

No. PW072903-11

REQUEST FOR PROPOSALS
for
CORROSION STUDY FOR CITY METALLIC WATER
TRANSMISSION MAINS
PROJECT NO. W03-1312

PROJECT DESCRIPTION

The City of Rapid City proposes to evaluate existing Ductile Iron, Cast Iron and Steel Water Transmission Mains within the City's system. Specifically, the City of Rapid City desires input from a corrosion control consultant on the corrosion and cathodic protection issues related to its metallic water transmission mains. The City is seeking corrosion investigation services to study potential external corrosion on several large diameter (greater than 12") water transmission mains. Factors that must be considered are the age and current condition of the mains, the soil environment around the piping, the type of existing corrosion protection such as coatings and electrical continuity, and the presence of stray DC or galvanic currents.

The City is seeking corrosion investigation services to study potential external corrosion on its metallic water transmission mains. The selected consultant will provide services for a three part study. The first part of the study is to make recommendations for two construction projects scheduled for design this year and construction in 2004. Upcoming street reconstruction has prompted the City to consider evaluations of a 20" cast iron water transmission main under Elm Avenue in southeast Rapid City and a 24" cast iron water transmission main through Memorial Park at 6th Street. The second part of the study is to evaluate the remaining metallic water transmission mains in the system. The third part of the study is to provide recommendations for guidelines and standard specification revisions. See the attached map of water transmission mains requiring evaluation.

The objectives of this study will be to evaluate the condition of the existing mains, determine the remaining life of the mains and recommend methods to extend the service life of existing transmission mains or a replacement program.

The Corrosion Study for City Metallic Water Transmission Mains shall be conducted in general accordance with guidelines provided in AWWA Manual M27, "External Corrosion –

Introduction to Chemistry and Control”, Chapters 3 and 4, and this Request for Proposals “Scope of Services Requested”.

Additional background information includes Omaha Street Corrosion Evaluation Report, Meade Street Sanitary Trunk Sewer Reconstruction Geotechnical Exploration, construction drawings, break history from 1995 to present and existing soil data. Existing borehole data as well as geotechnical reports at many locations are also available. The selected consultant will also have access to information from the Cities GIS, including soils maps, image files and soils boring logs. The City of Rapid City Utility Maintenance also has coupons from taps into several metallic water mains for the selected consultant inspection.