

Schoolhouse Move Obstacles

This summarizes the extreme difficulty / costs associated with moving Amherst College's building known as the Amherst Daycare Building (aka: Little Red School House). The building cannot realistically be moved in one piece. As such, relocating this building is not a reasonable possibility based on the following facts.

1 WIDTH OF STRUCTURE VS. WIDTH OF ROADWAYS

The building is 35 feet wide. Roadways are generally 22 feet wide. College Street is 23 feet wide; Dickinson is 18. Payne Building Movers provided detailed information for calculating required width of travel path as building width plus 2 to 3 feet on either side to account for steel that temporarily supports the building and minimal clearance buffer. As such the required travel path is 40 feet wide. The following diagrams demonstrate this fundamental problem with moving the building in one piece. (Note that this route is the only possible route off campus due to myriad obstacles in other directions, ie: steep slopes, narrow roadways, etc. Note also that College Street's obstacles such as trees and utility poles are even narrower than below.)

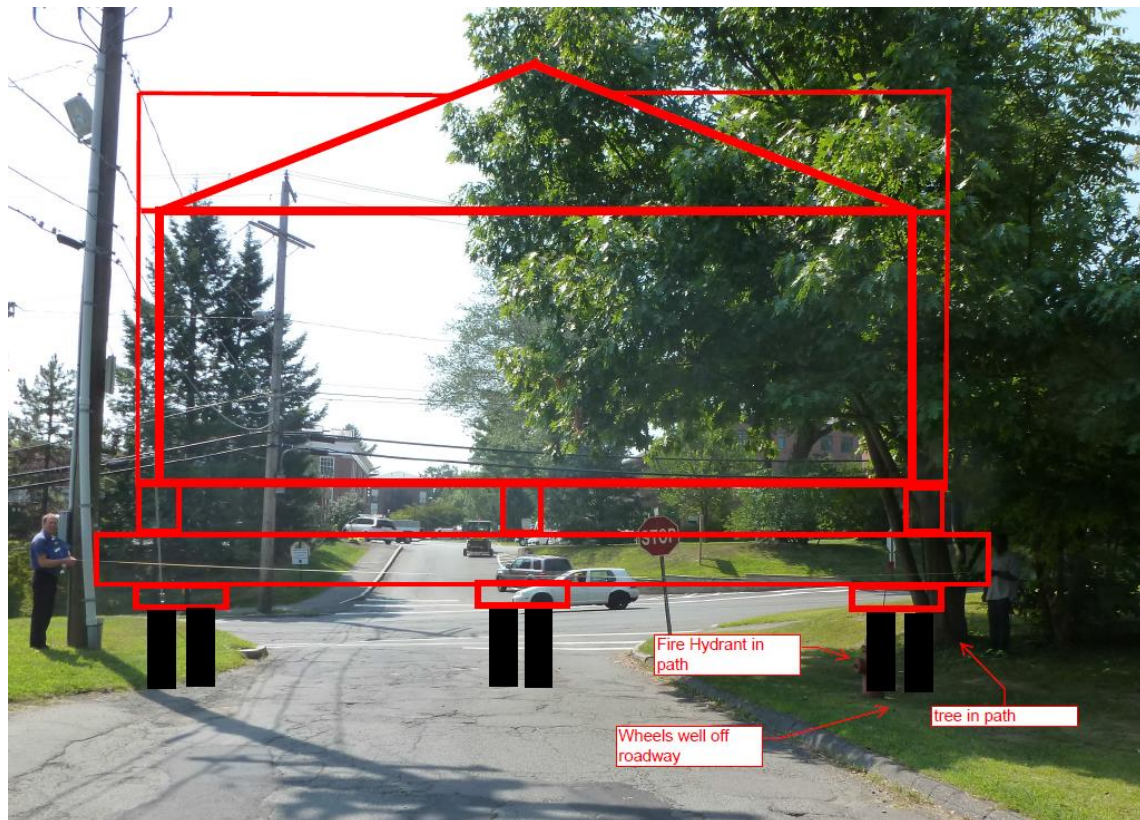
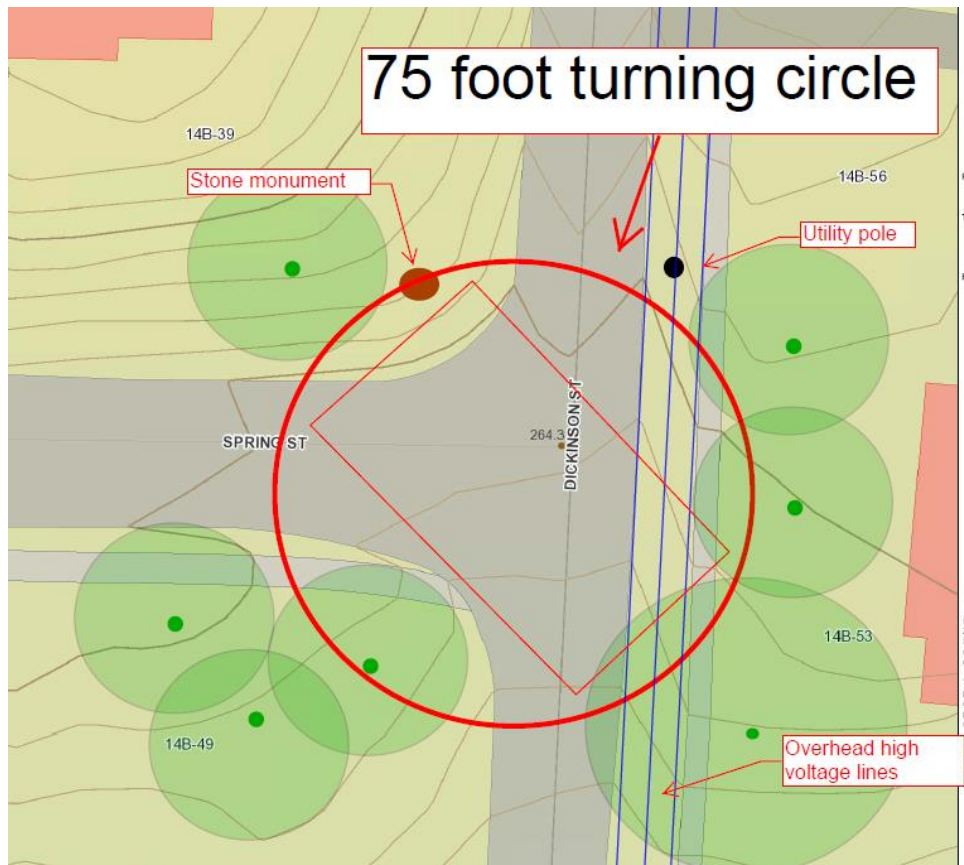


Photo looking south on Dickinson Street with scaled dimensions of building in transit superimposed. Tape measure notes 40 feet overlaps both utility pole on left and 16" caliper tree on right. (Note that College Street offers considerably less clear width.) This example condition occurs numerous times along any route.

2 LENGTH OF STRUCTURE VS. AREA AVAILABLE AT INTERSECTIONS

Payne Building Movers provided detailed information concerning critical dimensions required to maneuver the building through intersections. The diagonal of the structure is what determines the ability to pivot the structure in an intersection. Add to the diagonal dimension 3 feet at each end for steel extension and minimal clearance, and the critical dimension for this building is 75 feet. The following intersections cannot accommodate required rotation of the building: Dickenson at Spring, Spring to South Pleasant, Spring to Boltwood.



3 HEIGHT OF STRUCTURE VS. TREES AND OTHER OBSTRUCTIONS

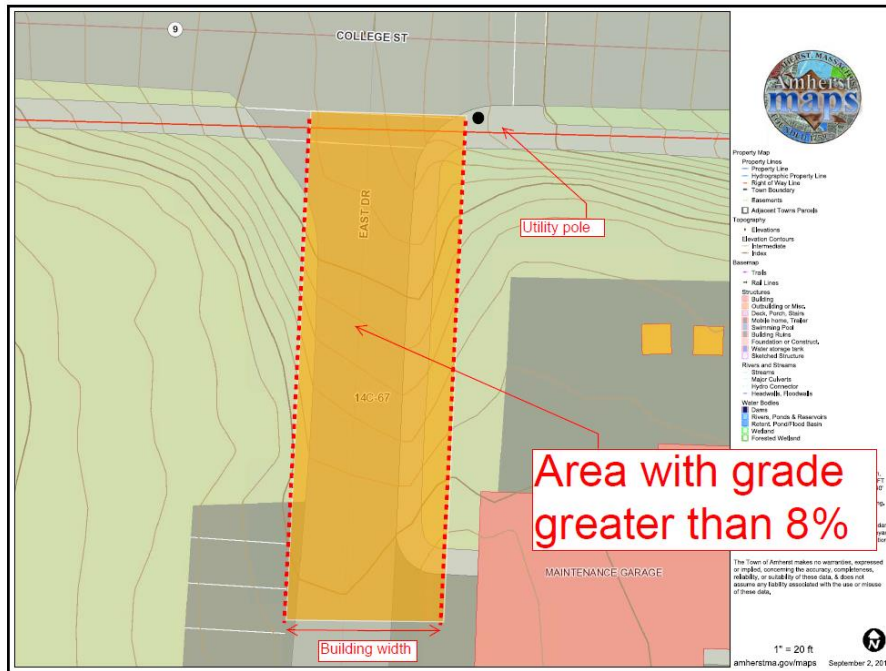
Payne Building Movers provided detailed information concerning the height of the clear required right of way to move the structure. The temporary supporting steel beams and the dollies beneath them require 6 feet of height. Add to this the height of the existing structure from the underside of the ground floor structure to the ridgeline of the roof (assuming the cupola is removed) yields a height of 24 feet. Many trees along roadways have large limbs overhanging the roadway itself at a height of 15 feet, which is the height of large trucks. As such, on any possible route, tree limbs would need to be removed approximately 9 feet up from current height. Payne notes that limbing trees, whether in the public way or on private property, is notoriously difficult to get permission to do. When the college moved the smaller houses, a small number of limbs needed to be removed,

and this process was quite difficult and took considerable time to negotiate permission to do so. Those trees were in the public way. For this schoolhouse, limbs over private land and from trees that are entirely on private land would need to be removed. Private owners have no obligation to comply, and many would object strenuously. See the figure on page one for better visual understanding of the typical conflict that moving this building would create concerning trees along the route.

4 MAXIMUM SLOPE FOR BUILDING MOVE VS. EXISTING SLOPES

Payne Building Movers provided detailed information concerning the maximum grade over which the structure could be moved, namely 8%. Indeed other movers noted this fact to Ms. Gray as well. Payne described that the building must remain level at all times throughout the move regardless of what grade is being traversed. To accomplish this, each of the four sets of dollies are hydraulically adjusted to raise or lower one end of the building. The dollies have a maximum adjustment length of 14", thus the maximum the lower end can be from the upper end is 14" lower.

East Drive as it exits the campus is well over 8% slope, steeper than what the movers have stated is the maximum. It is worth noting that the path from current building location to East Drive is also well over 8% grade.



Topographic site plan showing example of where the path's slope is over 8% maximum allowable.

5 SEGMENTING BUILDING TO FIT ON ROADWAYS

Payne Building Movers provided detailed information concerning segmenting the building in order to be able to relocate it. Indeed, the other movers noted the same: costs would be staggering if segmenting the building is

required (and demonstrated by the above that it would be to move the building). Total project cost could easily exceed \$1,000,000.

When the College relocated an historic wood frame house along the same path that the Schoolhouse would have to travel along, the house would not fit in one piece and was segmented into two pieces (and further the height of the house was reduced due to overhead restrictions). The maximum width of those segments was 24 feet. Even at that width, tree limb removal was required, all the parking meters were removed from Main Street as the structure overhung the sidewalks by many feet, a stone structure was removed at an intersection, signs were removed and of course utility wires were temporarily removed. That was for a 24 foot wide structure only 48 feet long. Again, the schoolhouse is 35 feet wide and 61 feet long.

Unfortunately, the building cannot be moved in once piece even to the edge of campus. Costs to relocate the building would be very high, likely exceeding \$1,000,000.

Submitted by Amherst College Design & Construction Department, September 8, 2015.