



MOBILE FIELD HOSPITAL (MFH) AND TELEMEDICINE PROPOSAL

VELAS LARGAS, HEALTH CARE EQUIPAMENT

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Summary Configuration – Composition

Latest Generation Custom Made High End Mobile Field Trailer (MFH)

PROPOSAL and CONFIGURATION

24 Beds in 8 Large Fully Equipped Expandable 3:1, 2:1 and 1:1 Trailers

Hospital and Emergency Care Facility, for Humanitarian Medical Applications including
Tele Medicine Solutions

Ref	Description	Trailers
PST	Premium Surgical Theatre (OT) Trailer 3:1 Including 2 Surgical Tables and Anesthesia Machines High-end Surgical Air Flow System Anesthesia Preparation, Staff and Recovery Room Disinfection and Sterilization Area	1
ICU/CCU	High-end ICU and CCU Trailer 3:1 Including 8 Beds, all with Individual Patient Monitors and Ventilators	1
PWT	Patient and EMS/CPR Ward Trailer 3:1 Including 8 Beds, General Wards, fully equipped 8 EMS Beds/CPR Ward, fully equipped with Individual Patient Mon.	2
AI	Advanced Imaging/Radiology Suite I 2:1 Including Toshiba Digital Radiology with Multi-Purpose C-arm Table, Incl. Fluoroscopy and Vascular Angiography Capabilities High-end Color 3D/4D (Fixed) and Color 3D/4D Portable Ultrasound Vannin HC VANPACS and Tele Med Radiology Module	1
AI	Advanced Imaging/Radiology Suite II 2:1 Including High-end, Latest Generation Multi-Slice 128 Slice CT Scanner Vannin HC VANPACS and Tele Medicine Radiology Module	1
CCE	Clinic and Consultancy Trailer 3:1 Including Consultancy Ward, Laboratory and Pharmacy Department Patient Reporting Area Vannin HC Green Cube EHR Patient Administration IT System	8

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GS	General, Storage, IT and Biomed Workshop Trailer 1:1	1
CS	Connection Sluices	Various

Including all Medical Devices, Medical Equipment Tele Health Solutions, Furniture, Fittings and Telehealth

Extensive Installed Base, Present in Over 65 Countries
Global Overview

**Global
Installed Base**



14x Trailers: Reference Sochi – Russia – Winter Olympics 2014



Expandable Latest Generation
(MFH) Trailer Hospital



Features



Field tested in the depths of the Russian winter to the deserts of the Middle East

Introduction

Modular, Relocatable laminar flow Mobile Hospital Trailers
The modular Mobile Hospital Trailers have been built with a newly developed composite wall panel, that has been successfully tested to the EU requirements of "Fire tests on building materials and structures. Methods for determination of the fire resistance of loadbearing elements of construction" and surpassed the 30 minutes HTM 05-02 requirement, proving resilient to temperatures of up to 950°C for over one hour.

Features – Surgical Facility

- Inbuilt hydraulic system to facilitate easy loading and unloading from a trailer without a crane
- Ready to use within 1 hour
- Full clinical environment built to exceed International standards
- HEPA filtered grade A air quality
- Laminar flow switchable option with over 25 air changes per hour
- Full bulk medical gas and air system including vacuum plant and scavenging
- 'Fast track' patient flow through anesthetic room, theatre and 2-bed first stage recovery
- Clean and dirty utilities and Staff Changing Room

**16 General
and 8
ICU/CCU
Beds**

**Male and
Female
Sections**





Illustrations; Inside and Outside View

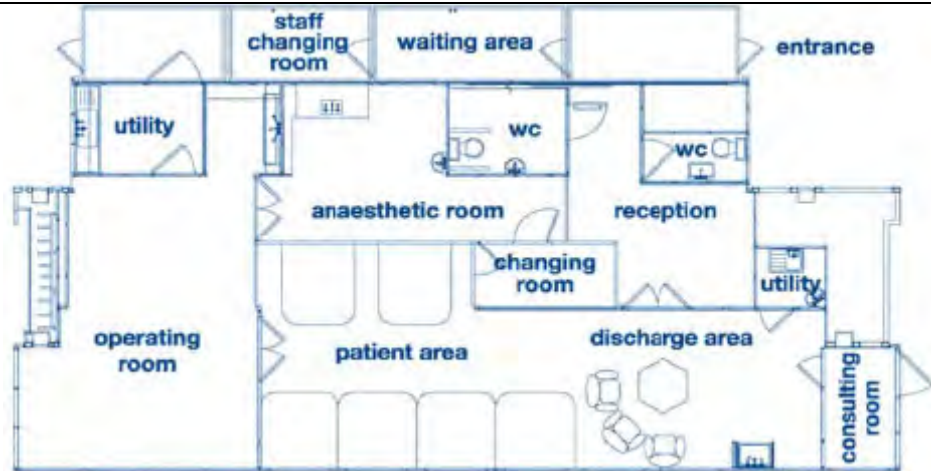


**Total footprint
of the main
box
Minimum 90
m²**

Variable; Sample (OT) Surgical Theatre
See Page 8

**Trailer Size: 6.33M (Width) x 15.00M = 95.00 M2
Fully 3:1 Extended**

**TOTAL TRAILER SURFACE OF THE ENTIRE MFH
695 M2**



Reference Only

**Sample
Drawing and
Illustrations**






Sample Patient Recovery or Patient Ward (Reference only)




**Hydraulic
Driven
expandable
sides**

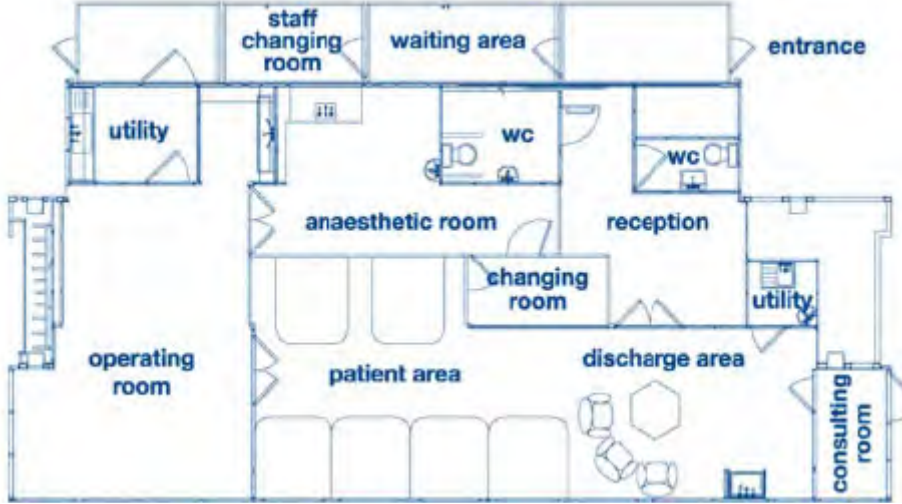

Included
With Inbuilt hydraulic systems
Fully Electronic - Electric

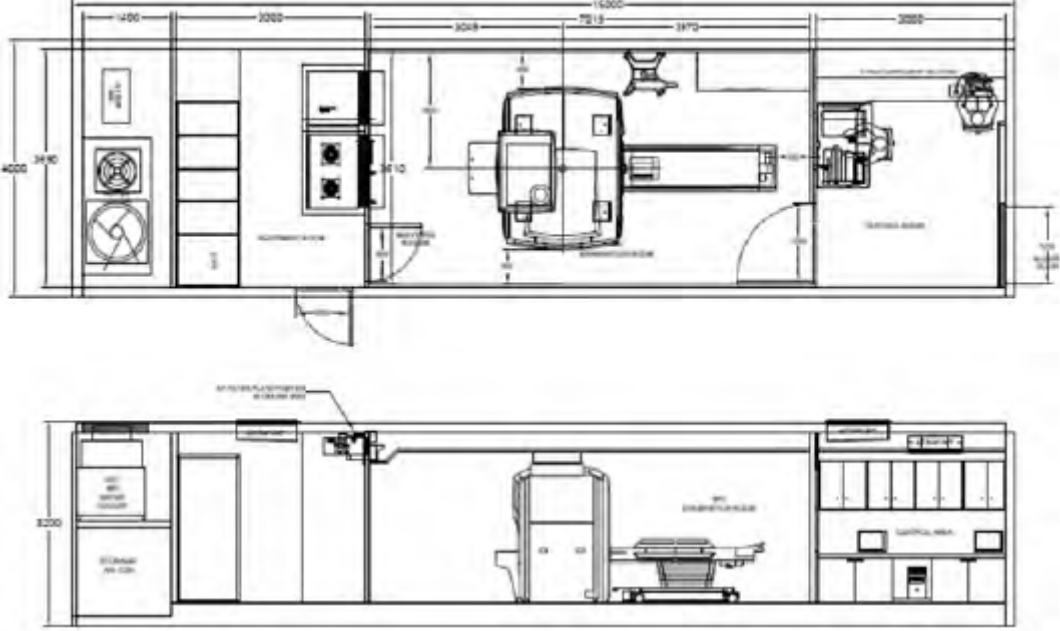
**Double
Expandable
box
(Trailer) 2:1**

Imaging 3:1 Expandable Trailer 2x




<p>Type 2x For CT Scanner DDR X-ray</p> <p>Echo Cardiograph Sonography (Ultrasound) Portable and Fixed</p>	 <p>Neusoft High-end 128 Slice CT Scanner Well Known Brand in Iran</p>  <p>Exclusive Multi-Purpose Digital Radiology, Fluoroscopy and Vascular Imaging</p>  <p>Ultrasound Devices, Cardiology/Radiology and Portable, incl. 3D/4D Imaging with DICOM Output</p>
<p>1x Double Expandable box 3:1 (Trailer) for Patient Ward With 8 Beds</p>	<p>Included</p>

	
<p>1x Double Expandable box 3:1 (Trailer) for 8-Bed CCU/ICU</p>	<p style="text-align: center;">Included</p>  <p style="text-align: center;">Outside View</p>
<p>1x Double Expandable box 3:1 (Trailer) for: 8-Bed EMS Ward Plus CPR Room</p>	

<p>Double Expandable box (Trailer) for Double Surgery Room</p> <p>4 Recovery Room</p> <p>1 Anesthesia Room</p>	 <p>Sample: Interior Layout, will be Custom Made</p>
<p>PHARMACY Built in Corridors</p>	<p>Included, Custom Made</p>
<p>Surgery Operating Room</p>	<p>Full clinical environment built to exceed Intl. EU standards, HEPA filtered grade A air quality, with Laminar flow switchable option with over 25 air changes per hour, bulk medical gas and air system including vacuum plant and scavenging</p>
<p>Inter connecting Units</p>	<p>Included</p>
<p>Laboratory Clinic</p>	<p>Included, Custom Made</p>
<p>CSSD Department</p>	<p>Included, Custom Made Including Dedicated Disinfection Devices</p>  <p>Dedicated Disinfection Devices</p>


<p>CT Scanner Clinic</p>	 <p style="text-align: center;">Sample Layout</p>
<p>Radiology Department DDR, ECHO CARDIO SONO GRAPHY</p>	<p>Two 2:1 Expandable Radiology/Imaging Trailers are included</p>
<p>Quantity of BOXES (Trailers)</p>	<p>8 Trailers, with High Capacity Military Graded Low Loaders See details at Page 1 and 2</p>
<p>Quantity of Inter Connecting Units</p>	<p>8 Maximum; Foldable Connections; or Direct Trailer connection Avoiding Quantity of Trailers and Cost (Side by Side)</p>

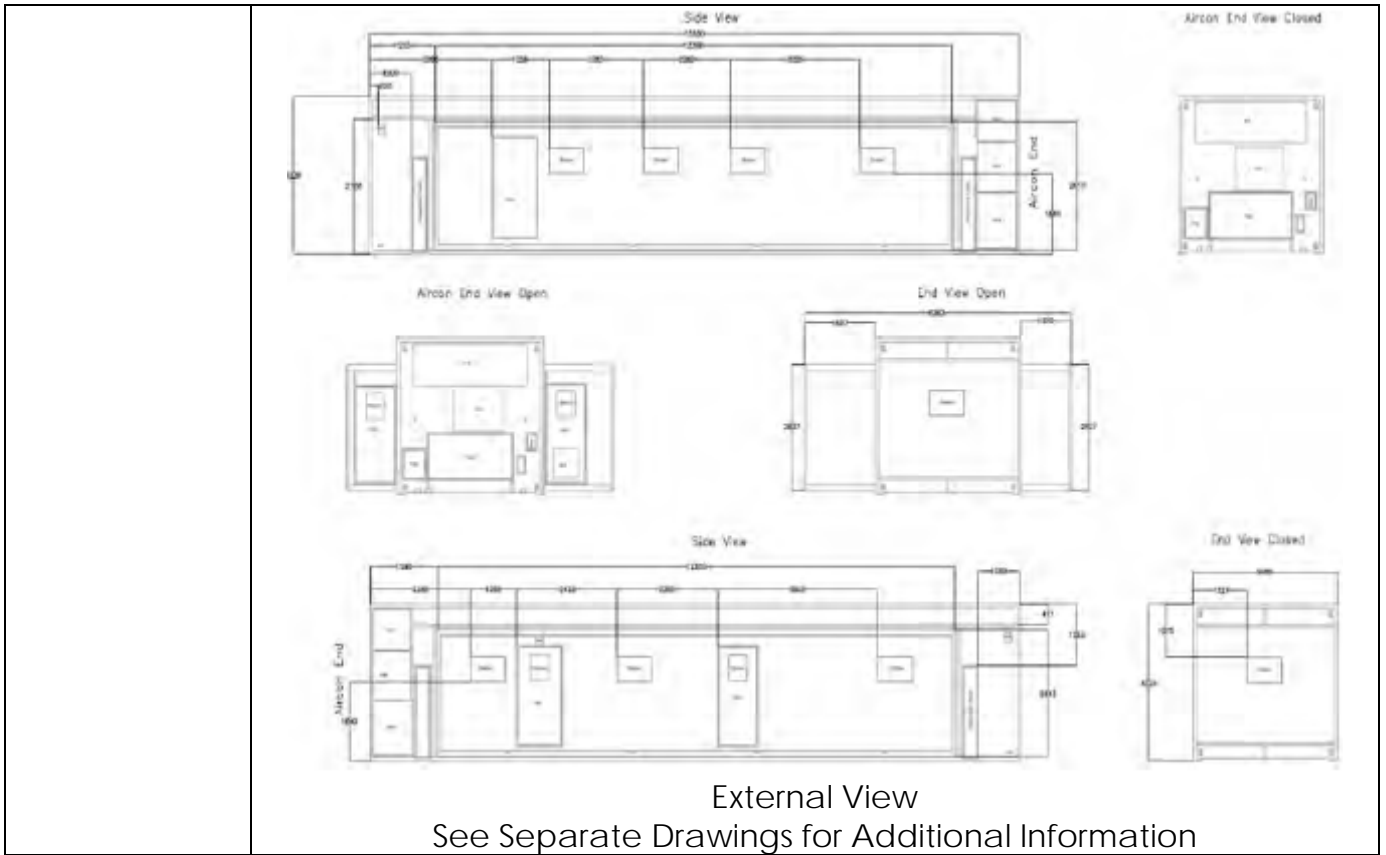
<p>Hydraulic System</p>	 <p>Heavy Duty Electric Hydraulic Systems Fully Integrated</p>
<p>Adjustable Height for any box (Trailer)</p>	<p>See Above. Build in at each Trailer, Fully Integrated Up-to Floor Level With Electric Controller System, Custom designed to requirement</p>
<p>Shipping by Aircraft Railway Or Road</p>	<p>Including Separate Heavy Duty Low Loader</p>
<p>BOX (Trailer) buildup on chassis</p>	<p>The Chassis is Fully Integrated in the Trailer A Custom Made 2:1 or 3:1 Expandable Chassis</p>
<p>Pre-fabricated Container (Trailer)</p>	

	 <p>Internal View, 3:1 Trailer, after delivery</p>
<p>Transferable Chassis on Vehicle</p>	 <p>Illustrations – Advanced High Capacity, Military Graded Low Loaders</p>
<p>WALLS (INSIDE)</p>	<p>Elite PVC Sheet 2.5 MM, Class '0' Fire Rated – See details below</p>
<p>WALLS (OUTSIDE)</p>	<p>Steel sheet, High quality Aluzinc Class '0' Fire Rated – See details below Painted with High Quality Exterior paint, in line with the client requirements and Logo and Text</p>  <p>Sample</p>
<p>Main Frame Material</p>	<p>S275 Structural Steel Box Section</p>
<p>Fire Resistance</p>	<p>See Details Below</p>
<p>Fire Rating</p>	<p>60 Minutes - EU - HTM 05:02 fire safety requirement</p>

	of 30 minutes - Exova Warrington Fire
Reaction to Fire class	Class '0' EU Part 6 and 7 Standards
Type of Insulation (Fire Retardant)	Poly Isocyanate Insulation Highest Level of Fire Retardant – See Above
Antibacterial Inside Surface (Standard EN 438)	Included: Silver-Ion PVC Anti-Bacterial / Microbial Surface Surgical Air Flow System / HEPA Filters
LED Lighting	Included – All is Energy Saving LED Lightning Including the Emergency Lighting
PVC Electrical Pipes	Included, See Below
Material	PVC Electrical Conducts and Junction Boxes
ELECTRICAL Junction Box	Bespoke Power Input and Distribution Boards
Electrical cables	Cable to EU Standards
Standard	EU Electrical Standard 7671 Part 17 Edition Wiring All International Safety Standards are Incorporated
Electrical cables for fire alarm	Cables to EU Standards All International Safety Standards are Incorporated PLUS , Health and Safety Standards
AIR diffusers	As required by HTM Standards HEPA H14 Throughout
PIPE and AIR Duct Insulation	Class '0' Fire Rated Self Adhesive Wire Clear Foam
Smoke classification	Classification EU, DO EN13501-1
Ecological Data	>50% Recyclable
Electrical Generators	Separate Integrated Commercial Generators Carried with the Trailer on the Chassis Well Insulated Low Noise and Vibration Levels
Water system	PEX Barrier Pipe and Fitting to EU WRAS Approved
Medical Grade GAS-PIPLINES	Fully Copper System with Solder Joints

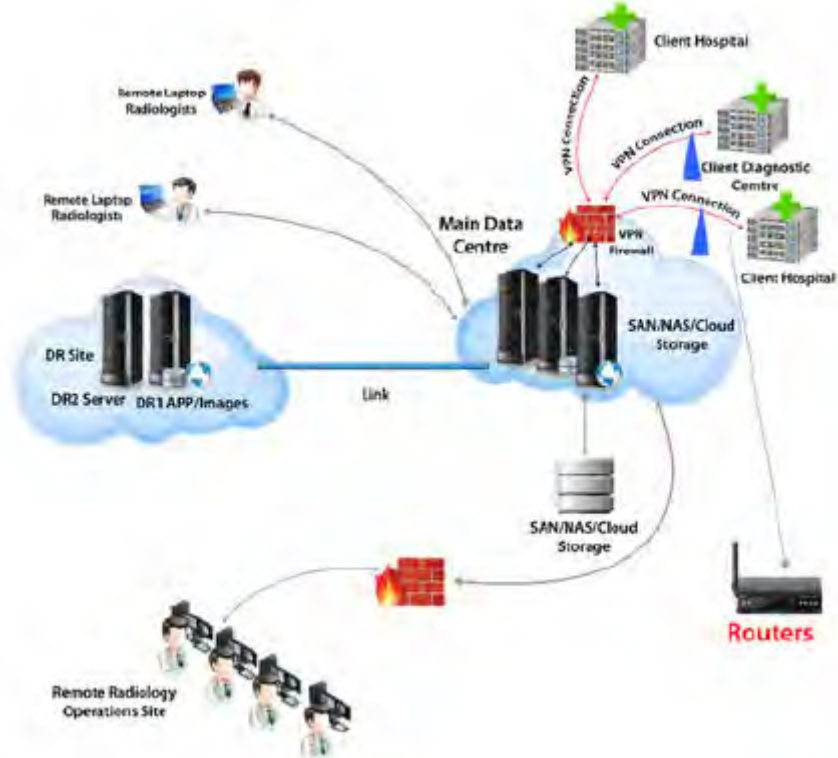
Water-waste System	Solvent Weld ABS Pipet Fittings to EN1455, EU, KM 548614 Standards
WATER Closet	All WRAS Approved, as required
Wastewater drainage system	Outlet from Unit to Local Bowser – Sewer – Drain
White drainage system	As Above – Waste/Water Drainage System
External hydraulic system	See Above – Page 14, including Illustrations
Fire alarm system	System to EU-1:2013 Standard Fitted in Each Trailer – Linked up for Entire Hospital
Fire station Extinguisher	Various Positions in Each Trailer
Water pressure pump for fire-fighting	Sprinkler System is Optional Not recommended in OT (Operating Theatre)
Fire extinguisher	CO2 Type – Other Type can be Specified
Temperature condition Air conditioning system	An Environmental Control System of each Trailer will be designed for the Local -Iran-Climate Conditions
Gas monitoring	Included in Each Trailer with a Gas bottle storage area Accessible from Outside
Electrical monitoring	Integrated in the General Distribution Panel, inside Each Trailer for Quick Access and Reading
Smoke Monitoring	As Above
Inter-comm. system	Will be included, Where Required
Phone central	Within the Central Distribution – IT Trailer
Ethernet switch	Within the Central Distribution – IT Trailer
General Utility Requirements	In Line with the Customer Requirements
Guaranty (Year)	2 Years, Main Units Medical Devices, 1 Year Consumables 6 Months
After sales services	Unlimited, 10 Years Minimum

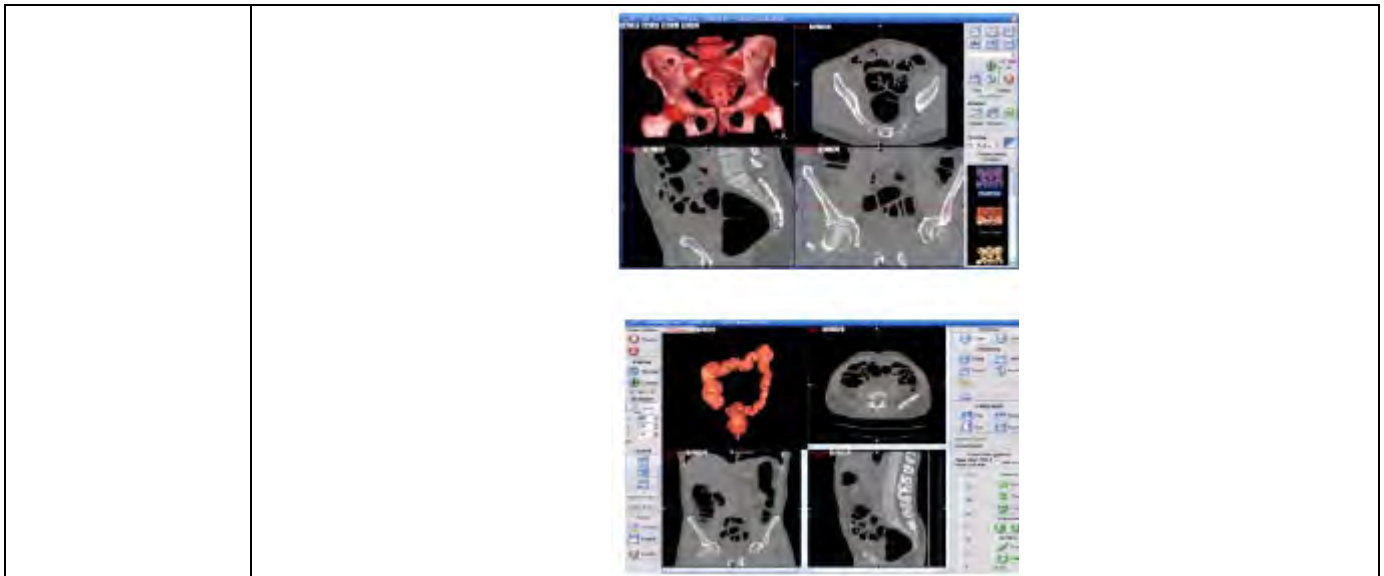
(Year)	
Training (technician – Engineer)	Training will be provided as part of the Project
Spare parts	Standard Part Kits will be Provided
Life time for each box (Trailer)	15 to 20 Years Minimum Our and Client Experience is 4x the amount of Years as our competition
<p>Image of cut-wall of sandwich Panel</p> <p>Image of cut-roof</p> <p>Image of cut-floor</p>	 <p>PLAN VIEW</p> <p>Top view</p>



**Medical
Equipment
For
the MFH
With
Tele Health**



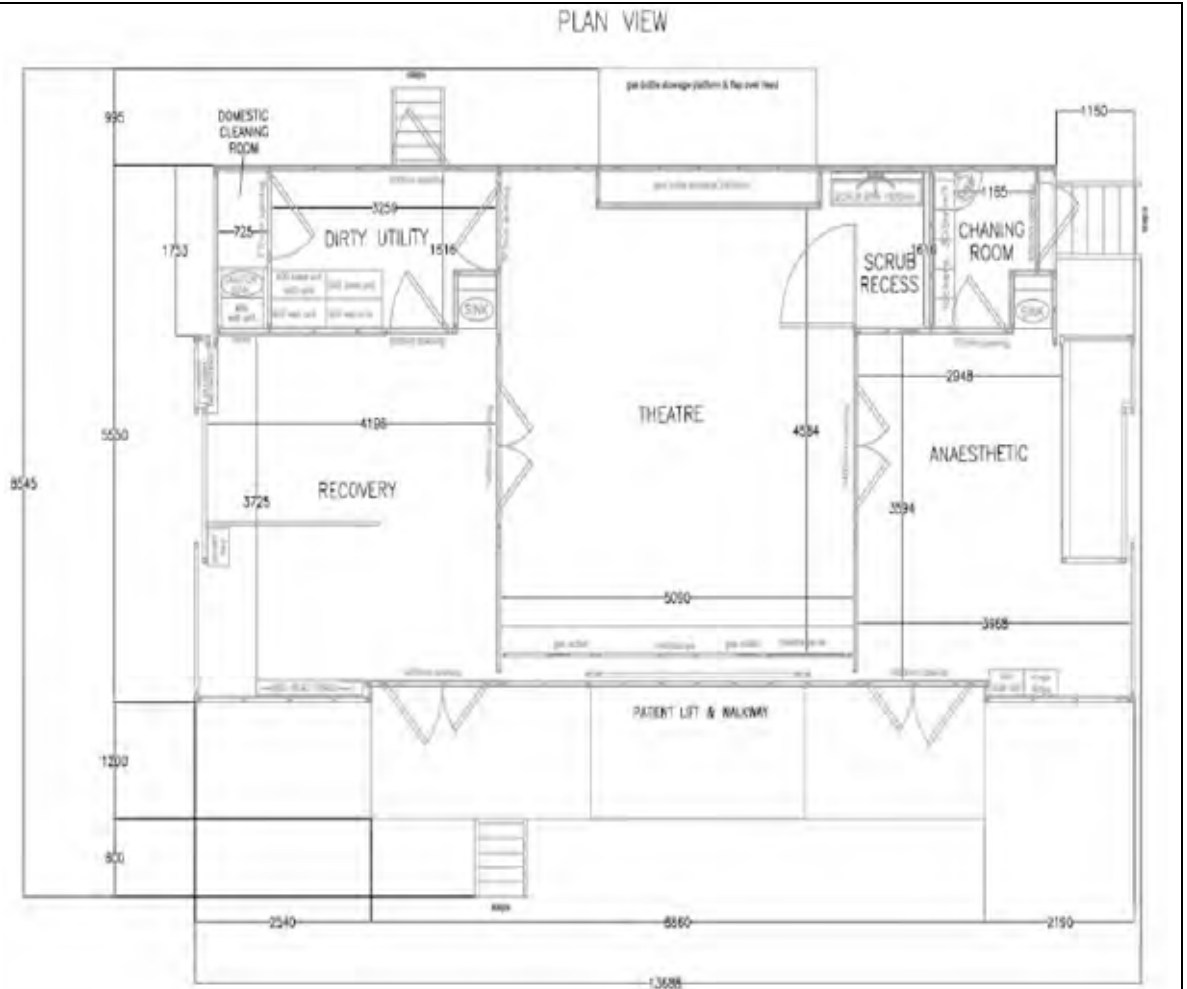




<p>All Related Standards</p>	<p>Quality Certificates, Environmental Conditions and Survival Capabilities EMI/EMC/MDD/ISO/CE/FDA – Medical Devices MIL-STD-810 and MIL-STD-461/464 Environmental conditions, from – 45 to + 60 degrees Celsius</p>
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SUPPLEMENT (Drawing)

**Plan View
Surgical
Theatre**

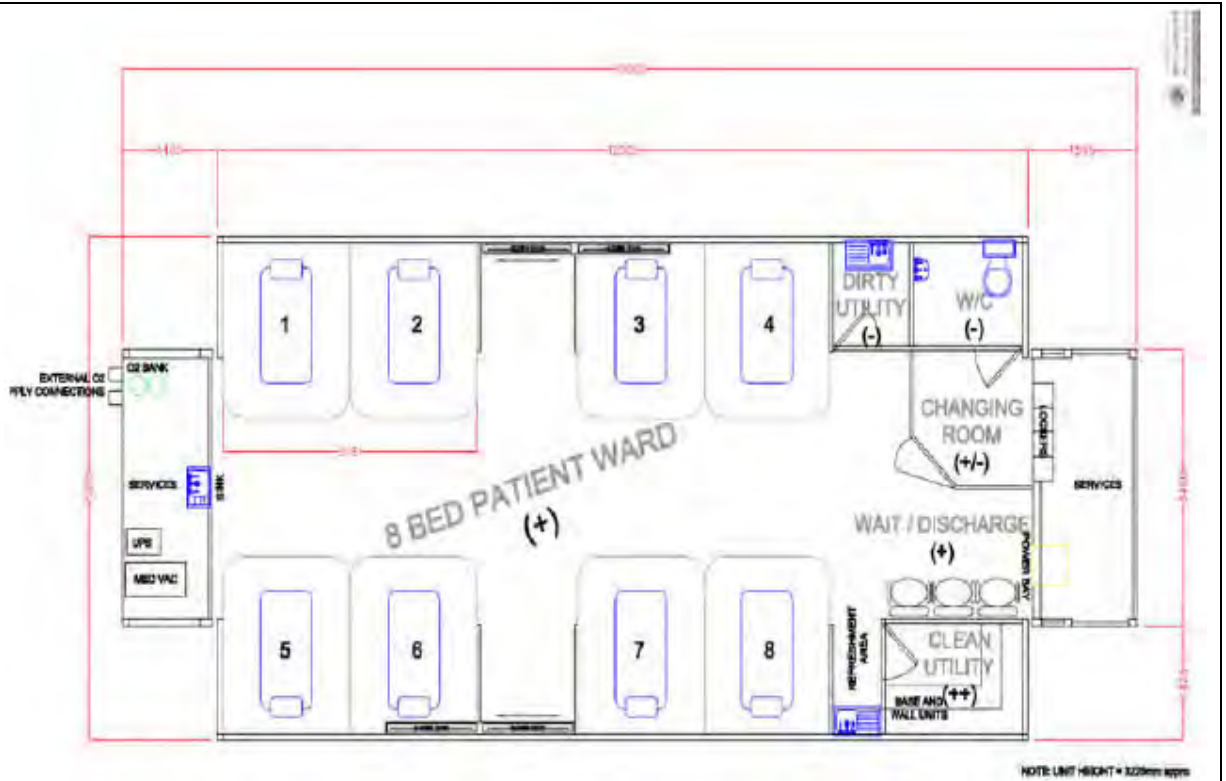


Surgical Theatre Plan View
Total Internal Surface

See further details at a separate Plan View Document

SUPPLEMENT (Drawing)

Plan View Patient Ward with 8 beds



Plan View Patient Ward
95M2 Fully 3:1 Extended
Total Internal Surface

See further details at a separate Plan View Document