

EXPANSION PROPOSAL OF THE KOUTIALA WOMEN'S AND CHILDREN'S HOSPITAL

Mali, West Africa



Requested by:

The *Centre Protestant pour l'Assistance Médicale au Mali (CPAM)*

Dr. Dan Sogoba
Assistant Medical Director
Director of Pediatrics
Koutiala Women's and Children's Hospital

History of the Hospital

Beginning in the 1980s, five single female missionary nurses began providing limited medical services in rural bush clinics around Koutiala, Mali. These original nurses were also involved in the central village of Koutiala because of the presence of a small training school for pastors, the Bethel Bible Institute.



In May, 2000, five prominent women from the area died within a few weeks of one other because they were not able to get a timely Caesarean section (c-section) or because they had complications from their deliveries. At that time, there was a government clinic but there were no physicians or facilities capable of performing an urgent c-section. One of the women who died, Anne Coulibaly, was the wife of the director of the Bible School, Daniel Diallo. Her daughter survived but unfortunately Mrs. Coulibaly bled to death on the delivery table at the government clinic.

These tragic events served as the impetus for the plan to construct a much needed hospital devoted to the treatment of women and children and certainly a place where women could have timely and safe c-sections.



Three years later, in May, 2003, construction of a hospital facility began in collaboration with the Malian Non-Governmental Organization, *Centre Protestant pour l'Assistance Médical* or CPAM, and the Christian and Missionary Alliance.

The first building included a small maternity ward and operation room and was opened in 2006.



Shortly thereafter, a second building was constructed housing administrative offices and a pediatric ward which fully opened in 2010.



Since then the hospital has grown by adding four more buildings which were completed in 2011.



The funding for the construction of the two original hospital buildings was provided by the Christian and Missionary Alliance (C&MA), a US-based religious denomination. The four additional buildings were largely funded by Christ Community Church, a C&MA church located in Omaha, Nebraska and most of the building supplies that came from the United States were sent by the Shelby Alliance Church (Shelby, Ohio). We praise God for the faithfulness of these churches, so many generous individuals, and the original team of doctors and nurses all of whom sacrificed so much to have a physical and eternal impact half-way around the world!

Patient Care Today

The hospital has grown exponentially and today we provide:

- Over 2000 prenatal consultations per month**
- Over 3000 deliveries per year**
- Approximately 300 c-sections per year (10-11% rate)**
- Over 1300 medical consultations per month**
- Over 3000 newborns admitted per year**
- Over 300 premature babies admitted per year**
- Over 1000 children vaccinated per month**
- Over 600 hospitalizations per month**
- Over 200 surgeries per month**

Women's Health

Although our hospital has expanded in many areas, it has remained true to its focus on women's and children's health. Included in the expansion of the new building (Phase 3), will be a complete renovation and expansion of our existing labor and delivery room to a more modern up to date birthing center that will provide comprehensive and global healthcare for women. Currently, cancer screening for women is extremely limited and many lives are lost unnecessarily. We plan on including screening for both cervical and breast cancer that may help to save many lives.

Neonatal Care

Our care starts with prenatal ultrasounds and counseling. We admit over 3000 babies per year to our general newborn nursery where the infants remain with their mothers. We perform sickle cell screening and currently follow over 300 patients with sickle cell disease in our clinic.

We admit over 300 premature babies to our neonatal intensive care unit (NICU) that currently has 20 incubators. We have had survivors as small as 800 grams and use advanced therapies such as surfactant and bubble CPAP. We also have four ventilators that are capable of supporting these tiny infants. Our new building will expand our NICU to 30 incubators and will have a room-in step-down nursery with 20 beds.



Pediatric Surgery

Pediatric surgery in our hospital encompasses the whole gamut of surgery for children starting with **neurosurgical procedures** for hydrocephalus, spina bifida, and encephaloceles.



We perform **thoracic surgery** including esophageal atresia repair, esophageal replacement for strictures secondary to caustic ingestion, lung resections for congenital malformations and chest tubes for pleural effusions.



Binta burned her esophagus by accidentally drinking lye. She couldn't eat for one year before coming to us. Her esophagus was so badly burned that it had to be removed and replaced with her stomach. Now she is eating normally and growing quickly.

Gastrointestinal surgery is the most common surgery that we perform. These operations can range from the straightforward appendicitis to children born without an anus (imperforate anus). This newborn baby had a condition called Hirschsprung's disease where the lower part of the colon cannot relax causing a functional obstruction. These children require two operations. First, a colostomy and later a "pull through" to remove the bad colon and to replace it with colon that is able to relax. For some unknown reason, we see many children with this diagnosis.





Urological procedures are not infrequent such as hypospadias repair where the end of the urinary tract of a boy (meatus) is not at the tip of the penis and has to be relocated. Also, due to extreme heat and dehydration, bladder stones are not too uncommon. This 2.5 cm stone was removed from the proximal urethra of a 10 year old boy.

Plastic and reconstructive surgery is a large part of care we provide at our hospital and includes cleft lips and palates, burn care and burn reconstruction.



Orthopedic surgery at our hospital is particularly challenging because almost all patients are treated first by traditional non-medical healers. Therefore, we see many complications of such treatment and are forced to try to salvage good outcomes.



Fortunately, for this teen boy, we were able to straighten his leg and get it to heal with an external fixator. He can now walk normally!

Current Facilities and Staff

Currently the hospital has 181 beds, three operating rooms, a labor and delivery unit, an adult ICU, a recovery room, an emergency room, and an ophthalmology and dental clinic. Pediatrics is comprised of 20 NICU (Neonatal ICU) beds, 16 intermediate care nursery beds, 6 PICU beds (Pediatric ICU), 6 SICU beds (Surgical ICU), 3 oncology beds and 27 general beds. A recent drone shot of our hospital is shown below.



The hospital **Board of Directors** is comprised of 9 members. A list of the directors is attached as Attachment 2.



Hospital personnel consists of 200 full-time staff which includes 1 American doctor and 6 Malian doctors (1 surgeon, 2 obstetrician-gynecologists, 2 generalists, and 1 generalist completing his cardiology fellowship). Additionally, we host occasional visiting doctors and nurses each year who help advance the level of care in numerous areas including surgery, anesthesia, ob-gyn, neonatology, and oncology.

The hospital's monthly operating **budget** is approximately \$69,000 (sixty-nine thousand dollars). Ninety percent of the expenses are covered by receipts from patients. Ten percent of the hospital's expenses is covered by "indigent funds". These funds are raised in the US as donations to help cover the expenses for services provided to the poorest hospital patients. Hospital policy and practice is not to turn away a single patient because of financial hardship. A copy of the hospital's most recent annual budget is available upon request.

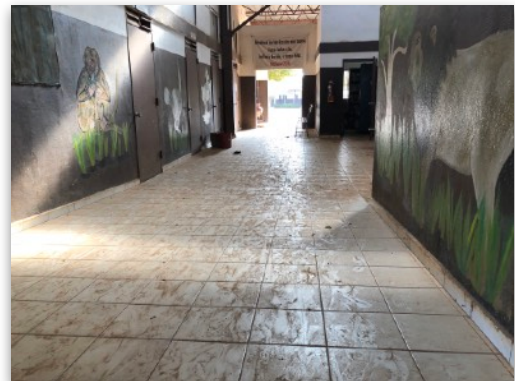
Critical Facilities Needs



The patient demand for good medical care for women and children has outgrown our existing space. Furthermore, the pediatric building is in very poor condition and would be condemned in most countries: (1) almost all of the sinks and bathrooms have been closed due to chronic plumbing problems; (2) the entire pediatric building is open without doors which allows dust, mosquitos, and horseflies to enter unabated resulting in an non-hygienic environment (3) the dust and dramatic swings in humidity and temperature from dry season to rainy season damage our sophisticated hospital equipment; (4) mosquitos carrying malaria infect both our staff and our patients, particularly during rainy season; and (5) rain enters through the open doors and a leaking roof contributing to the unsanitary conditions.



Just before it rains, the winds pick up and bring sand and dust into every corner of the building. This is one hallway after the wind and the rain.



Dire Conditions

Mali is one of the poorest countries in the world and ranks 184th out of 189 countries according to the United Nations Human Development Report(<http://hdr.undp.org/en/countries/profiles/MLI>). The country only spends 3.8% of its GDP on health care expenditures most of which are concentrated in the capital city. The Mali government does not have funds available for the Koutiala hospital construction project described in our proposal. The life expectancy at birth is a mere 59 years of age. Mali has the third highest birth rate in the world (<https://worldpopulationreview.com/country-rankings/birth-rate-by-country>). Each woman on average will have 6 children and one out of 16 will not survive their first year of life (<https://data.worldbank.org/indicator/SP.DYN.IMRT.IN?locations=ML>). A woman giving birth in Mali is 33 times more likely to die in childbirth or shortly thereafter than a woman delivering in the United States. More than 1 out of 4 children under 5 years of age is moderately or severely stunted due to malnutrition. 1 in 10 children won't live to see their 5th birthday.

Koutiala currently has a population of over 200,000 people with 600,000 people living in the surrounding villages. It is one of the fastest growing areas in Mali and has become the second largest city of Mali in terms of economic growth and total population. Unfortunately, it is located in the poorest region of the country with the worst health parameters. Koutiala Women's and Children's Hospital is not only a bright beacon of exceptional health care, but is also a beacon of hope as we strive to provide the best care possible with the love and compassion of Jesus Christ. It is the only Christian hospital in the predominantly Muslim country.

Vision for Expansion



The Koutiala Women's and Children's Hospital Board and leadership are planning an entirely new pediatric hospital as well as new operating rooms, a new recovery room, an adult ICU and emergency room. We also plan to add a new male patient ward, a new laboratory an expanded radiology department, administrative offices and conference rooms. Existing structures will be renovated to create a modern birthing center, and renovated ophthalmology and dental clinics. The pharmacy will also be expanded and a desperately needed physical therapy center including a gym for patients and our staff will be created.

With the planned new facilities, inpatient total capacity will increase to 319 beds, 22 outpatient consultation rooms and offices, and 3 conference rooms. This will include a 30 bed neonatal intensive care unit (NICU) and a 20 bed intermediate care nursery. Since mothers of newborns sleep in the hospital and are integral to the care of their newborns, we will provide 30 beds for the NICU mothers adjacent to the NICU. The intermediate care mothers will sleep next to their infants. The pediatric ward will include 36 general beds, 10 pediatric intensive care unit (PICU) beds, 10 surgical intensive care unit beds (SICU), a 4 bed burn unit, an 8 bed oncology unit, and 6 private/isolation rooms. In addition we plan to add an 8 bed emergency room for a total of 171 pediatric beds. As a result of the new hospital construction, the number of designated pediatric beds will increase from 78 to 171. Adult beds will increase from 85 to 148 and waiting area seating will increase by 150. Total beds will increase from 181 to 319.

Architectural renderings and floor plans, prepared by Engineering Ministries International (“EMI”, www.emiworld.org, a nonprofit organization) are included in Attachment 1.

This new building will greatly expand our lab and radiology services including possibly frozen section pathology, mammography and CT scanning. With sealed windows, limited double entries, and climate-control, we will be able to maintain a much more hygienic environment helping to improve our patient care, reducing unnecessary infections, and safeguard our equipment. We also hope to eliminate hospital-acquired malaria for our staff and our patients.

New Modern Birthing Center

The current Labor & Delivery (L&D) Department consists of two rooms, one with a four bed waiting room and another cramped room with 7 beds separated by curtains. As you can imagine, the room is noisy with very limited privacy. After the adult ICU, ER, and Recovery Rooms are moved into the new building, the entire space including the current L&D will be renovated to create a large, clean, modern, climate-controlled, private birthing center. Two of the three old operating rooms will be reserved for emergency cesarean sections. This renovation is included in the budget below.

Projected Construction and Equipment Costs

Current estimates of the cost of the construction project is approximately \$13,600,000 (thirteen million six hundred thousand dollars):

1. \$8,600,000 (eight million six hundred thousand dollars) for construction of the building including solar power, a back-up generator, HVAC, landscaping, and renovation of existing structures.
2. \$2,000,000 (two million dollars) for hospital equipment including a CT scanner, mammogram, fluoroscopy unit/table, radiology unit/table, patient monitors, IV pumps, off-the-wall suction, oxygen, and pressurized air, the outfitting of seven operating rooms and hospital furnishings.

Funding of the entire project is based on charitable contributions made to and through Team Healthcare, Inc., a 501(c)(3) entity based in the United States. For more information about Team Healthcare, Inc. please go to www.teamhealthcareinc.com

Although the need for dramatic improvement of patient care is immediate, and current hospital facility conditions are dire, nevertheless we hope to raise the required funding by the end of 2022 with a goal of breaking ground for the expanded Koutiala Hospital facility in early 2023. Infrastructure preparation may commence in 2022.

The primary naming opportunity is for the Koutiala Women's and Children's Hospital. For a gift of \$10,600,000 (ten million six hundred thousand dollars), which would cover the cost of construction and new equipment as well as maintenance the donor may designate a name to be appended at the end of the current hospital name, Koutiala Women's and Children's Hospital.

Staff Development Endowment

We are committed to developing and training nurses, doctors and affiliated staff by not only teaching excellent fundamental skills but perhaps more importantly how to show the love of Christ in our work. We are in the developing stages of starting a nursing school. We also hope to train doctors in both medical and surgical disciplines. Our goal is to raise \$3,000,000 for a hospital endowment for staff development and training. This will also include funds to offset the cost of additional staffing and augmentation of existing salaries.

Donations

Please consider joining the Koutiala Women's and Children's Hospital as a partner in providing improved health care to the most vulnerable and needy people of Koutiala with the goal of having an eternal impact for God's kingdom. We thank you in advance for your thoughtful consideration.

Donations should be made payable to "Team Healthcare FBO Koutiala Women's and Children's Hospital. Checks may be mailed to Team Healthcare, Inc., 4 Fidelity Way Towaco, NJ 07082. For direct bank transfer, wiring of funds, or stock donations, please contact: Team Healthcare at tsforshay@optonline.net, 973-715-0151. Donations may also be made via PayPal.

Contacts

If you would like more information about the Koutiala Women's and Children's Hospital expansion construction and maintenance project and related campaign, or if you would like to set up a zoom call or personal visit, please contact us at one of the following addresses:

Dr. Dan Sogoba
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Tom Ostenson
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601-573-4427

Dr. Jim Froehlich
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678-617-9179

ATTACHMENT 1: Conceptual Design



KOUTIALA HOSPITAL (CPAM) CAMPUS MASTER PLAN BUILDING EXPANSION CONCEPTUAL DESIGN

KOUTIALA | MALI



PROJECT LOCATION: KOUTIALA HOSPITAL, KOUTIALA, MALI
MINISTRY CONTACT: DANIEL SOGUNA, KOUTIALA@CPAM.COM
DESIGN OFFICE: EMI SENEGAL & EMI USA, 8P 24TH AVENUE, ANNEKHE, 23000 BANGALU, SENEGAL
PROJECT NUMBER: WWH12EMWORLD010
WEBSITE: WWW.EMWORLD.ORG
PROJECT LEADER: JOHN ABLE
EMAIL ADDRESS: INFO@EMWORLD.ORG

GENERAL NOTES

- ENGINEERING DRAWINGS, INTERIM, IDEAL, PROVIDES DESIGN FOR NON-PROFIT ORGANIZATIONS THROUGHOUT THE WORLD. DURING THE LIFE-SPAN OF THIS PROJECT, EMI HAS HERBAND-FIELD COMPANY, TYPICAL TO THE LOCAL AREA.
- LOCAL ORGANIZERS REQUIRE DRAWINGS TO BE REVIEWED AND FINALIZED JURISDICTION.
- PROJECT DOCUMENTS ARE THE PROPERTY OF EMI AND ARE INTENDED FOR USE ON THIS SITE ONLY, AND SHOULD NOT BE USED OR REPRODUCED FOR ANY OTHER PURPOSE WITHOUT THE WRITTEN PERMISSION OF EMI.
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ARCHITECTURAL

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CP01

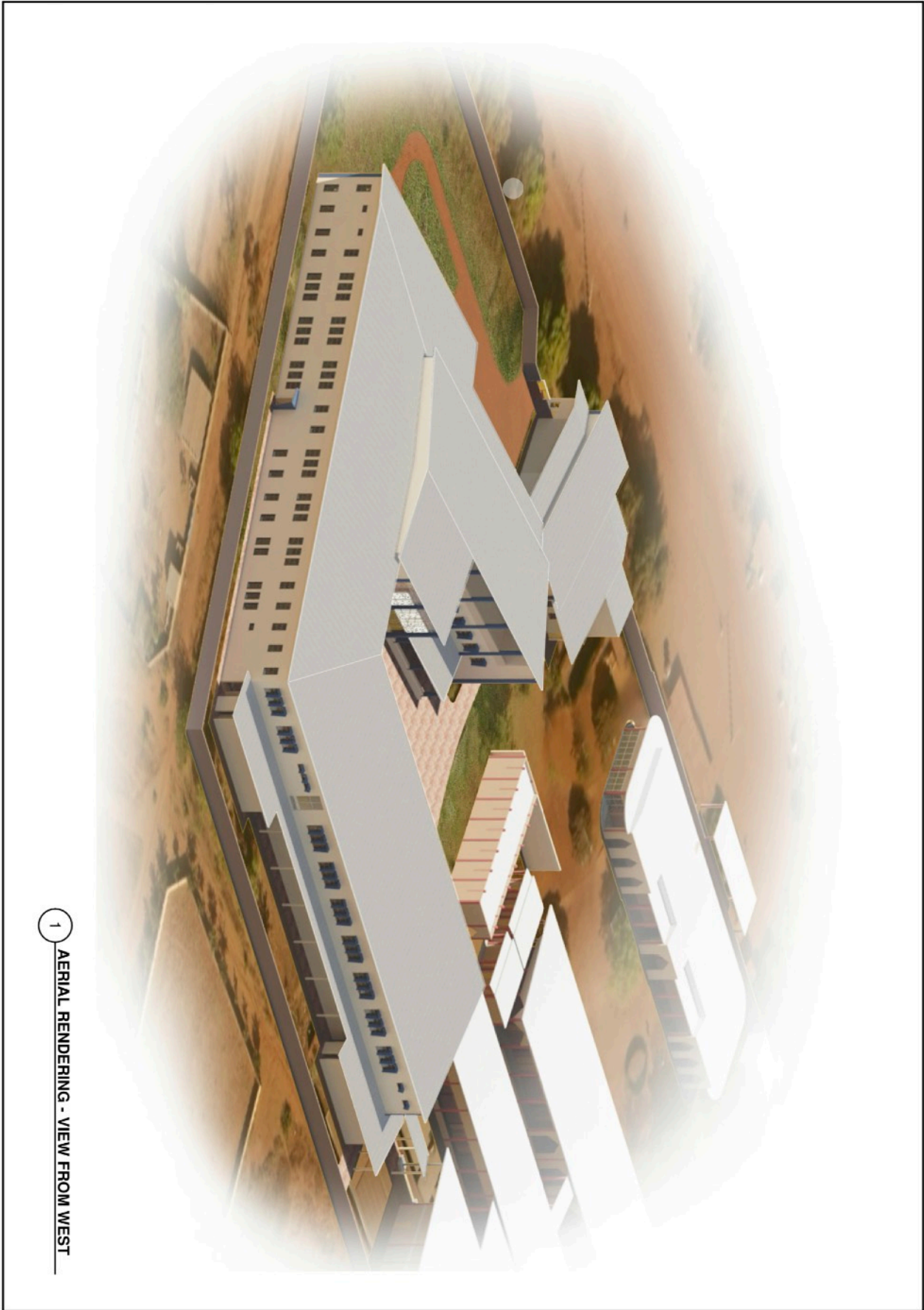
CP01	PROPOSED WATER DISTRIBUTION PLAN
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KOUTIALA HOSPITAL (CPAM)	KOUTIALA, MALI	designing a world of hope emworld.org SENEGAL				
COVER SHEET						
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1 AERIAL RENDERING - VIEW FROM EAST

SHEET NUMBER G2.0	KOUTIALA HOSPITAL (CPAM)	KOUTIALA, MALI	 designing a world of hope emeworld.org SENEGAL
	AERIAL RENDERING - VIEW FROM EAST		




1 AERIAL RENDERING - VIEW FROM WEST

SHEET NUMBER G2.1	PROJECT: SN-0018	KOUTIALA HOSPITAL (CPAM)	KOUTIALA, MALI
	DATE ISSUED: APR 2019	PEDIATRIC EXPANSION	
REVISIONS:	AERIAL RENDERING - VIEW FROM WEST		
CONCEPTUAL DRAWINGS NOT FOR CONSTRUCTION THIS DRAWING IS FOR INFORMATION ONLY AND IS NOT TO BE USED FOR CONSTRUCTION PURPOSES.			





1 EXTERIOR RENDERING - ENTRY BUILDING

PROJECT: SN-0018 DATE ISSUED: MAY 2021 REVISIONS:	KOUTIALA HOSPITAL (CPAM)	KOUTIALA, MALI	 designing a world of hope emiworld.org SENEGAL
	EXTERIOR RENDERING - ENTRY BUILDING		
SHEET NUMBER G2.2			




1 EXTERIOR RENDERING - MEDICAL BUILDING

<p>CONCEPTUAL DRAWINGS NOT FOR CONSTRUCTION</p> <p>THIS DRAWING IS FOR INFORMATION ONLY AND IS NOT TO BE USED FOR CONSTRUCTION. ANY CHANGES TO THE DESIGN SHALL BE MADE BY THE ARCHITECT AND NOT THE CONTRACTOR.</p> <p>PROJECT: SN-0018</p> <p>DATE ISSUED: MAY 2021</p> <p>REVISIONS:</p>	<p>KOUTIALA HOSPITAL (CPAM)</p>	<p>KOUTIALA, MALI</p>	<p>eMi designing a world of hope</p> <p>emivorld.org SENEGAL</p>
	<p>EXTERIOR RENDERING - MEDICAL BUILDING</p>		
<p>SHEET NUMBER</p> <p>G2.3</p>			




1 EXTERIOR RENDERING - MEDICAL BUILDING

SHEET NUMBER G2.4	DATE ISSUED MAY 2021	PROJECT SN-0018	CONCEPTUAL DRAWINGS FOR CONSTRUCTION	KOUTIALA HOSPITAL (CPAM)	KOUTIALA, MALI	 designing a world of hope emiworld.org SENEGAL
	REVISIONS:	PROJECT SN-0018	CONSTRUCTION	EXTERIOR RENDERING - MEDICAL BUILDING		

1 RENDERED SITE PLAN





SHEET NUMBER G3.0	CONCEPTUAL DRAWINGS CONSTRUCTION LOCAL MATERIALS AND METHODS TO BE UTILIZED FOR THE PROJECT'S EXECUTION PROJECT NO.: SN-0014 DATE ISSUED: MAY 2021 REVISIONS:	KOUTIALA HOSPITAL (CPAM)	KOUTIALA, MALI	 designing a world of hope emiworld.org SENEGAL
		RENDERED SITE PLAN		



SHEET NUMBER A1-1.0	CONCEPTUAL DRAWINGS NOT FOR CONSTRUCTION	KOUTIALA HOSPITAL (CPAM)	KOUTIALA, MALI	designing a world of hope creating a better tomorrow
	PROJECT: SN-0019 DATE ISSUED: MAY 2021 REVISIONS:	GROUND LEVEL OVERALL PLAN		



KOUTIALA HOSPITAL (CPAM)		KOUTIALA, MALI	
FIRST LEVEL OVERALL PLAN			
CONCEPTUAL DRAWINGS NOT FOR CONSTRUCTION PREPARED BY: [Name] CHECKED BY: [Name] DATE ISSUED: MAY 2021 REVISIONS:		 emi designing a world of hope cr@emi.sn www.emi.sn SENEGAL	
SHEET NUMBER A1-1.1			

ATTACHMENT 2: Hospital Board of Directors

Nyadia Goita	Board President	Administrator
Roda Daou	Board Vice President	Pharmacist
Andre Diarra	Member	Accountant
Elise Sagara	Member	Pastor
Dr. Timothe Dougnon	Member	Doctor
Dr. Dan Sogoba	THI	Doctor
Daniel Thera	General Director CPAM	Administrator
Representative	C&MA	Available Bamako team member
Representative	C&MA	Available Bamako team member