PROTOTYPE
A SUSTAINABLE INTEGRATED SYSTEMS SOLUTION FOR A CRITICAL ACCESS HOSPITAL IN EDGEFIELD, SC

PROBLEM
LIMITED ACCESS TO CARE

FUNDAMENTAL TO THE CONCERNS OF BRINGING COST, QUALITY AND ACCESS TO HEALTHCARE ARE THE ISSUES OF AGGREGATION IN THE HEALTHCARE DELIVERY MODEL. AS THE HEALTHCARE INDUSTRY OPTIMIZED ITS PIECES TO RESPOND TO THE REQUIREMENTS OF HISTORIC REIMBURSEMENT PROTOCOLS, IT FAILED TO OPTIMIZE THE WHOLE. THE CONSEQUENCES OF THIS FAILURE IS THAT MANY COMMUNITIES THROUGHOUT THE UNITED STATES HAVE IN SUFFICIENT RESOURCES AVAILABLE TO STAFF EVEN MINIMAL CARE DELIVERY SERVICES. THE UTILIZATION OF COLLABORATIVE CARE (LESS HEALTHCARE DELIVERY MODELS) PROMISES A VERY DIFFERENT, VIABLE MODEL TO MEET CURRENT AND PROJECTED HEALTHCARE NEEDS FOR THESE POPULATIONS.

SOLUTION
CRITICAL ACCESS HOSPITAL PROTOTYPE

THE CAH PROTOTYPE CAN BE ADAPTED FOR EACH SITE BASED ON THREE MAJOR FUNCTIONAL COMPONENTS.

PUBLIC ZONE ADJACENT TO DOWNTOWN
- DEDICATED COMMUNITY ZONING
- BUFFERED HOSPITAL PRIVACY

EAST/WEST SOLAR SHADE PATH
- DRIVES FUNCTIONAL LAYOUT
- MAXIMIZES SOLAR BENEFITS
- STRUCTURAL STEEL CANOPY VIEWS ALLOWS FOR MEDICAL PRIVACY

PATIENT ZONE PROMOTES VIEWS TO NATURE
- DEDICATED PRIVACY SECURITY BUFFER
- PROMOTES PATIENT WELLNESS AND NATURAL HARMONY

EDGEFIELD, SC
CRITICAL ACCESS HOSPITAL
LEAN AND NIMBLE

GROUND FLOOR: 44,000 SF.

CIRCULATION
INTERIOR COURTYARD

- Site specific
- Links town to facility
- Public transit access
- Roof and receiving
- Medical records storage
- Cafe and dining amenities
- Social interaction
- Family waiting

PUBLIC

- East/West orientation
- Clear span for flexibility
- Solar shading panels
- Natural day lighting
- Active/passive cooling
- ER receiving
- ORS/surgical suites
- Universal care units
- Diagnostic imaging
- Community/efg wellness
- Health adjacency

- Views to nature
- Courtyard access
- Emergency day lighting
- Nurse wash areas
- Patient rooms
- Family waiting space
- Patient climate control
- Privacy and security

COMMUNITY INTEGRATION

HIGH TECH WAREHOUSE

PATIENT CARE

BUILDING SECTION
1/8" = 1' 0"
CUTTING EDGE SUSTAINABLE SYSTEM USES WEBER'S THEORY OF OPTIMIZATION TO PLACE SOLAR SHADING PANELS FOR OPTIMAL THERMAL EFFICIENCY AND MAXIMUM ENERGY EXTRACTION.

THIS SUSTAINABLE SYSTEMS APPROACH PROVIDES EVEN SHADING THROUGHOUT THE DAY BY TRACKING THE SUN ACROSS ITS TRAVEL PATH. THEREFORE, SOLAR PANELS ARE ORIENTED FOR MAXIMUM ENERGY GAIN TO OFFSET OPERATING COST AND POTENTIALLY RETURN USEABLE ENERGY BACK TO THE GRID.