SCOPE OF WORK

Task 1 – Methods and Assumptions

Initiate the project and facilitate a meeting to determine the assumptions to be used during the course of the study.

A. Conduct a project kickoff meeting with the Study Advisory Team to confirm the project scope, discuss project goals and objectives, confirm the public involvement plan, and identify key data needs.

B. Coinciding with the kickoff meeting, conduct a methods and assumptions meeting with a select group of SAT members. An important topic of discussion in this meeting will be the purpose in collecting origin-destination data and the approach in collecting the data. This discussion and decisions and other study assumptions will be documented in a Methods and Assumptions Document in accordance with the Methods and Assumptions Template for SDDOT Planning Studies.

Task 2 - Baseline Conditions Analysis

Prepare an approach to assess the existing transportation network within the study area.

C. Obtain and review current ordinances and guidelines

D. Gather base mapping data

E. Review existing traffic volume and turning movement data and determine traffic volume count and turning movement count data needs. Depending upon location, RCMPO staff may be able to obtain the data

F. Gather origin-destination information at locations and according to the methods documented in Task 1. It is estimated that a minimum of five origin/destination stations will be needed and would possibly involve the following approach or approaches

1. Provide postcards directing individuals to provide information about their destination and travel route. This will require pulling drivers over to hand them a postcard to be mailed in or directs them to the Website for questions.
2. Work together with Ellsworth AFB officials to craft a survey process that will clarify how base employees are traveling to and from the Ellsworth AFB. Past experience has shown that military installations are open to this approach.
3. Work with major employers in the area to survey their employees to determine how they are traveling to and from work
4. Set up on the study's Website a travel survey to gather information about individual's driving behavior.
5. Utilize license plate recognition equipment to record license plate numbers traveling through key locations.

For budgetary purposes, it is assumed that approaches 2 and 5 would both be implemented. Approach 2 would create and circulate an online survey of base personnel using surveymonkey.com. Approach 5 would record up to 5,000 license plates during peak travel periods.

G. Gather other relevant data (land use, design plans, photography, utilities, functional classifications, existing development plans, etc.)

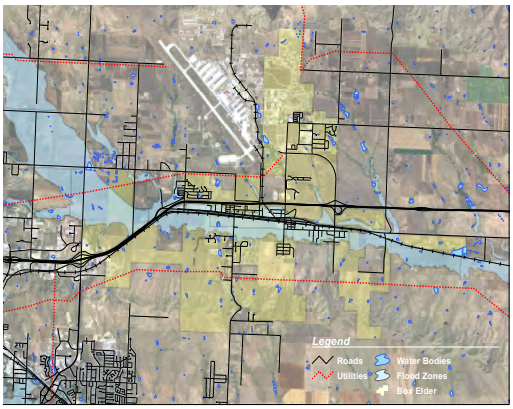
H. Identify traffic safety problems utilizing accident history and potential traffic safety areas based upon local knowledge.

I. Identify bicycle / pedestrian facilities, connections and needs.

J. Identify transit issues and needs.

K. Identify freight issues and needs.

L. Determine existing levels of service and operating conditions along key routes and intersections. The list of intersections to be evaluated will be developed in cooperation with the SAT and the public. For the purposes of this scope of work, it is estimated that 10 intersections will be analyzed. Include analyses of AM peak, PM peak and volume/capacity ratios for the existing time frame.



Data will be managed by GIS and will provide the project team with a consistent database of existing information

M. Review City and County development practices within the study area.

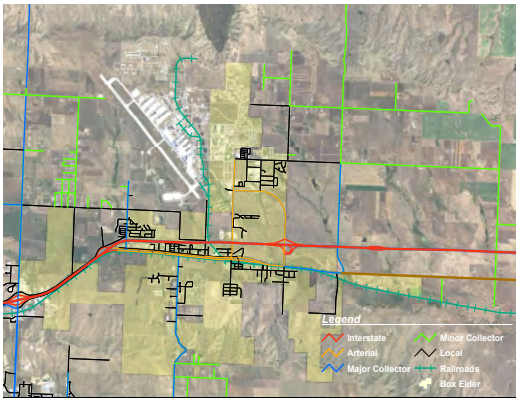
N. Review existing street and roadway standards of applicable agencies.

O. Identify existing capacity, geometric, right of way, and other deficiencies along key routes identified.

P. Develop a list of transportation issues currently facing the area.

Task 3 - Standards Development

Work with the Study Advisory Team to update existing street /roadway cross section standards and develop street / roadway cross section standards where lacking.



Existing functional classification will be reviewed and updated as needed

A. Develop a street / roadway classification system that meets local needs and can correspond with the Federal Highway Administration (FHWA) functional classification system.

B. Develop a major street plan for 20 years in the future that includes the preferred location for future arterials and collectors within the study area and corresponding typical roadway sections.

C. Develop traffic level of service standards for the Box Elder area.

D. Develop a master bicycle and pedestrian plan for 20 years in the future. Review existing and future regional trails and identify both on and off street linkages. Consider including bicycle lanes and sidewalks within recommended typical roadway sections. Also establish guidelines for the installation of pedestrian enhancements in the study area.

E. Develop a process by which development plans will address roadway and transportation needs associated with the development.

F. Confirm and develop (where needed) base typical cross sections for various roadway types dependent upon classification. These sections will be referenced and coordinated with the Master Streets Plan.

G. Confirm and develop (where needed) standards for access management by street / roadway classification.

Task 4 - Future Needs Analysis

Build upon the baseline analysis and standards developed to determine the future transportation needs within the study area.

A. Forecast traffic for 10 and 20 years along key routes considering forecasted changes in local land use. Forecasts will be developed using the Rapid City regional travel demand model. The project team will collaborate with the RCMPO to confirm that the model's assumptions are valid for the purposes of the study and make any necessary adjustments to better reflect future development plans within the City of Box Elder.

B. Determine future levels of service and operating conditions along key routes and intersections without improvements. Include analyses of AM peak, PM peak and volume/capacity ratio for the 10- and 20-year time frames. The same intersections (up to 10) identified in Task 2j will be addressed in this task.

C. Identify capacity, geometric, right of way, and other deficiencies along key roadway routes identified for 10- and 20-year time frames.

D. Identify roadway, transit, freight, pedestrian, and bicycle transportation future needs.

E. Review past proposals for transportation network improvements and incorporate into the transportation future needs, if appropriate.

Task 5 - Final Report

Prepare and submit a final report, including an executive summary. The report shall:

A. Identify projects needed to address existing and future deficiencies, including description of work, estimated range of year of need, and cost estimates in year of expenditure dollars.

B. Identify funding needed to maintain and expand the existing transportation system and identify existing and possible funding sources.

C. Highlight enhancements to existing transportation facilities and future roadway links.

D. Propose solutions for identified problem areas.

E. List of desirable but not necessarily needed projects, including description of work and cost estimates.

F. Prioritize the implementation of recommended solutions.

G. Recommend a methodology for the prioritization of improvement projects.

H. Assess potential impacts of proposed solutions.

I. Document benefits of proposed solutions and improvement projects using qualitative and quantitative measures

J. Quantify costs of proposed solutions and improvement projects.

Task 6 - Public Meetings

Prepare and facilitate a minimum of two (2) public meetings. This effort will include the following:

A. A public meeting as part of the baseline conditions analysis to be held within90 days of beginning the project to introduce the project to the public, and gather information pertaining to the needs and desires of the community.

B. A second public meeting at least 30 days prior to the submitting the draft final report in order to present preliminary results and gauge public reaction to solution ideas to be included within the final report.

C. A comprehensive written review of each meeting.

The RCMPO will handle the advertising / public notification for the meetings. It is anticipated that the meetings may include some discussion regarding issues outside of the study area. These issues should be recorded within the written review of the public participation meeting; however, it is not the intent of the study to solve issues outside of the study area.

Task 7 - Public Input Period

Allow for the public to provide input into the study for a minimum period of two weeks following each public meeting.

Task 8 – Web page

Provide RCMPO and the City of Box Elder a Web page (RCMPO) and a Facebook page (City) dedicated to the study.

The Web page and Facebook page will be organized in such a way that will help dispense information to the public regarding the status of the study, public meeting announcements, presentations, meeting summaries, and all reports. The Web page and Facebook page can be used to assist in data gathering through Web surveys and for other public participation actions as deemed appropriate as long as adequate advertising can be provided. The pages will be active at least ten (10) days prior to the first public meeting and shall remain active for a period of at least six (6) months after completion of the study to allow public access to the final report.

Task 9 - Study Advisory Team Meetings

Prepare for, attend and facilitate meetings with the Study Advisory Team for study coordination.

Study Advisory Team meetings will be held during the course of the project. Three of these meetings will be face-to-face for project kick-off and prior to the public meetings (possibly on the same day) to gather the Study Advisory Team's approval on the information being presented. The other meeting will be held via vidioconference or teleconference during the standards development phase of the study and at the start of the future needs analysis. Other meetings can be held as deemed necessary.

Task 10 - Project Deliverables

Provide the following items to the RMPCO contact person:

A. Study Updates in word processing format (Microsoft® Word) or as Portable Document Format (Adobe® .pdf) of the study's progression due August 16, 2013, October 16, 2013; December 16, 2013, February 16, 2014 and April 16, 2014. If the study completion date needs to be extended, study updates will be completed around the 15th of every other month beginning on June 15, 2014 until submittal of the draft final report.

B. An electronic copy, in Portable Document Format (Adobe® .pdf), of all approved standard typical sections.

C. A GIS shapefile (ESRI ArcMap® *.shp) of the final Master Street Plan in State Plane coordination system (NAD 1983, South Dakota South) compatible with the City of Box Elder's and Meade and Pennington Counties' existing coordinate system.

D. An electronic copy, in word processing format (Microsoft Word®) or as Portable Document Format (Adobe® .pdf) of the draft final report and executive summary.

E. Fifteen (15) printed copies of the final report and executive summary

F. An electronic copy, in word processing format (Microsoft® Word) as well as Portable Document Format (Adobe® .pdf), of the complete final report and the complete executive summary.

G. Copies of any pertinent working papers and electronic files created during the project.

After the Study Advisory Team's review of the draft reports, the RCMPO's contact person will advise as to its acceptability and will request any changes that may be desired. The executive summary and final report shall be due to RCMPO's contact person seven (7) days prior to the study's completion date.