# TRANSPORTATION & PARKING COMMISSION MEETING AGENDA

**Date:** April 26, 2017
**Time:** 7:00 p.m.
**Location:** Council Chambers – Village Hall
801 Burlington Avenue

I. Call To Order

II. Roll Call

III. Approval of February 8, 2017 TaP Commission Minutes

III. Public Comments – General Topics or Issues NOT on Tonight's Agenda

## 1. File # 6-17 Lester School – Indianapolis Avenue – Parking Revisions

**Action Requested:** Discussion and Recommendation to Council

**Description:** Staff is initiating this request, in response to the School's concern with problems occurring during afternoon pickup. A staff report has been prepared and letters were sent to residents in this adjacent to the parking revisions notifying them of the discussion. Staff is recommending this action and requesting APPROVAL from the Commission.

## 2. File # 7-17 Neighborhood Study – Traffic Control Revisions

**Action Requested:** Discussion and Recommendation to Council

**Description:** Staff is initiating this request, based on the completion of neighborhood study 5. A staff report has been prepared and letters were sent to residents in this neighborhood notifying them of the discussion. Staff is recommending this action and requesting APPROVAL from the Commission.

## 3. File # 8-17 Neighborhood Study – Pavement Marking and Sign Revisions

**Action Requested:** Discussion and Recommendation to Council

**Description:** Staff is initiating this request, based on the completion of neighborhood study 5. A staff report has been prepared and letters were sent to residents in this neighborhood notifying them of the discussion. Staff is recommending this action and requesting APPROVAL from the Commission.

## 4. File # 9-17 Neighborhood Study – Sidewalk Installation

**Action Requested:** Discussion and Recommendation to Council

**Description:** Staff is initiating this request, based on the completion of neighborhood study 5. A staff report has been prepared and letters were sent to residents in this neighborhood notifying them of the discussion. Staff is recommending this action and requesting APPROVAL from the Commission.

IV. Old Business

V. Communications

VI. Adjourn

*This is a tentative regular meeting agenda that is subject to change.*

DRAFT

**TRANSPORTATION AND PARKING COMMISSION**
**Minutes**
February 8, 2016, 7:00 p.m.

Council Chambers - Village Hall
801 Burlington Avenue, Downers Grove

Chairwoman Dunne called to order the February 8, 2017 meeting of the Transportation and Parking Commission at 7:00 p.m. and led the meeting with the recital of the Pledge of Allegiance. Roll call followed and a quorum was established.

**ROLL CALL**

Present: Chairwoman Dunne; Commissioners Aguzino, Carter, Saricks, Schiller, Wilkinson

Absent: Commissioner Wrobel

Staff Present: Public Works Traffic Engineer Will Lorton

Others: Downers Grove Police Officer Tim Sembach; Downers Grove residents: William Fitzgerald, 1241 Maple; Ted Searcy, 750 61st St.; Norm Kerr, 1314 Maple Ave.; Theresa Schulz, 1307 Maple Ave.; Don Renner, 1304 Maple Ave.; Clint Trapp, 1333 Maple Ave.; Todd Thiessen, 1311 Maple Ave.; Alan Kwak, 800 61st St.; Mike Breagel, 812 61st St.; James Turner, 801 61st St.

**APPROVAL OF MINUTES - DECMBER 14, 2016**

A change was noted on page 3, second paragraph, delete the word "head counts" and insert the word Ped-counts (pedestrian counts); also on bottom of Page 3, a revision to No. 3 within the motion should read "that a stop sign be installed on the north leg of 62nd Street and Plymouth Street. **MINUTES OF THE DECEMBER 14, 2016 MEETING WERE APPROVED, AS REVISED, ON MOTION BY MR. SCHILLER, SECONDED BY MR. SARICKS. MOTION CARRIED BY VOICE VOTE OF 6-0.**

**PUBLIC COMMENT (on non-Agenda items) –** None.

**File #1-17 Maple Avenue – Pavement Marking Revisions**: Traffic Engineer Will Lorton stated this case was in response to a resurfacing project, specifically to address Dunham Avenue to Carpenter on Maple Avenue. Currently there were only parking restrictions on the south side of Maple at the discussed location. For 550 feet east along the curve at Dunham Street to Carpenter, no parking restrictions existed on the north side of Maple. Staff was looking for resident and commission input on three alternatives: 1) to leave the roadway striped as is; 2) shift the center lane to the south and create a 9-foot lane for eastbound traffic; or 3) offset the center lane with two 9-foot lanes striped with parking boxes provided with omissions for driveways/hydrant. Staff supported Alternative 3.

Mr. Lorton shared that he did not know why the parking was originally restricted on the south side of Maple. He confirmed he was not recommending the offset due to speeding issues. Mr. Schiller pointed out that the areas under discussion were including sites where crashes occurred, wherein Mr. Lorton explained that 17 traffic crashes occurred on Carpenter (over a five-year period) which were related to improper backing of vehicles. It was noted by the chair that given this was a five-year period and only 3 or 4 sideswipes occurred she did not feel it was atypical of parking on a roadway, which would support staff's Alternative 3.

Chairwoman Dunne invited public comment.

Mr. Clint Trapp, 1333 Maple Avenue, Downers Grove, asked if there were any other success stories, besides Prairie and Carpenter, that what was being proposed was subjectively beneficial, wherein Mr. Lorton summarized that speed is reduced when a travel lane width is reduced. Mr. Trapp believed a before and after study would be beneficial. Continuing, Mr. Trapp asked what options were reviewed by staff to ease or slow down traffic, since he had his own ideas and shared that the area was a pass-through street for drivers. Mr. Trapp suggested a No Right Turn on Red onto Maple Avenue.

Mr. Lorton explained that the project was a resurfacing project with an intent to replace. The curb line could not be changed unless ADA compliance ramps were being added. The re-striping was a minimal cost and there was state funding connected to the project.

Mr. Trapp summarized that high school students were in the area and it was very busy where he lived. He believed installing a stop sign at Brookbank would be beneficial and deter traffic to 55th Street, wherein Mr. Lorton explained that a future county project was occurring at 55th and Main Streets with added left-turn lanes. Mr. Trapp believed those would be beneficial.

Responding to Mr. Trapp's question regarding the length of a traffic study for a stop sign, Mr. Lorton explained how a warrant for an all-way stop would be conducted.

Mr. Trapp said he would rather see more information regarding the parking boxes on Maple Avenue. He stated that most residents were not aware they could park on the north side of Maple Avenue and when the boxes are striped, he said more parking would be available. He hoped it would help with his complaints.

Mr. Don Renner, 1304 Maple Ave., Downers Grove, opposed Alternative No. 3. He asked staff what residents asked for the parking space demarcations on the north side and who were the parking spaces going to accommodate? He stated that everyone knows that if you park on the north side your car will get side-swiped; not enough room existed to add the parking lane. Lastly, he asked why was the only portion west of Carpenter to Dunham was being discussed and not the portion of Maple Avenue from Washington Avenue to the train tracks?

Mr. Lorton summarized how the resurfacing project for Maple Avenue was made up of two projects coupled together to receive additional funding but then were separated. Details followed, noting residents would be notified regarding the eastern portion of Maple.

Continuing, Mr. Renner explained the traffic issues that arise when a Swan's delivery truck make deliveries on the north side of Maple – noting the truck is pulled all the way to the side and westbound and eastbound traffic have to alternate stopping. If parking is allowed on the north side, he saw no difference with the traffic issue and asked if that was the point -- to continue to cause traffic jams. Mr. Renner also stated that if he was an Avery Coonley parent he would probably park in front of his house (north side) and wait for the child, back into a driveway and then head eastbound on Maple instead of waiting in a long line. Furthermore, he stated that between 3:00 pm and 4:00 pm the line of cars waiting for the Avery Coonley students backs up past his home on Maple. He has seen tire tracks from parents who have pulled up on his grass to turn around instead of waiting in line for their student. He believed adding parking spaces would cause issues.

Furthermore, he described that he and his wife will experience challenges when trying to back out of their driveway when cars are parked on both sides of the driveway. Sight lines will be an issue. Mr. Renner said he was fearful of children playing around parked cars, as they are another obstruction to vehicles traveling down Maple. Landscapers currently parked on

Brookbank and on Maplewood Streets and if the village moved forth with the recommendation, the village would be encouraging the landscapers to park their vehicles in the marked stalls and the same issues would exist as the delivery trucks. Mr. Renner voiced issues about: the lost parking at Main and Maple; commuters will consider the free parking west of Carpenter on Maple Avenue; emergency vehicles maneuvering; and having parked cars on the north side of Maple took away the aesthetics of Maple Avenue.

Discussing the alternatives, Mr. Renner stated the village's code lists 25 MPH for all village streets unless otherwise posted. He stated Maple Avenue was currently 30 MPH and could be changed to 25 MPH, along with enforcement. He suggested as another alternative to install a stop sign at Brookbank, since a majority of speeders were traveling during the PM rush hour, so that traffic could be diverted to 55th Street. He preferred that staff make its recommendation after receiving public comment.

Per the chair's question on whether there was any history of citations or sideswipes on Maple Avenue during current conditions, Officer Sembach did not have that information nor knew if there were any speed studies done. Under present conditions, Officer Sembach stated that from his observation he saw very little parking along the north side of Maple Avenue. The majority of parking was on Maplewood. Understanding what was being proposed would generate more parking, Mr. Saricks thought it prudent the village look at it from a safety standpoint on Maple Avenue.

Mr. Norm Kerr, 1314 Maple Avenue, Downers Grove, opposed the parking boxes, as proposed, voicing concern about safety and clearance. He asked whether traffic traveling westbound would have to stop in order for a car to pass, citing the safety issue that existed currently when cars are parked. Mr. Lorton provided his response. Mr. Kerr elaborated on the current safety issues of Maple Avenue and added that he attended a similar meeting back in 2004/2005 where the reduction of speed (to 25 MPH) and police enforcement was discussed. He cited that placing parking boxes on the north side was not a good idea and he opposed it for safety and traffic reasons. Asked what option he preferred, Mr. Kerr stated to leave it as is.

Mr. Kerr asked Mr. Lorton on the type of center line that would be painted wherein Mr. Lorton said it would be a solid double yellow line and the width should be enough to clear the parking without cars leaving their lane. Mr. Kerr voiced otherwise and explained that currently vehicles had to cross over the line to avoid coming close to a parked vehicle. Even if the line was moved south (four and one-half feet), Mr. Kerr stated drivers would have to cross the double yellow line in order to get around the parked cars.

For clarification purposes the chair noted that while Alternative 1 would solve Mr. Kerr's concerns, she was worried Alternative 3 would exasperate the existing conditions wherein Mr. Kerr added that Alternative 3 "would invite people to park in an unsafe situation."

Mr. Todd Thiessen, 1313 Maple Ave., Downers Grove, agreed with the above comments. However, he lived on the south side of Maple and said if the parking boxes were there, he would have to back out of his driveway into traffic and into a parked car. Pointing out the 9 feet width of the lanes, Mr. Thiessen said imagine driving into your one-car garage (9 feet wide) at 30 MPH and see how many times before you take off a mirror. He tells relatives/friends to not park on Maple Avenue.

Mr. Bill Fitzgerald, 1241 Maple Ave., Downers Grove, agreed with the above comments and stated parking should not be allowed on Maple; it should be 25 MPH and a stop sign should be installed at Brookbank and Maple. He asked if there was any discussion about a crosswalk being installed at Brookbank and Maple, since there were pedestrian safety concerns at that

location. He described the lack of sidewalk existing to get to Denburn Woods. If a stop sign were to be installed, he suggested doing it right by including a crosswalk.

Dialog ensued regarding crosswalks and why and where they are installed as it relates to stop signs.

Ms. Theresa Schulz, 1307 Maple Ave., Downers Grove, asked if there was any discussion, internal or at prior public hearings, about adding a stop sign at Brookbank and Maple. She stated that the sign was requested prior and she wanted to ensure that there was follow up since she proposed the installation. Commissioner comments followed that it may not have come before this committee; it may have not met the warrants; and that Mr. Lorton did not see such petition since his joining the village in August 2016.

Ms. Schulz expressed concern that there were requests by many people to have a stop sign installed there for safety and the issue was raised again tonight. Mr. Schiller stated he and some other commissioners were on the commission a number of years but he did not recall the request coming up which was why he suspected the sign did not meet the state's required warrants. He stated the residents had the option to fill out the petition again, have management review it, and if it met the requirements, then it would come before this commission.

Ms. Schulz stated she did bring the request up at an important public hearing, but many issues were raised as well. However, she said this issue was important for safety and she emphasized that it was important to have a stop sign installed at Brookbank and Maple. She asked if there was another process to follow and if so, to put the current issue on hold. Ms. Schultz added that she was opposed to the parking boxes and relocating the line. She requested that the roadway remain as is. She asked if there was a study done when the parents are parked at Avery Coonley School, noting it was very challenging to pass those vehicles at a consistent speed, and would also be a challenge when the vehicles are parked there all day long.

On another point, Ms. Schulz voiced the challenge of crossing with her child to the other side of Maple, due to waiting for a break in the traffic. Having parked cars there now would increase that difficulty due to the visual barriers. She stated she does not have her guests nor herself park on Maple due to safety concerns. She recommended that besides the stop sign, she would like a longer left turn arrow on Maple to go south on Main Street to allow for better traffic flow. Lastly, she said it was difficult for her to back out of her driveway and stay in one lane. If her lane was narrowed to nine feet she would not be able to pull out of her driveway safely.

Mr. Norm Kerr, 1314 Maple Ave., returned and explained that when events take place in the village, the police will install No parking signs along Maple from Carpenter to Avery Coonley. Should the parking boxes be painted, he asked whether that would continue, wherein Officer Sembach did not know if that was looked into. Mr. Kerr commended the commission and asked that they do the right thing for this particular case and not make the changes.

Mr. Don Renner, 1304 Maple, confirmed the acronym "ADA" (American with Disabilities Act) with staff and acknowledged that funding would be provided if ADA improvements were made. Mr. Lorton clarified that the funding for the project included funds to upgrade the crosswalks. Internally, staff was adding them along stretches of Maple and he recollected a crosswalk was being to Brookbank and Maple. Mr. Renner asked staff to explain the next steps for the recommendation and asked what happens if the plans are not submitted to IDOT by March 20th. Mr. Lorton indicated that plans were prepared for all three alternatives and it was a matter of selecting an alternative and voting on the recommendation at the March 8th TAP meeting.

A resident came forward and asked if there was a date for the resurfacing project, to which Mr. Lorton indicated there was not.

Chairwoman Dunne closed public comment. She emphasized that the commission was not advocating for anything and that staff was seeking public input on this matter. And, after hearing the input, she believed there was a consensus that parking on the north side of Maple in delineated boxes would not be the preferred alternative.

Commissioner Schiller asked the residents if anyone had an objection if the resurfacing project moved forward with the center line down the middle of the street. Then, when the other petitions are filed and investigated, the commission could review them at that time. Residents spoke up and stated that was what they wanted.

Commissioner Carter asked staff whether a speed limit study could be conducted for a period of 60 days, for example, since that was a concern, as well as adding the stop sign at Brookbank if the volume warrants were met. Mr. Lorton indicated that both a speed study and volume counts could be done near Brookbank; however, he stated that installing a stop sign should not be used for speed control. He elaborated on different scenarios where it would not be beneficial. Lastly, Mr. Lorton confirmed he could look at both issues for Mr. Carter.

In preparation for next month's meeting Commissioner Wilkinson suggested that the residents prepare their petition listing each of their points/requests for staff and that the final resurfacing project be presented at the next TAP meeting.

**File # 2-17 Kingsley School Parking – Powell Street – Parking Revisions**: Mr. Lorton reported this was a staff initiated request in response to Kingsley School contacting the village in December. The school was having ingress/egress issues with certain vehicles during the afternoon. Mr. Lorton reported that currently parking was allowed on the east side of Powell Street with a No Parking restriction from 8 AM to 11 AM. He further described what he found during a site visit to the school. After speaking with the officials from the school, he said it was determined to revise the loading zone to include a restriction from 2:30 PM to 3:00 PM, since the Kids Cabs loaded earlier than the school buses, and it would help with site circulation.

Mr. Lorton referenced the proposed revision for Section 14991, No Parking Zones – School Bus Loading Zones, including School Vehicles. He stated the restriction would be on the east side of Powell Street, 65 feet south of the south line of Norfolk Street to 145 feet south of the south line of Norfolk Street between the hours of 2:30 PM to 3:00 PM. An additional sign to an existing sign post would be added.

The chairwoman asked staff to explain before and after scenarios for better clarification. General questions followed, noting the school contacted staff to review and investigate the area to assist with facilitation. Lastly, it was pointed out that a number of different No Parking signs, with restrictions, were located on Powell Street heading south from Norfolk, which were confusing. Mr. Lorton explained the differences. Confirmation followed that the parking parents were being pushed back to the south. Mr. Lorton said the only issue was when parents arrived early to park, resulting in the Kid Cab vehicles not being able to park together.

Responding to the chairwoman's question on the expectation that the line would move up when the Kids Cabs drove off or would anxious parents cut in line at 2:55 PM to avoid the longer line, Mr. Lorton stated either could occur. Other questions followed as to how parents would know that the last (4$^{th}$) Kid Cab left for the day. Mr. Lorton stated a time restriction would exist.

Public comment was invited by the chairwoman. No public comment received.

Chairwoman Dunne believed that it was a better resolution than intermingling vehicles but may not be the best solution. Yet, she did not see a better solution to resolve the issue. As a result, she would support staff's recommendation given that the school made the request.

**WITH RESPECT TO FILE 12-17, MR. SCHILLER MADE A MOTION THAT THE TRANSPOR-TATON AND PARKING COMMISSION FORWARD A POSITIVE RECOMMENDATION TO THE VILLAGE COUNCIL TO INSTALL CUSTOM SIGNS ON POWELL STREET THAT DESIGNATE THE FIRST 100 FEET OF EAST CURB AS A DESIGNATED SCHOOL VEHICLE LOADING ZONE FROM 2:30 PM TO 3:00 PM AND TO REVISE VILLAGE ORDINANCES TO REFLECT THE PARKING REVISION.**

**SECONDED BY MR. CARTER.**

**MOTION CARRIED UNANIMOUSLY BY VOICE VOTE OF 6-0.**

**<u>File #3-17 61ST Street at Lyman Avenue – Parking Revisions</u>**: (Mr. Aguzino leaves meeting 8:20 pm) Traffic Engr. Lorton reported this was a resident-initiated request on January 18, 2017 with the issue of vehicles parking on the curb, impacting vehicle movements through the curb. Per staff, the existing restriction that should be in place would limit the parking near the fire hydrant on the north side of 61st and the restriction should be placed on Lyman to limit parking near the unmarked crossing. Characteristics of both streets followed. On a field visit and through Google Earth, Mr. Lorton stated he took curb measurements. There was no crash history from 2010 to 2016 but that did not include any near misses. Photos were referenced.

Mr. Lorton asked that commissioners consider two scenarios: 1) vehicles parking on the curb, and 2) vehicles parked on either side on the approach of the curb. Exhibits followed, noting the issues that come with both scenarios. The proposed revision was in Section 1498 of the Ordinance: No Parking Zone, Generally. Proposed is to box 15 feet west of the hydrant on 61st Street and 20 feet south of the crosswalk on Lyman. No restrictive hours would be placed on the signage. Mr. Saricks pointed out that had this been a standard ninety-degree intersection of two streets the parking restrictions would be in place but the only difference was due to the continuous curve.

Public comment was invited by the chairwoman.

Mr. James Turner, 801 61st St., Downers Grove, sent in the petition and discussed how over the years people would park and eventually started parking in the curve and driving on the grass. The snow plows also travel over the curve annually. Safety was a concern.

Asked if Mr. Turner was concerned that cars would be shifted closer to his home, he stated it was "part of the deal – they come for awhile; then they go away." He further comment that it became dangerous for his wife when vehicles start overlapping lanes. He viewed the matter as a safety issue, per the chair's questions.

Mr. Ted Searcy, 760 61st Street, Downers Grove, asked how far an intersection is back from a sidewalk to have no parking, to which Mr. Lorton explained the MUTCD refers to an unmarked crossing and would place it at 20 feet. Clarification followed by staff.

Mr. Mike Breagel, 812 61st St., resides three houses west of the curve. He voiced there were safety concerns with parking on both sides of the street, especially when activities were underway at the YMCA as well as negotiating out of his driveway when vehicles were parked on

both sides. Mr. Breagel summarized other issues included cut-through traffic to avoid the stoplight at 63rd and Main at rush hour as well as speeding on his street that is never enforced. Mr. Alan Kwak, 800 61st St., Downers Grove lives in front of the fire hydrant. He could go "either way with" the parking issue. His concern was that the intersection was dangerous because it was used as a cut-through to get off of Main Street to miss the light at Main/63rd. He believed it was a stop sign issue. In order to slow down speeding vehicles he has parked his vehicle on the street; his neighbors supported same. He was against the parking since it was near the park but because of the curve, he could see the danger. He believes it will push the parking further down the street and leave him with one parking space in front of his home. Mr. Kwak suggested installing a stop sign at Washington and 61st Street or at 61st and Lyman. Personally, he did not notice anyone parking on the curb. He believed if a No Parking sign was going to be installed, so should a stop sign.

Asked if he would be impacted with the change, Mr. Kwak said he would have one parking space versus two currently, but he was not concerned with that because it was a safety issue regarding the speed. There were also no warning signs approaching the curve.

Mr. Ted Searcy returned and stated he was in favor of not having the parking along the curve section. He further stated the busiest times were during the summer on Saturday mornings, next to the soccer fields, where cars parked up and down the street in each direction. He said if parked cars existed on the curve there were sight line issues when two cars were trying to pass each other. He supported extending the curve restriction for another 20 feet.

Mr. James Turner, 801 61st Street, returned and shared his concern that 20 feet may not be enough but deferred to the ordinance. He added that since the installation of the sidewalk it may temp drivers to drive into the YMCA field since they cannot park in the curve anymore. Lastly, he expressed concern about emergency vehicles getting through the area.

Mr. Mike Breagel returned and stated he lived in his home since 1979 and only recalled two accidents where cars did not negotiate the curve going east on 61st and eventually traveling through a neighbor's fence.

Public comment was closed.

Mr. Wilkins suggested the No Parking Anytime sign be considered as well as staff adding the warning signs about children playing or adding Slow signs on either side of the curve. In response, Mr. Lorton stated he would go forward with the parking restriction but would forward the petition to those residents who emailed him to look at traffic calming measures one of which could include striping the No Parking area as well as adding additional signage on the curve. He would investigate stops signs based on the warrants. Mr. Saricks questioned staff whether it was prudent to add signage that states "Caution: Blind Curve Ahead" wherein staff indicated it could be considered. Also if vehicles enter the field, Mr. Lorton said he could discuss with the YMCA the installation of sign posts with diamonds in order to prevent vehicles from entering the field.

**WITH RESPECT TO FILE #3-17, MR. SARICKS MADE A MOTION THAT THE TRANSPOR-TATON AND PARKING COMMISSION FORWARD A POSITIVE RECOMMENDATION TO THE VILLAGE COUNCIL TO APPROVE THE INSTALLATION OF NO PARKING SIGNS ON THE CORNER OF 61ST STREET AND LYMAN AVENUE AND TO REVISE VILLAGE ORDINANCES TO REFLECT THE PARKING REVISION.**

**SECONDED BY MR. SCHILLER.**

**MOTION CARRIED UNANIMOUSLY BY VOICE VOTE OF 5-0.**

**File #4-17 Mini Study 1 Update**: Traffic Engr. Lorton recalled this was in response to the December meeting where staff would provide smaller studies to expedite adding control to 4-way uncontrolled intersections. Due to weather, the counters could not be placed in the locations. The three locations that fell under the snow route of the replacement program included Oak Hill Court/Venard Road; Pomeroy Road/35th Street; and Williams St./39th Street. Staff asked for commissioner support to get the counts – weather permitting – and then provide the reports individually. Asked if this matter would return next month, Mr. Lorton said it would depend upon weather permitting. Future packets would include anywhere from 3 to 6 intersections depending on the snow route. Details followed.

Asked what staff's procedure would be for meeting the two-way stop control, Mr. Lorton explained that the network surrounding the intersection would need to be reviewed, not just the intersection itself. The commission was fine with staff moving forward on the above study.

**File #05-17 Traffic Count Update**: Traffic Engr. Lorton stated an RFP was initiated on February 3, 2017 requesting yearly traffic counts, including ADTs, which would be done by a traffic consultant. Peak hour pedestrian volumes were added. Proposals will be accepted until February 17, 2017. Clarification followed by Mr. Lorton that the pedestrian counts will be throughout the 2017 calendar year, as needed, provided there is a remaining budget.

**OLD BUSINESS:** Per Mr. Saricks' question about an update to the village's bicycle and pedestrian plan, Mr. Lorton explained the focus was on pedestrians and ensuring current pedestrian accommodations meet ADA. The bicycle plan was set aside as the need arises. From what he understood, Neighborhood Study 5 would bring delineation with sharrows as an alternative. Details followed. Regarding the bike path planned for 31st Street, Mr. Lorton was not sure if it was delayed due to the state's budget.

Per staff, Neighborhood Study 5 will be held at Puffer Elementary School on February 16-17, 2017 at 6:30 p.m. if commissioners wanted to attend.

Mr. Wilkinson asked if there were plans to restripe many of the intersections in school crossings throughout town as well as some roadways. Mr. Lorton reported for this year $50,000 was budgeted for restriping with no specific plan determined yet.

**COMMUNICATIONS** – In commissioners' packets.

**ADJOURN**

**MR. SCHILLER MADE A MOTION TO ADJOURN THE MEETING AT 8:52 P.M.**
**MR. CARTER SECONDED THE MOTION. MOTION CARRIED BY VOICE VOTE OF 5-0.**

Respectfully submitted,

Celeste Weilandt
Recording Secretary
(transcribed from MP3 recording)

# Public Works Staff Report
# File # 06-17
# Lester School Parking – Lincoln Avenue and Indianapolis Avenue

## BACKGROUND

This item is being presented by staff in response to the School's concern with the existing parking signs around the school. Initially the various parking restrictions were thought to be the problem with site circulation. There are multiple signs are in the are for 5 ordinances restricting parking/traffic immediately adjacent to Lester School on Lincoln Avenue and Indianapolis Avenue.

- General No Parking
- No Parking between 8:00 AM and 9:00 AM, 2:00PM and 3:00PM on School Days
- No Parking between 7:00 AM and 9:00 AM, except on weekends and holidays
- No Parking between 7:00 AM and 9:00 AM, 2:00 PM and 3:00 PM except weekends and legal holidays
- Temporary Road Closures – School Zones 8:00 AM to 9:00 AM and 2:30 PM to 3:30 PM

The dismissal bell has been changed to release kids between 2:55PM and 3:05PM which is reflected in the temporary road closure ordinance but not in the parking ordinances.

Lincoln Avenue and Indianapolis Avenue are both East-West roadways classified as local streets. Lincoln Avenue is approximately 24' wide while Indianapolis Avenue is approximately 23' wide. See **Exhibit.**

## Current Ordinances:

**Section 14.98 No parking zones-Generally**
*Indianapolis Avenue, on the north side, from a point seventy feet east of the east line of Florence Avenue to a point eighty-eight feet west of the east line of Florence Avenue*

**Section 14.104.04. Same--Between 8:00 A.M. and 9:00 A.M., 2:00 P.M. and 3:00 P.M. on school days.**
*Indianapolis Avenue, on the north side, from a point fifty (50) feet west of Florence Avenue to a point one hundred fifty (150) feet west of Florence Avenue.*
*Lincoln Avenue, on the north side, from a point four hundred fifty (450) feet west of Cumnor Road to a point five hundred fifty (550) feet west of Cumnor Road; and on the south side, from a point five hundred (500) feet east of Fairview Avenue to a point seven hundred fifty (750) feet east of Fairview Avenue.*

**Section 14.104.08. Same--Between 7:00 A.M. and 9:00 A.M., except on weekends and holidays.**
*Indianapolis Avenue, on the north side, between Cumnor Road and a point fifty (50) feet west of Florence Avenue; also from a point one hundred fifty (150) feet west of Florence Avenue to Fairview Avenue.*

**Section 14.104.11. Same-Between 7:00 A.M. and 9:00 A.M., 2:00 P.M. and 3:00 P.M. except weekends and legal holidays.**
No person shall stop or let stand any automobile, motor vehicle or other vehicle, between the hours of 7:00 a.m. and 9:00 a.m. or between the hours of 2:00 p.m. and 3:00 p.m., except on weekends or legal holidays, in the following location:
*Indianapolis Avenue, on the south side, between Fairview Avenue and Florence Avenue.*

**Section 14.4.1. Temporary Road Closures - School Zones.**
The following roadways shall be closed on a temporary basis: a. School Zones. To coincide with the afternoon dismissal of high school students, as described below:
*Lincoln Avenue, eastbound, from Fairview Avenue to Cumnor Road. Provided, this restriction shall only apply on school days between the hours of 8:00 a.m. to 9:00 a.m. and 2:30 p.m. to 3:30 p.m.*

## STUDY

Staff has observed the area through a field visit to the area. The concern as portrayed by school officials is that the current ordinances do not promote the best circulation during the afternoon dismissal. During Staff's visit it was determined that only minor changes are needed to help facilitate smoother circulation. The problem is the south side of Indianapolis Avenue, west of Florence Avenue.

The parking restriction in this area allows parking after 3:00 PM and cars were observed parking starting as early as 2:45 PM. A majority of pick-ups occur with vehicles parking on the north side of the street (where there is no afternoon restriction). When cars are parked on both sides of the street, there is not enough room for both eastbound and westbound movements. Revising the ordinance of this area from 2:00 PM – 3:00 PM to 2:30 PM – 3:30 PM should prevent this from occurring during the highest volume time of pick up.

Staff does not have any issues with revising the ordinances and signage in this area to reflect the new bell schedule and state from 2:30PM to 3:30PM. These revisions should benefit total site circulation and efficiency of the pick up process.

## RECOMMENDATION

Staff recommends the Transportation and Parking Commission forward a positive recommendation to the Village Council that the following be implemented:

- **REVISE ORIDNANCE FOR *INDIANAPOLIS AVENUE, ON THE SOUTH SIDE, BETWEEN FAIRVIEW AVENUE AND FLORENCE AVENUE* TO BE BETWEEN 7:00 AM AND 9:00 AM, 2:30 PM AND 3:30 PM.**

DISCLAIMER: This drawing is neither a legally recorded map nor a survey, and is not intended to be used as such. This drawing is a compilation of records, information and data located in various village, county and state offices, and other sources, affecting the land area displayed and is to be used for reference purposes only. The Village of Downers Grove shall not be responsible for any inaccuracies herein contained. If discrepancies are found, please contact the Downers Grove Information Technology Department.

0 0.0125 0.025 0.05 0.075 0.1 Miles

N

# Public Works Staff Report
# File # 07-17
# Neighborhood Study 5 – Traffic Control Revisions

## BACKGROUND

This item is being presented by staff in response to the completion of Neighborhood Study 5. KLOA was retained by the Village in order to perform Neighborhood Study 5 as they previously have performed Neighborhood Studies 1, 2, and 4. KLOA performed traffic counts and site observations and provided the Village with a finalized report with recommendations. This item will specifically address the proposed traffic control revisions.

The existing and proposed conditions are shown in the **Neighborhood Study 5 Report** as **Figure 5** (Existing) and **Figure 9** (Proposed).

## STUDY

Based on traffic counts and field observations KLOA has provided a number of proposed stop locations. See attached **Neighborhood Study 5 Report**. The recommendations follow a similar approach that has been discussed at previous Transportation and Parking Commission meetings to establish right-of-way at uncontrolled intersections.

## RECOMMENDATION

Staff recommends the Transportation and Parking Commission forward a positive recommendation to the Village Council that the following be implemented:

- **REVISE ORDINANCE FOR ALL PROPOSED STOP SIGNS IN FIGURE 9.**

# Public Works Staff Report
# File # 08-17
# Neighborhood Study 5 – Pavement Marking and Sign Revisions

## BACKGROUND

This item is being presented by staff in response to the completion of Neighborhood Study 5. KLOA was retained by the Village in order to perform Neighborhood Study 5 as they previously have performed Neighborhood Studies 1, 2, and 4. KLOA performed traffic counts and site observations and provided the Village with a finalized report with recommendations. This item will specifically address the proposed pavement marking and sign revisions.

The existing and proposed conditions are shown in the **Neighborhood Study 5 Report** as **Figure 4** (Existing) and **Figure 10** (Proposed).

## STUDY

See attached **Neighborhood Study 5 Report**.

## RECOMMENDATION

Staff recommends the Transportation and Parking Commission forward a positive recommendation to the Village Council that the following be implemented:

- **IMPLEMENT PROPOSED CROSSWALKS WITH EXCEPTION TO THE PROPOSED CROSSWALK THAT CROSSES WARREN AVENUE.**
- **IMPLEMENT PROPOSED S1-1 SIGN ON HADDOW AVENUE.**

# Public Works Staff Report
# File # 09-17
# Neighborhood Study 5 – Sidewalk Installation

## BACKGROUND

This item is being presented by staff in response to a petition and the completion of Neighborhood Study 5. KLOA was retained by the Village in order to perform Neighborhood Study 5 as they previously have performed Neighborhood Studies 1, 2, and 4. KLOA performed traffic counts and site observations and provided the Village with a finalized report with recommendations. This item will specifically address the installation of sidewalks within the study area.

The existing and proposed conditions are shown in the **Neighborhood Study 5 Report** as **Figure 4** (Existing) and **Figure 10** (Proposed).

## STUDY

Following the completion of Neighborhood Study 5 a neighborhood meeting was held at Henry Puffer School in February to discuss the results of the study, possible sidewalk installation, and the possible drainage improvements. Many residents provided comments in regards to the addition of sidewalks and were in favor of the addition.

See attached **Neighborhood Study 5 Report**.

## RECOMMENDATION

Staff recommends the Transportation and Parking Commission forward a positive recommendation to the Village Council that the following be implemented:

- **IMPLEMENT SIDEWALKS IN CONJUCTION WITH PROPOSED DRAINAGE IMPROVEMENTS.**

# Neighborhood Traffic Study
# Area Number 5

## Downers Grove, Illinois

Prepared for:

**Village of Downers Grove**

Submitted by:

**Kenig, Lindgren, O'Hara, Aboona, Inc.**

April 2017

# Neighborhood Traffic Study
# Area Number 5

# Downers Grove, Illinois

Prepared For

**Village of Downers Grove**

Prepared By

**Kenig, Lindgren, O'Hara, Aboona, Inc.**
Rosemont, Illinois

April 2017

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# 1. Introduction

The Village of Downers Grove has retained Kenig, Lindgren, O'Hara, Aboona, Inc. (KLOA, Inc.) to conduct the neighborhood traffic study in Area Number 5. Overall, the objective of the study was to thoroughly examine the existing operations within the neighborhood, identify operational deficiencies, and recommend modifications and/or improvements to enhance both vehicular and pedestrian operations. In addition, this included addressing the primary traffic concerns within a neighborhood, vehicular volume, vehicular speed, and overall vehicular and pedestrian safety.

Located on the western border of the Village, the neighborhood is generally bounded by Ogden Avenue, Henry Puffer Elementary School, and the Downers Grove Golf Club on the north, Belmont Road and the Downers Grove Golf Club on the east, Burlington Avenue on the south, and Walnut Avenue on the west. The neighborhood has 10 north-south roads and five east-west roads. Primarily consisting of single-family homes, the neighborhood also contains Henry Puffer Elementary School, Downers Grove Golf Club, Belmont Prairie Natural Preserve, and several parks. In addition, the Belmont Metra train station is located in the southeast quadrant of the neighborhood and commercial uses are located along the north end of the neighborhood. **Figure 1** shows the location of the neighborhood (all of the figures for this study are provided in the Appendix).

# 2.
# Existing Neighborhood Conditions

Transportation conditions were inventoried to obtain a database for evaluating the existing operations within the neighborhood and along the roadways bordering the neighborhood. The components of existing conditions that were inventoried within the neighborhood included the following:

- Existing land uses
- Physical and operating characteristics of the roadways (i.e., number of lanes, speed limits, traffic control, etc.)
- Existing traffic control devices
- Existing pedestrian and bicycle facilities
- Existing daily traffic volumes and vehicle speeds
- Existing morning and evening peak hour volumes

## Study Area and Existing Land Uses

The neighborhood is generally bounded by Ogden Avenue, Henry Puffer Elementary School, and the Downers Grove Golf Club on the north, Belmont Road and the Downers Grove Golf Club on the east, Burlington Avenue on the south, and Walnut Avenue on the west. Located along the western boundary of the Village, single-family homes are the predominant land use within the neighborhood with some commercial and office land uses located along Ogden Avenue. The neighborhood contains Henry Puffer Elementary School, which is located in the northwest quadrant of the Belmont Road/Haddow Avenue intersection, and the Belmont Prairie Nature Preserve and Walnut Park, which are located in the western portion of the neighborhood. In addition, the Belmont Metra train station and a parking lot for the train station are located in the southeast portion of the neighborhood. Finally, the Downers Grove Golf Club is located adjacent to the neighborhood with access provided via Haddow Avenue.

## Existing Roadway System

The two external roadways that border the neighborhood are described below.

*Ogden Avenue (U.S. Route 34)* is a northeast-to-southwest road that is under the jurisdiction of the Illinois Department of Transportation (IDOT). It has a five-lane cross section with a posted speed limit that varies from 35 mph to 40 mph. Traffic signal control is provided at its intersections with Belmont Road, Cross Street, and the I-355 ramps. IDOT classifies Ogden Avenue as a major arterial.

*Belmont Road* is a north-south roadway that is under the jurisdiction of the DuPage County Division of Transportation (DuDOT). In general, Belmont Road has a four-lane cross section and a posted speed limit of 35 mph. Separate left-turn lanes are provided on Belmont Road at its signalized intersections with Ogden Avenue, Prairie Avenue, and Haddow Avenue. Belmont Road has a grade-separated intersection with Burlington Avenue. IDOT classifies Belmont Road as a minor arterial.

### Internal Neighborhood Roadways

Excluding Ogden Avenue and Belmont Road, the following summarizes the physical and operating characteristics of the neighborhood roadways.

- All of the neighborhood roads provide one lane in each direction.
- All of the roadways within the neighborhood are classified as local roads except Walnut Avenue and Burlington Avenue, which are classified as collector roads.
- Parking is generally provided on one or both sides of the roadways except Rose Avenue, Western Avenue, and the western section of Burlington Avenue. However, parking restrictions are provided on many of the roadways. In addition, perpendicular commuter parking is provided along the south side of the eastern section of Burlington Avenue.
- The posted speed limit within the neighborhood is 25 miles per hour with 20 mph school and park zone speed limits except Walnut Avenue and Burlington Avenue, which have a posted speed limit of 30 mph.

**Figure 2** illustrates the number of lanes and posted speed limits on each of the roadways and the geometrics at the primary intersections. **Figure 3** shows the parking restrictions in the neighborhood.

## Pedestrian and Bicycle Facilities and Traffic Control Devices

The neighborhood contains Henry Puffer Elementary School, Downers Grove Golf Club, Belmont Prairie Nature Preserve, Walnut Park, and the Belmont Metra train station. In order to accommodate the neighborhood pedestrian and bicycle activity, a number of facilities and traffic control devices are provided in the neighborhood. These are illustrated in **Figure 4** and highlighted below:

- Burlington Avenue between Belmont Road and Cross Street and Cross Street are designated bike routes.

- Dedicated school crossings are provided at the intersections of Belmont Road with Prairie Avenue and Haddow Avenue with Puffer Road.

- School zones with warning signs and reduced speed limits are located along Belmont Road and Haddow Avenue within proximity to Henry Puffer Elementary School.

- School crossing guards are stationed at the Belmont Road with Prairie Avenue intersection.

- A dedicated pedestrian crossing is provided at the intersection of Haddow Avenue with Edward Avenue and the Downers Grove Golf Club access drive.

- All of the traffic signals provide pedestrian signals.

- Sidewalks are provided on at least one side of all the following roadways:

    - Burlington Avenue
    - Haddow Avenue
    - Puffer Road
    - Chase Avenue
    - Edward Avenue

In order to determine the pedestrian activity around the school, pedestrian counts were conducted at the intersection of Belmont Road with Haddow Avenue. The counts were conducted in November 2016 from 7:00 A.M. to 9:00 A.M. and from 2:00 P.M. to 4:00 P.M. Figure 4 also illustrates the results of the pedestrian traffic counts.

## Existing Intersection Traffic Control

**Figure 5** shows the existing intersection traffic control within the neighborhood and the following provides a summary of the existing traffic control at the 28 intersections within the neighborhood:

- One intersection is under traffic signal control
- Two intersections are under all-way stop sign control
- Nine intersections are under two-way or one-way stop sign control
- One intersection has two of the three legs under stop sign control
- Fifteen intersections have no intersection traffic control

## Existing Daily Traffic Volumes and Speed Surveys

In order to determine the existing traffic volumes and speeds along the neighborhood roadways, KLOA, Inc. conducted daily machine traffic counts and speed surveys at 20 locations. Of the total traffic counts and speed surveys, 12 were conducted along the north-south roadways and eight were conducted along the east-west roadways. The KLOA, Inc. traffic counts and speed surveys were conducted during October 2016. All of the traffic counts and speed surveys were conducted for a minimum of two days and were broken down by direction and by hour.

**Figure 6** shows the two-way daily traffic volumes and **Figure 7** shows the average and 85$^{th}$ percentile speeds observed on the roadways. The average speed is the sum of the observed speeds of all the vehicles divided by the total vehicles on that segment of the road. Average speeds are used to determine the speeds at which motorists are typically traversing a roadway section, whereas the 85$^{th}$ percentile speed represents the speed at or below which 85 percent of vehicles on a roadway section travel under free flow conditions. The 85$^{th}$ percentile speed is commonly used to establish the posted speed limits along roadways.

## Existing Morning and Evening Peak Period Traffic Volumes

In addition to the daily traffic counts and speed surveys, KLOA, Inc. conducted manual peak period traffic counts at the following intersections within the study area:

- Cross Street with Ogden Avenue
- Cross Street with Haddow Avenue
- Haddow Avenue with Belmont Road
- Haddow Avenue with Puffer Road and the Henry Puffer Elementary School access drive

The traffic counts were conducted in November 2016 during the morning (6:00 A.M. to 9:00 A.M.) and evening (3:00 P.M. to 6:00 P.M.) peak periods. **Figure 8** illustrates the existing morning and evening peak hour traffic volumes.

# 3.
# Evaluation of Existing Conditions

To determine how the roadway system is currently functioning, KLOA, Inc. examined the existing operating characteristics within the neighborhood. The purpose of this evaluation was to identify and quantify the current operations and ascertain how the neighborhood's infrastructure and land uses contribute to the existing conditions. This was accomplished by reviewing and analyzing the existing traffic volumes and the speed surveys as well as the physical characteristics of the neighborhood and its transportation system. This evaluation provides the basis to thoroughly analyze and develop recommendations pertaining to the operation and design of the internal roadways.

## Daily Traffic Volumes

From **Figure 6**, it can be seen that the collector roads (Walnut Avenue and Burlington Avenue) carry the highest volume of traffic. This is expected given that collector roads link the local neighborhood roads and land uses to the external or arterial roadway system. Further, the collector roads generally extend the length of the neighborhood and serve many homes and other land uses within the neighborhood. In addition, the eastern section of Haddow Avenue carries a higher volume of traffic which is due in part to the fact that it provides access to Henry Puffer Elementary School, the Downers Grove Golf Club, and the commuter parking lot.

*Residential Streets*, Third Edition[a] indicates that local residential roads have a daily volume between 400 and 1,500 vehicles while residential collector roads have a daily volume exceeding 1,500 vehicles. Therefore, even with the characteristics outlined above, the traffic volumes within the neighborhood are generally within the established standards for residential roads. Overall, given the various non-residential land uses in the neighborhood, the traffic volumes are relatively low.

[a] *Residential Streets*, Third Edition was developed by the National Association of Home Builders (NAHB), the American Society of Civil Engineers (ASCE), the Institute of Transportation Engineers (ITE), and the Urban Land Institute (ULI).

A review of the existing traffic volumes as well as the roadway system's physical and operating conditions indicates that the neighborhood is likely experiencing some limited cut-through traffic along Walnut Avenue, Burlington Avenue, and to a lesser extent along Haddow Avenue and Cross Street. The cut-through traffic can be attributed to the congestion along Ogden Avenue and its intersection with Belmont Road. However, as indicated previously, the traffic volumes in the neighborhood are low and well within the established standards for residential roads.

## Travel Speed Surveys

The main factors affecting travel speeds are the roadway's physical and operating characteristics including width of road, number of travel lanes, hills, curves, roadway surface, and length of free-flow conditions. Many of these attributes are fixed within the neighborhood's infrastructure and are generally difficult and/or costly to change.

Excluding Walnut Avenue and Burlington Avenue which have 30 mph posted speed limits, the internal neighborhood roads had an observed average speed of approximately 20 mph and an observed 85$^{th}$ percentile speed of approximately 26 mph. As shown in **Figure 7**, the average speeds on the roads with a posted 25 mph speed limit were generally between 14 and 29 mph. A number of the surveyed road sections did experience 85$^{th}$ percentile speeds that exceeded the posted speed limit by five mph and were primarily observed along the collector roads and those roadway sections that had longer lengths of free-flow conditions. The speed surveys show that the following roadways had 85$^{th}$ percentile speeds that exceeded the posted speed limit by five mph:

- Walnut Avenue
- Burlington Avenue
- Haddow Avenue
- Dressel Road

# 4.
# Detailed Evaluation and Recommendations

This section of the study provides the detailed evaluation of the internal roadways, pedestrian and bicycle facilities, and traffic control devices within the neighborhood and included a thorough analysis of traffic operations, vehicular and pedestrian/bicycle circulation, and overall safety along the internal neighborhood roadways. Recommendations were developed for the following components of the neighborhood transportation system:

- Intersection Traffic Control Devices
- Pedestrian and Bicycle Facilities

In addition, a number of traffic calming measures and/or tools were identified that can be used to effectively reduce the operating speeds and traffic volumes in the neighborhood.

The recommendations developed in this section were based primarily on accepted engineering practices, conformity with the 2009 *Manual on Uniform Traffic Control Devices* (MUTCD), existing Village criteria, and the input from Village staff. The MUTCD defines the standards used to install and maintain traffic control devices, including all signs, signals, markings, and other devices used to regulate, warn, or guide traffic on all public streets, highways, bikeways, and private roads open to public traffic. While the MUTCD provides guidelines with specific benchmarks, many of the criteria are subjective and are left to engineering judgment and practices.

## Intersection Traffic Control

Development of the intersection traffic control plan involves a comprehensive evaluation of each intersection along with the existing overall operating conditions of the neighborhood (see Chapter 3). Any intersection traffic control plan must consider typical neighborhood issues, such as functional classifications, cut-through traffic, speeding, traffic calming, neighborhood circulation, and land-use impacts. As such, a systematic approach was employed that examined the neighborhood from the inside (each individual intersection) and outside (the overall neighborhood). It is important to note that to increase the level of standardization and consistency of the neighborhood traffic control, the Village has requested that traffic signal control or some form of stop sign control generally be provided at all of the neighborhood intersections.

The first step consisted of evaluating the physical and operating conditions of each intersection to determine if they meet any of the MUTCD warrants/requirements that control the installation of all-way stop sign control. The second step was to determine which road of the one-way and two-way controlled intersections is to be under stop sign control. **Figure 9** illustrates the proposed traffic control plan which is presented below.

### All-Way Stop Sign Controlled Intersections

The following points summarize the all-way stop sign control warrants/requirements as outlined in the MUTCD:

1. Meets the minimum traffic and pedestrian volume
2. Meets the minimum number of intersection crashes
3. Required to control left-turn conflicts
4. Required to control vehicle/pedestrian conflicts
5. Required due to poor intersection sight distance
6. Required to improve traffic operational characteristics of the intersection of two collector roads with similar design and operating characteristics

The characteristics of each intersection were evaluated to verify whether the existing operations met any of the warrants and/or requirements that control the installation of an all-way stop sign control. It has been determined that the following intersections should be under all-way stop sign control:

- *Warren Avenue with the Belmont Road West Ramp*. This intersection should continue to operate under all-way stop sign control as it is the intersection of a collector roadway and the ramp from an arterial road.

- *Warren Avenue with the Belmont Road East Ramp.* This intersection should be converted to all-way stop sign control, given that it is an intersection of a collector roadway and the ramp from an arterial road.

- *Haddow Avenue with Cross Street*. This intersection should continue to operate under all-way stop sign control to maintain this established location and to reduce the uninterrupted flow along Cross Street.

- *Haddow Avenue with Edward Avenue and the Downers Grove Golf Club Access Drive*. This intersection should be converted to all-way stop sign control, given the uninterrupted flow along Haddow Avenue as well as the pedestrian activity in proximity to the intersection.

### Two-Way/One-Way Stop Sign Controlled Intersections

Once the all-way stop sign control intersections were identified, it was assumed that all of the other intersections were to be controlled via one-way (T-intersections) or two-way (four-legged intersections) stop sign control. The criteria used in determining which road of an intersection should be under stop sign control were based on the following:

1. The guidelines provided in the MUTCD.

2. Minimizing the uninterrupted flow along the local road by providing, if possible, a stop sign at every other cross road along the local roads.

3. If possible, maintaining which road is currently under traffic control (via either yield sign or stop sign) at each intersection in order to minimize the change in the flow of traffic through the neighborhood.

### New Two-Way Stop Sign Controlled Intersections

New two-way stop sign control should be provided at the following intersections:

- *Cross Street with Indianapolis Avenue and Drendel Road with Indianapolis Avenue.* Both of these intersections currently operate with no intersection traffic control. The Indianapolis Avenue approaches should be under stop sign control at both intersections.

- *Francisco Avenue with Haddow Avenue.* This intersection currently operates with no intersection traffic control. The Francisco Avenue approaches should be under stop sign control at this intersection.

## Proposed One-Way Stop Sign Controlled Intersections

The following T-intersections currently have no control and should be converted so the minor approaches are under stop sign control:

- *Rose Avenue with Haddow Avenue and Rose Avenue with Burlington Avenue.* The Rose Avenue approaches should be under stop sign control at both intersections.

- *Western Avenue with Haddow Avenue and Western Avenue with Burlington Avenue.* The Western Avenue approaches should be under stop sign control at both intersections.

- *Chase Avenue with Haddow Avenue and Chase Avenue with Burlington Avenue.* The Chase Avenue approaches should be under stop sign control at both intersections.

- *Edward Avenue with Burlington Avenue.* The Edward Avenue approach should be under stop sign control at this intersection.

- *Francisco Avenue with Burlington Avenue.* The Francisco Avenue approach should be under stop sign control at this intersection.

- *Cross Street with Burlington Avenue.* The Cross Street approach should be under stop sign control at this intersection.

- *Drendel Road with Burlington Avenue.* The Drendel Road approach should be under stop sign control at this intersection.

- *Granville Avenue with Burlington Avenue.* The Granville Avenue approach should be under stop sign control at this intersection.

- *Walnut Avenue with Provence Court.* The Provence Court approach should be under stop sign control at this intersection.

Finally, Cross Street currently has an S-curve in its alignment that has limited sight distance and a narrow cross section. As such, to provide for a safer and more orderly flow of traffic through the S-curve, stop signs should be installed along both legs of the S-curve.

## Summary of Recommended Intersection Traffic Control Plan

**Table 1** provides a summary of the intersection traffic control modifications and **Table 2** provides a comparison of the existing and recommended traffic control within the neighborhood. Under the recommended plan, 28 of the 28 intersections will be under either traffic signal control or some form of stop sign control. This is an improvement over existing conditions where 15 intersections have no intersection traffic control.

Table 1
RECOMMENDED INTERSECTION TRAFFIC CONTROL MODIFICATIONS

| Modifications | Intersections |
|---|---|
| Convert two-way stop sign control to all-way stop sign control | • Haddow Avenue at Edward Avenue and Downers Grove Golf Club Access Drive |
| Convert intersection with two of three legs under stop sign control to all-way stop sign control | • Burlington Avenue with Belmont Road East Ramp |
| Add two-way stop sign control at intersections with no intersection traffic control | • Drendel Road at Indianapolis Avenue (Stop sign control on Indianapolis Ave.)<br>• Cross Street at Indianapolis Avenue (Stop sign control on Indianapolis Ave.)<br>• Haddow Avenue at Francisco Avenue (Stop sign control on Francisco Avenue) |
| Add one-way stop sign control at intersections with no intersection traffic control | • Burlington Avenue at Chase Avenue<br>• Burlington Avenue at Edward Avenue<br>• Burlington Avenue at Western Avenue<br>• Burlington Avenue at Rose Avenue<br>• Burlington Avenue at Francisco Avenue<br>• Burlington Avenue at Cross Street<br>• Burlington Avenue at Drendel Road<br>• Burlington Avenue at Granville Avenue<br>• Haddow Avenue at Chase Avenue<br>• Haddow Avenue at Western Avenue<br>• Haddow Avenue at Rose Avenue<br>• Walnut Avenue at Provence Court |
| Add stop sign control along roadway | • Cross Street S-Curve |

Table 2
EXISTING AND RECOMMENDED INTERSECTION TRAFFIC CONTROL

| | Existing Intersection Traffic Control | Recommended Intersection Traffic Control |
|---|---|---|
| Traffic Signal Control | 1 | 1 |
| All-Way Stop Sign Control | 2 | 4 |
| Two-Way/One-Way Stop Sign Control | 9 | 23 |
| Two of Three Legs Under Stop Sign Control | 1 | 0 |
| No Intersection Traffic Control | 15 | 0 |
| Total | 28 | 28 |

## Pedestrian and Bicycle Facilities and Traffic Control Devices

As discussed previously, the neighborhood contains several pedestrian- and bicycle-generating land uses, including the Belmont Metra train station, Henry Puffer Elementary School, Downers Grove Golf Club, Walnut Park, and Belmont Prairie Nature Preserve. In addition, the Downers Grove Park District is proposing a soccer complex in the northwest section of the neighborhood. As such, the neighborhood has a number of existing and proposed land uses that generate higher pedestrian and bicycle activity.

In addition to the standard pedestrian and bicycle facilities (i.e., sidewalks, crosswalks and bike routes), the neighborhood contains various traffic control devices associated with the non-residential land uses. The neighborhood has several dedicated school and pedestrian crossings and school zones, which include appropriate warning signs and reduced speed limits. In addition, the traffic signals at the intersections of Belmont Road with Haddow Avenue and Belmont Road with Prairie Avenue have countdown pedestrian signals. Overall, these traffic control devices are generally well distributed and located appropriately.

However, recommendations have been developed to further enhance the pedestrian and bicycle circulation and to ensure that the traffic control devices comply with the MUTCD. The proposed recommendations are illustrated in **Figure 10** and summarized below and in **Table 3**:

- Sidewalks are currently provided on one side of the following roads in the neighborhood:

    - North side and a portion of the south side of Burlington Avenue
    - North side of Haddow Avenue
    - West side of Edward Avenue
    - West side of Chase Avenue
    - East side of Puffer Avenue

    To accommodate the neighborhood pedestrian activity, the Village should strive to install sidewalks or multi-use paths on at least one side of all the roads in the neighborhood. This is particularly critical given the narrow widths of many of the roads. To further enhance pedestrian and bicycle access to and from and circulation around the neighborhood as well as the nature preserve and the proposed soccer complex, the Village should explore whether sidewalks/multi-use paths can be provided through undeveloped Village right-of-ways and/or the nature preserve property.

- High visibility ladder style crosswalks should be installed at all of the existing and future pedestrian crossings within the neighborhood.

- An Advanced School Crossing Assembly should be installed along the eastbound direction of Haddow Avenue in advance of the existing school crossing at the intersection of Haddow Avenue with Puffer Road.

- Consideration should be given to installing sharrow markings along the two designated bike routes (Cross Street and Burlington Avenue between Belmont Road and Cross Street) in the neighborhood. Sharrow markings reinforce the shared-lane environment of posted bicycle routes where the road width cannot support dedicated bicycle lanes and/or where it is undesirable to eliminate on-street parking. Additionally, they alert road users of the lateral position that bicyclists are likely to occupy within the road to keep them out of the "door zone" of parked cars and in lanes that are too narrow for a motor vehicle and a bicycle to travel side-by-side within the same traffic lane. Further, they may reduce the number of bicyclists on the sidewalks and the additional guidance may reduce the number of bicyclists riding on the wrong side of the road.

- Consideration should be given to installing the following pedestrian enhancements at the Belmont Metra train station (see **Figure 11**) to improve pedestrian safety and increase the number of pedestrian crossings:

    - *Burlington Avenue with Belmont Road West Ramp.* A curb/sidewalk extension should be considered on the south side of the pedestrian crossing along the west leg of the intersection. The curb/sidewalk extension should extend the length of the perpendicular parking provided along the south side of Burlington Avenue. In addition, a high visibility ladder style crosswalk should be installed on the north leg of the intersection.

    - *Burlington Avenue with Belmont Road East Ramp.* Given that this intersection is proposed to operate under all-way stop sign control, consideration should be given to installing a pedestrian crossing on the west leg of the intersection. If installed, the pedestrian crossing should include a high visibility ladder style crosswalk and a curb/sidewalk extension on the south side of the crossing. The curb/sidewalk extension should extend the length of the perpendicular parking provided along the south side of Burlington Avenue. In addition, a high visibility ladder style crosswalk should be installed on the north leg of the intersection.

  However, further studies should be conducted to determine any impacts the enhancements will have on the Belmont Metra train station and the feasibility of installing the enhancements.

- Consideration should be given to installing a pedestrian refuge island in the Belmont Road median serving the crosswalk along the south leg of the Belmont Road with Prairie Avenue intersection (see **Figure 12**). However, in order to accommodate the turning maneuver of a semi-trailer, the crosswalk and sidewalk ramps on the south leg of the intersection and the northbound stop bar would need to be relocated approximately 15 feet south of their current location. As such, a comprehensive study needs to be performed in order to determine the impacts and feasibility of installing the pedestrian refuge island and the other require intersection modifications. Further, any improvements will require the review and approval of DuDOT as they have jurisdiction over Belmont Road.

Table 3
RECOMMENDED PEDESTRIAN AND BICYCLE FACILITIES AND TRAFFIC CONTROL ENHANCEMENTS

| Enhancement | Location |
|---|---|
| Install sidewalks/multi-use path on at least one side of the neighborhood roads | • All of the neighborhood roads without sidewalks |
| Install ladder style crosswalks | • Burlington Avenue at Belmont Road West Ramp<br>• Burlington Avenue at Belmont Road East Ramp<br>• Burlington Avenue at Puffer Road<br>• Burlington Avenue at Chase Avenue<br>• Burlington Avenue at Edward Avenue<br>• Burlington Avenue at Western Avenue<br>• Burlington Avenue at Rose Avenue<br>• Burlington Avenue at Francisco Avenue<br>• Burlington Avenue at Cross Street<br>• Burlington Avenue at Drendel Road<br>• Burlington Avenue at Granville Avenue<br>• Haddow Avenue at Puffer Elementary School Access Drive<br>• Haddow Avenue at Downers Grove Golf Club Access Drive |
| Install Advanced School Crossing Assembly | • Haddow Avenue at Puffer Road |
| Install sharrow markings on designated bike routes | • Burlington Avenue between Belmont Road and Cross Street<br>• Cross Street |
| Install curb/sidewalk extension (Only after comprehensive study is performed to determine impacts/feasibility) | • Burlington Avenue at Belmont Road West Ramp<br>• Burlington Avenue at Belmont Road East Ramp |
| Install pedestrian refuge island (Only after comprehensive study is performed to determine impacts/feasibility) | • South leg of Belmont Road with Prairie Avenue intersection |

## Traffic Calming Measures

Speeding and cut-through traffic are generally two of the major concerns expressed by residents in any neighborhood. As discussed previously, the traffic volumes within the neighborhood are generally within an acceptable range for residential roads and consistent with traffic patterns on other neighborhood roads within the Village. Furthermore, the internal neighborhood roads generally had observed average speeds within one to two mph of the posted speed limit and observed 85$^{th}$ percentile speeds within five mph of the posted speed limit. Several of the roads did experience 85$^{th}$ percentile speeds that exceeded the speed limit by five mph or more. The higher 85$^{th}$ percentile speeds were primarily observed along those roadway sections that had longer lengths of free-flow conditions. As such, a review of the existing traffic volumes and speed surveys as well as the roadway system's physical and operating conditions indicates that the neighborhood is experiencing some higher travel speeds and cut-through traffic.

The recommended traffic control and striping modifications should help to mitigate the speeds and cut-through traffic in the neighborhood. If these measures are not completely successful, other measures and/or tools that can effectively reduce vehicle speeds and cut-through traffic include the following traffic calming measures:

- Enhanced speed limit signs that increase motorists' awareness
- Increased police enforcement
- Portable or permanent speed awareness systems such as electronic speed radar signs
- Pavement markings, edge lines, parking lanes, and bike lanes/sharrows that reduce the width of roadways
- Horizontal or vertical deflections (e.g. curb extensions and/or medians at intersections and midblock locations, traffic circles, raised crosswalks, chokers, neck-downs, and chicanes)

**Table 4** provides a summary of these measures/devices and also shows how they can be implemented incrementally from measures/devices with lower costs and reduced design, coordination, and implementation efforts to measures/devices with higher costs and greater design, coordination, and implementation efforts.

Table 4
INCREMENTAL TRAFFIC CALMING MEASURES

| Options | Examples |
|---|---|
| **Level 1** | |
| Regulatory Modifications | Speed Limit Reductions |
| Increased Police Presence/Enforcement | |
| **Level 2** | |
| Advisory Signing | Portable Speed Radar Signs, Enhanced Speed Limit Signs |
| Pavement Markings | Parking Lanes, Bike Lanes/Sharrows, Crosswalks, Edgelines |
| **Level 3** | |
| Horizontal Deflections | Curb Extensions, Medians, Traffic Circles, Chicanes, Chokers/Neck-Downs |
| Vertical Deflections | Raised Crosswalks, Speed Humps, Speed Tables, Speed Cushions |

In addition, KLOA, Inc. examined locations that would be appropriate for traffic calming measures and developed traffic calming recommendations for the Village to consider. The review was only preliminary in nature and based on the existing traffic volumes, speed surveys, and roadway characteristics. Before any horizontal deflection measures are implemented, a thorough evaluation will need to be conducted to examine the impact of the measures/devices including emergency vehicle access and response times, diversion of traffic to other neighborhood roads, drainage impacts, costs, and long-term maintenance. The following outlines traffic calming measures that could be implemented along several of the neighborhood roads.

## Burlington Avenue

Burlington Avenue is an east-west collector road that extends along the south end of the study area and has a grade-separated interchange with Belmont Road and serves the Belmont Metra train station. The road has one lane in each direction with perpendicular parking for the Belmont Metra train station provided on the south side of the road between Pershing Avenue and Rose Avenue. It is under all-way stop sign control at its intersection with the Belmont Road west ramp and is proposed to be under all-way stop sign control at its intersection with the Belmont Road east ramp. According to the daily traffic counts/speed surveys, Burlington Avenue had a daily traffic volume of 1,305 to 1,787 vehicles and 85$^{th}$ percentile speed of 34 to 39 mph. The following traffic calming measures should be considered along Burlington Avenue:

- *Center Line*. Refresh the existing center line and extend to Walnut Avenue to delineate the travel lanes and to give motorists the perception of a narrower roadway.

- *Speed Limit Signage/Markings*. Add additional speed limits signs, install yellow-framed speed limit signs, and/or install speed limit pavement markings to further reinforce the posted speed limit.

- *Speed Monitors and Police Enforcement*. Utilize portable electronic speed monitors and/or install permanent speed monitors to further reinforce the posted speed limit. In addition, enhance targeted police enforcement, particularly during the weekday morning (7:00-9:00 A.M.) and evening (4:00-7:00 P.M.) peak commuting hours.

- *Sharrow Markings*. Install sharrow markings along both directions of the road between Belmont Road and Cross Street to reinforce the shared-lane environment of the posted bicycle route.

- *Median Islands*. Install a median island along the sections with no on-street parking to give motorists the perception of a narrower roadway that will reduce travel speeds.

### Walnut Avenue

Walnut Avenue is a north-south collector road that extends along the west end of the study area from Ogden Avenue to Burlington Avenue and serves Walnut Park and Belmont Prairie Nature Preserve. The road has one lane in each direction with parking permitted on both sides of the road. It is under stop sign control at its intersection with Ogden Avenue. According to the daily traffic counts/speed surveys, Walnut Avenue had a daily traffic volume of 1,298 to 1,747 vehicles and 85$^{th}$ percentile speed of 35 to 41 mph. The following traffic calming measures should be considered along Walnut Avenue:

- *Speed Limit Signage/Markings*. Add additional speed limits signs, install yellow-framed speed limit signs, and/or install speed limit pavement markings to further reinforce the posted speed limit.

- *Speed Monitors and Police Enforcement*. Utilize portable electronic speed monitors and/or install permanent speed monitors to further reinforce the posted speed limit. In addition, enhance targeted police enforcement, particularly during the weekday morning (7:00-9:00 A.M.) and evening (4:00-7:00 P.M.) peak commuting hours.

- *Median Islands*. Install one or more median islands to give motorists the perception of a narrower roadway that will reduce travel speeds. This would require the elimination of on-street parking within proximity to the median islands.

## Haddow Avenue

Haddow Avenue is an east-west local road that extends between Belmont Road and Cross Street and provides access to Henry Puffer Elementary School and Downers Grove Golf Club. The road has one lane in each direction with parking generally permitted on both sides of the road. It is under traffic signal control at its intersection with Belmont Road and all-way stop sign control at its intersection with Cross Street. In addition, the road is recommended to be under all-way stop sign control at its intersection with Edward Avenue and the Downers Grove Golf Club access drive. According to the daily traffic counts/speed surveys, Haddow Avenue had a daily traffic volume of 491 to 1,503 vehicles and 85$^{th}$ percentile speed of 26-36 mph. The following traffic calming measures should be considered along Haddow Avenue:

- *Speed Limit Signage/Markings*. Add additional speed limits signs, install yellow-framed speed limit signs, and/or install speed limit pavement markings to further reinforce the posted speed limit.

- *Speed Monitors and Police Enforcement*. Utilize portable electronic speed monitors and/or install permanent speed monitors to further reinforce the posted speed limit. In addition, enhance targeted police enforcement, particularly during the weekday morning (7:00-9:00 A.M.) and evening (4:00-7:00 P.M.) peak commuting hours.

- *Median Islands*. Install a median island at the intersection with Edward Avenue and the Downers Grove Golf Club access drive to enhance pedestrian circulation and safety and give motorists the perception of a narrower roadway that will reduce travel speeds.

# 5. Conclusion

This study summarizes the results and findings of the neighborhood traffic study for Area Number 5. The neighborhood is generally bounded by Ogden Avenue, Henry Puffer Elementary School, and the Downers Grove Golf Club on the north, Belmont Road and the Downers Grove Golf Club on the east, Burlington Avenue on the south, and Walnut Avenue on the west. Overall, the objective of the study was to thoroughly examine the existing traffic operations within the neighborhood, identify operational deficiencies, and recommend modifications and/or improvements to enhance both vehicular and pedestrian operations. The study addressed the primary traffic concerns within any neighborhood: vehicular volume, vehicular speed, and overall vehicular and pedestrian safety. The recommendations developed in the study were based primarily on accepted engineering practices, conformity with the 2009 MUTCD, existing Village criteria, and the input from Village staff and residents.

**Tables 5, 6,** and **7** summarize the short-term, mid-term, and long-term recommendations of the neighborhood traffic study. Short-term improvements generally have lower costs, are easier to implement, and/or are needed to address immediate concerns. Long-term improvements are generally more costly, require additional planning/engineering, can be implemented with other improvement projects, or may only be required depending on the effectiveness of previous efforts.

Table 5
SHORT-TERM (0 TO 6 MONTHS) RECOMMENDATIONS

| Recommendations | Location |
|---|---|
| **Intersection Traffic Control Modifications** | |
| Convert two-way stop sign control to all-way stop sign control | • Haddow Avenue at Edward Avenue and Downers Grove Golf Club Drive |
| Convert intersection with two of three legs under stop sign control to all-way stop sign control | • Burlington Avenue with Belmont Road East Ramp |
| Add two-way stop sign control at intersections with no intersection traffic control | • Drendel Road at Indianapolis Avenue (Stop sign control on Indianapolis Ave.)<br>• Cross Street at Indianapolis Avenue (Stop sign control on Indianapolis Ave.)<br>• Haddow Avenue at Francisco Avenue (Stop sign control on Francisco Avenue) |
| Add one-way stop sign control at intersections with no intersection traffic control | • Burlington Avenue at Chase Avenue<br>• Burlington Avenue at Edward Avenue<br>• Burlington Avenue at Western Avenue<br>• Burlington Avenue at Rose Avenue<br>• Burlington Avenue at Francisco Avenue<br>• Burlington Avenue at Cross Street<br>• Burlington Avenue at Drendel Road<br>• Burlington Avenue at Granville Avenue<br>• Haddow Avenue at Chase Avenue<br>• Haddow Avenue at Western Avenue<br>• Haddow Avenue at Rose Avenue<br>• Walnut Avenue at Provence Court |
| Add stop sign control along roadway | • Cross Street S-Curve |

Table 5, Continued
SHORT-TERM (0 TO 6 MONTHS) RECOMMENDATIONS

| Recommendations | Location |
|---|---|
| **Pedestrian and Bicycle Enhancements** | |
| Install ladder style crosswalks | • Burlington Avenue at Belmont Road West Ramp<br>• Burlington Avenue at Belmont Road East Ramp<br>• Burlington Avenue at Puffer Road<br>• Burlington Avenue at Chase Avenue<br>• Burlington Avenue at Edward Avenue<br>• Burlington Avenue at Western Avenue<br>• Burlington Avenue at Rose Avenue<br>• Burlington Avenue at Francisco Avenue<br>• Burlington Avenue at Cross Street<br>• Burlington Avenue at Drendel Road<br>• Burlington Avenue at Granville Avenue<br>• Haddow Avenue at Puffer Elementary School Access Drive<br>• Haddow Avenue at Downers Grove Golf Club Access Drive |
| Install Advanced School Crossing Assembly | • Haddow Avenue at Puffer Road |
| **Traffic Calming Measures** | |
| Increase police awareness/enforcement | • Throughout the neighborhood |
| Refresh the existing center line and extend to Walnut Avenue | • Burlington Avenue |
| Install additional speed limits signs, install yellow-framed speed limit signs, and/or install speed limit pavement markings | • Burlington Avenue<br>• Walnut Avenue<br>• Haddow Avenue |

Table 6
MID-TERM (6 TO 18 MONTHS) RECOMMENDATIONS

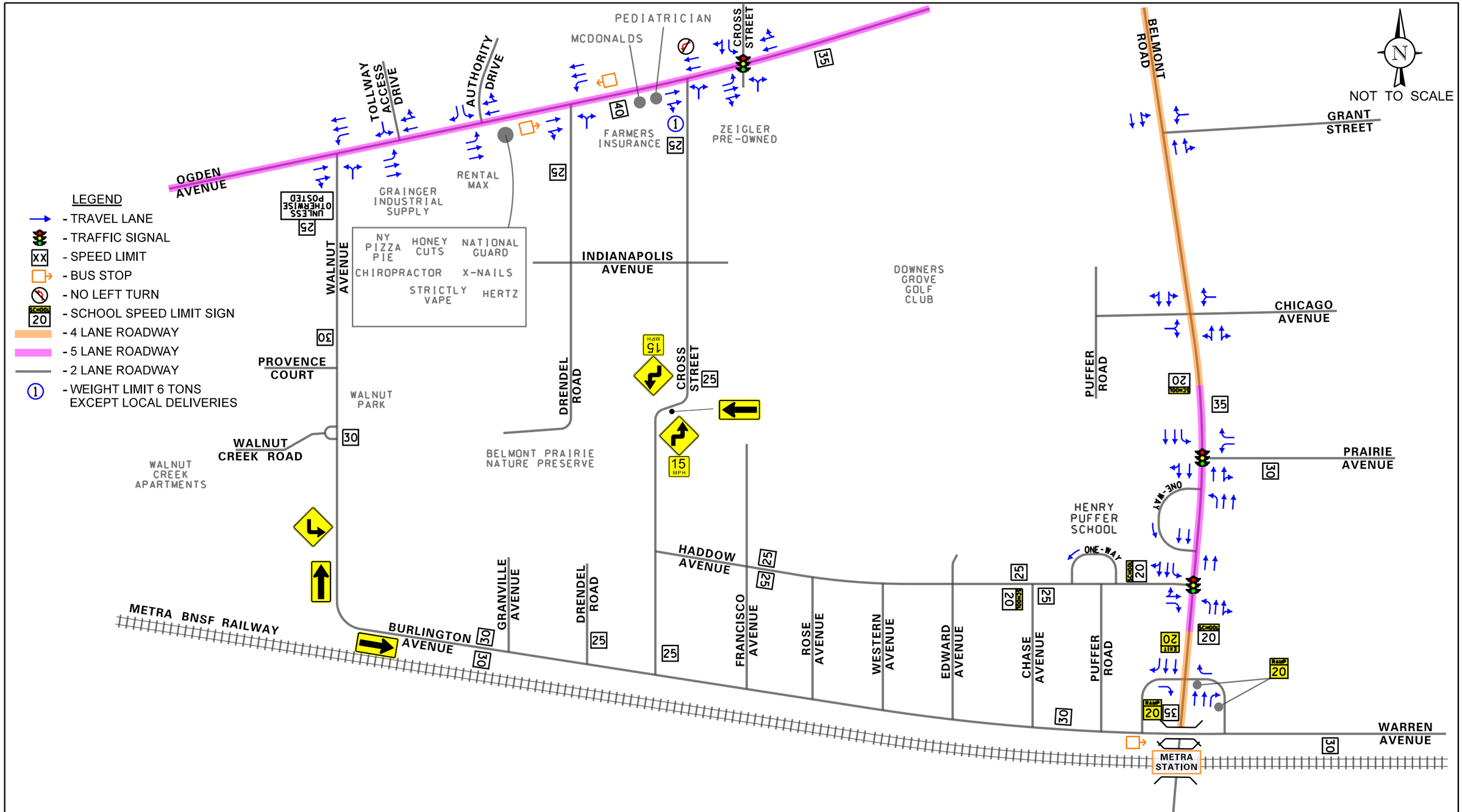
| Recommendations | Location |
|---|---|
| **Pedestrian and Bicycle Enhancements** | |
| Install sharrow markings | • Burlington Avenue between Belmont Road and Cross Street<br>• Cross Street |
| **Traffic Calming Measure** | |
| Install portable/permanent speed radar signs (Only implement if objectives of other measures are not sufficiently met.) | Key areas in the neighborhood, including<br>• Burlington Avenue<br>• Walnut Avenue<br>• Haddow Avenue |

Table 7
LONG-TERM (18 TO 36 MONTHS) RECOMMENDATIONS

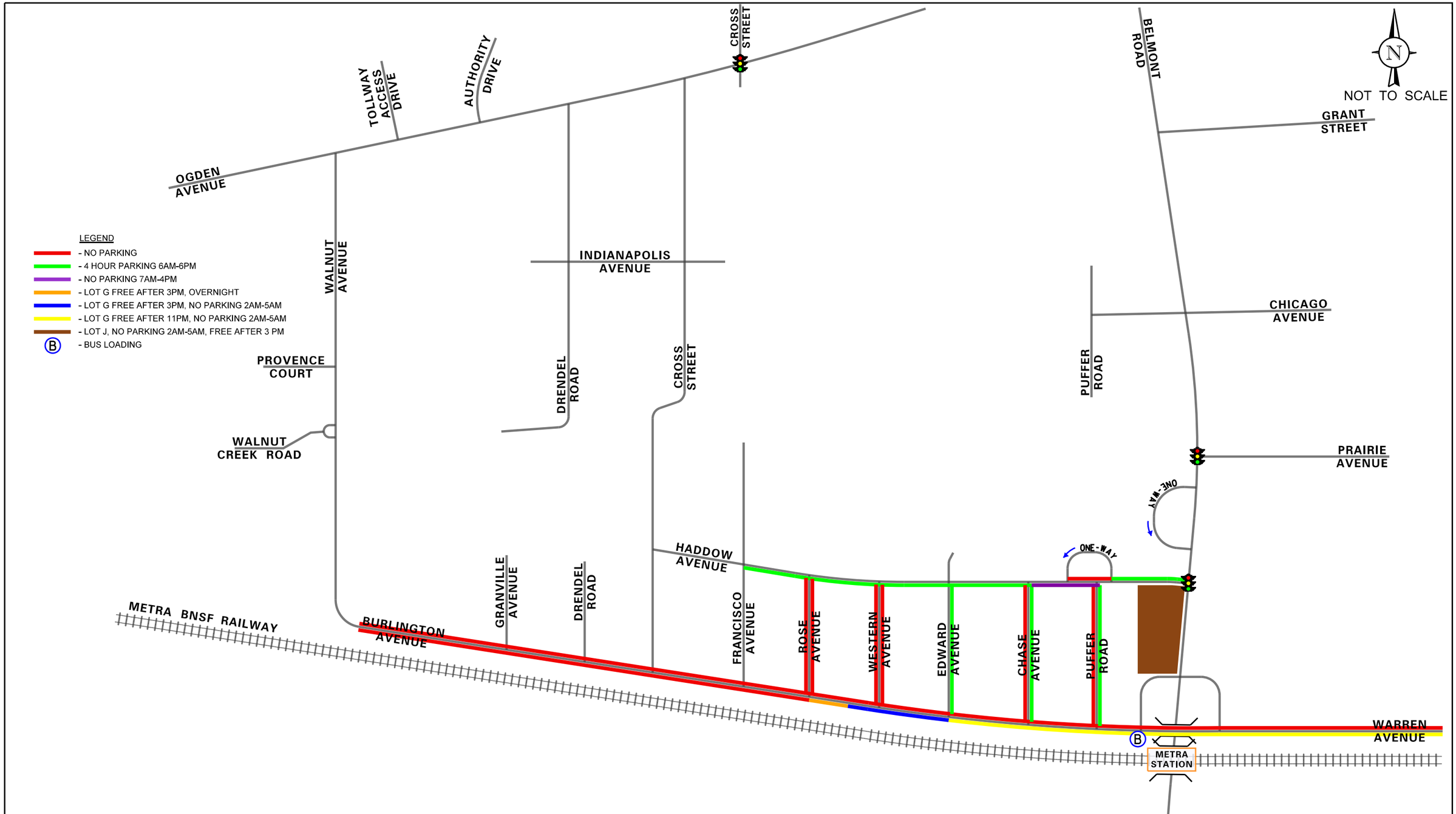
| Recommendations | Location |
|---|---|
| **Pedestrian and Bicycle Enhancements** | |
| Install curb/sidewalk extension (Only after comprehensive study is performed to determine impacts/feasibility) | • Burlington Avenue at Belmont Road East Ramp<br>• Burlington Avenue at Belmont Road West Ramp |
| Install pedestrian refuge island (Only after comprehensive study is performed to determine impacts/feasibility) | • South leg of Belmont Road with Prairie Avenue intersection |
| **Traffic Calming Measure** | |
| Install median islands (Implement only if objectives of other measures are not sufficiently met and a thorough evaluation of the impact of the measures/devices are performed.) | Possible locations for consideration include:<br>• Burlington Avenue<br>• Walnut Avenue<br>• Haddow Avenue |

# Appendix

**Figure 1** **Aerial View of Study Area**




| PROJECT: | TITLE: | |
|---|---|---|
| Traffic Study Neighborhood 5<br>Downers Grove, Illinois | EXISTING ROADWAY CONDITIONS | KLOA<br>Job No: 16-225<br>Figure: 2 |

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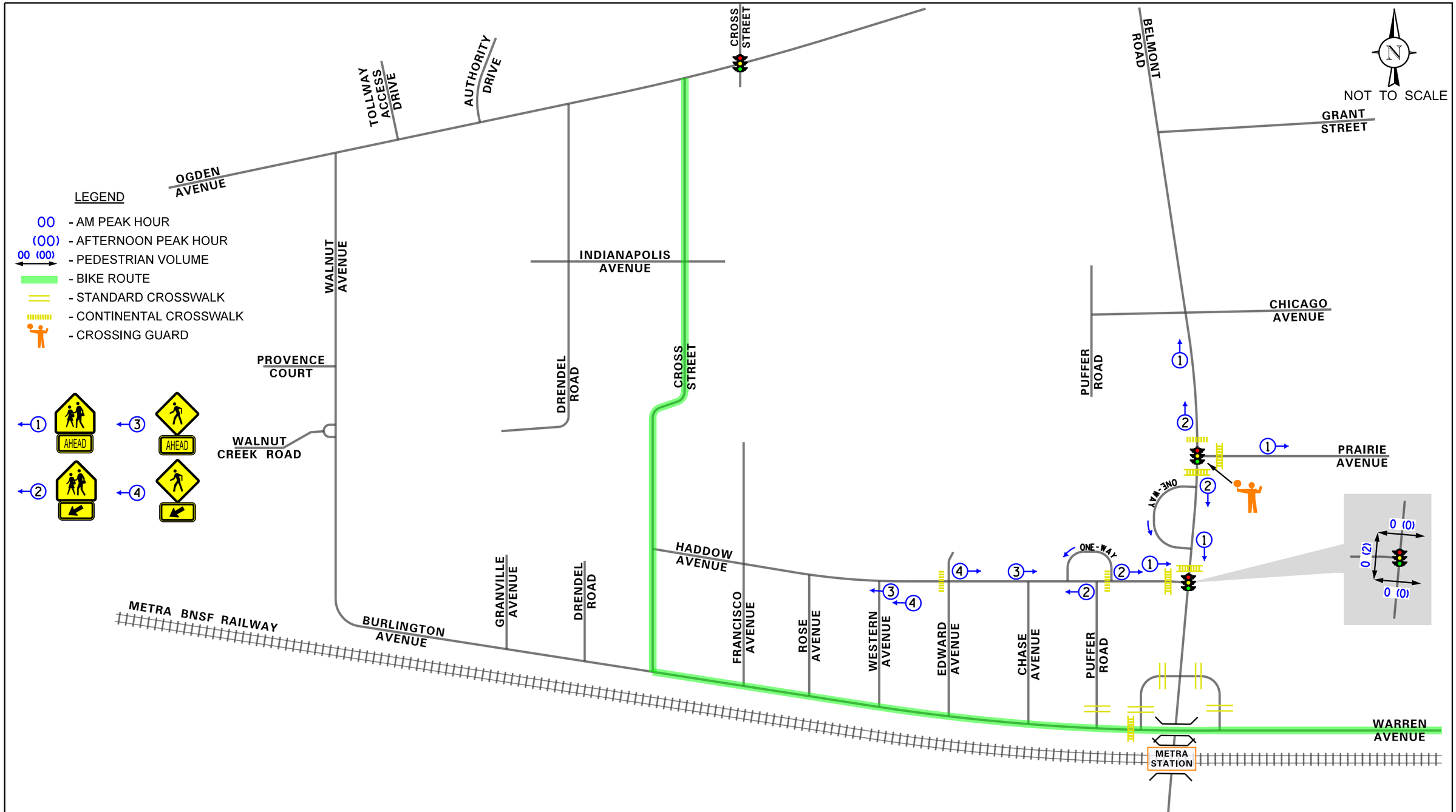
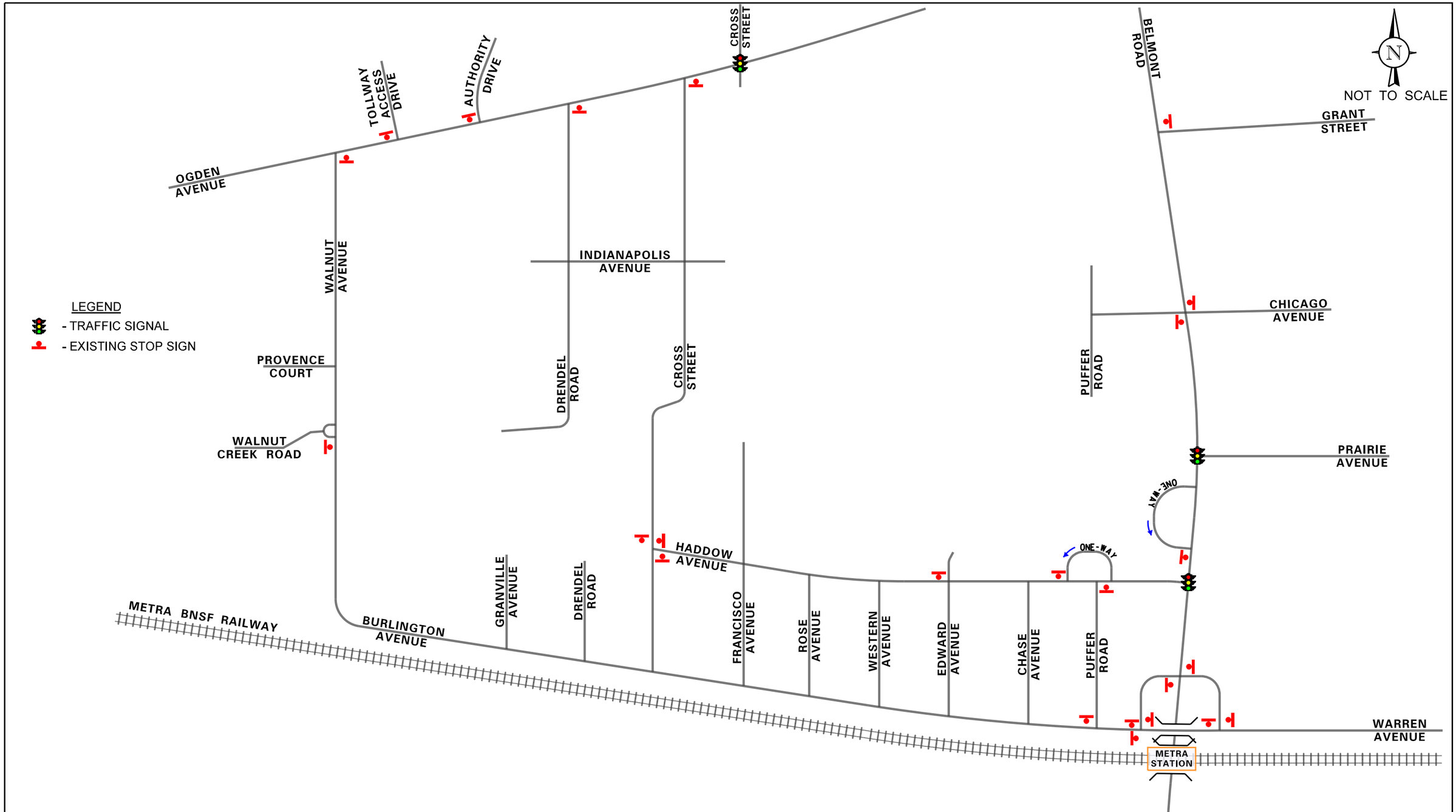
|---|---|---|
| Traffic Study Neighborhood 5<br>Downers Grove, Illinois | EXISTING PARKING RESTRICTIONS | KLOA<br>Job No: 16-225<br>Figure: 3 |




| PROJECT: | TITLE: | |
|---|---|---|
| Traffic Study Neighborhood 5<br>Downers Grove, Illinois | EXISTING PEDESTRIAN AND BICYCLE FACILITIES<br>AND TRAFFIC CONTROL DEVICES | KLOA<br>Job No: 16-225<br>Figure: 4 |

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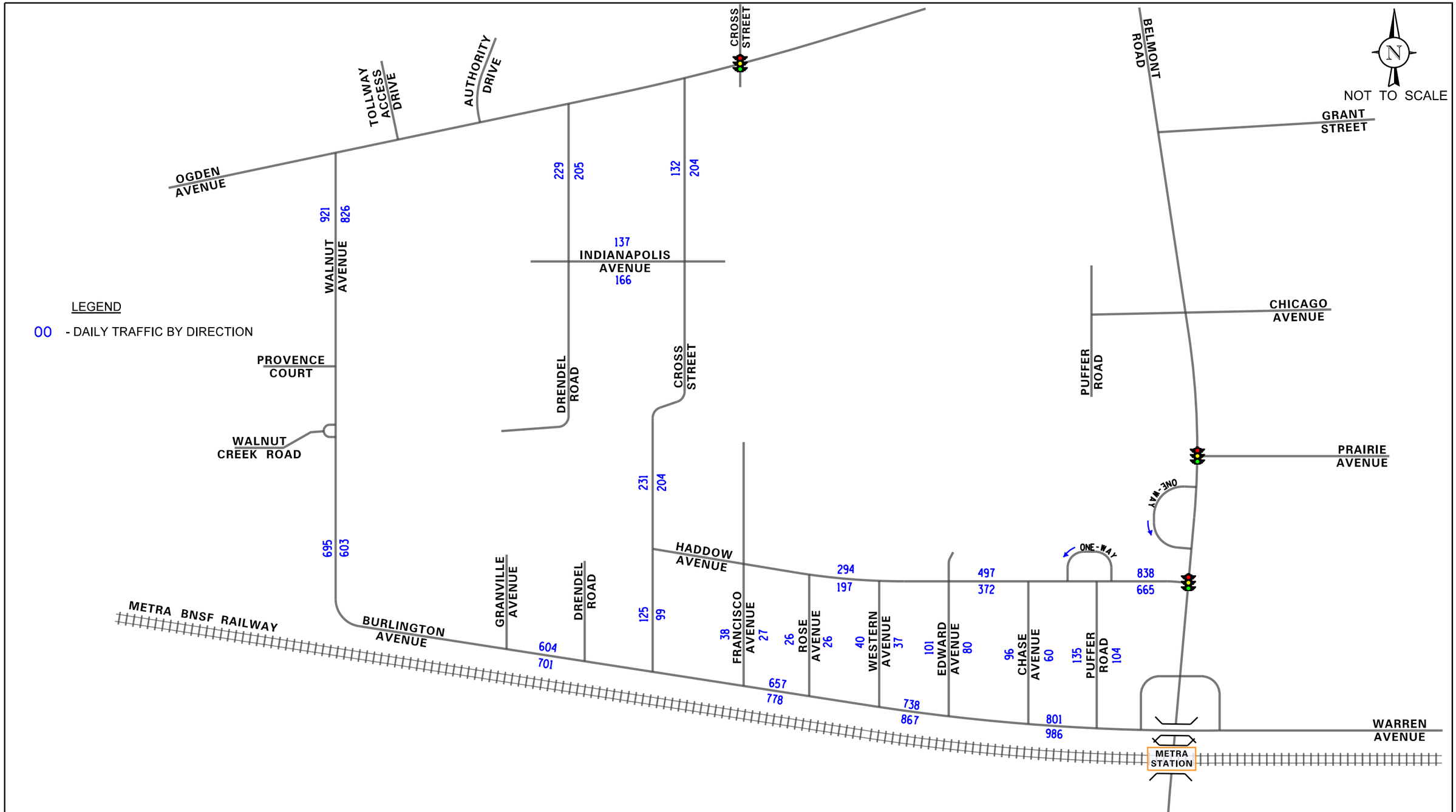
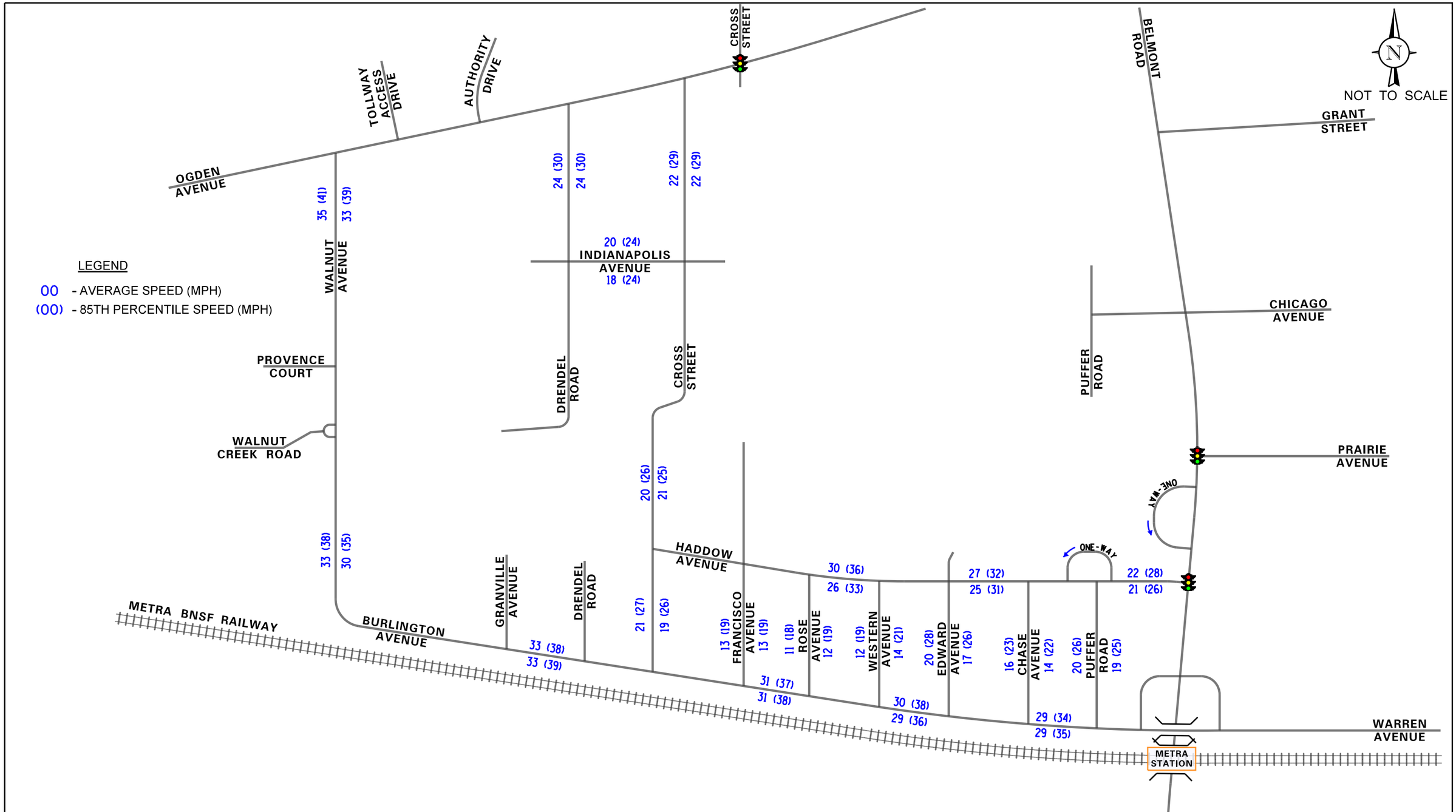
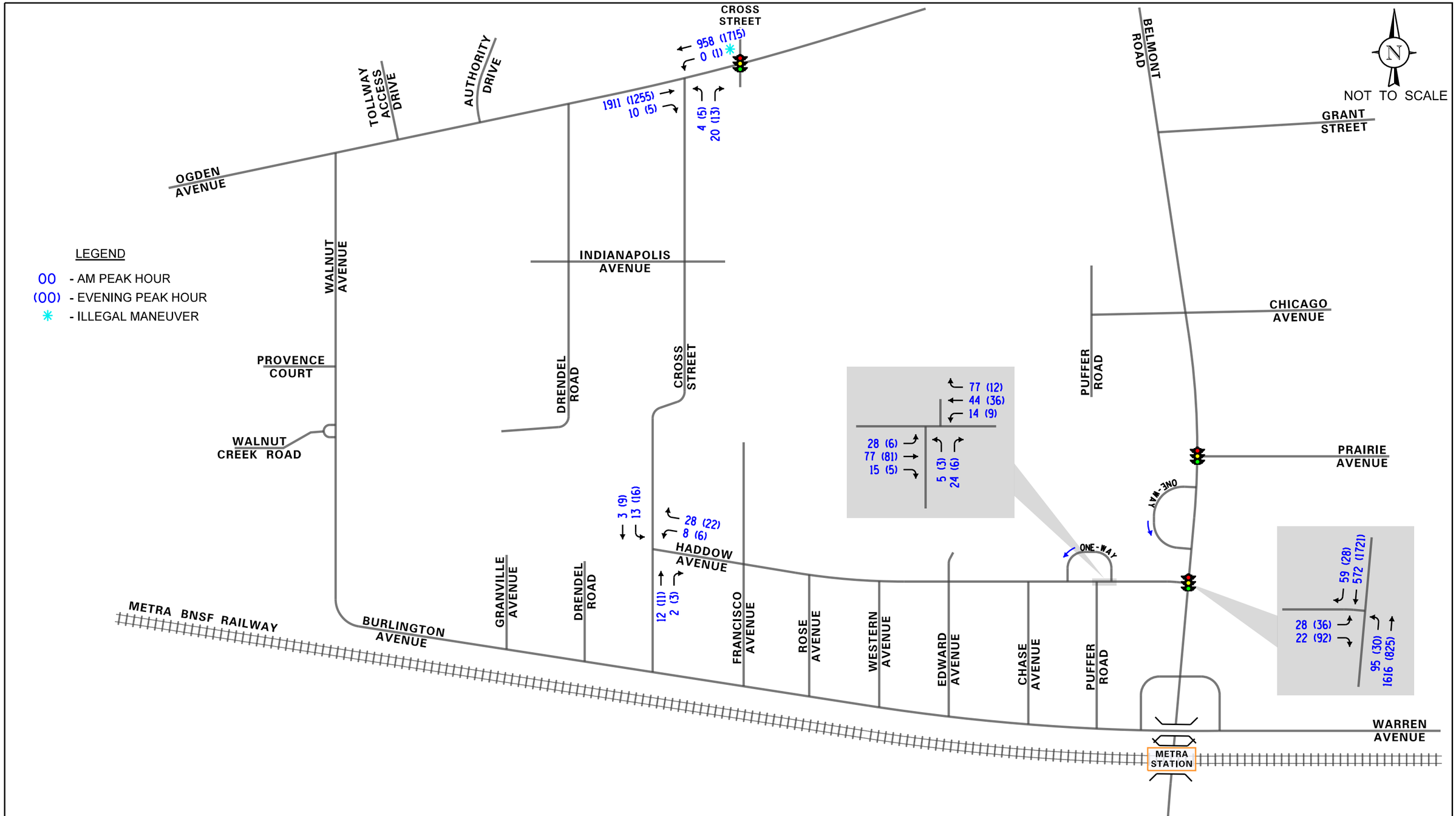
| Traffic Study Neighborhood 5<br>Downers Grove, Illinois | EXISTING INTERSECTION TRAFFIC CONTROL | KLOA<br>Job No: 16-225<br>Figure: 5 |




| PROJECT: | TITLE: | |
|---|---|---|
| Traffic Study Neighborhood 5<br>Downers Grove, Illinois | EXISTING DAILY TRAFFIC VOLUMES | KLOA<br>Job No: 16-225<br>Figure: 6 |




| PROJECT: | TITLE: | |
|---|---|---|
| Traffic Study Neighborhood 5<br>Downers Grove, Illinois | EXISTING TRAVEL SPEED | KLOA<br>Job No: 16-225<br>Figure: 7 |




| PROJECT: | TITLE: | |
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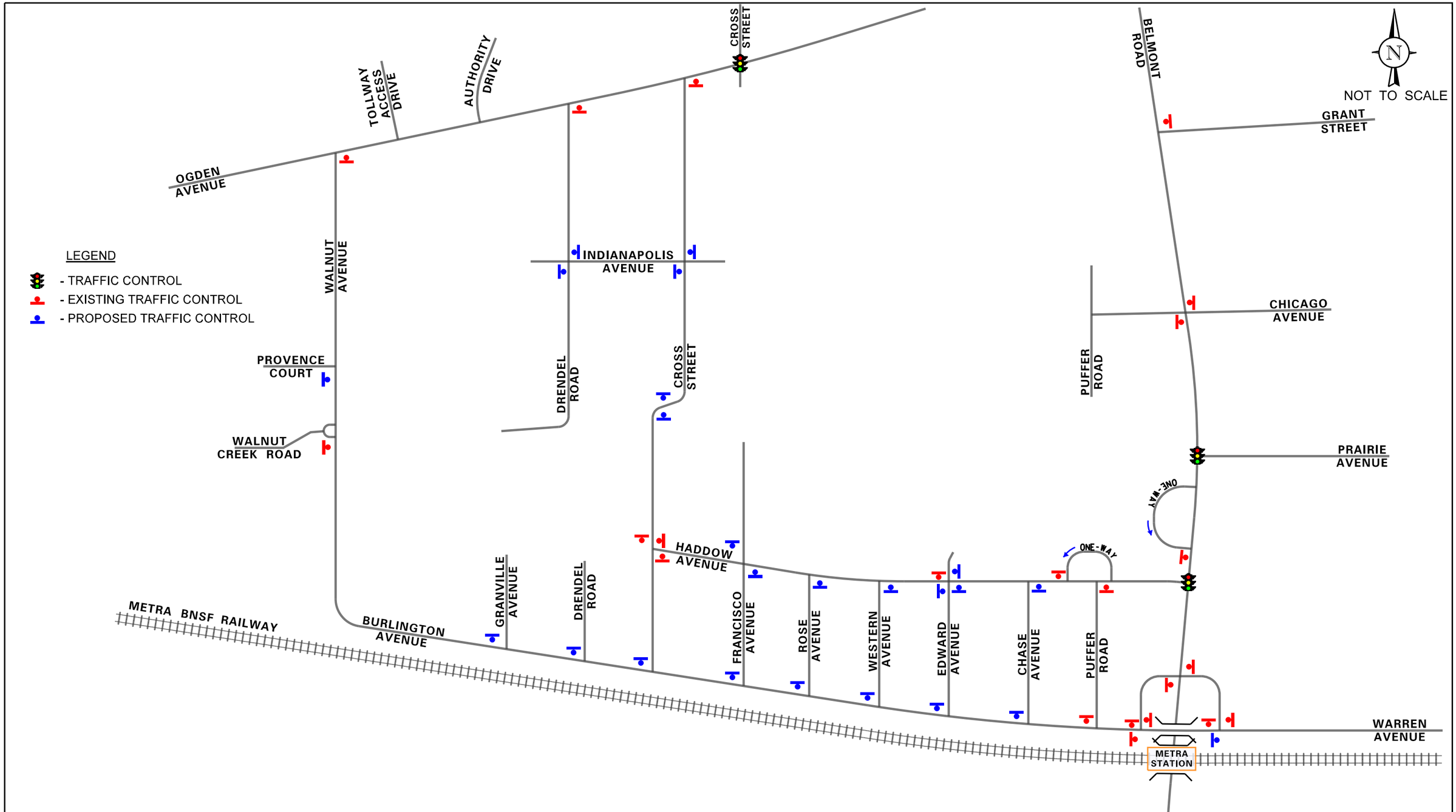
| Traffic Study Neighborhood 5<br>Downers Grove, Illinois | EXISTING INTERSECTION PEAK HOUR VOLUMES | KLOA<br>Job No: 16-225<br>Figure: 8 |




| PROJECT: | TITLE: | |
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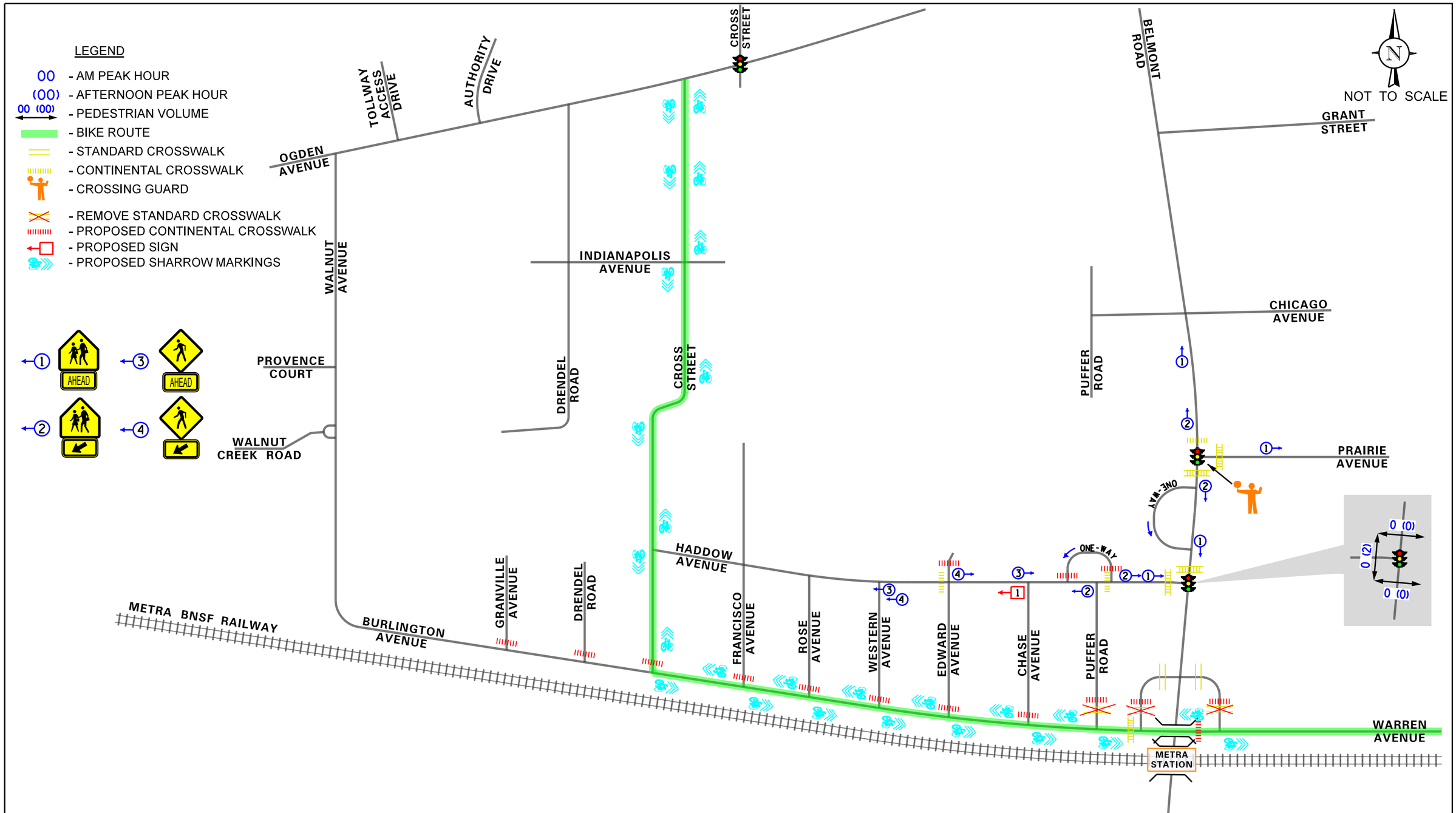
| Traffic Study Neighborhood 5<br>Downers Grove, Illinois | PROPOSED INTERSECTION TRAFFIC CONTROL | KLOA<br>Job No: 16-225<br>Figure: 9 |

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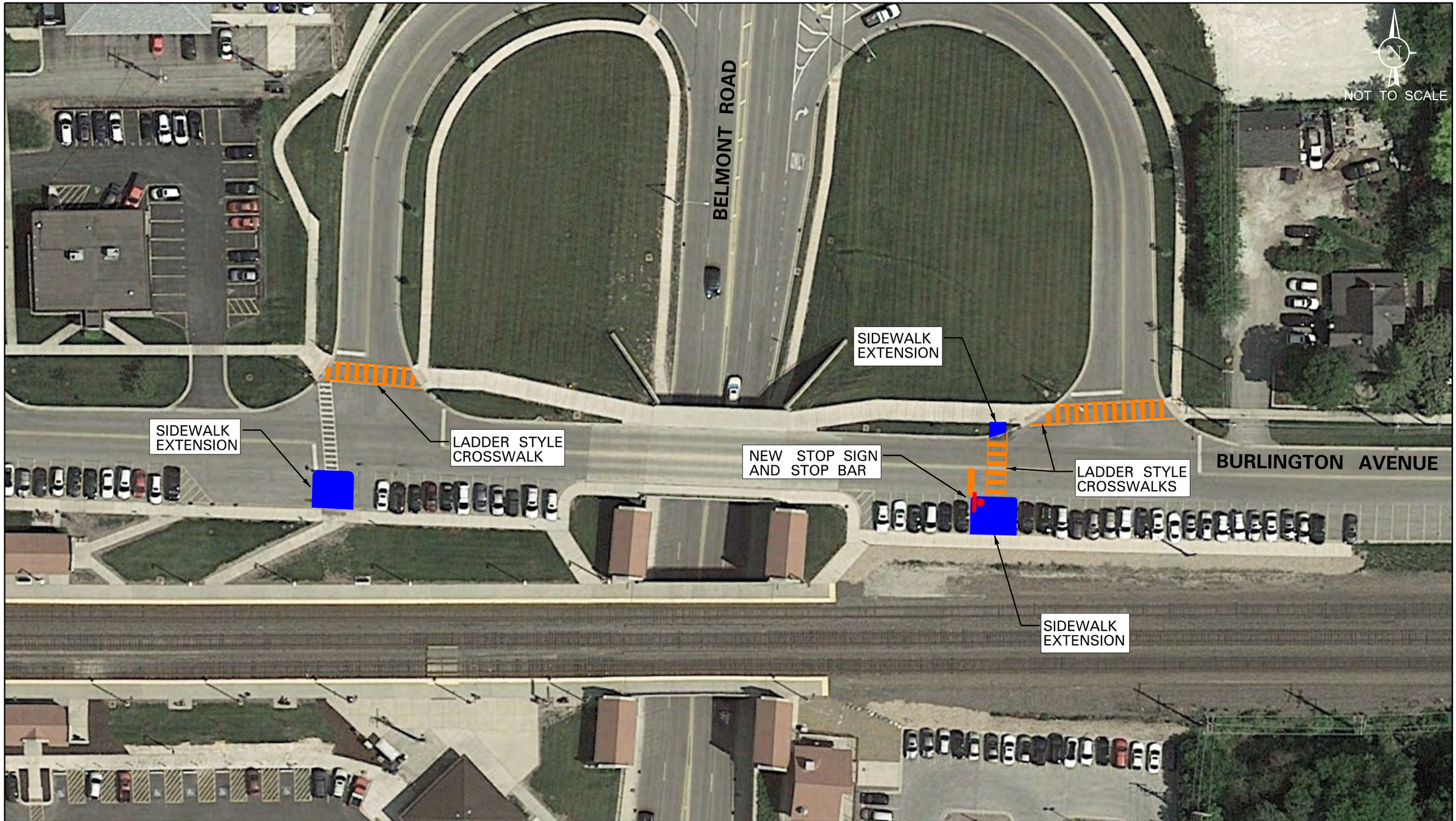
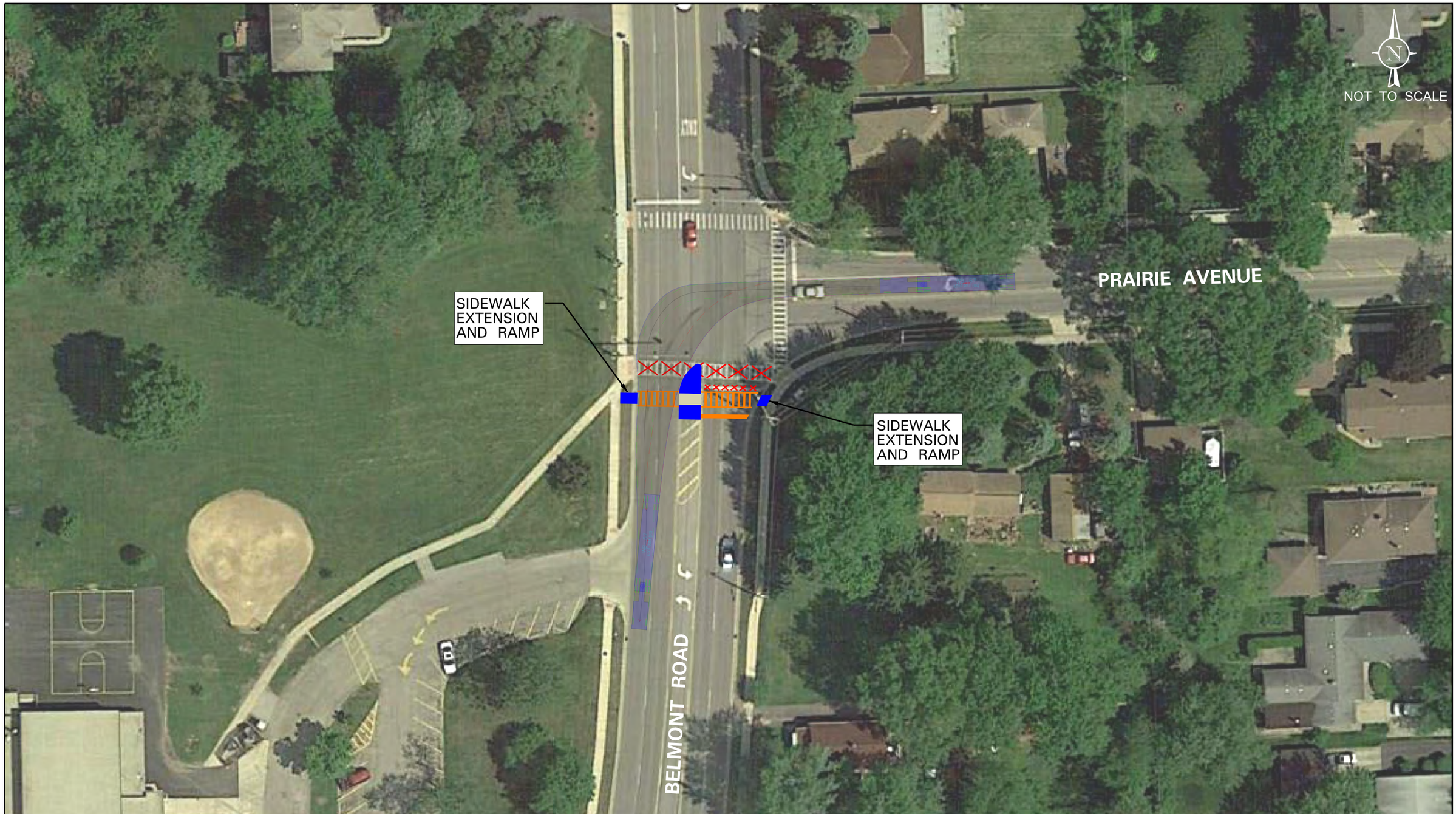
|---|---|---|
| Traffic Study Neighborhood 5<br>Downers Grove, Illinois | PROPOSED MODIFICATIONS TO THE PEDESTRIAN AND BICYCLE FACILITIES<br>AND TRAFFIC CONTROL DEVICES | KLOA<br>Job No: 16-225<br>Figure: 10 |




| PROJECT: | TITLE: | |
|---|---|---|
| Traffic Study Neighborhood 5<br>Downers Grove, Illinois | BURLINGTON STREET AT BELMONT AVENUE RAMPS<br>CONCEPTUAL PEDESTRIAN ENHANCEMENTS | KLOA<br>Job No: 16-225<br>Figure: 11 |




| PROJECT: | TITLE: | |
|---|---|---|
| Traffic Study Neighborhood 5<br>Downers Grove, Illinois | BELMONT ROAD WITH PRAIRIE AVENUE INTERSECTION<br>CONCEPTUAL PEDESTRIAN REFUGE ISLAND | KLOA<br>Job No: 16-225<br>Figure: 12 |