Truman Medical Center COVID-19 Needs

-DRAFT-

Infection Prevention

CMS suggests the establishment of Non-COVID Care zones that would routinely screen all patients for symptoms-- including temperature checks-- prior to entering the building. Staff would also be routinely screened as would others who will work in the facility (physicians, nurses, housekeeping, delivery and all people who would enter the area).

There will be a need for healthcare facilities to support a social distancing policy for staff, patients and patient visitors in non-restricted areas in the facility that meets then-current local and national recommendations for community isolation practices.

Surge Capacity/ Isolation

Across the country, healthcare organizations are aiming efforts to increase the supply of coronavirus patient intensive care units and airborne infection isolation rooms, with the goal of protecting health care workers from getting sick. The main reason for negative pressure rooms, rather than ICU-only rooms, is to prevent health care personnel from contracting COVID-19.

Staff who will be working in "non-COVID" zones should be limited to working in these areas and not rotate into "COVID Care zones." Construction of isolation rooms in consolidated areas will be important in meeting this need.

Location	Item	Description	Estimated total cost
HSD	Reconfigure Emergency Department entrance and waiting area	Design to accommodate public screening with temperature scanning and health checking-- downsize waiting room and increase Emergency Department rooms. Additional work on ambulance bay to improve infection prevention. Add Air Handling Unit Capacity to support additional (15) Isolation Rooms.	$4,500,000
HSD	Create public screening in main hospital lobby	Renovation of lobby entrance to enable health screening of public and employees-- primary entrance for employees and public with separate health screening capabilities.	$3,000,000
HSD	Charlotte Street Entry remodel	Added security and ability to screen public prior to hospital entry. Primary public entrance with health screening for the Specialty clinics, Retail Pharmacy and Medication Assistance Pharmacy.	$1,000,000
HSD/ LW	Tru-D ultra violet disinfecting machine	1 additional high capacity room and equipment disinfecting to handle increased needs and prolong the life of PPE.	$90,000
LW	eICU (4 rooms)	Renovate four ICU rooms to enable remote ICU patient monitoring. This includes equipment and one year of monitoring costs to enable higher acuity patients to remain at the LW facility. Currently, higher acuity patients are transferred to the Health Sciences District for care by critical care intensivists. 1st year o*perating costs = $270K/ equipment = $40K*	$310,000
HSD	Reconfigure newly constructed 5th/ 6th floor Inpatient rooms to create co-located isolation rooms	Adding additional Air Handling Unit capacity necessary to create negative pressure isolation rooms on 5th floor (8), 6th floor (6) and (1) additional NICU room (for a total of (2). *Final engineering work complete-- the increase to the original estimated cost is* associated with upsizing the Medical Air/ Vacuum/ Oxygen systems, piping, pumps and regulators from the 6th floor all the way down to the medical gas tank farm. These were not in the original estimate but with the potential need to use ventilators in all of the added isolation rooms simultaneously we would need to upsize these systems.	~~$1,500,000~~ $1,900,000
HSD	Main Operating Room Ante Room/Isolation	Add ante rooms to our (8) operating rooms to allow for negative pressure isolation capabilities for surgeries. Our operating rooms currently do not have the ability for surgeries to be performed on any highly infectious patient (COVID, TB, etc.) without the installation of plastic barriers to create temporary ante rooms. This will create permanent ante rooms for each operating room.	$750,000
HSD	Construct new (20) Bed Intensive Care Unit with isolation rooms. Create negative pressure Isolation rooms from existing Intensive Care Units.	Add 20 Intensive Care rooms which require administrative office space relocation. Create additional 34 negative pressure isolation rooms from existing Intensive Care Unit rooms.	$13,500,000
HSD	Renovate existing 3rd and 4th floor double patient rooms for single occupancy. Create 15 additional isolation rooms.	Create private rooms from dual occupancy rooms with some surge capacity if needed-- Add air handler unit capacity to make 15 of these negative pressure isolation rooms. Existing Chiller Plant is End of Life-- additional cooling capacity needed for new isolation rooms. We are currently replacing the electrical infrastructure that would allow us to replace these chillers as part of this project. New chillers will also ensure the entire hospital can be on backup power when commercial power is lost.	$14,500,000

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	Location	Item	Description	Estimated total cost
Surge Capacity/ Isolation (cont.)	Lakewood	Build out additional medical/surgical beds with negative pressure isolation capabilities. Add 4 isolation rooms to each of two existing med/ surg wings. Replace (2) chillers to handle the increased Inpatient capacity.	Add 14 negative pressure isolation rooms (formerly shell space) plus nurses stations. The design allows for segregation of these rooms by glass walls at the end of existing inpatient units. Add needed air handling unit capacity (+ 2 AHU) to support these new isolation units. Add 4 isolation rooms to each of two current inpatient wings. Adding inpatient rooms will require replacement of existing chillers that serve the Lakewood building as they are currently maxed out. As an added benefit, replacement of these chillers will result in better energy efficiency.	$12,700,000
	HSD/ LW	AIRVO High Flow nasal cannula (10)	Used in the treatment of COVID patients experiencing pneumonia with hypoxemia (low blood oxygen levels). High-flow nasal cannula therapy is an oxygen supply system capable of delivering up to 100% humidified and heated oxygen. Acute respiratory failure due to acute hypoxemia is the major manifestation in severe coronavirus disease 2019 (COVID-19). Rational and effective respiratory support is crucial in the management of COVID-19 patients.	$37,000
	HSD/ LW	Ventilators (20)	Needed to treat COVID patients *Revised to reflect additional 10 ventilators that will be equipped for neonates in the new NICU. Original request was for 10 adult ventilators. This is also reflects most current pricing on both types of ventilators. Purchased due to need and availability.*	~~$270,000~~ $687,000
COVID-19 Testing	HSD	Lab renovation	Temperature controls and power are not suitable for current needed equipment. New equipment requires additional power and appropriate cooling.	$2,500,000
	HSD	DiaSorin Liaison XL Lab instrument	Allows for IgG and IgM antibody testing for COVID	$115,000
	HSD	Beckman Coulter Chemistry and Automation Line	Part of the Lab renovation project. Automation line with Beckman Coulter will allow the laboratory to have direct connection to analyzers for greater efficiency and energy utilization.	$2,200,000
	HSD/LW	Cepheid Expansion for COVID-19 testing	Presently HSD has 16 testing bays, LW has 8. If COVID hits at the same time as the flu, we currently do not have enough capacity. Add 16 new testing bays at HSD, 8 new testing bays at LW	$400,000
Service Line Impacted	Lakewood	Build new Dental Clinic to continue to serve Medicaid and other patients. This is the only clinic at TMC that provides general dentistry services.	Current Dental Clinic is located in an older part of the hospital. Ventilation and HVAC issues have been a challenge for several years. Long term plan has been to relocate the Dental Clinic to a new MOB per the Lakewood Master Plan. Two options are under exploration to support current and on-going needs: **Option 1 (Purchase a building)**: 10K sf needed for approximately 20 exam rooms for dental only. Estimate is $3.5M for A & E, construction, FF & E, IT, etc.,. inclusive of a 10% contingency. Estimate per sf cost for purchase @ $180/ sf for a 20K sf building. **Option 2 (Lease space)**: 10K sf needed for approximately 20 exam rooms. $3.5M for construction and finishing. Lease cost inclusive of utilities, etc. is estimated at $17.75/ sf or for a 10-year lease-- $1,775,000.	Option 1: $7,100,000 Option 2: $5,275,000

According to CMS, when adequate testing capability is established, patients should be screened by laboratory testing before care, and staff working in these facilities should be regularly screened by laboratory tests as well. Facilities should use available testing to protect staff and ensure patient safety whenever possible and should implement a policy addressing requirements and frequency for patient and staff testing.

Note-- all construction projects and equipment will be contracted for after March 1, 2020 and before December 31, 2020.

These costs are preliminary schematic stage estimates and are intended only to give an order of magnitude based on historical data from past project work. Through architectural and engineering development of the details, a more exact set of costs will be generated.