

Section 10

Circulation & Access Plan

10-1

Section 10: Circulation & Access Plan

Circulation and Access Plans illustrating the multimodal circulation and access routes, commuter parking locations, and transit facilities for the Park-and-Ride (Short-Term) plan and the Metra station (Long-Term) plan are presented on the following pages.

Transportation Review of Preferred Plan

In order to assist the Village of Montgomery in identifying transportation needs associated with the preferred transit oriented development plan, Metro Transportation Group reviewed the key transportation and parking components established for an initial Park-and-Ride facility and ultimately a future Metra commuter rail station.

The transportation component of the transit oriented development plan focuses on a multimodal approach that integrates the access, circulation, and mobility needs for all modes of transportation (i.e., auto, bus, pedestrian, bicycle) and type of user (i.e., resident, commuter, employee, shopper). A multimodal approach fosters sustainable transportation that will effectively serve the transit facility, the downtown residents and businesses, and the surrounding community. Consistent with “complete street” design objectives, the surrounding street system should be designed to safely accommodate pedestrians, bicyclists, motorists, and various public transportation options.

Park-and-Ride Plan

The following highlights the key transportation components of the Park-and-Ride facility plan and presents an overall facility area circulation plan.

Park-and-Ride Facility Location

As shown on the map on page 10-13, the location of the Park-and-Ride facility is planned within the block bounded by Main Street on the east, Clinton Street on the south, Railroad Street on the west, and Mill Street on the north. This site is located within the downtown area and is in close proximity to parcels that may accommodate a potential future Metra station. Thus, this Park-and-Ride facility may remain as commuter parking serving Metra riders in downtown Montgomery or be converted into transit oriented development.

It should be noted that an opportunity to establish Park-and-Ride service more immediately is possible, prior to the acquisition of land and development of a formal Park-and-Ride facility. The Village may enter into an operational agreement with Pace and work out a lease agreement with a property owner that has excess daytime parking (i.e., vacant site, church, retail development, etc.) to initiate service until the planned Park-and-Ride lot is developed. This initial service is very flexible and provides the opportunity to initiate and promote the transit service to the community in the more immediate future.



The potential Park-and-Ride facility for Montgomery would have amenities such as a bus pick-up/drop-off area, bus shelter, and multimodal access, which are present at the existing facility in Bolingbrook (above).

Parking

Based on discussions with Pace Bus, a Park-and-Ride facility in Montgomery should initially target approximately 125 to 150 parking spaces. The Park-and-Ride facility plan includes a total of 172 of -street parking spaces. The primary function of these spaces is to accommodate parking for riders that will ride Metra, via a Pace route, and board/alight at the Aurora Transportation Center. The spaces may also serve as a centralized meeting point within the community for carpool groups. In addition to serving commuter needs, the parking may also serve community-parking demand during nights and weekends when commuter demand is very low and demand for parking generated by various shops, restaurants, and special events typically peaks.

Based on the number of Montgomery residents that currently ride Metra at the Aurora Transportation Center, according to Metra’s 2006 Origin-Destination Survey, and the utilization of the Park-and-Ride lot in Oswego, the 172 of -street parking spaces should be more than adequate to satisfy the anticipated demand.

Bus Pick-Up/Drop-Of Area

The bus pick-up/drop-of is shown on the map on page 10-13. In order to maximize the efficiency of the parking lot given the available space, minimize bus turning maneuvers and time at the facility, and to limit the conflicts between auto, bus, and pedestrian traffic, buses serving the Park-and-Ride facility will pick-up/drop-of passenger at the south curb of a dedicated bus lane generally along the current Clinton Street alignment (on the north side of the commuter lot). This on-street bus stop allows buses to easily access the pick-up/drop-of area without driving through a parking lot and mixing or contending with autos to enter and exit the lot.

In addition to using the general alignment of Clinton Street to establish a bus pick-up/drop-of zone, the plan also incorporates the conversion of this roadway segment between Main Street and Railroad Street as a bus-only street. The conversion to a bus-only street further accomplishes the goal of segregating the bus traffic and passenger boarding and alighting from the auto traffic. This roadway segment of Clinton Street currently experiences very little traffic, which may easily divert to Mill Street.

Bus Circulation

Since the buses will operate between the Park-and-Ride lot and the Aurora Transportation Center, the planned bus route is relatively direct. From the Aurora Transportation Center, buses will travel south on IL Route 25 and cross the Fox River at Mill Street, proceed west to Railroad Street, and circulate counter-clockwise around the block along Clinton Street and Main Street. After picking up or dropping of riders at the Park-and-Ride facility, buses will continue east along Mill Street, across the Fox River, and north along IL Route 25 to the Aurora Transportation Center.

Multimodal Access

Although the main purpose of the short-term plan is to increase access to commuter rail service by developing a Park-and-Ride facility, one overall objective of the plan is to incorporate all modes of transportation. Residents in nearby neighborhoods or potential redevelopments in the downtown area should have comfortable and direct access to the facility. A majority of the downtown and adjacent residential properties are within a ¼-mile of the planned Park-and-Ride facility, resulting in an approximately 5 to 7-minute walk.

Consideration should also be made to improve the pedestrian crossings at adjacent intersections. Potential improvements may include installation of differentiating pavement materials or markings at crosswalks to better delineate pedestrian crossing zones and constructing curb extensions at intersection corners to increase visibility of pedestrians waiting to cross the street and reduce the actual crosswalk length.

Any pedestrian facilities, whether they are within the property or along the surrounding streets, should incorporate improved streetscape and urban design features to enhance the character and feel of the pedestrian zone. Many streetscape features, such as trees, landscape planters, benches, lights, and bike racks, can also serve as a buffer between pedestrians and auto traffic. A more comfortable, attractive, and safe pedestrian area will help to encourage walking as an alternative mode of transportation and contribute to the character and feel of the neighborhood.

The “park” in Park-and-Ride should not be limited to only vehicles. Ample bicycle parking should be provided to also allow commuters to ride their bicycles to the Park-and-Ride facility, safely and securely lock their bicycles, and ride the bus to the Aurora Transportation Center. Additional amenities to consider include lockers to store helmets and other gear, and weather-protected bike rack areas, to promote uses of bicycles as a commuting option by enhancing the experience for bicyclists.

Metra Station Plan

The following summarizes the key transportation components of the Metra station plan over the long-term, as it grows from the short-term plan of a Park-and-Ride facility, and a modified overall circulation and access plan.

Station Location

As shown on the map on page 10-15, the design for accommodating a long-term plan of constructing a Metra station in Montgomery includes the location of primary commuter waiting facilities for the inbound (northbound) platform on the east side of the mainline BNSF tracks at Madison Street. Waiting facilities for the outbound (southbound) platforms are to be located along the west side of the mainline BNSF tracks and would be accessible from the east via a pedestrian tunnel. This tunnel could be extended to the west side



Source: Hitchcock Design Group

Varied paving materials for a crosswalk can help differentiate it from the road for both pedestrians and motorists. For example, this crosswalk on River Street near Village Hall is marked with colored pavers.



Source: College of DuPage, Panoramia.com

Elements such as benches, trash receptacles, and sidewalk space enhance the character of the pedestrian zone of a bus shelter area as well as create a safe environment for people waiting for the bus.



Source: Lorton at Flickr.com

A weather-protected bicycle shelter provides overhead cover for bicycles, providing peace of mind to bike-riding Metra riders that their bicycles are protected from rain or other precipitation.



Source: Europe et la Carte Blog
 Elements such as murals, wall decorations, architectural accents, and quality lighting can enhance the walking experience within a pedestrian tunnel.

of the BNSF tracks pending the availability of funding in the future. The location of a potential additional (third) mainline BNSF track is unknown at this time until further studies are completed. This location is easily walkable from downtown and the nearby residential neighborhoods.

Station Parking

Metra has indicated that new commuter rail stations are recommended to provide approximately 1,250 commuter parking spaces to accommodate potential full build-out. Pending further study, ridership projections would determine the need for commuter parking and potential phasing. Given the ridership and demand for parking at the existing western stations along the Metra/BNSF Line, a new Metra station may be a popular attraction for some riders who have difficulty finding parking at existing stations.

The Metra station plan provides a total of 1,250 of -street parking spaces to serve commuter-parking demand. The parking lots are located along the east side of the BNSF Railway, both north and south of the station. A majority of the parking is provided on the north side of the station. Parking lot access is provided via Main Street and Webster Street. The Main Street access locations generally blend into the existing traditional grid street network at Mill Street and Madison Street, as well as driveways north of downtown. In order to minimize turning conflicts and eastbound queuing issues along Webster Street in close proximity to the at-grade railroad crossing, access to commuter parking at what is currently Railroad Street will be restricted to right-in/right-out movements. Prohibiting eastbound left-turns from Webster Street to the commuter parking lots will minimize the potential for vehicles to queue to the at-grade railroad crossing.

Similar to how the Park-and-Ride parking lot may be utilized as a public lot on evenings and weekends when commuter parking demand is low, commuter parking will also be available to accommodate parking demand generated by downtown businesses, shops, restaurants, and special events.

Access To/From Platforms

As shown on page 10-15, the design for accommodating a long-term plan of constructing a Metra station in Montgomery includes the inbound (northbound) platform on the east side of the mainline BNSF tracks. The outbound (southbound) platforms are to be located along the west side of the mainline BNSF tracks and would be accessible from the east via a pedestrian tunnel. This tunnel could be extended to the west side of the BNSF tracks pending the availability of funding in the future. The location of a potential additional (third) mainline BNSF track is unknown at this time until further studies are completed.

In an effort to maximize safety, railroads generally prohibit additional at-grade railroad crossings without the closure of one or more at-grade railroad crossings. Thus, a grade-separated bridge or tunnel will be necessary to provide safe access between the station platforms across the BNSF Railway when riders are either boarding or alighting.

Due to the height required for a pedestrian bridge to provide adequate clearance for trains and span the multiple tracks (approximate 40-foot clearance), the level-of-comfort for passengers crossing a pedestrian bridge of the required height, and the extensive cost, the plan includes constructing a pedestrian tunnel underneath the BNSF Railway between the inbound and outbound platforms. The pedestrian tunnel ramp system must adhere to ADA requirements associated with acceptable ramp slopes, among other design variables. Although ADA requirements allow ramp slopes up to 8 percent, the ramps leading to and from the pedestrian tunnel are recommended to maintain a 5 percent slope to ease use of the ramps and tunnel.

Bus Pick-Up/Drop-Of Area

Similar to the bus pick-up/drop-of area planned for the Park-and-Ride facility, the Metra station plan includes maintaining the same general bus route to and through the station area. With the station planned where Madison Street meets the BNSF Railway, the planned bus pick-up/drop-of area is a short walk away (approximately 650 feet) from the station and even closer to the southern portion of the inbound (northbound) platform.

Kiss-and-Ride Area

The Metra station plan includes modifying Madison Street west of Main Street to provide an access loop in front of the station with driveways leading to commuter parking along the east side of the BNSF Railway north and south of Madison Street. This access loop west of Main Street will serve as a kiss-and-ride zone where passengers can get picked up/dropped of to ride the train. If demand for kiss-and-ride exceeds the available parking within the access loop and blocks access to the adjacent parking lots, parking spaces within the adjacent parking lot immediately north of the station could be designated as short-term parking during peak hours to accommodate additional pick-up activity. These spaces would be available at non-peak hours midday and weekends for train passengers.

Multimodal Access

As discussed with the Park-and-Ride plan, a potential Metra station must accommodate all users and modes of transportation. Additional bicycle parking, with appropriate amenities to encourage bike use, should be provided at the station. As previously discussed, a pedestrian tunnel is planned to provide grade-separated access across the BNSF Railway. A comfortable and well-lit pedestrian path should be constructed along the east side of the BNSF Railway, but outside of the BNSF right-of-way, to link the station and inbound platform to the commuter parking lots. Other improvements, such as improved crosswalks and curb extensions, should be provided to provide safe and convenient pedestrian routes between the station and downtown businesses and homes.

Closure of Main Street South of Webster Street

The long-term plan includes redevelopment along the south side of Webster Street between Railroad Street and River Street. Due to the relatively short blocks and the impact they have on development potential, an urban design



In addition to providing ease of access for motorists, the angled parking format can typically accommodate more parking spaces than the parallel parking format.

opportunity, and the pedestrian-vehicle conflicts, the plan includes dosing the south approach of Main Street at Webster Street to auto traffic. Auto traffic can easily divert to River Street (east) and Railroad Street (west).

The street closure provides flexibility in the development concept for properties along the south side of Webster Street, eliminates an existing pedestrian-vehicle conflict point, and due to the relatively low traffic volumes turning to/from the south leg of Main Street at Webster Street, would have a minimal impact on traffic conditions. This street closure may also limit potential cut-through traffic for westbound vehicles on Webster Street traveling through the adjacent neighborhood to bypass queues resulting from the railroad crossing gates.

Pedestrians would continue to maintain access along the Main Street alignment between Webster Street and the neighborhood to the south. This closure will help to create a continuous pedestrian route along the south side of Webster Street without auto conflicts. Well-marked mid-block pedestrian crosswalks on Webster Street and appropriate regulatory signs should be installed to maintain the north-south pedestrian route along Main Street.

On-Street Parking

The long-term plan includes options to modify current on-street parking configurations. Depending on the desired pedestrian zone width (i.e., sidewalk, streetscape features, etc.) and the ability to acquire additional Right-Of-Way, on-street parking can be converted to a combination of parallel parking on one side and angle parking on the other side or angle parking on both sides of the street. The existing parallel parking configuration maintains 174 public parking spaces. By converting one side of the streets to angle parking, the on-street parking supply may increase up to 350 public parking spaces. A full conversion of on-street parking to angle parking on both sides of the downtown streets would yield up to 495 spaces.

The existing on-street parking within the downtown area is generally underutilized. However, availability of public on-street parking can be used to further accommodate parking demand generated by existing businesses and new commercial retail and office redevelopment in the downtown. Converting portions of the on-street parking to angled spaces would help in minimizing the number of of -street spaces needed and will result in more efficient and productive use of available property downtown.

The redevelopment opportunities included in the plan consist of residential apartments and townhomes, commercial retail, and office uses. In general, of -street parking requirements for transit oriented development districts are lower than for those not conveniently located to transit and mixed-use business districts. For residential uses included in this plan, of -street parking for apartments is provided at a ratio of 1.5 spaces per unit. This is appropriate for apartments in a suburban downtown and transit oriented development area. The townhomes included in the plan provide 2.0 spaces per unit.

With respect to commercial retail and office uses in a transit oriented and downtown area, parking requirements are reduced from typical suburban standards, as they are located near transit and within convenient walking distance of residential neighborhoods and other businesses. Thus, a parking ratio of 3.0 spaces per 1,000 square feet should be adequate to serve retail and office uses in the study area.

With the combination of non-commuter on- and of -street parking and the redevelopment opportunities included in the plan, the resulting parking ratio for commercial retail and office space is approximately 4.7 spaces per 1,000 square feet with the current parallel parking configuration. The parking ratio increases to 5.2 spaces per 1,000 square feet with one side of the streets converted to angle parking and 6.0 spaces per 1,000 square feet with both sides converted. Thus, the downtown parking included in the plan is more than adequate to serve the needs of downtown businesses.

Review of Future Traffic Conditions

The following section summarizes a planning-level review of the future traffic conditions within the study area. The goal of this planning-level review is to establish general transportation guidelines and identify potential improvements and recommendations that may be needed to accommodate the additional traffic within the study area associated with the new transit facilities and redevelopment presented in the two plans.

Trip Generation

The amount of traffic generated by development depends on the type and density of land use being proposed. Based on the land uses and densities included in the Park-and-Ride (Short-Term) and Metra Station (Long-Term) planning scenarios, projections for the peak hour traffic generation were projected.

For commercial and residential uses, Metro referenced data in the Institute of Transportation Engineers publication entitled *Trip Generation*, 8th Edition. Traffic generated by commuter parking either for a park-and-ride facility or a commuter rail station, was based on the number of commuter spaces and an estimated percentage derived from the current portion of morning and evening Metra riders boarding and alighting during the actual morning and evening peak hour.

Transit oriented development promotes use of public transportation and walking while creating a synergy between multiple land uses. The density and close proximity of the residential uses to the transit station attracts residents who walk to utilize Metra service, via a rail station or Park-and-Ride service. One objective of commercial businesses in the area is to capture customers from the transit riders who daily board buses and trains at the station. Thus, it is reasonable to expect some discount in the trip generation estimates, which are typically based on land uses in an auto-oriented context.

Within the downtown area surrounding the transit facilities, trip generation estimates were reduced to reflect the traffic characteristics of transit oriented and mixed-use development based on Metro's past experience with similar developments. Residential trip generation was reduced by five percent (5%) to account for nearby downtown residents using Metra and walking to/from nearby restaurants, shops, and other commercial uses. Commercial trip generation was reduced by 10% to account for capture from Metra riders as well as residents walking from new residential units and nearby neighborhoods.

Trip generation for commuter parking was reduced by 5% to account for riders living in the surrounding area and walking to the station.

The projected traffic generation associated with both the Park-and-Ride (Short-Term) and Metra Station (Long-Term) scenarios is presented in the table in Figure 10-1.

Figure 10-1
Trip Generation: Park-and-Ride & Metra Station Scenarios

Land Use	Unit	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
<i>Park-and-Ride Plan (Short-Term)</i>							
Park-and-Ride Lot ¹	172 spaces	105	10	115	5	50	55
Commercial/Retail ²	21,600 sf	-	-	-	30	30	60
	-10% Reduction	-	-	-	-	-	-
Apartments	28 units	5	10	15	10	5	15
	-5% Reduction	-	-	-	-	-	-
Sub Total		110	20	130	45	85	130
<i>Metra Station Plan (Long-Term)</i>							
Metra Commuter Lots	1,420 spaces	850	85	935	45	425	470
Apartments	254 units	25	105	130	100	55	155
	-5% Reduction	-	-5	-5	-5	-	-5
Townhomes	42 units	5	15	20	15	5	20
	-5% Reduction	-	-	-	-	-	-
Commercial/Retail ²	84,600 sf	10	15	25	110	120	230
	-10% Reduction	-	-	-	-10	-10	-20
Office	85,600 sf	120	15	135	20	110	130
	-5% Reduction	-5	-	-5	-	-5	-5
Sub Total		1,005	230	1,235	275	700	975

¹ - Assumes 60% (929 peak hour/1,585 morning boardings at Aurora in 2006) of spaces inbound in the morning and 30% (373 peak hour/1,267 evening alightings at Aurora in 2006) of spaces outbound in the evening with 10% kiss-and-ride.

² - ITE Trip Generation does not provide trip rate for specialty retail uses, as they are not typically open during the AM peak hour. Assume 10% of PM peak hour traffic to account for minor levels of trip activity.

Planning-Level Traffic Review

Consistent with a planning-level review, specific traffic engineering studies and capacity analyses were not conducted. As development proposals for projects within the study area are submitted, traffic impact studies should be conducted to determine specific transportation improvements, reflecting the development plans at that time.

The Park-and-Ride plan is not expected to generate a significant volume of traffic during the peak hour. Based on the good levels of service currently experienced at key intersections in the study area and the projected traffic volumes summarized above, the additional peak hour traffic associated with the Park-and-Ride plan should be easily distributed and handled by the intersections in the downtown area without the need for capacity improvements.

As presented above, the Metra Station Plan could potentially generate a significant volume of peak hour traffic with the downtown area. It should be noted that a significant portion of the traffic is associated with Metra commuters and the trip generation estimates reflect full utilization of the 1,250 parking spaces. The at-grade railroad crossing on Webster Street does limit the commuter parking accessibility to/from IL Route 31. However, a great majority of the commuter parking is planned north of the station along Main Street. It is expected that a portion of traffic using the northern commuter lot will access the study area to/from the north along Main Street where additional options are available to cross the BNSF Railway at Rathbone Avenue or the River at Ashland Avenue.

The ultimate distribution of commuter traffic through the downtown area will depend on, among other factors, Metra ridership and utilization of the commuter parking lots, where the commuters live, gate closures at the Webster Street crossing, and levels of congestion at nearby intersections.

Based on the access and circulation options provided by the traditional grid street network and the distribution of the planned commercial retail and office space along Webster Street, River Street, and Mill Street, the associated traffic is not expected to significantly impact the study area intersections.

However, potential improvements to mitigate traffic issues may include:

- Signal timing adjustments at IL Route 25/Mill Street to provide additional time to/from west
- Signal timing adjustments at IL Route 31/Webster Street to provide additional time to/from the east
- Installation of a traffic signal at Mill Street/River Street
- Installation of a traffic signal at Webster Street/Main Street
- Coordination with the Illinois Commerce Commission (ICC) regarding coordination of IL Route 31/Webster Street signal with railroad crossing signal

Traffic conditions should be monitored to identify specific issues and evaluate alternative improvement measures as the plan implementation progresses.

In addition to potential roadway and intersection improvements, the following outlines potential strategies or programs that may further address multi-modal transportation and parking issues within the study area.

□ Wayfinding Directional and Information Signage

There are a variety of destinations located within the downtown study area, including the Fox River and Montgomery Park, the new Village Hall, the Fox River Trail, and various retail/restaurant businesses among others. The Park-and-Ride facility and potential future Metra station area will attract and must provide access for vehicles, pedestrians, bicycles, and Pace bus service. In order to safely and efficiently guide visitors to their destinations, directional signage and information kiosks should be provided at key locations throughout the study area.

Information and directional guide signs should be considered as part of a comprehensive wayfinding plan to designate the use of specific locations and to lead visitors as they access the station area to the various connections and destinations. Comprehensive kiosks, displaying station area and parking maps, Pace Bus routes and schedules, and other information on community events occurring in the area should also be provided. The comprehensive wayfinding plans should maintain a uniform signage design and brand for the downtown.

□ Shared Parking Opportunities

As redevelopment proposals are presented, opportunities to integrate shared parking agreements should be pursued. In addition to commuter parking for the Park-and-Ride and Metra, potential shared parking opportunities available within the downtown area include Village Hall and a number of existing/future commercial properties. While the peak parking demand for Metra commuters is generally on weekdays between approximately 6:00 AM and approximately 5:30 PM, the peak parking demand for retail and restaurant uses occur weekday evenings and weekends. By the time the peak parking demand for the retail and restaurant uses occurs, the peak parking demand generated by Metra commuters is generally over. The complimentary of set periods of peak parking demand present the opportunity to share parking spaces and efficiently use the available land within the study area.

Special events at Village Hall, along riverfront parks, and other locations downtown on evenings and weekends are other examples of instances when the Park-and-Ride lot is utilized.

By applying shared parking strategies, valuable land that might otherwise be used to accommodate peak parking demand separately for

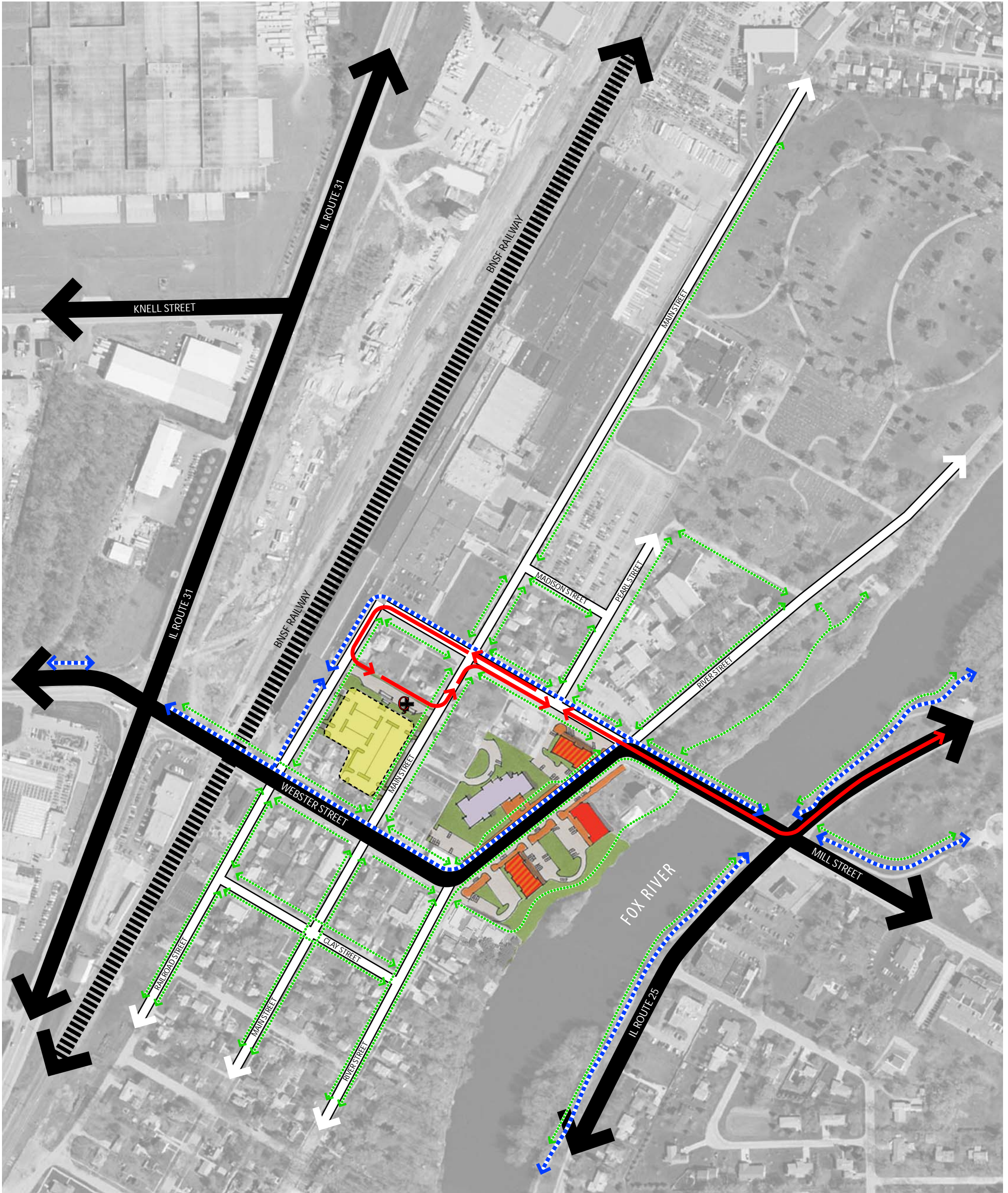
each individual property may be used more efficiently for further development, open space, or other uses. Because peak parking demand characteristics, such as magnitude of peak demand, day of week, and time of day, for a range of land uses can vary, shared parking opportunities should be evaluated on a case-by-case basis depending on the mix and interaction of uses and their respective parking characteristics.

A fee-in-lieu parking contribution program should also be considered to utilize and enhance the plentiful public on-street parking and maximize development efficiency on each site. A developer typically pays a fee, usually equivalent to the cost of constructing parking spaces, into a fund used by the Village to provide needed parking in centralized municipal lots.

□ Employee Shuttle Program

A potential shuttle program should be considered to connect the Metra station to nearby employment centers within the Village, including Caterpillar on IL Route 31 south of US Route 30. A shuttle program, which may be subsidized by various area employers, would provide an important link between the Metra station and places of work that are beyond a 1/4-mile to 1/2-mile walking distance of the station.

Pace currently facilitates a municipal van-pool program of offering vans to the Village to use for \$260 per month and the option to purchase for \$1 after five years. An employee shuttle program enables Metra to be an attractive transportation option for many people who may currently drive to and from work and is an opportunity to increase Metra ridership.



LEGEND

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|--|-------------------|--|------------------------------|--|------------------|--|-----------------------|
| | Primary Roadway | | Station Access & Circulation | | Commuter Parking | | Bus Stop with Shelter |
| | Secondary Roadway | | Pedestrian Route | | Kiss & Ride | | |
| | Pace Bus Route | | Bicycle Route | | | | |

DRAFT - FOR REVIEW PURPOSES ONLY

Circulation and Access Plan (Short-Term Park-and-Ride Facility)

TOD Plan & Park & Ride Location Study | Village of Montgomery, Illinois

Last revised: May 4, 2009



