EXECUTIVE SUMMARY

This report was prepared at the completion of Phase I of the STEP UP project. STEP UP, the Strategic Transportation, Environmental and Planning Process for Urbanizing Places, is an environmental streamlining project for Colorado to develop an improved process for addressing environmental impacts related to transportation projects at the earliest stage and the tools to implement the process. The effort focused on the transportation planning process used by the North Front Range Metropolitan Planning Organization (NFRMPO) to develop their Regional Transportation Plan (RTP). The STEP UP model planning process is in accordance with recent guidance, “Linking the Transportation Planning and National Environmental Policy Act (NEPA) Processes” issued jointly by the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA).

In a review of the environmental streamlining efforts by other states and MPOs, elements from each were used to best meet the objectives desired by participants in the STEP UP program. Each effort looked to an early screening of proposed transportation projects utilizing an interactive database centered on a Geographic Information System (GIS). Incorporating an environmental review of projects at the earliest possible point is a key objective of the STEP UP project.

To achieve this objective a new model planning process has been developed. This process begins with identification and review of regional environmental concerns prior to the submission of projects by local governments for a Regional Transportation Plan. Local governments will be able to use this information to develop transportation projects and in land use planning. The STEP UP model planning process also incorporates current CDOT guidance on developing Corridor Visions within a region and statewide. NFRMPO has already begun its implementation of this concept and screens out projects that are not part of an identified regionally significant corridor.

STEP UP will further strengthen the process by which projects are screened and prioritized for inclusion in regionally significant corridors by allowing both project planners and MPO staff to review the potential environmental conflicts for corridors and individual projects. The MPO will be able to use this information in its prioritization and screening process so that the new RTP will prioritize those projects that will avoid constrained resources and not require mitigation.

STEP UP also includes the beginnings of a Regional Cumulative Effects Assessment (RCEA) process. All of the environmental data provided or reviewed by participating agencies will be available to CDOT along with the database of potential transportation improvements. These data can be used along with land use data sets to generate maps of potential growth areas. These maps along with the project locations can be reviewed regionally for impacts to critical environmental resources.

A web-based collaborative application and a statewide environmental database will be required in order to support the model planning process and RCEA process. An application was designed to provide a user-friendly interface to accomplish each step in the modified process and produce a reusable database of projects and environmental data. All environmental data should be based in GIS for graphical display on maps within the application.
Initial design work for the application has been completed at the concept level with technical parameters defined by current CDOT application development standards. Data layers that should be included in a statewide environmental repository are listed in Chapter 6 along with potential sources and general areas for which data will be hard to gather. The collection and sharing of environmental data is one of the key challenges facing the implementation of the STEP UP model planning process. Data access, repository design and data management are additional issues to be resolved for STEP UP.

Short and long-term recommendations are identified in Chapter 7. These include immediate steps that can be taken to conduct the pilot program of applying the STEP UP process to the upcoming RTP update for the NFRMPO and steps for the long-term successful implementation of STEP UP. The recommended short-term implementation steps for the pilot program include:

- Initiate development of the proposed application to support the STEP UP model planning process.
- Create a temporary regional database with as many layers as possible.
- Create and formalize initial partnerships with resource agencies that can participate in the pilot program.
- Test existing Cumulative Effects Assessment models developed by the University of Colorado at Denver.

The three primary long-term recommendations are:

- Develop formal partnership agreements between the Steering Committee and resource agencies needing to participate in the environmental review process for the program.
- Strengthen support for a statewide environmental database with all environmental issues properly represented.
- Further develop more sophisticated Cumulative Effects Assessment models that function at a regional scale so that the impacts and implications of transportation development in a region can be more fully understood.

Implementation of the STEP UP process will mostly likely require additional staff and training of staff at the NFRMPO and CDOT. As stated above, it also will require the development and deployment of the multi-user application, the development and review of a GIS repository of statewide environmental data, and the review and modeling of RTP projects for the RCEA process and document. These activities must fit into the business process reengineering efforts underway at CDOT.

FHWA and EPA will continue to play a vital role in sponsoring this effort and assisting CDOT and NFRMPO as needed. Their involvement will be key in facilitating resource agency participating and providing overall guidance on federal requirements pertaining to transportation planning and the NEPA process.
The process was modified to incorporate the above recommendations and redefines how the NFRMPO accomplishes transportation planning. By incorporating environmental considerations and resource agency input early in the process, efficiencies can be achieved during the project development phase (NEPA). In this new process, avoidance and minimization of impacts to critical environmental resources are identified early. This early identification may lead to changes in a project’s alignment or features as well as changes in project timelines or phasing.

The following text describes each key step in the process shown in Figure 3.2. The conceptual interface developed for the proposed application (see Chapter 5.0) representing each step is found in Appendix B. Please note this process does not show all efforts related to developing the NFRMPO’s RTP and TIP. Also, some steps in the process may occur concurrently.

(0) Environmental Database

**Purpose:**

Provide data on the natural, built and social environment for use in the Regional Transportation Plan development process and regional cumulative effects assessment process. This includes gathering and storing system-wide baseline data in a single repository that is accessible to all users.

**Goals/ Objectives:**

- Develop an interactive, GIS-based environmental database for use in land use, transportation and environmental planning.
- Build a partnership with federal and state resource agencies, and local sources to populate and maintain the database.
- Provide public and user interface to access environmental data.

**Methodology:**

As a means for efficient decision making and meeting regulatory requirements, environmental data is provided upfront to stakeholders via a web-based GIS application. The data provide stakeholders with a comprehensive look at the region for a number of environmental factors through a consistent format. The MPO/TPR will use this data in developing a Regional Transportation Plan as specified by State and Federal legislation. Resource agencies can benefit from the data as part of their regulatory responsibilities. Local jurisdictions are encouraged to use the data for planning such as developing comprehensive plans/growth policy plans and transportation plans.

This information also can be made available to the public through a public domain website as part of the RTP public involvement process or through another vehicle. With the public aware of the sensitive environmental areas within the region, the local planning jurisdictions should take this into account in planning decisions and the compatibility of land use decisions with the established community visions and goals for an area.
Figure 3.2. STEP UP Model Planning Process
The database will be comprised of several GIS data layers from a variety of sources. The data layers, as discussed in Chapter 6, may include, but are not limited to, land use, farmland, demographics, transportation system, air quality, water resources, floodplains, wetlands, vegetation, wildlife including threatened and endangered species, historic properties, and 4(f)/6(f) properties. Resource agencies, CDOT and the MPO/TPR are involved in the database development, data sharing agreements and building the data layers. CDOT or its designee will store and maintain the database, and environmental data sets will be normalized to a standard, simplified coding scheme for representing areas of constraint. This would likely result in the need to hire 1 to 2 staff and find the physical equipment and connections to support a web-based data repository. The information will be available for use by local governments, planning agencies, CDOT, FHWA, FTA, and resource agencies.

(1) Regional Environmental Review

Purpose:

To provide for early identification and consideration of regional environmental issues for specific geographies to use in the development/update of the RTP and local agency comprehensive plans. To identify potential environmental mitigation sites within the region early on in advance of project development.

Goals/ Objectives:

- Encourage early resource agency involvement to:
  - Identify critical environmental issues (fatal flaws) within a region that may affect the transportation system or conflict with land uses.
  - Review and comment on regionally significant corridors (RSC), including identification of critical environmental issues within each corridor.
  - Identify resources for a Cumulative Effects Assessment within the region and by corridor.
- Better integration of transportation, land use, and environmental planning.
- Identify data deficiencies.
- Maintain regular coordination with resource agencies.

Methodology:

This step in the process provides for early coordination and scoping with agencies having regulatory responsibilities for environmental resources. It involves prioritization by CDOT and resource agencies of sensitive social and natural resource protection areas consistent with the requirements of NEPA. Using the web-based application, resource agencies and CDOT review environmental data layers, identify critical environmental issues within the region, and comment
on a corridor and its relationship to environmental resources. A checklist of potential cumulative
effects in the region and by corridor can also be generated from this review for use in a RCEA.

A GIS-based map of critical issues is created based on the resource agencies and CDOT
comments and review of the environmental data and corridors. This map is available for use by
local and regional planning agencies in developing transportation and land use plans. CDOT, the
MPO/TPR and resource agencies also can utilize this information in their respective planning
activities.

As a result of adding this step to the process, resource agencies and CDOT are involved much
earlier in the planning process. Critical environmental issues for either avoidance or mitigation
are taken into account early on by all jurisdictions involved in planning activities. The early
system-wide review of regionally significant corridors by various agencies allows for
opportunities to address environmental impacts by avoiding certain areas and identifying
potential mitigation sites prior to project development and NEPA documentation. Baseline
environmental data is available for environmental resource and cumulative effects assessments
by local, regional, state, and federal agencies.

(2) Corridor Assessment & Visions Review

Purpose:

Review the regionally significant corridors, including the visions, goals, and strategies, as part of
the development/update of the RTP. The review may include consideration of critical
environmental concerns as identified by resource agencies and CDOT during the Regional
Environmental Review (1). Prepare a RTP consistent with CDOT environmental policies.

Goals/ Objectives:

› To access and evaluate the regionally significant corridors based on identified environmental
  concerns.

› To review/refine the visions, goals and strategies of regionally significant corridors,
  incorporating environmental constraints.

› To identify regional values associated with corridors and established policy.

Methodology:

MPO staff facilitates the review of the regionally significant corridors and works with MPO
members to develop and refine the visions, goals, and strategies for each corridor as defined by
the CDOT process, environmental policy, and corridor values. MPO staff and members are able
to identify the environmental issues up front for each corridor and to address them in the vision
statements. Because there is member participation this also allows for early involvement in the
environmental issues by the MPO members as the project sponsors.
(3) RTP Project Submittal

**Purpose:**
MPO members submit projects to be considered for inclusion in the RTP.

**Goals/ Objectives:**

- Provide MPO members access to the Environmental Database and the Regional Environmental Review comments for use in advancing the best projects for consideration in the RTP.

**Methodology:**

Local jurisdictions are given the projects included in the previous RTP and the Project Prioritization and Screening Process (PPSP) guidelines to develop projects for the RTP. The projects are submitted to the NFRMPO for evaluation. MPO members are responsible for using the information provided on environmental issues and the regionally significant corridors in developing projects for submittal. The MPO uses the same information to evaluate the projects. The projects submitted by the local agencies are pre-screened during the “Initial Screening” based on the eligibility criteria identified in the PPSP.

If the project meets the eligibility requirements it goes through the prioritization and screening process conducted by the MPO (see Step 4). Projects submitted by MPO members for inclusion in the RTP must meet the eligibility requirements as well as the project prioritization and screening evaluation criteria. The use of current environmental data will assist project submitters with such things as best alignment, cost considerations, and a preview of environmental clearances that may be required.

(4) Project Prioritization and Screening Process

**Purpose:**
Evaluate and prioritize projects for inclusion in the Regional Transportation Plan based on criteria including environmental impacts.

**Goals/ Objectives:**

- To apply actual environmental data to the evaluation process used to screen and prioritize projects.

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1 The PPSP is a modified version of the existing Project Prioritization Process (PPP) for STEP UP.
To evaluate environmental impacts, including potential for cumulative effects, of candidate projects.

To improve the quality of information needed to make sound planning decisions and develop the most environmentally responsible and sustainable projects.

**Methodology:**

MPO staff in conjunction with its members review and update the PPSP every three years prior to the RTP process starting. An environmental impacts criterion is added to the Project Prioritization and Screening Process. The data provided, as part of the Environmental Database (0) and Regional Environmental Review (1), is used for this criterion during the assessment of candidate projects submitted by local jurisdictions. It may also be used as an eligibility requirement based on comments in an effort to protect highly sensitive environmental resources.

MPO member agencies are strongly encouraged to use the Project Prioritization and Screening Process in developing candidate projects for inclusion in the RTP. The MPO uses the process to assess the projects submitted by local agencies for consideration for placement into the RTP. The resource agency and CDOT review comments also will be used in the evaluation and would include any flagging on the potential for a cumulative effects assessment.

This additional criterion also provides an opportunity for the MPO (or its representative) to review and comment on the RTP candidate projects with specific data. Project costs and project timing are better understood at this stage.

**(5) Regional Transportation Plan Document**

The NFRMPO’s RTP is updated every three years to identify regional transportation needs. The RTP includes a Vision Plan and a Fiscally Constrained Plan. The Vision Plan is a comprehensive list of multi-modal transportation needs within the region for at least a 20-year period and is corridor based. All projects initially identified and submitted for consideration in the RTP are categorized and prioritized to establish a list of projects ranked in order of importance to the region. The Fiscally Constrained Plan includes the high priority projects from the Vision Plan that are likely to be funded with available resources over the period of the plan.

Key elements of the RTP are:

- Values, vision, goals and strategies

- Inventory of Existing Transportation System – region-wide and used to identify areas in need of improvement over the planning period. Information from the Environmental Database is used by the NFRMPO and CDOT to assess the current transportation system during the “Inventory of Existing Transportation System, Services and Infrastructure” step of the RTP development process by the NFRMPO.

- Regionally Significant Corridors:
• Transportation Corridors that connect communities by facilitating the timely and safe movement of people, goods, information, and services.

• Types of corridors are:
  o roadway
  o bicycle/pedestrian
  o freight rail
  o passenger rail

• Play a key role in shaping project eligibility (initial screening) and project scoring. A project must be consistent with the vision for the corridor in which it is located to be eligible for the RTP.

• Visions, goals, and strategies in corridor visions may include:
  o maintain or improve infrastructure to optimal condition
  o reduce fatalities, injuries and property damage crash rates
  o coordinate transportation and land use decisions
  o promote transportation improvements that are environmentally responsible

### (6) Pre-TIP Environmental Review & Scoping

**Purpose:**

To conduct a more detailed environmental review of the top few construction projects from the RTP prior to inclusion in the TIP, as well as for those projects moving into the TIP from a suballocation process. To identify cumulative and environmental issues that may affect the project’s priority, alignment, or features. To implement transportation improvements that protect the environment, enhance quality of life and promote community values. This also marks the initial Project Development phase beginning with the NEPA process.

**Goals/Objectives:**

- Class of Action determination (Categorical Exclusion, Environmental Assessment, Environmental Impact Statement) prior to project development.
- Identify agencies requiring no further involvement.
- Early assessment of project’s potential environmental and cumulative effects to focus on in the NEPA documentation (agency scoping).
- Development of clear project description and/or purpose and need.
- Coordinated involvement of resource agencies, FHWA, CDOT, and local agencies.
- Preliminary cost estimates for NEPA studies
Programmatic Agreements

Methodology:

The environmental consequences, including cumulative effects, of the top few projects to move into the TIP are evaluated in more detail. For projects to move into the TIP, the environmental and cost implications should be understood. This sets the stage for the environmental documentation process required under NEPA. This includes early identification of issues (scoping), continued resource agency involvement prior to the NEPA process (streamlining), development of clear project description and/or purpose and need statement, preliminary cost estimates for NEPA studies, and class of action determination (CE, EA, EIS).

This step includes the involvement of FHWA, CDOT, resource agencies, and project sponsors. The information entered into the management application discussed in Chapter 5.0 will help determine the class of action. This decision is made by FHWA based on the issues and comments associated with each project. This screening prepares projects that are included in the TIP for the NEPA process. Projects should then move more smoothly through NEPA documentation, resulting in schedule and budget efficiencies.

(7) Transportation Improvement Program (TIP)/Statewide Transportation Improvement Program (STIP)

A TIP is a six-year program based on the fiscally constrained portion of the RTP and is updated every two years. It lists the projects to be funded over the next six years. Each TPR/MPO’s TIP is integrated into the STIP. A project must be included in the STIP to be eligible for federal and/or state funding. FHWA’s project category designation occurs after a proposed project is identified in the STIP by the Colorado Transportation Commission.

(8) Project Development

This step of the process is the responsibility of CDOT and the project sponsor. At this point the projects identified in the TIP/STIP go through the following steps:

- NEPA Documentation
- Permitting
- Preliminary design
- ROW acquisition
- Final design
- Construction
3.3 **RELATIONSHIP TO COMPREHENSIVE LOCAL PLANNING**

Environmental data is available for use by local jurisdictions for a variety of planning and applications. This data can come directly from the Environmental Database (0) or the result of the Regional Environmental Review (1). The intent of making this information available to local planners is to provide them with environmental data to help make sound planning decisions. By providing this data, a link is created between the environment and land use planning.

3.4 **REGIONAL CUMULATIVE EFFECTS ASSESSMENT PROCESS**

To address the issue of regional cumulative effects, a work group was established to define a process for evaluating cumulative effects as part of the RTP development process using GIS software. As projects are being developed for inclusion in the RTP, resources agencies will identify and provide comments on resources that are of concern from a cumulative effects standpoint. By providing this information early in the transportation planning process, costly impacts can be avoided or minimized. This component of the STEP UP model planning process is fully discussed in Chapter 4.0.

3.5 **SUMMARY**

The STEP UP model planning process described in this chapter modifies how the RTP is developed in the NFRMPO. A comprehensive environmental database is developed for use by local, regional, state and federal agencies in their respective planning activities. The process brings agency involvement into the early stages of transportation planning to identify critical environmental issues well before a project enters the NEPA process. Along with this is the early identification of avoidance and mitigation strategies. The environmental data provided can be used to develop criteria for use in prioritizing and screening projects in the RTP process.