

Mobile Wellness Center Design Competition

"To Elevate the Dignity of the Individual"

Architecture and Engineering (Updated 4/24/14)

- 1ST PRIZE \$3000
- 2ND PRIZE \$1500
- 3RD PRIZE \$750
- 4TH PRIZE \$375
- 5TH PRIZE \$165

Teams of two to four students to design prototype for 100 Mobile Wellness Centers for truck stops throughout the United States. Designs must include facilities for:

- Private psychological counseling
- Private medical check-ups (Primary Care)
- Public and Private spiritual guidance
- Public physical well-being

JUDGING CRITERIA:

- 20% Functionality
- 30% Space Utilization (Interior, Exterior, Surface, Site)
- 20% Aesthetics (Cultural, Messaging, Exterior, Interior)
- 10% Sustainability (Energy, Water, Repairs, Maintenance)
- 10% Versatility
- 10% Constructability

DETAILS (See Dr. Wunderlich's Public Folder for all documents):

- 1) **BUDGET:** \$80,000 using Lowes.com and Bestbuy.com whenever possible. Labor costs paid by others and not in budget. Also use Grainger, Harbor Freight (for specialty items like hydraulics), and Conestoga Wood Specialties (for custom high-quality cabinetry if desired). Look at the following websites for product materials that could enable a creative solution to the space constraints:
 - Armstrong World Industries www.armstrong.com
 - SPI @ www.winrospi.comand
- 2) **STANDARDS:** US standards (ADA, HIPPA, AIA, ASHRAE, building and vehicle codes). See Primary Care design criteria: <https://www.transformed.com/>
Review documents in Dr. W.'s Public Folder regarding Primary Care exam room design:
 - FILE: 2_midmark_604_manual_exam_table.pdf
 - FILE: Patient Centered Design in the Exam or Procedure Room.pdf
- 3) **SPACE:** Design space **EXTERIOR:** 53' - 0" long, 8' - 6" wide (NOT 9-6"), 13' - 6" high; but you can design sections that extend out and up automatically (like an RV), and design as many windows and skylights as you wish. However, must collapse to 53' - 0" long, 8' - 6" wide, 13' - 6" for transporting. Trailer **INTERIOR** dimensions: Finished floor is 48 inches above ground, interior box is 52' - 6" long, 8' - 4" wide, 9' - 2" high
- 4) **SITE DESIGN:** Use of surroundings will vary in size and degree; so design for varied site conditions and lot configurations; a typical site plan is in the documents folder –assume rest-stop will supply bathrooms, food, etc. 50 foot turning radius for trucks. Assume truck will be located away from truck traffic flow.
- 5) **HVAC:** Environmental conditions should be similar to that of a typical U.S. office building during working hours. Trailers must operate in a variety of climates (from the 120F+ degrees heat of Death Valley in summer, to the sub-zero tundra of the Yukon in winter). A refrigerator must be included for medical supplies (not food). Consider insulation R-values and required thicknesses for Walls, Floor, and Ceiling
- 6) **PLUMBING:** Medical Professional will need a sink, and you may not have access to water and wastewater from the Travel Center. Other plumbing may be designed (sink, shower, dishwasher, etc) if you can fit it into your budget.
- 7) **INFORMATION TECHNOLOGY:** Assume high-speed internet available. A high-def large teleconferencing capability must be designed into trailer (for televised sermons, group-counseling, exercise & wellness classes, etc.)
- 8) **ELECTRICAL:** Assume 10 watts per square foot supplied to trailer, and 120 volts AC provided, however you can propose alternate (maybe renewable) energy generation and storage. When trailer connects to tractor, need standardized trailer connector for low-voltage power, compressed air, etc. High voltage feed to be fed into trailer near tractor connection. Assume 200AMP service available at trailer. Don't run wires or ductwork under trailer (All Electrical and Mechanical integration must be inside trailer)
- 9) **WEIGHT:** Total finished trailer can't weight more than 80,000 pounds (existing trailer is 10,000 pounds)
- 10) Truck doesn't stay with trailer once delivered to site (so don't rely on it for Compressed Air, Hydraulics, alternative power generations, etc)
- 11) Assume floors need to be resilient, for easy cleaning (i.e., no carpeting)
- 12) Sleeping accommodations for staff is optional in your design
- 13) Remember that onsite facilities will provide restrooms, food, showers, etc.
- 14) Don't worry about structural implications of how you penetrate shell of trailer for windows, doors, space-extensions, etc (that will be addressed during follow-up A&E)

Present your design in a 20 minute multimedia presentation (must include a poster) on Wednesday, May 7th at 11:00am in Gibble Auditorium. Contact Dr. Joseph Wunderlich (wunderjt@ETOWN.EDU) for further information

