

Analysis of Future Land Use Plans



The following sections provide a brief analysis of potential conflicts between the Rapid City Regional Airport Land Use Compatibility Plan Zones (RCRA zones) and the Rapid City Area Metropolitan Planning Organization Future Land Use Plan Maps (MPO maps).

Airport Neighborhood Future Land Use Plan

Zone 2 – Inner Approach/Departure Zone

RCRA Zone 2 extends beyond the ends of Runway 13-31. The location of Zone 2 is shown on the attached exhibits.

- ▶ Northwest Zone 2
 - ▶ No apparent conflict with designated land uses in the MPO Airport Neighborhood Future Land Use Plan. The MPO plan limits residential development to one dwelling unit per 10 acres, consistent with Zone 2 recommendations.
- ▶ Southeast Zone 2
 - ▶ No conflict with lands designated as RR (Rural Reserve). Rural Reserve limits residential density to one dwelling unit per 40 acres.
 - ▶ In addition to Rural Reserve, there is land designated as LI (Light Industrial) within Zone 2. There is some concern that Light Industrial use might result in population densities that exceed Zone 2 recommendations (average of 25 persons per gross acre, and a maximum of 50 persons per single acre). However, taking into consideration information listed in Figure 10 of the Airport Neighborhood Future Land Use Plan, it appears population density restrictions would not be exceeded. Figure 10 lists an anticipated density of 2,500 square feet of floor area per acre. If we assume one person per 100 square feet to be safe (office use is typically 1 person/100 sq. feet and manufacturing is typically 1 person/200 sq. feet) this equates to 25 people per acre in areas designated Light Industrial.

Zone 3 – Circling Traffic Pattern Zone

RCRA Zone 3 encompasses many different types of MPO land use designations. The location of Zone 3 is shown on the attached exhibits. There was some concern that land designated as General Commercial, Business Park, Office Commercial, and Light Industrial may conflict with recommendations set forth in RCRA Zone 3. It appears that population density recommendations for Zone 3 (average of 150 persons per gross acre, and a maximum of 450 persons per single acre) will not be exceeded by these land use designations.

Light Industrial density was discussed above and its anticipated population density would not exceed recommendations for Zone 3. Anticipated density for General Commercial, Business Park, and Office Commercial is listed in Figure 5 of the Airport Neighborhood Future Land Use Plan. The anticipated densities are as follows:

- ▶ Business Park: 3,200 sf/ac
- ▶ Office Commercial: 3,000 sf/ac
- ▶ General Commercial: 9,800 sf/ac

Assuming one person per 100 square feet, the population densities are as follows:

- ▶ Business Park: 32 people/ac
- ▶ Office Commercial: 30 people/ac
- ▶ General Commercial: 98 people/ac

The General Commercial w/ Planned Commercial Development area on the north side of Highway 44 allows maximum density of 13,613 sf/ac. Although the most common commercial uses would not exceed the recommended population densities, review of any Planned Commercial Development in this area should restrict uses that could exceed the recommended maximum population densities, e.g. large theaters, convention centers, etc.

SE Connector Future Land Use Plan

Zone 2 – Inner Approach/Departure Zone

Land designated in the SE Connector Future Land Use Plan as “Planned Residential Development 1 du/3ac” conflicts with the Zone 2 recommended maximum of one dwelling unit per 10 acres. If possible, it is recommended that SE Connector residential development areas within Zone 2 be limited to a density of one dwelling unit per 10 acres. Note that this area is in the FEMA Floodplain and will likely be in the Rapid Creek Floodway when the floodway is defined east of Bradsky Road. That determination could further restrict development within this portion of Zone 2.

Zone 3 – Circling Traffic Pattern Zone

RCRA Zone 3 encompasses many different types of MPO land use designations. There is no apparent conflict with Zone 3 recommendations. There are areas within Zone 3 designated as Neighborhood Commercial with anticipated densities of 4,000 sf/ac. Assuming one person per 100 square feet, the anticipated population densities in these areas would be 40 people per acre. This number is within the population density recommendations for Zone 3 (average of 150 persons per gross acre, and a maximum of 450 persons per single acre).

Conclusion

There is no apparent conflict between RCRA zones and the Airport Neighborhood Future Land Use Plan. Aside from the conflict between RCRA Zone 2 and land designated “Planned Residential Development 1 du/3ac” there is no apparent conflict between RCRA zones and the SE Connector Future Land Use Plan.