



**Exhibit 1 – Scope of Work – Engineering, Planning, and Operations**  
**Item 2 – Substation Design, Engineering, and Maintenance**

**Project Title:** Design New 138 KV/25 KV Substation

**Project ID:** 13.82

**Project Location:** Smyrna, Delaware

**Client Name:** Town of Smyrna

**Description of Work:** This project involved the fully integrated design of an 80 MVA, 138 KV/25 KV main power supply substation for the Town of Smyrna, Delaware. Downes Associates was responsible for all design aspects of the project including site design, foundation design, structural steel design, transformer and circuit breaker specification and relay system/control building design. Downes Associates was also responsible for oversight of all aspects of material procurement and substation construction. All interface work with the regional transmission owner and all substation commissioning work was the responsibility of Downes Associates.

**Year Completed:** 2005 **Adherence to Schedule:** Yes

**Total Cost of DAI Contract:** \$500,000.00

<b>Project Team Member</b>	<b>Role</b>
George E. Owens, P.E.	Chief Electrical Engineer - Developed conceptual design based on growth projections and system assessment; specify major substation apparatus to include power transformers, circuit breakers, high voltage switches. Developed protective relay, substation control, and metering schemes, and specify equipment required for implementation. Interfaced substation with transmission owner and generation owner equipment; provided engineering services for construction management and commissioning of apparatus and protective relay/controls.
George K. Owens, P.E.	Project Manager - Coordinated with Conectiv Power Delivery, developed conceptual substation site plan, structural layout, stormwater management, and soil erosion control plans. Designed and specified substation structures, bus work, control building and associated foundations. Designed transformer pads and containment structures. Reviewed and coordinated the development of substation material list for vendors to competitively bid on; developed procurement documents and project manual for construction; coordinated outsourced subsurface investigations, utility locations, surveying, and on-site construction testing of soil compaction and concrete; developed and monitored schedules and project budgets.

**Additional Questions?**

We are here through every step of the process, including the information gathering stage. In fact, we understand this to be one of the most important aspects of locating a consultant capable of handling your project.

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Timothy B. Shaver	Senior Designer - Developed substation construction and material procurement drawings; developed substation material list for substation vendors to competitively bid on.
Wayne Johnson	Senior Designer - Developed substation construction and material procurement drawings. Developed substation material list for vendors to competitively bid on. Interfaced between the electrical and civil engineering departments of DAI to bring project requirements together without conflicts.
Carol E. Mister	Engineering Assistant/CAD System Administrator - Developed substation construction and material procurement drawings; performed quality control of all drawing sets during final drawing review by engineers.

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