U.S. AIR FORCE ACADEMY, CO
UTILITY SYSTEM DESCRIPTIONS

General: The Air Force Academy (AFA) is located north of the city limits of Colorado Springs, CO. There are 18,455 acres of land within the AFA boundaries.

System Descriptions: The electric, natural gas, and water distribution systems and the wastewater collection system are being considered for privatization. The utility system information provided here is an estimate only and is subject to change.

Electric: The City of Colorado Springs provides and wheels power to two substations at the AFA. The City owns and operates the 34.5 kV overhead lines and equipment in the substations. The AFA owns and operates the 34.5 kV – 12.5 kV substation transformers and all 12.5 kV distribution equipment. The 12.5 kV equipment at the substations is metal-clad switchgear. The distribution system is primarily concrete encased duct bank from the substations to the AFA facilities with select and interrupt switches in manholes and transformer vaults. Most transformers are unit substation type (dry or oil-filled) in vaults in the buildings. Some are pad-mount type adjacent to buildings. There are some single-phase overhead lines to remote facilities.

Natural Gas: The natural gas distribution system at the AFA consists of a network of approximately 189,000 lineal feet of coated and wrapped steel and polyethylene piping, ranging in size from 1 inch to 14 inches diameter. The City of Colorado Springs provides and wheels natural gas through a single metering station. The main natural gas transmission line begins at a metering station east of Interstate 25. Gas is taken from the metering station at 50 psig. The majority of the steel gas piping is protected with three-deep anode bed systems with rectifier units. Distribution piping within the Military Family Housing (MFH) areas is protected with galvanic anodes. There are several other isolated sections of gas piping that are also protected with galvanic anodes. There are 11 pressure regulating valve pits located throughout the AFA where the gas pressure is reduced to 15 psig for further distribution. The gas pressure is reduced to a few ounces by individual regulators at each building such as residences in the MFH areas. Meters and regulators will be privatized.

Potable Water: The potable water system consists of approximately 283,000 lineal feet of water mains consisting of various materials ranging in size from 4 to 24 inches. All of the potable water supply comes from the City of Colorado Springs supply main (or supply pipeline). Potable water is stored in the AFA's four reservoirs, which have a total storage capacity of 3.4 million gallons. A chlorinating system is located at each reservoir. A fluoridation system serves the MFH area. The system was originally installed between the years 1958 and 1960. The underground piping systems are protected against external corrosion with cathodic protection. During 1987-1988, all cathodic protection systems at the AFA were upgraded.

Sanitary Wastewater: The AFA operates an extensive wastewater collection system that drains the major building areas and grounds from the western boundary, east to the wastewater treatment plant (WWTP) located near the east boundary off of Stadium Boulevard. The wastewater collection system consists of approximately 330,000 lineal

feet of pipe and three lift stations. The pipe materials used are vitrified clay, reinforced concrete, cast iron, and PVC, 21 inches in diameter and smaller. Some lift stations include backup power generators, which will be included in the privatization.

The WWTP treats wastewater generated within the AFA. The wastewater treatment plant is a 2.0-MGD activated sludge plant operating at approximately 1.0 to 1.4 MGD. Its 30-day average biochemical oxygen demand (BOD) and suspended solids limits are 25 and 10 respectively with varying seasonal discharges to nearby Monument Creek. The WWTP consists of preliminary, primary, and secondary treatments, filtration, disinfection, and sludge handling.

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