



*Arthur Ravenel Jr. Bridge*

Bridges and trusses are structures that need to be inspected periodically but can prove to be very difficult to access. Vertical Access has completed a number of bridge and truss characterization and inspection projects in the past 25 years, honing the unique skills required to safely maneuver in a more horizontal environment.

One aspect of VA's bridge and truss investigation work is developing site-specific rigging to allow hands-on inspections.

For the Catskill, Kaaterskill and Normanskill bridges in the Catskill region of the New York State thruway, Vertical Access designed and built a mobile access truss cart that allowed technicians and bridge inspectors to access inboard structural members, deck beams and other difficult to reach areas.

On the 1,546 foot-long cable stayed Arthur Ravenel Jr. Bridge in Charleston, SC, Vertical Access designed and fabricated a rolling anchor system to access the entire length of the stay cables which ranged between 15° to 65° from vertical. Hands-on inspection was performed on the high-density polyethylene (HDPE) stay cable ducts and steel framework tubes in the pylons.

Another component of VA's work investigating bridges and trusses is the application of direct digital documentation techniques. Using tablet computers and AutoCAD in the field, VA is able to complete data acquisition of overall dimensions, connection details, and condition observations directly into the computer.

On the Canadian Pacific Railway Bridge spanning the Niagara River Gorge in Niagara Falls, NY, all of the steel truss members were characterized as part of a preliminary engineering study of the bridge. The real-time photo and video linking capability of TPAS® allows VA to leave the site with the deliverables largely complete, reducing turnaround time and the possibility for errors of translation or transcription.



*New York State Capitol Trusses*