ATTACHMENT 2

DRAFT

BICYCLE FACILITIES PLAN

EXECUTIVE POLICY COMMITTEE
CITIZENS ADVISORY COMMITTEE
TECHNICAL COORDINATING COMMITTEE

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RAPID CITY AREA METROPOLITAN PLANNING ORGANIZATION

LSA

LSA ASSOCIATES, INC.

BICYCLE FACILITIES PLAN

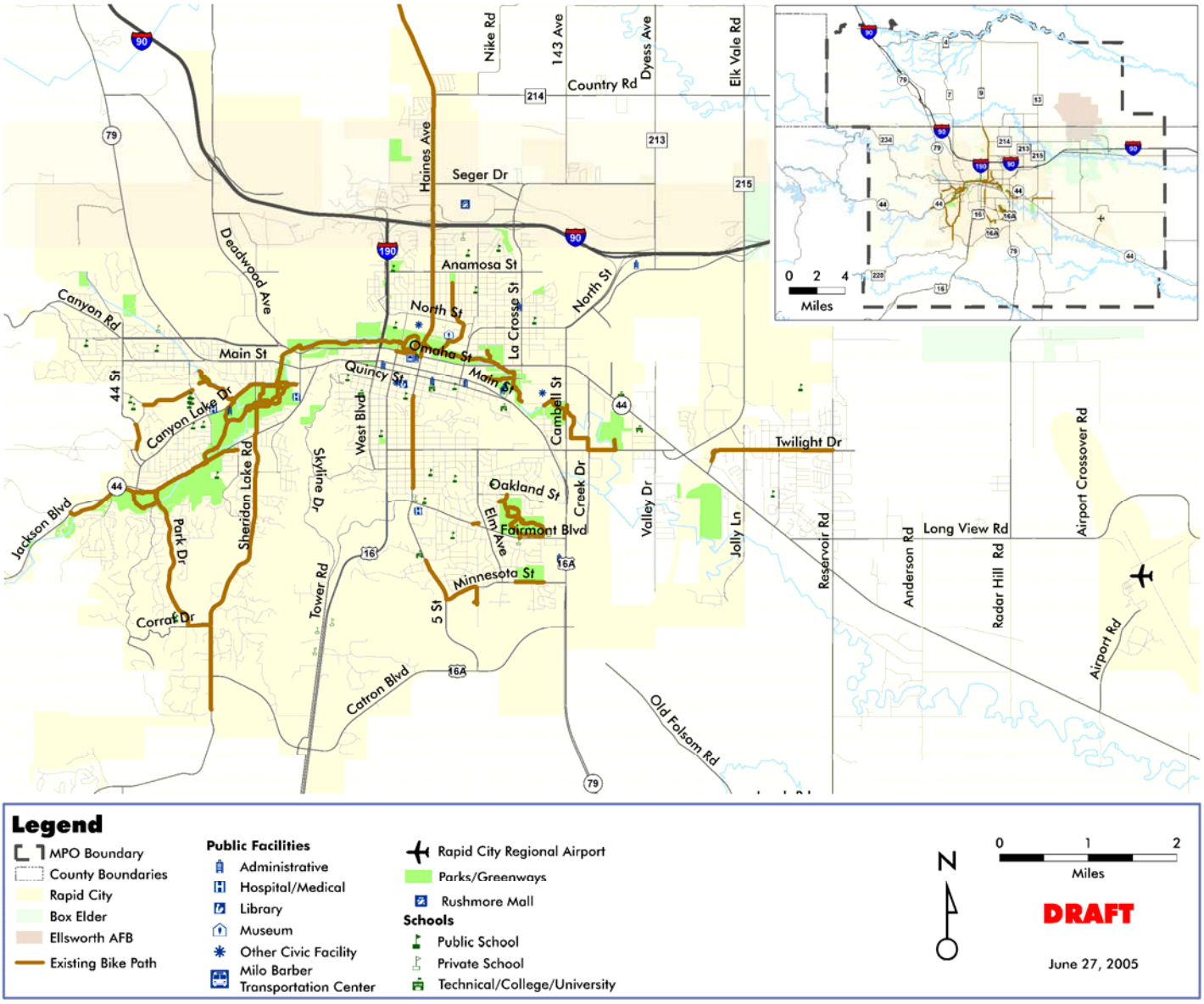
The bicycle can be a healthy alternative to the automobile for many trips. It can also play an important role in helping the region to reduce congestion, improve air quality, and develop a more balanced transportation system. As part of the development of the 2030 Long Range Transportation Plan (LRTP), the regional bicycle network was reviewed, updated, and analyzed.

EXISTING CONDITIONS

The Existing Bicycle Network is anchored by a path that follows Rapid Creek through the city. In 1972, the creek flooded when stationary thunderstorms over the eastern slopes of the Black Hills dumped as much as 15 inches of rain in as little as six hours over the Rapid Creek basin. In all, 238 people died, making this one of the deadliest flash floods in the United States this century. The flood also significantly changed the look of Rapid City. As a result, City officials turned the flood plain into a greenbelt to lessen the effect of future floods.

The Existing Bicycle Facilities in the region are shown in Figure 1. The Rapid Creek Biway now in place represents a major component of the existing 31 miles of bicycle network. The Biway is an eight foot wide concrete path that parallels Rapid Creek through the center of the community. It is augmented by several additional paths, including those along Haines Avenue, Fifth Street, Minnesota Street, Twilight Drive in Rapid Valley, Sheridan Lake Road, Park Drive, Corral Drive, and others.

Figure 1
Existing Bicycle Facilities



BICYCLE ALTERNATIVES AND ANALYSIS

Throughout the 1980's, a core group of bicyclists met periodically to address specific bicycle and pedestrian issues such as school crossings, dangerous storm drain grates, feeder routes, and signage. In 1992, the City and MPO recognized the formation of a Bike Walk Run Task Force. The purpose of the task force is to improve, expand, and promote the safe use of the community's bikeway and walkway facilities.

Over several years, the Bike Walk Run Task Force developed a comprehensive network of facilities for non-motorized travel, which became known as the Bikeway/Walkway Plan. This plan served as the starting point for the development of the bicycle component of the LRTP. It was presented at public meetings, modified accordingly based on public comments and roadway alignment plans, and analyzed to identify priorities for implementation. Figure 2 shows the proposed Bicycle Facilities Plan that is being recommended as part of the 2030 LRTP.

BICYCLE FACILITIES

Bicycle facilities include paths, trails, bike lanes, bike routes, and sidewalks. All streets in the region, with the exception of Interstate highways, are considered part of the bicycle network, since bicycles are considered vehicles and may legally travel on any street that does not have a minimum speed requirement. On the other hand, many roads do not provide a reasonable option for the casual or less-experienced cyclist due to traffic volumes, speeds, and other factors.

Bike Lane – A portion of roadway which has been designated by striping, signing, and pavement markings for the exclusive use of bicyclists.

Path – A facility that is physically separated from motorized vehicle traffic by a parkway, open space, or barrier and is either within the road right-of-way or within an independent right-of-way. Paths have hard surfaces, such as concrete or asphalt.

Trail – Similar to a path, except a trail has a soft and/or natural surface, such as compacted soil or small-size gravel.

Bike Route – A segment or system of roadways signed for the shared use of automobiles and bicycles without striping or pavement markings.

Sidewalk – The portion of a roadway designated for preferential use by pedestrians and for the allowable use by bicyclists. Bicycles are prohibited from sidewalks within the downtown area.

The proposed Bicycle Facilities Plan encompasses 142 miles of lanes, paths, trails and routes in addition to existing bike paths. As can be seen in Figure 3, the vast majority of proposed new facilities are bike routes. Bike paths account for the next highest portion of proposed facilities (and the highest percentage of off-road facilities), followed by bike trails and bike lanes.

The proposed Bicycle Facilities Plan represents the bicycle network associated with buildout of the region's Future Land Use Plan. In other words, this plan will likely be fully functional after the year 2030 on which the LRTP is based. Rather than financially constrain the bicycle network to available resources, the entire network is proposed to be included in the LRTP as illustrative projects. Since there is not a dedicated funding program for bicycle facilities, they tend to be implemented as general funds or specific grants become available or as part of roadway improvements. However, the high (short-term) and medium priority projects identified below are expected to be implemented in the timeframe of the 2030 LRTP. Low priority (long-term) projects may take longer to implement.

Figure 2
Proposed Bicycle Facilities Plan

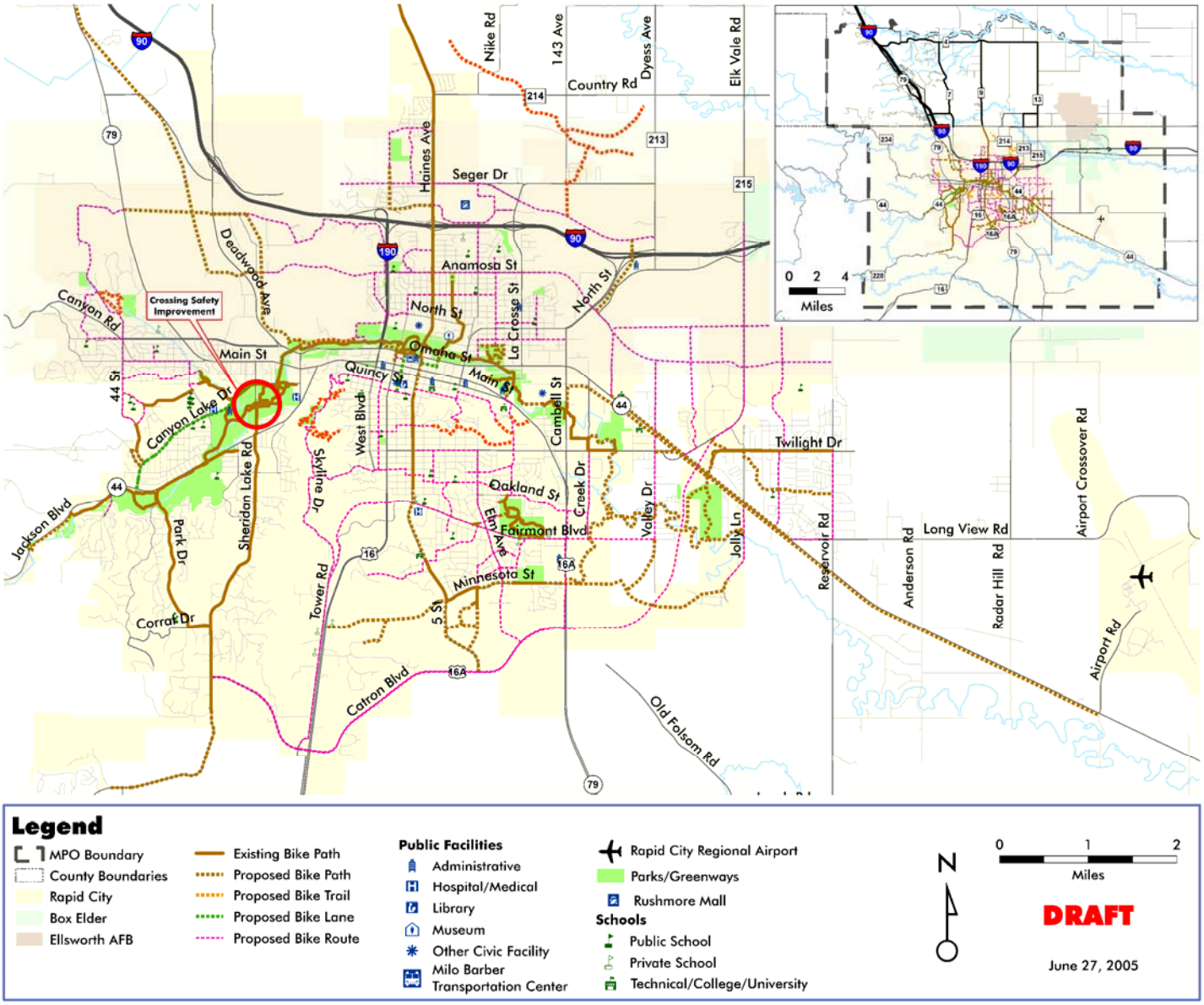
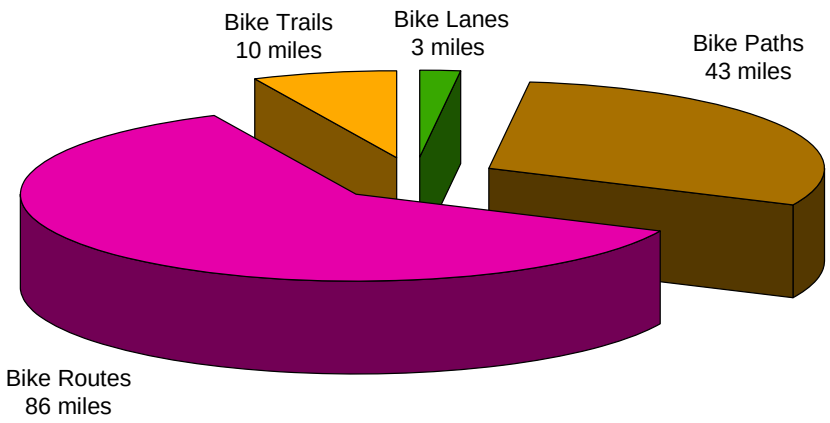
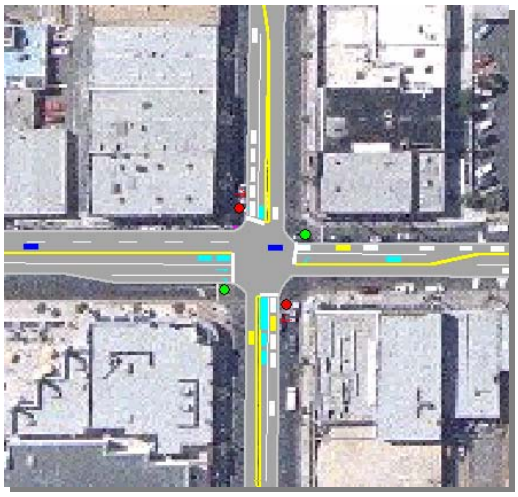


Figure 3
Proposed Bicycle Facility Types





Using the travel demand model, trips of five miles or less (a reasonable and typical trip made by bicycle) were analyzed on roads within the MPO. Bicycle Facilities Plan segments which could provide an alternate means of transportation for those trips were identified. The bicycle facilities were then prioritized based on the expected number of these "short trips." Short trips for both the year 2000 and 2030 were examined, with areas of high numbers of short trips in the year 2000 receiving the highest priority. Critical "missing links," or gaps, in the current system were also given a higher priority.

PRIORITIES FOR THE RECOMMENDED BICYCLE FACILITIES PLAN

Based on the analysis described above, each segment of the proposed Bicycle Facilities Plan has been reviewed and prioritized for implementation. High priority projects include those recommended for implementation in the first ten years (2005 to 2015) of the LRTP. Medium priority projects are those recommended in the next ten years, approximately from 2015 to 2025. Long-term vision priority projects are recommended for long-term implementation, or after approximately 2025. Figure 4 identifies the recommended priorities for the proposed Bicycle Facilities Plan. Bike routes are not prioritized.

Figure 4
Recommended Bicycle Network Priorities