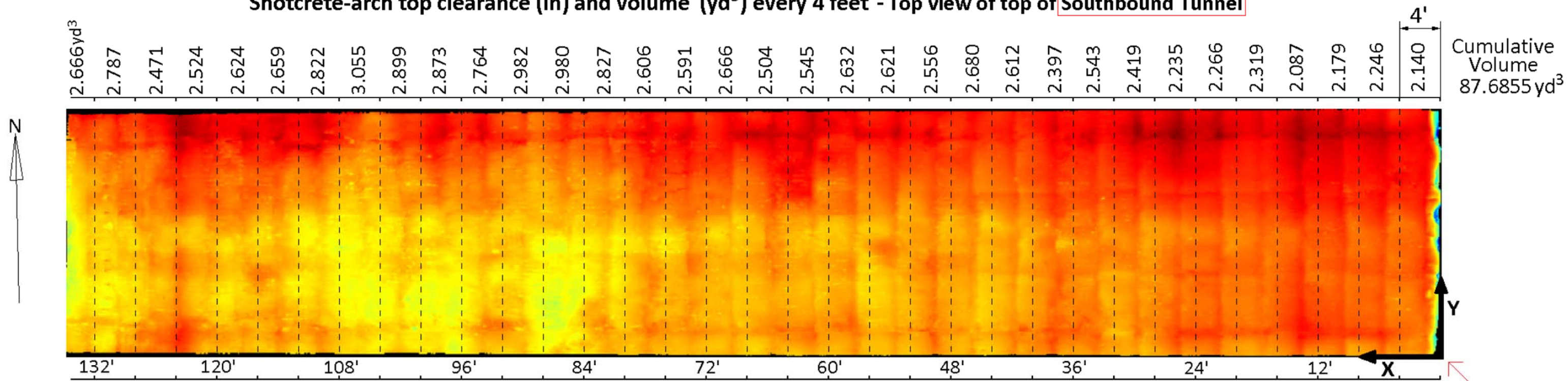


Shotcrete-arch top clearance (in) and volume\* (yd<sup>3</sup>) every 4 feet - Top view of top of Southbound Tunnel



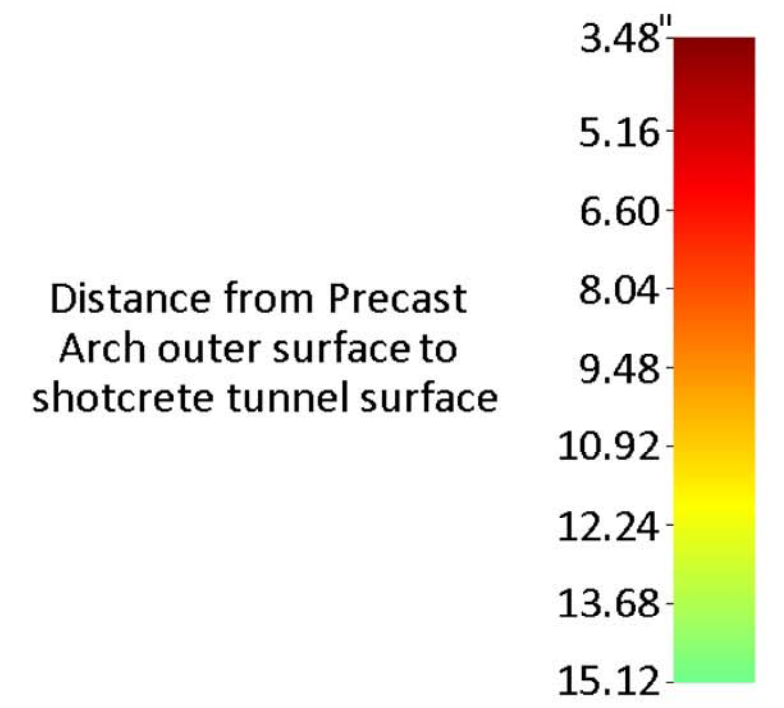
Measurement starts at top south corner of kneewall on the median end of the southbound lane tunnel



point cloud of tunnel with heat map



Location of x, y origin



Distance from Precast Arch outer surface to shotcrete tunnel surface

Title: LiDAR Tunnel Clearance Map	Date: 10/16/2017
Project: GEORGIA IM CULV(25)	
Author: Daniel Jarvis	

\* Volume represents area between outer surface of pre-cast arch and shotcrete tunnel surface