



VI. Transit Friendly Infrastructure

In order for transit to be successful, transportation investment policies and programs must be paired with land use policies and programs. Land use policies that embrace denser development, a mix of uses, and traditional development maximize access to public transportation, and often incorporate features to encourage transit ridership. Integral to land use policies are design considerations for good pedestrian access. Every transit rider begins and ends their trip as a pedestrian (or bicyclist). The design of paths, sidewalks, and transit stops contribute to a passenger's experience and perception of safety on the transit system. Well-connected sidewalks should be installed so that transit patrons will not be forced to walk in the street while traveling to or from a stop or station. In addition, roadway crossings should be made safer with an appropriate combination of facilities, such as marked crosswalks, crosswalk bump outs, median crossing islands, warning signs, and pedestrian signals. Good pedestrian design should account for the needs of all potential users, including those with physical or mental limitations. When applied appropriately, this design concept known as "universal design" ensures the built environment is usable and can be shared by all people,

IL Route 31 and Randall Road are two arterial roadways in McHenry County in which transit service currently operates and new transit service has been proposed. On Randall Road, sidewalks are lacking throughout most of the corridor, including in the shopping and job centers near Algonquin Commons in the Village of Algonquin. For Illinois Route 31, there are no sidewalks for 1.5 miles between Blake Boulevard and Johnsburg Road north of McHenry; south of Crystal Lake, sidewalks exist in downtown Algonquin but they discontinue for the most part in many other areas. Additionally, safe crossings for bicyclists and pedestrians are vital. Intersections in many locations along IL Route 31 and Randall Road are wide and intimidating to people who are not in a car. High-visibility crosswalks, pedestrian crossing islands, and sufficient street lighting would be valuable additions to help the corridors become more bicycle and pedestrian friendly.

Storefronts along newer arterial corridors are often 600-700 feet set back from the street. Bus routing could divert buses off the road to directly serve storefronts, but too many diversions slow down the transit service and can make the bus a less attractive option for riders. Also, the bus may not be able to detour through the parking lot due to the durability of the pavement, permission from the property owner, or because of physical constraints that preclude it. However, if the bus stays on the main arterial roadway, then the passengers must traverse the parking lot to get to their destination, which is less convenient for customers and adds to their trip. Future development patterns which encourage storefronts brought closer to the sidewalks and parking lots behind the storefront will greatly enhance transit and access along the corridors.

Passenger amenities at bus stops are also very important. Pace currently operates a "flag stop" service. This means that the bus will stop at any intersection where it is safe to do so if someone is requesting the bus to stop, often by waiving at the driver. These flag stops do not have any passenger amenities, such as signs or bus shelters. Pace is beginning to implement a designated stop-only system throughout the metropolitan region. This Plan recommends that there be designated stops with bus route signs throughout the County for fixed bus routes. In addition, bus stops with a significant amount of boardings should have a concrete pad which allows accessible boarding with ease as well as protects riders from muddy waiting conditions and ideally a bus shelter. Pace provides a standardized set of shelter designs. In addition to the shelter, other passenger amenities such as lighting, benches, heating, trash receptacles,



and a display space for a local map with the route displayed, hours of operation, service areas, fares, arrival times for scheduled stops, and advertising purposes may be possible, given local funding. An electronic panel that displays route information and real time next-bus information may also be considered.

To enhance access to transit, the County and local agencies should consider the variety of smaller capital projects that they could implement to support transit riders. Additionally, McHenry County, the municipalities, and Pace should work together on passenger amenities at proposed stops, including installing bus stop signs with a concrete path connecting the sidewalk to the bus stop. Potential capital projects that allow a pedestrian or bicyclist to have a more comfortable experience getting to the transit stop and waiting for the bus and are described in Chapter VII, Transit Access Along Randall Road and Chapter VIII, Access Improvements for Existing Routes.

VII. Transit Access Along Randall Road

In order for the proposed Crystal Lake-Elgin Route via Randall Road to be successful, the condition of Randall Road needs to be converted to a transit friendly environment. The existing conditions and deficiencies of Randall Road are described in this chapter. Transit stop locations are proposed. Infrastructure improvements that would support pedestrian and bicycle access to the proposed transit stops are recommended.

A. Existing Conditions

Randall Road is a primary north-south arterial in southern McHenry County. This roadway extends 3.5 miles from the County Line, through Crystal Lake, Lake in the Hills, and Algonquin. Existing conditions of these 3.5 miles include:

- Four lane undivided highway (some areas with six lanes)
- Lack of sidewalks
- I I intersections
- Major intersection at Randall Road and Algonquin Road
- Designated as a Strategic Regional Arterial (SRA)
- Average Annual Daily Traffic (AADT) counts of 41,000 vehicles/day (Randall Road, from the County Line to Ackman Road- nearly equivalent to the volumes passing thru McHenry County on I-90)

B. Phase I Improvements

In 2007, McHenry County initiated a Phase I study to develop alternatives to improve Randall Road between County Line Road and Ackman Road. The preferred alternative consists of widening and resurfacing Randall Road to a six-lane roadway. Various access drives will be closed or modified along Randall Road to accommodate 2030 traffic volumes and the preferred alternative.

Intersection improvements along the corridor as part of the preferred alternative include:

- Bunker Hill Drive/Huntington Drive – Add turning lanes and pedestrian crosswalk
- Stonegate Road – Covert to right-in/right-out access
- Algonquin Road – Add pedestrian crosswalk
- Acorn Lane/Polaris Drive – Add turning lanes and pedestrian crosswalk
- Miller Road – Add turning lanes and pedestrian crosswalk
- Village Road – Continuous Green T traffic signal and pedestrian crosswalk
- Alexandra Boulevard– Convert to right-in/right-out

Additionally, pedestrian and bicycle improvements were also included in the Preferred Alternative:

- 10-ft. multiuse path along Randall Road
- Potential future pedestrian overpasses:
 - ✓ Bunker Hill Drive – Overpass across Randall Road
 - ✓ Woods Creek – Underpass across Randall Road to connect Ken Carpenter Park and Richard Taylor Soccer Field
 - ✓ Miller Road – Overpass across Randall Road
 - ✓ Angela Lane – Overpass across Randall Road
- At-grade intersection crosswalks as listed above

C. Pedestrian/Bicycle Infrastructure

The Villages of Algonquin, Lake in the Hills, and Crystal Lake all have on and off-street bike routes. In the Village of Algonquin, two trails cross Randall Road – one at County Line Road and one at Huntington Drive. The trail along Algonquin Road terminates on the west side of Randall Road. In Lake in the Hills, trails along Algonquin Road and Miller Road terminate at Randall Road. The trail along Miller Road is particularly important in connecting to many of the parks, the lake, and the Prairie Trail on the east side of Randall Road. Crystal Lake trails all terminate east of Randall Road. This includes trails along Miller and Ackman Roads.

Future improvements include both new pedestrian/bike trails and grade separations proposed by local agencies along with the Randall Road Phase I study north/south and east/west pedestrian and bicycle options. The complete list of proposed pedestrian/bike grade separated crossings across Randall Road by all agencies includes:

- South of Harnish Drive
- South of Bunker Hill Drive / Huntington Drive
- North of Stonegate Road
- North of Algonquin Road
- Woods Creek (north of Polaris Road / Acorn Lane)
- Miller Road
- North of Angela Lane / Alexandra Boulevard
- North of Ackman Road

D. Existing Deficiencies

Due to traffic conditions, roadway width and lack of sidewalks, pedestrian and bicycle access to and across Randall Road is very difficult. These existing conditions will make accessing future transit service along Randall Road challenging. Existing deficiencies along Randall Road are summarized below.

1. Roadway

Randall Road is a major arterial carrying over 40,000 vehicles per day. While currently consisting of four through lanes, it is proposed to be expanded to six through travel lanes. With a center median in many areas, turn lanes (dual turn lanes at many intersections), and 8 to 10 foot shoulders, the right-of-way is at least 150 feet. Further, the typical cross-section contains large, open drainage ditches adjacent to the travel lanes. For a pedestrian, crossing a corridor as wide as 150 (minimum) feet within the duration of a traffic signal cycle would be challenging. Further, with signalized intersections spaced at up to 0.3 to 0.5 miles apart, and no way to cross between intersections, pedestrian access to land uses between signals is long and generally difficult for pedestrians to cross.

2. Land Use and Development Patterns

Land use patterns that are dense, diverse and reflect traditional development patterns are critical to the success of fixed route transit. When people are able to get to transit stops in a direct, safe, efficient manner, they are more inclined to use transit. Much of the Randall Road corridor can be characterized by larger lot development with limited pedestrian features. Larger lot development typically sets the buildings back from the street, and therefore the entrance to the actual store or office is separated from the roadway by a surface parking lot. This results in transit passengers having to traverse a long distance, sometimes with no sidewalks or pedestrian pathways.

3. Pedestrian Network

Sidewalks generally are nonexistent, are discontinuous, and may be deeply setback from the roadway. While the corridor lacks these pedestrian features, there is generally right-of-way alongside Randall Road that could be used to improve these conditions.

E. Transit Stop Criteria for Randall Road

1. Transit Development Guidelines

In order to identify the location of potential bus stops and recommend infrastructure improvements, two resources were referenced: Pace Development Guidelines and IDOT Bureau of Design and Environment Manual (March 2013)(BDE). The Pace Development Guidelines (1999) present design elements necessary for the development of safe and efficient provision of transit service. Specific guidelines are presented for bus turnouts, bus stop spacing and location, and passenger waiting areas. The IDOT BDE Manual includes design guidelines on bus stop locations and bus turnouts.

2. Bus Stop Locations and Design

Bus stop spacing is based on land use and population densities. Typically bus stops are located every 660 feet (standard city block). In areas of more medium employment and population densities, bus stops should be placed about every 1320 feet (1/4 mile). Both Pace and IDOT prefer far-side stops where possible which allows the bus to travel through the traffic signal prior to stopping at a bus stop. Mid-block stops could be considered in locations where far-side stops are not practical. Also, mid-block stops can be considered in conjunction with major traffic generators. Both Pace and IDOT identify a preferred pavement width of 12 feet for bus stops. Since existing shoulder widths on Randall Road vary from about 8 feet to 10 feet, the existing shoulder width does not allow for buses to safely pull over at stops and get completely out of traffic. Further, the weight of a typical Pace bus can range from about 13 to 19 tons. Existing roadway shoulders are not designed to handle heavy vehicles. Pace Guidelines recommend a pavement design to accommodate vehicle loads of 20,000 pounds per axle. Therefore, shoulder improvements would be required along Randall Road.

Paved waiting areas should extend 25 feet back from the corner tangent point, being completely between the curb and sidewalk. Standard shelter size is 13.5 feet by 6.5 feet and should be set back 5 feet from the street. An on-street far-side bus stop needs about 90 feet in length (40 feet for vehicle and 50 feet for taper). An on-street mid-block stop would require 150 feet.

3. Bus Turnouts

Pace Development Guidelines and the IDOT BDE both provide design recommendations for bus turnouts with deceleration and acceleration tapers for transitioning to and from the travel lanes. Bus turnouts provide buses room to slow down when approaching stops and to speed up to prevailing travel speed when leaving the stop. This need is lessened when the stop is located on the far-side of a signalized intersection. Far-side stops allow buses to decelerate through the intersection where other vehicles are generally more prepared to reduce speed. They also allow the bus an opportunity during red light signal phases to re-enter the travel lane and get up to traffic speed.

For Randall Road, with a posted speed of 45 mph, 150 foot tapers leading both to and from the turnout is recommended by Pace (125 feet required for 40mph; 175 feet required for 50 mph). The actual design will depend on local site conditions, the frequency of bus service and projected number of passengers. If turn lanes are provided, turnout designs and tapers may differ or may be contained within the turn lane if turning movements are not significantly impeded by the bus. When a turnout is located at the far-side of an intersection, then the cross-street area can be assumed to fulfill the need for an entry taper.

IDOT suggest the use of turnouts on arterial streets where speeds are higher than 35mph, when during the peak hour there are at least 250 vehicles per hour in the curb lane, and the potential for vehicular/bus conflicts warrant the separation of vehicles with stopping transit vehicles. Also, if roadway improvements are being considered, as in the case of Randall Road, then it would be appropriate to consider bus turnouts. On Randall Road, a far-side stop would need 200 feet for a bus turnout (50 feet for vehicle plus 150 feet acceleration taper). A mid-block stop would need 350 feet (50 feet for vehicle plus 150 feet for both acceleration and deceleration tapers).

4. Stop Criteria

The following criteria were applied determining stop locations along Randall Road:

- Per Pace Development Guidelines, a minimum bus stop spacing of 1,320 feet between stops.
- Provide stops in both directions
- Provide far side stops as possible. This allows for easier bus re-entry into traffic due to gaps created by intersection traffic signals.
- Provide stops in locations with higher densities to generate higher passenger volumes
- Provide stops in location that appear to have adequate space for the bus turn-outs, pads, and shelters
- Provide stops at locations where potential exists to link transit service to pedestrian and bicycle facilities
- Avoid areas where potential exists to create adverse environmental impacts (i.e., wetlands, water retention areas)
- Passenger waiting areas would include a physical shelter, bench, and sidewalk connections to adjacent land uses and other pedestrian facilities

a. Mid-Block Stops and Direct Route Alignments

While far side stops using turn-outs along Randall Road is the preferred stop type, there were some special circumstances in which the preferred stop was either mid-block or traveling off of Randall Road. These circumstances included consideration of an adequate stop location along certain areas of Randall Road. For example, the Randall Road / Algonquin Road intersection may require a stop upstream or downstream of the intersection. Subsequently, for the area south of Algonquin Road, a mid-block stop is proposed. For the area north of Algonquin Road, a direct routing into the commercial area is proposed. These stops are described in more detail in the next section.

F. Proposed Transit Stop Locations

Each of the recommended stop locations are described below and shown in Figure 12. The transit stops are proposed to be located near an existing or proposed signalized intersection or grade separated pedestrian/bike crossing in order to provide safe pedestrian linkages to the bus stop from either side of Randall Road. With the heavy traffic volumes, high speeds, and significant width of Randall Road, mid-block crossings from nearby land uses should be discouraged. Currently, existing conditions would generally require riders to cross grassy parkways along the shoulder, exposed to traffic. The grassy parkways would increase risk to riders under wet conditions or where there are steep embankments, and can be virtually impassable when snow is present. Therefore, stops were located near areas where sidewalk connections can be completed and bus turnouts can be added to bridge the distance between the stop and the adjacent land use. Curb ramps and marked crosswalks must be provided at the intersection to expedite pedestrian movements. While pedestrian refuge areas at intersections are also desired, the existence of dual left turn lanes along Randall Road eliminate the space to accommodate pedestrian refuge medians. Proposed improvements are shown on each exhibit map.



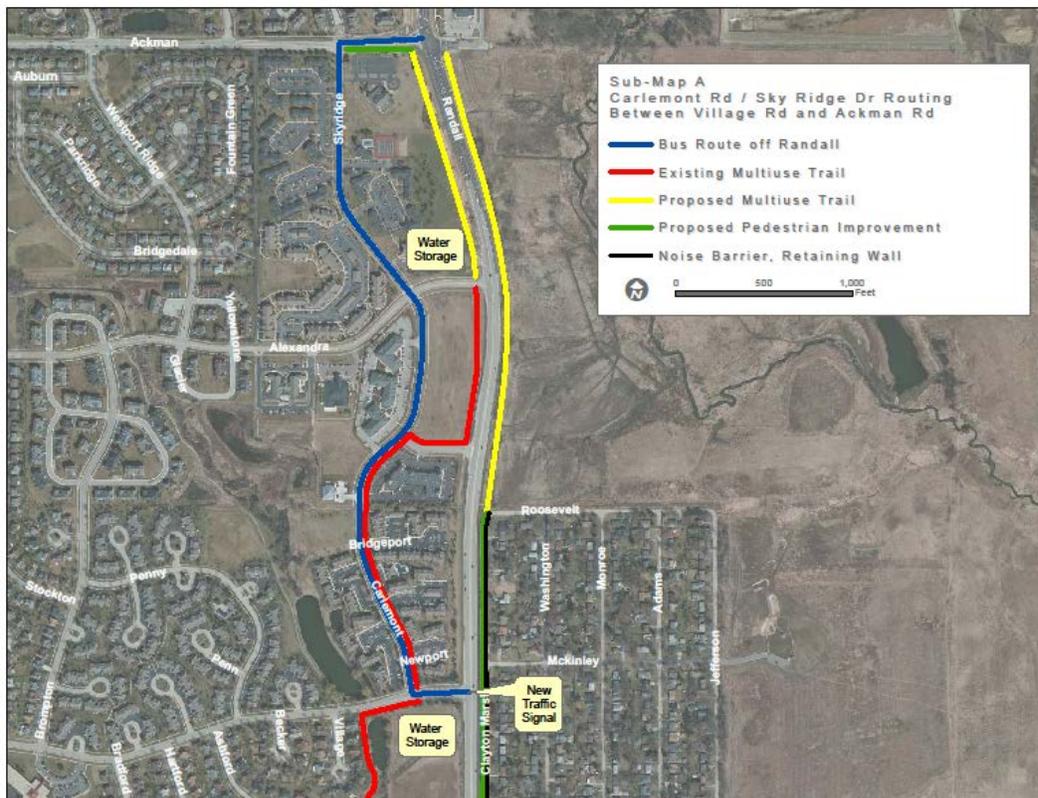
Figure 12

The following transit stop locations are proposed:

- Ackman Road to Village Road (via Carlemont Road/Sky Ridge Drive)
- Polaris Road / Acorn Lane
- Algonquin Road
- Stonegate Road
- Bunker Hill Drive / Huntington Drive
- Harnish Drive
- County Line Road

I. Ackman Road to Village Road

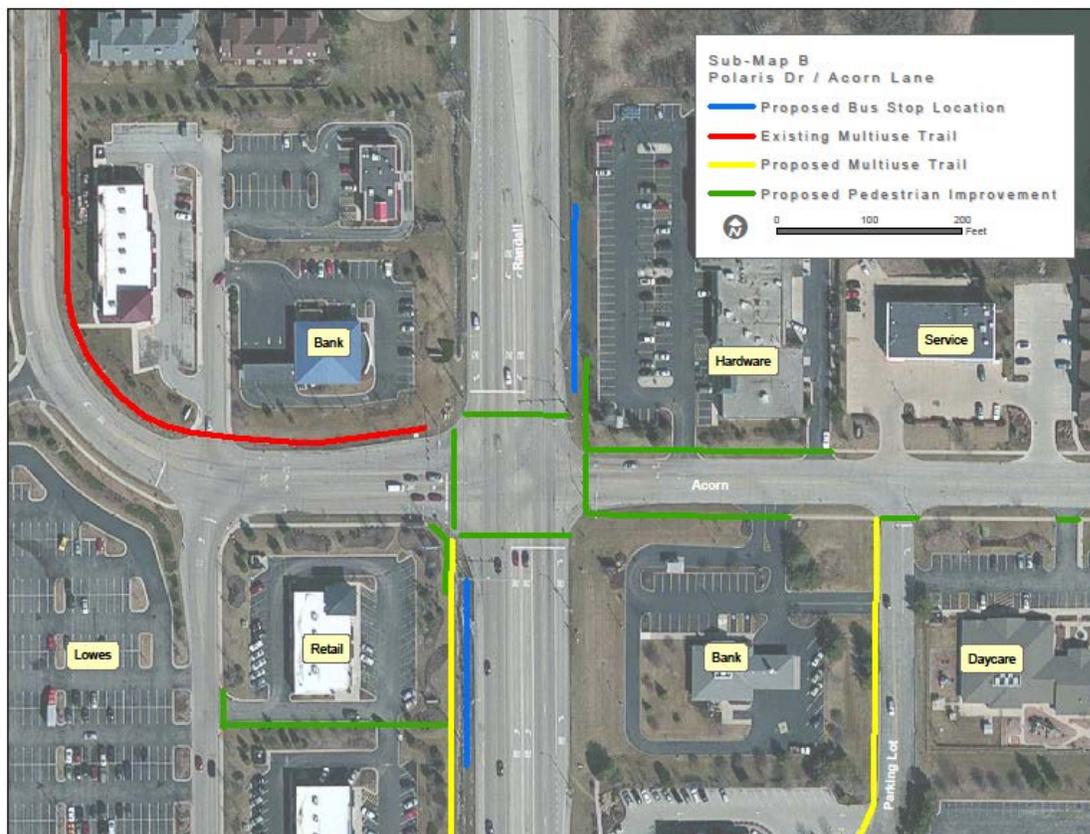
In order to allow for better pedestrian access, transit service in this segment is proposed to deviate off of Randall Road starting at Ackman Road on the north and travel via Carlemont Drive / Sky Ridge Drive until Village Drive, where the bus would get back on Randall Road. This is based on three considerations: 1) the lack of adequate stop locations along Randall Road in this segment; 2) residential areas are located further west and there is undeveloped land on the east; and, 3) few ridership-generating destinations are located adjacent to Randall Road. A multi-use path exists along Carlemont / Sky Ridge Drives along this segment. The intersection of Ackman Road and Randall Road is currently signalized and the intersection of Randall Road and Village Road is proposed to be signalized. With both intersections signalized, access to/from Randall Road by transit vehicles would not be difficult. Two multi-use grade separations are proposed – north and south of Ackman Road. Bus stops would be located on-street on Carlemont / Sky Ridge Drives, so no turnouts would be required. Signage and shelters should be included.



Standard bus stop spacing would recommend a stop at the next major intersection to the south, i.e. Miller Road, a distance of approximately 3,000 feet. However, a bus stop is not recommended at Miller Road as there does not appear to be an adequate stop location. A large area of water retention is located in the northwest quadrant. The southwest quadrant also appears to have wetlands. Eastern quadrants include residential uses, but none have connections to Randall Road. The Randall Road corridor study calls for retaining walls and noise barriers, which would prohibit any access to transit service. The next intersection, Village Road, is located about 500 feet north of Miller Road. With a new traffic signal proposed for Village Road, this location was determined to be better situated for a transit stop.

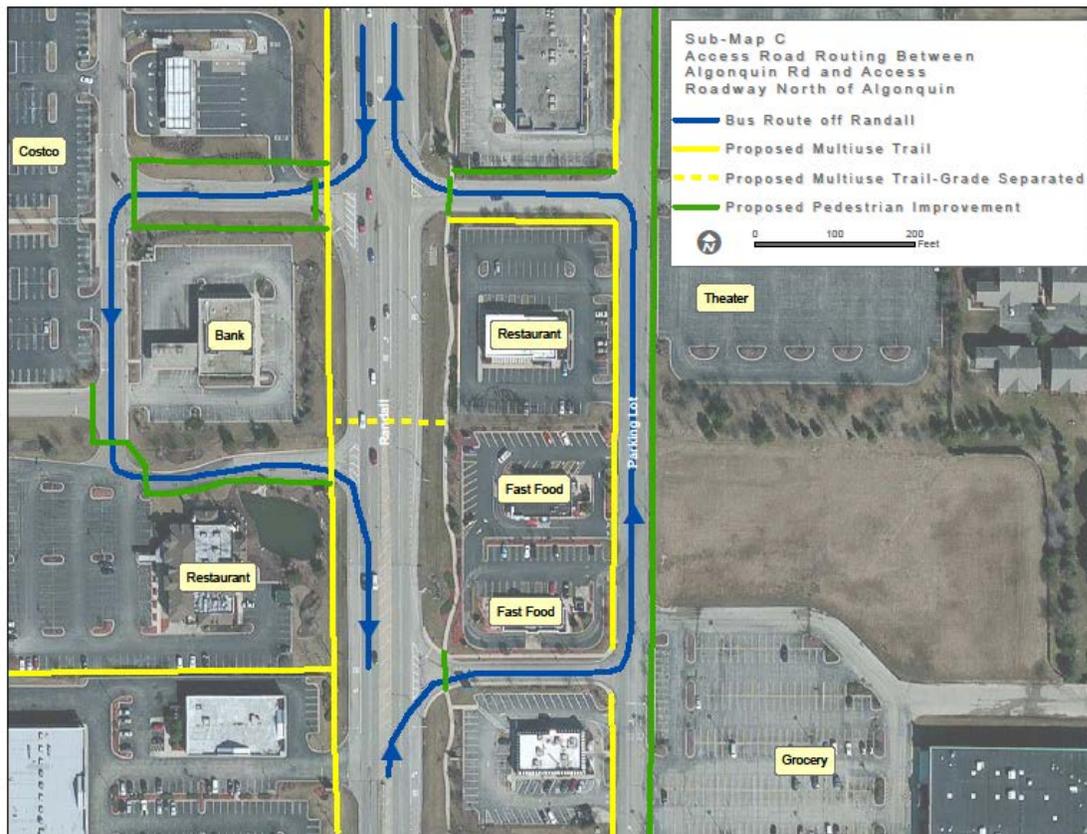
2. Polaris Road / Acorn Lane

This transit stop would be located on the far sides of the intersection. Adjacent land uses include retail, banks, and service land uses. Drainage areas are located along the northwest quadrant and a small area on the southwest quadrant. Sidewalks continue to the intersection from the west, but are discontinuous on the east. An existing multi-use path is located in the northwest quadrant, connecting to the intersection. A multi-use path is proposed for the southwest quadrant along Randall Road and along the access road east of Randall Road. The intersection includes dual left turn lanes and a single right turn lane on three approaches (the east leg only includes a single left turn lane and no right turn lane). The bus stop location would require a 50 foot vehicle pad located 25 feet from the corner, plus a 150 foot acceleration lane. Roadway shoulders would need to be improved to accommodate a 12 foot vehicle width. The right turn lanes could be extended across the intersection to accommodate the bus turn-out and acceleration lane. Crosswalks should be added across all legs of the intersection. A direct sidewalk to land uses in the southwest quadrant from the bus stop is recommended.



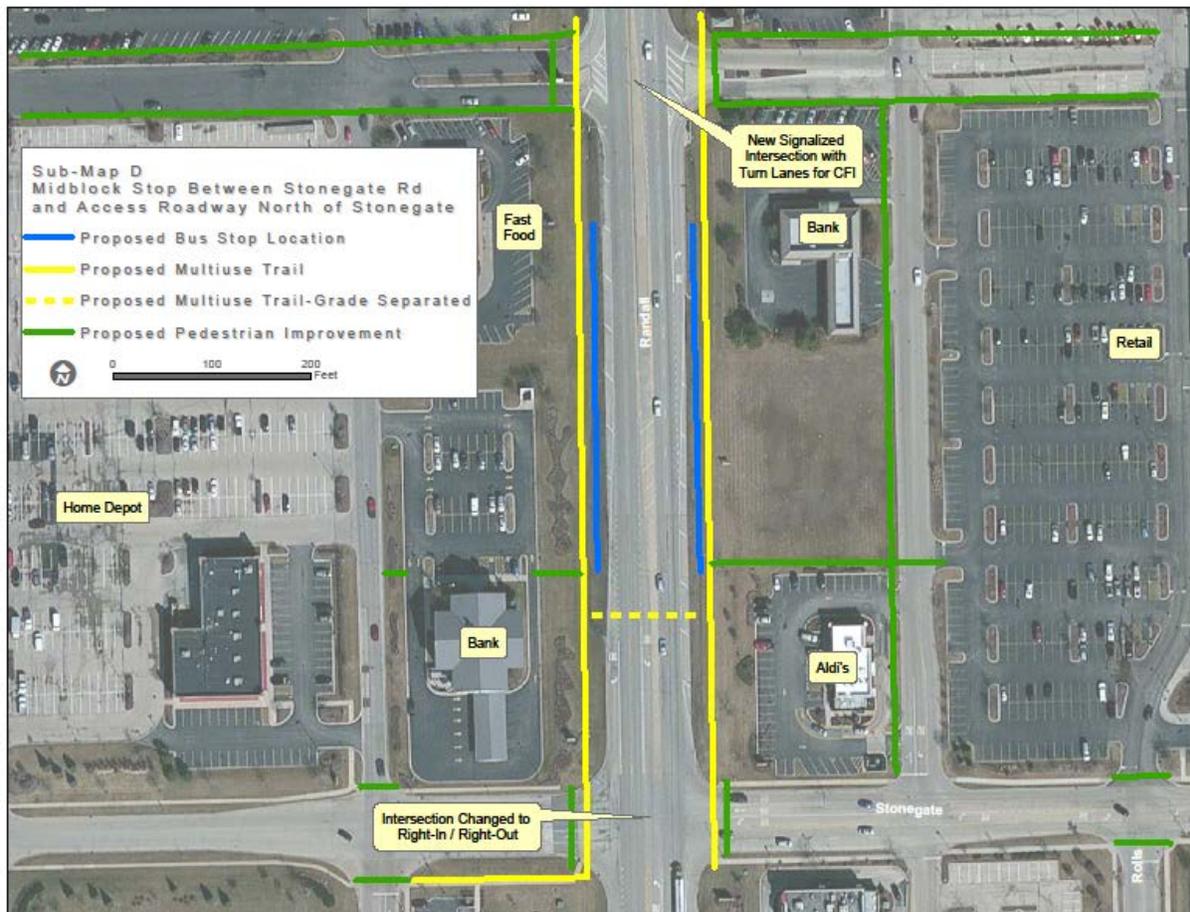
3. Algonquin Road

The future design of the intersection may require that the stop is located either upstream or downstream of the intersection. However, there does not appear to have adequate shoulder space to accommodate a mid-block crossing near Algonquin Road. Also, because of the number of retail and restaurant uses located along both sides of Randall Road, along with the existence of right-in / right-out access drives, there is the opportunity to pull off of Randall Road for a short segment. Vehicles could then pull back onto Randall Road using the existing right turn lane as the acceleration/merge lane. The south access roadway on the east side of Randall Road is proposed to be changed to a right-out only drive as part of the Randall Road Corridor Study. This would need to be modified to allow northbound transit vehicles to enter this access drive. Surrounding land uses includes Costco, Dominick's, Lake in the Hills Theatre, banks, and numerous restaurants. Sidewalks should be added along all access roadways. Direct sidewalk connections are required to the bus stop from the adjacent land uses and to the multi-use paths. Multi-use paths are proposed along the west side of Randall Road and the north-south access road east of Randall Road. A grade separated multi-use path is proposed to travel under Randall Road just north of Algonquin Road. Bus stops would be located on-street on the access roadways, so no turnout would be required. Signage and shelters should be included.



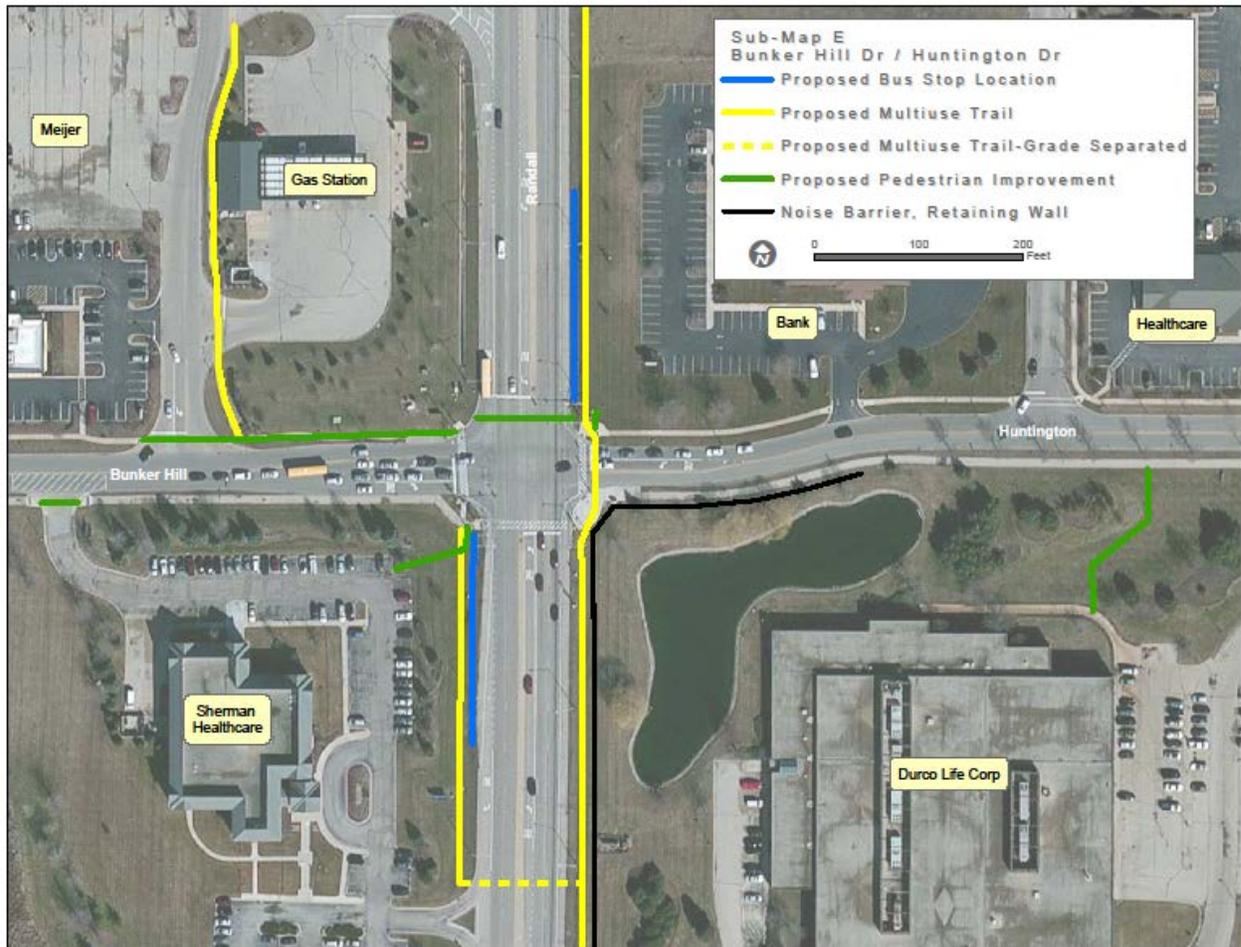
4. Stonegate Road

In this segment, the bus stop would be located mid-block between Stonegate Road and the access roadway north of Stonegate Road. It appears that there is adequate space along the roadway shoulders for a mid-block crossing to be feasible, possibly even using the existing right turn lanes. A multi-use path is proposed along both sides of Randall Road. A grade separated multi-use path is proposed across Randall Road just north of Stonegate Road. The multi-use path and bridge would connect both the east and west sides of Randall Road, eliminating the need for transit riders to walk to the signalized intersections to cross Randall Road. Direct sidewalk connections are required to the bus stop from the adjacent land uses and to the multi-use paths. The bus stop location would require a 50 foot vehicle pad located, plus both a 150 foot acceleration lane and a 150 foot deceleration lane. Roadway shoulders would need to be improved to accommodate a 12 foot vehicle width, possibly using the existing right turn lanes.



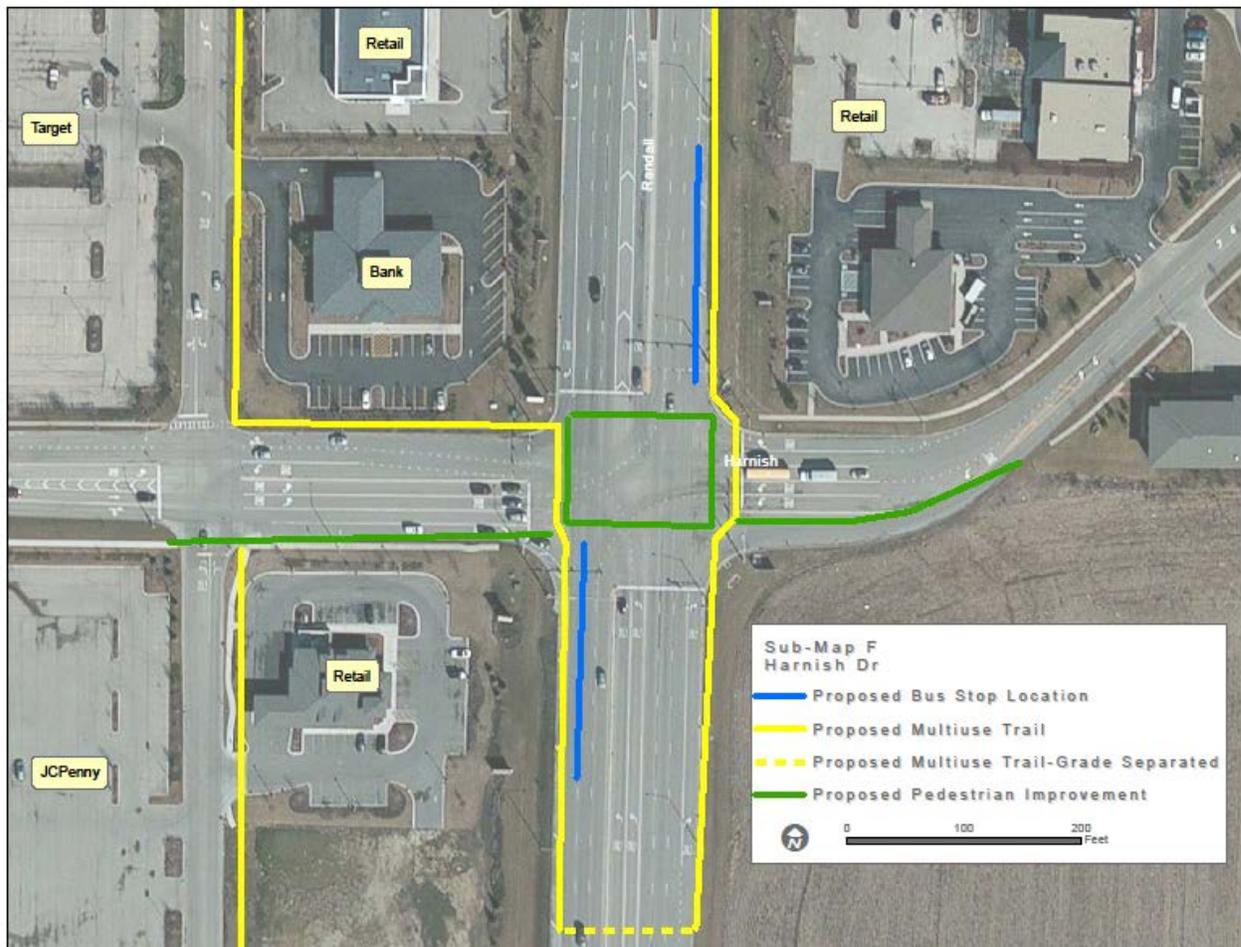
5. Bunker Hill Drive / Huntington Drive

This transit stop would be located on the far sides of the intersection. Adjacent land uses include Sherman Healthcare, Meijer, a bank, and Durco Life Corp. Water retention is located in the southeast quadrant. Sidewalks are generally connected to the intersection. Sidewalk extensions are suggested to connect to Durco Life Corp. and Sherman Healthcare. Multi-use paths are proposed for the east side of Randall Road and along the north-south access road in the northwest quadrant. A grade separated multi-use path is proposed over Randall Road south of Bunker Hill / Huntington Drive near Sherman Healthcare. The intersection includes dual left turn lanes and a single right turn lane on three approaches (the east leg only includes a single left turn lane and no right turn lane). The bus stop location would require a 50 foot vehicle pad located 25 feet from the corner, plus a 150 foot acceleration lane. Roadway shoulders would need to be improved to accommodate a 12 foot vehicle width. The right turn lanes could be extended across the intersection to accommodate the bus turn-out and acceleration lane.



6. Harnish Drive

This transit stop would be located on the far sides of the intersection. Retail uses are located in all quadrants except the southeast, which is undeveloped. Landscaping is located in the shoulder of the northwest quadrant. The intersection currently includes dual left turn lanes and a single right turn lane on all approaches. Sidewalks are located up to all corners of the intersection except the southeast quadrant. A multi-use path is proposed along the east side of Randall Road and also along the north-south access drive west of Randall Road. A grade separated multi-use bridge is proposed across Randall Road south of Harnish Drive. Sidewalks should be extended to the bus stop, plus connect to the grade separated crossing. The bus stop location would require a 50 foot vehicle pad located 25 feet from the corner, plus a 150 foot acceleration lane. Roadway shoulders would need to be improved to accommodate a 12 foot vehicle width. The right turn lanes could be extended across the intersection to accommodate the bus turn-out and acceleration lane.



7. County Line Road

This transit stop would be located on the far sides of the intersection. The southwest quadrant (located in Kane County) includes a major shopping center. Retail uses are also located in the other quadrants. Water retention is located in the southeast quadrant. The intersection currently has dual left turn lanes and a single right turn lane on all approaches. Sidewalks are located up to the intersection. Sidewalk extensions would be required to connect to the bus stop. A multi-use path is proposed along Randall Road and through the retail area in the northwest quadrant. The bus stop location would require a 50 foot vehicle pad located 25 feet from the corner, plus a 150 foot acceleration lane. Roadway shoulders would need to be improved to accommodate 12 feet vehicle width. The right turn lanes could be extended across the intersection to accommodate the bus turn-out and acceleration lane.

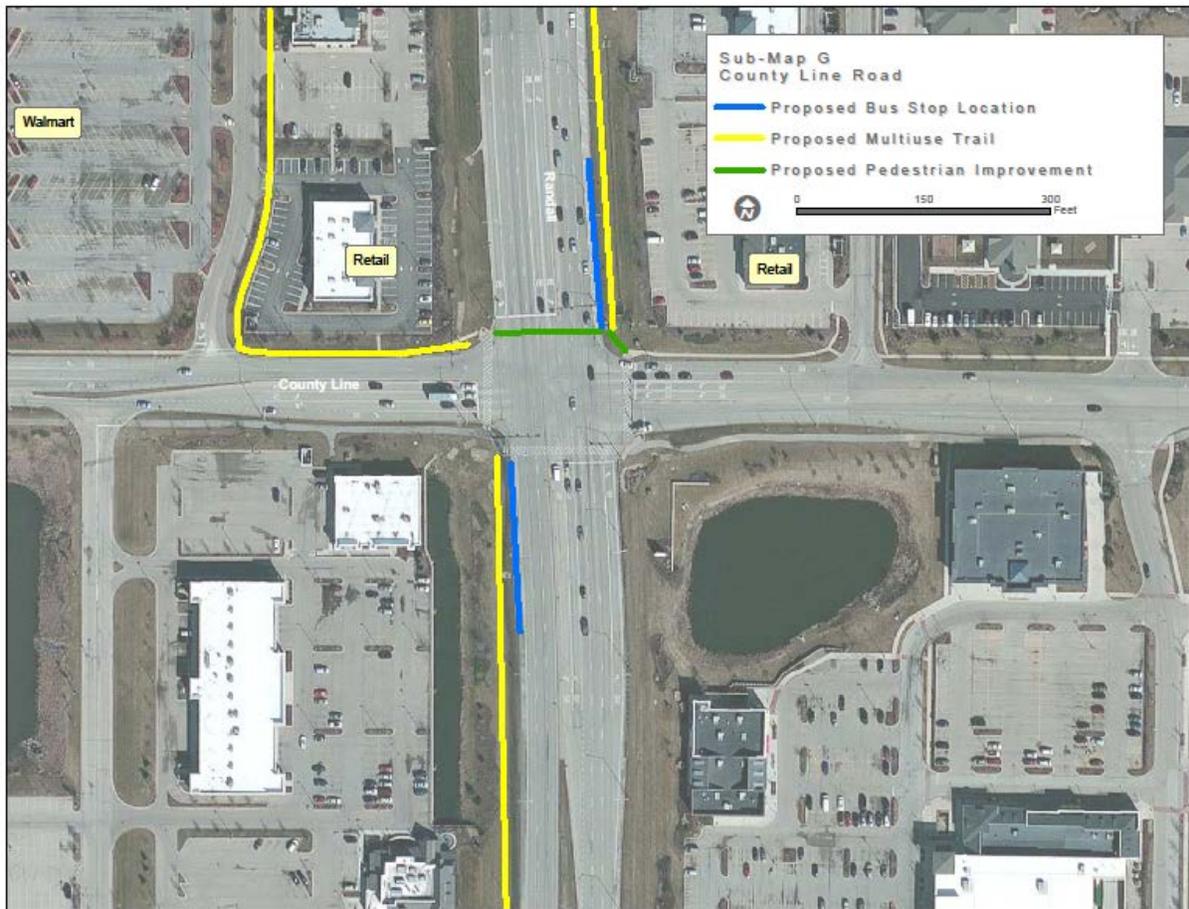


Table 19 presents a summary of existing and proposed conditions along with required infrastructure changes for each stop.

Table 19 - Summary of Proposed Bus Stop Locations

STOP LOCATION	EXISTING CONDITIONS/ PLANNED ROADWAY IMPROVEMENTS	NEEDED INFRASTRUCTURE IMPROVEMENTS TO ACCOMMODATE TRANIST
Village Road to Ackman Road – Access Road (Carlemont Drive) routing and stop	<ul style="list-style-type: none"> • Adjacent land uses: residential, services, retail, undeveloped land • Randall Road Corridor Study proposal: new traffic signal at Village Road with turn lanes; noise barrier along east side of Randall Road from Miller Road to Roosevelt • Existing sidewalks on Carlemont and Sky Ridge Drives. • Multi-use path proposed for both east and west sides of Randall Road and north-south access road east of Randall Road between Roosevelt and Ackman Road • Existing multi-use trail along Carlemont Dr. between Village Road and Alexandra Blvd. • Proposed grade separation overpasses across Randall Road north of Alexandra Blvd., and north of Ackman Road • Water retention along east side of Randall Road at Alexandra Blvd. and Village Road 	<ul style="list-style-type: none"> • Transit vehicles would enter at Village Road (signalized intersection) and Ackman Road (signalized intersection) • Bus stops would be on-street along Carlemont and Sky Ridge Drives • Sidewalks/ADA ramps connecting bus stop/shelter to existing sidewalks • New sidewalks on Village Road and Angela Lane between Randall Road and Carlemont/Sky Ridge Drives. • Add crosswalks at all intersections • Possible for this area to be designated as Flexible service / Call-in-Ride service
Polaris Road / Acorn Lane – Far Side Stop	<ul style="list-style-type: none"> • Adjacent land uses: Lowes, banks, retail, service, daycare • Randall Road Corridor Study proposal: dual left turn lanes and right turn lanes on Randall Road, Polaris Dr., and Acorn Lane • Sidewalks on all legs except east side of Randall Road • Existing multi-use path along north side of Polaris Drive, continuing into residential subdivision • Multi-use path proposed for east and west sides of Randall Road connecting to access drives east and west of Randall Road • Water retention/wetlands on 	<ul style="list-style-type: none"> • Improve roadway shoulder for bus pad and shelter • 50' bus pad located 25' from corner • 150' accel lane • Sidewalks/ADA ramps connecting bus stop/shelter to sidewalks on Bunker Hill Dr. and Huntington Drive • Add crosswalks on north leg of Randall Road and Polaris Dr. / Acorn Lane and at all access roadways

STOP LOCATION	EXISTING CONDITIONS/ PLANNED ROADWAY IMPROVEMENTS	NEEDED INFRASTRUCTURE IMPROVEMENTS TO ACCOMMODATE TRANIST
<p>Algonquin Road Access Road routing and stops</p>	<p style="text-align: center;">west side of Randall Road</p> <ul style="list-style-type: none"> • Adjacent land uses: Costco, Lake in the Hill theatre, retail, restaurants, bank, Dominick's • Randall Road Corridor Study proposal: new signalized intersection to be located between Algonquin Road and Access Road north of Algonquin Rd; some access driveway closures on Randall Road and Algonquin Road • Existing sidewalks on west side of Randall Road • Multi-use path proposed for both east and west sides of Randall Road and north-south access road east of Randall Road • Proposed grade separation underpass across Randall Road north of Algonquin Road • Water retention along east side of Randall Road 	<ul style="list-style-type: none"> • Transit vehicles would enter right-in / right-out access roads. • Bus stops would be on-street along access roads • Sidewalks/ADA ramps connecting bus stop/shelter to existing sidewalks • new sidewalks on Access Road, and adjacent land uses • Add crosswalks on all legs of both Access Roads with Randall
<p>Stonegate Road Midblock Stop</p>	<ul style="list-style-type: none"> • Adjacent land uses: Home Depot, Meijer, retail, restaurants, bank • Randall Road Corridor Study proposal: intersection at Stonegate changed to right-in / right-out and new signalized intersection to be located south of Access Road (north of Stonegate Road); some access driveway closures near Algonquin Road • Sidewalks on Stonegate • Multi-use path proposed for both east and west sides of Randall Road and access drive west of Randall Road • Proposed grade separation overpass across Randall Road north of Stonegate 	<ul style="list-style-type: none"> • Improve roadway shoulder for bus pad and shelter • 50' bus pad • 150' accel and decel lanes • Sidewalks/ADA ramps connecting bus stop/shelter to existing sidewalks on Stonegate • Add crosswalks on all legs of both Access Roads with Randall • New sidewalks along north-south Access roads
<p>Bunker Hill Drive / Huntington Drive –</p>	<ul style="list-style-type: none"> • Adjacent land uses: Sherman Family Healthcare, Meijer, 	<ul style="list-style-type: none"> • Improve roadway shoulder for bus pad and shelter

STOP LOCATION	EXISTING CONDITIONS/ PLANNED ROADWAY IMPROVEMENTS	NEEDED INFRASTRUCTURE IMPROVEMENTS TO ACCOMMODATE TRANIST
Far Side Stop	<ul style="list-style-type: none"> • restaurant, bank, Durco Life Corp. • Randall Road Corridor Study proposal: dual left turn lanes and right turn lanes on Bunker Hill Dr and Huntington Dr.; retaining wall along southeast quadrant • Sidewalks on all legs except south leg • Multi-use path proposed for east side of Randall Road and access drive west of Randall Road • Proposed grade separation overpass across Randall Road south of Bunker Hill Dr. / Huntington Dr. (connecting near Sherman Healthcare and Durco Life Corp.) • Water retention on southeast quadrant 	<ul style="list-style-type: none"> • 50' bus pad located 25' from corner • 150' accel lane • Sidewalks/ADA ramps connecting bus stop/shelter to sidewalks on Bunker Hill Dr. and Huntington Drive • Add crosswalks on north leg of Randall Road and at access roadways
Harnish Drive – Far Side Stop	<ul style="list-style-type: none"> • Adjacent land uses: retail, Target, restaurants, banks, service, proposed retail center • Existing dual left turn lanes; right turn lanes on Harnish Drive • Sidewalks on all legs except south leg • No proposed intersection improvements • Multi-use path proposed for east side of Randall Road and access drive west of Randall Road • Proposed grade separation overpass across Randall Road south of Harnish Drive 	<ul style="list-style-type: none"> • Improve roadway shoulder for bus pad and shelter • 50' bus pad located 25' from corner • 150' accel lane • Sidewalks/ADA ramps connecting bus stop/shelter to sidewalks on Harnish Drive • Complete sidewalk along south side of Harnish Drive east of Randall Road • Add crosswalks on all intersection approaches at Harnish Drive with Randall Road and at Harnish Road with west access road.
County Line Road – Far Side Stop	<ul style="list-style-type: none"> • Drainage in southwest and southeast quadrants • Adjacent land uses: retail, Walmart, restaurants • Dual left turn lanes; right turn lanes • Sidewalks on all legs except south leg 	<ul style="list-style-type: none"> • Improve roadway shoulder for bus pad and shelter • 50' bus pad, located 25' from corner • 150' accel lane • Sidewalks/ADA ramps connecting bus stop/shelter to sidewalks on County Line Road



STOP LOCATION	EXISTING CONDITIONS/ PLANNED ROADWAY IMPROVEMENTS	NEEDED INFRASTRUCTURE IMPROVEMENTS TO ACCOMMODATE TRANSIT
	<ul style="list-style-type: none"> • No proposed intersection improvements with Randall Road Corridor Study • Multi-use path proposed for east side of Randall Road and access drive west of Randall Road 	<ul style="list-style-type: none"> • Add crosswalk on north approach of intersection

VIII. Access Improvements for Existing Routes

The study examined access to each of the existing fixed route services, Route 806, 807 and 808. Existing conditions and recommendations on how to improve the pedestrian environment to each of these routes is identified below.

A. Route 806 Access Improvements

The existing Route 806 travels on IL Route 31, between IL Route 176 on the south end of the route in the City of Crystal Lake to Bull Valley Road in the City of McHenry. In addition, recommended changes to Route 806 has the route operating on IL Route 31 between Elm Street and Johnsburg Road on the north side of the City of McHenry in order to serve the many newer retail stores, senior center and community center.

The Illinois Department of Transportation (IDOT) is in the process of an Illinois Route 31 Phase I Study. The project corridor is located just north of IL Route 176 in Crystal Lake and extends north to IL Route 120 in downtown McHenry. Highway improvements are proposed to accommodate existing and projected 2040 traffic demands. Proposed improvement options for the northern and southern sections are described below. Additionally, improvements are also proposed for the IL Route 120 intersection including a minimum and maximum build alternatives. Both options include additional lanes and remove on-street parking. The northern section option (north of Bull Valley/Charles Miller Road to John Street) is proposed to include two travel lanes in each direction separated by an 18 foot raised curb median. It would also include a shared use path and sidewalk. See Figure 13.



Figure 13

The southern section option (IL Route 176 to south of Bull Valley Road/Charles Miller Road) would include two travel lanes in each direction separated by a 30 foot raised curb median and would also include a shared use path and sidewalk. There is also an alternative option for the section between Drake Drive and Veterans Parkway to provide a 30 foot depressed median with 10 foot paved shoulders which would allow for speed limits higher than 45 mph. See Figure 14.



Figure 14

A change to the footprint of IL Route 31 is expected to increase access to bus stops due to the installation of shared use paths/sidewalks along the corridor. Although the roadway will be wider, the installation of a raised median could provide a pedestrian refuge island for transit riders needing to cross the street. The County and IDOT should work together to ensure that IL Route 31 is a transit friendly corridor and that pedestrian accommodations be integrated into the design plans.

A review of pedestrian access from Route 806 to adjacent land uses along IL Route 31 is presented below by segment. Recommended infrastructure improvements to enhance pedestrian access are described.

I. IL Route 176 to North of Ray Street

This segment is a more dense area of the corridor in downtown Crystal Lake. It is primarily auto-oriented with one travel lane per direction. The IL Route 31 Phase I Study calls for two travel lanes per direction along with a multiuse path and sidewalks.

Sidewalks currently exist for one mile of IL Route 31 north of IL Route 120, but there are no sidewalks for 1.5 miles between Blake Boulevard and Johnsburg Road. On IL Route 31 south of Crystal Lake, sidewalks exist in downtown Algonquin and on the site of Walmart, but they discontinue for the most part in many other areas. Existing conditions include:

- Commercial land uses set back from roadway
- Numerous curb cuts
- Two lanes per direction with open drainage areas

- Limited signalized intersections for protected crossings
- Discontinuous sidewalks
- Sidewalks currently exist at Ray Street, west of IL Route 31 for access to Columbia College

Potential improvements could include:

- Improved shoulders for bus turn out
- Continuous sidewalks along IL Route 31 and cross streets
- Marked crosswalks
- Traffic signal at IL Route 31 and Ray Street or pedestrian bridge near this intersection for protected crossing to Columbia College

IL Route 31, from IL Route 176 to Ray Street



2. North of Ray Street to Veterans Parkway

This segment is more rural with some industrial uses. Currently one travel lane per direction. The IL Route 31 Phase I Study calls for two travel lanes per direction along with a multiuse path and sidewalks. Existing conditions include:

- A few industrial land uses set back from roadway. TC Industries is located at Half Mile Trail.
- Two lanes per direction with open drainage areas
- Few signalized intersections
- No sidewalks
- Residential area located in southeast quadrant of IL Route 31 and Ames Road

Potential improvements could include:

- Improved shoulders for bus turn out near TC Industries
- Pedestrian bridge near Ames Road

3. Veterans Parkway to Bull Valley Road/Charles J. Miller Road

This segment transitions from rural to commercial developments. Currently one travel lane per direction. The IL Route 31 Phase I Study calls for two travel lanes per direction along with a multiuse path and sidewalks. Existing conditions include:

- A few industrial land uses set back from roadway at Veterans Parkway. This intersection is not signalized. North-south marked cross walk on the east side of IL Route 31 crossing Veterans Parkway with sidewalks in the southeast corner.
- Pioneer Center and retail area at Prime Parkway. Intersection of IL Route 31 and Prime Parkway is signalized. No sidewalks or marked crosswalks. Land uses set back from Roadway.
- Residential land uses with access via Veterans Parkway
- Centegra Medical Center located between Shamrock Lane and Bull Valley Road. Shamrock Lane / IL Route 31 intersection is signalized
- Two lanes per direction with open drainage areas

Centegra Medical Center



Pioneer Center/Prime Parkway



Potential improvements could include:

- Improved shoulders for bus turn out near Prime Parkway and Shamrock Lane. Could use right turn lane for acceleration/deceleration lane.
- Far side stop would provide direct access to Pioneer Center
- Marked crosswalks at intersections
- Continuous sidewalks along IL Route 31 and Prime Parkway
- Direct access to Centegra Medical Center

4. Bull Valley Road/Charles J. Miller Road to downtown McHenry (IL Route 120)

This segment travels along West Crystal Lake Road, returning back to IL Route 31 at Lillian Street and then traveling to the intersection at IL Route 120. Existing conditions include:

- One travel lane per direction, shoulders, striped median along Bull Valley Road
- Bull Valley Road signalized at Ridgeview and Crystal Lake Road
- Surrounding land uses mostly rural with residential subdivision at Kesswood Drive. Large church east of Crystal Lake Road.
- Prairie Trail Path located along UP Railroad
- Sidewalks located only directly in front of adjacent land uses; not continuous
- Along Crystal Lake Road land uses are residential. McHenry High School – West Campus and a post office located near Royal Drive.
- Route travels into downtown McHenry with much more dense development, sidewalks, and signalized intersections

Potential improvements could include:

- Bus turnout on Bull Valley Road at Kesswood to connect to residential area
- Continuous multiuse path along Bull Valley and Crystal Lake Road to connect to Prairie Trail. This would connect the high school to the path.
- Bus turnout at high school with shelter

- Sidewalk connections from roadways to land use

McHenry High School / Post Office



5. Downtown McHenry (IL Route 120) to north of McCullom Lake Road

This segment travels along IL Route 120 to the north segment of IL Route 31. The IL Route 31 Phase I Study calls for two travel lanes per direction along with a multiuse path and sidewalks. The intersection of (south) IL Route 31 and IL Route 120 is proposed to be improved. Existing conditions include:

- Along IL Route 31 (south) - one travel lane per direction, shoulders, center turn lanes and on-street parking. Along IL Route 120, two travel lanes per direction, center turn lanes, on-street parking. Along IL Route 31 (north), two travel lanes per direction, center turn lanes
- Numerous driveways/curb cuts
- On-street parking
- Sidewalks
- Downtown McHenry is suburban with denser development, sidewalks, and signalized intersections
- Major retail center at IL Route 31 (north) and McCullom Lake Road, continuing to Running Brook Farm Boulevard

Potential Improvements could include:

- Driveway consolidations
- Consistent marked crosswalks at intersections
- Improved pedestrian connection from IL Route 31 (south) to McHenry Metra station
- For the area along IL Route 31 (north) from McCullom Lake Road to Blake Boulevard, pedestrian connections should be improved to better access transit service. Bus turnouts should be located at far side locations. Improved pedestrian paths through parking areas to businesses.
- Should consider improvement at the commercial access roadway between McCullom Lake Road and Blake Boulevard. This could be a signalized intersection with bus turn outs or possibly a pedestrian bridge across IL Route 31, also with bus turnouts.

Commercial Center at McCullom Lake Road



6. North of McCullom Lake Road to Ringwood Road

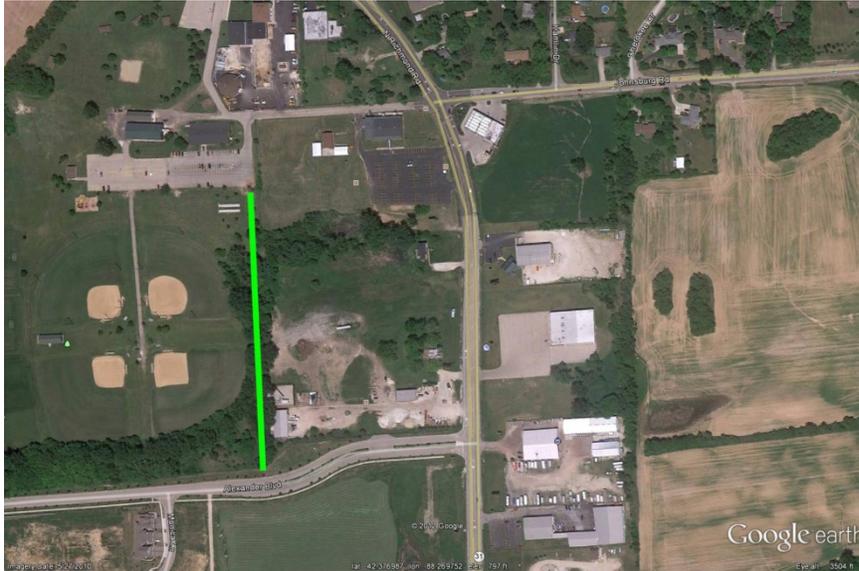
This segment travels from Running Brook Farm Boulevard along IL Route 31 and connecting to Johnsburg Road. Existing conditions include:

- IL Route 31 transitions to one travel lane per direction with striped median
- Intersection at IL Route 31 and Johnsburg Road is signalized
- McHenry Township Offices and Senior Center at IL Route 31 and Johnsburg Road
- Area along Johnsburg Road is rural. Roadway is one lane per direction with shoulders
- Sidewalks generally along north side of Johnsburg Road, east of Chapel Hill Road
- East of Spring Grove (along Wilmot Road section), area is more residential with sidewalks

Potential improvements could include:

- Continuous sidewalks along both sides of Johnsburg/Wilmot Road
- Striped crosswalks at intersections
- Pedestrian connections to adjacent land uses
- Bus turnouts, depending on ridership demand
- A new driveway access to Alexander Road to better serve Senior Center and eliminate northbound/southbound turn movements onto IL Route 31

Alexander Road at Senior Center



7. Ringwood Road to Grand Avenue

This segment travels along Ringwood Road through Johnsburg to Grand Avenue in Fox Lake via US 12. Existing conditions include:

- One travel lane per direction. Limited signalized intersections.
- Suburban residential
- Intersection at Fox Lake Road and US 12 is signalized
- US 12 has two travel lanes per direction
- Generally no sidewalks until downtown Fox Lake
- Route ends at Fox Lake Metra station

Potential improvements could include:

- More sidewalk continuity
- Improved pedestrian connection to Fox Lake Metra depot station
- Improved crosswalks

Downtown Fox Lake / Metra



B. Route 807 Access Improvements

A review of pedestrian access from Route 807 to adjacent land uses is presented below by segment. Recommended infrastructure improvements to enhance pedestrian access are described.

I. Prime Parkway to Bull Valley Road/Charles J. Miller Road

This segment transitions from rural to commercial developments. Currently there is one travel lane per direction. The IL Route 31 Phase I Study calls for two travel lanes per direction along with a multiuse path and sidewalks. Existing conditions include:

- Pioneer Center and retail area at Prime Parkway. Intersection of IL Route 31 and Prime Parkway is signalized. No sidewalks or marked crosswalks. Land uses set back from roadway.
- Centegra Medical Center located between Shamrock Lane and Bull Valley Road. Shamrock Lane / IL Route 31 intersection is signalized
- Two lanes per direction with shoulders and open drainage areas
- Sidewalk along south side of Shamrock, but ends prior to intersection
- Mercy Drive is a cul-de-sac roadway with sidewalks along both sides. Intersection is not signalized.

Potential improvements could include:

- Improved shoulders for bus turn out near Prime Parkway and Shamrock Lane. Could use right turn lane for acceleration/deceleration lane
- Far side stop would provide direct access to Pioneer Center
- Marked crosswalks at intersections
- Continuous sidewalks along IL Route 31 and Prime Parkway
- Direct access to Centegra Medical Center

2. Bull Valley Road/Charles J. Miller Road to downtown McHenry (IL 120)

This segment travels along IL Route 31 to the intersection at IL Route 120. The IL Route 31 Phase I Study calls for two travel lanes per direction along with a multiuse path and sidewalks. The intersection of IL Route 31 and IL Route 120 is proposed to be improved. Existing conditions include:

- Along IL Route 31 - one travel lane per direction, shoulders, center turn lanes and on-street parking. Along IL Route 120, two travel lanes per direction, center turn lanes, on-street parking. Sidewalks in front of commercial uses, but not continuous
- Numerous curb cuts
- Area transitions to residential north of Knox Road
- Route travels into downtown McHenry with much more dense development, sidewalks, and signalized intersections

Potential improvements could include:

- Bus turnout on IL Route 31 at Bull Valley Road
- Continuous sidewalks
- Consolidation of driveways
- Consistent marked crosswalks at intersections
- Improved pedestrian connection from IL Route 31 to McHenry Metra station

3. IL Route 120, from downtown McHenry to South Curran/Ringwood Road

This segment travels through downtown McHenry to Curran Road, where the land uses once again become more rural. Existing conditions include:

- No improvements planned for upgrading IL Route 120
- Two travel lanes per direction plus center turn lanes
- Signalized intersections at Curran, Meadow, Oak, Crystal Lake Road and IL Route 31
- Sidewalks along both sides of IL Route 120, although south side ends east of Curran
- Prairie Trail path crosses IL Route 120 at Oak Drive
- Numerous curb cuts
- Land uses more residential west of Ramble Drive

Potential improvements could include:

- Improved pedestrian path to McHenry Metra station
- Bus turnout on west side of UP Railroad for direct access to Metra station
- Driveway consolidation
- Improved pedestrian paths to adjacent land uses

4. Curran/Ringwood Road to Greenwood Road

This segment transitions from the dense downtown area to a more rural area. Existing conditions include:

- Two travel lanes per direction with painted median, transitioning to one lane per direction with no center median at Elm Road
- Large warehousing/industrial use between Dot Road and Elm Road
- No sidewalks along IL Route 120 west of Curran.
- Valley View Elementary School located west of Martin Street. Sidewalks connect the school to IL Route 120
- Rural between Martin Street and Greenwood Road
- Cement plant east of Wonder Lake Road

- Signalized intersections located at Curran, Wonder Lake, Thompson, and Greenwood
- Residential uses west of Wonder Lake and north of IL Route 120

Potential improvements could include:

- Improved shoulders for bus turn out near elementary school
- Improved shoulders for bus turn out at Wonder Lake Road

5. Greenwood Road to Raffel Road

This segment turns south along Greenwood Road (IL Route 120 designation follows Greenwood)

Existing conditions include:

- One travel lane per direction with narrow shoulders, no walking paths.
- Predominantly rural
- No signalized intersections until Raffel Road

Potential improvements could include:

- Due to rural nature and limited land uses, there is limited need for transit access improvements.

6. Raffel Road to downtown Woodstock

This segment transitions from a rural area to more suburban residential and downtown Woodstock.

Existing conditions include:

- Marian Central Catholic High School at IL Route 120 and Raffel Road. Sidewalks exist from IL Route 120 to the high school.
- IL Route 120 and Raffel Road intersection signalized
- McHenry County Courthouse located at Ware Road, just east of Seminary Avenue (IL Route 47). Sidewalks along north side of Ware and east side of Seminary.
- Elementary and middle schools at Ware and Seminary. Large park with ball fields also located off of Seminary.
- Intersection of Ware and Seminary not signalized. Ware ends at Seminary.
- Seminary and IL Route 120 intersection signalized
- Woodstock Metra Station located off of Church Street
- Outside of downtown Woodstock, area is predominantly residential.

Potential improvements could include:

- Continuous sidewalks along both sides of Ware and Seminary
- Bus turnout on Raffel Road just north of IL Route 120 to better serve Marian Central Catholic High School

C. Route 808 Access Improvements

Route 808 travels along US 14 for a substantial part of the route. US 14 is programmed to be widened from its current rural cross-section of one travel lane in each direction, painted median, and shoulders to a five-lane urban cross-section. This will include two travel lanes per direction and center turn lanes. There is no known time frame as to when improvements will begin.

A review of pedestrian access from Route 808 to adjacent land uses is presented below by segment. Recommended infrastructure improvements to enhance pedestrian access are described.

I. Crystal Lake Metra station to Harvard Metra station via downtown Woodstock

This segment travels along IL Route 176 to US Route 14.

Existing conditions include:

- Few sidewalks except near the Metra station
- Outside of downtown Crystal Lake, area is predominantly rural
- McHenry County College located at Lucas Road / Tartan Drive; entrance from US 14 is signalized
- Bike path runs from McHenry County College to Oak Street in Crystal Lake
- Centegra Medical Center located at Doty Road; intersection of Doty and US 14 is not signalized
- Government offices at Lake Shore Drive / Rolling Hills Drive and US 14
- US 14 widens out to two lanes per direction with center (grass) median at West Lake Shore Drive
- A number of large businesses located near US 14 and Lake Ave (IL Route 47). This intersection is signalized. Businesses are located away from US 14 with no sidewalk connections.
- Route diverts from US 14 to travel to downtown Woodstock and Woodstock Metra station
- IL 120 ends at US 14. This intersection is not signalized. West of IL 120, US 14 transitions back to a two-lane roadway.
- Intersection of Hwy. 23 and US 14 is signalized. North of this intersection transitions to downtown Harvard and the Harvard Metra station. Large businesses are located near this intersection with large setbacks and no sidewalks.

Outside of the three downtown areas, the route travels through areas that are more rural in nature with limited land uses, resulting in a limited need for transit access improvements. Depending on demand, improvements could include:

- Continuous sidewalks in Crystal Lake along both sides of IL Route 176 up to Virginia Street
- Marked crosswalks at intersections in Crystal Lake and Woodstock
- Bus turnouts at US 14 and IL Route 47
- Sidewalk connections to adjacent land uses