

# Athens Metro Tram Extension with Spectra Precision Equipment



The Athenian port of Piraeus, Greece, a major commercial hub and Europe's largest passenger port, will soon be served by the Athens Tram. A contract to perform civil engineer studies for the new extension went to 2KP, an Athens-based consulting engineering firm.

The contract, issued by ATTIKO METRO SA, proposed a route through a labyrinth of urban canyons, and it demanded a fast completion. According to vice president Kalimeris of 2KP, his company managed to survey more than 60 percent of the job by using Spectra Precision ProMark 800 and ProMark 220 GNSS receivers with Z-Blade technology. They provided accurate RTK fixes within the canyons formed by the streets of Piraeus. The rest of the job was taken care of by using a FOCUS 30 robotic total station. This method

yielded the fewest traverse operations maximising their productivity enabling them to comfortably meet the tight production schedule, he added.

2KP had recently purchased a fully robotic Spectra Precision FOCUS 30 total station and Nomad data collectors from JGC Geoinformation Systems to meet the company's expanding needs in road construction. It chose the FOCUS 30 for its speed, accuracy, full exchange of data between field and office and its ability to run software identical with the company's many legacy GNSS receivers, as well as its newest ProMark 800 receivers.

2KP received NTRIP corrections, generated by a Spectra Precision ProFlex 800 CORS, from the Athens JGC-net positioning service operated by JGC Geoinformation Systems. 2KP performed all measurements with data downloaded, processed and adjusted in Spectra Precision's GNSS Solutions office software. GNSS Solutions provided the final results in the Greek Geodetic Reference System 1987 (GGRS87) and in the Athens Metro coordinate system (OMA).