

AGREEMENT
FOR PROFESSIONAL ENGINEERING SERVICES

This is an Agreement which shall become effective on _____, 2005, between The City of Rapid City, South Dakota (Owner), whose address is 300 Sixth Street, City of Rapid City, South Dakota, 57701, and Kadrmass, Lee & Jackson, Inc., (Engineer), whose address is 330 Knollwood Drive, Suite A, City of Rapid City, South Dakota, who hereby agrees to provide professional engineering services for City of Rapid City project ST04-1397, East Anamosa Street Extension, Lacrosse Street to Century Road (project) consisting of:

PRELIMINARY ENGINEERING PHASE

As per the submitted Scope of Services for Preliminary Engineering, Environmental Review and Project Design.

DESIGN ENGINEERING PHASE

As per the submitted Scope of Services for Preliminary Engineering, Environmental Review and Project Design.

CONSTRUCTION ENGINEERING PHASE

To be added to the contract through a supplement to this agreement as requested by the Owner.

Payment for the above work for the Preliminary Engineering Phase is to be made on the basis of hourly rates and a fixed fee, to a maximum fee of \$259,776.12. The supplements for the Construction Engineering Phase will be added at a later date as agreed upon by the Owner and the Engineer.

Additional services available include: preparation of Change Orders; permitting, zoning, platting, and annexation fees; aerial photography; shop, field or laboratory tests or review of material or equipment; appearances before courts or boards on matters of litigation related to the project; assistance in the spreading of Special Assessments; and preparation of record drawings. These services will be billed an Hourly Rate as agreed upon by the Owner and the Engineer.

The Engineer shall furnish to the Owner, upon request, up to five copies of all reports, maps, plans and specifications pertaining to the project. Original documents, survey notes, drawings and maps prepared by the Engineer shall remain the sole property of the Owner. The Engineer shall be held harmless by Owner or any other person for use of any plans or drawings not signed by Engineer, or for use of plans or drawings on any project other than the one set forth in this Agreement. The Engineer shall not be held responsible for any changes made in plans or specifications by the Owner or other person.

Any opinion of the construction cost prepared by the Engineer represents his judgment as a design professional and is supplied for the general guidance of the client. Since the Engineer has no control over the cost of labor and material or over competitive bidding or market conditions, the Engineer does not guarantee the accuracy of such cost opinion as compared to contractor bids or actual cost to the Owner.

Unless notified by the Owner in writing that the Owner will provide for construction engineering (field review), the Engineer will provide said service on a full time or part time basis as he deems necessary.

The Engineer's undertaking hereunder shall not relieve the contractor of contractor's obligation to perform the work in conformity with the drawings and specifications and in a workmanlike manner; shall not make the Engineer an insurer of the contractor's performance; and shall not impose upon the Engineer any obligation to see that the work is performed in a safe manner.

The Engineer shall be held harmless from delays caused by strikes, lockouts, accidents, acts of God, labor shortages, failure of Owner to furnish information or approve or disapprove the Engineer's work, faulty performance by the Owner or his agents, other contractors or governmental agencies. In the case of such delays, the time for completion of the engineering work shall be extended accordingly.


Engineer's liability to the Owner for injury or damage to persons or property arising out of work performed for the Owner and for which legal liability may be found to rest upon Engineer, other than professional errors and omissions, will be limited to Engineer's general liability insurance coverage which Engineer maintains in limits of at least \$1,000,000.

Owner further agrees to indemnify and hold the Engineer harmless from any and all costs, liability, real or alleged, in connection with the performance of work on this project, excepting liability proximately arising from the sole negligence of the Engineer.

Owner's acceptance of this proposal as indicated by signature below will constitute an Agreement between Owner and Engineer and be Engineer's authority to proceed with the work. Owner agrees that there are no understandings or agreements except as herein expressly stated.

ENGINEER:

OWNER:



RODNEY A. SENN - PARTNER
KADRMAS, LEE & JACKSON, INC.

JIM SHAW - MAYOR
CITY OF RAPID CITY, SOUTH DAKOTA

JAMES F. PRESTON - FINANCE OFFICER
CITY OF RAPID CITY, SOUTH DAKOTA

Date: _____

Date: _____

**KADRMAS, LEE & JACKSON, INC.
SCOPE OF SERVICES**

**PRELIMINARY ENGINEERING, ENVIRONMENTAL REVIEW
AND PROJECT DESIGN**

**EAST ANAMOSA STREET EXTENSION
NORTH LACROSSE STREET TO CENTURY ROAD
August 16, 2004**

I PROJECT DESCRIPTION

The East Anamosa Street Extension project begins at North Lacrosse Street and extends easterly approximately seven tenths of a mile to its east project limit located at the intersection point with Century Road. The following improvements are planned for the East Anamosa Street Extension:

Reconstruction of the three-lane section from the Lacrosse Street intersection to the end of the existing urban section near the east entrance to Wal-Mart. The new section should be an urban section and is anticipated to consist of two 12' driving lanes in each direction, right turn lanes as required and a common left turn lane or left turn lanes as required and a sidewalk/bike path. The grading will be completed to accommodate a future seven-lane configuration. Geometrics will be evaluated with and without the use of medians.

New sanitary sewer mainline will be designed to provide future service to this area as referred to in the East Mall Drive Preliminary Study currently being finalized by the City from the existing facilities near the eastern edge of Wal-Mart to Century Road.

Water main extensions will be designed to provide future service to this area within the low and high-level systems from the existing facilities in the vicinity of the North Lacrosse intersection to Century Road for future expansion.

A storm water drainage study will be completed for the entire drainage area contributing runoff to the project corridor. New storm sewer and surface drainage will be designed as required.

II SERVICES TO BE PERFORMED

The following services to be performed are outlined to follow the format of the task items included in the schedule of fees, submitted with this scope of work.

100 PROJECT ADMINISTRATION

101 Project Schedule and Scope of Work

Perform a Project Scoping Meeting with City Engineering staff to develop a comprehensive Scope of Work for the project. The detailed Project Scoping Checklist is included as a reference to this Scope of Work.

Submit a schedule to the City of Rapid City which details the specific tasks for the project as discussed in the Project Scoping Checklist. The schedule will include the establishment of milestone dates for the major work items. The schedule will be reviewed and adjusted as necessary to incorporate changes in the work concept and progress to date.

102 Progress Reports (Monthly)

Provide written progress reports once a month which describe work recently completed, ongoing work, work to be completed next period, project concerns, and items required from the City of Rapid City. Progress reports will be submitted to the City of Rapid City Project Manager during the last week of each month.

103 Planning Meetings With Property Owners/Unscheduled Meetings

Meet with property owners immediately adjacent to the project to identify issues and concerns regarding the proposed improvements as required. Time has been included in this Scope of Work for up to 8 two-hour meetings with property owners. Meeting dates, times and discussions will be documented.

104 Field Reviews

Conduct project field reviews with representatives from the City of Rapid City as necessary during the design process. Project information will be discussed at the field reviews to confirm the scope of work and identify potential concerns and alternative solutions. A written summary will be prepared and distributed following each meeting. Time has been included for two field review meetings. Minutes will be provided for all meetings.

105 Management Presentation (1 meeting)

Prepare for and conduct one presentation for the City Council, and/or prepare presentation material for the Public Works Department to present. The presentation will provide details regarding alternatives and environmental impacts as determined through the project design. The agenda and presentation will be presented to and approved by the City of Rapid City Project Manager prior to the

presentation. An outline that summarizes the presentation and comments received will be prepared and distributed.

106 Project Management & Sub consultant Coordination

Coordinate work with sub consultants, government entities, utilities and agencies. The project manager will direct work activities to the project team to maintain overall project schedule and scope.

200 AGENCY COORDINATION

201 Solicitation of Views

Prepare one solicitation of views package in electronic format, to affected, potentially affected, or interested parties, as well as governmental agencies with a possible interest in the project's planning at the beginning of the study process. The letter will be used as a means of "scoping" issues pertinent to the study and to obtain information about any permits, licenses, or other agency requirements needed to construct the project. The solicitation of views letter will be provided to the City for review prior to consultant distribution.

202 Stakeholder Meetings

Make arrangements and prepare for four stakeholder input meetings. Preparation for the meetings will include any or all of the following: a PowerPoint presentation, visual displays, public handouts, exhibits, and plan drawings.

203 Wetland Evaluation, Permitting and Mitigation

Coordinate with the City of Rapid City on the environmental documentation. Research governing agencies to identify the permit requirements and to develop measures to avoid, minimize or mitigate any adverse environmental impacts of the proposed action.

Impacts to the East Anamosa Street Extension corridor drainage may require federal action through an Army Corps of Engineers 404 permit. If this is the case, a Categorical Exclusion may need to be pursued. Fees have not been included in this Scope of work to complete a Categorical Exclusion, Environmental Assessment or Environmental Impact Statement as required by the National Environmental Policy Act. If required, fees for these services would be negotiated at a later date.

204 DM&E Coordination and Permitting

Coordinate with the Dakota, Minnesota and Eastern Railroad on the grade-separated railroad crossing issues. Research agency requirements to identify the crossing structure requirements as well as crossing and construction permits and easement requirements.

205 Plan Review Meetings

Facilitate meetings to discuss key issues, progress, plan review and upcoming milestones. The City of Rapid City, landowners, developers and other interested parties will be encouraged to participate as required through the design process. These meetings will be conducted at the time of the 60% and 95% design submittals. Minutes will be provided for all meetings. Time has been included in this Scope of Work for 2 formal meetings.

300 PRELIMINARY ENGINEERING REPORT

301 Preliminary Survey & Base Maps

Complete and furnish preliminary ground survey of project limits to include site contours, existing surface features, above ground utilities, underground utilities and right-of-way limits and adjacent property boundaries. Download the field survey data and generate AutoCAD base maps in accordance with current City of Rapid City Drafting Standards.

Existing data to be compiled includes project control, horizontal & vertical alignment, topography, right-of-way, property boundaries and utilities.

302 Geotechnical Report and Analysis

Coordinate a geotechnical evaluation to determine existing pavement and soil conditions to be used for the pavement design. The geotechnical evaluation will generally include six soil borings along the proposed alignment to determine existing soil conditions. These will include two borings near the proposed railroad crossing, one boring just east of Wal-Mart, two in the fill area southeasterly of the railroad track and one boring near the eastern termini of the project near Century Road. KL&J has included time in the fee summary for review of the geotechnical report.

303 Traffic Operations Analysis

The City of Rapid City will provide any existing traffic data available for analysis.

A traffic analysis for 10-year and 20-year projected traffic volumes will be completed to determine required geometry. City will provide 10-year and 20-year estimated traffic volumes. Evaluation of the use of lane configurations with and without medians will be considered for the corridor including the future Cambell Street intersection and an intersection east of Wal-Mart.

304 Pavement Design Report

Based upon geotechnical information, a pavement design report will be completed for the asphalt and concrete pavement sections. Pavement design will be in

accordance with AASHTO and City of Rapid City design criteria. A life cycle cost analysis of the two pavements will be conducted for evaluation purposes.

305 Roadway Alignment

The new roadway alignment will generally follow the recommended alignment in the East Anamosa Street Extension Study and the corridor established from Century Road east to East North Street. Minor adjustments may be made to optimize the railroad crossing location. Design speeds will be evaluated to determine impacts to the built environment and earthwork quantities. Using preliminary survey and other data, a preliminary horizontal and vertical alignment will be prepared. Cross sections will be generated to determine the extent of right-of-way impacts, and to identify design issues and estimate quantities.

306 Roadway Geometrics

Based upon preliminary pavement section thicknesses and geometric requirements, typical roadway cross-sections will be developed for the urban design sections. It is assumed that sufficient right-of-way or easements will be obtained to allow the placement of fill materials without the use of retaining walls other than standard SDDOT retaining walls.

307 Hydrology/Hydraulic Analysis

Analyze the study area using the criteria established in the various City of Rapid City Design manuals. Crosscheck results with available historical information.

The hydrologic model will be used to evaluate the performance of the proposed alternatives as compared to the existing storm sewer systems and surface drainage patterns. Conformance with ordinances for the City of Rapid City will also be verified. A preliminary hydraulic review will be performed for the proposed street storm sewer and surface drainage in the immediate area.

308 Stormwater Plan

A stormwater plan will be completed for the entire drainage area within this project corridor. The plan will conform to the City of Rapid City storm water management practices and requirements. Recommendations from the plan will be incorporated into the project design.

309 Structure Concepts

Research will be conducted to evaluate the various options to provide the grade-separated railroad crossing structure based upon the data obtained from the DM&E Railroad, geotechnical evaluation and preliminary alignments. Three options will be evaluated based on construction and a life cycle analysis. The three structures to be evaluated will include a structural steel pipe, precast concrete tunnel and a single span bridge.

310 Evaluate Existing Utilities

Evaluate and coordinate with municipal and private utilities with regards to impacts resulting from proposed improvements, and any expansion of private utilities that may be incorporated into the proposed project.

Identify conflicts between existing utilities and planned design aspects. Notify and coordinate with utility owners of conflicts and necessary relocations.

311 Proposed Water System Upgrades

Water main extensions will be provided on both the low and high-level systems in the vicinity of the project corridor.

Evaluate and model alternatives for the low level water main extension to provide looping from proposed improvements near Century Road to the existing system at the Lacrosse Street intersection. This portion of the low-level water main system is requested due to capacity issues with the system in the service area adjacent to Lacrosse and Anamosa Streets.

Evaluate and model alternatives for the high level water main extension to provide looping from proposed improvements near Century Road to the existing system at the Lacrosse Street intersection.

312 Proposed Sanitary Sewer System Upgrades

Evaluate an 8" sanitary sewer extension to provide service to the lots adjacent to the project corridor as per the East Anamosa Street Extension Study.

313 Structural End Wall Concepts

Prepare preliminary concepts for the use of retaining walls in conjunction with the grade separated crossing structure and areas of large depth fills.

314 Construction Traffic Control Plan

Investigate traffic control processes during the various construction phases. The plan will include a written plan for construction traffic control and plan sheets showing any required detours, signing and pavement markings for the required construction phasing.

315 Permanent Traffic Control Plan

Evaluate the traffic control items to be incorporated into the final design. These items will include permanent signing, pavement markings, and traffic signal provisions for the anticipated future traffic signal installation at the Cambell Street intersection and/or others.

316 Preliminary Cost Estimates

Preliminary cost estimates will be prepared for each alternative and will be based upon recent construction costs of standard bid items for the City of Rapid City and industry standards.

317 Prepare Preliminary Engineering Report

The Preliminary Engineering Report will provide a summary of the analysis described above, and recommendations for the alternatives considered. A draft report will be submitted for review and comment, followed by a final report. The Preliminary Engineering Report will serve as the environmental report.

400 PLANS AND SPECIFICATIONS

60%, 95% and final plans and specifications will be produced based on recommendations and decisions made in the Preliminary Engineering Report. Plans and specifications will be developed as per City Standards. No further alternative analysis has been included in this scope of work following the acceptance and decisions made in the PER. At this time, the manhours allocated for Item 404 – Structural Design will be evaluated for the structure selected in the PER. The manhours shown are the maximum hours anticipated for structural design. Depending upon the type of structure selected, end treatment and retaining wall requirements the range of hours is estimated to be between 325 and 368.

60% Plans and Specifications

Prepare preliminary plans, specifications and cost estimate for the selected alternative as determined in the PER process. The 60% plans, specifications and cost estimates will be submitted to the City for review and concurrence.

Facilitate a 60% design review meeting with the City staff, landowners and developers to discuss review comments on these Preliminary Design Services.

95% Plans and Specifications

Prepare preliminary plans, specifications and cost estimate for the selected alternative as determined in the PER process. The 95% plans, specifications and cost estimates will be submitted to the City for review and concurrence.

Facilitate a 95% design review meeting with the City staff, landowners and developers to discuss review comments on these Preliminary Design Services.

Material changes in work or bid alternatives added after this review will be considered outside this scope.

500 FINAL DESIGN AND BIDDING SERVICES

501 Final Plan Revisions / Final Document Production

Prepare and furnish final drawings with sufficient number of copies for review, bidding and contracts. Stamp and sign all plans with the seal of the Professional Engineer in charge of the project design.

502 Final Specifications and Bidders Proposal

Prepare and furnish final Specifications and Bidders Proposal with sufficient number of copies for review, bidding and contracts. Stamp and sign all specification documents with the seal of the Professional Engineer in charge of the project design.

503 Final Quantities and Cost Estimate

Prepare and furnish final quantities and cost estimate with sufficient number of copies for review, bidding and contracts.

504 Assist with Pre-Bid Conference

Assist with the scheduling and facilitation of a pre-bid conference. Attend and facilitate the project pre-bid opening with proper authority.

505 Assist with Bidding Evaluation

Analyze bid proposals, review bid tabulation and make a recommendation of construction contract award.

506 Assist with Pre-construction Conference

Assist with the scheduling and facilitation of a pre-construction conference. Attend and facilitate the project pre-construction conference with proper authority.

507 Shop Drawing Review

Review shop drawing submittals from the Contractors and make recommendations and comments for their conformance with the project Plans and Specifications.

600 RIGHT OF WAY ACQUISITION SERVICES

601 Right of Way Exhibits

Prepare right of way exhibits for use by the City of Rapid City in landowner negotiations. Based on the preparation of no more than twelve exhibits.

602 Right of Way Plats

Prepare right of way plats for use by the City of Rapid City in acquiring right of way. Based on the preparation of no more than twelve exhibits.

603 Right of Way Negotiations and Acquisition

Assist the proper City staff in meeting and negotiating with landowners to acquire right of way. Answer technical questions pertaining to the project design and its impacts to the adjacent properties.

III SUBCONSULTANTS

1. American Engineering Testing, Inc. - Geotechnical Analysis and Report

IV. PROJECT SCHEDULE

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| Project Scoping | July 16, 2004 |
| City Council Contract Award | July 18, 2005 |
| Preliminary Engineering Report Submittal | November 5, 2005 |
| PER Review Meeting | November 12, 2005 |
| 60% Design Submittal | December 31, 2005 |
| 60% Design Review Meeting | January 7, 2006 |
| 95% Design Submittal | March 12, 2006 |
| 95% Design Review Meeting | March 19, 2006 |
| Final Design Submittal | April 8, 2006 |