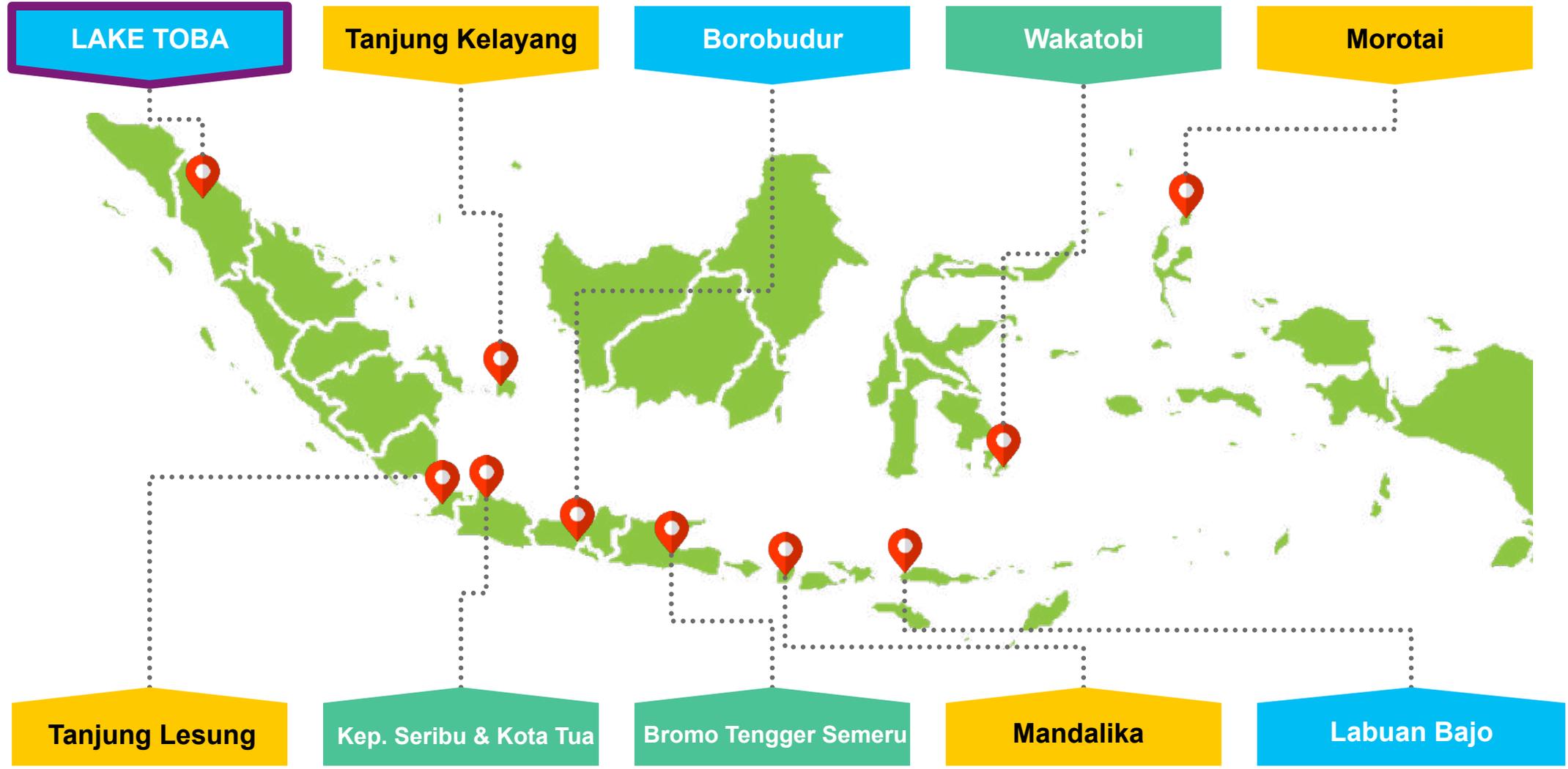


An aerial photograph of Lake Toba, showing the lake's deep blue water, surrounding green hills, and a small town built on a peninsula. The lake is surrounded by lush greenery and some buildings are visible on the shore.

LAKE TOBA TOURISM DEVELOPMENT INVESTMENT OPPORTUNITIES



INDONESIA 10 PRIORITY DESTINATIONS



Tourism Authority Tourism Special Economic Zone (SEZ) National Strategic Tourism Zone

NORTH SUMATRA AND LAKE TOBA OVERVIEW

North Sumatra

North Sumatra is the 7th biggest province by regional GDP. It has 14M with a growth rate at ~1.8% per year. Income per capita is around IDR 44M per year. Employment rate is at 70% with a low minimum wage level of under IDR 2M per month.

Highlights of LAKE TOBA

- Lake Toba is one of the four **special priority destinations** assigned by the Government.
- **The largest volcanic lake in the world** and the **second largest lake in the world** after Victoria Lake in Africa.
- One out of ten **deepest lake in the world**, reaching around 500 meters deep.

The distinctive geographical of Lake Toba reserves a number of economic potentials for the benefit of the wide range of communities, especially as a source of bountiful fresh water and lush tropical forest which attract the interest of big industries to invest in the areas.

Key Tourism Areas:

- ✧ Parapat (Girsang Sipangan Bolon) in Simalungun Regency
- ✧ Samosir Island (Simanindo & Pangururan) in Samosir Regency
- ✧ Balige in Toba Samosir Regency



□ **Lake Toba Tourism Authority**, established based on **Presidential Decree 49 of 2016**, is a professionally-managed Public Service Agency that synchronizes and coordinates all stakeholder associated with investments and businesses in the tourism industry including the Local Government, Central Government and Community in order to reach the target of **1 million international tourist visitors in 2019**

- The Lake Toba Tourism Authority has the following tasks:
1. **To Facilitate** Coordination, Synchronization, Planning and Development of Lake Toba Tourism Destination
 2. **To Conduct** Planning, Development, and Management within Designated Development Area
 3. **To Promote** tourism in Lake Toba

ADVISORY BOARD (13 Ministers + 1 Governor)

Chairman: Coordinating Minister for Maritime Affairs
Chairman of Daily Executive : Minister of Tourism

EXECUTING BOARD



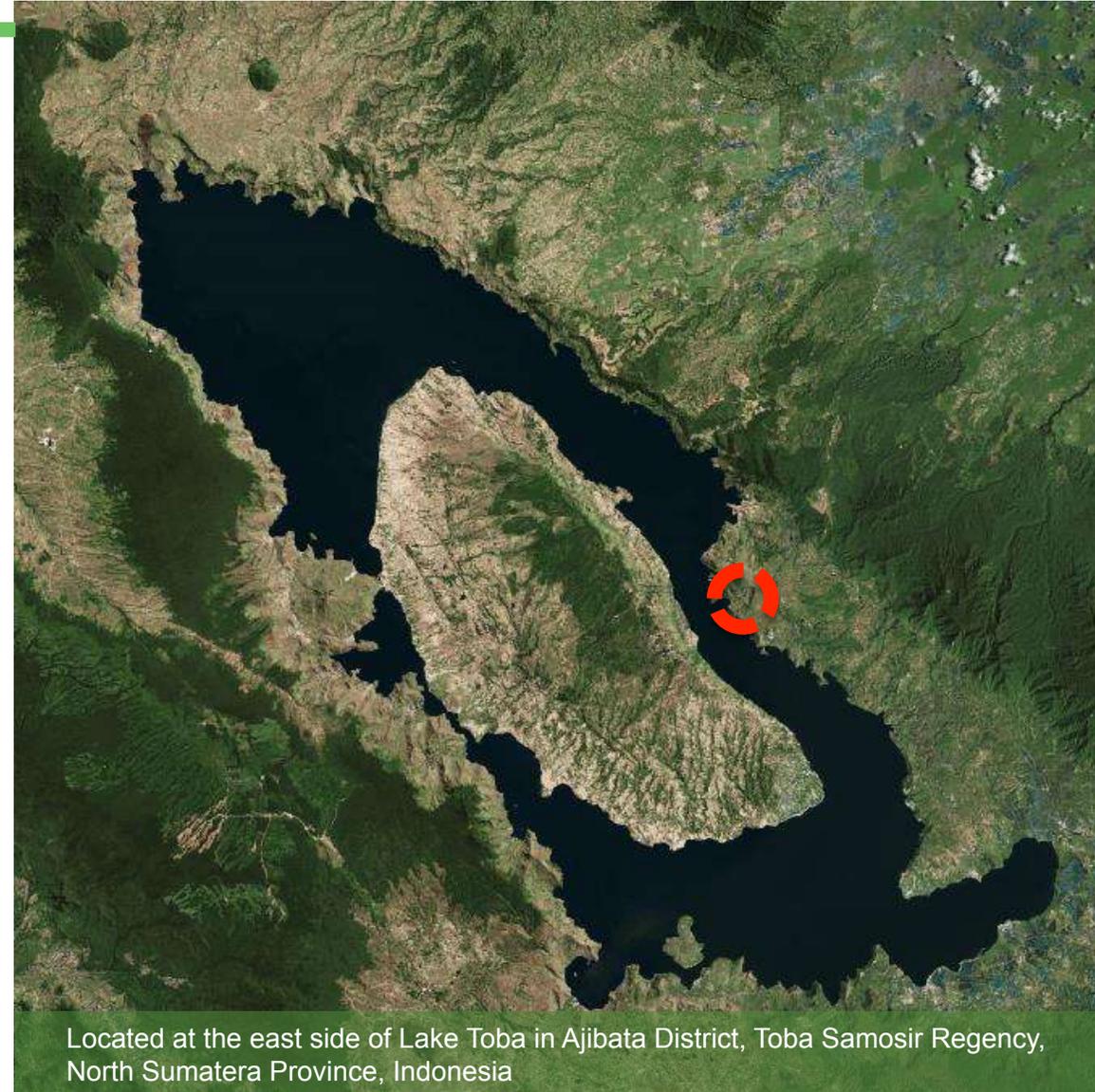
Lake Toba Investment Plan: TOBA CALDERA RESORT

An integrated resort complex located on the cliffs surrounding the naturally sculpted Lake Toba

Resort Concept that incorporate nature, culture and technology into an **Integrated Eco Resort**.

The resort is aimed not only to celebrate its majestic nature, but also to elevate local communities and to rebrand the local wisdom, history, and culture of Lake Toba

It also initiates a cutting-edge, engaging educational experience on the history of Lake Toba, a massive caldera created by a supervolcanic eruption 1.2 million years ago; together with its culturally rich communities that live around lake toba.

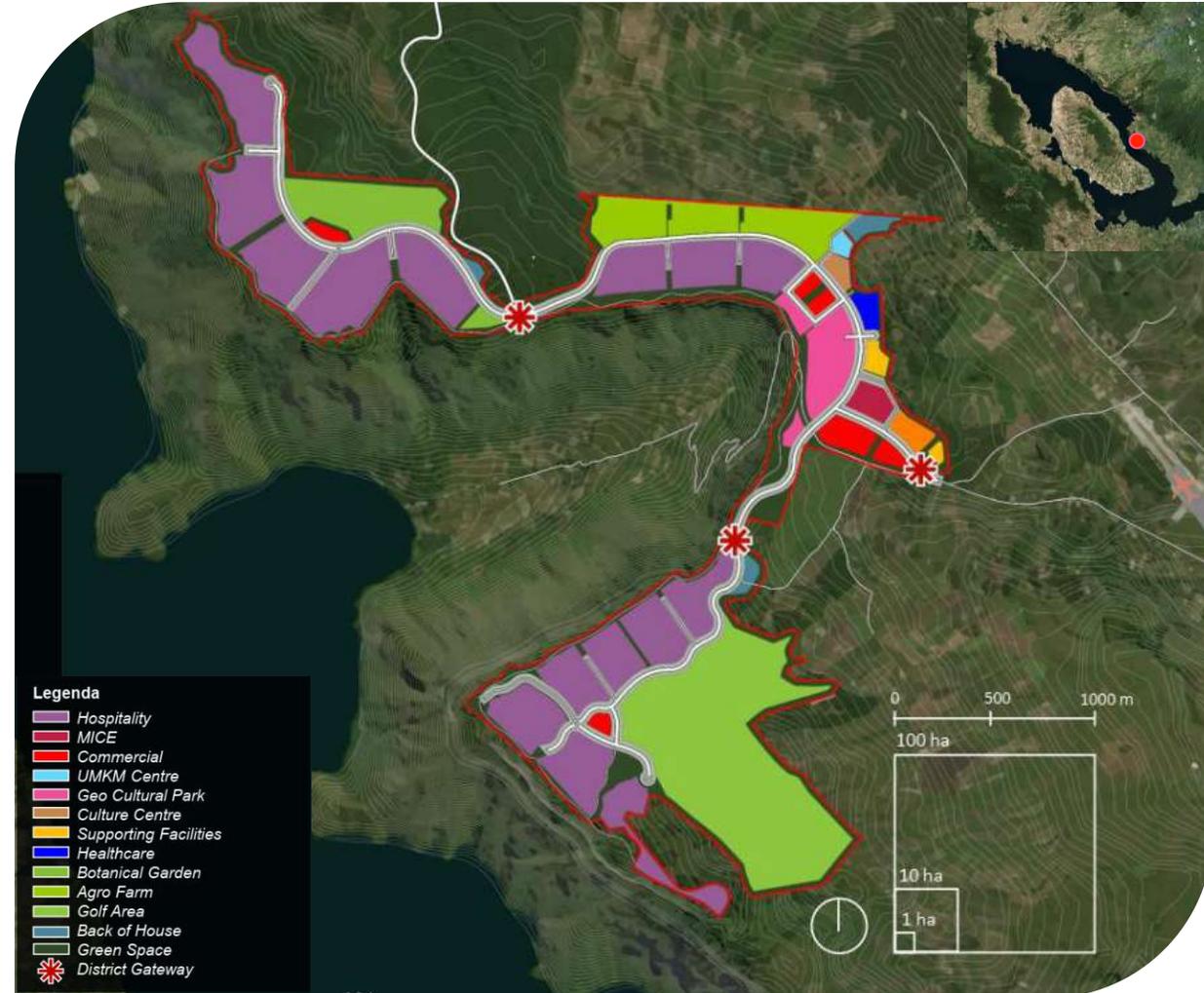


Located at the east side of Lake Toba in Ajibata District, Toba Samosir Regency, North Sumatera Province, Indonesia

Lake Toba Investment Plan: TOBA CALDERA RESORT

Located on top of a valley with a total authorized area of ± 500 Ha and development area of ± 386.72 Ha, Sibisa is the key region to be developed by the Lake Toba Tourism Authority. The site overlooks the vast Lake Toba and Samosir Island in the front, as well as Bukit Barisan mountain range in the back.

Development Site Breakdown	Area (Ha)	Percentage
Hospitality	121.67	31.46%
MICE	2.72	0.70%
Commercial	8.36	2.16%
UMKM Centre	0.9	0.23%
Geo Cultural Park	9.78	2.53%
Cultural Centre	1.35	0.35%
Supporting Facilities	2.06	0.53%
Healthcare	1.66	0.43%
Botanical Garden	14.54	3.76%
Agro Farm	21.47	5.55%
Sustainable Golf	71.53	18.50%
Back Of House	3.25	0.84%
Green Space	127.43	32.95%
Total	386.72	100%



Branding Concept

To create a unique ecofriendly and sustainable tourism destination in Toba that develops and empowers local communities by integrating technology, diversity, and innovation

Community Focused



Eco Friendly

- Nature & Adventure
- Agro & Sustainability
 - Green Activities
 - Education
- No Plastics
- Pollution Control
- Alternative Energy

Community Focused

- Education & Training
- Community Engagement
 - Health & Medical
 - Cultural Shows
 - Local Products

Geo-Park

- UNESCO
- Education & Mice
- First In Indonesia
- Best In Asia
- International Exposure
- 3D Mapping Shows
- Memorable Experiences

Eco Friendly



Geo Park



Masterplan Concept TOBA CALDERA RESORT



Marvelous geological attraction
at one of the greatest
supervolcano on earth

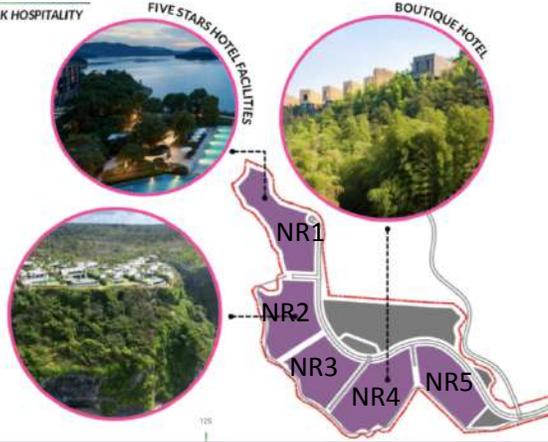
Heartwarming Batakese
cultural & historical pilgrimage
at the heart of North Sumatera

Vibrant and lively creative-
villages that enliven the
local economy

Serene retreating resorts and
lakeside delights at the natural
wonder of Toba Highland



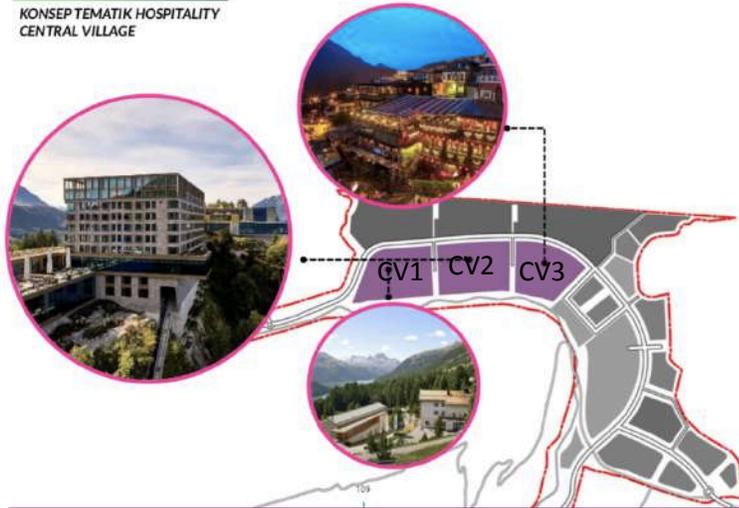
KONSEP TEMATIK HOSPITALITY NORTH RIDGE



VILLA

NR1: 10.75 Ha, NR2: 10.2 Ha, NR3: 9.18 Ha
NR4: 12.94 Ha, NR5: 9.6 Ha

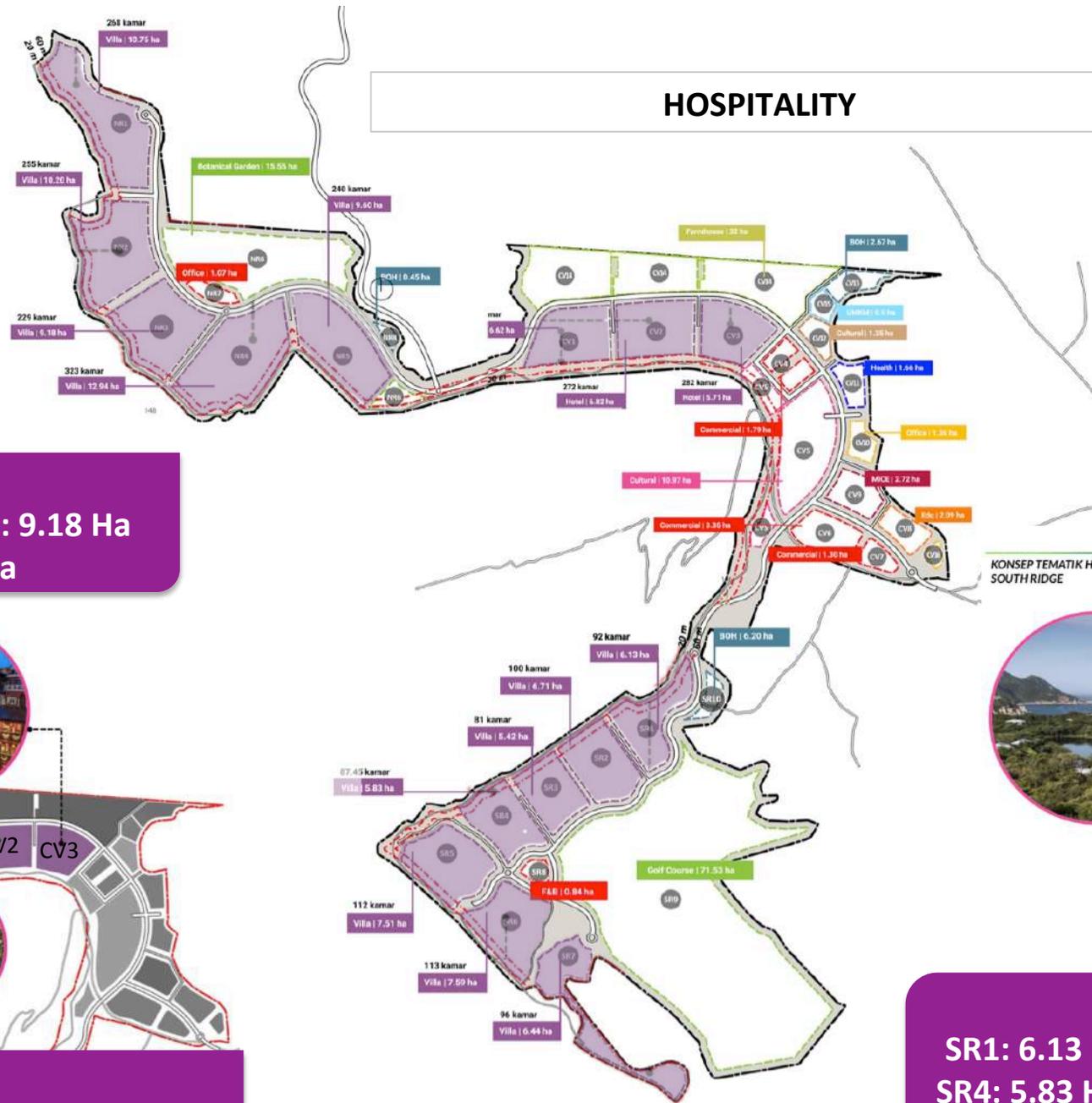
KONSEP TEMATIK HOSPITALITY CENTRAL VILLAGE



HOTEL

CV1: 6.62 Ha, CV2: 6.82 Ha, CV3: 5.71 Ha

HOSPITALITY



KONSEP TEMATIK
COMERCIAL / FNB



COMMERCIAL
CV4: 1.79 Ha
CV6: 3.35 Ha
CV7: 1.30 Ha

UMKM
CV15: 0.9 Ha

KONSEP TEMATIK
PREMIUM FNB

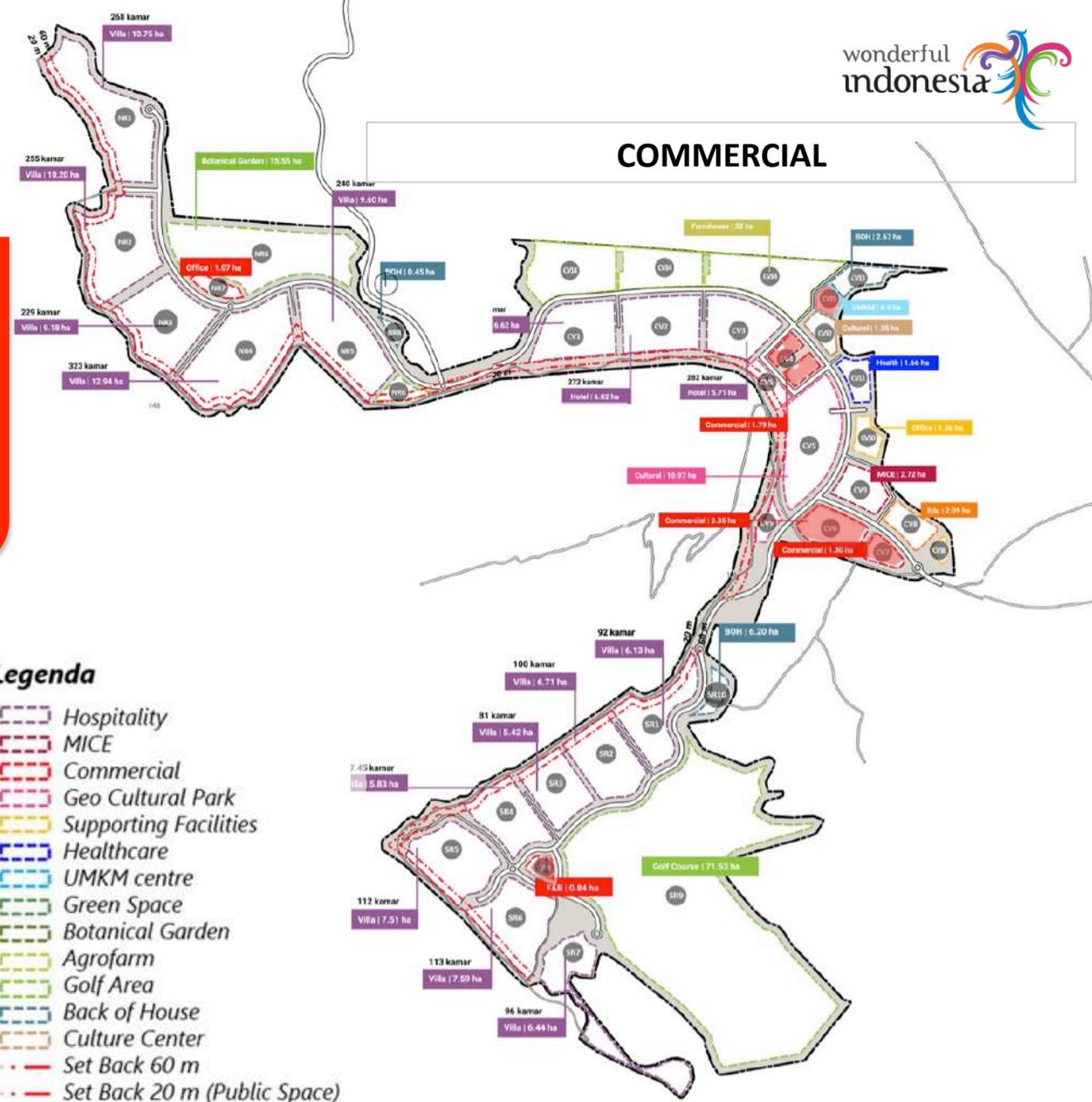


F&B
SR8: 0.84 Ha

Legenda

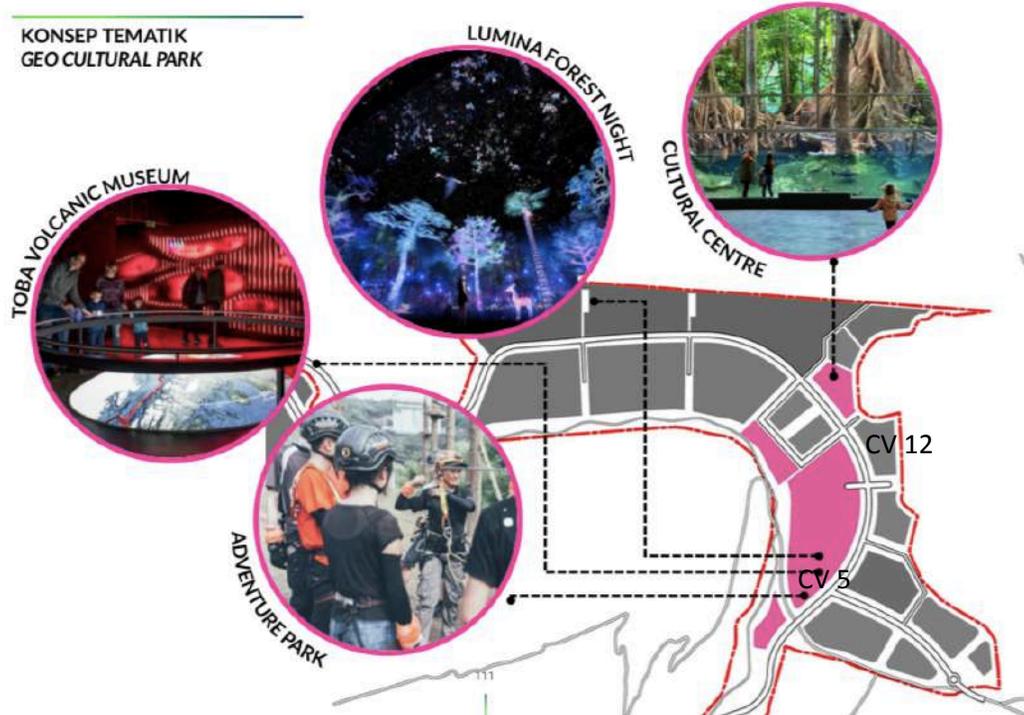
- Hospitality
- MICE
- Commercial
- Geo Cultural Park
- Supporting Facilities
- Healthcare
- UMKM centre
- Green Space
- Botanical Garden
- Agrofarm
- Golf Area
- Back of House
- Culture Center
- Set Back 60 m
- Set Back 20 m (Public Space)

COMMERCIAL

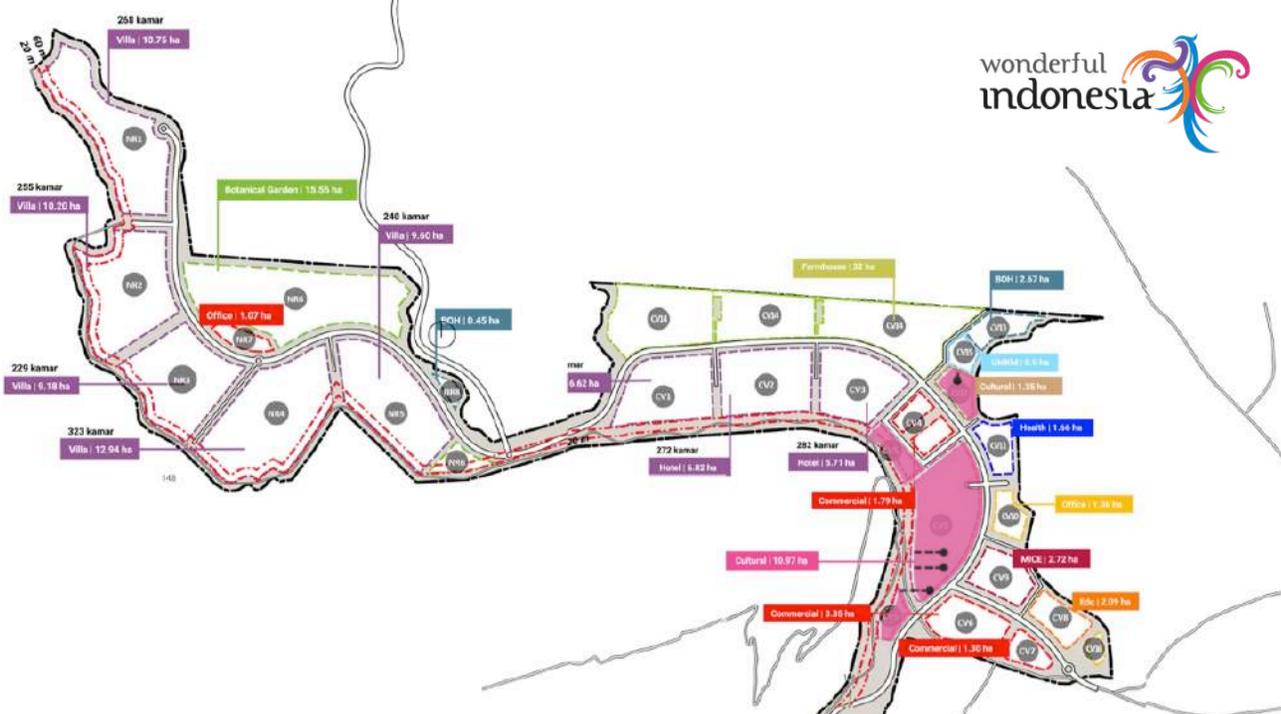


GEO CULTURAL PARK

KONSEP TEMATIK
GEO CULTURAL PARK

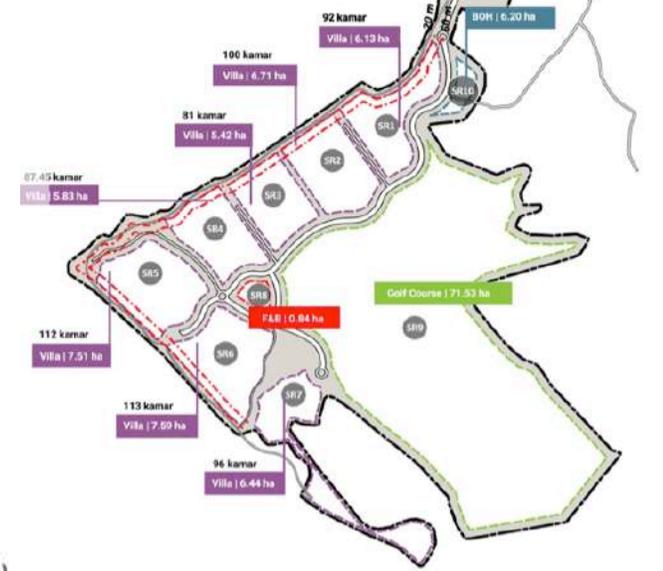


CV 5: 10.95 Ha
CV 12: 1.35 Ha



Legenda

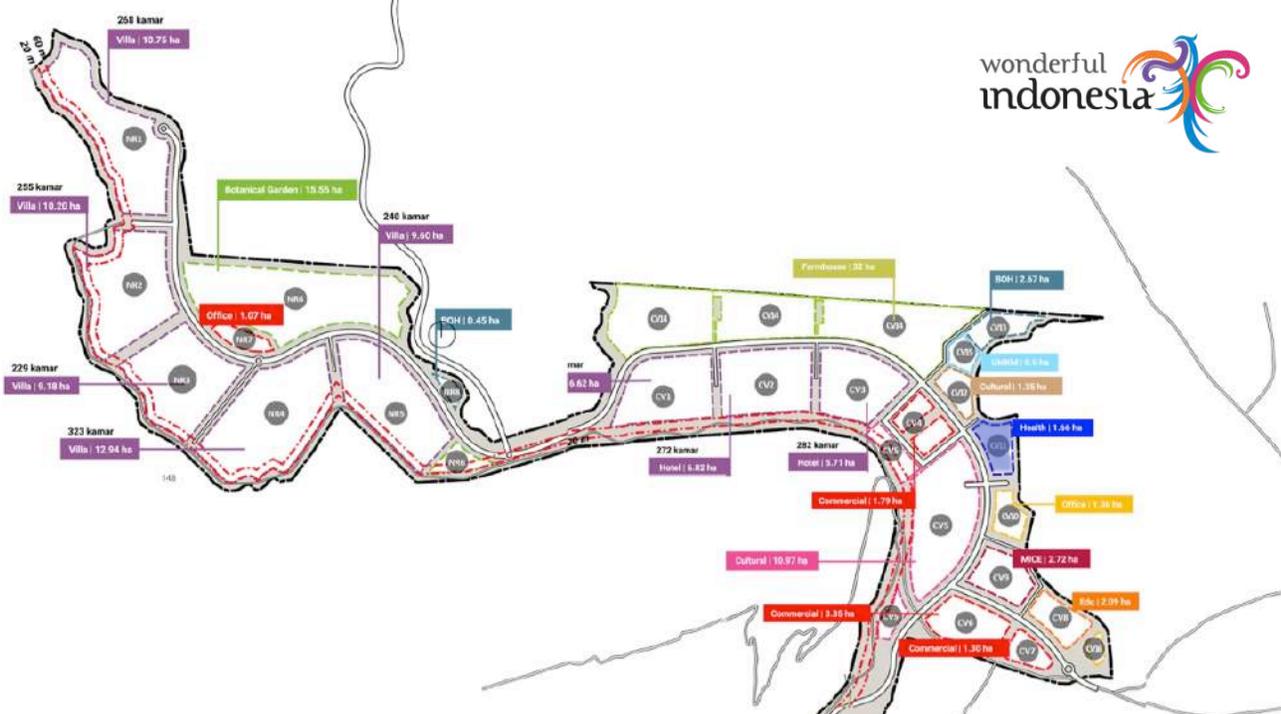
- Hospitality
- MICE
- Commercial
- Geo Cultural Park
- Supporting Facilities
- Healthcare
- UMKM centre
- Green Space
- Botanical Garden
- Agrofarm
- Golf Area
- Back of House
- Culture Center
- Set Back 60 m
- Set Back 20 m (Public Space)



HEALTHCARE



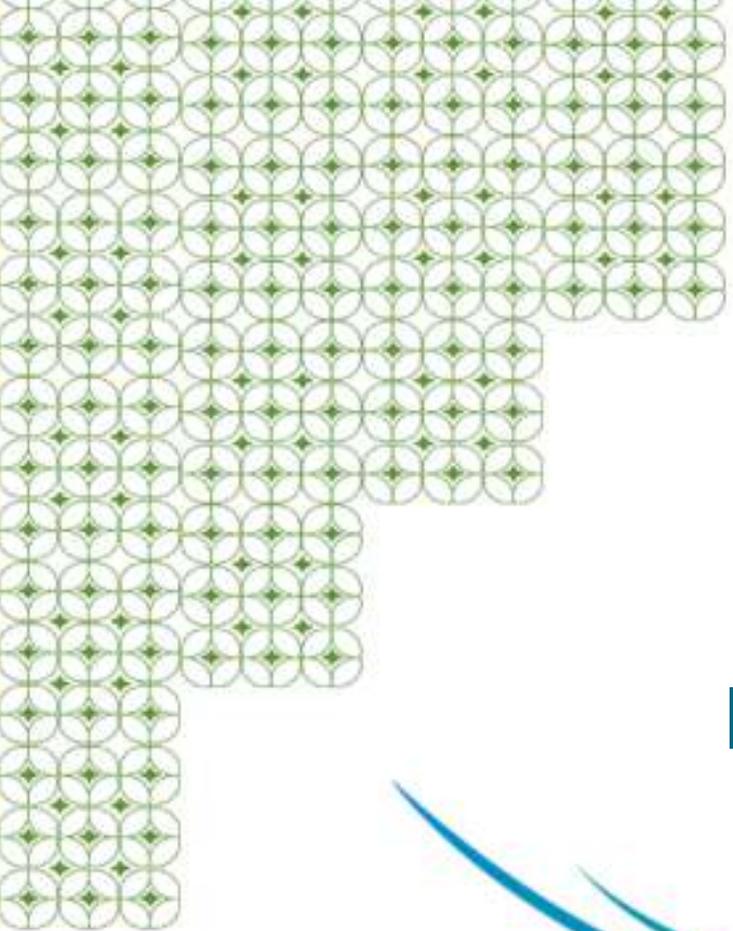
CV 11: 1.66 Ha



Legenda

-  Hospitality
-  MICE
-  Commercial
-  Geo Cultural Park
-  Supporting Facilities
-  Healthcare
-  UMKM centre
-  Green Space
-  Botanical Garden
-  Agrofarm
-  Golf Area
-  Back of House
-  Culture Center
-  Set Back 60 m
-  Set Back 20 m (Public Space)





INITIAL INFRASTRUCTURE STUDY

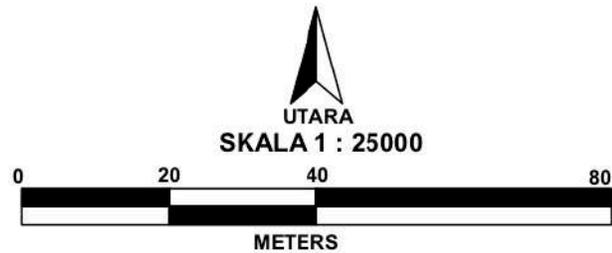


Initial Infrastructure Study TOBA CALDERA RESORT

Road

RENCANA PENGEMBANGAN KAWASAN WISATA DANAU TOBA

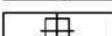
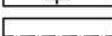
Desa Pardamean Sibisa, Desa Motung, dan Desa Sigapiton
Kecamatan Ajibata, Kabupaten Toba Samosir,
Provinsi Sumatera Utara

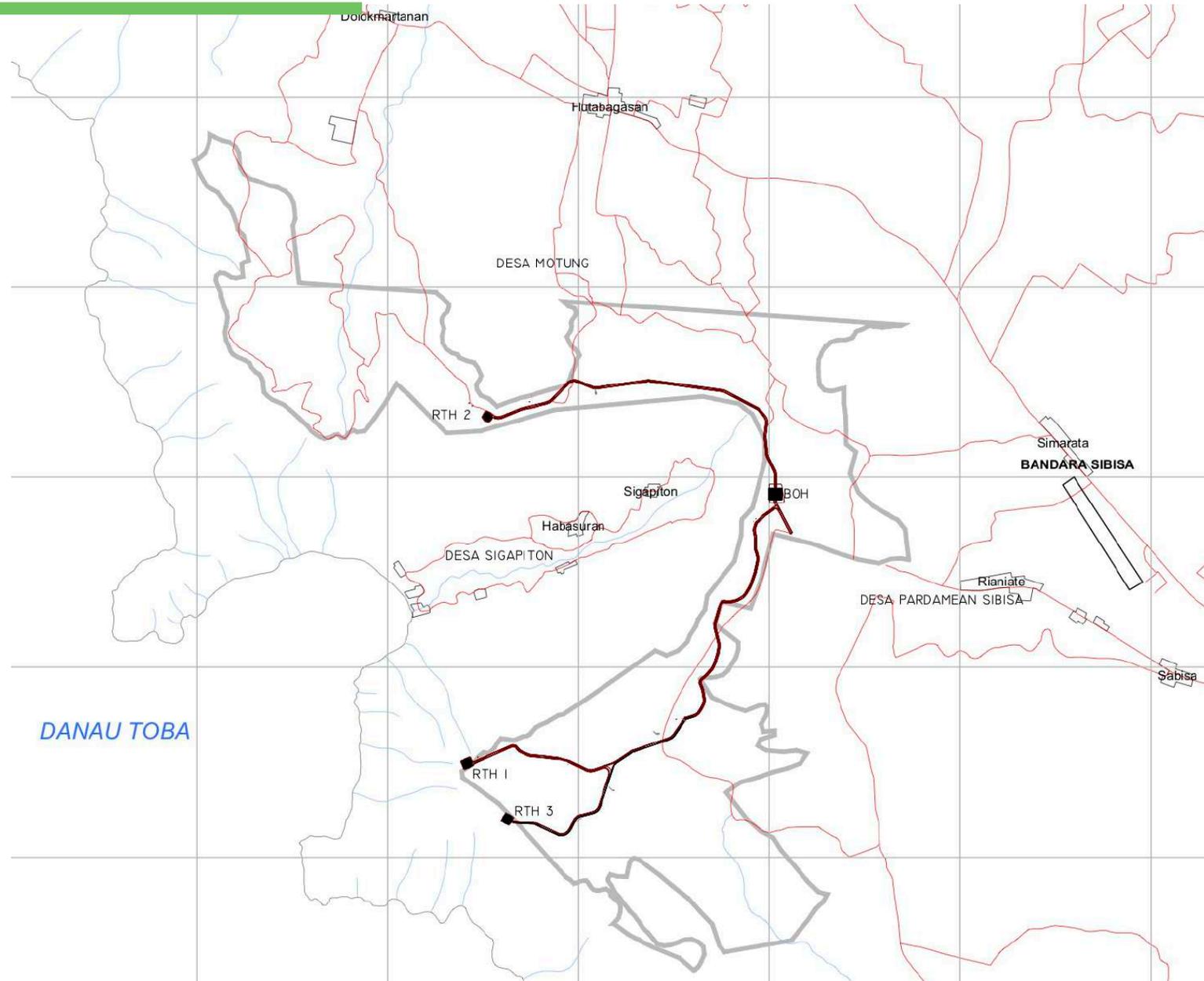


SISTEM KOORDINAT REFERENSI :

PROYEKSI : Universal Transverse Mercator (UTM)
SISTEM GRID : GRID UTM
DATUM : World Geodetic System 1984 (WGS 84)
ZONA : UTARA 47

LEGENDA :

-  RENCANA BACK OF HOUSE
-  RENCANA RUANG TERBUKA HIJAU
-  PATOK / BENCHMARK
-  BATAS DESA
-  JALAN EKSISTING (MOBIL)
-  BATAS LAHAN BPODT



Initial Infrastructure Study

TOBA CALDERA RESORT



Water Supply Infrastructure Concept

Water Demand

North Ridge: 35 liter/second
 Central Village: 28 liter/second
 South Ridge 27 liter/second

Water Sources

Lumban Siahaan Spring (36 l/sec),
 Lumban Manurung Spring (20 l/sec),
 Simarnaung Spring (25 l/sec)
 Motung Check Dam

Transmission

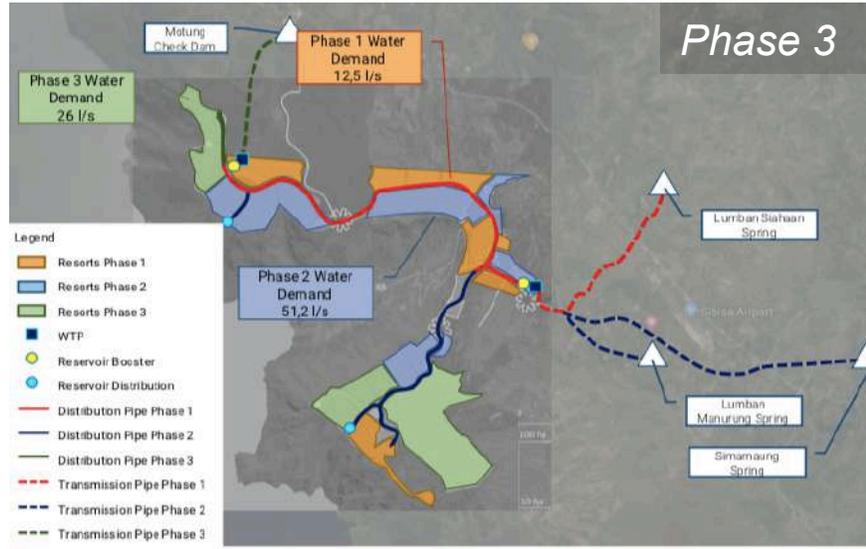
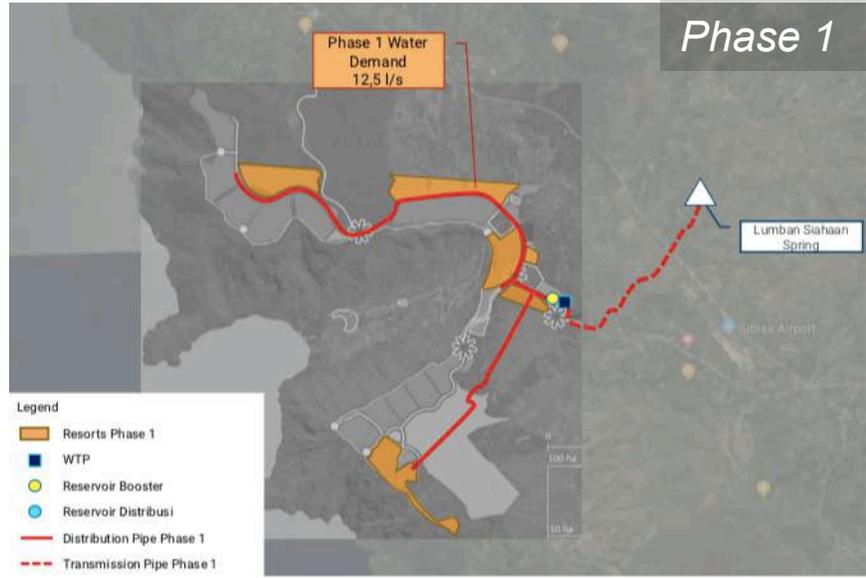
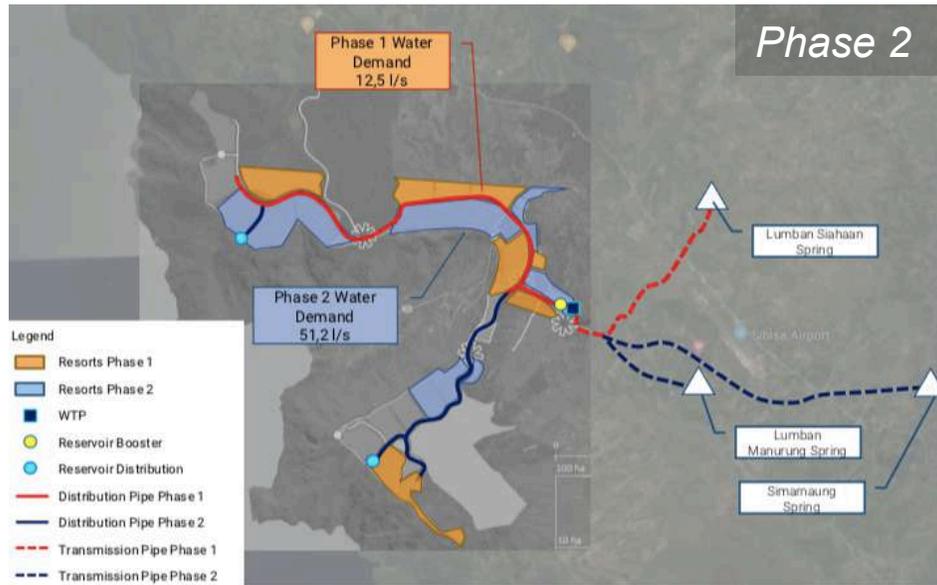
Pumping is needed to take water from Lumban Siahaan Spring, Lumban Manurung Spring, and Motung Check Dam
 Transmission with gravitation is possible for Simarnaung Spring

Distribution

1. Main pipe that convey water from WTP to Reservoir
2. Main Reservoir equipped with booster pump, and distibution reservoir
3. Primary, Secondary, Tertiary, and Reticulation Pipe that distribute water to each service block.

Production

Phase 1: Water Treatment Plant is planned to be built in Central Village. To accommodate the increasing water demand in the next phases, the WTP will be modular and its capacity will be easily increased.
 Phase 3: Water from Motung Check Dam will be used. 2nd WTP is planned to be built in North Ridge.



Initial Infrastructure Study TOBA CALDERA RESORT

Waste Water Supply Infrastructure Concept

Phase 1

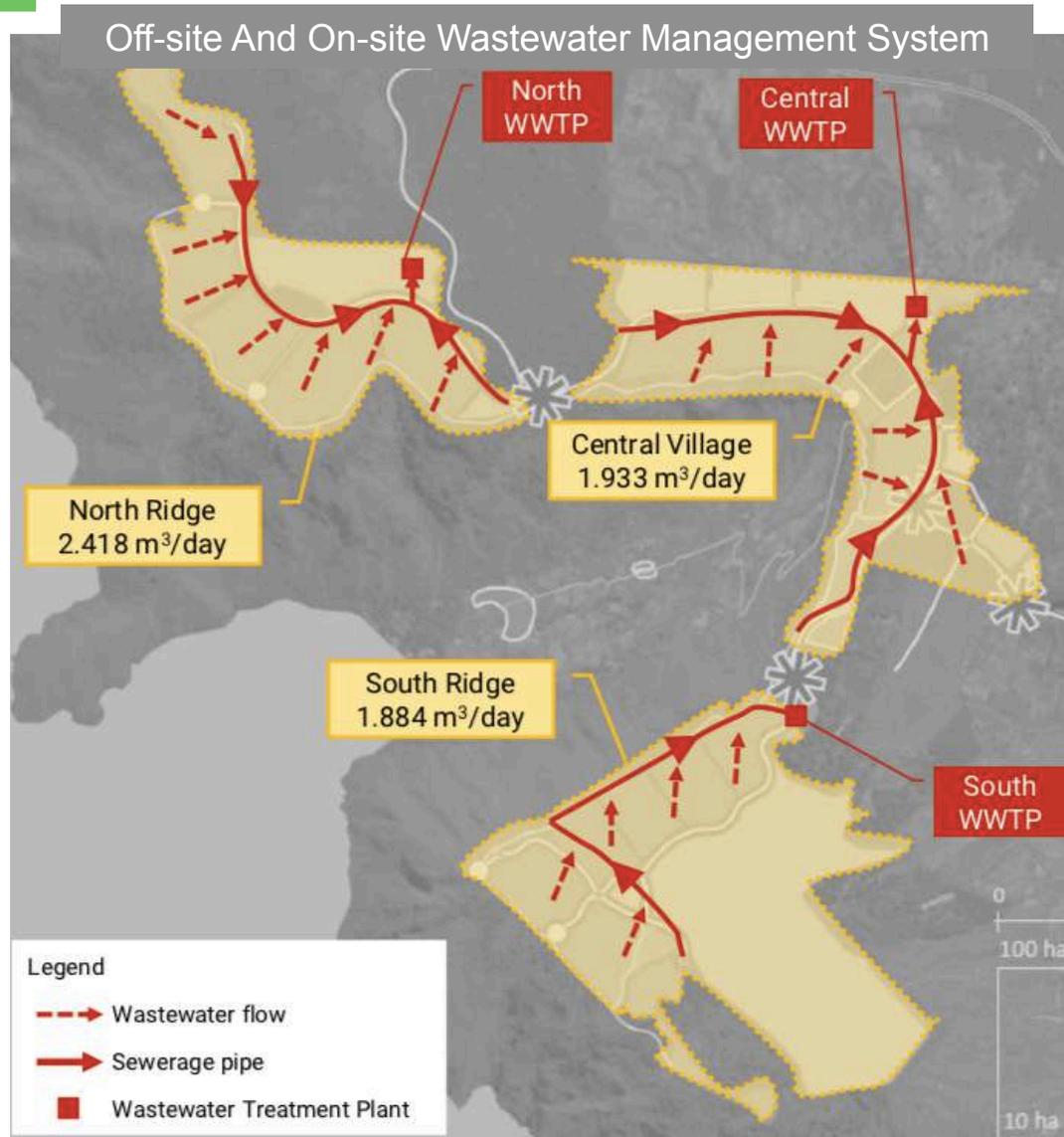
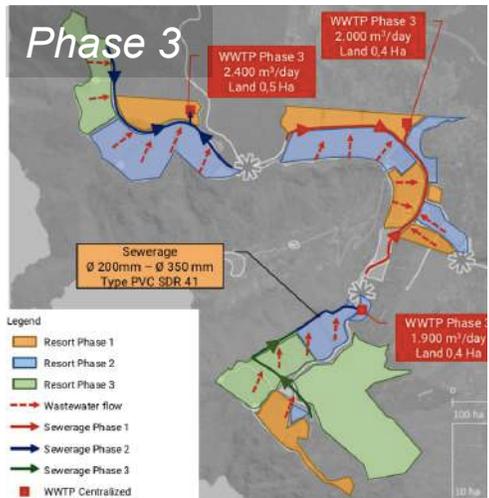
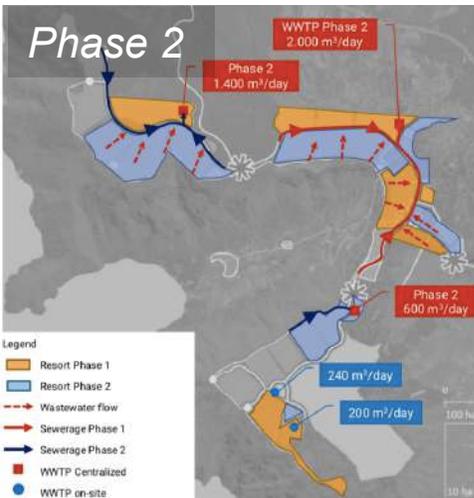
Both off-site and on-site system will be utilized. Centralized wastewater treatment plant and sewerage system will be built and operated first in Central Village. On-site system will be applied in Botanical Garden North Ridge and Luxury Villa and also Glam Camp in South Ridge.

Phase 2

Another centralized WWTP will be built for North Ridge and South Ridge. The capacity of WWTP in Central Village will be increased.

Phase 3

All zone will be serviced by centralized system. On-site WWTP in South Ridge will be connected to centralized system.

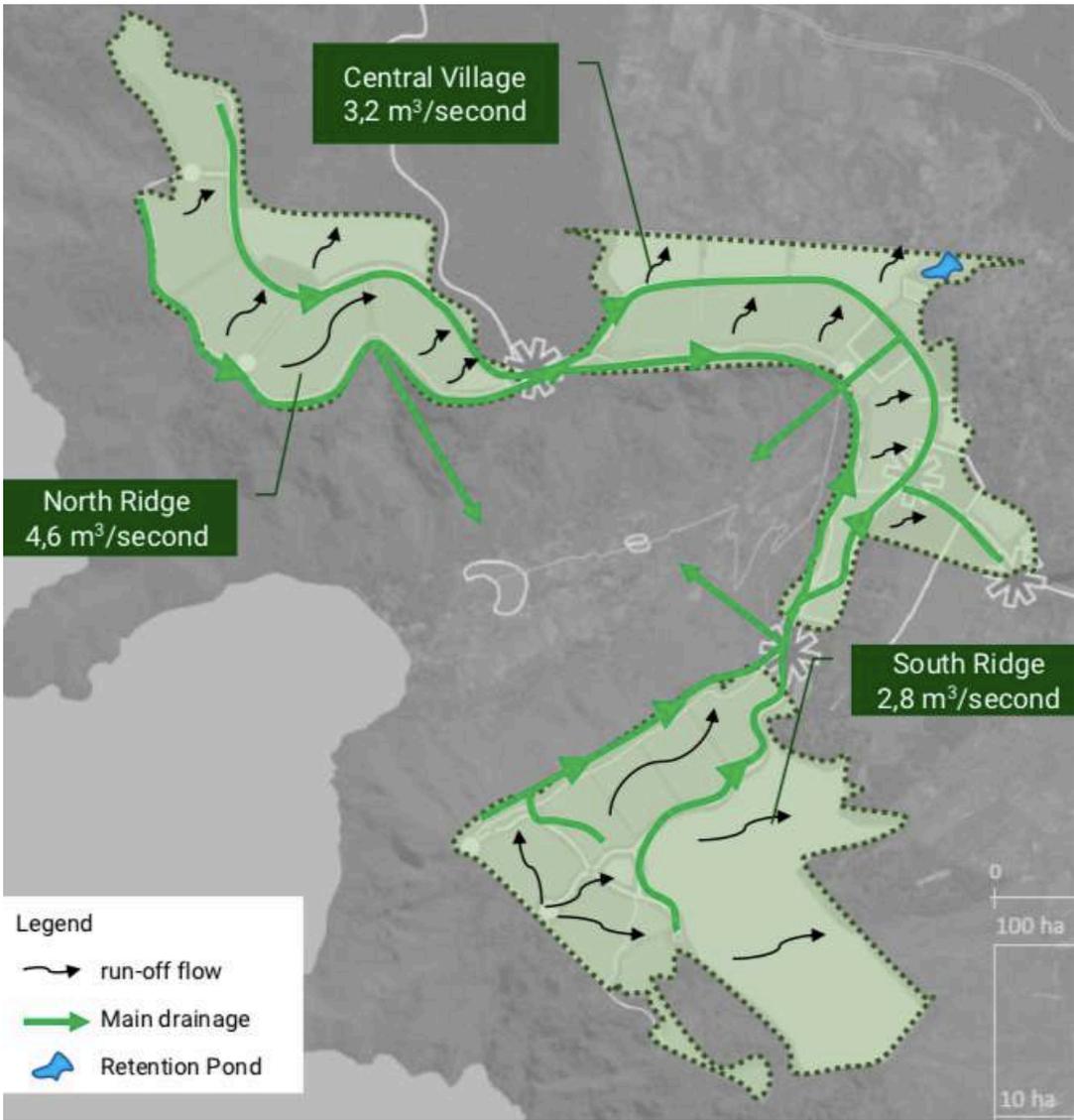
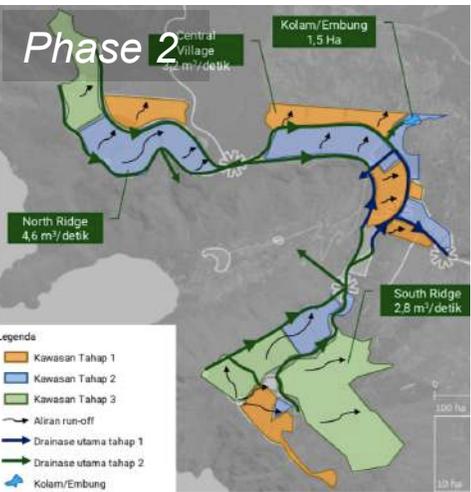
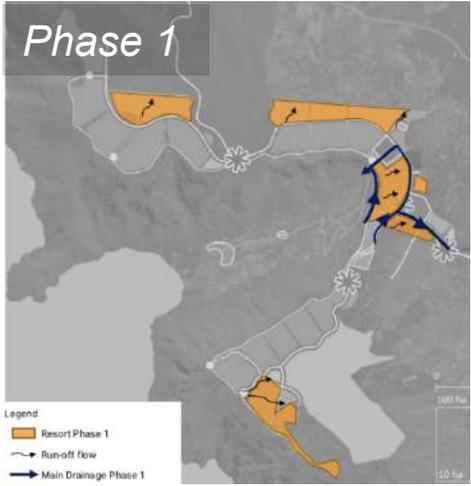
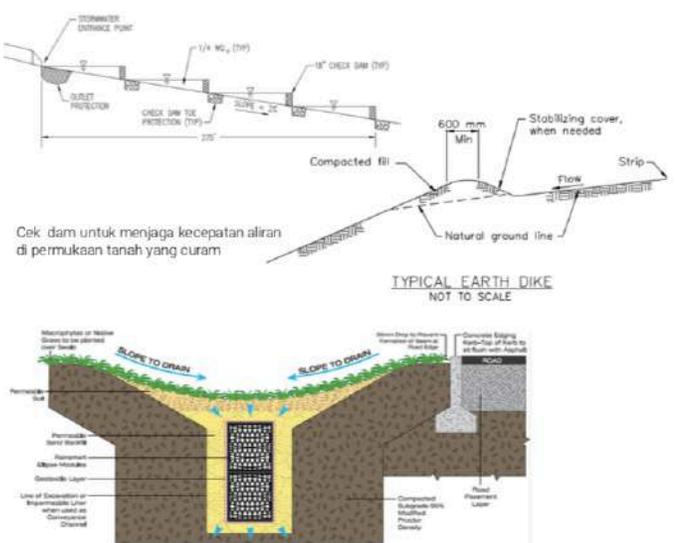


Initial Infrastructure Study TOBA CALDERA RESORT

Drainage Infrastructure Concept

Drainage system in resorts area is Bioretention Swale
 Swale drainage have certain characteristics that made water retention and infiltration possible, thus minimizing rainwater run-off that will flow to receiving water body. The flow within drainage channel will follow resorts area's topographical condition. The design of drainage system is based on 25 years return period rainwater intensity value with maximum intensity of 217 mm/hour.

Swale Drainage



Initial Infrastructure Study

TOBA CALDERA RESORT

Solid Waste Infrastructure Concept

Waste Generation

Total waste generation in resorts area is around 38 m³/day or around 12 ton/day.

Indirect System

Solid wastes that are generated from every activities in resorts area will be processed in intermediate treatment facility (ITF) within the resorts area. Organic wastes will be composted, and recyclable waste will be recycled. Only refused waste will be transported and dumped to landfill in Toba Samosir Regency.

Collection and Transportation Facility

Each building will have temporary waste container. Waste from each temporary container will be transported by truck with capacity of 3 – 6 m³. Wastes from the roadside will be transported using motorcycle with capacity of 1 – 1,5 m³. The wastes then will go to ITF for further treatment.

Phase 1

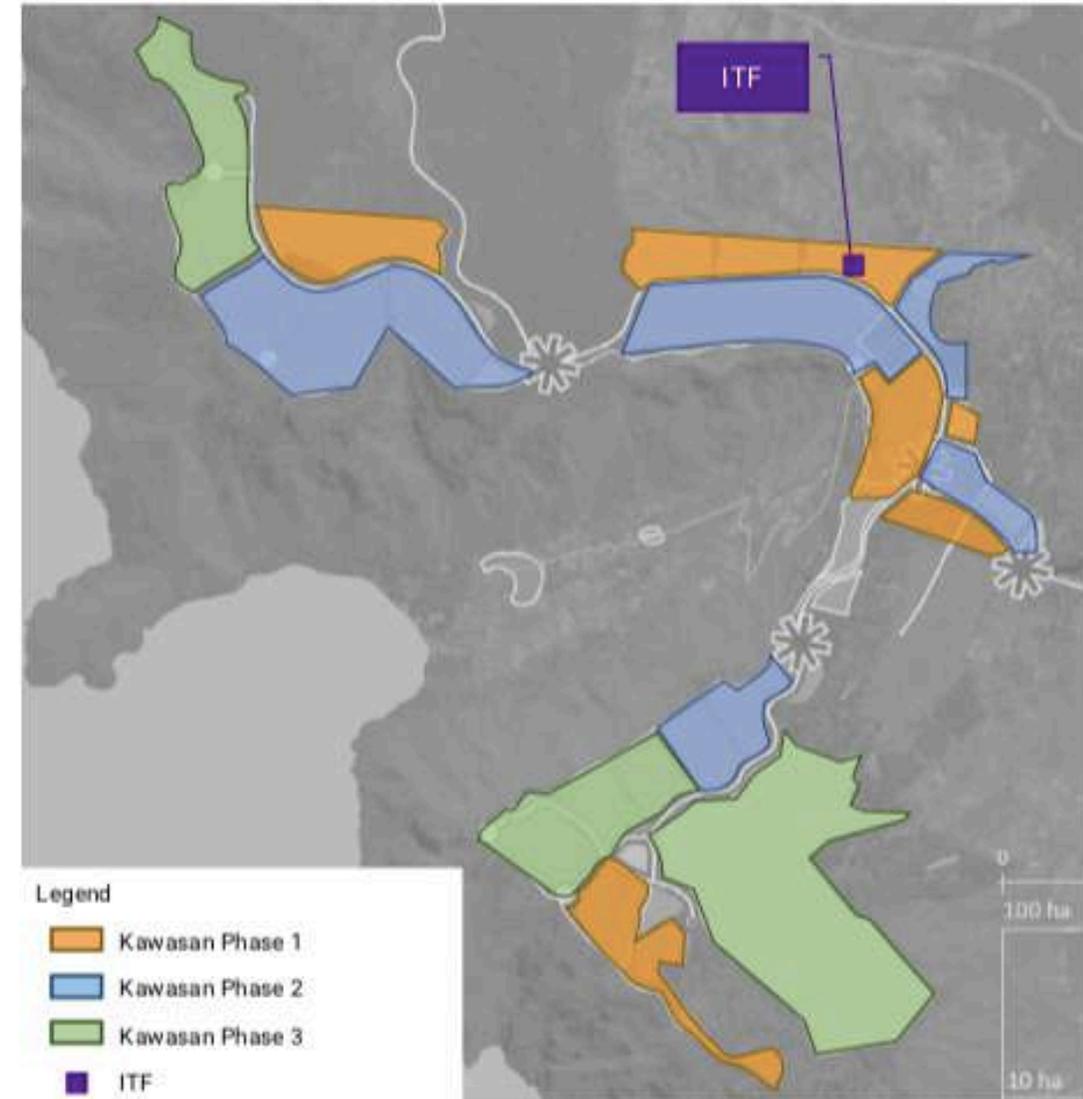
13,6 m³/day
4,1 ton/day
1 ITF
2 motor sampah
1 truk sampah

Phase 2

17,4 m³/day
5,2 ton/day
3 motor sampah
2 truk sampah

Phase 3

7 m³/day
2,1 ton/day
4 motor sampah
3 truk sampah



Initial Infrastructure Study

TOBA CALDERA RESORT

Electricity Infrastructure Concept

Power Demand

Total Power Demand is 45,68 MW. The power demand in Central Village is 18,95 MW, North Ridge 18,04 MW, and South Ridge 8,68 MW.

Electricity Network System

The main power source is planned to be drawn from PLN's main substation through 150 kV distribution system. The electricity is then received by substation within resorts area. The voltage will be reduced from 150 kV to 20 kV and then distributed to distribution station.

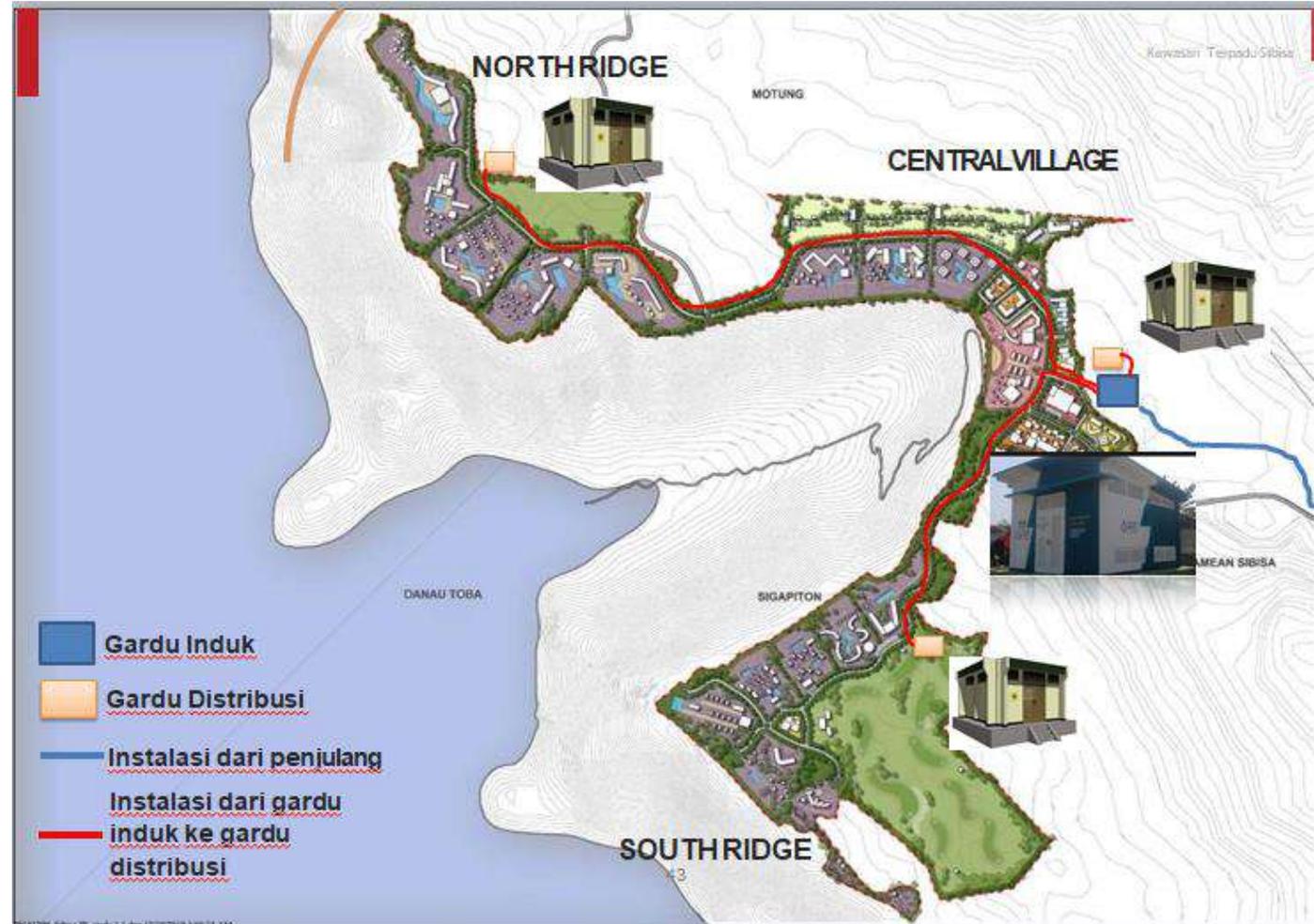
Emergency Power Source

Diesel Generator Set is used as emergency power source and will be provided in each building with 380/220 Volt to Low Voltage Main Distribution Panel (PDUTR). Genset is also located in each power house that are scattered in various places within resorts area.

Distribution Network System

Power is distributed with voltage of 380/220 Volt, 50 Hz to branch panels that are divider panels. The power then will be distributed from divider panel to every sub panels. Maximum drop voltage from load center to the farthest load point is calculated to be 5%.

Lightning Protection and Grounding System that consists of External Protection, Internal Protection, Grounding System, and Open Area Lightning Rod.



Initial Infrastructure Study TOBA CALDERA RESORT

ICT Infrastructure Concept

ICT System For Telephone Communication And Data Communication

ICT technology in one system that consist of:

1. Network Backbone – LAN
2. Resorts area web portal, and
3. Application program module

The network is planned to use fiber optic cable.

ICT Network Backbone

ICT Network backbone consists of LAN, Data Center, Backbone Optic and network inside or outside of building that consists of passive components (copper cable and fiber optic), and also active components (switch, router, hub) that will be arranged according to IT blue print that is provided by IT service provider in resorts area. It is estimated that 1.220 lines of cable network and fibre optics are needed.

Telephone Communication System

PABX (Private Branch Exchange) or extension is private network. In PABX, several line of PSTN from Telkom are further divided to private lines in a building. It is estimated that 1.220 line are needed for automatic central telephone connection in resorts area.

