



**FORT'S**  
MEDICAL

THE WORLD'S FASTEST MEDICAL FACILITIES

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## The FORTS Medical Mission

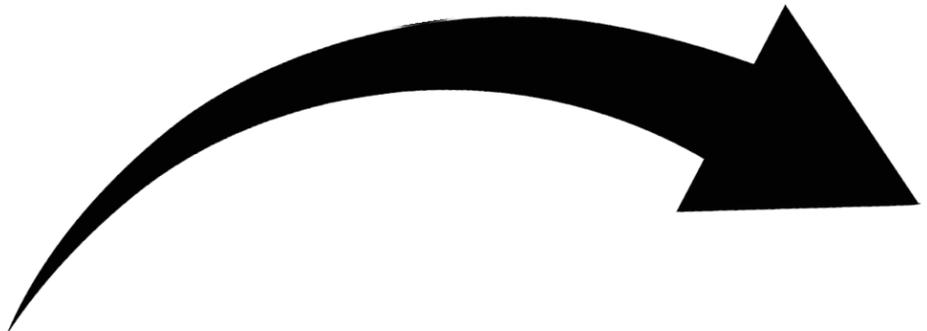
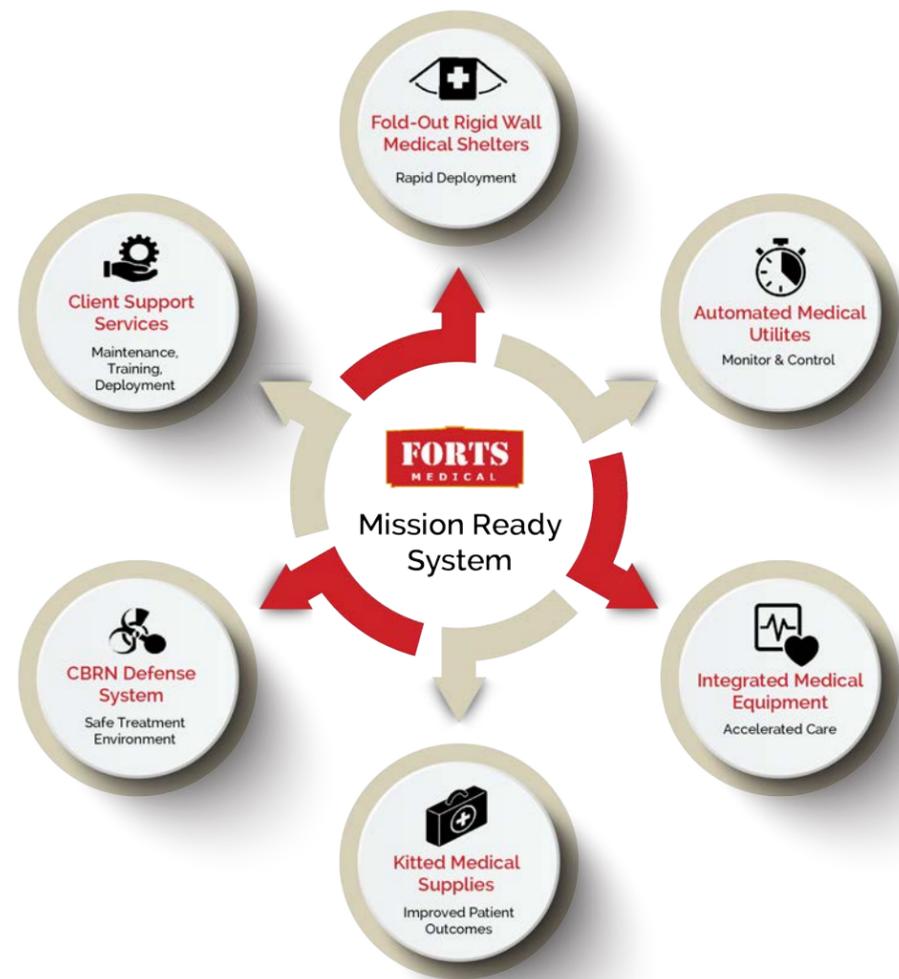
We share an extreme passion for improving and saving lives. We do so by providing the most reliable, time saving medical infrastructure ever developed to bring care to those that need it most. Whether in a remote location or caught in a disaster, proven experience and preparation are vital in the midst of traumatic events. FORTS & OSMOCO have joined forces, as FORTS Medical, to solve the greatest threat to saving lives in these situations...the lack of quick and comprehensive remote medical facilities.

## Our Experience

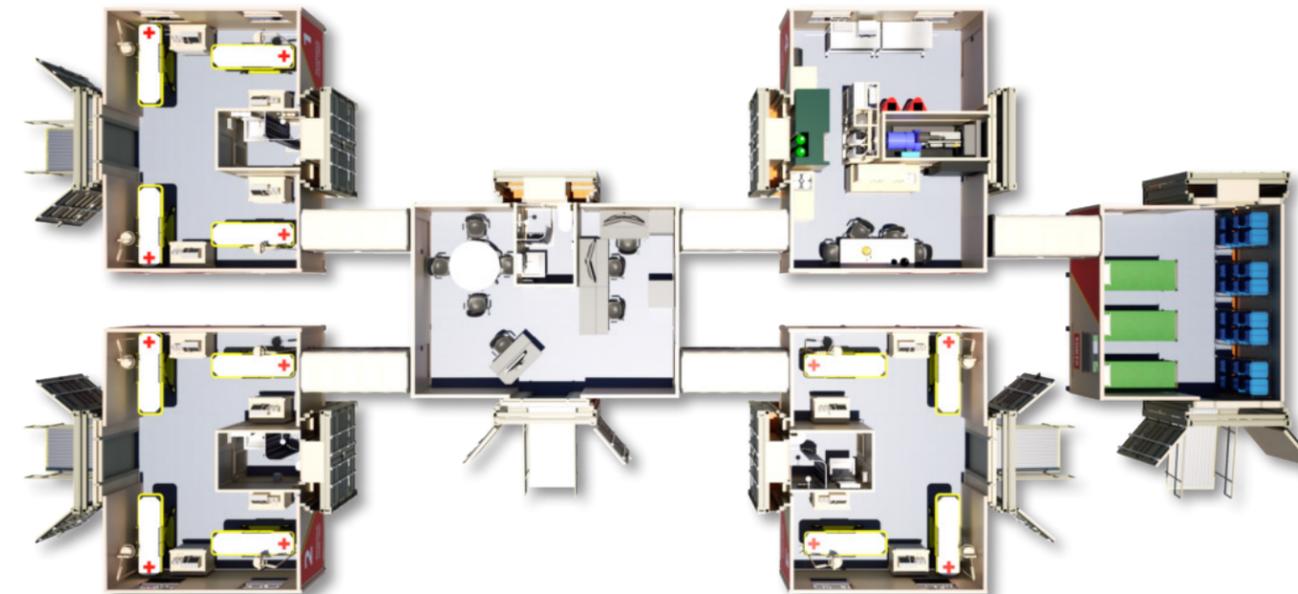
Since 1979, OSMOCO has been saving lives through their Airborne Medical Services, Remote Rescue Services, Crowd Medical Services and International Disaster Services. FORTS has over 30 years of experience creating new and innovative shelters that stand up to the harshest environments. FORTS developed ground breaking fold-out technology to create rapidly deployable, durable and highly energy efficient shelters which are ideal for remote medicine around the globe.



## Comprehensive Portable Medical Facilities



## Unmatched Operational Speed & Flexibility



Facilities Function Together or Independently



## Fold-Out Rigid Wall Shelters

Experience tells us, that even with the most thorough emergency preparedness planning, not all situations can be foreseen. Often times rapidly changing site conditions or a lack of logistical resources, such as transportation and unloading options, cause major delays in emergency care. FORTS Medical shelters eliminate this risk with a unique combination of built-in reliability, flexibility and operational speed.



- Deploy "mission ready" shelters through challenging urban and rural terrain with ease on a FORTS Medical Mobilizer Trailer.
- Shelters are fully compatible with world-wide land, sea or air transportation equipment without the need for alteration.
- Reduce transport costs and logistical concerns by consolidating shipments with all medical equipment and supplies already inside.
- No special unloading equipment is needed with an integrated shelter Unloading & Levelling System.
- Integrated shelter levelling mechanisms quickly adapt to irregular site surfaces of dirt, sand, gravel, asphalt or concrete.
- Onboard medical grade utilities require no onsite skilled trade installation of electricity, HVAC, potable water, sanitary waste, medical gas or communication systems.
- Each shelter is fully operational within 1 hour with just a 2 person crew.

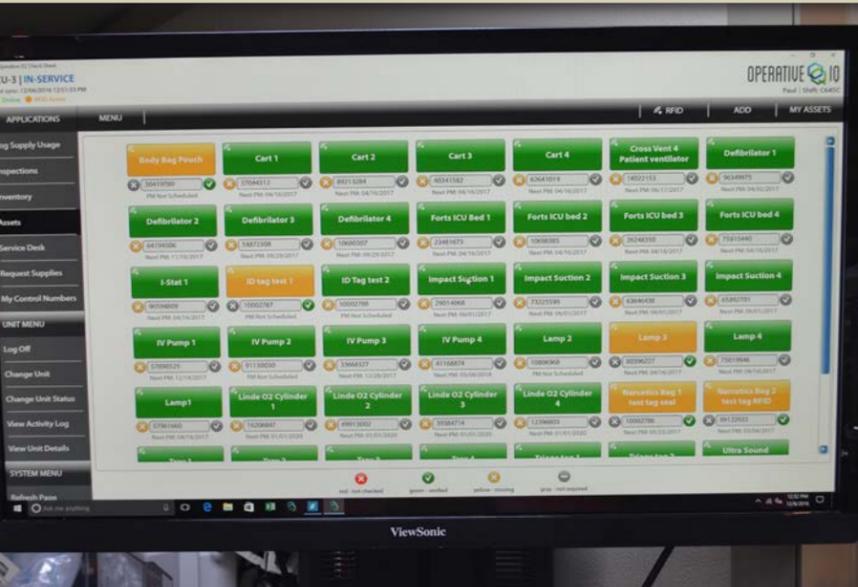
## Automated Medical Utilities

Emergency Responders have little time to manage emergency response facilities, inventories and patient records when everyone around them needs their attention. Yet maintaining the effectiveness of equipment, availability of supplies and tracking treatment are critical components to insure care is optimized. Through advanced system automation, FORTS Medical frees personnel to focus on the all important patient care.



- Surveillance system visibility enhances security, resource coordination and after action reporting.
- Z-wave automation system continuously monitors all utilities, medical equipment and supplies whether the shelters are stored or deployed.
- RFID sensors on staff lanyards, patient bracelets, medical equipment and supplies delivers real time inventory level and location awareness.
- Security monitoring includes door access locks, motion sensors, smoke/fire alarms, carbon monoxide sensors, environmental sensors, fire suppression systems and manual panic/fire pull stations.
- Redundant communication systems include HF long range radio, VHF marine band & air band, VOIP, Iridium satellite, GSM cellular phone, intra-hospital communication system and even walkie-talkies.





## Integrated Medical Equipment

Emergency and remote medical facilities routinely suffer from receiving medical equipment in separate shipments. Too often when shipments are finally received, some of the medical equipment components turn up missing or the equipment is simply out of service. Staff must spend valuable time unpacking, assembling and installing the medical equipment before delivering care. Medical equipment and supplies are always kept in a "Mission Ready" state within FORTS Medical shelters so that patient care is never delayed.



- Interchangeable Adult, Obstetric, Neonatal and Pediatric Intensive Care, Surgery, Imaging, Dialysis, Dental and many other medical stations are outfitted with everything in place to begin care immediately.
- Medical stations are monitored 24/7/365 to insure preventative maintenance is complete and that the medical equipment is fully operational when needed.
- Medical stations are held in the center storage space of a stored shelter and then simply rolled into position when the shelter is opened.
- Shelters supply state-of-the-art, multi-function and field proven medical equipment not only to save valuable space but also to minimize staff training time.
- Medical grade electric, oxygen and potable water generators along with HVAC, HEPA filtration and lighting systems are all factory installed to eliminate delays with field installation.
- Emergency Medical Protocol and Patient eChart software enhances speed and quality of patient care.

# BENEFITS IMPROVED PATIENT OUTCOMES

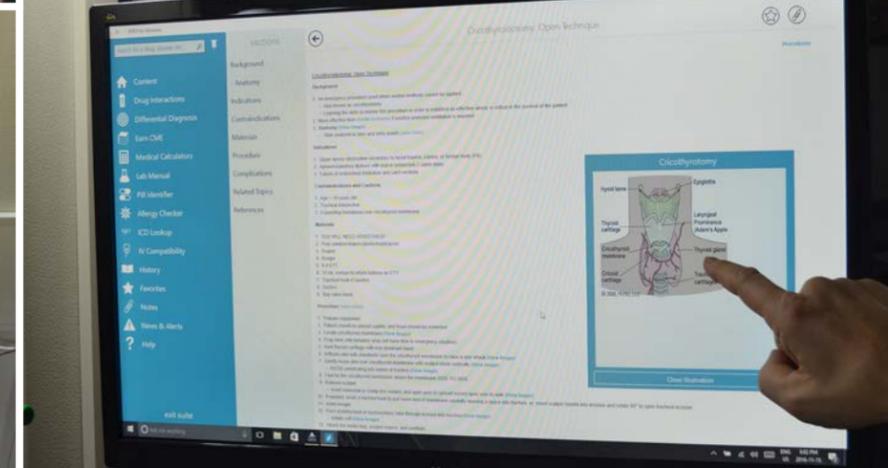
# 2

## Kitted Medical Supplies

Staff at emergency and remote sites bring their own level of experience and familiarity with available medical supplies. Components required for a particular procedure are often a challenge to keep grouped together. Out of urgency staff may make do with what they have on hand, ultimately sacrificing the quality of care. The FORTS Medical Procedure Kits eliminate this risk by providing everything needed for a particular procedure in easy step by step kits.



- Each FORTS Medical shelter includes an initial supply of interchangeable medical procedure kits critical for handling an initial surge of patients until medical supplies can be replenished.
- With clear labels and simple to follow directions in each medical procedure kit, combined with computer station access to PEPID Emergency Medical Protocols, new or less skilled personnel will become effective immediately.
- PEPID Emergency Medical Protocols include emergency intervention, trauma, advanced cardiac life support, and advanced trauma life support protocols along with a full drug database, drug & IV interaction database, pill identification, lab manual, patient discharge instructions and much more.
- Inventory management is made easy with FORTS Medical bar code labels on all consumables to facilitate proactive stock rotation, automated ordering and timely inventory restocking.





## CBRN Defense System

One never knows what types of deadly threats may occur in the midst of a deployment. Typical emergency medical facilities often lack the ability to continue operations without a delay in patient care. Valuable time is lost while CBRN defense and decontamination resources are mobilized. With an optional CBRN Defense System, FORTS Medical shelters are "Mission Ready" to create and maintain a safe treatment environment at a moments notice. Easy entry, egress and movement between shelters allows operations to continue with minimal interruption.



- Shelter doors, windows, corridors and all rigid wall panels lock together with dual compression seals.
- Outside entry/egress corridors are positive pressure zones and are equipped with hydrogen peroxide decontamination units which sanitize the corridor so personnel can safely don or doff personal protective equipment.
- BIO Protection Kits are equipped with personnel protective, patient intervention and decontamination supplies.
- A patient decontamination unit provides HPV decontamination and reverse CBRN filtration.
- Each shelter HVAC system is equipped with CBRN filtration and a positive pressure booster fan to maintain a positive pressure shelter environment.
- Sensors continuously monitor and record environmental conditions throughout the shelter and confirm safe zones with both visual and audible signals.

## Client Support Services

Maintaining and deploying emergency and remote medical facilities is often complicated by disparate components requiring considerable staff time and experience to validate operational readiness. This situation places a significant burden on the user and requires the training of large numbers of deployment personnel. The same personnel that may not be available in a disaster situation. The inherent deployment simplicity and component integration of FORTS Medical shelters, coupled with 24/7/365 monitoring and support from FORTS Medical Field Technicians, eliminates this very real performance risk.



- So that clients are always "Mission Ready", FORTS Medical Field Technicians manage supply inventory recertification and perform preventative maintenance programs for both the medical equipment, utility systems and the shelter itself.
- With the aid of FORTS Medical Automated Medical Utilities, FORTS Medical Field Technicians are alerted to any system or security abnormalities, so they can take corrective action immediately.
- FORTS Medical Field Technicians are highly trained in Deployment Protocols and Medical Protocols and are ready to accompany FORTS Medical shelters on deployments, should client staff require assistance.
- Simple to follow on-line client training modules along with FORTS Medical Field Technician led client training exercises insures the small deployment staff required are always "Mission Ready".
- For clients who do not have deployment resources, FORTS Medical will staff and manage the deployment logistics so the client need only provide the medical staff.





Countless Shelter Combinations are Available

### A Field Hospital for the 21st Century

Whether responding to a disaster or managing the health of remote populations, the FORTS Field Hospital System combines decades of “real world” emergency response experience with advanced fold-out shelter technology, integrated utility systems and medical equipment and supplies. This unique dual use capability allows clients to maximize the impact of their investment by utilizing the Field Hospital to build population resiliency in advance of deployment for emergency response and recovery operations.

- All Field Hospital shelters are held on trailers ready to deploy at any time. The entire system is connected to electrical service so that the integrated utility systems, medical equipment and supplies can be continuously monitored from anywhere in the world.
- The base 6 shelter solution is comprised of a Command Shelter, Technical Shelter, 3 ICU Shelters, and a Central Supply Shelter capable of treating, stabilizing and holding 12 patients at a time.
- When an incident demands additional medical capability, a series of interchangeable Maternity, Surgery, Isolation, Dialysis shelters and Patient Wards are available.
- With the use of connecting corridors, as enclosed walkways between adjacent shelters, staff can move freely throughout the Field Hospital in a productive, safe and secure manner.



150kW Electric Generator & PMG electrical stabilizer



Medical Gas Generation System



Water Filtration System



## Save Lives with Reliable Medical Grade Utilities

As the "Heart" of the Field Hospital, the Technical Shelter eliminates the time needed to unload, assemble and test various utility systems. With automated medical utilities staged in a single shelter; reliable power, medical gas, potable water and sanitary waste systems deliver critical utilities throughout the Field Hospital immediately upon reaching a site.

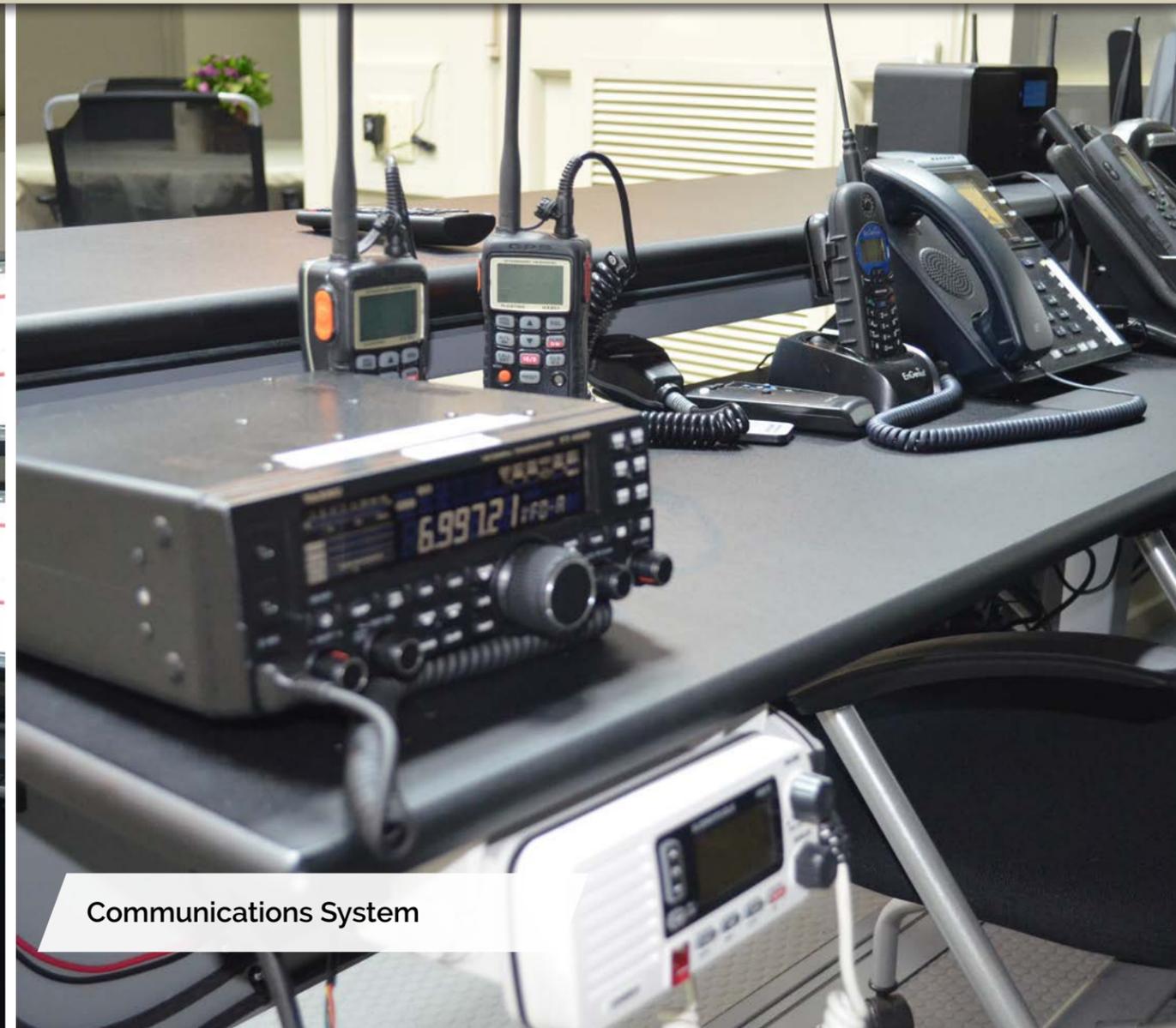
- A 150kW generator and PMG electric stabilizer supplies clean and consistent power to all shelters.
- Medical Gas Generation System provides a reliable supply of 50 LPM 95% pure oxygen to each ICU.
- Water Filtration System generates at least 8,000 liters per day of potable water from any water source.
- Secure Z-Wave Automation System allows local or remote monitoring, testing and control of all utilities.
- Bundled, insulated and heat traced quick-connect umbilical utility lines distributes utilities to all shelters.
- The canteen provides a 7 day supply of high quality dehydrated foods and drinks to nourish the staff and patients alike.
- A medical device sterilizer, laundry equipment, medical supply refrigerator and ice machine brings critical services to the Field Hospital.

# MODELS COMMAND SHELTER

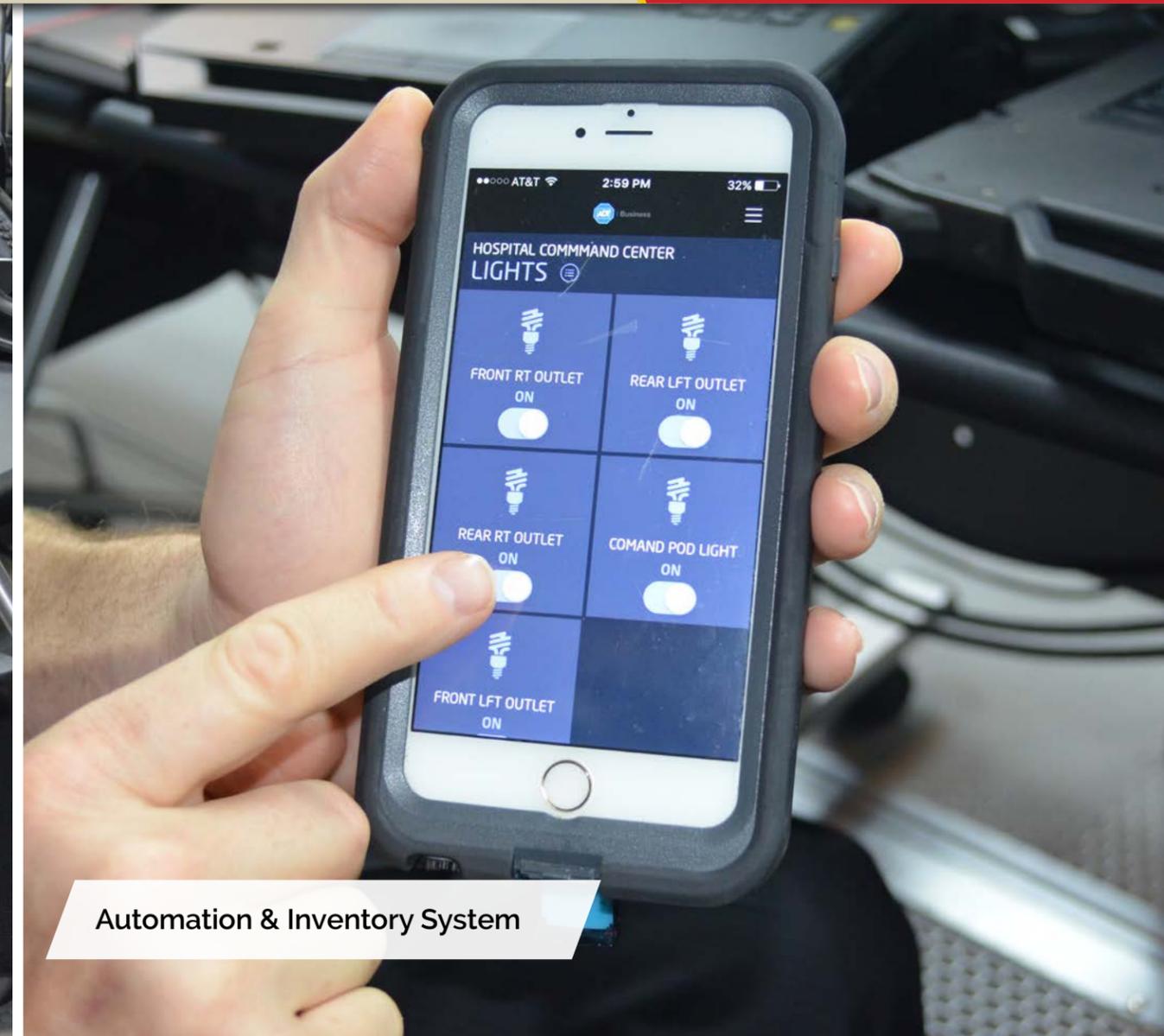
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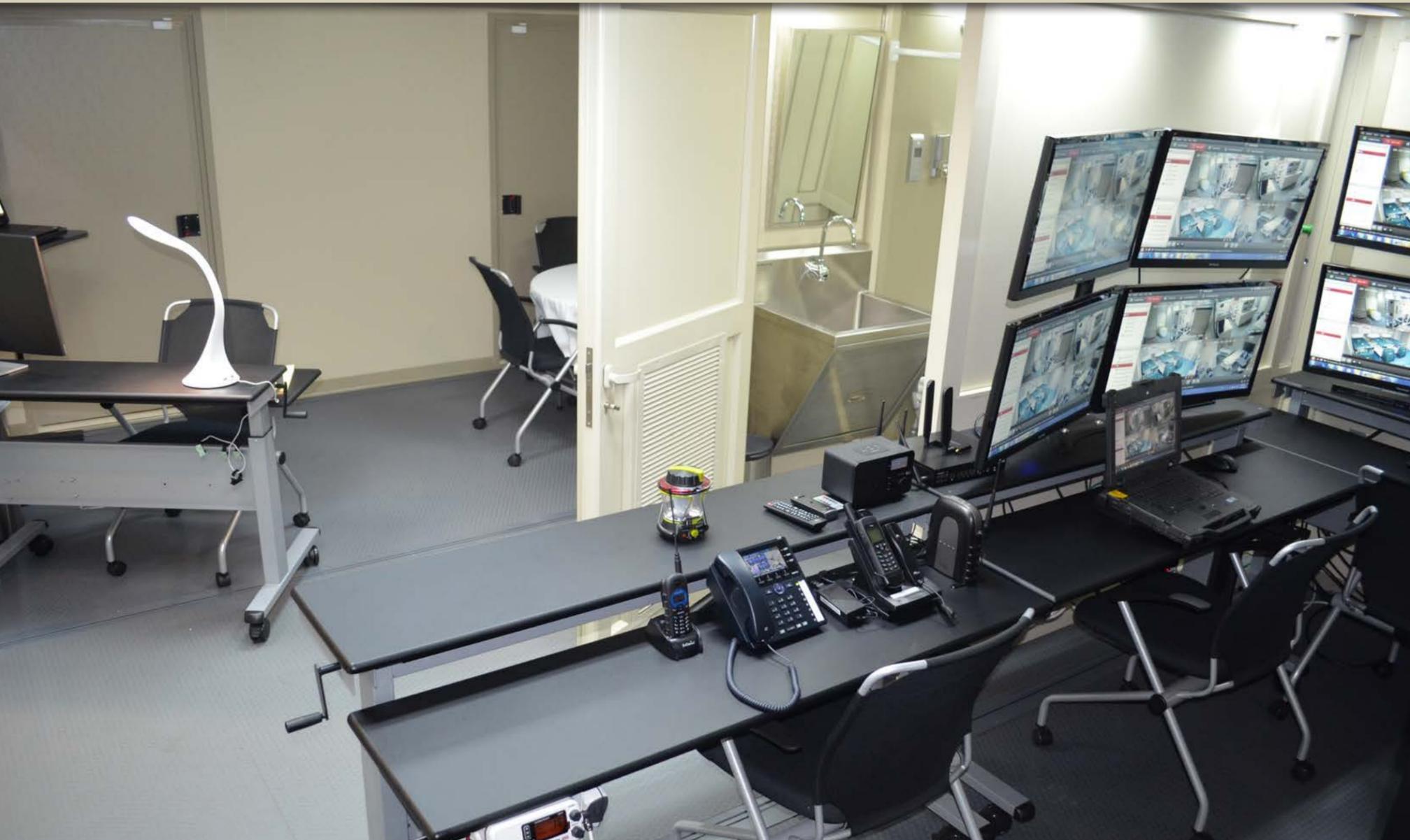
Surveillance System



Communications System



Automation & Inventory System



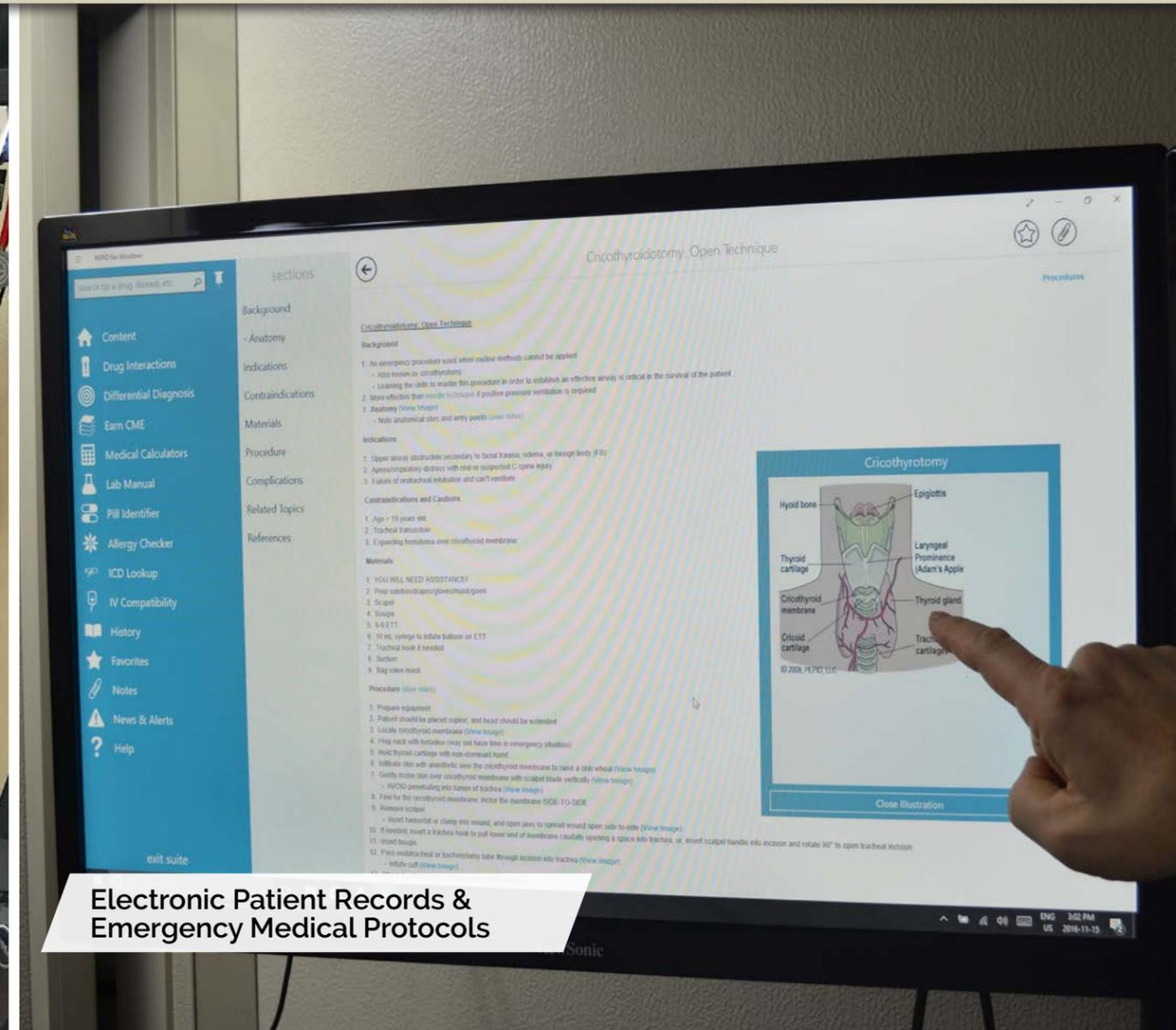
### Maximize Resource Coordination, Communication & Security

As the "Brain" of the Field Hospital, the Command Shelter provides real-time information access to accelerate life saving Incident Command decisions. Staff can direct patient flow, credential medical personnel and maintain patient records while monitoring resource levels, safety, security and environmental systems for the entire field hospital.

- Surveillance System visibility enhances security, resource coordination and after action reporting.
- Communication System redundancy insures communication is reliable and adaptable to any situation.
- Automation and Inventory Systems monitor critical resources and alerts staff accordingly.
- Reception Area controls walk-in access and serves as location for staff and patient credentialing.
- Patient eChart System records all treatment and brings continuity of care to patient transfers.
- Chaplain & Family Services space provides privacy for counseling both staff and family members.



Medical Equipment & Supplies



Electronic Patient Records & Emergency Medical Protocols



Maternity & Neonatal Care

# MODELS INTENSIVE CARE UNIT SHELTER

# 3



## Accelerate Treatment and Improve Patient Outcomes

As the "Backbone" of the Field Hospital, the ICU Medical Shelters waste no time with everything already on hand for life saving critical care. A combined Trauma Ward and Emergency Room, preloaded with medical treatment stations and supplies, is kept in a "Mission Ready" state so patient care can begin immediately.

- Each ICU Shelter is equipped with interchangeable maternity, neonatal, pediatric or adult medical stations capable of treating 4 patients simultaneously.
- Electronic Patient Records and Emergency Medical Protocol software enhances staff productivity and the post patient transfer continuity of care.
- The exclusive Decontamination System is proven to be 99.99% effective in just 1 hour thus eliminating the risk of medical shelter reuse.
- An Automation & Inventory Management System tracks the location of all medical equipment to insure it is fully operational and readily available when needed.
- Surgical sink and patient restroom with touchless fixtures and HEPA filtration minimizes the spread of infections.
- An entry door access ramp allows wheelchair and gurney entry through an oversized door with a protective exterior canopy and lighting.

# MODELS CENTRAL SUPPLY SHELTER

3



Staff Recovery Dorm



Inventory Access Wall

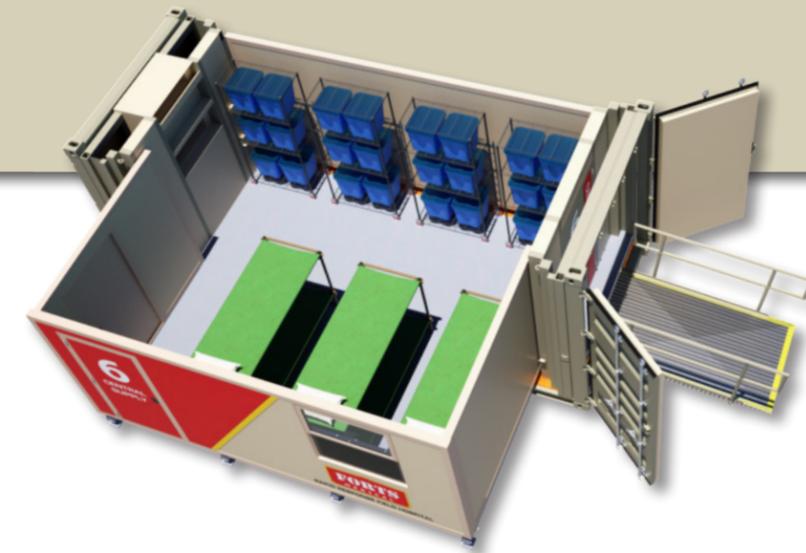


Kitted Inventory

# MODELS

## CENTRAL SUPPLY SHELTER

# 3



### Accelerate Deployment and Maintain Effective Operations

As the “Muscle” of the Field Hospital, a Central Supply Shelter brings speed and endurance to emergency and remote medical care. This dual function shelter, staged with ancillary equipment and supplies, also serves as a staff recovery dorm during active operations.

- An Inventory Access Wall opens in seconds for loading and unloading of equipment and supplies.
- Utility cables, portable bladder tanks, pumps and more are stored within the shelter during transport.
- The inclusion of large equipment tote bins and material handling equipment accelerates deployment with a minimal staff.
- The RFID tracked inventory held on racks in clear supply bins, provides easy access to medical supplies during active operations.
- The shelter is quickly transformed with portable cots, linens and accompanying lockers to accommodate up to 6 people at a time.
- As with each shelter, all life safety & security components are included to bring piece of mind to those needing rest.

# ACCESSORIES

# 4





### Maximize Infection Control and Reduce Hazard Exposure

Up to now it has been risky to reuse portable medical facilities due to the lack of a thorough and effective means to decontaminate facilities and their contents from one deployment to the next. Since FORTS Medical has integrated comprehensive infection control capabilities within the facility design, staff and patients are protected during deployment, operational use, demobilization and redeployment.

- The Bio-Fluid Spill Decontamination System controls patient body fluid spills through an exclusive neutralizing bio-containment powder and vacuum steamer.
- The Dry Fog Hydrogen Peroxide Decontamination Unit completely sanitizes all shelter surfaces along with the entire HVAC system to allow facility cleaning and maintenance without the need for hazardous personal protective equipment.
- The Waste Oxidizing Disinfection Cart decontaminates the sanitary waste holding tanks and associated plumbing pipes via access ports to safely isolate, treat and flush the entire system before dismantling.
- A portable Medical Waste Incinerator permits the onsite rapid destruction of contaminated items which can be burned such as paper products, packaging, sheets, etcetera and converts them into non-hazardous waste ash.

### Always Staged in a “Mission Ready” State

FORTS Medical shelters are typically held on Mobilizer trailers ready to deploy at any time. Each shelter is connected to electrical service so that the integrated utility systems, medical equipment and supplies can be continuously monitored from anywhere in the world. This rapid response capability simplifies intermodal transport logistics whether deploying to challenging urban or remote locations.

- A tandem axle chassis trailer constructed of galvanized steel utilizes ISO container chassis twist locks to secure the shelter for transport with a suitably sized pickup truck.
- The hydraulic Unloading & Levelling System eliminates the need for specialty equipment (such as forklifts) to load, unload and level the shelter on even the most challenging terrain.
- An optional Generator Loading/Unloading System allows transport of the shelter with an auxiliary generator requiring no additional equipment to deploy.



## Shelter Components

- 2012 International Building Code
- 2012 International Residential Code
- ICC (International Code Council) - ESR-1599 Roof and Wall panels
- ASCE 7-10 (American Society of Civil Engineers) 2010 Aluminum Design Manual
- Shelters are rated for wind speeds up to 130 mph with proper anchoring
- Roof live loads are rated up to 60 lbs. per square foot
- UL (Underwriters Laboratories), ETL (Electrical Testing Laboratories) certified electrical system components
- FDA (Food & Drug Administration) medical gas system installation guidelines
- FDA approved medical devices
- NSF (National Science Foundation) standards for multisource filtered water systems
- NSF certified plumbing fixtures for medical use
- UL, ETL and NSF certified UV water system
- All communications equipment is certified by FCC (Federal Communications Commission)

## Transportation

- ISO Container Standards (ICC type) - ISO 830, ISO 1161, ISO 6346
- T.I.R. Certification (The Customs Conventions on Containers)
- C.S.C. Certification (International Convention for Safe Containers)
- DOT (Department of Transportation) certified transport trailers

## Fire

- UL 1715 (UBC 17-5) Room Corner Test, Fire test of Internal Finish Materials as classified by Underwriters Laboratories, Inc. File No. R15413.
- Class "B" (Full) Exterior Fire Resistances per ASTM E108-91A. Three classes of fire test exposures, spread of flame, intermittent flame and burning Brands.
- Classified by Underwriters Laboratories, Inc., File No. R 15373.
- Class "A" Spread of Flame for exterior fire resistance, per ASTM E108-07A, Southwest Research, Department of Fire Technology.
- UBC 26-3 Room Fire Test Standard. 15 minutes interior. Southwest Research, Department of Fire Technology.





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