

Test Yourself



By **Richard L. Elgin, PhD, LS, PE**

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Compute the Pile Elevations

A Point on Tangent (POT) has coordinates 7000.00 North, 8500.00 East and Elevation 426.89 and is at Station 8+36.92. From this POT, the centerline departs on a bearing of N47°18'26"W.

There is a curve Point of Curvature (PC) at Station 13+14.15. For that curve, the Degree of Curvature is exactly 3° and "Delta" or "I" is Left 38°47'05". A bent of three piles are to

be located at the following locations:

The centerline grade from the POT for this part of the route is 2.785%. At the bent of piles, the route's cross-slope is exactly 1% (sloped toward the curve radius point).

Based on this design, compute the elevations for the top of each of the three piles and compute the coordinates for the three.

For the solution to this problem (and much more), please visit our website at: www.TheAmericanSurveyor.com.

Good luck! *AS*

STATION	OFFSET	ELEVATION	COORDINATES	
			NORTH	EAST
20+62.69	0			
20+62.69	30.00 RIGHT			
20+62.69	43.00 LEFT			

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