REQUEST FOR PROPOSAL
FOR SHERIDAN LAKE ROAD SANITARY TRUNK SEWER EXTENSION
PROJECT NO. SS00-1007

PROJECT DESCRIPTION

The City of Rapid City (the City) proposes to provide sanitary sewer service for the proposed Red Rock Estates development located north of North Country Side and in the process, provide service for future development along Sheridan Lake Road. To accomplish this, the City proposes to extend the existing 15" sanitary trunk sewer along Sheridan Lake Road from South Wildwood to approximately Croyle Ave., as shown on the enclosed line maps. The project will consist of constructing approximately 9,800 feet of gravity sanitary trunk sewer, manholes, and miscellaneous appurtenances.

A proposed lift station located in the NE 1/4 of Section 29 will serve Red Rock Estates and the North Country Side area. The lift station's forcemain will extend from the lift station south to Sheridan Lake Road where it will discharge to the proposed gravity trunk sewer extension. The lift station and forcemain are being designed by Dream Design International Inc. The consultant selected for this project will need to coordinate the forcemain and gravity sewer connection with Dream Design.

As part of this project, the consultant is asked to evaluate the service area for the proposed trunk sewer and the basin area that may be served by the Red Rock lift station. The purpose of this evaluation is to develop a master planning document on how best to service future development in these basins as well as service the existing developments that are anticipated to connect to the system, (for example, North Country Side and Red Rock). Items to be addressed include truck sewer sizing and alignment alternatives, design flow projections (immediate and future), and future sewer main extension

locations and sizes, etc. We would like to evaluate minimizing the future wastewater flows going to the Red Rock Lift Station by possibly extending the proposed gravity trunk sewer into the Red Rock Basin and thus intercept these basin flows prior to entering the lift station system (refer to attached basin map). It is intended that this evaluation be presented in the form of a report included with the preliminary design submittal for the truck sewer extension.

The Red Rock Estates lift station and forcemain are currently under design and construction may possibly begin as early as this fall. The Sheridan Lake Road Trunk Sewer Extension project needs to be constructed by July 2001, if not sooner, in order to provide service for Red Rock Estates.

Design criteria for the project will be as contained in the "City of Rapid City Standard Specifications"; "Recommended Standards for Sewage Works" (Ten State Standards); and "Design Criteria Manual for Water Distribution Systems and Sanitary Sewer Collection Systems for the City of Rapid City" (Draft).

Additional background information includes: "Design of Gravity Sewers, MOPFD-5, ASCE/WEF", 1982; "Handbook of PVC Pipe Design", Unibell, 1991; "Preliminary Design Submittals" by Dream Design International Inc. for Red Rock Estates; "Wastewater Facilities Plan for Rapid City, South Dakota 1979 to 1990", by Utility Engineering Corporation; "Wastewater Facilities Plan for Rapid City, South Dakota, Addendum No. 1, 1982 to 1990", by Utility Engineering Corporation; "Southwest Connector Neighborhood Area Future Land Use Plan, City of Rapid City, 1999"; and the "City of Rapid City Engineer's Estimating Guide".

SCOPE OF SERVICES REQUESTED

1. PRELIMINARY DESIGN PHASE

1.1. Review information listed on the prior pages.

1.2. Establish design criteria for various components of the project.

1.3. Define the scope of geotechnical investigations as may be necessary for final design, assist City in negotiation of agreement for geotechnical engineering services, and coordinate with City geotechnical engineering consultant.

1.4. Identify and evaluate potential utility conflicts associated with the proposed project.

1.5. Perform the following planning and design tasks:

- Perform site surveys sufficient for design plans preparation;
- Perform preliminary horizontal and vertical alignment analysis; and,
- Evaluate and recommend hydrogen sulfide control and/or protection, if necessary.

1.6. Determine need for permanent and temporary easement acquisitions and assist the City with property acquisition for temporary or permanent easements and for right-of-way required. Perform legal surveys for property acquisition (if appropriate), perform title searches, and prepare plats and/or easement exhibits as necessary.

1.7. Prepare preliminary system layouts in the form of plan and profile sheets showing proposed alignment, manholes, and locations of existing utilities in and immediately adjacent to the construction limits. Show existing utilities locations with probable depth. Scale of plan & profile sheets shall be: 1" = 20' Horizontal, 1" = 5' Vertical. Prepare Preliminary Design Report with recommendations for review and comment by City staff and conduct a review meeting with City staff.

1.8. Evaluate and prepare master plan for the trunk sewer service area and Red Rock lift station service area. The evaluation should address the following:

- Service area delineation, land use, and wastewater flow projections for both immediate and future development;
- Trunk sewer alignment selection alternatives;
- Future sewer main extension alignments;
- Future sewer main sizes and flow projections;

- Identify environment/assessment issues that may need to be addressed in order to construct the project; and,
- Cost estimates for future sewer main extensions.

1.9. Prepare preliminary opinion of probable construction cost for trunk sewer extension project.

2. FINAL DESIGN PHASE

2.1. Provide complete plans and specifications for a unit price construction contract.

2.2. Provide additional route and topographical survey not provided in Preliminary Design (establish land ties and bench marks, locate property corners, and field locate all existing utilities).

2.3. Construction staking information on the drawings shall include a survey control and project layout sheet that includes a survey control table and a construction survey control table. The survey control table shall include, in tabular format, the control point number, the coordinates, and a description of the monument. The construction survey control table shall be in tabular format and will include all PC's, PI's, PT's and any angle points; the corresponding stationing; point description; and coordinates.

On the plan sheets, include either: 1) Notes with station offsets of all PC's, PI's, PT's, and any angle points, curve data, location of applicable storm sewer, sanitary sewer, and water main fittings; or 2) In a tabular format the coordinates and description of intervisible control points, curve data, and coordinates of all items of work requiring field staking. Benchmark information shall be provided on each sheet.

2.4. Provide a project layout plan including proposed alignment and stationing, lot lines (front and side), addresses of all properties adjacent to construction, and property owner names.

2.5. Information shown on the drawings shall be drafted to scale, except where specifically noted. Where scaled details are rendered illegible by drafting to scale, such may be drafted in symbol form and so noted.

2.6. Provide separate, special detail drawings at appropriate scale showing additional information necessary to construct the project but not shown adequately elsewhere in the drawings.

2.7. Coordinate directly with utility companies' engineering divisions to ensure that all existing utilities are completely and accurately located in the field; that pertinent information regarding depth, material, size, etc. are noted on the plans; and that conflicts requiring relocation of utilities or special construction techniques are fully specified in the contract documents.

2.8. Provide general sequence of construction requirements in order to assist bidders to prepare their bids and to coordinate utility construction to minimize interruption of service, etc.

2.9. Provide suggested conceptual Traffic Control Plans identifying detour routes (if applicable) and signage for various stages of construction as necessary.

2.10. Provide Detailed Specifications supplementing *City of Rapid City Standard Specifications* as necessary.

2.11. Prepare opinion of probable construction cost (engineer's estimate) for the project based upon the City of Rapid City Engineer's Estimating Guide format and average bid price and engineering judgement.

2.12. Provide general provisions for dewatering, sediment control requirements, and waterway pollution prevention

2.13. Prepare and include within the detailed specifications any permits required by the contractor for construction dewatering, etc.

2.14. Prepare any permits required by the City.

2.15. Include appropriate City of Rapid City Standard Details in the plan drawings. (The City can furnish the consultant with AutoCAD drawings of these details.)

2.16. Deliver the following: 1) Reproducible construction plans on 22"x34" mylar for printing by the City; 2) Complete construction plans on disk in AutoCAD 14.0 format; 3) Complete specifications on disk in Word 97 format for printing by the City; 4) A unit price Engineer's cost estimate on disk in City of Rapid City Project Workbook format (based

upon the City of Rapid City Bid Items listed in the Engineer's Estimating Guide) in Excel 97 format; and 5) Copies of consultant's Quantity Take Off Sheets.

2.17. Review design, plans and specifications, and permanent or temporary or easement exhibits with City staff at 65% and at 95% stages.

3. BIDDING PHASE

Provide standard bidding phase services, e.g. attend Prebid Conference, issue addenda and interpretations to the bid documents if required, review prequalification submittals if required, assist owner in evaluating bids, etc. Bid tabs will be prepared by the City of Rapid City in the Project Workbook.

4. CONSTRUCTION PHASE

Provide construction management services as negotiated, which may include:

- Attend preconstruction conference and periodic progress meetings;
- Review and take action on shop drawings, test results, and other submittals;
- Provide construction surveys under this contract or under the appropriate construction Contract bid item;
- Provide construction observation, make periodic site visits at intervals appropriate to the various stages of construction;
- Review and recommend for payment the Contractors applications for payment;
- Prepare as-constructed drawings and submit compilation of construction observation reports, photos, etc.;
- Issue statement of substantial completion;
- Issue warranty letter to contractor; and
- Attend and participate in a post construction project review and critique.

5. MEETINGS AND SUBMITTALS

5.1. Project team members will include the *consultant; City staff from Engineering Division* project management, design and construction coordination; *Operations Divisions*, e.g.

Utility Maintenance group (service area and O&M related issues); and *other departments* as appropriate, e.g. Planning Department (master planning and traffic planning).

5.2. Meetings requiring the Consultant's participation will include:

- Kick-off meeting;
- Preliminary design report presentation and discussion including Basin Master Plan and preliminary design;
- Utility companies coordination meeting;
- 65% Plans and Specifications Review;
- 95% Plans and Specifications Review;
- Prebid Conference.

5.3. Meetings the Consultant may need to attend as negotiated, which may include:

- Preconstruction Conference;
- Construction Progress Meetings; and
- Post Construction Meeting.

5.4. Submittals required during the design phase include:

- Preliminary Design and Report including Basin Master Plan and preliminary design;
- 65% Plans and Specifications and easement exhibits;
- 95% Plans and Specifications and easement exhibits;
- 100% Plans and Specifications and easement exhibits.

NOTE: Easement exhibits for property acquisition should be completed prior to 95% Plans and Specifications in order to facilitate securing the easements prior to construction.

PROJECT SCHEDULE

Contract Negotiations Complete	September 6, 2000
Notice to Proceed with Design	September 19, 2000
Preliminary Design Submittal	To be determined
65% Design Submittal	To be determined
95% Design Submittal	January 15, 2001
100% P&S Submittal	February 2, 2001

ESTIMATED CONSTRUCTION SCHEDULE

Open bids	March 1, 2001
Award construction contract	March 5, 2001
Begin construction	March 29, 2001
Complete construction	June 29, 2001

PROPOSAL SUBMISSION

Please submit four (4) copies of your proposal no later than August 21, 2000 at 4:00 p.m. Proposals should include: 1) Resumes of key personnel; 2) Proposed schedule for a March 1, 2001 bid opening; and 3) Estimated tasks and corresponding level of effort (personnel hours) for the project.