

**Adams High School**  
3200 W. Tienken Road  
Rochester Hills, MI 48306  
248-726-5200

**Van Hoosen Middle School**  
1339 N. Adams Road  
Rochester Hills, MI 48306  
248-726-4900

#### **LOCATION:**

The two schools share a campus in Section 6 in the City of Rochester Hill, on the north side of Tienken Road, west of Adams Rd. There are four driveways to Tienken Rd and four to Adams Rd. The two schools are linked with one drive that runs west of the school buildings, locally known as Highlander Way.

Tienken Rd across the frontage of the high school is four lanes: one through lane in each direction, a center lane for left turns, and a westbound right turn auxiliary lane beginning at the signalized intersection with Adams Rd and running to the west-most driveway. All four driveways to Tienken Rd serve the high school, handle two-way traffic and operate under STOP sign control.

Adams Rd has a variable section across the frontage of the high school and middle school. For the two driveways for the high school, Adams Rd is four lanes: one through lane in each direction, a center lane for left turns, and a southbound right turn auxiliary lane of limited length to just serve these two drives. While there is some signing to suggest the drives are to operate as a one-way pair, the signing is poorly done and we noted a flagrant disregard for one-way movements. Only the south-most drive has a STOP sign.

For the two driveways at the middle school, Adams is four lanes: two lanes in each direction. The north-most drive is signalized, and the other has a STOP sign. Both middle school drives handle two-way traffic; however exiting left turns are not allowed for the south drive for Van Hoosen School. The signalized driveway provides a signalized pedestrian crossing of Adams Road.

There are safety paths along both sides of Adams and Tienken Roads.

#### **GENERAL:**

Several visits were made, starting on April 28<sup>th</sup> and running through May 15<sup>th</sup>. At that time we met with the office staff of both schools, and Principal Dan Mooney with Van Hoosen. Observations were made of the a.m. arrival and p.m. dismissal periods.

For both schools, the concerns were focused on the afternoon departure period. They involved traffic backups from the parent pick up operations extending out onto Adams and Tienken Roads. Otherwise, it was just the general congestion in the front of the schools related to parent drop off and pick up.

#### **OBSERVATIONS:**

##### **Van Hoosen MS On-Site**

##### **Bus Loop / Loading Area:**

- The designated area is fully adequate for the number of busses observed, whether regular transit or for special education. This was the best functioning portion of the Van Hoosen site.

#### Parent Drop-Off Area (Front Loop):

- Both the morning arrival and afternoon dismissal period were congested. The afternoon period appeared more intense, and of longer duration.
- There are no signs indicating one-way operation. Pavement marking arrows would suggest that two-way operations are allowed. However, this loop should be for one-way operation, entering from north aisle that aligns with the signal to Adams, running south across face of school and departing east into the parking lot. Departing traffic can either head to north to use traffic signal (left or right turns on Adams), or use south driveway to turn right only to SB Adams.
- Fundamental problem for both a.m. and p.m. periods is that parents were not utilizing the full length of the curbside sidewalk as a loading zone. The propensity was to NOT want to pull past the school doorway just north of the school office, limiting the use of the loading zone, and it turn slowing the process of embarking to and disembarking from the vehicles.
- The slowed rate of loading zone use resulted in traffic queuing back to Adams Rd. For our limited observations we did not see traffic queuing onto Adams, but would believe that it occurs on occasions.

#### Visitor Parking Area:

- There are numerous signs trying to discourage use as a loading zone parallel to the front parent loop. This was partially successful, with parent violations being infrequent on the days we observed traffic.
- Far more common was parents parking in the individual stalls, and waiting for their children to cross the front loop to join them. There were occasional non-handicap placard vehicles in handicap parking stalls.
- For the most part, students crossing the front loop to reach a parent vehicle in the parking lot were crossing at the designated pedestrian crossing location. The jaywalkers were generally parents who had left their vehicles to meet their children.

#### **Adams HS On-Site**

##### Bus Loop:

- The bus loop is only just of adequate size for handling the number of regular transit busses for Adams, but too small to also include the special education busses. Their operations will be discussed later. No problems noted for the arrival period. Only noteworthy point to mention for the dismissal time is that when busses start to leave, they all leave at once regardless of traffic conditions on Tienken Rd. Is reminiscent of funeral procession on how they exit the site en mass, compelling traffic to yield to them.
- For dismissal period, all busses leave exiting left toward Adams Rd, and turn left (north) at Adams Rd to go to Van Hoosen MS to pick up those students before heading out to take students home.
- After the busses leave the bus loop for the dismissal period, some private vehicles enter the loop to use as an auxiliary parent loading zone.

##### Special Education Bus Loading Area:

- Located in the west (lower) parking lot, just north of the intersection with Highlander Way, the loading area for special education busses has every hallmark of being improvised. Students enter and exit the building from the south-most door on the west side of the building. Busses attempt to get close to the door in the morning for the arrival activity. However, they have to make a multi-point turn to remove themselves from this constricted area.
- For the dismissal time, the busses have to jockey around to queue up in echelon in an area that has been hatched out with pavement markings. This location allows for one way traffic flow on either side of the buses and students have to be brought across the circulation aisle to the bus.

- After loading the buses make multi-point turns in order to leave the school site. This maneuver requires surrounding vehicular traffic in parking lots, driveways and Highlander Way to yield to the buses. The multipoint turns also occur across an area of student pedestrian activity as students cross from the main doors of the school to the pathway on the west side of Highlander Way.

#### Parent Loop:

- While of adequate size for the arrival period, this loop is totally inadequate for the dismissal period. Part of the problem is that the full loading zone area is only filled once prior to school dismissal, and afterwards parents will NOT want to pull past the school doorway, limiting the use of the loading zone and slowing the process of embarking vehicles.
- Traffic queuing spills back onto Tienken Rd to such an extent that westbound extends back to the signal at Adams. Eastbound came close but did not quite fill the left turn storage available.
- For westbound, the waiting vehicles did gap the driveways for the student parking lot and bus loop, but this led to sight distance problems for traffic exiting those driveways, especially for the student parking lot.
- Only after the busses left did parents enter the bus loop, which allowed the parent queuing on Tienken traffic to dissipate.

#### Staff (Southwest) Parking Lot:

- There appears to be adequate parking available in this lot for staff parking.
- Only problem noted was that some school busses used the aisles in this lot to stage prior to afternoon dismissal. Approaching dismissal time, the busses would either pull back on to Tienken to enter the bus loop or file into the echelon formation used by the special education busses.

#### Student Upper (Southeast) Parking Lot:

- This parking lot did not appear to fill up on the days we observed.
- Student drop off was relatively rare in the a.m. period and we did not observe any parent pick up activity in the p.m.
- The most significant problem with this lot was that the driveway to Tienken Rd is far too close to the signalized intersection with Adams Rd. In addition to the sight distance issues already noted with queuing traffic waiting to enter the parent loop, exiting traffic that wanted to turn left toward the signal had problems with the backups from the signal. This led to several high risk maneuvers.

#### Student Lower (East) Lot:

- This lot was very chaotic during both the a.m. and p.m. periods.
- There were a significant number of drop offs occurring in the a.m. and the queue for this occasionally spilled back to Adams Rd.
- Presumably the north driveway is for entering one-way travel, but we saw traffic using it to exit, some in the a.m. and many in the p.m.
- Even though the south driveway was signed for exit only, a fair number of vehicles entered using this location in the a.m.
- There were a significant number of picks ups occurring in this lot in the p.m. Waiting vehicles queued in tow lanes along the north circulation aisle and the center circulation aisle. This limited the ability of parked drivers to leave parking spaces. While the driveways appear to have been set up for one way operation, numerous vehicles made risky maneuvers in the lot in order to exit the northern driveway and turn left.

## **RECOMMENDATIONS – SHORT TERM:**

### **Van Hoosen MS Site**

- All regular transit bus service for both Van Hoosen MS and Adams HS should be contained in the bus loop at this school. High school students would only have a walk of about 720' from this location to the doors in the northeast corner of the school. We note that many already walk this distance since high school students with parking privileges are allowed to park in the Van Hoosen lot. We also note that many middle students were observed walking this distance in order to reach vehicles parked in the Adams lots.
- The pavement markings for the parent loop should be modified and signs installed to make this a one-way movement to the south and east.
- Install signs for the parent loop with the message PULL FORWARD TO DROP-OFF / PICK-UP. In concert with this, have the children congregate much further to the east, away from the doors of the school.

### **Adams HS Site:**

- In moving the regular transit bus service to Van Hoosen, this frees up the bus loop. The special-education busses should be moved to this location to eliminate the issues noted with their loading zone.
- Improve the traffic signs and pavement markings for the two driveways of the student lower (east) lot to emphasize one-way movements.
- Parents should be discouraged queuing for pick-up in the circulation aisles of the student lower (east) lot.

## **RECOMMENDATIONS – LONG TERM:**

Various alternatives have been developed, mostly for Adams HS, to resolve the circulation issues in a safe and comprehensive way. Please refer to Exhibits No. 1 to No. 5. The options tend to concentrate traffic on the west-most driveway to Tienken Rd, and would result in the need to have this location signalized. They also move the driveway for the student upper (southeast) lot further to the west, increasing its separation with the signal at Adams Rd. Exhibits 2 and 3 require moving regular transit bus service to Van Hoosen. All options accommodate special education buses in a new loop on the east side of the building.

Respectfully submitted by:  
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June 23, 2014