

REQUEST FOR PROPOSALS
for
JACKSON BLVD/ MOUNTAIN VIEW RD. DRAINAGE and WATER
MAIN REPLACEMENT PROJECT
PROJECT NO. W01-1040

PROJECT DESCRIPTION

The City of Rapid City proposes to construct the Jackson Blvd/ Mountain View Rd Drainage and Water Line Project, W01-1040. This project is located along and adjacent to Jackson Blvd and Mountain View Rd. from Sheridan Lake Rd. to West Main St.

Drainage

The City proposes to construct storm sewer and inlets on Jackson Blvd. from east of Lodge St. to Mountain View Rd. This section of storm sewer will start at the outfall line from Lance St. and follow along Jackson Blvd to the Water Treatment Plant entrance road as shown on the attached exhibit "A".

The City also proposes to construct storm sewer in Mountain View Rd. from West Main St. to Jackson Blvd. This section of the project consists of two (2) separate runs of storm sewer. The section from West Main to Canyon Lake Dr. consists of an 18" RCP at the south end to a 36" RCP at the north end. The section from Canyon Lake Dr. to Jackson Blvd consists of 24" RCP for the entire section.

Water Main

The City proposes to construct a 24" DIP water transmission main paralleling Mt. View from Canyon Lake Drive south to the Water Treatment Plant entrance road. This transmission main will connect the existing 24" DIP main in Canyon Lake Dr. to the existing 30" main coming from the Water Treatment Plant. This new interconnection will allow the City to abandon the existing 18" CIP main that runs north from Canyon Lake Dr. along Mt. View to West Main.

In addition the City proposes to reconstruct the water main running north and south along Mt. View from Canyon Lake Dr. to Jackson Blvd. The City also proposes to construct a water main along Mt. View from West Main to Canyon Lake Drive. This main will replace the existing 18" CIP that is to be abandoned. Consultant services will include investigating the possibility of using the abandoned 18" CIP as a casing and installing the new water main inside the 18" CIP. This would potentially avoid some pavement replacement in Mt. View.

General

It is the City's intention to have these proposed projects constructed prior to the SDDOT asphalt overlay, which is to start after the motorcycle rally in August 2001.

A copy of the approximate project location is shown on the enclosed partial draft DBDP and a water line map.

Design criteria for the project will be as contained in the "City of Rapid City Standard Specifications"; the "Uniform Fire Code as adopted by the City of Rapid City"; "Recommended Standards for Water Works" (Ten State Standards); "Design Criteria Manual for Water Distribution Systems and Sanitary Sewer Collection Systems for the City of Rapid City (Draft)"; "City of Rapid City Street Design Criteria Manual"; and "City of Rapid City Drainage Criteria Manual" and the Jackson Boulevard Drainage Basin Design Plan(Draft);

Additional background information includes the "Study & Report for Municipal Water System, Rapid City, South Dakota" by FMG, Inc., 1985; Preliminary Design Plans for the Reconstruction of Canyon Lake Drive, by TSP Inc., "Geotechnical Exploration Program 2000 City-wide Area Projects" including "Water Main Loop at Water Treatment Plant and along Mountain View Road" by FMG, Inc.; and the "City of Rapid City Engineer's Estimating Guide".

SCOPE OF SERVICES REQUESTED

1. PRELIMINARY DESIGN PHASE DRAINAGE

1.1. Review existing data including the following:

- 1.1.1. Elements 9,11,12,13,15, and 312 from the Jackson Boulevard Drainage Basin Design Plan; existing and design plan hydrology and hydraulics from the Jackson Boulevard Drainage Basin Design Plan;
- 1.1.2. City maps and drawings;
- 1.1.3. Existing utility locations, including the existing facilities at the City Water Treatment Plant.
- 1.1.4. Survey records and existing land ownership, plats, rights of way and easement information from Pennington County Courthouse records;

1.2. Perform a detailed topographic survey identifying relevant features and underground utilities. Establish land ties and benchmarks, locate property corners, and field locate existing utilities. Owner will obtain rights of entry for private property.

1.3. Recommend options for all storm sewer identified in the Jackson Boulevard Drainage Basin Design Plan for the elements identified above;

Provide preliminary plans for the storm sewer in Jackson Blvd from the Lance St. sump outfall to Mountain View Rd. (elements 12,15 and 312). Note: the City desires to explore the option of placing as much new storm sewer identified adjacent to the roadway in attempts to minimize the disturbance of the pavement and traffic flow in Jackson Blvd and Mountain View Rd.

On Mountain View Rd., in the section from W. Main to Jackson Blvd the consultant shall provide preliminary plans for the placement of the proposed storm sewer (Elements 9,and 11).

1.4. Prepare preliminary opinion of probable construction cost; costs shall be broken down for the different segments discussed above.

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

1.6. Prepare preliminary systems layout, including limits of all recommended improvements, channel construction, road crossing profiles, and cross sections to clearly show the intent of the improvement, the consultant shall consider future design geometry of Jackson Blvd and meet with the SDDOT and the City to identify locations of possible conflict with future design of Jackson Blvd and the design of improvements per this proposal.

1.7. Prepare Preliminary Design Report, including hydrologic and hydraulic analysis for existing and design plan conditions, with recommendations for review and comment by City staff, and conduct a review meeting with City staff.

1. PRELIMINARY DESIGN PHASE WATER MAIN

- 1.1. Review information listed on the prior pages.
- 1.2. Establish design criteria for various components of the project.
- 1.3. Identify and evaluate potential utility conflicts associated with the proposed project.
- 1.4. Perform the following planning and design tasks:
 - Perform site surveys sufficient for design plans preparation;
 - Perform preliminary horizontal and vertical alignment analysis. Including investigating constructing the 24" DIP through City property west of Mountain View Rd. instead of in Mountain View Rd.
 - Perform preliminary feasibility of utilizing the existing 18" CIP in Mt. View from West main to Canyon Lake Dr. as a casing and installing the proposed local water main inside of it.
- 1.12 Evaluate the feasibility of utilizing the existing 18" Mt. View CIP from West main to Canyon Lake Dr. as a casing and then installing the proposed local water main inside of it.
- 1.13. Prepare preliminary design report with recommendations for review and comment by City staff and conduct a review meeting with City staff.
- 1.14. Prepare preliminary systems layout in the form of plan and profile sheets showing proposed alignment, valve locations and fire hydrant locations. Show existing utilities locations with probable depth within and adjacent to the construction limits.
- 1.15. Scale of plan and profile sheets shall be 1" = 20' Horizontal and 1" = 5' Vertical.
- 1.16. Prepare preliminary opinion of probable construction cost.
- 1.17. Determine the 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 survey for property and prepare plats and/or easement exhibits as necessary.
- 1.18. Determine the need for permanent and temporary easement acquisitions
- 1.19. Provide additional preliminary design services as negotiated, which may include: Defining the scope of additional geotechnical investigations as may be necessary for final design; assisting

the City in negotiation of an agreement amendment for additional geotechnical engineering services with FMG, Inc.; and, coordinating with the geotechnical engineer.

Assisting the City with property acquisition for temporary or permanent easements and for right-of-way required. Performing legal surveys for property and prepares plats and/or easement exhibits as necessary.

2. FINAL DESIGN

- 2.1. The scope of final design of the drainage shall be determined after review of the preliminary design information submitted.
- 2.2. In the Jackson Blvd. section of this project, the feasibility of performing the construction while minimizing the disturbance of the pavement in Jackson Blvd. will be used as a determining factor as to whether or not final design will be completed at this time.
- 2.3. In Mountain View Rd. section of this project from Canyon Lake Dr. to Jackson Blvd, only preliminary Design shall be performed. In the section from West Main to Canyon Lake Dr., performance of final design will be considered depending on the nature of the water main project (slip lining or open cut), along with the preliminary design location of the proposed storm sewer in this section Provide complete plans and specifications for a unit price construction contract.
- 2.4. Provide additional route and topographical survey not provided in Preliminary Design, (establish land ties and benchmarks, locate property corners, and field locate all existing utilities).
- 2.5. 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 valves, fittings, etc. for work requiring field staking; 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.

- 2.6. Provide project layout plan to include lot lines (front and side) and addresses of all properties adjacent to construction, and the names of the property owners.
- 2.7. 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.
- 2.8. Provide separate, special detail drawings at appropriate scale showing additional information necessary to construct the project but not shown adequately elsewhere in the drawings.
- 2.9. 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.
- 2.10. Provide general sequence of construction requirements in order to assist bidders to prepare their bids and to coordinate utilities construction to minimize interruption of service, etc.
- 2.11. Provide suggested methods of cleaning and disinfecting the constructed large diameter transmission main and water main.
- 2.12. Provide conceptual Traffic Control Plans identifying detour routes and signage for various stages of construction as necessary.
- 2.13. Provide Detailed Specifications supplementing *City of Rapid City Standard Specifications* as necessary.
- 2.14. 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.
- 2.15. Provide general dewatering and sediment control requirements.

- 2.16. Prepare and include within the detailed specifications any permits required by the contractor for construction dewatering, etc.
- 2.17. Prepare any other permits required by the City.
- 2.18. 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.
- 2.19. Review design, plans and specifications, and permanent or temporary easement exhibits with City staff at preliminary design, at 65% and at 95% stages.
- 2.20. Include appropriate City of Rapid City Standard Details in the plan drawings. (The City can furnish the consultant with AutoCAD drawings of the details.)
- 2.21. Provide erosion control plan for use during construction;

3 BIDDING PHASE

Provide standard bidding phase services, e.g. attend Prebid Conference, issue addenda to the bid documents if required, assist owner in evaluating bids, etc. Bid tabs will be prepared by City.

4 CONSTRUCTION PHASE

Services for the Construction phase of this project may be negotiated at a later time as an addendum to this contract. Construction management services as negotiated, 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. Water Division (service area and O&M related issues), and *other departments* as appropriate, e.g. Planning Department (master planning, traffic planning), Fire Department (fire flows and hydrant locations); Parks Dept. (channel through park)

5.2 Meetings requiring the Consultant's participation will include:

- Kick-off Meeting
- Preliminary Design Report Presentation and Discussion
- 65% Plans and Specifications Review
- 95% Plans and Specifications Review
- Prebid Conference

5.3 Submittals required during the design phase include:

- Preliminary Design Report
- 65% Plans and Specifications
- 95% Plans and Specifications
- 100% Plans and Specifications

PROJECT SCHEDULE

Contract Negotiations Complete	December 6, 2000
Notice to Proceed with Design	December 19, 2000
Preliminary Design Submittal	March 2, 2001
65% Plans Submittal	(To be Determined)
95% Plans Submittal	March 28, 2001
100% P&S Submittal	April 11, 2001

ESTIMATED CONSTRUCTION SCHEDULE

Open bids	May 3, 2001
Award construction contract	May 7, 2001
Begin construction	May 28, 2001
Complete construction	July 31, 2001

PROPOSAL SUBMISSION

Please submit three (3) copies of your proposal no later than November 17, 2000. Interviews will be Tuesday, November 28, 2000.