

Knowledge of:

- principals, practices, and methods of civil engineering as applied to the planning, design, and construction of City public works projects and facilities
- basic design principals, materials strengths, and stress requirements for public works construction
- field operations involved in the maintenance of public works facilities
- principals, practices, and methods of effective report writing and statistical analysis
- real estate description practices, including methods used in property location
- topographic and construction surveying
- hydraulic principals of water production and distribution systems
- telemetry, electrical, and mechanical control and monitoring systems

Ability to:

- design common engineering plans and prepare basic specifications for drainage structures, streets, water production and distribution systems, and other public works facilities
- conduct technical engineering research work, make detailed analyses, and prepare reports
- review engineering plans and specifications prepared by others
- provide basic direction to technical engineering assistance staff assigned to assist with specific projects
- use drafting and survey instruments to prepare maps, plans, cross-sections, and profiles
- perform consultant and construction contract administration
- prepare quantity and cost estimates
- prepare property description and property acquisition documents
- assist with the development and administration of contracts
- deal tactfully and courteously with consulting engineers, contractors, and citizens concerned with public works engineering projects
- effectively and tactfully communicate in both oral and written forms
- establish and maintain effective work relationships with those contacted in the performance of required duties

Training and Experience: Any combination of training and experience which would provide the required knowledge and abilities is qualifying. A typical way to obtain the knowledge and abilities would be:

- Six years of increasingly responsible technical engineering work experience on public works projects and facilities. Advanced education in civil engineering may be substituted for up to three years of the work experience.

