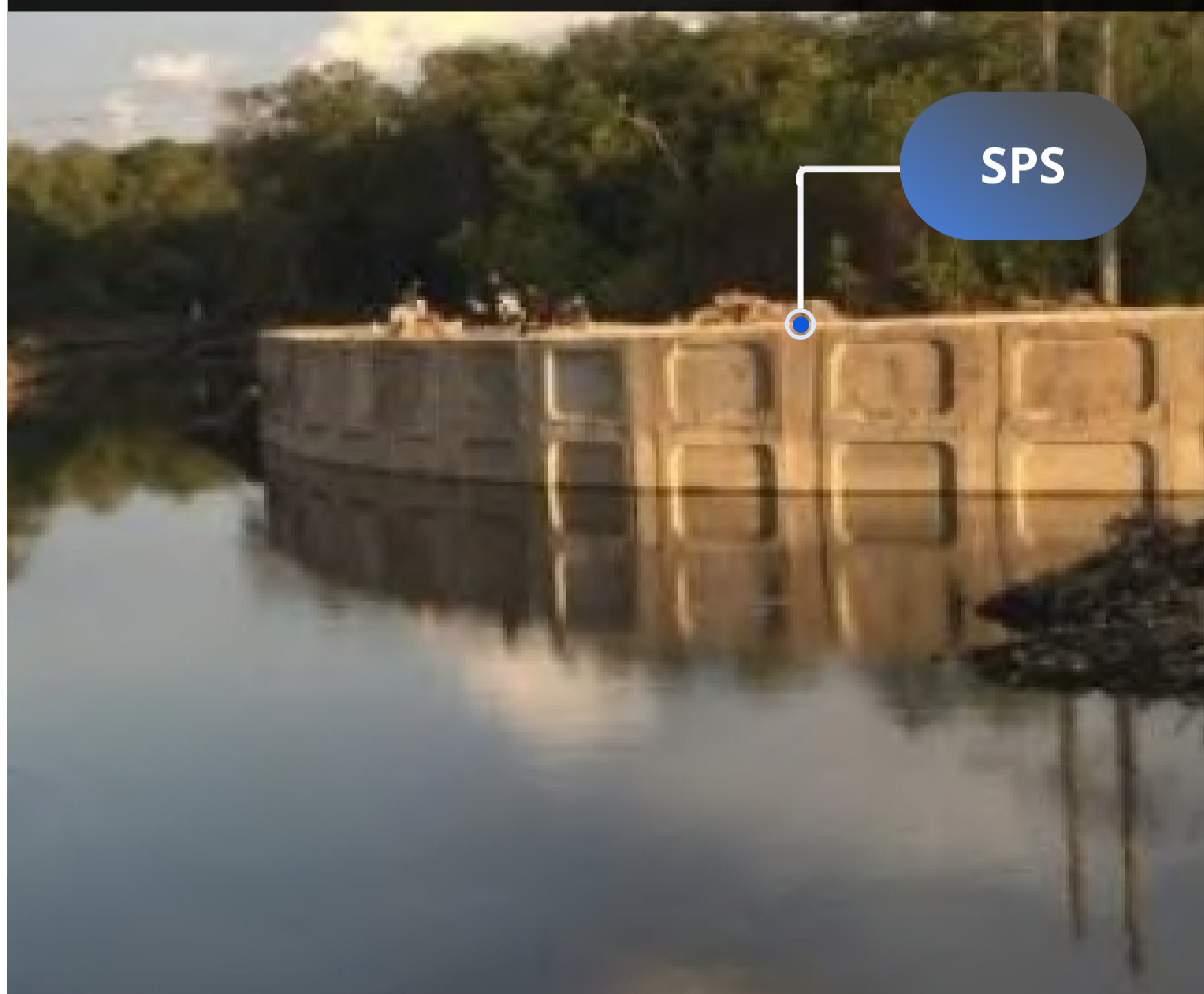
SOIL IMPROVEMENT



RETAINING WALL



RIVER WALL



CEKDAM



COASTAL RECLAMATION

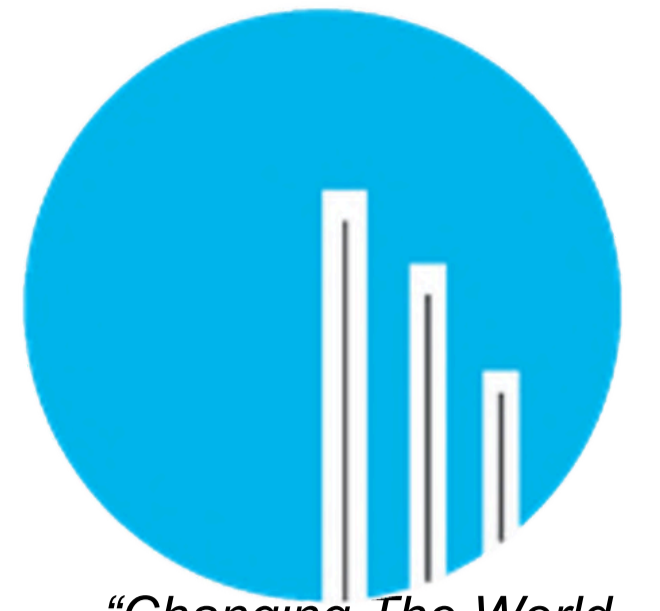


BRIDGE SUPPORT



SPS (SCHEMATIC PANEL SYSTEM)

SPS Utilization Application



"Changing The World
We Live In"

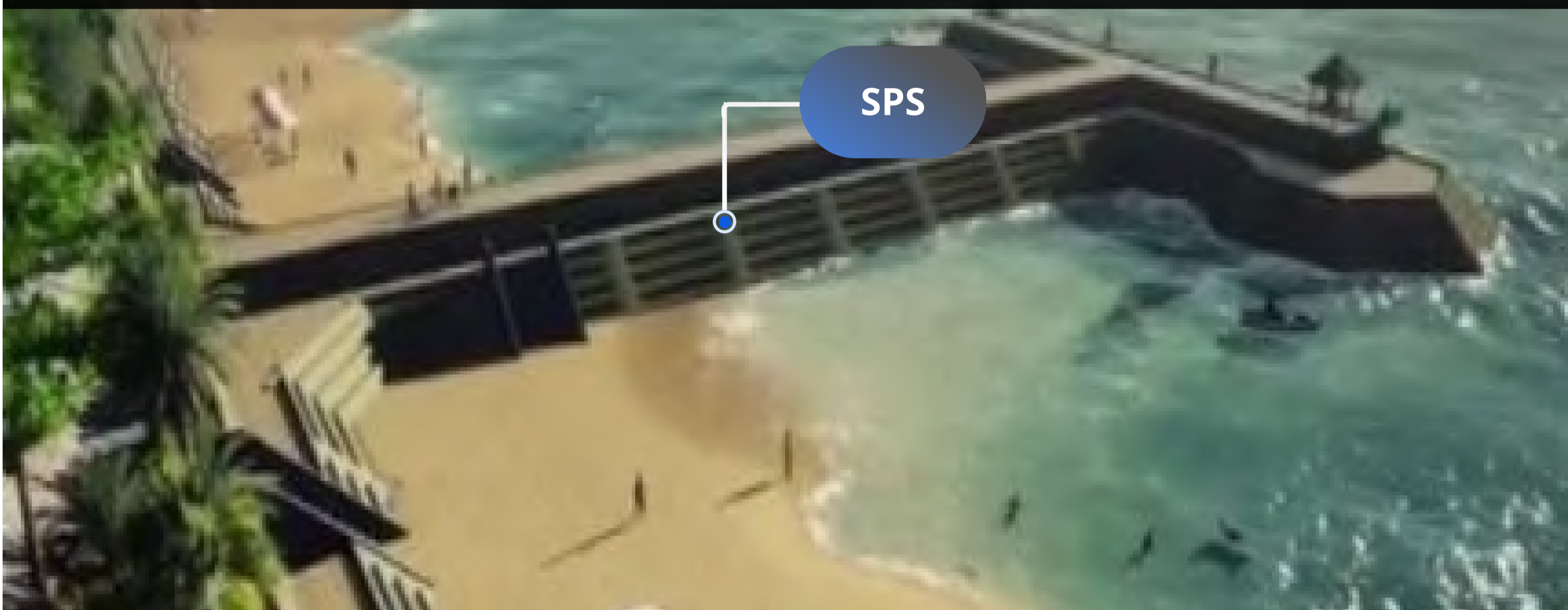
ROAD BODY BASE



BASIC RAIL BODY FOUNDATION



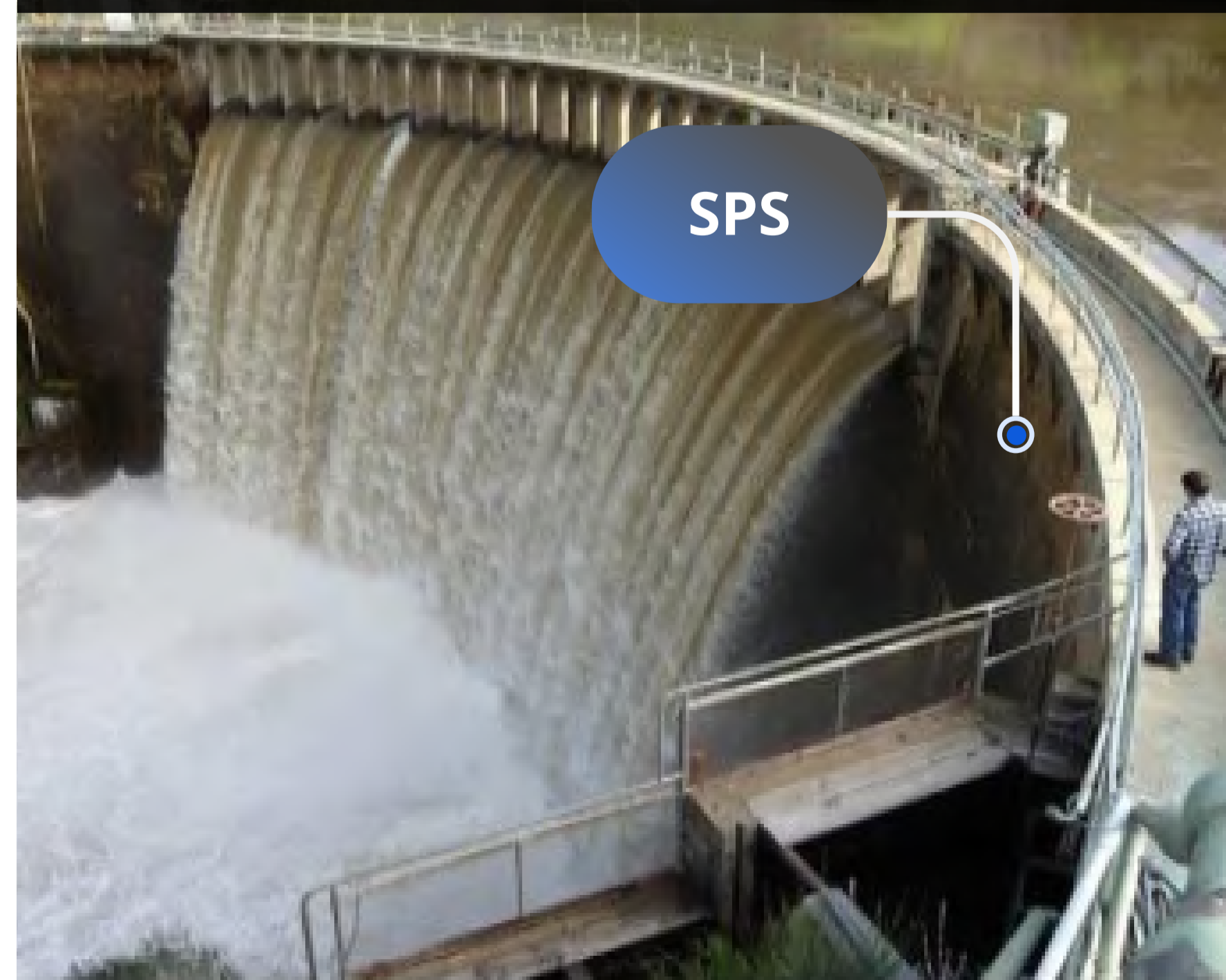
COASTAL PROTECTION



JETTY & HARBOUR



DAM/RESERVOIR

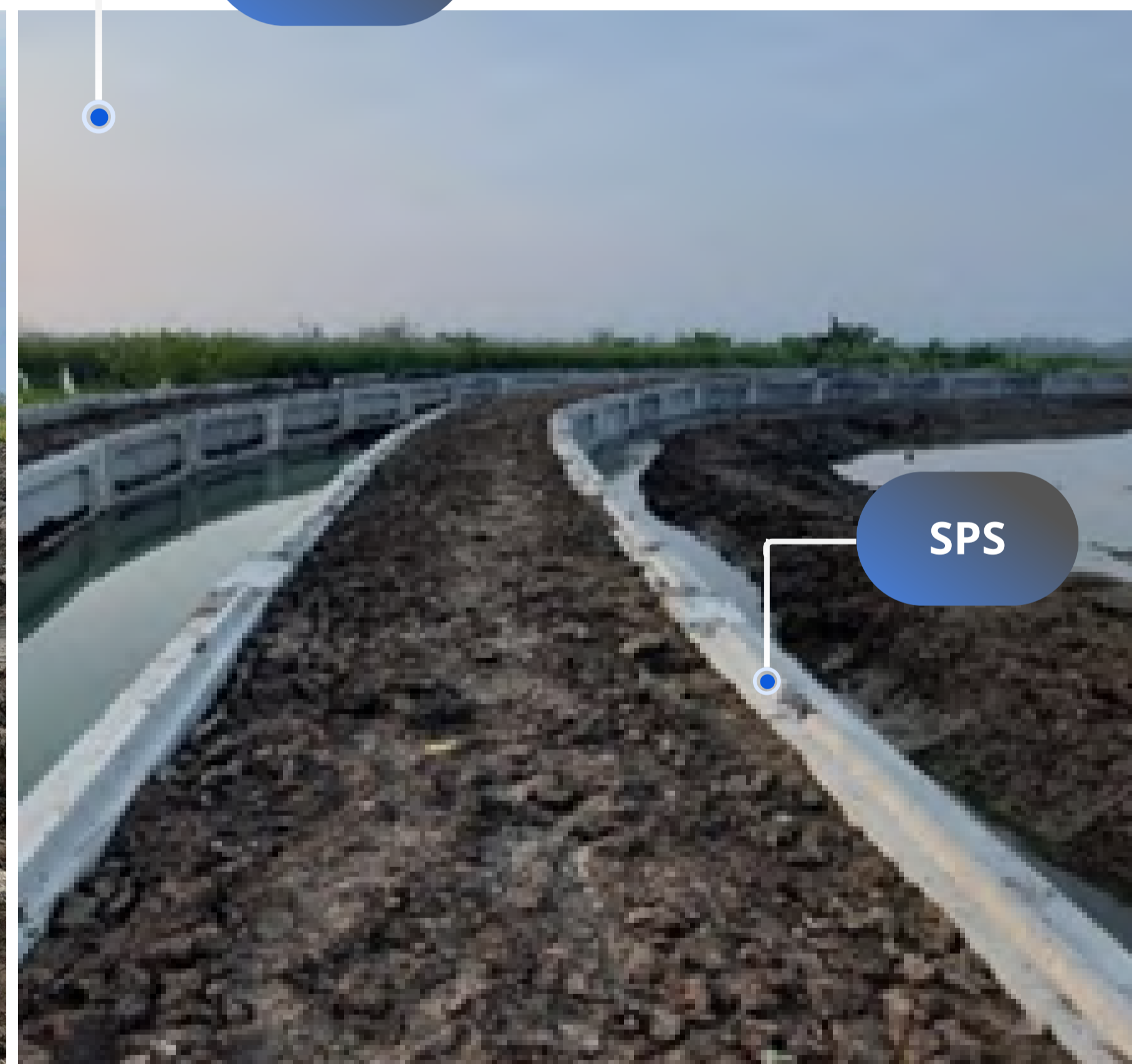


KONSTRUKSI SPS/SPS CONSTRUCTION : LAND SLIDE POLDER KALIMATI BEKASI Bekasi, Jawa Barat (2023)

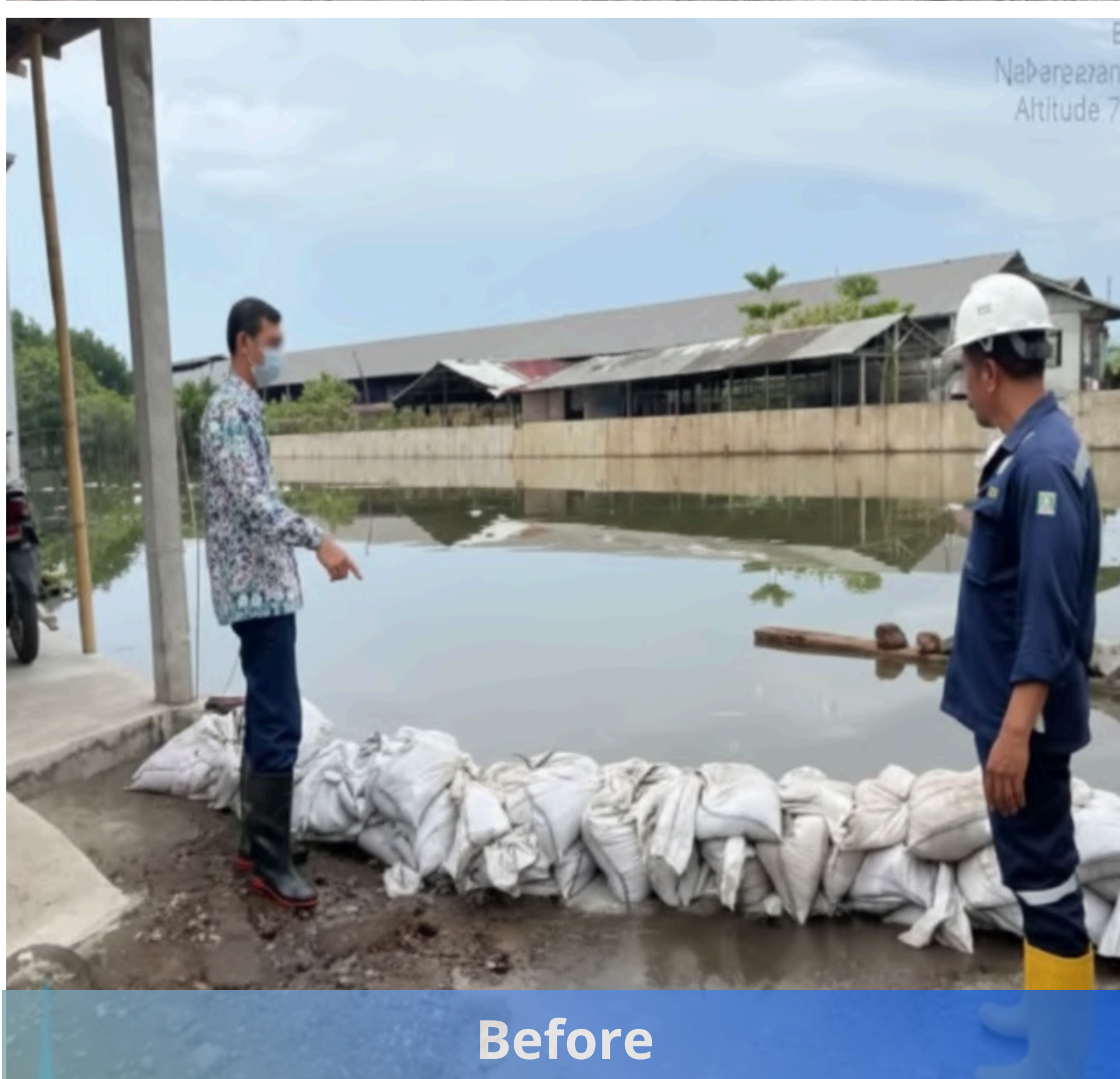


Timur, Indonesia

KONSTRUKSI SPS/SPS CONSTRUCTION :
REHABILITATION OF THE PENCENG RIVER
TO CONTROL THE SAYUNG FLOOD
 Kabupaten Demak, Jawa Tengah (2022)



KONSTRUKSI SPS/SPS CONSTRUCTION : REHABILITATION OF MENYONG RIVER Demak, Jawa Tengah (2022)



KONSTRUKSI SPS/SPS CONSTRUCTION : MARUNDA RESERVOIR CONSTRUCTION PHASE I Jakarta Utara, DKI Jakarta (2022)



KONSTRUKSI SPS/SPS CONSTRUCTION : CEKDAM 6 OF WANGGU RIVER Kendari, Sulawesi Tenggara (2021)

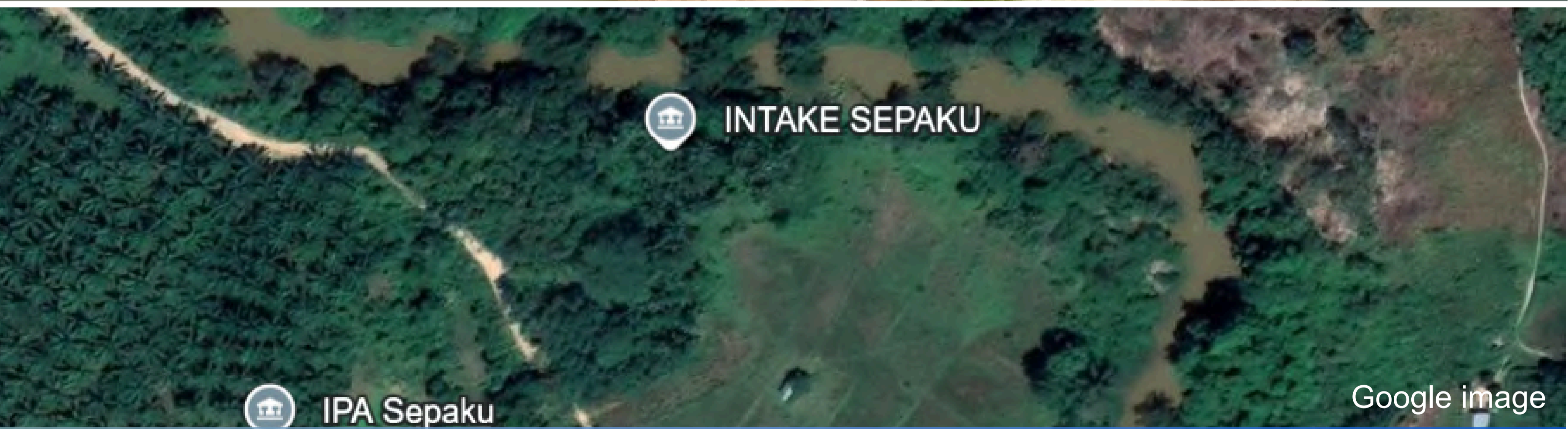


Condition at 2021



Condition at 2024

KONSTRUKSI SPS/SPS CONSTRUCTION : INTAKE OF SEPAKU RIVER Ibu Kota Baru Indonesia (2022)



Condition at 2020

KONSTRUKSI SPS/SPS CONSTRUCTION : FLOOD CONTROL Kali Seringin, Semarang (2018)



Condition at 2021

KONSTRUKSI SPS/SPS CONSTRUCTION : TUKAD UNDA Klungkung, Bali (2021)



Condition at 2025



Condition at 2020



Condition at 2021

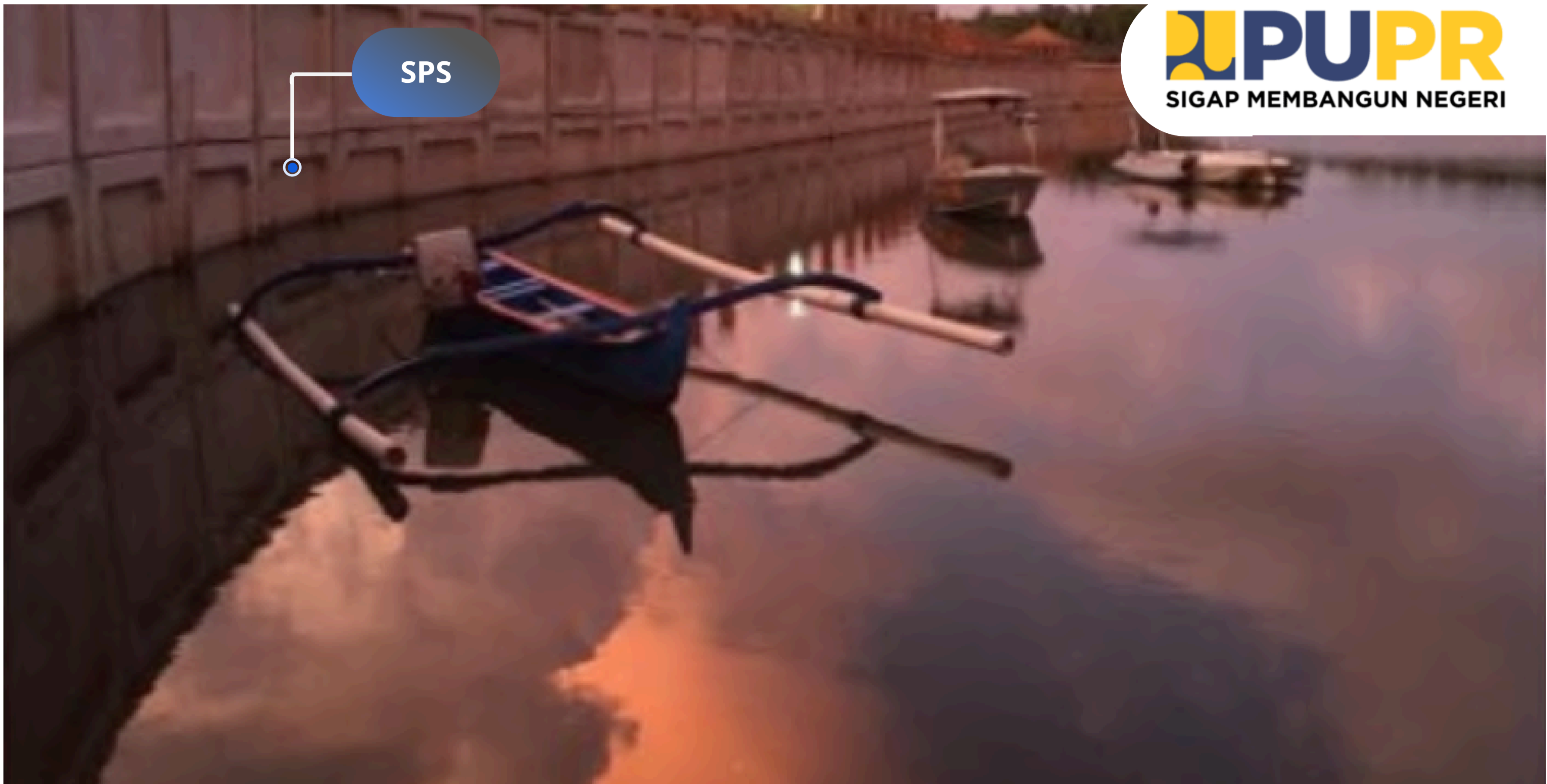


Condition at 2022

KONSTRUKSI SPS/SPS CONSTRUCTION : CEKDAM RIVER, Tukad Aya Timur, Jembrana, Bali (2017)



KONSTRUKSI SPS/SPS CONSTRUCTION : FLOOD CONTROL RIVER NORMALIZATION Tukad Mati, Denpasar, Bali (2014)



KONSTRUKSI SPS/SPS CONSTRUCTION : BANDUNGSARI ROAD REHABILITATION, Brebes, Jawa Tengah (2018)



Before

KONSTRUKSI SPS/SPS CONSTRUCTION : RAIL WAY REACTIVITY AT TAWANG STATION Pelabuhan Tanjung Mas, Semarang, Jawa Tengah



After



Before

KONSTRUKSI SPS/SPS CONSTRUCTION : **FLOOD MANAGEMENT FROM ROB BANDENGAN** Pekalongan, Jawa Tengah (2016)



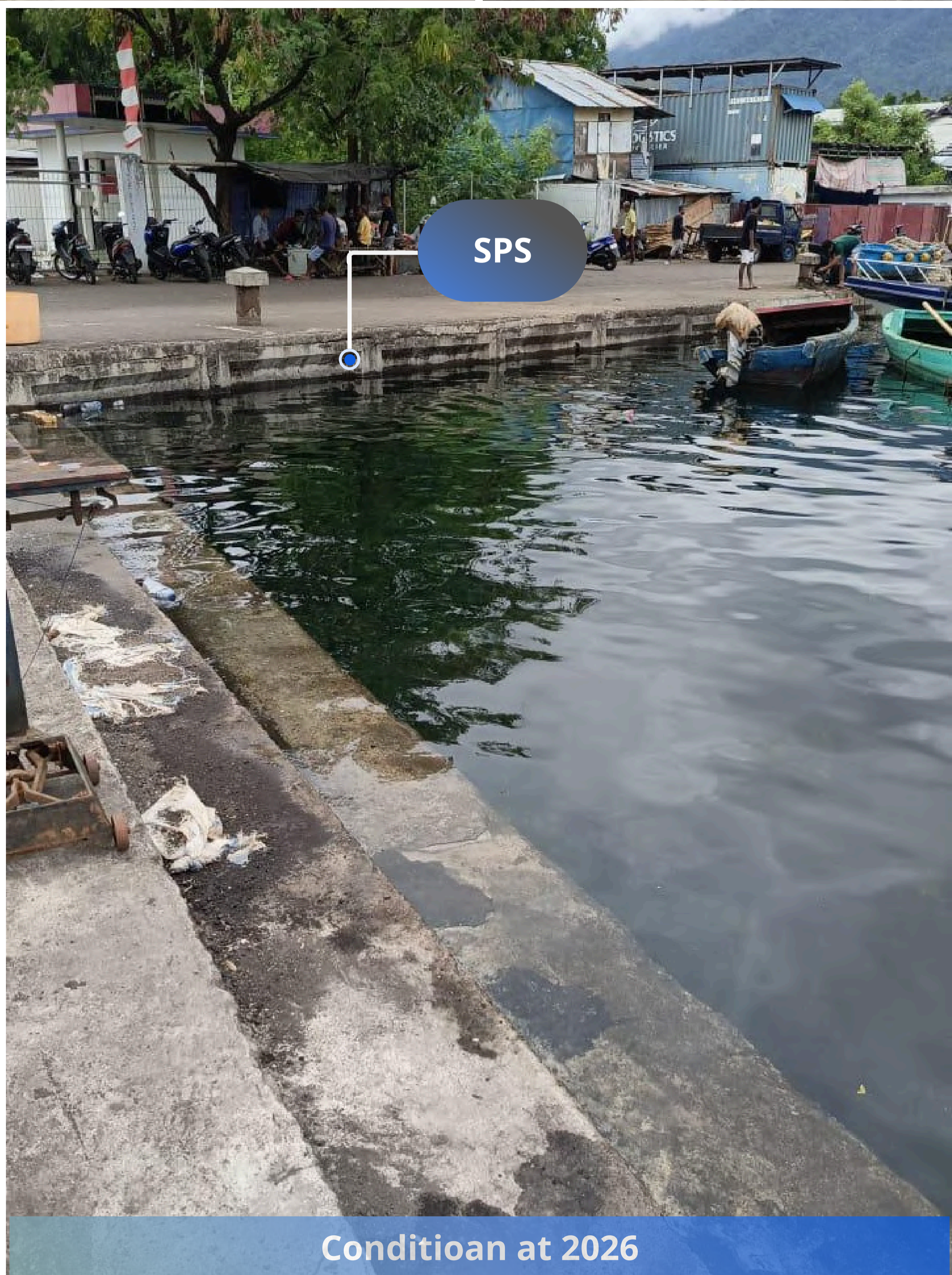
Condition at 2025

Condition at 2025



Condition at 2025

KONSTRUKSI SPS/SPS CONSTRUCTION : **RECLAMATION AND REVETMENT** Bitung, Sulawesi Utara (2010)



Condition at 2026

KONSTRUKSI SPS/SPS CONSTRUCTION : ROAD INSPECTION, SLOPE HANDLING, AND CIPATUNJANG RIVER FLOW ARRANGEMENT, Karawang (2015)



KONSTRUKSI SPS/SPS CONSTRUCTION : **RETAINING WALL AND CLIFF REINFORCEMENT** Singaraja, Bali (2017)



KONSTRUKSI SPS/SPS CONSTRUCTION : Construction at SIOMBAK LAKE Medan, Sumatera Utara (2024)

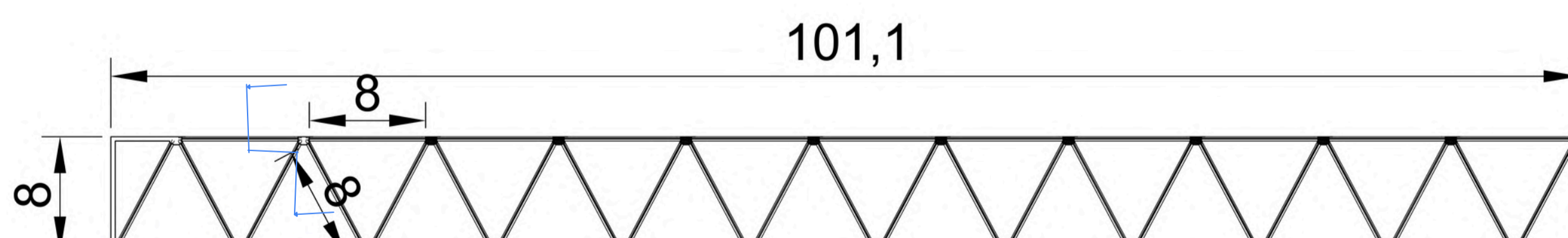
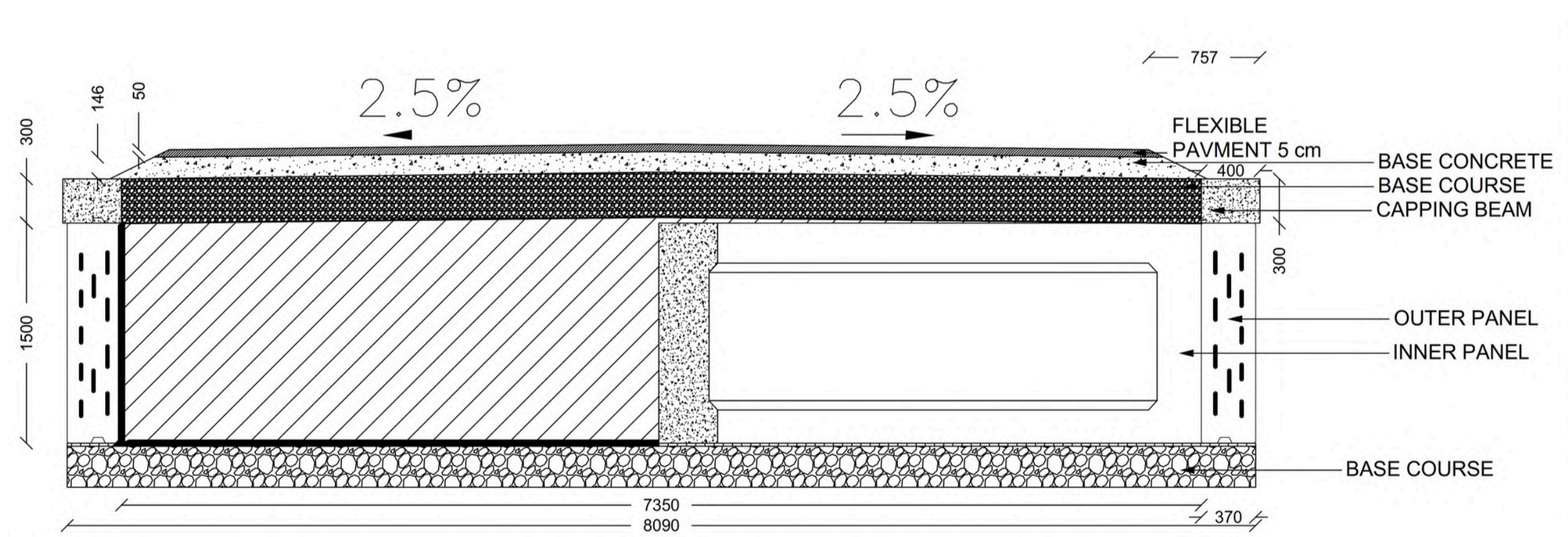


Condition at 2025



Condition at 2022

KONSTRUKSI SPS/SPS CONSTRUCTION : ROAD REPAIR PROJECT Bagan Pasir, Malaysia (2018)



SPS Construction Design For Road Embankment Reinforcement
on Soft Soil (Utility Purposed)

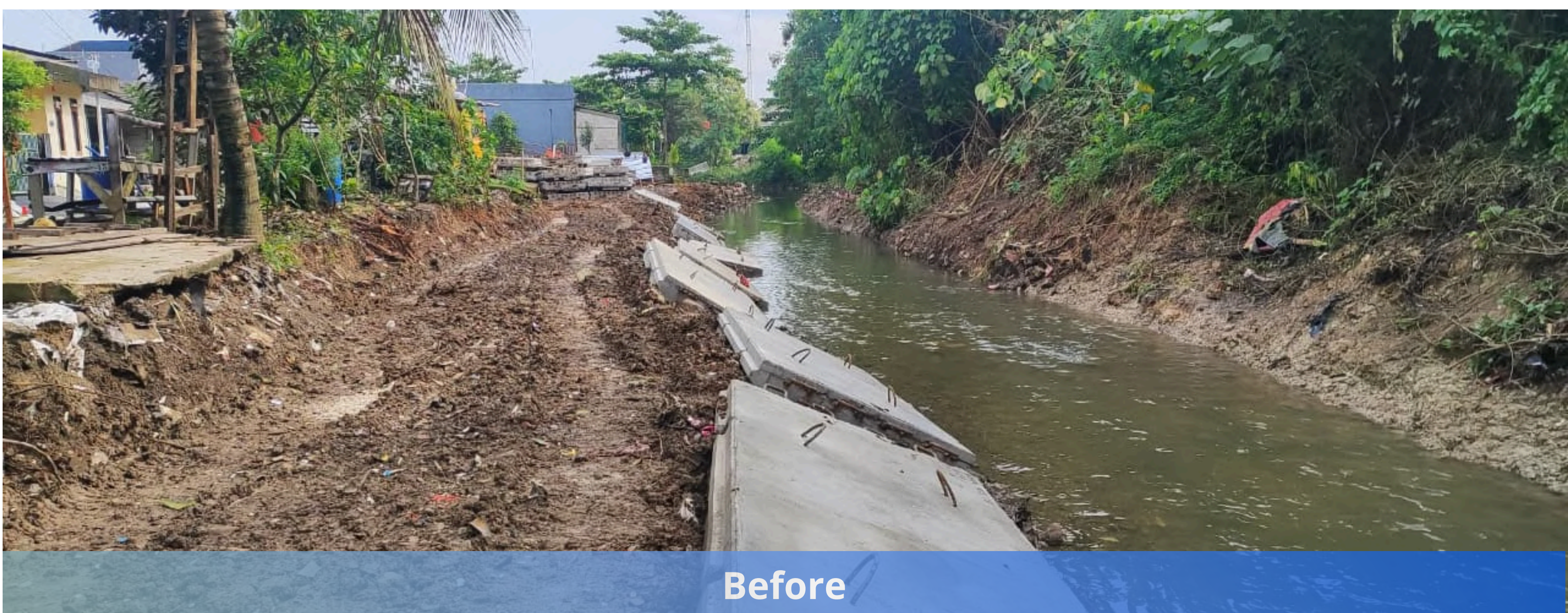
KONSTRUKSI SPS/SPS CONSTRUCTION : **CENDANA LANDSLIDE** Tangerang, Banten (2025)



KONSTRUKSI SPS/SPS CONSTRUCTION : RIVER DAM PROJECT Cikadu, Jawa Barat (2025)



After



Before



KONSTRUKSI SPS/SPS CONSTRUCTION :

BENDONO ROAD CONSTRUCTION

Surodadi Sekaligus Sabuk Pantai, Bendono, Demak (2016)



KONSTRUKSI SPS/SPS CONSTRUCTION :
MOSQUE ROAD ACCES TO MAIN SAYUNG ROAD
Purwosari, Demak, Jawa Tengah



KONSTRUKSI SPS/SPS CONSTRUCTION : RETAINING WALL (WITH JOGGING TRACK) AND RIVER CHANNEL ARRANGEMENT Sungai di Tukad Ijo Gading, Negara (2018)



DPT, PURA TUNGGUL BESI Karangasem, Bali (2020)





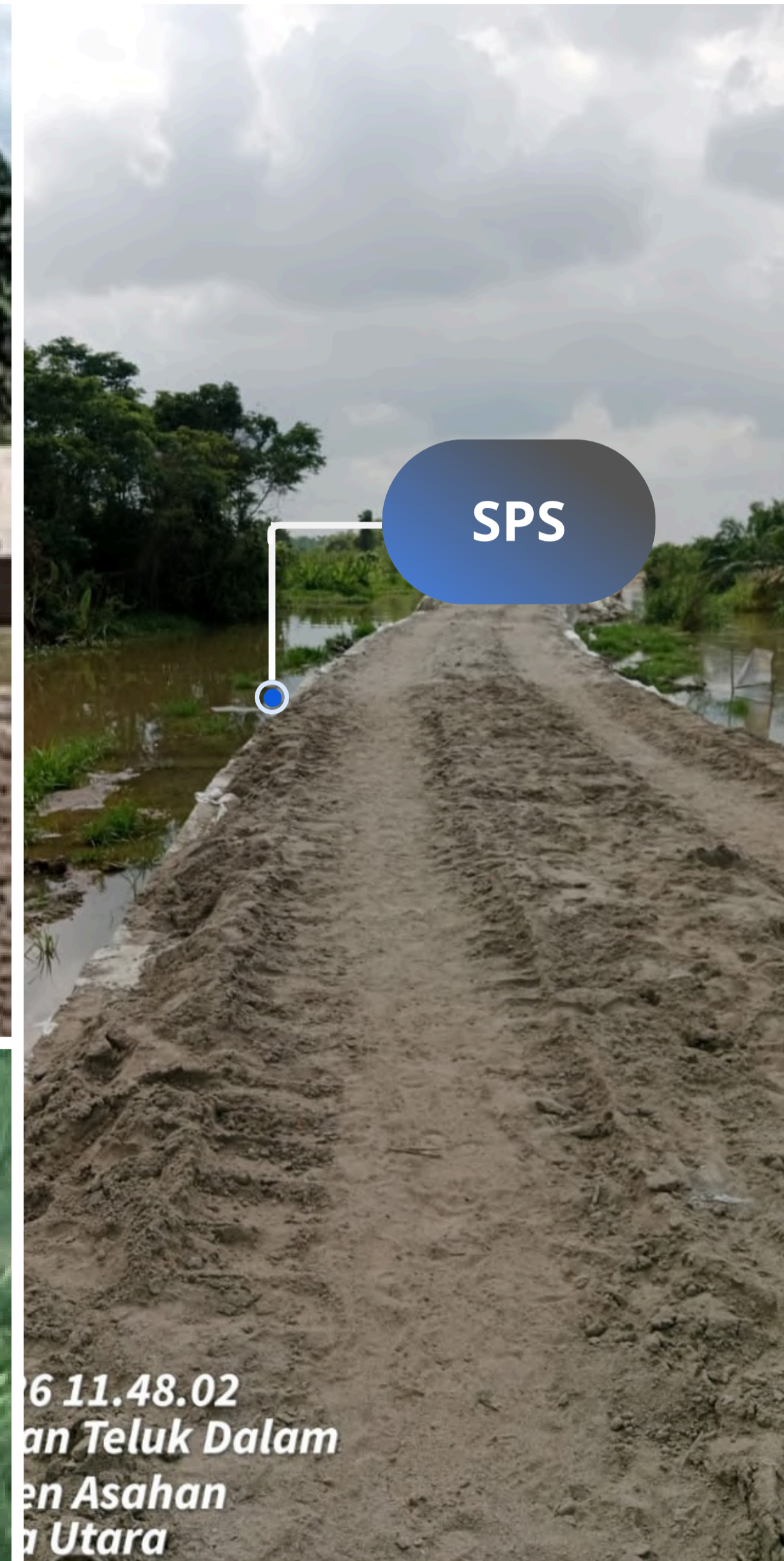
KONSTRUKSI SPS/SPS CONSTRUCTION : UNDER CONSTRUCTION CIBALIUNG LANDSLIDE Pandeglang, Banten (2025)



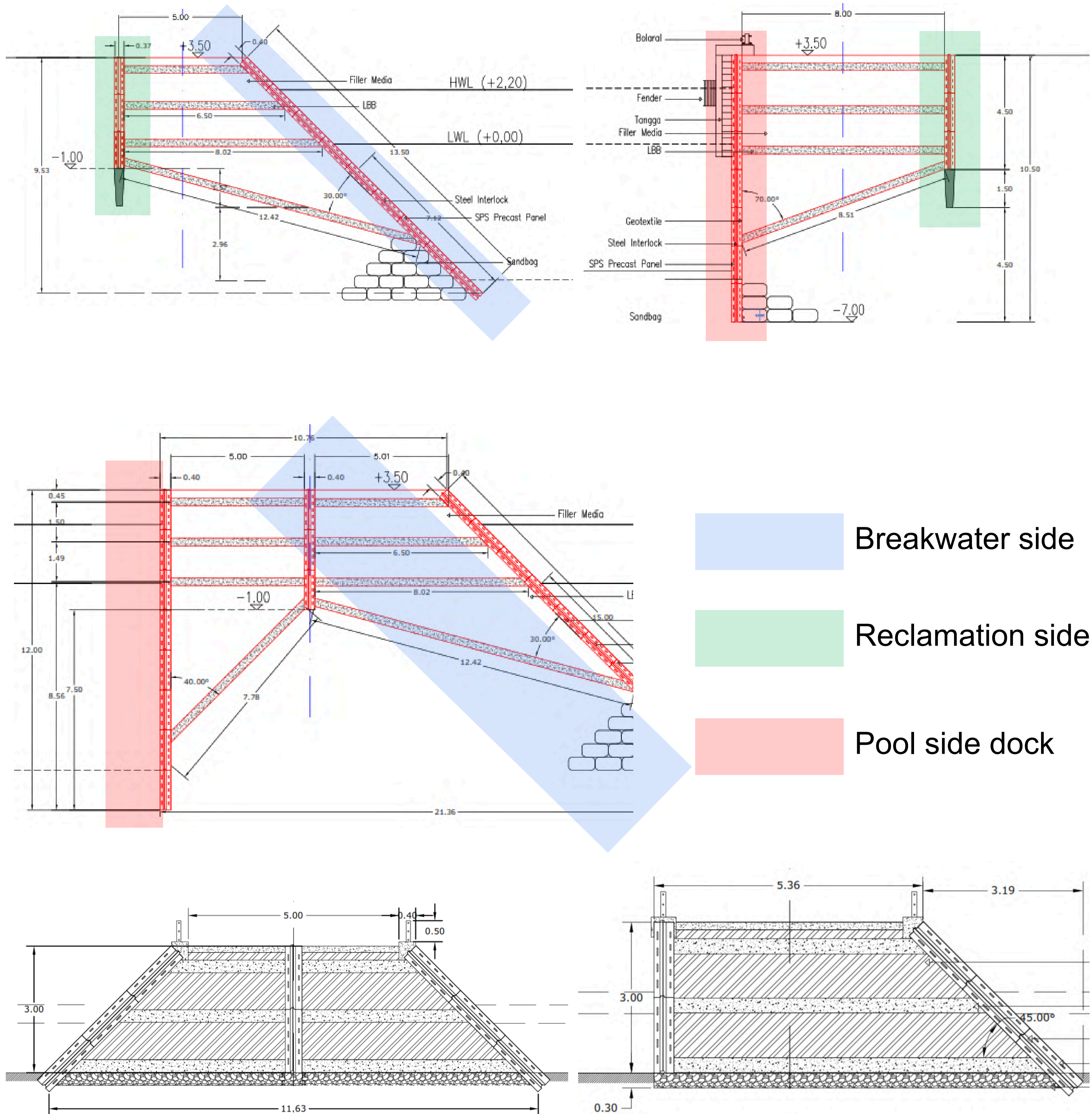
KONSTRUKSI SPS/SPS CONSTRUCTION: **UNDER CONSTRUCTION DAM PROJECT** Mbay, NTT (2025)



KONSTRUKSI SPS/SPS CONSTRUCTION : UNDER CONSTRUCTION RIVER DAM PROJECT Asahan, Sumatera Utara (2025)



KONSTRUKSI SPS/SPS CONSTRUCTION : SPS CONSTRUCTION INNOVATION AS JETTY, REVETMENT, AND BREAKWATER



SPS installation scheme as Breakwater

1. Backfilling of the shortest part of the SPS system
2. Installation of LBB portal & Steel Profile
3. Backfilling of panel installation is preceded by the deepest side
4. At the same elevation, the short side panel begins to be installed

KONSTRUKSI SPS/SPS CONSTRUCTION : SPS CONSTRUCTION INNOVATION AS A GIANT SEA WALL



SPS as Breakwater/Giant Sea Wall construction

- Topping SPS Structure Applicable, can be used as an access road and others.
- The distribution of the load is contained and channeled throughout the system through the interlocking system.
- Has a High Safety Factor value.
- It has been tested at the Pustlibang of Water Resources and Beaches (2019), a test of the physical model of Coastal Protection.

KONSTRUKSI SPS/SPS CONSTRUCTION : SPS CONSTRUCTION INNOVATION AS A INLET CHANNEL



SPS CONSTRUCTION'S INOVATION FOR INLET CHANNEL

SPS (Schematic Precast System) : **SPS Construction Video Link on Youtube**



- SPS Construction System Review <https://youtu.be/F7pM9EpqxUE>
- SPS Penanggulangan banjir ROB <https://youtu.be/E688rrdOJQk>
- SPS Land Reclamation and Jetty <https://youtu.be/T3DjtOE6-24>
- SPS Coastal Erosion Protection <https://youtu.be/K2XuuQ3D5Cs>
- SPS Beach Nourishment <https://youtu.be/FbsWZFKDJmE>
- SPS Tukad Mati Indonesia https://youtu.be/pHPnv3wa_cs
- SPS Riverdam Construction <https://youtu.be/AzfynwsQXy4>
- SPS Toll Road and Train Rail <https://youtu.be/ZBRpLe3jw0M>
- SPS Landslide Protection <https://youtu.be/urVDfPe8-RM>
- SPS Soil Improvement untuk Jalur KA <https://youtu.be/dVbLtTYmjMc>
- SPS Pelabuhan dan Pemecah Ombak <https://youtu.be/yN4nM9VH1hw>
- SPS Cekdam Tukad Aya Timur <https://youtu.be/8fi0rpkhCH0>
- SPS Perencanaan Embung <https://youtu.be/8fi0rpkhCH0>
- SPS Reactivation Semarang Train Line <https://youtu.be/8fi0rpkhCH0>

Subscribe ke Youtube Channel Kami : **SPS Patent**



SPS (Schematic Precast System)

Coordinator SPS Patent Contact

ING Anggara

Mobile : [+62-821-23458899](tel:+62-821-23458899)

Email : anggara@sps-patent.com

Ella

Mobile : [+62-822-4435-8899](tel:+62-822-4435-8899)

Email : ella@sps-patent.com

Prasetyo Widhy

Mobile : [+62-821-34662360](tel:+62-821-34662360)

Email : prasetyo@sps-patent.com

Prof. Dato Seri Dr. Ir. Ts. Rashid Maidin

Mobile : [+60-139102310](tel:+60-139102310)

Email : datorashid_deltaconsult@yahoo.com.my

Prof. Dr. Ir. H. Dede Manarolhuda Sulaiman, M.Sc.

Mobile : [+62-812-2164598](tel:+62-812-2164598)

Email : dedems378@gmail.com



SPS

***“Changing The World
We Live In”***

SPS (SISTEM PANEL SERBAGUNA).

www.sps-patent.com



5

MAIN ADVANTAGES



STRONGER



**MORE EFFICIENT IN
COST**



FAST IN IMPLEMENTATION



**MORE
ENVIRONMENTALLY
FRIENDLY**



MORE DURABLE