



**ARCHSTORMING**  
ARCHITECTURE COMPETITIONS

# HOPE DENTAL CENTER

RWANDA CLINIC AND TRAINING INSTITUTE

**/ARCHITECTURE COMPETITION/**

in collaboration with



# INTRODUCTION

Archstorming is collaborating in this new competition with His Hands On Africa (“HHOA”), a non-profit organization born in 2016 that wants to address the lack of dental services by equipping communities to achieve sustainability with dignity. The chosen location is Rwanda, a small country in the heart of Africa.

In the aftermath of the 1994 Rwandan genocide against the Tutsi, life expectancy from birth was just 28 years, according to data by The World Bank. Today, that figure has more than doubled. However, despite this increase, 18% of morbidity cases that are directly linked to treatable oral diseases are easily preventable and curable with access to basic dental care and education, according to the 2016 reports by the Rwandan District Hospital <sup>(1)</sup>. Rwanda currently has 48 dentists in a country with a population of almost 12 million people, which translates to about one dentist for every 250,000 potential patients. By comparison, the United States has approximately 1 dentist per every 1,600 patients. Despite major efforts to rebuild the nation, the statistics remain in despair and the need for more dental care professionals is greater than ever.

We simply cannot overlook this dire and overwhelming need. His Hands On Africa was created to improve the oral-health care need in Rwanda but a few questions remain: how does a developing country scale affordable and quality healthcare when the majority of its population live on a few dollars a day? How do you maximize foreign aid while also empowering the nation to partner in a sustainable solution for the long term? How do you reach people who do not have the means or ability to access locally based facilities?

**In this competition, we will help HHOA build its HOPE Dental Clinic and Training Institute in Kigali, the capital of Rwanda.**



(1) 2016 Annual Health Statistics Booklet, Rwandan Ministry of Health

# THE NGO: FOUNDERS

**Dr. Thomas Lee**



Dr. Lee received his Doctor of Dental Surgery degree from the University of California at San Francisco School of Dentistry (USA) in 1989. He brings 30 years of successful private practice experience to Rwanda to raise up and empower young Rwandan dentists to care for their own people and to build a sustainable dental care system in Rwanda. Since 2013, Dr. Lee and his wife, Lita, have returned to Rwanda every summer to care for the people and love Rwanda deeply.

**Lita Lee**



Lita's passion is to help Rwandans heal emotionally and spiritually. Lita has been studying and receiving intensive training in Christian counseling. Her dream is to be used by God to restore hope through emotional and divine healing. Her love and compassion run deep for the children, the families, and the wider community.

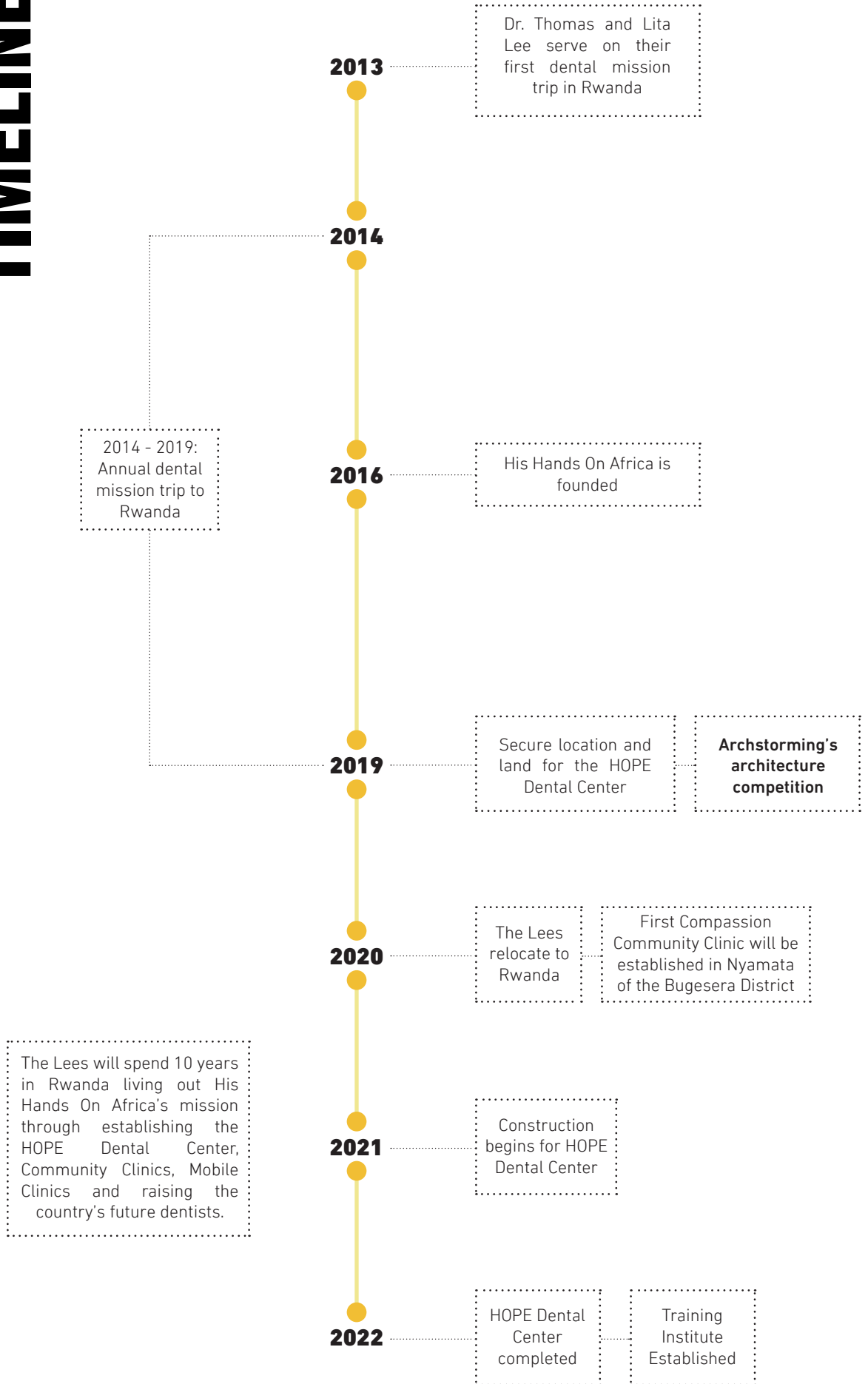
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In 2013, Dr. Thomas Lee and his wife, Lita, were planning for their 25th anniversary and Thomas' 50th birthday celebration. That same year, Jean Claude Rwagasore, from Best Family Rwanda - a ministry dedicated to making Jesus known to the orphaned and vulnerable Rwandan children - came to their church in California to share his testimony. Jean shared of his unimaginable pain and suffering during the 1994 Rwandan genocide against the Tutsi and his story of forgiveness, healing and hope.

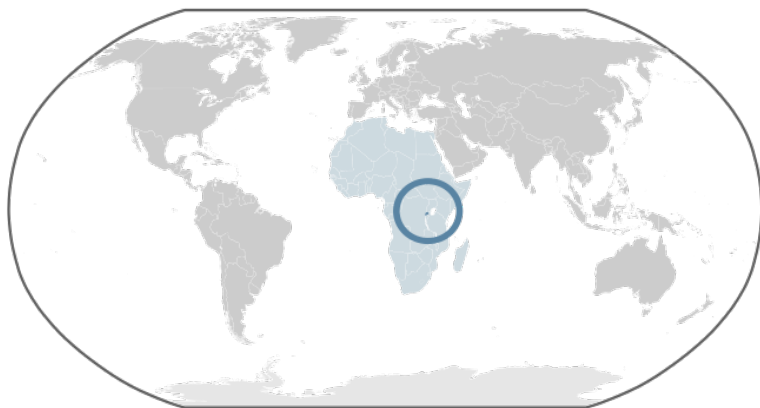
Through the testimony, God moved both Thomas and Lita's hearts to celebrate their milestones by helping people in Rwanda on a short-term summer medical mission trip. While on that trip, they received a clear calling from God to commit the remainder of their lives healing and blessing those in Rwanda through long-term dental ministry. Since then, the Lees have been going back to Rwanda for dental missions every year to lay the foundation for their future ministry.

**In 2016, Thomas and Lita officially established His Hands On Africa, a non-profit organization.**

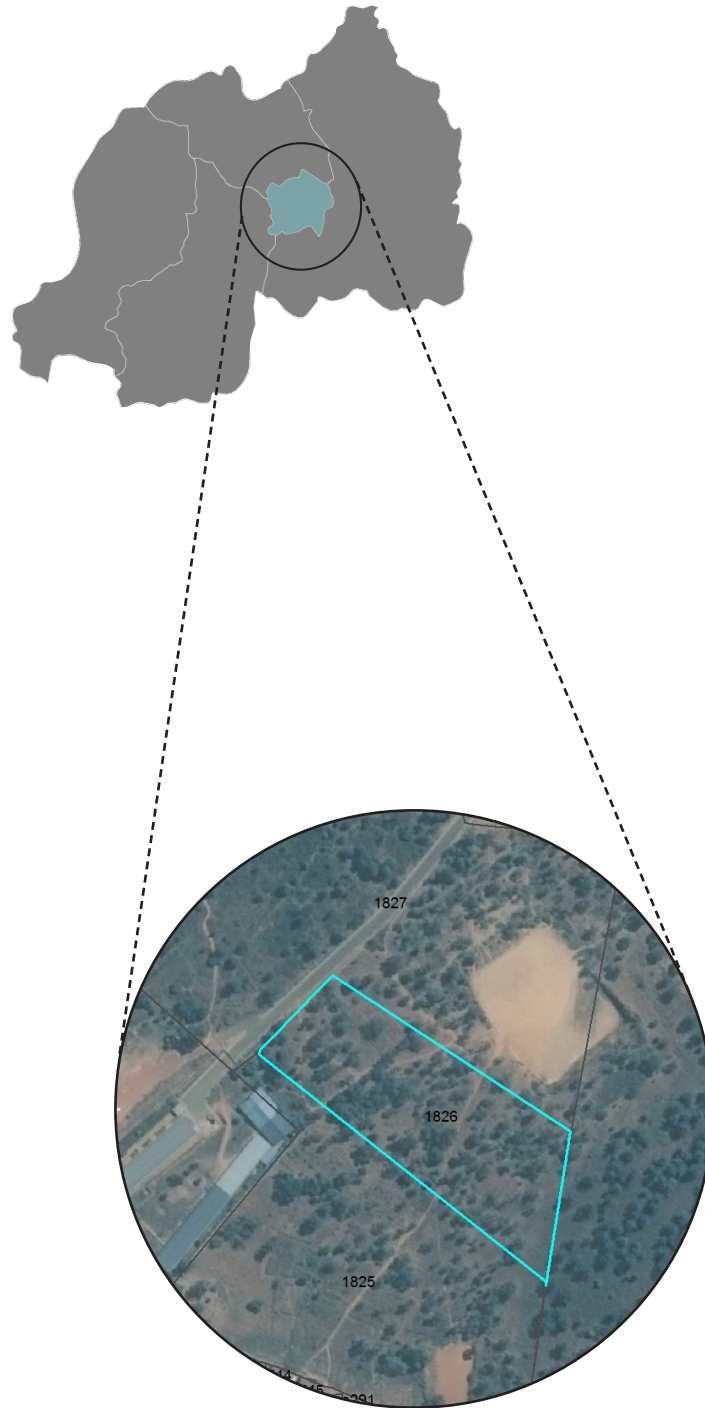
# TIMELINE







# LOCATION



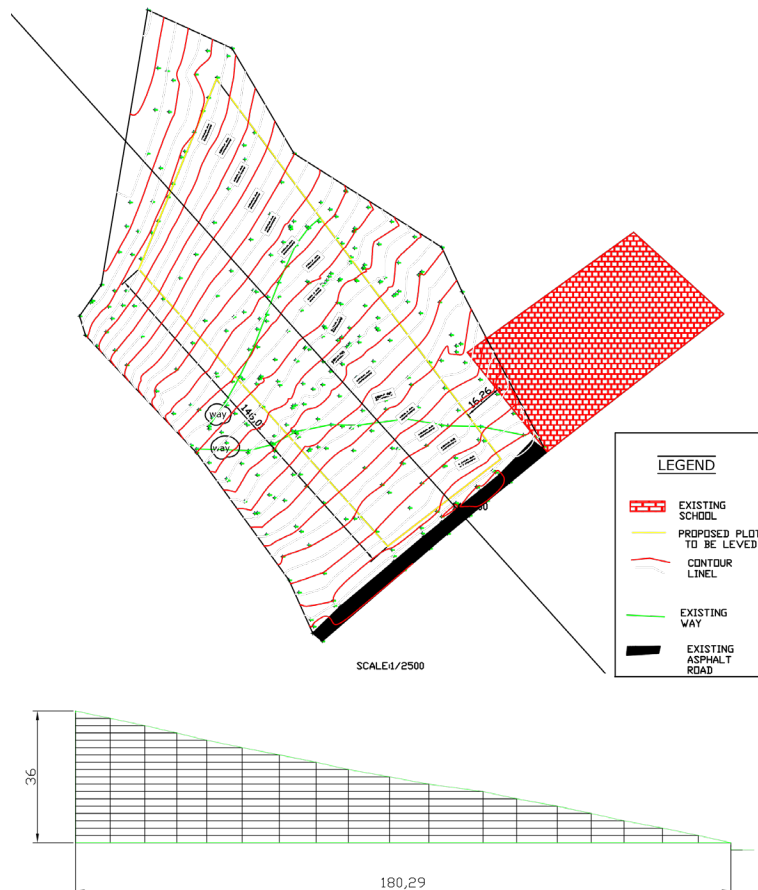
**Archstorming is calling for proposals to design a dental clinic and training institute in Kigali, the capital of Rwanda.**

The facility will be built in the city of Kigali, near the geographic center of the country, with a population of more than 1.1 million people.

The plot is located in the north-west part of the city, in the Gasabo District, Kacyiru Sector, Kamutwa Cell, Umutekano Village, with parcel ID number 1826.

Further information and zoning guidelines can be consulted in this web page: <http://www.masterplan2013.kigalicity.gov.rw/> (use of Internet Explorer is recommended)

# THE SITE



The parcel extends to nine thousand nine hundred and ninety-eight square meters (**9,998 m<sup>2</sup>**) approximately as per the Kigali city master plan.

This is a **roughly rectangular brown soil steep plot** with open ended boundaries. The long sides measure 146.01m and 186.68m, and the short ones 81.79m and 56m.

The plot area is currently vacant and grown with **eucalyptus trees mixed with some food crops**. Each tree is correctly located in the DWG plan that we will send after registration. Since there is a huge quantity of trees and bushes, the site will have to be cleared of them, as well as any ant-hills, rocks, or dumped material we may find. **You are free to preserve as many trees as you find appropriate in your design.**

There is an existent **asphalt road on the north-west side of the plot** (bottom right in the image above). But you also have to consider that a **new road is planned to be built in the future**. It will be located in the south-east side of the plot. **The main entry to the project will be off the new road on the east end of the site. The triangle area south east corner of lot created after new road is built, will not be part of the design competition. The final area of the plot will be 8,000 m<sup>2</sup>.** See page 14 of the briefing for more information.

The topography study reveals that **there is a pronounced slope in the plot. The height difference is 36 meters**. It is very important to take that into account in your designs.

**A detailed topographic plan of the site will be sent after registration.**



# CLIMATE

In Rwanda, the “land of a thousand hills”, is located just south of the Equator. The climate is pleasantly **warm all year round**, with cool nights, because of the altitude. In fact, **most of the country is located on a plateau, around 1,500 meters (5,000 feet) above sea level**. The altitude decreases below a thousand meters (3,300 feet) only in the westernmost part, along the Rusizi River, which marks the border with the Democratic Republic of the Congo. This is therefore the only area where it can get hot, and the temperature can sometimes reach 35 °C (95 °F).

Precipitation ranges from 1,000 to 1,400 millimeters (40 to 55 inches) per year depending on area. **There is a dry season from June to August (with July as the driest month) and a rainy season from September to May**. On closer view, there would be two rainy seasons, caused by the zenith passages of the sun, from March to May and from September to November. However, the decrease in rainfall from December to February is small, and it is just more pronounced in the north, where it drops below 100 mm (4 in) per month, so we cannot properly speak of dry season. Between the two rainy seasons, the most intense is the one from March to May, and the rainiest months are usually April and May, when precipitation reaches 150 mm (6 in) per month, or even more.

The capital, Kigali, is **located at the center of the country**, at 1,500 meters (5,000 feet) above sea level, and **receives 950 mm (37.5 in) of rain per year**, with a maximum in April and a minimum from June to August, when it almost never rains. From December to February, the rains are still quite frequent.

Temperatures in Kigali **are stable all year round**, and hover around 26/27 °C (79/81 °F) during the day and around 15/16 °C (59/61 °F) at night.

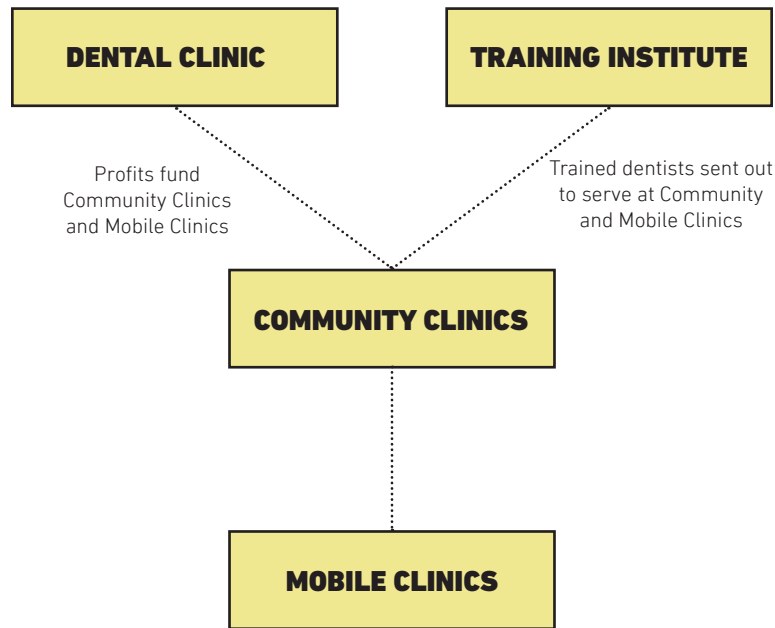


*Actual site pictures*





# THE VISION



The HOPE Dental Center's operations consist of three components:

- **DENTAL CLINIC:** The HOPE Dental Center will operate a world-class dental clinic in the Kacyiru sector of the capital city, Kigali. It will be the foundation of HHOA's vision for a sustainable dental care system in Rwanda. The clinic will be equipped with the latest dental equipment and technology and managed with efficiency to provide an excellent patient experience.

It will provide dental care to nearby high-income clientele, such as those employed by embassies, corporations and NGOs in Kigali. Having run a successful practice in California since 1991, Dr. Thomas Lee has the experience and strong leadership to make the HOPE Dental Center into a highly profitable clinic.

The **profits from the HOPE Dental Center will then go towards funding the other two HHOA mission components**, which focus on training and disciplining local Rwandan dentists (Education), and operating Community Clinics and Mobile Clinics throughout the country (Compassion Ministry).

**Once the HOPE Dental Center is firmly established, the ongoing operations and management of the center will be transferred to Rwandan doctors and staff.**



# THE VISION

- **EDUCATION:** Part of HHOA's mission is to raise up Christian dentists through education and discipleship, then send them out to serve their communities with love, compassion and integrity.

In addition to the dental clinic itself, the HOPE Dental Center will **include a state-of-the-art training institute and dental laboratory where local dentists will receive advanced dental training.**

In partnership with The University of Rwanda College of Medicine and Health Services' School of Dentistry\*, Dr. Lee will provide teaching and paid apprenticeships to a number of graduates who are selected to pursue advanced training at the center's institute.

These dentists will continue the work of His Hands On Africa by providing dental care at the HOPE Dental Center, Community and Mobile Clinics, and training the next generation of Rwandan dentists.

- **COMPASSION MINISTRY:** As part of the Compassion Ministry, His Hands On Africa will establish and operate **two** types of dental clinics in strategic locations throughout Rwanda to reach people who have limited or no access to dental care: **Community Clinics** and **Mobile Clinics.**

- **Community Clinics** will partner with existing **Rwandan District Hospitals,** to upgrade the dental clinics within the network. The dentists trained at our training institute will be sent to each district hospital to increase the range of services and upgrade the quality of care that is provided, along with sharing the Gospel.

- **Mobile Clinics,** based out of each Community Clinic, will use portable dental equipment to reach extremely remote areas of Rwanda and provide care for those who have no access to even the most basic dental care throughout their lifetime. These will be equipped to create pop up clinics which include a patient's chair, power generator, and enough supplies to maintain hygiene and painless care.

The first Community Clinic will be established in 2020 at Nyamata District Hospital, in the Bugesera District.



# THE CHALLENGE: PROJECT SCOPE

This competition gives you the opportunity to work in the **development of the HOPE Dental Center and training institute in Rwanda that will be built.**

In order to better adapt to the plot slope, we propose **creating three (3) different buildings**, with the following indicative program:

## **Building #1 - Ground floor:**

<b>Type of space</b>	<b>Number</b>	<b>m<sup>2</sup></b>	<b>Total</b>
Dental Office			
Operator	8	12	96
Large teaching/private operator	2	20	40
Waiting area + reception desk	1	55	55
VIP private entrance	1	40	40
VIP private waiting area	1	40	40
Director office	1	30	30
Consultation room	1	11	11
Jr Doctor office	1	15	15
Dental lab	1	230	230
Business offices	3	14	42
Public restroom	1	30	30
Private restrooms for staff	1	20	20
Conference room for staff (20 people)	1	55	55
Mechanical room	1	23	23
Computer room	1	23	23
Dental supply room	1	23	23
Hall/ stairs and elevator/ paths	1	140	140
Total			913

## **Building #1 - First floor:**

<b>Type of space</b>	<b>Number</b>	<b>m<sup>2</sup></b>	<b>Total</b>
Large conference room (100 people)	1	230	230
Training room with lab (20 people)	1	55	55
Cafeteria (100 people)	1	140	140
Outdoor terrace	1	140	140
Kitchen	1	45	45
Restroom	1	20	20
Mechanical room	1	14	14
Small chapel (20-30 people)	1	30	30
Hall/ stars and elevator/ path	1	70	70
Total			744

Remember that size of the rooms is **indicative**, you can have small modifications to better adapt it to your proposal.



# THE CHALLENGE: PROJECT SCOPE

## **Building #2 - Ground floor:**

<b>Type of space</b>	<b>Number</b>	<b>m<sup>2</sup></b>	<b>Total</b>
Dental supply company			
Warehouse with truck ramp	1	835	835
Director office	1	25	25
Office rooms	5	10	50
Restrooms	1	20	20
Kitchenette	1	10	10
Storage room	1	20	20
Total			960

## **Building #3 - Ground floor:**

<b>Type of space</b>	<b>Number</b>	<b>m<sup>2</sup></b>	<b>Total</b>
Regular bedroom	8	20	160
Large bedroom	2	30	60
Bathroom for large bedrooms	2	10	20
Common area/eating area	1	50	50
Kitchen	1	20	20
Hall	1	20	20
Storage	1	15	15
Total			345

## **Green spaces:**

- The terrace in Building 1 has to be associated with the conference room, cafeteria, chapel.
- Building 2 offices should have a patio.
- Building 3 should have a patio space associated with the bedrooms and common area.
- The program should include a **garden area for meditation**.

As said before, this program is indicative, **these spaces must appear in your project** but their size can vary according to your design.





# THE CHALLENGE: PROJECT SCOPE

The proposed program should have the following characteristics:

## **Building #1 - Ground floor:**

**Operatory:** small space for 1-3 people: patient, doctor and dental assistant. No doors required.

**Large teaching/private operatory:** larger space for 5-8 people to view and learn live surgery, will have door.

**Waiting area + reception desk:** spacious waiting area with natural light.

**VIP private entrance and waiting area:** discrete entrance located close and accessible to the large operatory with separate entrance from public lobby.

**Director office:** large space enough for sofa for guests, a restroom and a shower.

**Consultation room:** small private room with table.

**Business offices:** three offices for the clinic personal that should be connected to reception area.

**Mechanical room:** for dental air compressor and vacuum systems.

**Dental supply room:** a storage room for dental supplies.

**Jr Doctor office:** one office for 2 doctors.

**Dental lab:** space for 10 people with dental equipment.

## **Building #1 - First floor:**

**Large conference room:** with audiovisual equipment. Flexible room configuration, movable partitions...

**Training room with lab:** live learning space, audiovisual equipment, projector and screen.

**Cafeteria:** accessible to conference room and the kitchen, with capacity for approximately 100 guests.

**Outdoor terrace:** with tables and patio cover.

**Kitchen:** to attend the staff of the clinic during the week, and attendees of the seminars during weekend (50 to 100 people). Full-size industrial kitchen. Needs outdoor kitchen area for prep and BBQ.

**Please take into account that some spaces that use very specific furniture, such as operatories, dental labs or training labs, will have their interiors designed by a specialist once the winning proposal has been chosen. Your entry should not focus on the specific interior spaces. It is sufficient to just provide information about their location, proposed access and materials.**

The main building will have a Donor Wall, with space for approximately 1000 donors. Potential locations can be the main lobby or a covered outdoor area.



# THE CHALLENGE: PROJECT SCOPE

## Building #2 - Ground floor:

**Dental Supply Company:** the dental supply company will be a distribution center. It is not a retail store. It will be a warehouse where HHOA will import dental supplies in containers, store the materials in the warehouse, and deliver or ship the supplies as orders are placed by dental clinics located throughout Rwanda. So the space will be very basic. A large warehouse with few office spaces for staff to conduct business.

**Warehouse with truck ramp:** to be located toward the North West part of the site. It should have a loading dock for trucks. It is desirable to have the main warehouse truck access off of the existing road on the north west boundary of the property.

**Multiple office rooms:** One room for director (5 m x 5 m) and another 5 small offices. This area should also include restrooms and a storage room.

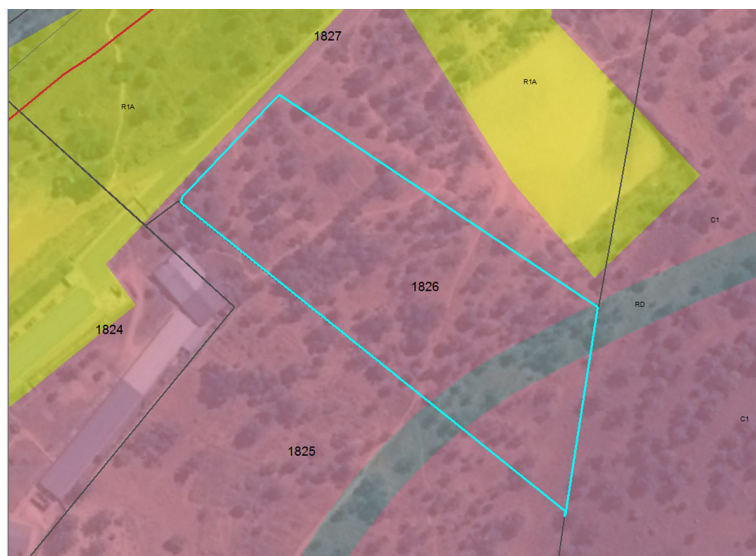
## Building #3 - Ground floor:

**Regular bedroom:** 8 regular rooms for double occupancy with two twin or double beds, a bathroom and a kitchenette.

**Large bedroom:** 2 large rooms for 6-8 people occupancy (3-4 bunk beds).

**Common area/eating area:** dining hall and lounge sofa area, with outdoor patio space.

**Kitchen:** full kitchen with outdoor kitchen area for prep and BBQ.



The new road is expected to be located on the south east part of the plot (see image above). That road will be used as the main access to the facility. Building #2 should be close to the existing road, at the NW boundary of the property.

**The facility will need a perimeter wall and a guard station and security gate at the main entrance.**

**Triangle area south east corner of the lot will not be part of the design competition.**

# MATERIALS AND BUILDING TECHNIQUES

**In this competition the winning project is going to be built.** The chosen proposal will be used as the basis for the final project. Therefore, the materials and building techniques will be crucial.

The election of materials is open, but you have to take into consideration that **HHOA would like to build a high-end building.** Material should be locally sourced and accessible as much as possible. In the material we will send you after registration, you will find some pictures of building references where you'll have a better idea of how the HHOA is imagining their center. They would like to have a **modern building with Rwandan/African accents.**

Sustainability is a fundamental matter in new buildings, not only in Africa, but all around the world. That is why the building will have to consider matters such as **energy, heating and ventilation efficiency.**

Renewable energy sources are welcome in your proposal. **Solar panels should be considered and integrated into the site design.**

Also, site planning should integrate **sustainable water management strategies with deposit tanks. Also, rainwater has to be collected and recycled.**

**There's not a public sewer network to connect.**

**All site and building areas shall be designed to be accessible for the disabled.** An **elevator** will also be needed in the multi-story building.

Since there is a pronounced slope in the plot, maximizing views from the building will be very important for your proposal.

The facility will include a parking lot.

**The estimate budget for building construction is \$2,000,000 USD.**



# COMPETITION DETAILS

## ELEGIBILITY

Any architecture student or professional architect can participate in HOPE DENTAL CENTER, regardless of their nationality. Likewise, people from other disciplines can also participate, such as engineers, philosophers, sociologists, photographers, etc. It is not necessary to have an architect on the team, although it is recommended.

Teams may be formed by a maximum of four (4) members and a minimum of one (1).

All team members must be 18 years of age or older.

The registration fee must be paid per team, regardless of the number of members (1-4 people).

In the event that a team or participant wants to participate with more than one proposal, it will be necessary to register twice (or as many times as proposals will be submitted), paying the full price corresponding to each registration.

Under no circumstances may jurors, the organization or persons directly related to the jury participate in this competition.

## AWARDS

Prizes totaling 10.000€ + CONSTRUCTION, broken down as follows:

1st PRIZE

**6.000 €**

+

**PROJECT CONSTRUCTION**

2nd PRIZE

**2.000 €**

3rd PRIZE

**1.000 €**

SPECIAL HONORABLE MENTION

**500 €**

SPECIAL HONORABLE MENTION

**500 €**

+10 HONORABLE MENTIONS

In addition, the winning projects or finalists will be published in magazines, blogs or architecture web pages, social networks or the Archstorming website.

\*Depending on the country of residence of the winners, the prize may be subject to the withholding or payment of taxes foreseen in the law of that country.





# COMPETITION DETAILS

## CALENDAR

NOVEMBER 6, 2019	EARLY REGISTRATION BEGINS
DECEMBER 11, 2019	EARLY REGISTRATION CLOSES
DECEMBER 12, 2019	REGULAR REGISTRATION BEGINS
JANUARY 15, 2020	REGULAR REGISTRATION CLOSES
JANUARY 16, 2020	ADVANCED REGISTRATON BEGINS
FEBRUARY 12, 2020	ADVANCED REGISTRATON CLOSES
FEBRUARY 13, 2020	LATE REGISTRATON BEGINS

## MARCH 6, 2020

## SUBMISSION DEADLINE

MARCH 7 - 22, 2020	JURY DECISION
MARCH 25, 2020	WINNERS ANNOUNCED

\*No submissions will be accepted after the general deadline indicated above: 23:59:59 Los Angeles time (UCT / GMT-7) or PDT.

## PAYMENT

Registration fees will depend on the registration date, and will evolve as follows:

EARLY REGISTRATION: **60€ + VAT**  
REGULAR REGISTRATION: **80€ + VAT**  
ADVANCED REGISTRATION: **100€ + VAT**  
LATE REGISTRATION: **120€ + VAT**

VAT: 21%

Registration process must be completed on the official Archstorming website. In order for the registration to be successful, the team must pay the fee corresponding to the registration date. Once the registration and payment process have been completed, there will be no refunds.

## PAYMENT METHODS

Visa, Mastercard, Discover and American Express credit or debit cards may be used. The Archstorming team will not have access to credit card details. Please provide the information on the card as it appears on it.

Likewise, payments are accepted through Paypal.

## REGISTRATION

Within 24 hours after registration and payment, the Archstorming Team will send a confirmation email that will include the work material (pictures, topography, site plans, etc.), as well as the registration number. This number must be placed in a visible spot on the team's competition board, preferably the lower right corner.

At the time of submission of the proposals, the registration number will be required to identify the team.

<http://www.archstorming.com/register.html>



# COMPETITION DETAILS

## SUBMISSION MATERIALS

Participants must submit **two (2) A1 format boards** (594x841 mm or 23.4x33.1 inches) oriented either landscape or portrait with the registration number in the lower right corner.

The content of the boards is open, as long as the idea that the participants want to communicate is clearly expressed. However, it is **important to detail the proposal with the materials and constructive systems thought**. Recommended information to be included in the boards are:

1. Site analysis, environmental conditions and cultural, view corridors, master plan, etc.
2. Architectural plans, sections, elevations or 3D renderings to describe architectural design concept.
3. Site plans, sections, elevations or 3D renderings to describe overall site design strategies for pedestrian access, courtyards garden, patio spaces and other exterior spaces.
4. Site sustainable strategies, passive cooling and natural lighting, as well as water management strategies.
5. Phasing diagram.

The boards must be delivered in JPEG or JPG format and the file name must be the registration number provided by the Archstorming Team (eg 432465423-1.jpg and 432465423-2.jpg for the two boards)

In addition, **one (1) description of the project no longer than 400 words** must be submitted. The description must be submitted in PDF format and the file name must be the registration number provided by the Archstorming Team (eg 432465423.pdf)

All the materials must be submitted in the Submit section on the Archstorming's website.

<http://www.archstorming.com/submit.html>

## EVALUATION CRITERIA

The jury will evaluate the projects based on the proposed objectives, the main being the creation of a dental center in Kigali, Rwanda, with the indications provided in this briefing.

The jury is free to add other criteria that they consider important for the creation of the HOPE Dental Center and Training Institute.

A total of 50 proposals will be selected for the final round. Among the 50 finalists, the jury will choose the winner, the second and third place, the 2 special honorable mentions, and the 10 honorable mentions.

## FAQ

You can check the most common questions in the corresponding section on the Archstorming website:

<http://www.archstorming.com/faq.html>

Also, during the competition, all questions sent by email will be answered individually and uploaded to the section of the website mentioned above.



# COMPETITION DETAILS

## **INTELLECTUAL PROPERTY AND COPYRIGHT**

All the projects that win a monetary prize will become property of Archstorming, and therefore give Archstorming all rights to the materials from that moment on. Archstorming reserves the rights to use any of the participating projects for exhibitions and publications, digital or paper catalogues and dossiers.

Archstorming will publish all materials given appropriate attributes to the authors.

Archstorming reserves the right to modify the proposals and text in order to better adapt them to any publication format, without changing the essence of the proposal itself.

The participant is responsible for using copyright-free images. Archstorming is not responsible for the use of protected images by the participants.

## **NOTES**

Archstorming reserves the right to make any changes in the rules of the competition (dates, requirements, etc.). It is the obligation of the participants to check on a regular basis the website of Archstorming to verify if the Terms and Conditions or the competition information have been modified.

His Hands On Africa is in charge of the project construction. Archstorming is collaborating with the project but not responsible of the Dental Center construction. If for any reason the NGO in charge of the project finally decides not to build it, Archstorming will not be responsible of the fact.

Archstorming is not responsible for any research done by participants in the area.

The breach of the norms and terms defined in this briefing or in the Terms and Conditions of the website of Archstorming will result in the immediate disqualification of the team without any refund of the payments made.

Archstorming reserves the right to cancel this contest in case it does not reach a minimum number of participants, defined in the Terms and Conditions. In that case, Archstorming will return the full amount of registration fees to the participants enrolled at the time of cancellation.

<http://www.archstorming.com/terms.html>

