CHAPTER 9
RURAL SRA ROUTES

9.1 TRANSIT

Techniques associated with mass transit which may be applicable in certain rural situations are described below. All measures are supportive of bus and/or rail service and are consistent with the objectives of the SRA system.

9.1.1 Ridesharing

Carpools and vanpools are the most common forms of ridesharing. Carpools are frequently privately organized, but employers sometimes sponsor vanpools. In Northeastern Illinois, CATS and the Regional Transportation Authority assist with the organization and start-up costs of vanpools. CATS also provides assistance in identifying carpool participants, on request. Marketing and financial support for van and carpooling programs are strategies which complement the SRA program in general and, in rural areas where commutes are particularly long, can have a positive effect on vehicle occupancies.

The "jughandle" design of the frontage roads at rural SRA intersections, as shown on *Figure 6.2*, provides locations for park and ride facilities.

9.1.2 Improved Transit Station Accessibility

Improved transit station accessibility is discussed in detail in Section 8.1.7 in Chapter 8.

9.1.3 Transit Signage

Section 7.1.9 in Chapter 7.

9.2 ROADWAY OPERATIONS

9.2.1 Intersections

Intersections on rural SRA routes with more than four approaches often cause many operational problems. Excess approaches can be removed by closing the approach, by conversion to one-way traffic movement away from the intersection, or using extremely short signal timings to reduce the desirability of the approach. It is recommended that intersections with more than four approaches be reconfigured to remove the excess approaches away from the intersection.

9.2.2 Intersection Lighting

Rural SRA routes will not likely have continuous lighting. It is recommended, however, that all major intersections along rural SRA routes have appropriate intersection lighting.

9.2.3 Overhead Signing

All rural SRA-to-SRA route intersections should have advance overhead signing with route numbers and/or road names and, where appropriate, regional destinations indicated.

9.2.4 Delineators for Rural SRAs

Along rural SRA routes, delineators (light reflective devices) should be investigated for use where continuous lighting is not provided. In addition to aiding motorists at night, delineators are beneficial under inclement weather conditions such as fog, rain, and snow. Delineators should be installed in accordance with IDOT Standard 2149 of the IDOT Highway Standards Manual.

9.2.5 Eliminate Minor Road Access

The high speeds of vehicles on rural SRA routes can make intersections with minor roads potentially hazardous. Signalization of these intersections may improve safety but is not recommended because of the resultant increase in delays. The most desirable method of improving safety at these locations, while having the least effect on arterial traffic, is to eliminate the access to the minor road from the SRA.

Access to the SRA could be eliminated by either terminating the minor road or rerouting it to access the SRA at another location. Travel times will probably increase for motorists utilizing the minor road when this technique is implemented.

A detailed study on the feasibility of access removal must be conducted prior to implementation. Minor road traffic volumes, emergency vehicle response times, and the effects of displaced vehicles on other facilities should be included in this evaluation.

9.2.6 Deceleration Lanes

Due to the relatively high speed limits that will generally be posted on rural SRA routes, deceleration lanes for right turns should be provided along those segments where over 20 percent of vehicles are freight. An example of this would be the delivery and shipping entrance to a factory or warehouse facility. Deceleration lanes should also be provided when sight distance is limited and potential for rear-end collision is high such as an entrance located immediately past the crest of a hill.

In addition to using right turn deceleration lanes at all major intersections with the SRA, left turn deceleration lanes will also be used and would be designed in accordance with IDOT's channelized left turn lane design.

9.3 ROADWAY DESIGN FEATURES

9.3.1 Interchanges

It is recommended that right-of-way be protected at all intersecting rural SRA routes for eventual interchange construction as a post-2010 improvement. The single point diamond interchange is the desirable interchange type for rural SRA routes in almost all cases.

At rural SRA to rural SRA interchanges, the route with the highest projected traffic volume should have the through priority movement at the interchange.

If two intersecting rural SRA routes exhibit unusually high projected traffic volumes, a cloverleaf interchange type may be considered. The projected level of service on both routes should be D or worse with conventional improvements before the option is evaluated.

A final condition that warrants consideration of an interchange in the rural area is to replace an intersection which has an acute angle and exhibits a high incidence of accidents.

9.3.2 State and County Boundaries

Five rural SRA routes terminate at the Illinois/Wisconsin state line and two rural SRA routes terminate at the Illinois/Indiana state line. Several other SRA routes terminate at the McHenry/Boone, Kane/DeKalb, Kane/Kendall and Will/Kankakee county boundaries. It is quite possible that the SRA planning process will recommend roadway cross-sectional changes at these state and county boundaries. Features such as number of lanes and posted speed may change. Roadway tapers and transitions should be provided in those areas of roadway cross-section change to provide safety for motorists.

9.3.3 Route Bypasses

Many rural SRA routes are characterized by long stretches of roadway that connect existing communities. Illinois 31 connecting Richmond and McHenry is a typical example. A rural SRA route that passes through a commercial area of community may better serve the concept of regional mobility if it bypasses the narrow right-of-way, minimal setbacks, frequent access points and traffic signals typical of these areas.

The two options for route bypasses around rural communities are to designate an existing roadway facility or to construct a new roadway facility. It is recommended that route bypasses be assigned to existing roadway facilities where possible rather than constructing new roadway facilities. If an existing roadway facility is utilized as a route bypass, it should be reasonably close to the original SRA facility and clearly signed. Any route bypass should also have as a minimum partial access control. Where full access can be obtained without major problems, the route bypass should be designed accordingly.

If new construction is recommended, the bypass design should follow the roadway design criteria in *Table 6.2*. In new corridors, property owners may be willing to dedicate planned right-of-way if the alignment conforms to development plans for the property. There is a mutually beneficial relationship between property value and roadway access. Land along new corridors is significantly more valuable than land on less well travelled streets. The environmental for negotiating such agreements is improved when the corridor is sited along ownership boundaries or owner-designated access routes. It is recommended such agreements be explored prior to final alignment determination.

9.4 ACCESS AND RIGHT-OF-WAY

9.4.1 Access Management

Access management in rural areas is partly a matter of good planning for future development. Irregularly spaced driveways are particularly dangerous on these routes, because speed limits are higher and turning movements unexpected. Specific techniques for access management are described in Chapters 7 and 8.

9.4.2 Right-of-Way Protection

Techniques for right-of-way preservation are described in Chapters 7 and 8.

9.5 FREIGHT

The uninterrupted flow of traffic on rural SRA routes makes them highly desirable for freight vehicles and their regional trips.

9.5.1 Structural Vertical Clearance Improvements

Existing structures on rural SRA routes should have a minimum vertical clearance of 14 feet - 6 inches. If an existing structure does not meet this requirement, the primary method to develop the desired vertical clearance is to lower the roadway profile. New structures should be constructed with 16 feet - 3 inches vertical clearance.

9.5.2 Turning Radius Improvements

Where separate right turn lanes are constructed at rural SRA intersections, the turning radius should be designed to accommodate a WB-60 design vehicle wholly within the right lanes of the intersecting routes. The availability of right-of-way and absence of heavy pedestrian volumes should allow implementation of this turning radius.

9.5.3 Alternate Freight Routes

Alternate freight routes generally are not recommended for the rural SRA routes. However, existing communities located in rural areas may wish to have alternate freight routes designated to divert freight vehicles away from the community core area. Alternate freight routes can be considered when adequate parallel roadway facilities exist. The parallel roadway facilities should not be a major deviation from the rural SRA route and must be clearly marked.

9.6 BICYCLES AND PEDESTRIANS

More options are available on rural SRA routes for handling pedestrian and bicycle access. For example, while right-of-way availability is still a critical issue, dense development immediately adjacent to the roadway is not as common an occurrence. Provisions for bicycles and pedestrians may be accommodated within the SRA right-of-way itself. In rural situations alternative parallel routes may not always be available. The choice of how to provide access within the SRA corridor should be based on each unique situation. Under all situations, the goal is to have a continuous system of bicycles and pedestrian facilities.

As in the cases of the urban and suburban SRA routes, access across major obstacles or barriers will be handled by the SRA if alternative access is not feasible.