

## APPENDIX A

## Construction Plan:

## The South Middleton Township Box

## DIRECTIONS:

Mr. Keith Barnes, an Industrial Arts teacher at Boiling Springs High School, designed and built our box with help from his students for less than \$100.00, and the following plan and materials list is probably detailed enough for someone with moderate carpentry skills to reproduce his design. While we encourage you to incorporate your own ideas into your box, there are a few design elements in our box that we've found essential.

The removable, see-through plexiglass panel on one of the ends allows the students to view their site in the vertical before they excavate it, and the wooden panel that can be used to cover the plexiglass makes this feature optional (there may be some site profiles you want to hide from your students). When both panels are removed, your tabletop box is easily and quickly cleaned out. Our box has an alphanumeric grid superimposed on it's railing, with small studs on four inch centers that a string

can be looped around (see top view of the box), as well as a datum point and a north arrow, and this greatly facilitates the gridding and mapping of the site. Finally, our box has very sturdy legs (doubled 2x4's) and heavy casters. Since a filled tabletop site can weigh a couple hundred pounds, these features make the box safe and portable. Remember to adjust the overall height of your box (ours is 34 inches) to the size of your students.

Our box's frame is built entirely of 2x4's, some of which are ripped into 2x2's, and 3/4 inch plywood forms the bottom and the walls. One end contains a plexiglass panel and a plywood panel that simply drop into a slot framed in with 2x2's. We used countersunk 1/4" wood screws for all of the joinery (you could just use nails), and if we had it to do over again, we would recommend the use of 3/8" or even 1/2" carriage head bolts, washers, and nuts to attach the legs (which support quite a bit of weight) to the frame. The small studs that mark the corners of the grid on the box's railing are common plastic push pins. The grid numbers and letters, the datum mark, and the north arrow can be painted on, or done with a permanent ink marker. It will take someone with some reasonable carpentry skills and the right tools about a day or a day and a half to build a replica of our box.

## MATERIALS

- Approximately 12 8' 2x4's
- 2 4'x 8' sheets of exterior grade 3/4" plywood
- Approximately 75 2.5" flathead wood screws or about 2 lbs. of 8d common or finishing nails
- 8 5.5" 3/8" or 1/2" carriage head bolts with washers and nuts  
(for the legs)
- 1/4" plexiglass panel, 24" x 17.25"
- A box of plastic push pins
- paint or clear finish