



# CITY OF RAPID CITY

RAPID CITY, SOUTH DAKOTA 57701-2724

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## PLANNING DEPARTMENT

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### MEMORANDUM

To: Rapid City Legal and Finance Committee

From: Jeff Gies, Transportation Planning Coordinator

Date: December 5, 2001

Re: Approval of the 2002 Unified Planning Work Program

Attached for your review and approval is the Draft 2002 Unified Planning Work Program (UPWP). The development of an annual Unified Planning Work Program is a federal requirement of Metropolitan Planning Organizations that utilize federal transportation planning funds. It serves as a description of the transportation planning related tasks to be conducted within the Rapid City Area Metropolitan Planning Organization Study Boundary during calendar year 2002; as well as, a budget for scheduling and monitoring the transportation planning process.

There are two categories of funds being utilized within the Unified Planning Work Program. The majority of federal funding is comprised of Federal Highway Administration Planning funds (known as PL funds), with the remainder of federal funding coming from Federal Transit Administration Planning funds. The match ratios on these categories of federal funding are approximately 80% federal match, 20% local match. The exact match ratios are explained in more detail in the attached document.

Approximately 80% of the Transportation Planning Division budget is comprised of a mix of these two categories of federal funding, with the remainder being City Match. Rapid City Public Works is also reimbursed for Transportation Planning related activities under this program, as is the Black Hills Council of Local Governments for their involvement with Rapid Transit System planning.

Please feel free to contact me if you have any questions or would like additional explanation.

**STAFF RECOMMENDATION: Approval of the 2002 Unified Planning Work Program.**

**2002  
UNIFIED PLANNING  
WORK PROGRAM**

**FOR THE  
RAPID CITY AREA  
METROPOLITAN PLANNING  
ORGANIZATION  
TRANSPORTATION PLANNING PROCESS**

**PREPARED BY:**

**City of Rapid City  
Pennington County  
City of Box Elder  
Black Hills Council of Local Governments  
South Dakota Department of Transportation**

**IN COOPERATION WITH:**

**U.S. Department of Transportation  
Federal Highway Administration  
Federal Transit Administration**

**Draft 12/5/01**

**TABLE OF CONTENTS**

**ACRONYMS**.....2

**INTRODUCTION**.....3

**METROPOLITAN PLANNING**.....5

**SECTION 1000:** PROGRAM MANAGEMENT (41.11.00).....6

**SECTION 2000:** SYSTEM MANAGEMENT AND OPERATION (41.16.82).....9

**SECTION 3000:** ENVIRONMENTAL & COMMUNITY IMPACT (41.16.86).....10

**SECTION 4000:** TRANSPORTATION IMPROVEMENT PROGRAM (41.15.00).....13

**SECTION 5000:** LONG RANGE TRANSPORTATION PLANNING (41.13.01).....14

**SECTION 6000:** CAPITAL RESOURCES.....16

**SECTION 7000:** SPECIAL TRANSPORTATION STUDIES.....17

**SECTION 8000:** OTHER ACTIVITIES (41.17.00).....19

## ACRONYMS

<b>3-C</b>	Continuing, Comprehensive and Cooperative Transportation Planning
<b>ADA</b>	Americans With Disabilities Act of 1990. Mandates changes in building codes, transportation, and hiring practices to prevent discrimination against persons with disabilities. This act affects all existing and new public places, conveyances, and employers. The significance of ADA in transportation will be most apparent in transit operations, capital improvements, and hiring practices.
<b>BIT</b>	South Dakota Bureau of Information and Telecommunications
<b>BHCOG</b>	Black Hills Council of Local Governments
<b>CAC</b>	Citizens' Advisory Committee of the Metropolitan Planning Organization
<b>CFR</b>	Code of Federal Regulations
<b>CY</b>	Calendar Year
<b>DART</b>	South Dakota Dept. of Transportation Office of Air, Rail and Transit
<b>DBE</b>	Disadvantaged Business Enterprise
<b>EPC</b>	Executive Policy Committee of the Metropolitan Planning Organization
<b>FHWA</b>	Federal Highway Administration
<b>FTA</b>	Federal Transit Administration
<b>FY</b>	Fiscal Year
<b>GIS</b>	Geographic Information Systems
<b>GMIS</b>	Grants Management Information System
<b>CTPP</b>	Census Transportation Planning Package
<b>HPMS</b>	Highway Performance Monitoring System
<b>ISTEA</b>	Intermodal Surface Transportation Efficiency Act of 1991
<b>IMS</b>	Information Management System
<b>ITI</b>	Intelligent Transportation Infrastructure
<b>ITS</b>	Intelligent Transportation Systems
<b>MPO</b>	Metropolitan Planning Organization
<b>NTD</b>	National Transit Database
<b>PEA</b>	Planning Emphasis Area
<b>PL</b>	Metropolitan Planning Funds that have been set aside for transportation planning activities in Urbanized Areas.
<b>RCATSA</b>	Rapid City Area Transportation Study Area
<b>RTAB</b>	Rapid Transit Advisory Board
<b>RFP</b>	Request for Proposals
<b>Section 5303</b>	Federal Transit Administration mass transportation planning funds.
<b>Section 5307</b>	Federal Transit Administration program that provides capital and operating assistance to urbanized areas.
<b>Section 5310</b>	Federal Transit Administration program that provides capital assistance to organizations that provide transportation services to elderly and disabled persons.
<b>SDDOT</b>	South Dakota Department of Transportation
<b>STIP</b>	State Transportation Improvements Program
<b>TAZ</b>	Traffic Analysis Zone
<b>TCC</b>	Technical Coordinating Committee of the Metropolitan Planning Organization
<b>TDP</b>	Transit Development Plan
<b>TEA-21</b>	The Transportation Equity Act for the 21st Century. This five-year highway bill was approved in June of 1998, and carries on the ISTEA emphasis towards a balanced transportation system, including public transit, bicycle and pedestrian modes, and environmental and social consequences.
<b>TIP</b>	Transportation Improvements Program
<b>USC</b>	United States Code
<b>UPWP</b>	Unified Planning Work Program
<b>USDOT</b>	United States Department of Transportation

## INTRODUCTION

The 2002 Unified Planning Work Program (UPWP) is a description of the multimodal transportation planning programs to be conducted in the Rapid City Area Transportation Study Area (RCATSA). This annual document is a foundation for requesting federal planning funds; as well as, a control tool for scheduling, budgeting, and monitoring the transportation planning process. This work program is administered by the City of Rapid City in accordance with the agreements between the City and the Black Hills Council of Local Governments, the City of Box Elder, Pennington County, and the South Dakota Department of Transportation. Ellsworth Air Force Base, the Federal Highway Administration, and the Federal Transit Administration also participate in the transportation planning process.

Input from involved agencies is required for the development of the UPWP, so that all issues concerning transportation within the study area are equally considered for inclusion. Agencies such as the South Dakota Department of Transportation, the Federal Highway Administration, the Federal Transit Administration, Pennington County, and Rapid Transit all provide input utilized in the formation of work program tasks.

The two funding sources utilized in this work program are Federal Highway Administration (FHWA) Planning Funds for transportation planning related activities and Federal Transit Administration (FTA) Section 5303 funds for mass transportation planning activities. Both categories of funds are matched by a local agency at the following ratios:

FHWA PL	18.05% Local	81.95% Federal
FTA Section 5303	20.0% Local	80.0% Federal

## RAPID CITY AREA TRANSPORTATION STUDY ORGANIZATION

Effective transportation planning requires coordination and direction for all modes of travel as provided by a unified organization. This direction is provided by a committee structure that consists of the Executive Policy Committee, the Technical Coordinating Committee, and the Citizens' Advisory Committee. This structure allows input from citizens, professionals, and those affected by transportation decisions.

The Executive Policy Committee is the authorized decision making group and is composed of locally elected officials, representatives from federal and state agencies, and other local agencies interested in transportation planning. The primary function of this group is to provide guidance for the planning process, and to ensure coordination among various transportation modes, local governments, and planning efforts. Voting membership of this committee is comprised of representatives from the following departments or agencies (\*Denotes a non-voting member of the Executive Policy Committee):

Mayor of Rapid City	Jerry Munson
Mayor of Box Elder	Bill Maher
Chairman of the Pennington County Commission	Ken Davis
Pennington County Commissioner	Jim Kjerstad
Rapid City School District	Mike Kenton
Rapid City Council	Alan Hanks
Rapid City Regional Airport	Tory Richardson

South Dakota Transportation Commission  
SDDOT, Division of Planning\*  
Federal Highway Administration\*  
Ellsworth Air Force Base\*

Mark Mollers  
Terry Keller  
Mark Hoines  
Bob Eben

The Technical Coordinating Committee provides technical review and guidance from city planners, city engineers, safety officials, airport officials, and representatives from federal and state agencies. This group makes recommendations to the Executive Policy Committee concerning the adoption and approval of all transportation plans and programs such as the Long Range Transportation Plan, the Transportation Improvements Program, and the various reports and plans as required by the UPWP. Voting membership of this committee is comprised of representatives from the following departments or agencies (\*Denotes a non-voting member of the Technical Coordinating Committee):

City of Rapid City Engineering Division	Randy Nelson
City of Rapid City Traffic Engineering	Doug Adelman
City of Rapid City Street Division	Don Brumbaugh
City of Rapid City Community Development Department	Bonnie Hughes
Rapid City Regional Airport Administration	Tory Richardson
Rapid City Police Department, Street Division	Lt. Dick Gilbert
Rapid City Planning Department, Urban Division	Position Vacant
Pennington County Planning Department	Scott Anderson
Western Pennington Flood Management Commission	Position Vacant
Pennington County Highway Department	Hiene Junge
Pennington County Sheriff's Department, Traffic Division	Cpt. Bill Armstrong
City of Box Elder	Rebecca Phillips
Ellsworth Air Force Base	Bob Eben
Black Hills Council of Governments/Rapid Transit System	Rich Sagen
SDDOT, Division of Operations: Region Engineer	Todd Seaman
SDDOT, Division of Planning	Terry Keller
SDDOT, Air, Rail and Transit Section	Willis McLaughlin
Federal Highway Administration*	Mark Hoines

The Citizens' Advisory Committee is composed of private citizens whose input concerning transportation issues provides valuable assistance to the planning process. This committee ensures that public involvement in the transportation planning process remains a priority and that the public is informed of planning developments. Since the planning process is organized for the good of the community, it is imperative that this committee serves as a resource to both staff and the public. Membership of the Citizens' Advisory Committee consists of seven voting members representing various sections of the Rapid City Area Metropolitan Planning Organization.

Central Rapid City	Tom Bodensteiner
Northern MPO Area	Adeline Kalmbach
Northwest MPO Area	Position Vacant
Southwest MPO Area	Walt Roetter
Southern MPO Area	Bill Franklin
Northeast MPO Area	Meredith Lawson
Southeast MPO Area and Rapid Valley Neighborhood	Dorothy Davis

The three committees operate under the Federal regulations established by the Transportation Equity Act for the 21st Century (TEA-21). These regulations define the process and organization that must be present.

## WORK PROGRAM BUDGET

The development and organization of the 2002 Unified Planning Work Program is intended to simplify the utilization of Federal Funds based on a combination of FHWA and FTA funding. The Federal Match for Line Items **1000 through 5000** in the 2002 Unified Planning Work Program will be based on a 75% Federal Highway Administration match (with a local match as shown below) and a 25% Federal Transit Administration match (with a local match as shown below). This funding split is based on an agreement between the South Dakota Department of Transportation and the Rapid City Area Metropolitan Planning Organization. ***The exception to this 75/25 split is the funding included for the Office of Air, Rail, and Transit under the South Dakota Department of Transportation. The Office of Air, Rail, and Transit has requested Federal Transit Administration funds within Line Items 1000 through 5000. All Federal funding for the Office of Air, Rail, and Transit will be through Federal Transit Administration reimbursement only. The Office of Air, Rail and Transit will also supply the local match.***

The Rapid City Area local match within Line Items **1000 through 5000** will be determined by the following formula:

### FHWA Ratio

### FTA Ratio

$$.75 \times .1805 \times \text{total \$ within Line Item} + .25 \times .20 \times \text{total \$ within Line Item}$$

***In the event that Federal Transit Administration money is expended within these line items before the Federal Highway Administration money is expended, Federal Highway funds will be used as a full reimbursement until such time that additional Federal Transit funds are available.***

Line Items 6000 and 7000 will be funded in full by Federal Highway Administration Funds, and Line Item 8000 will be funded in full by Federal Transit Administration Funds.

## METROPOLITAN PLANNING

As transportation plans are developed, whether it is a major street plan, a mass transit plan, or a bicycle/pedestrian plan, there are seven factors that should be considered in the planning process. These factors are designated as key issues concerning the transportation field.

1. Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency;
2. Increase the safety and security of the transportation system for motorized and non-motorized users;
3. Increase the accessibility and mobility options available to people and freight;

4. Protect and enhance the environment, promote energy conservation and improve quality of life;
5. Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight;
6. Promote efficient system management and operation; and,
7. Emphasize the preservation of the existing transportation system.

In addition to the seven factors addressed by TEA-21, the Federal Transit Administration Region 8 Office has developed five Planning Emphasis Areas (PEAs). The mission of these Planning Emphasis Areas is to ensure the highest quality of surface and public transportation which promotes the Nation's economic and community vitality. The PEA's addressed in the 2002 Unified Planning Work Program are:

- Intelligent Transportation Systems
- Livable Communities Initiative
- Integration of Planning and the Environment
- Railroad Grade Crossing Safety
- Freight and Goods Movement

## **ACTIVITY DESCRIPTIONS**

### **1000 - Program Management - 41.11.00**

This section consists of the work activities to manage a continuing, cooperative and comprehensive (3-C) transportation planning process that results in plans and programs that consider all transportation modes and supports metropolitan community development and social goals.

#### ***Management Documents***

The Rapid City Area Metropolitan Planning Organization is required to develop an annual work program to address transportation issues and concerns. This document outlines funding and describes the activities, basic planning and research studies, and the intended goals and products to be accomplished in the Rapid City Transportation Planning Area. The Agreement of Understanding between the participating governmental agencies will be revised and edited as necessary to reflect changes in membership and participation.

During the 2002 Fiscal Year, the calendar year 2003 Unified Planning Work Program (UPWP) will be developed to provide guidance during the next year's planning process. Amendments or revisions to the existing Work Program may also become necessary during the year.

#### ***Committee Activities/Public Involvement***

Primary committee involvement occurs within the three transportation planning committees. Those committees are the Executive Policy Committee (EPC), Technical Coordinating Committee (TCC) and the Citizens' Advisory Committee (CAC). Staff provides assistance for



typing, research, meeting notifications, minutes, assembling meeting materials, and all other related business.

The Transportation Planning Coordinator, who is presently the chairman of the TCC, is also an active member in the Rapid City Chamber of Commerce Transportation Committee. This committee addresses transportation as a tool to economic development and fulfilling business needs. The Coordinator also provides Staff assistance to the Rapid City Area Bike/Walk/Run Committee, the Rapid Transit Advisory Board, and is the City Staff liaison to the Rapid City Area Air Quality Board.

Public involvement is a key aspect of the planning process and includes presentations concerning transportation-related topics, speaking engagements with various civic, educational, service, business, and professional organizations. An annual report is prepared to inform the public of the important plans or projects that were accomplished during the year through the transportation planning process. The annual report discusses County, City, State, and Federal projects related to road construction/reconstruction, congestion mitigation, air quality improvement, hazard elimination, pavement management, mass transit, aviation, and other transportation modes. This report is submitted to the Rapid City Journal for publication.

### ***Administration***

Includes the effective operation and financial management of the transportation planning process.

### ***Training and Travel***

Since new skills and knowledge help further the planning process, training is an area of major importance. Activity and costs associated with training and travel may include specific training related to various aspects of transportation planning, such as: traffic forecasting, congestion management training, Intelligent Transportation System technology, etc. This activity also includes attendance at conferences regarding State and Federal policies and procedures, and travel to network with other MPO's or agencies regarding transportation process issues and technology. Staff travels to Pierre at various times throughout the year to discuss and coordinate important issues with the SDDOT.

### ***Plan and Plat Review***

Site plans and plats for proposed developments are reviewed throughout the year as they are submitted. Plan review considerations include the reservation of roadway right-of-way, controlling and planning access points, evaluating transit routing and impacts, and evaluating impacts to existing and future transportation facilities. Parking, signage, circulation, and other transportation related issues are also considered during the reviews.

### ***Ordinance Revisions***

Subdivision and zoning ordinance revisions are a continuous process as Staff and elected officials strive to improve the planning process. These revisions may concern ordinances, street design criteria, parking requirements, access policies, or other transportation-related policy and procedure.

## ***Transit Coordination***

A coordinated transit process has been developed to improve cooperation and efficiency through joint operation of transportation related functions, when possible. The goal of this process is to make better use of existing equipment, provide better service, reduce costs to the consumer and taxpayer, meet Federal mandates, and eliminate duplication of transportation services. Part of this process involves a joint review with the State Department of Transportation regarding yearly prioritization of private non-profit vehicle requests.

## **FISCAL YEAR 2002 WORK ACTIVITIES AND PRODUCTS TO BE COMPLETED**

- Development of the 2002 and 2003 Unified Planning Work Programs.
- Prepare Section 5307 grant application and required information for the UPWP to obtain Section 5303 funding.
- Staff time involved with committee participation relating to the transportation process, which includes public involvement, developing the 2001-2002 Annual Report, and Self-Certification for calendar year 2002.
- Intergovernmental coordination between the various transportation government entities regarding the transportation process.
- Review, monitor and maintain compliance with congressional legislation, FTA regulations, FHWA regulations, and guidelines.
- Improve image and awareness of Rapid Transit System.
- Administrative duties which include bookkeeping, vouchers, progress reports, budgeting, secretarial work, and purchasing materials.
- Review the 1994 Operations Plan and make necessary updates.
- Review and update the Public Involvement Plan section of the Operations Plan, and approve as a separate document.
- Tuition and Staff times involved with employee training and travel.
- Review of site plans, plats, and zoning requests.
- Administration of operating, planning, and capital grants; including preparation and submittal of Quarterly Progress Report, Financial Status Reports, National Transit Database reports, and Disadvantages Business Enterprise goals.
- Submission of an Annual Progress Report for both the Section 5303 and Section 5307 grants.
- Develop and revise ordinances that pertain to the transportation planning process.
- Review Environmental Justice requirements and develop a guidance policy in cooperation with the South Dakota Department of Transportation and Federal Highway Administration.
- Coordination of planning efforts toward intermodalism of highway, air, rail, transit, bike, and walking modes.
- Further develop an access management policy for the Rapid City Area.
- Coordinate transportation efforts with various non-profit agencies in the Rapid City Area, including Rapid City Public Schools.
- Develop five year Operating/Capital Plan for Transit.
- Prioritization of private non-profit (Section 5310) transit projects based on committee review and evaluation.

Person Days

RAPID CITY PLANNING	329
RAPID CITY PUBLIC WORKS	39
BHCOG	<u>60</u>
	428 total person days

Funding Requests

CITY OF RAPID CITY	\$108,494.00
BHCOG	\$ 15,000.00
SDDOT-DART	<u>\$ 4,240.00</u>
	<b>\$127,734.00</b>

**2000 - System Management and Operation - 41.16.82**

The Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 originally required states to develop, establish, and implement seven management systems. Some of the systems were preexisting and others were developed with assistance from the South Dakota Department of Transportation. Although the requirement for management systems was repealed in 1995, the Rapid City Area MPO continues to gather data and utilize the developed management systems for pavement management, safety management, and congestion management. These systems serve as a valuable resource for the transportation planning effort within the entire MPO area. Although the City of Rapid City and the Rapid City Area MPO conduct activities within the other management system areas such as bridge management and traffic monitoring systems, there is not a formal management system in place for these activities.

**FISCAL YEAR 2002 WORK ACTIVITIES AND PRODUCTS TO BE COMPLETED**

- Visual pavement survey of City streets and maintenance of database.
- Purchase and coordinate the development of a new pavement management database.
- Assemble accident data for the Rapid City Area.
- Perform accident analysis and develop annual Accident Report.
- Evaluate levels of congestion and means to mitigate congestion through analysis of travel time and signal timing studies.
- Operation and maintenance of Transportation Technician's vehicle for use in the Transportation Planning process, as well as, administrative support associated with vehicle usage records.

Person Days

RAPID CITY PLANNING	10
RAPID CITY PUBLIC WORKS	14
BHCOG	<u>0</u>
	24 total person days

### Funding Requests

CITY OF RAPID CITY	\$ 8,031.00
BHCOG	0.00
SDDOT-DART	\$ 0.00
	<b>\$ 8,031.00</b>

### **3000 - Environmental and Community Impact - 41.16.86**

This section is comprised of those activities that are related to the collection and manipulation of data as well as providing transportation generated information and staff support.

#### ***Geographic Information Systems***

A comprehensive transportation database is being developed which will provide valuable assistance in performing various transportation planning procedures for the entire MPO planning area. The comprehensive database will provide numerous types of data utilized in assessing site plans and performing site impact analysis. The database will contain information required for such tasks as the following: street and signal inventories; the quick and accurate computation of level-of-service; and a tool for developing an accurate land use database. The system will allow the production of sophisticated maps that depict physical and statistical data. The analysis of census data will continue as the system grows and develops. Census data of all forms is constantly being released which applies to transportation and land use. Census data will be used to develop forecasts, depict trends or patterns, or identify needs. This data is easily entered in the system and analyzed.

#### ***Land Use***

The staff of the Transportation Planning Division, in cooperation with the Urban Division of the Planning Department, will be developing the land use element of the comprehensive land use plan. This information will be utilized within the traffic forecasting model and the GIS to assist in traffic forecasting. The database will be updated as land use, zoning, and platting changes occur. The land use plan will also provide data that will be useful in studying the effects of clustering multi-family development. This clustering may enhance transit ridership, which may in turn reduce congestion.

#### ***Traffic Counting, Monitoring, and Evaluation***

This task is comprised of those activities involved with counting, monitoring, and evaluating traffic. Information and analysis obtained from these functions is used to predict traffic impacts to ensure an efficient transportation network.

Regional Traffic Monitoring and Evaluation is designed to improve and monitor air quality and reduce fuel consumption in the Rapid City area through improvements to the region's traffic signal system. To accomplish this the following must be done: Identify locations where traffic signals may be warranted, conduct turning movement counts, and perform the appropriate analysis to see if signals are warranted. Any possible signal improvements must then be prioritized with respect to need, safety, and funding sources. Staff will also analyze existing and proposed traffic signals or signal systems utilizing the appropriate computer software. The

results of this software assist in signal timing optimization and improved traffic flow. The monitoring of traffic control systems is a successful means of managing congestion and its influences.

This also includes the analysis of street signs and alternate forms of traffic control. Finally, the promotion of alternative forms of transportation such as ridesharing, mass transit, and bicycling provide a solution to achieving a balanced transportation system and improved air quality. This includes informing the public about the existing facilities and the possibilities for utilization.

Traffic Counts. The City conducts numerous traffic counts throughout the year as scheduled or as requested. The traffic count map will be updated and the traffic count report will be compiled utilizing counts from the City of Rapid City, the City of Box Elder, and the State Department of Transportation. Staff will coordinate state counting locations and local counting locations to eliminate duplication. Site visits necessary to evaluate site plans, examine future improvements, or perform site impact analysis for presentation to the Planning Commission and City Council will also be included in this task. Site visits assist in presenting a professional and well-defended conclusion concerning the impacts of a particular plan or site on the existing or proposed transportation system.

Highway Performance Monitoring System. Each year the Rapid City Transportation Planning Division collects and maintains data to be used in the Highway Performance Monitoring System for the SDDOT. This task involves forecasting traffic volumes and developing growth factors by land use along those segments of streets in the urbanized area that are functionally classified. Although an updated report has not been submitted in the past several years, Staff is developing a new pavement management database to provide more accurate information.

### ***Social/Economic/Environmental Data***

Staff will continue to analyze population, housing, and employment trends, in combination with, 2000 Census data and area building permits. Projections for these types of data will also be secured for the same purpose. Staff will develop data applicable to tasks related to transportation planning and demand modeling.

The City of Rapid City strives to improve the air quality within Rapid City. Monitoring of the air quality within the Rapid City area will continue and Rapid City will maintain a liaison to the Pennington County Air Quality Board. The continued assessment of the transportation network and its impact on air quality will be a means of achieving cleaner air.

### ***Transit Data Collection and Evaluation***

Staff will gather data to determine existing transit facility usage and efficiency. Review of data and reports will be used to identify opportunities to improve the transit system. Road system changes will be coordinated with the management of the transit system to avert delays or system discontinuities.

### ***Mapping and Graphics***

Frequently, for presentations to the MPO committees, Planning Commission, City Council, various civic, business, and other interested agencies, some form of maps, charts, or graphs are utilized to better illustrate trends or patterns. The development of such items can take a

considerable amount of time. The Geographic Information System will continue to be an effective tool for these purposes by reducing time and improving the quality of graphics.

### ***Inventories***

Inventories of the City's streets, alleys, traffic signals, and signs are conducted and maintained to develop policies, guide future growth and development, and are utilized in travel demand forecasting procedures.

### **FISCAL YEAR 2002 WORK ACTIVITIES AND PRODUCTS TO BE COMPLETED**

- Develop and maintain the Geographic Information System database for use in the transportation process.
- Review and confirm data requests from the Census Bureau regarding transportation and land use data.
- Continue to update land use information for use in the GIS and traffic forecasting model and work towards approval of the Rapid City Land Use Plan Update.
- Develop policies to minimize negative impacts on the transportation system based on land use information.
- Identify opportunities for intermodal transportation systems.
- Further explore the benefits and capabilities of Intelligent Transportation Systems. Develop priorities for implementing ITS technologies within the Rapid City Area.
- Conduct traffic counts and turning movement counts for development of the Annual Traffic Count Report, use in traffic impact studies, use in site-plan review process, use in the traffic forecasting model, and capacity analysis.
- Work cooperatively with the State Department of Transportation to refine traffic counting methodology for the City of Rapid City.
- Collect and update information to be used in the Highway Performance Monitoring System in coordination with SDDOT.
- Update street miles by pavement type.
- Develop maps, charts, and graphs for use in presentations and/or documents related to the transportation planning process.
- Inventory signs, traffic controls, streets, and parking lots for input into pavement management database, GIS, and traffic forecasting model.
- Gather, compile, and review transit reports for projecting system trends.
- Analyze transit routes by collecting lap-by-lap and route-by-route ridership information, and implement necessary changes.

### Person Days

RAPID CITY PLANNING	408
RAPID CITY PUBLIC WORKS	215
BHCOG	<u>8</u>
	631 total person days

Funding Requests

CITY OF RAPID CITY	\$119,027.00
BHCOG	\$ 2,000.00
SDDOT-DART	\$ 0.00
	<b>\$121,027.00</b>

**4000 - Transportation Improvement Program - 41.15.00**

This section is comprised of those activities that are related to the development and coordination of the Transportation Improvement Program.

***Project Evaluation***

The project evaluation task is under development for the City of Rapid City and will be the beginning stage at which projects are evaluated for inclusion in the Transportation Improvement Program. This process will examine alternatives and prioritize such alternatives based on an extensive list of technical data and evaluation criteria. After evaluation the preferred alternative will be identified. This approach is excellent for involving the MPO committees throughout the prioritization of projects for the TIP.

***Transportation Improvement Program Development***

The Transportation Improvement Program provides a three-year program of planned transportation improvements that were developed from the community's desired goals and objectives. These improvements must also follow those recommendations presented in the Long Range Transportation Plan. Typical improvements are related to street, highway, mass transportation, railroad, aviation, and bicycle/pedestrian paths. After approval by the Executive Policy Committee, the South Dakota Department of Transportation incorporates the metropolitan Transportation Improvement Program into the Statewide Transportation Improvement Program. Final project listings will be completed by August 2002. Construction updates are also presented to the committees throughout the year.

***Corridor Analysis***

This task includes those activities related to identifying and preserving future transportation corridors, development of transportation projects, prioritization of projects, and funding identification.

Reviews of existing and proposed roadways are done throughout the year. Centerline alignments, access points, and frontage road locations will be evaluated within this task. As new development occurs and future demand requires new roadways, these needs will be monitored throughout the year. This task includes the analysis of proposed state projects and their impacts on the Rapid City area.

**FISCAL YEAR 2002 WORK ACTIVITIES AND PRODUCTS TO BE COMPLETED**

- Monitor money through Federal, State, and Local resources for all transportation related projects and improvements. This information will be utilized in the prioritization and listing of

projects in the Transportation Improvement Program, with the ultimate goal of receiving project funding.

- Meet with Local, State and Federal Staff regarding development and coordination of projects.
- Development of projects based on committee review of project evaluation sheets, which includes corridor review, financial analysis, cost/benefit data, and other criteria.
- Development of the Transportation Improvement Program which includes project selection review for fiscal responsibility, time involved in the document development, coordination of the approval process, and attendance at meetings.
- Enhancement program management and enhancement program project development.
- Bicycle and pedestrian project development.

Person Days

RAPID CITY PLANNING	95	
RAPID CITY PUBLIC WORKS	44	
BHCOG	<u>2</u>	
	141	total person days

Funding Requests

CITY OF RAPID CITY	\$ 39,751.00
BHCOG	\$ 500.00
SDDOT-DART	<u>\$ 3,760.00</u>
	<b>\$ 44,011.00</b>

**5000 - Long Range Transportation Planning - 41.13.01**

This section includes those activities that relate to the long range planning of the Rapid City Area transportation system.

***Long Range Transportation Planning***

The Long Range Transportation Plan Update received final approval in August 2000, and was developed in accordance with the community's goals and objectives. The major focus of the Update was increasing/preserving safety, identifying existing and future congestion issues, and developing a fiscally constrained list of projects to address safety and congestion issues. The Plan Update was also developed in accordance with the guidelines established by the Transportation Equity Act for the 21<sup>st</sup> Century for Metropolitan Long Range Transportation Plans. This plan will serve as a foundation and guideline for the development of the Transportation Improvements Program and the prioritization of projects. The Long Range Transportation Plan will be due for revision in 2005, or sooner if substantial demographic changes occur within the Rapid City Metropolitan Area.

***Traffic Forecasting***

Traffic forecasting software is used to assist in forecasting future traffic along each segment of the transportation system. The model accounts for expansion and modification of the street and highway system, changes in land use, changes in travel patterns, and population growth. The



current and future year information from the model will be utilized as a component of the Long Range Transportation Plan and as a factor in the decision making and prioritization of projects within the Transportation Improvement Program. Traffic forecasts will be used to evaluate transit route efficiency and route selection. The most significant asset of the model will be the use of forecasting data in the long-term planning of the transportation system.

In 1996, a base year model was developed and calibrated. During 2001 the City of Rapid City continued development of the future land use element of the Rapid City Comprehensive Land Use Plan. As soon as the future land use information is approved through the Comprehensive Plan adoption, it will be used to develop the future year traffic projections. The City of Rapid City, as well as the MPO committees have been involved throughout the model development process, and will continue to be involved as the model is further developed and updated.

***Bicycle/Pedestrian Plans***

This activity includes any plans or studies related to the bicycle or pedestrian modes of travel. Project development for transportation enhancement funds is also included. Focus will be on expanding the bikeways and sidewalks to encourage commuters to utilize these modes of travel rather than automobiles. A Bicycle/Pedestrian Task Force has been established to provide guidance and suggestions concerning related issues. Safety is a major concern in terms of protecting the pedestrian and bicyclist from each other and motorized traffic. A strong emphasis is placed on public education concerning safety, availability, and future plans. Intermodal opportunities between bicyclists/pedestrians and transit will be explored. Presentations concerning such plans will be made to the committees.

**FISCAL YEAR 2002 WORK ACTIVITIES AND PRODUCTS TO BE COMPLETED**

- Continue the development of future land use plans for remaining neighborhood areas. A comprehensive future land use plan will be developed after all neighborhood areas are completed. This will enable staff to complete travel demand projections.
- Review of development and transportation projects for compatibility with long range transportation planning goals.
- Collect and analyze data for use in the traffic-forecasting model.
- Update and recalibrate the traffic-forecasting model.
- Complete MPO area travel survey as part of the traffic forecasting model validation process.
- Maintain an updated and calibrated traffic-forecasting model for use in the transportation planning process.
- Evaluate the transit system based on traffic model information.
- Provide Staff support to the long-range transportation-planning element of Special Studies as they are developed.
- Further development of a Bicycle/Pedestrian Plan for the Rapid City Area.
- Staff time involved with the Bicycle/Pedestrian Task Force.

Person Days

RAPID CITY PLANNING	228
RAPID CITY PUBLIC WORKS	16
BHCOG	<u>0</u>
	244 total person days

Funding Requests

CITY OF RAPID CITY	\$ 60,233.00
BHCOG	\$ 0.00
SDDOT-DART	\$ 0.00
	<u>\$ 60,233.00</u>

**6000 - Capital Resources**

As technology continues to increase within the transportation field, it becomes increasingly difficult to stay current with equipment and software advances. To maintain or increase the efficiency of existing systems, and cover any potential repairs that may be needed, this section has been created.

**FISCAL YEAR 2002 WORK ACTIVITIES AND PRODUCTS TO BE COMPLETED**

- Review and purchase needed equipment and software for transportation planning purposes.

Person Days

RAPID CITY PLANNING	14
RAPID CITY PUBLIC WORKS	2
BHCOG	<u>0</u>
	16 total person days

Funding Requests

CITY OF RAPID CITY	\$13,714.00
BHCOG	\$ 0.00
SDDOT-DART	\$ 0.00
	<u>\$13,714.00</u>

***All capital purchases will be reviewed by the SDDOT prior to acquisition. A letter of justification for the requested purchase and the cost of the requested purchase must be submitted to the SDDOT. A minimum of three (3) quotes must be provided if the requested item is not going to be purchased in accordance with the State Purchasing Contract. Purchases of equipment with a per unit purchase price over \$5,000 also require prior Federal Highway Administration approval, unless the item has been specifically included in the Unified Planning Work Program with a purchase price.***

***It is recommended that computer hardware and software be purchased in accordance with the State Purchasing Contract whenever possible. If the desired hardware or software is not available from the state bid list, it must be approved by the Bureau of Information and Telecommunications (BIT) prior to acquisition. A minimum of three (3) quotes must be provided with the justification for the requested hardware or software and the criteria for emergency purchase of computer hardware or software must be followed.***

***A letter explaining and justifying all emergency purchases must be signed by the head of the respective department. This process is being established in order to avoid confusion regarding authorization in an emergency.***

**Criteria for emergency purchase of computer hardware and software:**

***Application for exemption from moratorium may be made in writing to the South Dakota Department of Transportation Metropolitan Planning Engineer. Each exemption should include the following information:***

- 1. A description of the item to be purchased and indication of its compatibility with state government information systems.**
- 2. Cost of the item as well as an explanation of how the item is funded.**
- 3. An explanation of how this piece of equipment or software will impact state government.**
- 4. The name and phone number of a contact person in your department.**

***Emergency purchases of equipment with Federal Highway Administration Planning Funds for items over \$5,000 per unit also require Federal Highway Administration approval.***

**7000 - Special Transportation Studies**

This element includes transportation studies that have been prioritized or which may be expected as need originates. Study funding is determined according to eligibility for PL funds. Special studies may utilize contractual services, according to the approved process designed by the South Dakota Department of Transportation and the City of Rapid City. The following potential 2002 studies cover a variety of issues related to the transportation planning process.

1. Develop a corridor, access and land use study for the Southeast Connector and SD Highway 44 East.
2. Continue the development of the Future Land Use Element of the Rapid City Comprehensive Land Use Plan. Portions of this plan have been completed in calendar years 1997,1998, 1999, 2000 and 2001.
3. Develop a corridor and access plan for Catron Boulevard (the South Truck Route).
4. Conduct a corridor study for East North Street from Mall Drive to Cambell Street which focuses on access, level of service and progression, as well as, a traffic analysis for the surrounding street network.
5. Conduct a travel survey for the MPO area for use in the traffic-forecasting model.
6. Update the Transit Development Plan.
7. Develop an Intelligent Transportation System plan for the MPO area.
8. Investigate the purchase of a pavement management database with analytical capabilities, and gather data to update the Pavement Management System.
9. Develop an access plan for the Chapel Valley Neighborhood.
10. An infrastructure and transportation corridor study of the "M" Hill area (that area between Omaha Street and I-90 and between Deadwood Avenue and I-190).
11. An infrastructure and land use study for the area between the South Truck Route south to Spring Creek Road and between U.S. Highway 16 and S.D. Highway 79.
12. A microanalysis of the transportation system serving the Rushmore Mall area.

13. Western Connector Route Study and Environmental Assessment (for the corridor between Sheridan Lake Road and SD Highway 44 West).

**FISCAL YEAR 2002 WORK ACTIVITIES AND PRODUCTS TO BE COMPLETED**

- Continue the development of the Future Land Use Element of the Rapid City Comprehensive Land Use Plan, which may also include contractual services for the mapping component.
- Complete and receive approval of the Northeast Area Analysis (a.k.a. Mall Drive Corridor Study).
- Complete a corridor and access plan for the US Highway 16 (South) Corridor from Cathedral Drive to Spring Creek (near Reptile Gardens).
- Refine and adopt the Pavement Management Maintenance Plan and gather data to maintain the Pavement Management System.
- Conduct a travel survey of the Rapid City MPO area for use in the traffic forecasting model.
- Complete a traffic forecasting model update with the assistance of a consultant.
- Complete the Jackson Boulevard Extension Study.
- Provide staff support and technical advice to aid the development of the above referenced Special Studies.

Person Days

RAPID CITY PLANNING	59
RAPID CITY PUBLIC WORKS	8
BHCOG	<u>0</u>
	67 total person days

Funding Requests

CITY OF RAPID CITY	\$139,629.00
BHCOG	\$ 0.00
SDDOT-DART	<u>\$ 0.00</u>
	<b>\$ 139,629.00</b>

***The entire Special Studies Line Item is eligible for either staff time or contractual reimbursement for Special Studies activities. Special studies contracts that have been approved by the Executive Policy Committee and the South Dakota Department of Transportation in 2002 will be referenced in Monthly Financial Status Reports that are a component of each monthly voucher for reimbursement.***

***Contracts with outside parties shall be allowed for activities related to Transportation and Transit Planning, provided that appropriate approval of the South Dakota Department of Transportation and the Executive Policy Committee is received.***

**8000 - Other Activities - 41.17.00**

This section includes those planning activities that specifically utilize Federal Transit Administration Section 5303 Planning Funds, and have not been identified in any of the above sections.

**FISCAL YEAR 2002 WORK ACTIVITIES AND PRODUCTS TO BE COMPLETED**

- Monitor the anti-drug program for employees who perform sensitive safety functions.
- Rapid Transit System will monitor the transit system safety program.
- Verify that the Rapid City Paratransit Plan is meeting ADA mandates.

Person Days

RAPID CITY PLANNING	0
RAPID CITY PUBLIC WORKS	0
BHCOG	<u>2</u>
	2 total person days

Funding Requests

CITY OF RAPID CITY	\$ 0.00
BHCOG	\$ 500.00
SDDOT-DART	<u>\$ 0.00</u>
	<b>\$ 500.00</b>

### 2002 UNIFIED PLANNING WORK PROGRAM

	LINE ITEM DESCRIPTION	RC	BHCOG/	SDDOT	FHWA	FTA	FTA	LOCAL	LOCAL	TOTAL	DART	TOTAL
		PLANNING	CITY RC	DART	MATCH	MATCH	MATCH FOR	MATCH	MATCH	LOCAL	MATCH	BUDGET
		REQUEST	REQUEST	REQUEST			DART	FHWA	FTA	MATCH		AMOUNT
1000	PROGRAM MANAGEMENT - 41.11.00	\$108,494.00	\$15,000.00	\$4,240.00	\$75,902.50	\$24,698.80	\$3,392.00	\$16,718.00	\$6,174.70	\$22,892.70	\$848.00	\$127,734.00
2000	SYSTEM MANAGEMENT AND OPERATION - 41.16.82	\$8,031.00			\$4,936.05	\$1,606.20		\$1,087.20	\$401.55	\$1,488.75		\$8,031.00
3000	ENVIRONMENTAL & COMMUNITY IMPACT - 41.16.86											
		\$119,027.00	\$2,000.00		\$74,386.22	\$24,205.40		\$16,384.03	\$6,051.35	\$22,435.38		\$121,027.00
4000	TRANSPORTATION IMPROVEMENT PROGRAM - 41.15.00	\$39,751.00	\$500.00	\$3,760.00	\$24,739.27	\$8,050.20	\$3,008.00	\$5,448.98	\$2,012.55	\$7,461.53	\$752.00	\$44,011.00
5000	LONG RANGE PLANNING - 41.13.01	\$60,233.00			\$37,020.71	\$12,046.60		\$8,154.04	\$3,011.65	\$11,165.69		\$60,233.00
6000	CAPITAL RESOURCES	\$13,714.00			\$11,238.62			\$2,475.38		\$2,475.38		\$13,714.00
7000	SPECIAL TRANSPORTATION STUDIES											
	SPECIAL STUDIES	\$139,629.00			\$114,425.97			\$25,203.03		\$25,203.03		\$139,629.00
8000	OTHER ACTIVITIES 41.17.00		\$500.00			\$400.00			\$100.00	\$100.00		\$500.00
	<b>TOTALS</b>	\$488,879.00	\$18,000.00	\$8,000.00	\$342,649.34	\$71,007.20	\$6,400.00	\$75,470.66	\$17,751.80	\$93,222.46	\$1,600.00	\$514,879.00