#3825

INTERGOVERNMENTAL AGREEMENT BY AND BETWEEN THE CITY OF ARVADA AND THE REGIONAL TRANSPORTATION DISTRICT TO PROVIDE FUNDING ASSISTANCE FOR THE DEVELOPMENT OF A SCOPING PLAN FOR GOLD LINE RAILROAD AND THE WEST I-70 CORRIDOR

This Agreement made this 8th day of September, 2003 between the Regional Transportation District (RTD), a political subdivision of the State of Colorado, and the City of Arvada, a municipality organized and existing under the laws of the State of Colorado, is to provide funding for additional work to be performed by the Consultant as part of the Corridor Scoping Plan for Goldline railroad and the West I-70 corridor between the City of Denver and the City of Golden.

I. RECITALS

1. RTD shall enter into a contract with a consultant to be named to prepare a Corridor Scoping Plan for the Goldline, North Metro, and I-225 corridors. The project team is comprised of staff members from the City of Arvada, the Colorado Department of Transportation, and the Regional Transportation District.

2. Required approval, clearance and coordination has been accomplished from and with the appropriate agencies.

3. The project goal is to produce a plan that updates the findings of RTD's Goldline Major Investment Study in an innovative and effective manner. The Corridor Scoping Plan must specifically:

    - Confirm and/or update the findings of RTD's Major Investment Study for the Goldline in regard to right-of-way requirements.
    - Perform travel demand forecasts using the DRCOG travel demand forecasting model.
    - **Develop detailed right-of-way information including acquisition and relocation data at the request of the City of Arvada.**
    - Develop capital and O&M cost estimates.

4. The City of Arvada is willing to contribute funds to RTD's Corridor Scoping project for development of the detailed right of way information.

In furtherance of these goals, the parties agree as follows:

II. TERMS AND CONDITIONS

1. The Recitals set forth above are incorporated herein and made a part of this agreement.

2. The City of Arvada will participate in the Corridor Scoping Plan project as a member of any steering committee or technical advisory committee established for the project.
3. RTD shall manage all work performed by the Consultant. A copy of the Scope of Work for the detailed right-of-way work is attached hereto as Exhibit A. The City of Arvada

shall be entitled to receive copies of all reports, drawings, data, and other material produced or collected by the Consultant pursuant to Exhibit A at no additional cost.

4 Funding obligations with respect to the Goldline, I-225 and North Metro Corridor Scoping under this agreement shall be as follows:

Agency	Contribution
DRCOG/CDOT	$680,000
RTD	$200,000
City of Arvada	$ 80,000
TOTAL	$960,000

The City of Arvada shall pay to RTD a total of $80,000 for the in-depth right-of-way documentation attached as Exhibit A, which will be incorporated into the complete Scope of Work for the consultant. Payment shall be made to RTD within 30 days upon receipt of a RTD invoice(s) for work performed by the Consultant on the scope shown in Exhibit A. The Consultant's invoice will be included in the documentation for verification purposes. The City of Arvada's payment shall be, per the Consultant's itemized invoice. RTD shall separately invoice the City of Arvada for the work shown in Exhibit A: Scope of Work, Section 9.10. All payments shall be contingent upon the City of Arvada's review and approval of work performed by the Consultant, such approval shall not be unreasonably withheld. If the City objects to any item on the invoice, it shall notify RTD in writing within 30 days of receipt. RTD shall be the sole administrator of the contract with the Consultant and the City of Arvada shall be bound by any determination of payment obligation reached through RTD's dispute resolution procedure with its Consultant. Payment shall be made for any items not subject to objection.

III. GENERAL PROVISIONS

1. RTD shall maintain all books, documents, papers, accounting records, and other evidence pertaining to costs incurred and shall make such materials available to the City of Arvada for inspection and review at reasonable times during the course of the contract and for three years from the date of final payment to the Consultant.

2. This Agreement shall commence on the date above-written and shall continue until 30 days past completion of the work by the Consultant for RTD. All portions of this Agreement that by their terms require extension beyond the contract period, including those for review of financial documentation, shall be construed to extend until their purposes are fulfilled.

   The City of Arvada has budgeted, appropriated and authorized funds for the performance of this Agreement. RTD shall not terminate its Agreement without 30 days written notice to the City of Arvada or the Consultant.

3. No officers or employees of the City of Arvada, the Colorado Department of Transportation, or RTD shall be permitted to have a personal or beneficial interest in this Agreement or the work to be performed hereunder.

4. This Agreement is a complete integration of all understandings between the parties regarding RTD's corridor scoping along the Goldline railroad corridor as well as the West I-70 corridor. This Agreement may only be modified in writing and signed by the parties.

5. Each party represents and warrants that it has taken all actions that are necessary or that are required by its procedures, bylaws, or applicable law to legally authorize the undersigned signatories to execute this Agreement on behalf of the parties and to bind the parties to its terms. The person(s) executing this Agreement on behalf of each of the parties warrant that they have full authorization to execute this Agreement.

6. Except as herein otherwise provided, this Agreement shall inure to the benefit of and be binding upon the parties hereto and their respective successors and assigns.

7. This Agreement is subject to such modifications as may be required by changes in federal or State law or their implementing regulations. Any such required modification shall automatically be incorporated into and be part of this Agreement on the effective date of such change as if fully set forth herein.

8. The terms of this Agreement are severable unless severing a term would alter the intent of this Agreement and should any term or provision hereof be declared invalid or become inoperative for any reason, such invalidity or failure shall not affect the validity of any other term or provision hereof. The waiver of any breach of a term hereof shall not be construed as a waiver of any other term or the same term upon subsequent breach.

9. If, through any cause, RTD or the City fails to fulfill in a timely and proper manner all obligations under this Intergovernmental Agreement, or if RTD or the City violates any of the covenants, agreements, or stipulations of this Intergovernmental Agreement, RTD or the City shall thereupon have the reciprocal right to terminate this Intergovernmental Agreement for cause by giving written notice, respectively, to the City or to RTD of such termination and specifying the effective date thereof, at least five days before the effective date of such termination.

10. Any notices required hereunder shall be sent in writing, first class U.S. mail, postage paid to:

For the Regional Transportation District:

David W. Hollis, Manager of Corridor
Planning, Modeling & Operational Analysis
Regional Transportation District
1600 Blake Street
Denver, CO 80202

For the City of Arvada:

Robert Manwaring, Traffic Engineer
City of Arvada
8101 Ralston Road
P.O. Box 8101
Arvada, CO 80001-8101

In Witness whereof, the parties hereto have executed this Agreement on the day and year first above written:

Clarence W. Marsella, General Manager
Regional Transportation District

Approved as to legal form for the Regional Transportation District:

Marla L. Lien
Associate General Counsel

In Witness whereof, the parties hereto have executed this Agreement on the day and year first above written:

CITY OF ARVADA, a Colorado municipal corporation

Ken Fellman, Mayor

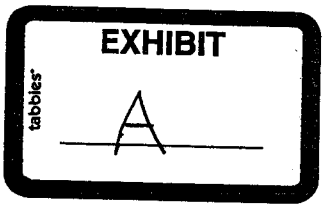
CITY OF ARVADA SEAL COLORADO

ATTEST:

Deputy City Clerk

APPROVED AS TO FORM:

Christopher K. Daly, City Attorney



SCOPE OF SERVICES FOR CORRIDOR SCOPING

Goldline, I-225, And North Metro

REGIONAL TRANSPORTATION DISTRICT

July 10, 2003

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1 INTRODUCTION

The Regional Transportation District (RTD) is soliciting proposals for Consultant services to prepare a planning and conceptual engineering study for three separate corridor investment activities. The services to be performed for each component of this study are similar, but vary somewhat as noted in this Scope of Services.

The main purpose of this study is to provide a decision making process for determining transportation investments. There should be qualitative and quantitative measures to assess and evaluate these improvements against a baseline (no action) condition.

The study shall include:

- Confirm and/or update the findings of RTD's Major Investment Studies (MIS) and CDOT's Strategic Investment Plan for the Goldline, North Metro, and I-225 corridors in regard to right-of-way requirements.
- Perform travel demand forecasts using the DRCOG travel demand forecasting model.
- **Develop detailed right-of-way information including acquisition and relocation data exclusively for the City of Arvada.**
- Develop capital and operating & maintenance cost estimates.

The following Scope of Work does not describe a federally sanctioned environmental study. This Scope is not intended to predetermine any outcome of any environmental study that may be in progress or later undertaken within the geographic boundaries of this Scope. Nothing in this Scope shall preclude federal, state or local agencies or officials from fulfilling their responsibilities under the National Environmental Policy Act (NEPA), as codified in 42 U.S.C., section 4321, et seq., or any of NEPA's implementing regulations.

The transit portion of these studies must fit the definition of a Locally Preferred Alternative (LPA) as identified in the previous RTD MISs. Definitions of Purpose and Need, as well as Alternatives Analyses, have already been completed within the context of the previous MISs. At this time, none of the suggested roadway improvements identified in CDOT's Strategic Investment Plan have undergone similar rigorous analyses.

Sufficient planning work and conceptual engineering shall be completed by the stated project milestones. This includes optimal alignment, station locations, park-n-Ride locations, conceptual level engineering to avoid fatal flaws, and general staging/phasing recommendations for both transit and roadway improvements.

2 BACKGROUND

Much progress has been made in constructing a rapid transit system in the Denver metropolitan area. The Downtown Express, a bus/high occupancy vehicle facility along Interstate 25 was completed in 1994. Further, RTD also began operations on the region's first light rail line, the Central Corridor, in 1994. Major Investment Studies were completed in 1997 for the Southeast, West, and East corridors. In 2000, light rail service in the Denver region expanded with the opening of the Southwest Corridor Light Rail Line connecting Littleton with downtown Denver. Additional Major Investment Studies were completed in 2001 for the Goldline, North Metro and I-225 corridors. In April 2002 the Central Platte Valley Light Rail connected the Lower

Downtown to the Central Corridor just west of the Auraria Campus Station. The Southeast Corridor Light Rail Line is currently under construction and is scheduled to open in 2006.

3 DESCRIPTION OF STUDY AREA ISSUES

3.1 Goldline Issues

Several issues were left unresolved at the conclusion of the Goldline Major Investment Study and are listed below:

- Right-of-Way for the proposed light rail is constrained along the corridor due to the desire of the freight railroads to double-track their operations.
- Pedestrian and vehicle access from the Olde Town Arvada Station to Olde Town itself. Grade separation may be required to facilitate this movement.
- Impacts to historic Olde Town due to LRT track including Flour Mill and Water Tower projects.
- Impact of Grandview Avenue freight RR crossing on horizontal and vertical transit alignment. (Environmental Assessment in progress by CDOT).
- Coordination between the freight railroads (BNSF and UPRR) for that segment between Denver Union Station and the Denver/Adams Co. line.
- Resolution of alignment between Ward Road and Tabor Street. Alternative scenarios include the relocation of the current Ward Road pnR near the proposed LRT tracks; OR should the LRT track alignment be skewed southward at Tabor Street to terminate at the existing pnR?
- Roadway improvements along I-70 were identified but not defined to a conceptual engineering level of detail.

3.2 North Metro Issues

The North Metro Transportation Study (NMTS) recommendations were predicated on the presumption of readily available funding, for both the recommended alternatives package itself, as well as the background transportation network expected to be in place under the 2020 Regional Transportation Plan (2020 RTP). With the change the economy and the re-statement of project costs, funding is no longer readily available. Funding is now *the limiting factor* in any re-consideration of the vision-based recommendations from the NMTS. Without the background 2020 RTP projects in place, the prioritization and functionality of the NMTS recommendations is compromised.

The second most important issue, left largely untouched by the North Metro Transportation Study is what happens with I-25 between the junction with US-36 and Downtown Denver, especially as relates to the General Purpose (GP) lanes. Lacking any additional right-of-way, this segment of I-25 is an all-important driver of congestion levels and circulation patterns/routing choices for travel. If not for the congestion levels, no major investment would be needed. With congestion, Bus/HOV and LRT/DMU alternatives are much more competitive and also arterial network completion is more important as a relief valve to I-25.

Thirdly, the LRT/DMU element of the NMTS recommendations has recently faced challenges in two areas. Most notably, recent shifts in thinking by the Union Pacific Rail Road (UPRR) suggest that a critical segment of right-of-way may no longer be available for shared use or purchase by a passenger-rail agency. The segment in question is the segment between the

BN/UP interlocker near I-270 at Brighton Blvd. and 40th Ave. The other challenge is a shift in community preference for the LRT/DMU element to extend further north with the DMU technology, rather than implementing a shorter corridor with the more-expensive LRT technology. The tradeoffs between technology, resulting service levels, and corridor extent need to be explored more thoroughly.

North Metro pre-NEPA Scoping Issues

		Route Choice		Stations/pnR's	
NMTS Recommendation Element	Cost	Extent	Alignment	Location	Spacing
Light Rail/Diesel Multiple Unit					
LRT vs. DMU Technology	x	x	x	x	x
UP Track availability south of I-270 to DUS	x		x	x	
FasTracks Updated LRT Cost Estimates	x				
FasTracks Interlined Operations Plan	x		x		
GP + Bus/HOV Lanes on I-25					
CDOT reconstruction of I-25	x	x			
HOT lane operations	x				
Interchanges/overpasses	x			x	x
ROW availability	x		x	x	x
HOV Treatments: buffer vs. barrier	x	x		x	x
Updated CDOT Construction Estimates	x	x			
Downstream capacity of I-25	x	x	x	x	x
GP + Bus/HOV Lanes on I-76					
Colorado Blvd. extension dropped from RTP	x	x		x	
US 85 Access study recommendations	x	x	x	x	x
Downstream capacity of I-25	x	x	x	x	x

3.3 I-225 Issues

Unresolved issues regarding the I-225 corridor include:

- Verification of adequate median width and right of way along I-225 between Parker Road and Colfax Avenue to incorporate both roadway widening and light rail transit.
- Alignment through City Center: The MIS envisioned the LRT leaving the median of I-225 at approximately Exposition Avenue and then traveling northeast along the Aurora Mall ring road with a station in the vicinity of the Alameda/Sable intersection. The City of Aurora would now like to pull the alignment further to the east to serve the new Centrepoint development with a station near Centrepoint Drive and a new (as yet unnamed) street that would connect from Centrepoint to Alameda Parkway. Although the MIS did not call for parking at the City Center station, the City would now like to see parking at the station serving Centrepoint. *FasTracks* is recommending 500 garage spaces at this location.
- Second Aurora City Center Station: The City of Aurora would like to have a second station in the vicinity of Exposition Ave. and the Aurora Mall.
- Alignment through Fitzsimons: Although the MIS recommended a specific route through the Fitzsimons campus, this should be verified with the latest FRA site plan.
- If constructed, the new I-225 Colfax interchange would provide a direct ramp connection from I-225 to Sand Creek Parkway in the vicinity of 17th Place. Given the traffic volumes on the ramp, it is likely that a grade-separation treatment will be required for the light rail at this intersection.
- Additional Fitzsimons Station: The FRA has hinted that it might want a third station in the northwest area of the Fitzsimons campus.

- Aurora Planning staff has recommended crossing Alameda Parkway at-grade rather than elevated as shown in the MIS. The Consultant will need to perform traffic analyses to ensure the feasibility of this design.
- Alignment along Peoria Street: The MIS envisioned the LRT to continue north from Fitzsimons along the east side of Peoria Street. Since the completion of the MIS, several new structures (church, fire station expansion) have been constructed along the east side of Peoria. While there are still fewer structures on the east side than the west, the issue of which side to run along will have to be reevaluated.
- There is a perceived discrepancy between the DRCOG 2025 socioeconomic data and Aurora City staff. This is based upon numerous letters of intent from developers to the City of Aurora. The Consultant will be required to resolve this issue prior to the completion of the project.
- Parking needs should be reopened to determine the best location for park-n-Ride activities versus stations most suitable for transit-oriented development. The City of Aurora's concern is that these areas do not become satellite parking for Denver International Airport.

4 PROJECT APPROACH

4.1 Project Management

The RTD will be the Local Lead Agency and the Project Manager for preparation of the Corridor Scoping effort. The Consultant will be required to work closely and coordinate with RTD in-house design staff and other RTD Consultants throughout the length of the corridor scoping process.

Unless otherwise specified by RTD, the Consultant Project Manager will be required to attend all stakeholder meetings, as well as all public meetings held throughout the corridor scoping process. The Consultant will be responsible for preparing appropriate presentation materials for all meetings. The Consultant Project Manager will be required to attend coordination meetings with RTD and local governments.

The Consultant shall prepare monthly project progress reports, billings, establish and maintain project schedule with key milestones, a contact reporting system, an issues tracking system, and a schedule for monthly progress meetings. The Consultant shall also prepare and maintain corridor mailing lists.

4.1.1 Project Management Plan

The Consultant will be responsible for developing a comprehensive Project Management Plan as part of this project. This Project Management Plan (PMP) establishes the project administration framework, and documents the approach for the corridor scoping and conceptual engineering efforts. It formulates the general management methodology, organization, and describes the controls required for its implementation. Required sections within this document should include:

- General Overview
- Organization and Staffing Plan
- Project Administration
- Project Management and Control
- Consultant Scope of Work

- Quality Assurance and Quality Control
- Disadvantaged Business Enterprise Compliance

It is a direct outline that should be understood by all users to whom it is issued, including all involved RTD staff, consultants and other project participants. The consultant's proposal, if developed appropriately, may be substituted for this requirement.

5 PROJECT INITIATION

All key members of the Consultant's team shall participate in a field reconnaissance trip with members of RTD, CDOT, and the municipalities to review the corridors and to take note of the physical features along each alignment. During this time, the municipalities will provide input and clarity to the Consultant in order to better define each project scope.

The Consultant shall review all of the standards to be used for the project and shall submit to RTD any questions in writing. If the Consultant does not have any questions regarding this RFP, a statement acknowledging receipt of the documents must also be completed.

The Consultant shall provide RTD staff ONE electronic copy that contains samples of their AutoCAD setup that is compatible with RTD's criteria.

5.1 Stakeholder Involvement Approach

RTD intends to work cooperatively with the Cities and Counties within each study area as well as the Colorado Department of Transportation. RTD also intends to work cooperatively with business districts and subdistricts, residents, businesses, and property owners as appropriate throughout the planning and conceptual engineering process.

At the study outset, the Consultant shall develop a stakeholder involvement approach tailored to each of the study areas for review and approval by the RTD Project Manager. The Consultant's community involvement team will work with RTD to coordinate stakeholder input. Stakeholder meetings with project partners will be held periodically throughout the study duration. This group is anticipated to include the Cities of Arvada, Aurora, Broomfield, Wheat Ridge, Thornton, Brighton, Westminster, Commerce City, Golden, City and County of Denver; Adams County, and the Colorado Department of Transportation.

The primary vehicle for conducting outreach to the governmental entities will be through their respective Council's or Commission's transportation subcommittee structure. From time to time the consultant may be required to assist the City or County staff for preparing presentations to their respective City Councils or County Commissioners. **For purposes of this RFP, assume two briefings for each corridor and one open house for each corridor.** The Consultant will also be required to update the DRCOG TAC at the midpoint and completion of this project. Techniques for implementing policy and technical guidance oversight throughout the study should be identified as part of the Consultant's proposed public involvement approach.

The Consultant will prepare presentation materials to help describe the benefits and impacts of the improvements, including graphics and handouts for the stakeholder and public meetings. Material for these graphics will vary with the audience but may include foam boards, slides, Power Point presentations, videos, photo simulations, audiovisuals, or other forms of presentation materials. Specific graphics will be determined in conjunction with the RTD Project

Manager and community involvement group assigned to the project. The Consultant will participate in information development for the general mailings to stakeholders and announcements in neighborhood newspapers.

The Consultant will NOT arrange public meeting times and locations, advertise, provide public notification, and conduct public meetings. THE MUNICIPAL STAKEHOLDERS WILL PROVIDE STAFF TO ATTEND AND EXECUTE THE PUBLIC INVOLVEMENT EFFORT. Further, the municipal stakeholders will be responsible for contacting and involving the adjacent property owners along each transportation improvement. The Project stakeholders must be committed to help ensure an open and proactive public involvement process that facilitates consensus development. However, the Consultant shall include a schedule for the proposed public involvement activities specific to each of the study areas.

5.2 Internal Stakeholder Coordination

RTD, CDOT, and municipal staff will provide planning, design, operations and public involvement/community relations staff assigned to the project to assist in decisions affecting the development of all tasks.

RTD, CDOT, and municipal staff will also participate in meetings with outside agencies, groups and other interested parties. The RTD Project Manager or Deputy Project Manager will be the lead person in conducting meetings. The Consultant shall provide support to the Project Manager outlined in the Scope of Services.

5.3 Project Schedule and Outline

The Consultant shall provide an overall schedule for completion of the corridor scoping documentation and all preliminary design documents including:

- A timeline outlining the amount of time required to complete each task.
- Product delivery dates for all draft and final documents as well as any other documentation necessary for the process. **Assume a concurrent THREE-week review period for each City and County as well as RTD and CDOT staff.**

The Initial Schedule submittal shall include a CD-ROM containing a copy of the CPM network schedule clearly labeled to indicate contents by file name and size, RTD Contract number, submittal number(s) and date of submittal. All data shall be written to using MS-Project software.

5.4 Monthly Schedule Updates

Not later than thirty (30) calendar days after acceptance of the Initial Schedule, and monthly thereafter, the Consultant shall meet with the RTD to review a draft Monthly Schedule with activities updated and calculated as of the data date assigned by RTD for the reporting period in question. The list of reporting period data dates will be provided by the Engineer after Initial Schedule acceptance.

The purpose of the schedule meeting is the joint review and evaluation of the Contract Work status as shown in the draft Monthly Schedule update. Within five calendar days after establishing the Contract Work status at the joint schedule review meeting, the Consultant shall submit to the RTD final copies of the Monthly Schedule update.

Monthly Schedule update reports shall consist of the following:

- A narrative, which identifies the work, actually completed and reflects the progress along the critical path in terms of days ahead of or behind the contract completion date as specified in the Contract Documents. The narrative report should describe what was done the previous month and identify current and potential problem areas with suggestions or recommendations for resolving them. Specific topics to be addressed in the narrative are as follows:
    - Schedule progress, critical path status, and current and potential problem areas shall each be separate sections of the narrative.
    - If the monthly schedule update reports indicate an actual or potential delay to the Project completion date, the narrative shall, regardless of the responsibility for the delay, identify the problem, cause and the activities affected, and shall propose for discussion with the Engineer a method or methods to mitigate the delay.
    - Activities proposed to be added to or deleted from the accepted Target Schedule as well as the reason for the proposed change.

5.5 External Coordination

The Consultant will coordinate with outside agencies as required for this corridor scoping project. The Consultant shall provide RTD with documentation for these coordination efforts in the form of meeting minutes, telephone communication forms, copies of letters both sent to and received from these agencies, or a note to file about the coordination effort. The Consultant will coordinate these efforts with RTD prior to any meeting and shall provide the opportunity to RTD to have RTD personnel attend the meeting. No official request by another entity will be made directly to the Consultant but rather shall be made through RTD unless authorized by RTD's Project Manager.

The Consultant will coordinate with key personnel from RTD and shall seek their advice and approval on key elements of the project. This can be done either directly with the RTD personnel or through the monthly coordination meetings. For either method, the Consultant will provide meeting minutes to RTD within five (5) working days.

5.6 Progress Meetings and Reports

The Consultant will be responsible for arranging with RTD project management and attending and/or conducting progress meetings on a monthly basis. Meetings with RTD staff will be scheduled and confirmed at least 48 hours in advance of the meeting. The Consultant will be expected to prepare minutes of all meetings, with a complete typed copy furnished to the RTD Project Manager within five (5) working days. When a definable task is identified and discussed in the meeting, that task shall be identified as an "Action Item" and assigned to the responsible person with a corresponding completion date. A running list of action items will be prepared for each monthly meeting. When an action item is complete it will be removed from the list.

The Consultant shall provide monthly progress reports to the RTD Project Manager. It shall include summaries of work accomplished, meetings attended, task percent complete, work planned in upcoming month, problem areas, resolution of previously identified problem areas, schedule status, and budget status. The Consultant shall submit their updated schedule with this submittal. The schedule shall show the project milestones and the critical path for the project on it. A copy of this report will be attached to the Consultant's monthly invoice.

5.7 Right of Entry and Permitting

Some activities may require work on land that is not controlled by the CDOT or RTD. In such cases the Consultant shall obtain the necessary written permission to enter the premises. Included in this written permission will be the names and telephone numbers of persons to contact should notification prior to entry be necessary. These written permissions will be applied to CDOT and RTD personnel as well as Consultant personnel. Signed copies of the written permission will be submitted to the Project Manager prior to entering private property for survey work.

Access Permits, that include requirements for railroad safety training, insurance, and railroad flaggers may be required by the railroad companies for permission to enter railroad property.

6 RESOURCES

RTD will supply the following items to the Consultant including:

- LRT Design Standards
- Central Platte Valley Corridor, Phase I Environmental Assessment, RTD, October 15, 1998
- Southeast Corridor Major Investment Study Final Report, Carter Burgess for CDOT, July 1997
- DRCOG Year 2025 Interim Regional Transportation Plan, 2002
- Central Platte Valley Multimodal Access and Air Quality Study, City and County of Denver, 1998
- Central Platte Valley Environmental Assessment
- I-225 Major Investment Study documents
- North Metro Major Investment Study documents
- Goldline Major Investment Study documents
- RTD cost estimates for the Goldline, I-225, and North Metro corridors

In addition, RTD will provide the Consultant with current plans and drawings for the Southeast Corridor to assist in the I-225 analysis.

The stakeholders have also expressed their willingness to provide any plans or engineering documents relevant to each corridor.

7 PROJECT SCHEDULE AND MILESTONES

RTD's milestones for the corridor scoping project include:

Milestone	Date Due
Notice to Proceed	September 2003
Alternatives Definition	October 2003
Travel Demand Forecasting	November 2003
Right-of-Way	January 2003
Survey	January 2003
Aerial Photography	January 2003

Milestone	Date Due
Utilities	February 2004
Traffic Analysis	March 2004
Civil Engineering	March 2004
Trackwork	April 2004
Arvada Work (ROW)	July 2004
Planning and Conceptual Engineering complete. Final report submitted	September 2004
Termination of Contract	December 2004

8 PLANNING WORK TASKS

The following work tasks describe the work program components that the Consultant must address. Work will not proceed until written notice-to-proceed is issued.

8.1 Alternatives Definition

8.1.1 No Action Scenario

A "no action" scenario consists of the existing transit and highway systems and all projects contained in the current adopted Transportation Improvement Program (TIP) and Transit Development Plan (TDP) for the Denver metropolitan area.

8.1.2 Build Scenario

The build scenario will consist of both transit and roadway improvements as identified in a previous MIS and within the context of the CDOT Strategic Investment Plan.

8.1.2.1 Transit Improvements

Rail transit improvements identified in the previous Major Investment Studies will define the build scenario. This would consist of light rail from DUS to Ward Road for the Goldline and light rail from Parker Road to Smith Road and Peoria Street for I-225. A comparative analysis for utilizing either light rail or **diesel multiple unit (DMU) technology must be conducted** between DUS to 124th Avenue for the North Metro study area. Understanding the trade-offs between LRT and DMU in regards to system connectivity (North Metro to East Corridor transfer), travel time, frequency, operating & maintenance costs, acceleration/deceleration characteristics, and their affect on corridor ridership must be addressed as part of this analysis. ALL OTHER ALTERNATIVE OR ALIGNMENT ANALYSES WILL NOT BE CONDUCTED AS PART OF THIS EFFORT. ONLY THOSE LOCALLY PREFERRED ALTERNATIVE IMPROVEMENTS AS DESCRIBED IN THE MIS WILL BE INVESTIGATED.

8.1.2.2 Roadway Improvements

The ultimate set of roadway improvements as defined in CDOT's Strategic Investment Plan will be included in this effort. Specific CDOT projects are identified below:

Goldline Roadway Improvements

- Wadsworth Parkway-Grandview Ave. grade separation
- I-70 widening from C-470 to Kipling St. (6 to 8 lanes)
- I-70/SH 58 Interchange additional ramps

North Metro Roadway Improvements

- I-25 reconstruction and widening from US 36 to SH 7 (6 to 8 lanes)
- I-25 accel/decel lanes between US 36 and SH 7
- I-25 bus/HOV lanes from US 36 to SH 7
- I-76 bus/HOV lane from I-270 to US 85
- New 104th Ave. Interchange (US 85 Access Study)
- New 112th Ave. Interchange (US 85 Access Study)
- New 120th Ave. Interchange (US 85 Access Study)
- Close 124th Ave. intersection (US 85 Access Study)
- New 124th Ave. Interchange (US 85 Access Study)
- Close 132nd Ave. intersection (US 85 Access Study)
- New 136th Ave. Interchange (US 85 Access Study)
- New 144th Ave. Interchange (US 85 Access Study)
- New Bromley Lane/152nd Ave. Interchange (US 85 Access Study)
- Close Denver St. intersection (US 85 Access Study)

I-225 Roadway Improvements

- I-225 from Parker Road to 6th Ave. (4 to 6 lanes) CDOT STIP
- I-225 from Parker Road to I-70 (6 to 8 lanes) MIS recommendation

8.2 Travel Demand Forecasting

The Consultant shall identify travel demand in the corridors for transit and roadway improvements. The transportation networks to be used include 2025 No Action, transit, and roadway elements. The no-action network is defined as the DRCOG 2010 network.

The Consultant will be responsible for travel demand modeling work associated with corridor scoping activities. Specifically, the Consultant will perform:

- Network coding for both light rail and bus feeder networks upon definition of those networks with assistance from the Consultant, as well as those roadway improvements cited above.
- Travel forecasts for the No Action and Full Build scenarios using the DRCOG MINUTP model.
- General and detailed analyses of model results including trip generation and distribution results by trip purpose, roadway network and assignment statistics, transit network and assignment statistics, mode split information and vehicle assignment statistics (VMT, VHT, Speed).

RTD will assist in providing patronage forecasting input, including:

- 2025 land use data sets, transit, and roadway networks in coordination with DRCOG.

- Review of Consultant's estimates of LRT alignment distances and operating speeds.
- Review and input to the Consultant's bus feeder network definition.

The Consultant shall use transit patronage forecasts to support the development of annual operating and maintenance plans for costs for bus and LRT service.

The Consultant will extract, analyze, and evaluate impacts on the transit and roadway networks including travel times, average daily ridership, boardings by station, average daily traffic, as well as bus and LRT service. The Consultant will also use this model output information to assess impacts and mitigation measures on regional and corridor traffic volumes. The Consultant will also assess impacts to streets including Level of Service (LOS) analysis and requirements for parking at park-n-Rides.

9 CONCEPTUAL ENGINEERING WORK TASKS

9.1 Applicable Standards

The conceptual engineering design for this project will be done in accordance with all local, state, national, and industry standards, rules and regulations as applicable and with the following specific design standards:

- *LRT Design Criteria Manual (2000),* RTD
- *Manual for Railway Engineering,* AREMA
- *A Policy on Geometric Design of Highways and Streets*, AASHTO
- *Roadway Design Manual,* CDOT
- *Highway Capacity Manual,* TRB
- *Manual on Uniform Traffic Control Devices* (MUTCD)
- *TCRP Report 57, Track Design Handbook for Light Rail Transit*, TRB

The current standards of ASTM, ACI, AISC, NEC, FTA, FRA, FHWA, BNSF and UP Railroads, Corps of Engineers, Urban Drainage and Flood Control District, affected cities and counties, utility companies, and other local entities may be applicable.

9.2 Right-Of-Way

The Contractor shall obtain Right of Way (ROW) information from CDOT and existing County Assessor's records. A ROW map will be prepared at a scale of 1-inch equals 100-feet horizontally depicting the ownership of the property encompassing each improvement.

Areas where ROW may be necessary to be obtained for alignments, stations, and Park-n-Rides will be identified. Costs associated with the acquisition of that property will be quantified. Areas reserved for open space or other sensitive uses that may impact the alignment will be identified. CDOT will coordinate with local governments to suggest right-of-way corridor preservation through dedication in development process.

ROW information produced for the Project's conceptual engineering studies will require additional details that may also be used to supplement the early ROW information generated in support of a future EA or EIS. Maps shall be provided as AutoCAD Files.

Determine if any potential impacts or ROW acquisitions include Section 4(f)/6(f) properties (e.g., publicly owned parks, recreation, nationally significant historic sites, wildlife refuges, and public outdoor recreation areas that received Land and Water Conservation Funds).

Conduct a field evaluation for the presence of wetlands. Delineate the boundaries and size of all jurisdictional wetlands and non-jurisdictional wetlands and Waters of the US within each study corridor. Prepare wetlands maps that delineate the wetland boundaries within each corridor.

9.3 Survey

The Consultant shall meet with the RTD prior to the commencement of the project survey work. The requirements regarding method, standards, equipment, basis of bearing, and project coordinate basis and vertical datum shall be discussed.

The deliverables shall include a digital terrain model with 2-foot contours, existing topography, drainage structures and utilities (from utility locates by the utility companies), vertical and horizontal control points used to establish control, a survey control diagram, and control for aerial photography. Supplemental survey may be required at major bridge crossings. This information shall be provided in AutoCAD 2000 format.

9.4 Aerial Photography

The Consultant shall obtain aerial photography for the purpose of preparing public displays of the transportation improvements, identifying environmentally sensitive areas and providing the basis for the conceptual engineering studies. The scale for this aerial photography will be 1-inch equals 100-feet horizontally and 1-inch equals 10-feet vertically.

A "mosaic" aerial photographic map shall be developed to provide an overview of each corridor for both roadway and transit improvements. This map should include sufficient coverage to identify community accessibility and traffic circulation patterns on the adjacent road system (e.g., one-half mile each side of a proposed interchange).

For purposes of depicting how each improvement's typical sections and their design features would generally fit into the surroundings, mapping should generally be suitable for showing each transportation improvement's alignment and any necessary adjustments of right-of-way lines, determining areas of impact on geographic features such as wetlands, farmlands, historic structures or hazardous waste sites, or calculating distances between travel lanes and sites of activities that are sensitive to noise or vibration.

Conventional field surveys will be utilized to verify the accuracy of aerial topography In addition to providing supplemental coverage in those areas where design issues require a higher level of accuracy than described above. Such locations shall include all structure underpasses and other obscured areas; minimum vertical clearance for all overpasses and detailed design items that will be identified after the initiation of the conceptual engineering process.

The aerial photographic map will be rectified to the ground control and will be delivered in electronic format. This format will be a *.TIFF file. The planimetric map will be delivered in AutoCad 2000 format.

9.5 Utilities

The Consultant shall identify all major utilities within and immediately adjacent to each transportation improvement's alignment and provide maps at 1-inch equals100-feet scale. The Consultant shall identify the location of possible utility conflicts or known required improvements as a result of construction.

The Consultant shall identify all agencies and utility companies, including cities, counties, metropolitan districts, and private companies that own utilities within the proposed sites. The Consultant shall obtain utility location maps from the utility companies including, but not limited to: sanitary sewer, water, irrigation, fiber optic, electric, gas, telephone, and cable television companies which identify utility facility locations in the project area. Requests and receipt of maps will be coordinated with the RTD.

The Consultant will prepare an Existing Utility Map for each transportation improvement's alignment for use during the conceptual engineering phase. The Map will show only the horizontal location of all existing utilities (including but not limited to storm and sanitary sewer, water, irrigation, fiber optic, electric, gas, telephone, and cable TV) and all known utility easements. The map shall be based upon information received from each utility company and available maps.

9.6 Traffic Analysis

The Consultant shall perform all necessary work to complete a conceptual engineering design of roadway intersection modifications and related traffic signal improvements. The task shall include the preliminary plans to satisfy the requirements of the governing agencies.

Based on the projected traffic, the following will be prepared for the conceptual engineering portion of the project:

- Prepare a traffic analysis report for major intersections adjacent to each improvement
- Determine total volume and AM/PM peak hour for present day and 2025
- Map Level of Service for all adjacent roadways for present day and 2025
- Determine requirements for type of crossing for present day and 2025
    - Grade separation
    - Signalized at-grade Crossing
    - Unsignalized at-grade Crossing
- Interchange spacing conflicts

Prepare a traffic report documenting the findings and recommendations for implementing the improvements with traffic impacts at existing street intersection, grade crossing, station area, and bus transfer point. Traffic analysis will be reviewed by CDOT Region 6 Traffic Section.

Develop preliminary plans for improvements to intersections and crossings for bicycle, pedestrian and vehicular traffic through, across or along the site.

9.7 Civil And Structural Conceptual Engineering

The Consultant will identify all major bridge locations required for each corridor. The approximate length of the bridges and height of the bridges will be determined based on the horizontal alignment and the profile of the track and roadway. CDOT will provide existing bridge sufficiency reports for bridges along the affected corridor where available.

The Consultant will identify impacts to the local roadway network, access points and business entrances. The Consultant will prepare typical roadway sections for the impacted streets and show on a sketch drawing the laneage requirements at the affected intersections.

Mapping of the 100-year floodplain and floodway boundaries will be performed for all drainageways within each corridor based only upon FEMA mapping or other published reports. The Consultant will develop preliminary cost estimates for drainage improvements if it is found that significant work will be required.

9.8 Conceptual Roadway Design

Conceptual engineering drawings (10 percent) of the roadway alignment will be prepared to meet CDOT criteria. In critical locations such as areas of major interchanges, areas constrained by ROW and other locations where greater detail is required, conceptual drawings will be prepared at a larger scale. The Consultant will identify the proposed right-of-way requirements based upon the ultimate build out of the roadway.

Plans shall be submitted in paper and electronic formats. Drawings shall be produced and transmitted in accordance with CDOT's *Design Manual Volume IV Computer Aided Drafting (CAD).*

Preliminary design shall be submitted to CDOT personnel for review prior to release to other agencies or individuals.

Roadway deliverables for design will include the following:

- Typical sections
- Key map
- Plan and profile – horizontal scale 1-inch equals 100-feet and vertical scale 1-inch equals 10-feet.

If available, the Consultant will obtain electronic "as-built" drawings of the roadway corridors under investigation for use in subsequent tasks. CDOT has preliminary plans including plan views, typical sections and cross sections for the North I-25 portion of the North Metro Study. No additional roadway work to be supplied by CDOT.

9.9 Trackwork Engineering

Conceptual engineering drawings (10 percent) of the track alignment will be prepared to meet RTD criteria. In critical locations such as station platform areas, areas of major interchanges, areas constrained by ROW and other locations where greater detail is required, conceptual drawings will be prepared at a larger scale.

Plans shall be submitted in paper and electronic formats. Drawings shall be produced and transmitted in accordance with RTD'S *General Drafting and Design Standards for AutoCAD and Microstation.*

Preliminary design shall be submitted to RTD personnel for review prior to release to other agencies or individuals.

Trackwork deliverables for design will include the following:

- Typical sections
- Key map
- Plan and profile – horizontal scale 1-inch equals 100-feet and vertical scale 1-inch equals 10-feet.

Particular attention on trackwork design will be given to grade separated areas, (such as LRT grade separated crossings and tunnels), proximity to sensitive land uses, areas of restricted rights-of-way, critical clearances with physical constraints and difficult topographic areas (e.g., drainage concerns) in order to accurately present the final configuration. All horizontal alignment information will include radius of curve, length of curve, length of spiral stationing and speed constraints. The vertical alignment for the control track will include existing ground, proposed grade, vertical curve information, clearances to existing and proposed overhead structures, and speed constraints. The drawings will include right-of-way information, existing utilities, station locations, crossovers, station access and any modifications to neighboring streets. Existing and proposed utilities will be shown on separate sheets.

9.10 Work To Be Completed Exclusively For The City Of Arvada

9.10.1 Right of Way

After identifying right-of-way issues as described in Section 9.2, the Consultant will augment the **TRANSIT** findings with the following tasks:

- Identify the location of the proposed Sheridan Boulevard station. This task shall include an assessment of:
    - The property required for full station development including: trackage, pedestrian facilities, parking, circulation, open space and other ancillary elements required for station operation.
    - Interaction and access of different modes of travel that may have reason to utilize the station including: automobiles, trucks, bus, pedestrians, bicyclists, private carriers and other modes as appropriate.
    - Road and pedestrian improvements that may be necessary to accommodate the demand generated by the station using two design horizons: initial construction of the rail line and twenty years afterward using the best available information for completion date of the Gold Line. Cost estimates for both scenarios will be required with the twenty-year estimate inflated to match the expected costs at that time.
    - Describe and quantify the impacts station development will have on surrounding land uses and identify parcels which present unique acquisition challenges.
- Superimpose, over a rectified aerial photo at a scale of 1-inch equals 100-foot the following information:
    - The station information identified above as appropriate

- The right of way and field information obtained in Section 9.2
- The proposed footprint of the MISs Locally Preferred Alternative right of way and the existing and ultimate (double-track) right of way for the BNSF RR
- Individual property ownerships that abut ether the Gold Line or the BNSF RR (existing and ultimate) corridors through Arvada
- Areas where the footprints of either corridor overlap with individual properties whether the properties are privately or publicly held
- These areas shall be clearly demarcated on the photo, given a unique numeric designation and cataloged as described below
- Identify areas where constraints to land acquisition or transit construction may be and display these areas with a description on the aerial photo described above.
- Jurisdictional boundaries

- Catalog the individual properties that must be acquired and assembled to meet the future right of way needs for both rail corridors. Using the numeric designation described above for each individual acquisition, chronologically tabulate the properties, the ownerships, the current zoning, the amount of property needed by square foot and the dollar value of each acquisition in 2003 dollars.

10 COST VALIDATION

Both RTD and CDOT have developed detailed cost estimates for the projects listed in Section 8.1. The Consultant shall review and, if appropriate, validate these construction cost estimates. RTD's cost estimation and CDOT's cost book for each improvement by corridor will be supplied to the Consultant. If there is found a discrepancy in either the RTD or CDOT cost estimate, the Consultant will notify RTD for resolution.

11 PROJECT COMPLETION

The Consultant will prepare a Draft and Final report with Executive Summary and Appendices, as necessary. The Final report will document the work completed in the above including detailed information on the recommended alternatives and opportunities. The Consultant will assist RTD and CDOT staff in developing a presentation for the RTD Board of Directors and the CDOT Commissioners on the findings of this report.

11.1 PRODUCTS/DELIVERABLES

The deliverables for each Planning or Conceptual Engineering task shall be provided to RTD in the form of camera-ready originals. The number of required additional copies is specified below with the exception of specific engineering deliverables. All reports, text materials, and engineering drawings shall be provided on CD-ROM in Microsoft Word and AutoCAD 2000 format. Color graphics are appropriate and necessary for selected products and Consultants should indicate this in the deliverables lists.

The Consultant shall submit the following products and documentation for each specific task in accordance with the Project schedule. In general, all reports and submittals must be accepted by RTD prior to their content being utilized in the next phase of the study effort.

Project Approach

- Project Management Plan (15 copies)

- Schedule for Progress Meetings
- Format for Progress Reports
- Project Schedule with Milestones
- Meeting Minutes for all meetings within FIVE WORKING DAYS to RTD
- Monthly Progress Reports
- Invoices and Billings
- Issues Tracking Report

Project Initiation

- Brief summary of relevant projects to the corridor
- AutoCAD setup disk
- Scheduled field reconnaissance trip and report

Stakeholder Involvement

- Stakeholder Involvement Approach (15 copies)
- Graphics and handouts for public meetings
- Other presentation materials as necessary
- Summary Section of Stakeholder Involvement Process in Final Report

Alternatives Definition

- Draft and Final Technical Memorandum on Alternatives Definition (15 copies)
    - Description of No-Action Alternative
    - Description of Build Alternative

Right-of-Way

- Property ownership defining:
    - Existing Right-of-Way boundaries
    - Proposed Right-of-Way boundaries based upon ultimate cross-section

Survey

- Control Survey
- Topographic mapping (1-inch equal 100-foot (horiz.); 1-inch equal 10-foot (vert.)
- Existing Conditions mapping
- Aerial photography

Utilities

- Existing utility map

Traffic Analysis

- Traffic analysis report (15 Copies)

Civil and Structural Conceptual Engineering

- Existing and proposed major structures including bridges, retaining walls etc.

Conceptual Roadway Design (15 copies)

- Typical sections
- Plan and profile sheets for roadway and major intersections

Trackwork Engineering (15 copies)

- Plan and profile drawings for trackwork and major intersections
- Track alignment plan
- Key map

Work to be Completed Exclusively for the City of Arvada

- Location of Sheridan Station and supporting documentation
- Right of Way and Parcel Mapping
- Right of Way and Parcel Report (15 Copies)

Cost Validation

- Validation Report of costs after completion of the conceptual engineering phase (15 Copies)

Project Completion

- Draft and Final Report with Executive Summary and Appropriate Appendices (100 copies)

Miscellaneous

- Survey data as required
- Graphics as required for the project

12 EVALUATION

12.1 Evaluation Committee

The Evaluation Committee will consist of various RTD, municipal, and CDOT staff. Members of this Evaluation Committee will include:

RTD
Two **voting** representatives:
John Shonsey, Senior Manager, Engineering
Dave Hollis, Manager of Corridor Planning and Modeling and Operations Analysis

CDOT
Two **voting** representative:
Brad Beckham, Environmental
Tim Harris or alternate

Local Government Representatives
One **voting** representative, City of Arvada:
Bob Manwaring

One **non-voting** representative, City of Aurora:
Mac Callison

One **non-voting** representative, City of Thornton (or other North Metro designee):
Gene Putman or alternate

One non-voting representative, City and County of Denver:
Mark Najarian or alternate

12.2 Evaluation Criteria

Procedures have been established for the evaluation and selection of Consultants that provide for a consistent approach for obtaining outside professional services to RTD. An evaluation committee has been established with representation from RTD and other stakeholders deemed appropriate for this RFP. Proposals will be evaluated according to the following criteria:

Proven Management of Multiple Corridors within Schedule and Budget Constraints – Due to the complexity of this contract, the Consultant shall demonstrate how they will complete each task for each corridor under parallel schedule and budget constraints. ***(40 Percent)***

Understanding of Corridor Concepts and Issues – Proposals must clearly demonstrate that the Consultant has a clear understanding of each of the defined tasks within the Scope of Work as well as all associated technical issues. Include a description of the applicant's understanding of the project, detailed methodology and schedule to comply with the Scope of Work, and identification of any problem areas you may have detected together with your approach to develop solutions. ***(35 Percent)***

Ability to Successfully Complete Similar Projects for Transportation Improvements – Competence, including technical education and training experience in the kind of project to be undertaken shall be defined. Specific reference to experience and training in the National

Environmental Policy Act (NEPA) process as well as significant knowledge of all associated laws, regulations, and guidance must be included for all key personnel. ***(25 Percent)***

SCHEDULE FOR CORRIDOR SCOPING

Milestone	Date Due
1st Draft RFP circulated for internal review	April 15
Internal RTD Legal review of draft IGA	April 30
2nd Draft RFP circulated for review to CDOT	May 9
Met with Arvada—distributed draft IGA and Scope	May 16
Draft IGA forwarded to CDOT for review	May 19
Met with Aurora—distributed draft Scope	May 28
3rd Draft RFP incorporating CDOT, Arvada, Aurora, Thornton Comments	June 10
P&D final review of scope	June 13
CDOT final review of scope	June 20
Municipal stakeholders final review of scope	June 20
RTD Contracts review	June 27
To P&D Committee for IGA approval	July 7
Advertise RFP	July 11
To RTD Board for IGA approval	July 21
IGA's executed by RTD	
IGA executed by City of Arvada	
IGA executed by CDOT	
Consultant Submittals	August 11
Consultant Selection	August 25
Notice-to-Proceed	September 2