



# **SCHOOL TRAFFIC MANAGEMENT PLAN**

## **Hudson City Schools Central Campus**

**City of Hudson, Summit County, Ohio**



### **Prepared For:**

Hudson City Schools  
2400 Hudson Aurora Road  
Hudson, OH 44236

### **Prepared By:**

GPD Group  
520 South Main Street  
Suite 2531  
Akron, OH 44311

**Revised October 2018**

# School Traffic Management Plan Hudson City Schools Central Campus

City of Hudson, Summit County, Ohio

Prepared For:

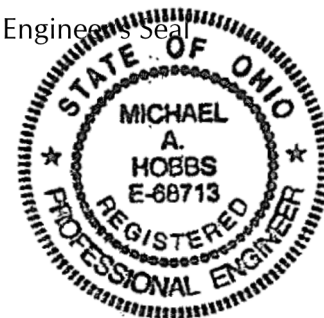
Hudson City Schools  
2400 Hudson Aurora Road  
Hudson, OH 44236

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Prepared By:

Prepared  
Under The Responsible  
Charge of:

Engineer's Seal



Brett M. Ferrell Michael A. Hobbs

Brett M. Ferrell, P.E.  
Registration No. 81812

Michael A. Hobbs, P.E., PTOE  
Registration No. 68713  
Certification No. 1346

October 08, 2018

Date



**GPD GROUP®**  
Glaus, Pyle, Schomer, Burns & DeHaven, Inc.

520 South Main Street, Suite 2531, Akron, Ohio 44311  
330-572-2100 Fax 330-572-2101

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## **I. Purpose:**

This Traffic Impact Study is being prepared at the request of the Hudson City School District in association with the proposed construction of the new Hudson Middle School and associated central campus modifications in the City of Hudson, Ohio. The purpose of this particular Traffic Impact Study is to analyze the vehicular operating conditions in the vicinity of the Hudson City Schools Central Campus; both during and after its proposed construction to determine what, if any, impact the proposed project will have on the surrounding roadway network.

## **II. Project Setting:**

### ***Study Area***

The subject property currently serves as the site of the existing Hudson schools central campus. The central campus is comprised of the following four (4) schools:

- 1) Evamere Elementary School – Kindergarten through 1<sup>st</sup> grade
- 2) McDowell Elementary School – 3<sup>rd</sup> grade
- 3) East Woods Elementary School – 4<sup>th</sup> and 5<sup>th</sup> grade
- 4) Hudson Middle School – 6<sup>th</sup> through 8<sup>th</sup> grade

The central campus is bounded by Aurora Street to the north, SR-303 to the south, N. Oviatt Street to the west, and N. Hayden Parkway to the east. The development within the study area is primarily single family residential homes. See **Figure 1** for a project location map and **Figure 2** for an aerial photograph of the project area.

### ***Area Roadway System***

State Route 303 (SR-303) currently exists as two (2) lane asphalt roadway with one (1) lane in each direction. The current posted speed limit on SR-303 is 35 miles per hour (mph). According to information obtained from the Ohio Department of Transportation's (ODOT) Transportation Information Mapping System (TIMS), SR-303 is classified as an urban minor arterial.

Aurora Street currently exists as a two (2) lane asphalt roadway with one (1) lane in each direction. The current posted speed limit on Aurora Street is 25 mph. According to information obtained from ODOT-TIMS, Aurora Street is classified as an urban major collector.

N. Hayden Parkway and N. Oviatt Street currently exist as two (2) lane asphalt roadways with one (1) lane in each direction. The current posted speed limit on N. Hayden Parkway and N. Oviatt Street is 25 mph. According to information obtained from ODOT-TIMS, both roadways are classified as urban local roadways.

There is one (1) existing signalized intersection and six (6) existing unsignalized intersections that are currently located within the study area and are of special interest to this project:



### SR-303 / N. Hayden Parkway

This intersection is currently signalized utilizing a mast arm configuration with signal supports located on each corner of the intersection. The intersection consists of four (4) approaches with the following lane configurations: EB & WB SR-303 – one (1) lane (left-thru-right), NB & SB N. Hayden Parkway – one (1) lane (left-thru-right). A permitted/protected left turn phase is provided for the EB approach of SR-303.

### SR-303 / N. Oviatt Street

This intersection is currently unsignalized with the NB and SB approaches operating under stop control. The intersection consists of four (4) approaches with the following lane configurations: EB & WB SR-303 – one (1) lane (left-thru-right), NB & SB N. Oviatt Street – one (1) lane (left-thru-right).

### N. Oviatt Street / Elm Street

This intersection is currently unsignalized with all approaches operating under stop control. The intersection consists of three (3) approaches with the following lane configurations: WB Elm Street – one (1) lane (left-right), NB N. Oviatt Street – one (1) lane (thru-right), SB N. Oviatt Street – one (1) lane (left-thru).

### Aurora Street / N. Oviatt Street

This intersection is currently unsignalized with the NB and SB approaches operating under stop control. The intersection consists of four (4) approaches with the following lane configurations: EB & WB Aurora Street – one (1) lane (left-thru-right), NB & SB N. Oviatt Street – one (1) lane (left-thru-right).

### Aurora Street / Franklin Street

This intersection is currently unsignalized with the NB approach operating under stop control. The intersection consists of three (3) approaches with the following lane configurations: EB Aurora Street – one (1) lane (thru-right), WB Aurora Street – one (1) lane (left-thru), NB Franklin Street – one (1) lane (left-right).

### Aurora Street / N. Hayden Parkway

This intersection is currently unsignalized with the NB approach operating under stop control. The intersection consists of three (3) approaches with the following lane configurations: EB Aurora Street – one (1) lane (thru-right), WB Aurora Street – one (1) lane (left-thru), NB N. Hayden Parkway – one (1) lane (left-right).

In addition to these primary intersections surrounding the central school campus, the study will also evaluate the intersections of each of the existing school drives (currently one (1) on N. Oviatt Street and five (5) on N. Hayden Parkway) for the current conditions as well as the intersections of each proposed school drive (anticipated to be one (1) on N. Oviatt Street and four (4) on N. Hayden Parkway) for the future conditions.



### ***Existing Traffic Volumes***

For this study, Cummins Consulting Services performed turning movement traffic counts during a typical weekday when school was in session. For purposes of this study, morning and afternoon counts were obtained on Tuesday, April 10<sup>th</sup>, 2018 between the hours of 7:00 AM to 9:30 AM for the school arrival period and from 2:00 PM to 4:30 PM for the school dismissal period. These counts were performed at the following locations:

- SR-303 / N. Oviatt Street
- N. Oviatt Street / Elm Street
- N. Oviatt Street / Franklin Street
- Aurora Street / N. Oviatt Street
- Aurora Street / Franklin Street
- Aurora Street / N. Hayden Parkway
- N. Hayden Parkway / McDowell Elementary N. Access Drive
- N. Hayden Parkway / McDowell Elementary S. Access Drive
- N. Hayden Parkway / East Woods Elementary Drive
- N. Hayden Parkway / Evamere Elementary N. Access Drive
- N. Hayden Parkway / Evamere Elementary S. Access Drive
- SR-303 / N. Hayden Parkway

The ‘raw’ traffic count data is contained in **Appendix A**. From the count data, it was determined that the study area experiences two (2) AM and two (2) PM peak hours due to the different start and dismissal times of the middle and elementary schools. The middle school’s AM peak hour was identified to occur from 7:00 – 8:00 AM while its PM peak hour was identified to occur from 2:15 – 3:15 PM. The AM peak hour of the Elementary schools was identified to occur from 8:15 – 9:15 AM while their PM peak hour was identified to occur from 3:15 – 4:15 PM. The traffic volumes during the middle school and elementary schools peak hours can be seen in **Figures 3 & 4**, respectively.

### **III. Proposed Action:**

The proposed project will construct a new middle school facility, remodel the existing McDowell and East Woods Elementary Schools, demolish a portion of the existing Evamere Elementary School and convert the remainder into administrative and Hudson Community Education and Recreation (HCER) offices, and improve the internal roadway network. The preliminary site plan is shown in **Figure 5. Table 1** on the following page summarizes the construction phasing timeline along with the grade levels and respective student enrollment that will be housed in each building by phase as well as the final configuration.



Table 1: School Building Enrollment

School Facility	Phase 1 and 2 (9/2018 – 7/2020)		Phase 3 (8/2020 – 7/2021)		Phase 4 (8/2021 – 7/2022)		Final Configuration (8/2022)	
	Grade Levels	Student Enrollment	Grade Levels	Student Enrollment	Grade Levels	Student Enrollment	Grade Levels	Student Enrollment
Evamere Elementary	K - 1 <sup>st</sup>	589	PK – K	354	Renovation / Demo		Admin. Offices	
McDowell Elementary	3 <sup>rd</sup>	311	Renovation / Expansion		PK – K	354	PK – K	354
East Woods Elementary	4 <sup>th</sup> – 5 <sup>th</sup>	678	Renovation / Expansion		3 <sup>rd</sup> – 5 <sup>th</sup>	989	3 <sup>rd</sup> – 5 <sup>th</sup>	989
Existing Middle School	6 <sup>th</sup> – 8 <sup>th</sup>	1,077	3 <sup>rd</sup> – 5 <sup>th</sup>	989	Demo		N/A	
New Middle School	Construction		6 <sup>th</sup> – 8 <sup>th</sup>	1,077	6 <sup>th</sup> – 8 <sup>th</sup>	1,077	6 <sup>th</sup> – 8 <sup>th</sup>	1,077
	<b>Total:</b>	<b>2,665</b>	<b>Total:</b>	<b>2,420</b>	<b>Total:</b>	<b>2,420</b>	<b>Total:</b>	<b>2,420</b>

As shown **Table 1**, the current student enrollment for the central campus is 2,665 students which will remain the same for Phase 1 and 2. The central campus will experience a reduction in students during Phase 3 at which time the 1<sup>st</sup> grade students will switch buildings with Pre-K who are currently located at Ellsworth Hill Elementary School (off-campus), resulting in a net loss of 245 students and a new total of 2,420. As such, the final configuration will generate less traffic than the current campus and negate any new trips that would be generated by the administrative offices added to Evamere or the potential reuse of the 1927 middle school building that will remain upon completion of the project.

The middle school will continue to have access to Aurora Street and N. Oviatt Street via full movement driveways. Two (2) separate drop-off/pick-up loops will be provided for the middle school. A parent drop-off/pick-up loop will be provided in front of the building with vehicles entering and exiting at N. Oviatt Street and only exiting at Aurora Street while a dedicated bus drop-off/pick-up area will be provided on the northeast corner of the building with buses entering and exiting at Hayden Parkway. It should also be noted that a gate will be utilized during drop-off/pick-up times in order to separate passenger vehicles from the school buses. This gate will have remote control access in order to maintain EMS/Fire access.

The McDowell and East Woods Elementary schools will each provide a parent drop-off/pick-up loop in front of their respective buildings with vehicles entering and exiting via N. Hayden Parkway. A dedicated bus drop-off/pick-up area will be provided between the two (2) elementary schools with buses entering and exiting via N. Hayden Parkway. The location of this bus drop-off/pick-up area will allow buses to drop-off/pick-up students from both elementary schools simultaneously.

#### **IV. Discussion of Analysis Scenarios:**

Currently, the new central school campus is planned to be constructed in four (4) phases. Phases 1 & 2 will construct the new middle school, the traffic circle in front of the middle school, and the middle school's bus drop-off/pick-up area. Phase 3 will renovate the existing McDowell and East Woods Elementary Schools and finish modifications to the campus' internal roadway network. Phase 4 will partially demolish the Evamere Elementary school and remodel the remainder for administrative and HCER offices. After the completion of Phase 4, the existing middle school will be demolished, less the 1927



building. Additionally, a connector road from N. Oviatt Street to the middle school's traffic circle and a staff parking lot located on the west side of the new middle school will be constructed.

After the completion of Phases 1 & 2 and before the start of Phase 3, grades 6 – 8 will move into the new middle school and grades 3 – 5 will be relocated to the existing middle school. First grade will be relocated off-campus to Ellsworth Hills Elementary School and Pre-K will join Kindergarten at Evamere Elementary School. Following the completion of Phase 3, grades PK – K will be relocated to McDowell Elementary School while grades 3 -5 will be relocated to East Woods Elementary School. This will be the final configuration of the Hudson City Schools Central Campus. A more detailed discussion in reference to traffic conditions of each phase is provided below. To provide a visual depiction of the phasing discussions to follow, traffic circulation figures that show how passenger vehicles and school buses will flow through the site during each phase of construction are provided in **Appendix B**.

### ***Phase 1 & 2 Conditions***

Phase 1 and Phase 2 will consist of the construction of the new middle school. As all students will remain in their current buildings, the generated traffic will remain consistent with that of the existing conditions. Furthermore, the construction will be confined to a new construction drive on SR-303 that will allow the normal school circulation patterns to be maintained. Only the existing driveway connection between the internal connector road and the Evamere parkin lot will be closed during these phases. As this driveway connection is typically gated during school hours, only buses traveling between the middle school and Hayden Parkway will be impacted, but the parallel route past East Woods Elementary School will remain open and thus allow for current travel patterns to be maintained.

### ***Phase 3 Conditions***

During Phase 3, school traffic will be able to continue to utilize all existing school drives with the exception of the McDowell Elementary School driveways as it will be closed for renovations. The existing middle school parking lot and its Franklin Street connection along with the internal connector road between East Woods and the middle school will also be maintained during Phase 3.

For the new middle school, all buses will utilize the East Woods or Evamere Elementary School drives on N. Hayden Parkway to access the new bus drop-off/pick-up area, provided after the completion of Phase 2, by means of the internal campus roadway network. This will separate the school buses from the passenger vehicles which will help improve the internal traffic flow of the site. For passenger vehicles, all vehicles will enter the site on Franklin Street (via Aurora Street) and utilize the new loop in front of the school. When leaving the site, these vehicles will then have the option to exit the site to either Aurora Street or N. Oviatt Street. Instead of requiring all traffic to exit at the same location, the additional option will better disperse outbound vehicles and minimize any resulting traffic congestion. To ensure that inbound vehicles do not block the internal intersection where outbound vehicles will turn across them to get to N. Oviatt Street, it would be recommended to install "Do Not Block Intersection" signs and/or have an individual directing traffic at this location.



With the elementary and middle school AM and PM peak periods being offset from one another, it allows the flexibility to utilize an alternative circulation plan for elementary school drop-offs/pick-ups. For the relocated elementary schools that will now be in the existing middle school building, the existing middle school traffic circulation pattern will be maintained. This means that all vehicles will continue to enter using Franklin Street (via Aurora Street) while passenger vehicles will exit only to N. Oviatt Street and buses will loop around the parking lot and exit to Hayden Parkway via the internal connector road. This circulation plan is beneficial because there are no internal vehicular conflicts, there is plenty of storage to queue vehicles waiting to drop-off/pick-up students, and it maintains the existing middle school circulation pattern which many parents will already be familiar with. See **Appendix B** for a depiction of how passenger vehicles and buses will be anticipated to flow through the site during Phase 3 of construction.

#### ***Phase 4 Conditions***

After the completion of Phase 3, the McDowell and East Woods Elementary Schools will have been renovated and all students that were temporarily housed in the existing middle school will relocate to their permanent buildings. Therefore, all grade levels will be located in their final assigned buildings during Phase 4, only the remaining demolition of the existing middle school and the renovation and partial demolition of Evamere will impact the internal circulation patterns.

For the new middle school, all buses will now only be able to utilize the East Woods Elementary School drive on N. Hayden Parkway to access the new bus drop-off/pick-up area as the Evamere Elementary School will be under construction and closed to traffic. As previously noted, the separation of school buses from the passenger vehicles will help improve the internal traffic flow of the site. For passenger vehicles, they will continue to enter the site from Franklin Street (via Aurora Street) and will then still have the option to exit the site to either Aurora Street or N. Oviatt Street, similar to Phase 3. Since the permanent driveway serving the drop-off/pick-up loop will not yet be constructed due to the demolition of the existing middle school building, the intent is to maintain the same middle school circulation patterns from Phase 3 to Phase 4 in order to minimize confusion.

The McDowell and East Woods Elementary Schools will have direct access to N. Hayden Parkway and will now be able to utilize the new drop-off/pick-up loops that will be provided for parents. The two (2) Elementary Schools will also share a new bus drop-off/pick-up area, provided after the completion of Phase 3, located between them. As previously noted, the separation of school buses from passenger vehicles will improve traffic operations both internally and along N. Hayden Parkway. See **Appendix B** for a depiction of how passenger vehicles and buses will be anticipated to flow through the site during Phase 4 of construction.

#### ***Final 'Build' Conditions***

The final 'Build' configuration represents the final roadway layout as shown in the preliminary site plan, **Figure 5**. As previously stated, the middle school will have direct access to Aurora Street and N. Oviatt Street via full movement driveways while the elementary schools will have direct access to N. Hayden Parkway.





Following the completion of Phase 4, a final internal roadway connection will have been constructed connecting N. Oviatt Street directly to the passenger vehicle drop-off/pick-up loop located in front of the new middle school. With this driveway, the final circulation pattern will be revised so that all passenger vehicles will now enter the site via N. Oviatt Street and will then have the option to exit the site either back to N. Oviatt Street or out to Franklin Street. Similar to Phase 2 and Phase 3, maintaining both options for egress will better disperse outbound vehicles and minimize any resulting traffic congestion. This final layout will also eliminate the temporary situation where outbound traffic would turn left across inbound traffic when exiting back to N. Oviatt Street under Phase 3 and 4. See **Appendix B** for a depiction of how passenger vehicles and buses are anticipated to flow at each school site under the final 'Build' configuration.

## **V. Projected Traffic Volumes:**

### ***Existing School Traffic Volumes***

As the traffic currently generated by the existing school campus will remain, it is first important to isolate the existing school trips of each school during the four (4) peak hours so that it can be redistributed and assigned to the proper driveways both during and after construction of the new campus. **Table 2** summarizes the entering and exiting peak hour traffic volumes by driveway location for the existing central campus schools during the middle school peak hours.

Table 2: Existing School Traffic – Middle School Peak Hours						
School / Intersection	AM Peak (7:00 AM - 8:00 AM)			PM Peak (2:15 PM - 3:15 PM)		
	Entering	Exiting	Total	Entering	Exiting	Total
<b>Hudson Middle School</b>						
Aurora Street / Franklin Street	282	47	<b>329</b>	70	66	<b>136</b>
N. Oviatt Street / Franklin Street	0	143	<b>143</b>	33	64	<b>97</b>
<b>Evamere Elementary School</b>						
N. Hayden Parkway / North Access Drive	3	0	<b>3</b>	4	0	<b>4</b>
N. Hayden Parkway / South Access Drive	23	13	<b>36</b>	13	14	<b>27</b>
<b>McDowell Elementary School</b>						
N. Hayden Parkway / North Access Drive	21	0	<b>21</b>	10	0	<b>10</b>
N. Hayden Parkway / South Access Drive	0	3	<b>3</b>	0	21	<b>21</b>
<b>East Woods Elementary School</b>						
N. Hayden Parkway / East Woods Drive	93	81	<b>174</b>	34	42	<b>76</b>
<b>Existing School Trip Generation</b>	<b>422</b>	<b>287</b>	<b>709</b>	<b>164</b>	<b>207</b>	<b>371</b>
<b>Existing Entering/Existing Distribution</b>	<b>60%</b>	<b>40%</b>	<b>100%</b>	<b>44%</b>	<b>56%</b>	<b>100%</b>



As shown in **Table 2** on the previous page, during the middle school peak hours the existing campus is currently generating 709 trips during the AM peak hour (422 entering and 287 exiting) and 371 trips during the PM peak hour (164 entering and 207 exiting).

**Table 3** summarizes the entering and exiting peak hour traffic volumes by driveway location for the existing central campus schools during the elementary schools peak hours.

Table 3: Existing School Traffic – Elementary Schools Peak Hours						
School / Intersection	AM Peak (8:15 AM - 9:15 AM)			PM Peak (3:15 PM - 4:15 PM)		
	Entering	Exiting	Total	Entering	Exiting	Total
<b>Hudson Middle School</b>						
Aurora Street / Franklin Street	34	59	<b>93</b>	32	81	<b>113</b>
N. Oviatt Street / Franklin Street	11	15	<b>26</b>	29	50	<b>79</b>
<b>Evamere Elementary School</b>						
N. Hayden Parkway / North Access Drive	21	0	<b>21</b>	31	0	<b>31</b>
N. Hayden Parkway / South Access Drive	119	64	<b>183</b>	77	115	<b>192</b>
<b>McDowell Elementary School</b>						
N. Hayden Parkway / North Access Drive	70	0	<b>70</b>	62	0	<b>62</b>
N. Hayden Parkway / South Access Drive	0	52	<b>52</b>	0	84	<b>84</b>
<b>East Woods Elementary School</b>						
N. Hayden Parkway / East Woods Drive	177	115	<b>292</b>	48	81	<b>129</b>
<b>Existing School Trip Generation</b>	<b>432</b>	<b>305</b>	<b>737</b>	<b>279</b>	<b>411</b>	<b>690</b>
<b>Existing Entering/Existing Distribution</b>	<b>59%</b>	<b>41%</b>	<b>100%</b>	<b>40%</b>	<b>60%</b>	<b>100%</b>

As shown in **Table 3**, during the elementary school peak hours the existing campus is currently generating 737 trips during the AM peak hour (432 entering and 305 exiting) and 690 trips during the PM peak hour (279 entering and 411 exiting). Utilizing the individual driveway counts, the associated direction of arrivals and departures, and the traffic counts and flow patterns along SR-303, Aurora Street, N. Oviatt Street, and N. Hayden Parkway, the assignment and travel path of all existing school trips throughout the study area was determined. **Appendix C** contains figures that show the existing school trips during the middle school and elementary schools peak hours at each intersection within the study area.

In order to isolate the background non-school related traffic in the study area, all middle school and elementary school traffic (shown in **Appendix C**) was removed from the existing peak hour traffic volumes (shown in **Figures 3 & 4**). See **Figures 6 & 7** for the Existing Year middle school and elementary schools peak hour background traffic volumes, respectively.

### ***Phase 3 Traffic Volumes***

In order to develop the Phase 3 traffic volumes, the existing school traffic from the previous section was assigned to the proper school drives and redistributed throughout the surrounding roadway network based on expected travel patterns and distributions in the study area. The redistributed school traffic volumes were then added to the Existing Year background traffic volumes (**Figures 6 & 7**).

During construction, it is anticipated that 33 buses will serve the Middle School and 24 will serve the Elementary Schools. Therefore, during the middle school peak hours, the school bus traffic was extracted from the middle school traffic volumes and assigned to utilize the N. Hayden Parkway / East Woods Elementary School Drive and N. Hayden Parkway / Evamere Elementary School S. Drive intersections. From there, the bus traffic was redistributed throughout the roadway network based on existing traffic distributions in the study area.

Since the temporary elementary school is planned to continue to utilize the existing site circulation pattern of the existing middle school, only exiting school bus traffic was isolated from the elementary school counts during the elementary school peak hours. It was then assigned to utilize the N. Hayden Parkway / E. Woods Elementary School Drive intersection and proportionately redistributed throughout the roadway network based on existing traffic distributions in the study area. See **Figures 8 & 9** for the Phase 3 middle school and elementary schools peak hour traffic volumes, respectively.

### ***Phase 4 Traffic Volumes***

In order to develop the Phase 4 traffic volumes, the existing school traffic was assigned to the proper school drives and redistributed throughout the surrounding roadway network based on expected travel patterns and distributions in the study area. The redistributed school traffic volumes were then added to the Existing Year background traffic volumes (**Figures 6 & 7**).

For the middle school, the only difference between the Phase 3 and Phase 4 traffic circulation patterns is that during Phase 4 school buses will only be able to utilize the N. Hayden Parkway / E. Woods Elementary School Drive intersection to access the bus drop-off/pick-up area as the Evamere Elementary School will be under construction.

The largest change to occur during Phase 4 is the reconfiguration of grade assignments for the Elementary Schools. To reflect these changes in the traffic volumes all passenger vehicles previously traveling to/from Evamere Elementary were rerouted to McDowell Elementary and all passenger vehicles previously traveling to/from McDowell Elementary were rerouted to E. Woods Elementary. For school bus traffic, it was assumed that buses would enter the bus drop-off/pick-up area via the E. Woods Elementary access point and then exit via the McDowell Elementary access point. See **Figures 10 & 11** for the Phase 4 middle school and elementary schools peak hour traffic volumes, respectively.



### ***Final ‘Build’ Traffic Volumes***

In order to develop the ‘Build’ traffic volumes, the existing school traffic was assigned to the proper school drives and redistributed throughout the surrounding roadway network based on anticipated future travel patterns in the study area. The redistributed school traffic volumes were then added to the Existing Year background traffic volumes (**Figures 6 & 7**).

The ‘Build’ elementary school traffic patterns will remain identical to the Phase 4. The only change in travel and site circulation patterns from Phase 4 to the final ‘Build’ conditions occurs at the middle school. With the construction of the new internal connector road between N. Oviatt Street and the passenger vehicle drop-off/pick-up loop located in front of the new middle school, passenger vehicles will now enter the site via N. Oviatt Street and will then have the option to exit the site at either N. Oviatt Street or Aurora Street. All school bus traffic will continue to enter/exit the campus via N. Hayden Parkway. See **Figures 12 & 13** for the ‘Build’ middle school and elementary schools peak hour traffic volumes, respectively.

## **VI. Traffic Analysis:**

### ***HCS Intersection Capacity Analysis***

Intersection Capacity analyses were performed for the Existing Year/Phase 1/Phase 2, Phase 3, Phase 4 and final ‘Build’ configuration ] in order to determine the operating conditions that would be expected to be experienced at each intersection. The quality of the operating conditions experienced by an intersection is measured in terms of Level-of-Service (LOS). Levels-of-Service can range from LOS A to LOS F. Level-of-Service ratings of A, B, and C are considered to be in the acceptable range. Per City of Hudson standards, Levels-of-Service D, E and F are considered below average with significant levels of delay experienced by vehicles. The Level-of-Service thresholds vary for signalized and unsignalized intersections. The thresholds related to average control delay for both signalized and unsignalized intersections are as follows:

<b>Level-of-Service</b>	<b>Delay Threshold – Signalized (Sec)</b>	<b>Delay Threshold – Unsignalized (Sec)</b>
A	< 10	< 10
B	> 10 - 20	> 10 – 15
C	> 20 - 35	> 15 – 25
D	> 35 - 55	> 25 - 35
E	> 55 - 80	> 35 - 50
F	> 80	> 50

The capacity analysis is performed utilizing the computer program HCS7 developed by McTrans Corporation and is based on the Highway Capacity Manual (HCM), 6<sup>th</sup> Edition and the 2009 Manual of Uniform Traffic Control Devices (MUTCD). Based on criteria established by ODOT, the Highway Capacity Software (HCS) is used to determine the required number of lanes and the lane assignments at intersections (i.e. the needed capacity).



It should be acknowledged that this capacity analysis is based on the traffic volumes experienced during the peak 1-hour timeframe for both the morning and afternoon periods but school facilities naturally experience a traffic surge that occurs within a more confined timeframe of 15 to 30 minutes. In order to account for this, the actual Peak Hour Factors (PHF) were used instead of the standard 0.92. The PHF is a measure of fluctuations in traffic demand during the peak hour and ranges from zero (0) to one (1). A PHF of 1 means that every 15-minute interval during the peak hour is the same therefore, the traffic flow is constant over the peak hour. As the PHF decreases, it shows that traffic is more variable over the peak hour and that the peak hour traffic volume has a surge during a peak 15-minute interval. The PHF's utilized in the capacity analysis were based on the existing traffic count data in order to more accurately represent the actual school traffic surge that occurs in this area relative to each individual intersection.

This analysis also assumes free-flow conditions at each driveway and through each study intersection whereas on-site congestion that results in vehicles queuing out onto the public roadways will have an adverse impact on surrounding intersections should such queues block the travel paths of other vehicles. While this is not anticipated to be an issue, it should be noted should the perception of traffic operations in the vicinity of the school not necessarily correlate with the analysis findings reported below.

#### *Existing/Phases 1/Phase 2 Conditions*

**Table 4** summarizes the HCS Intersection Capacity Analysis and details the Levels-of-Service and delay experienced under the existing, Phase 1 and Phase 2 conditions during the 'Middle School Peak Hours' & 'Elementary Schools Peak Hours' for the signalized intersection within the study area. See **Appendix D** for the HCS analysis printouts.

Table 4: HCS Intersection Capacity Analysis Summary Existing/Phase 1/Phase 2 Conditions – Signalized Intersection								
Intersection / Movement	'Middle School Peak Hours'				'Elementary School Peak Hours'			
	AM Peak		PM Peak		AM Peak		PM Peak	
	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)
<b>State Route 303 / N. Hayden Parkway</b>								
Eastbound Left-Thru-Right	C	20.2	B	18.6	C	23.1	C	21.1
Eastbound Approach	C	20.2	B	18.6	C	23.1	C	21.1
Westbound Left-Thru-Right	B	19.8	B	18.2	B	16.5	B	17.4
Westbound Approach	B	19.8	B	18.2	B	16.5	B	17.4
Northbound Left-Thru-Right	B	19.0	B	17.8	C	20.9	B	18.9
Northbound Approach	B	19.0	B	17.8	C	20.9	B	18.9
Southbound Left-Thru-Right	C	20.1	B	18.6	C	23.0	C	21.0
Southbound Approach	C	20.1	B	18.6	C	23.0	C	21.0
<b>Intersection Total</b>	<b>B</b>	<b>19.9</b>	<b>B</b>	<b>18.4</b>	<b>C</b>	<b>20.5</b>	<b>B</b>	<b>19.8</b>



As shown in **Table 4** on the previous page, the SR-303 / N. Hayden Parkway intersection operates with acceptable Levels-of-Service during the peak hours under the existing, Phase 1 and Phase 2 conditions. The analysis above indicates that the intersection has sufficient capacity to accommodate its current traffic demand as well as during the first two phases of construction.

**Table 5** summarizes the HCS Intersection Capacity Analysis and details the Levels-of-Service and delay experienced under the existing, Phase 1 and Phase 2 conditions during the ‘Middle School Peak Hours’ & ‘Elementary Schools Peak Hours’ for each unsignalized intersection within the study area. See **Appendix D** for the HCS analysis printouts.

Table 5: HCS Intersection Capacity Analysis Summary Existing/Phase 1/Phase 2 Conditions – Unsignalized Intersections								
Intersection / Movement	‘Middle School Peak Hours’				‘Elementary School Peak Hours’			
	AM Peak		PM Peak		AM Peak		PM Peak	
	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)
<b>State Route 303 / N. Oviatt Street</b>								
Eastbound Left-Thru-Right	A	8.8	A	8.6	A	8.5	A	8.4
Eastbound Approach	A	2.1	A	1.7	A	1.5	A	1.8
Westbound Left-Thru-Right	A	8.0	A	8.1	A	8.2	A	8.3
Westbound Approach	A	0.5	A	0.6	A	0.9	A	0.8
Northbound Left-Thru-Right	D	25.4	C	19.4	D	25.0	C	22.7
Northbound Approach	D	25.4	C	19.4	D	25.0	C	22.7
Southbound Left-Thru-Right	C	21.9	C	18.1	C	20.3	C	21.0
Southbound Approach	C	21.9	C	18.1	C	20.3	C	21.0
<b>N. Oviatt Street / Elm Street</b>								
Westbound Left-Right	A	8.4	A	7.6	A	7.1	A	7.4
Westbound Approach	A	8.4	A	7.6	A	7.1	A	7.4
Northbound Thru-Right	A	8.8	A	7.9	A	7.5	A	7.8
Northbound Approach	A	8.8	A	7.9	A	7.5	A	7.8
Southbound Left-Thru	A	8.9	A	8.2	A	7.6	A	8.0
Southbound Approach	A	8.9	A	8.2	A	7.6	A	8.0
<b>Intersection Total</b>	<b>A</b>	<b>8.8</b>	<b>A</b>	<b>8.0</b>	<b>A</b>	<b>7.5</b>	<b>A</b>	<b>7.9</b>
<b>N. Oviatt Street / Franklin Street</b>								
Westbound Left-Right	B	11.1	B	10.6	A	9.6	B	10.2
Westbound Approach	B	11.1	B	10.6	A	9.6	B	10.2
Southbound Left-Thru	A	7.5	A	8.5	A	7.7	A	7.5
Southbound Approach	A	0.0	A	2.1	A	0.5	A	0.6

Note: Yellow highlighted cells indicate a Level of Service D.





Table 5: HCS Intersection Capacity Analysis Summary (Cont.)  
Existing/Phase 1/Phase 2 Conditions – Unsignalized Intersections

Intersection / Movement	'Middle School Peak Hours'				'Elementary School Peak Hours'			
	AM Peak		PM Peak		AM Peak		PM Peak	
	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)
<b>Aurora Street / N. Oviatt Street</b>								
Eastbound Left-Thru-Right	A	8.1	A	7.6	A	8.1	A	8.1
Eastbound Approach	A	0.5	A	0.3	A	0.9	A	0.3
Westbound Left-Thru-Right	A	8.3	A	7.9	A	7.8	A	7.8
Westbound Approach	A	1.1	A	1.5	A	1.5	A	1.0
Northbound Left-Thru-Right	D	26.9	B	12.0	C	16.0	B	14.5
Northbound Approach	D	26.9	B	12.0	C	16.0	B	14.5
Southbound Left-Thru-Right	D	27.2	B	13.1	C	15.1	C	17.6
Southbound Approach	D	27.2	B	13.1	C	15.1	C	17.6
<b>Aurora Street / Franklin Street</b>								
Westbound Left-Thru	B	10.2	A	8.0	A	7.9	A	7.9
Westbound Approach	A	5.0	A	1.1	A	0.4	A	0.5
Northbound Left-Right	C	22.7	B	12.5	C	18.8	B	14.9
Northbound Approach	C	22.7	B	12.5	C	18.8	B	14.9
<b>Aurora Street / N. Hayden Parkway</b>								
Westbound Left-Thru	A	9.0	A	8.3	A	8.5	A	8.4
Westbound Approach	A	1.9	A	1.1	A	3.4	A	2.1
Northbound Left-Right	D	26.7	B	13.5	C	21.3	C	17.3
Northbound Approach	D	26.7	B	13.5	C	21.3	C	17.3
<b>N. Hayden Parkway / McDowell N. Access</b>								
Northbound Left-Thru	A	7.8	A	7.3	A	8.0	A	7.5
Northbound Approach	A	0.9	A	0.6	A	1.3	A	1.0
<b>N. Hayden Parkway / McDowell S. Access</b>								
Eastbound Left-Right	B	10.9	A	9.2	B	10.9	B	10.0
Eastbound Approach	B	10.9	A	9.2	B	10.9	B	10.0
<b>N. Hayden Parkway / E. Woods Elementary Drive</b>								
Eastbound Left-Right	B	11.1	A	9.7	C	15.7	B	11.1
Eastbound Approach	B	11.1	A	9.7	C	15.7	B	11.1
Northbound Left-Thru	A	7.7	A	7.5	A	8.5	A	8.3
Northbound Approach	A	3.3	A	2.0	A	5.9	A	2.0

Note: Yellow highlighted cells indicate a Level of Service D.



**Table 5: HCS Intersection Capacity Analysis Summary (Cont.)**  
**Existing/Phase 1/Phase 2 Conditions – Unsignalized Intersections**

Intersection / Movement	'Middle School Peak Hours'				'Elementary School Peak Hours'			
	AM Peak		PM Peak		AM Peak		PM Peak	
	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)
<b>N. Hayden Parkway / Evamere N. Access</b>								
Northbound Left-Thru	A	7.5	A	7.4	A	9.0	A	8.3
Northbound Approach	A	0.0	A	0.1	A	0.7	A	0.9
<b>N. Hayden Parkway / Evamere S. Access</b>								
Eastbound Left-Right	B	10.3	A	9.4	B	12.1	B	12.0
Eastbound Approach	B	10.3	A	9.4	B	12.1	B	12.0
Northbound Left-Thru	A	7.5	A	7.4	A	8.0	A	7.8
Northbound Approach	A	1.2	A	0.8	A	3.2	A	2.1

As shown in **Table 5**, all movements and approaches of the unsignalized intersections within the study area operate with acceptable Levels-of-Service during the peak hours under the existing, Phase 1 and Phase 2 conditions with the exception of several unsignalized side street approaches which were found to operate at LOS D. The analysis above indicates that the unsignalized intersections generally have sufficient capacity to accommodate their current traffic demand as well as during the first two phases of construction. The following four (4) approaches have been found to be currently operating at LOS D under the existing, Phase 1 and 2 conditions:

- SR-303 / N. Oviatt Street – NB Approach (Middle School AM Peak & Elementary School AM Peak)
- Aurora Street / N. Oviatt Street – NB Approach (Middle School AM Peak)
- Aurora Street / N. Oviatt Street – SB Approach (Middle School AM Peak)
- Aurora Street / N. Hayden Parkway – NB Approach (Middle School AM Peak)

As these are existing conditions, the proposed Middle School project will not be required to mitigate the operation to a LOS C or better, but will need to maintain LOS D without additional Level-of-Service degradation under the Final 'Build' conditions.

### Phase 3 Conditions

**Table 6** summarizes the HCS Intersection Capacity Analysis and details the Levels-of-Service and delay experienced under the Phase 3 conditions during the ‘Middle School Peak Hours’ & ‘Elementary Schools Peak Hours’ for the signalized intersections within the study area. See **Appendix E** for the HCS analysis printouts.

Table 6: HCS Intersection Capacity Analysis Summary Phase 3 Conditions – Signalized Intersection								
Intersection / Movement	‘Middle School Peak Hours’				‘Elementary School Peak Hours’			
	AM Peak		PM Peak		AM Peak		PM Peak	
	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)
<b>State Route 303 / N. Hayden Parkway</b>								
Eastbound Left-Thru-Right	B	18.0	B	18.6	B	19.0	B	19.9
Eastbound Approach	B	18.0	B	18.6	B	19.0	B	19.9
Westbound Left-Thru-Right	B	19.6	B	18.1	B	18.8	B	17.2
Westbound Approach	B	19.6	B	18.1	B	18.8	B	17.2
Northbound Left-Thru-Right	B	19.2	B	17.8	B	18.8	B	19.1
Northbound Approach	B	19.2	B	17.8	B	18.8	B	19.1
Southbound Left-Thru-Right	B	19.7	B	18.6	B	19.1	B	20.0
Southbound Approach	B	19.7	B	18.6	B	19.1	B	20.0
<b>Intersection Total</b>	<b>B</b>	<b>19.0</b>	<b>B</b>	<b>18.4</b>	<b>B</b>	<b>18.9</b>	<b>B</b>	<b>18.9</b>

As shown in **Table 6**, the SR-303 / N. Hayden Parkway intersection is anticipated to continue to operate with acceptable Levels-of-Service during the ‘Middle School’ and ‘Elementary School’ peak hours under the Phase 3 conditions. The analysis above indicates that the redistribution of school traffic will have a limited impact to the operation of this intersection.

**Table 7** summarizes the HCS Intersection Capacity Analysis and details the Levels-of-Service and delay experienced under the Phase 3 traffic conditions during the ‘Middle School Peak Hours’ & ‘Elementary Schools Peak Hours’ for each unsignalized intersection within the study area. It should be noted that the following intersections were not evaluated under the Phase 3 conditions as there will be no entering / exiting traffic due to construction at the McDowell building:

- N. Hayden Parkway / McDowell Elementary N. Access Drive
- N. Hayden Parkway / McDowell Elementary S. Access Drive

See **Appendix E** for the HCS analysis printouts.



**Table 7: HCS Intersection Capacity Analysis Summary**  
**Phase 3 Conditions – Unsignalized Intersections**

Intersection / Movement	'Middle School Peak Hours'				'Elementary School Peak Hours'			
	AM Peak		PM Peak		AM Peak		PM Peak	
	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)
<b>State Route 303 / N. Oviatt Street</b>								
Eastbound Left-Thru-Right	A	8.9	A	8.3	A	8.8	A	8.5
Eastbound Approach	A	2.9	A	1.7	A	3.5	A	2.5
Westbound Left-Thru-Right	A	8.0	A	8.1	A	8.0	A	8.1
Westbound Approach	A	0.5	A	0.6	A	0.7	A	0.6
Northbound Left-Thru-Right	D	29.3	C	19.9	D	32.5	D	25.2
Northbound Approach	D	29.3	C	19.9	D	32.5	D	25.2
Southbound Left-Thru-Right	D	28.8	C	19.7	E	40.5	D	34.7
Southbound Approach	D	28.8	C	19.7	E	40.5	D	34.7
<b>N. Oviatt Street / Elm Street</b>								
Westbound Left-Right	A	8.8	A	7.7	A	7.5	A	7.7
Westbound Approach	A	8.8	A	7.7	A	7.5	A	7.7
Northbound Thru-Right	B	10.1	A	7.9	A	8.5	A	8.4
Northbound Approach	B	10.1	A	7.9	A	8.5	A	8.4
Southbound Left-Thru	A	9.7	A	8.2	A	8.4	A	8.7
Southbound Approach	A	9.7	A	8.2	A	8.4	A	8.7
<b>Intersection Total</b>	<b>A</b>	<b>9.8</b>	<b>A</b>	<b>8.0</b>	<b>A</b>	<b>8.4</b>	<b>A</b>	<b>8.5</b>
<b>N. Oviatt Street / Franklin Street</b>								
Westbound Left-Right	B	12.5	B	10.5	B	11.6	B	12.2
Westbound Approach	B	12.5	B	10.5	B	11.6	B	12.2
Southbound Left-Thru	A	7.7	A	7.5	A	7.6	A	7.6
Southbound Approach	A	0.0	A	0.0	A	0.0	A	0.0
<b>Aurora Street / N. Oviatt Street</b>								
Eastbound Left-Thru-Right	A	8.0	A	7.6	A	7.8	A	7.9
Eastbound Approach	A	0.5	A	0.3	A	0.8	A	0.3
Westbound Left-Thru-Right	A	8.4	A	7.8	A	7.8	A	7.8
Westbound Approach	A	1.2	A	1.2	A	1.6	A	1.1
Northbound Left-Thru-Right	E	39.5	B	13.2	D	29.5	C	22.8
Northbound Approach	E	39.5	B	13.2	D	29.5	C	22.8
Southbound Left-Thru-Right	D	27.3	B	12.2	B	14.2	C	16.7
Southbound Approach	D	27.3	B	12.2	B	14.2	C	16.7

Note: Yellow highlighted cells indicate a Level of Service D.  
Orange highlighted cells indicate a Level of Service E.



**Table 7: HCS Intersection Capacity Analysis Summary (Cont.) –  
Phase 3 Conditions – Unsignalized Intersections**

Intersection / Movement	'Middle School Peak Hours'				'Elementary School Peak Hours'			
	AM Peak		PM Peak		AM Peak		PM Peak	
	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)
<b>Aurora Street / Franklin Street</b>								
Westbound Left-Thru	B	10.2	A	8.1	A	9.2	A	8.7
Westbound Approach	A	5.4	A	1.9	A	3.8	A	1.9
Northbound Left-Right	B	13.5	B	10.4	B	10.7	B	10.9
Northbound Approach	B	13.5	B	10.4	B	10.7	B	10.9
<b>Aurora Street / N. Hayden Parkway</b>								
Westbound Left-Thru	A	9.6	A	9.0	A	8.1	A	8.2
Westbound Approach	A	1.5	A	0.8	A	1.3	A	1.1
Northbound Left-Right	C	23.8	B	14.3	C	16.2	B	14.9
Northbound Approach	C	23.8	B	14.3	C	16.2	B	14.9
<b>N. Hayden Parkway / E. Woods Elementary Drive</b>								
Eastbound Left-Right	B	10.7	B	10.7	B	10.6	B	10.6
Eastbound Approach	B	10.7	B	10.7	B	10.6	B	10.6
Northbound Left-Thru	A	8.5	A	8.5	A	7.4	A	7.4
Northbound Approach	A	0.9	A	2.1	A	0.0	A	0.0
<b>N. Hayden Parkway / Evamere N. Access</b>								
Northbound Left-Thru	A	7.4	A	7.4	A	7.6	A	8.0
Northbound Approach	A	0.0	A	0.2	A	1.6	A	1.2
<b>N. Hayden Parkway / Evamere S. Access</b>								
Eastbound Left-Right	A	9.9	A	9.3	B	10.1	B	10.5
Eastbound Approach	A	9.9	A	9.3	B	10.1	B	10.5
Northbound Left-Thru	A	7.5	A	7.4	A	7.6	A	7.6
Northbound Approach	A	1.8	A	1.0	A	5.6	A	2.8

As shown in **Table 7**, the SR-303 / N. Oviatt Street intersection and the Aurora Street / N. Oviatt Street intersection will continue to experience Level-of-Service deficiencies under the Phase 3 conditions. In addition to the northbound and southbound approaches operating at LOS D as they do under the existing conditions, the southbound approach of the SR-303 / N. Oviatt Street intersection will be expected to temporarily degrade to LOS E during the Elementary School AM Peak while the northbound approach of the Aurora Street / N. Oviatt Street intersection will do the same during the Middle School AM Peak during this phase of construction. These side street approaches experience unacceptable Levels-of-Service due to additional school traffic on the side streets trying to find gaps in the higher volumes traveling on the mainline.



While there won't be any additional traffic generated by the new middle school, it does appear that there is a decent number of vehicles cutting through the campus to Hayden Parkway based on the traffic counts. This analysis assumed that those vehicles will be contained to the west side of the campus through the use of gates and desire to separate them from the bus traffic. This potential additional traffic exiting onto N. Oviatt Street during the AM peak hour is resulting in the additional deficiencies during the middle school hours. For the elementary school hours, the majority of traffic that currently enters and exits via Hayden Parkway will be redirected to N. Oviatt Street so the additional delays during this timeframe would be expected, although they too will primarily only effect the morning peak hour.

Despite the deficiencies, no geometric improvements can be provided that would mitigate them, especially when considering that this is only a temporary condition. The only potential solution would be to install a temporary traffic signal, therefore signal warrants will be evaluated at the SR-303 / N. Oviatt Street and Aurora Street / N. Oviatt Street intersections later in this report.

#### *Phase 4 Conditions*

**Table 8** summarizes the HCS Intersection Capacity Analysis and details the Levels-of-Service and delay experienced under the Phase 4 conditions during the 'Middle School Peak Hours' & 'Elementary Schools Peak Hours' for the signalized intersection within the study area. See **Appendix F** for the HCS analysis printouts.

Table 8: HCS Intersection Capacity Analysis Summary Phase 4 Conditions – Signalized Intersection								
Intersection / Movement	'Middle School Peak Hours'				'Elementary School Peak Hours'			
	AM Peak		PM Peak		AM Peak		PM Peak	
	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)
<b>State Route 303 / N. Hayden Parkway</b>								
Eastbound Left-Thru-Right	C	20.6	B	19.0	C	23.3	C	21.1
Eastbound Approach	C	20.6	B	19.0	C	23.3	C	21.1
Westbound Left-Thru-Right	B	19.7	B	18.4	B	16.6	B	17.4
Westbound Approach	B	19.7	B	18.4	B	16.6	B	17.4
Northbound Left-Thru-Right	B	19.0	B	17.6	C	20.9	B	18.9
Northbound Approach	B	19.0	B	17.6	C	20.9	B	18.9
Southbound Left-Thru-Right	C	20.6	B	19.0	C	23.4	C	21.1
Southbound Approach	C	20.6	B	19.0	C	23.4	C	21.1
<b>Intersection Total</b>	<b>C</b>	<b>20.1</b>	<b>B</b>	<b>18.7</b>	<b>C</b>	<b>20.6</b>	<b>B</b>	<b>19.8</b>

As shown in **Table 8**, the SR-303 / N. Hayden Parkway intersection is again anticipated to operate with acceptable Levels-of-Service during the 'Middle School' and 'Elementary School' peak hours under the Phase 4 conditions. The analysis above indicates that the redistribution of school traffic will still have a limited impact to this intersections operation.





**Table 9** summarizes the HCS Intersection Capacity Analysis and details the Levels-of-Service and delay experienced under the Phase 4 traffic conditions during the ‘Middle School Peak Hours’ & ‘Elementary Schools Peak Hours’ for each unsignalized intersection within the study area. It should be noted that the following intersections were not evaluated under the Phase 4 conditions as there will be no entering / exiting traffic due to construction at the Evamere building:

- N. Hayden Parkway / Evamere Elementary N. Access Drive
- N. Hayden Parkway / Evamere Elementary S. Access Drive

See **Appendix F** for the HCS analysis printouts.

Table 9: HCS Intersection Capacity Analysis Summary Phase 4 Conditions – Unsignalized Intersections								
Intersection / Movement	‘Middle School Peak Hours’				‘Elementary School Peak Hours’			
	AM Peak		PM Peak		AM Peak		PM Peak	
	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)
<b>State Route 303 / N. Oviatt Street</b>								
Eastbound Left-Thru-Right	A	8.8	A	8.6	A	8.5	A	8.4
Eastbound Approach	A	1.9	A	1.4	A	1.5	A	1.8
Westbound Left-Thru-Right	A	8.0	A	8.1	A	8.2	A	8.3
Westbound Approach	A	0.5	A	0.6	A	0.9	A	0.8
Northbound Left-Thru-Right	D	25.3	C	19.1	D	25.0	C	22.7
Northbound Approach	D	25.3	C	19.1	D	25.0	C	22.7
Southbound Left-Thru-Right	C	21.6	C	18.0	C	20.3	C	21.0
Southbound Approach	C	21.6	C	18.0	C	20.3	C	21.0
<b>N. Oviatt Street / Elm Street</b>								
Westbound Left-Right	A	8.3	A	7.5	A	7.1	A	7.3
Westbound Approach	A	8.3	A	7.5	A	7.1	A	7.3
Northbound Thru-Right	A	8.7	A	7.6	A	7.5	A	7.8
Northbound Approach	A	8.7	A	7.6	A	7.5	A	7.8
Southbound Left-Thru	A	8.7	A	7.9	A	7.6	A	7.9
Southbound Approach	A	8.7	A	7.9	A	7.6	A	7.9
<b>Intersection Total</b>	<b>A</b>	<b>8.6</b>	<b>A</b>	<b>7.7</b>	<b>A</b>	<b>7.5</b>	<b>A</b>	<b>7.8</b>
<b>N. Oviatt Street / Franklin Street</b>								
Westbound Left-Right	B	10.4	A	9.5	A	9.2	A	9.9
Westbound Approach	B	10.4	A	9.5	A	9.2	A	9.9
Southbound Left-Thru	A	7.5	A	7.4	A	7.4	A	7.5
Southbound Approach	A	0.0	A	0.0	A	0.0	A	0.0

Note: Yellow highlighted cells indicate a Level of Service D.



**Table 9: HCS Intersection Capacity Analysis Summary (Cont.)**  
**Phase 4 Conditions – Unsignalized Intersections**

Intersection / Movement	'Middle School Peak Hours'				'Elementary School Peak Hours'			
	AM Peak		PM Peak		AM Peak		PM Peak	
	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)
<b>Aurora Street / N. Oviatt Street</b>								
Eastbound Left-Thru-Right	A	8.1	A	7.6	A	7.9	A	8.0
Eastbound Approach	A	0.5	A	0.3	A	0.8	A	0.3
Westbound Left-Thru-Right	A	8.4	A	7.9	A	7.8	A	7.8
Westbound Approach	A	1.2	A	1.1	A	1.5	A	1.0
Northbound Left-Thru-Right	D	27.4	B	13.1	C	21.0	C	18.3
Northbound Approach	D	27.4	B	13.1	C	21.0	C	18.3
Southbound Left-Thru-Right	C	23.7	B	12.5	B	14.2	C	16.5
Southbound Approach	C	23.7	B	12.5	B	14.2	C	16.5
<b>Aurora Street / Franklin Street</b>								
Westbound Left-Thru	A	9.2	A	7.9	A	8.0	A	8.0
Westbound Approach	A	4.0	A	1.3	A	0.6	A	0.7
Northbound Left-Right	B	12.6	B	10.2	B	10.1	B	10.4
Northbound Approach	B	12.6	B	10.2	B	10.1	B	10.4
<b>Aurora Street / N. Hayden Parkway</b>								
Westbound Left-Thru	A	9.2	A	8.7	A	8.7	A	8.4
Westbound Approach	A	2.5	A	1.4	A	4.0	A	2.1
Northbound Left-Right	D	32.4	B	15.0	C	24.9	C	17.2
Northbound Approach	D	32.4	B	15.0	C	24.9	C	17.2
<b>N. Hayden Parkway / McDowell N. Access</b>								
Northbound Left-Thru	A	7.6	A	7.4	A	8.4	A	7.6
Northbound Approach	A	1.2	A	0.6	A	4.0	A	2.2
<b>N. Hayden Parkway / McDowell S. Access</b>								
Eastbound Left-Right	A	9.4	A	9.3	B	12.3	B	10.4
Eastbound Approach	A	9.4	A	9.3	B	12.3	B	10.4
<b>N. Hayden Parkway / E. Woods Elementary Drive</b>								
Eastbound Left-Right	B	12.4	B	11.2	C	22.4	B	12.6
Eastbound Approach	B	12.4	B	11.2	C	22.4	B	12.6
Northbound Left-Thru	A	8.1	A	8.0	A	8.6	A	7.9
Northbound Approach	A	4.0	A	3.9	A	5.3	A	3.0

Note: Yellow highlighted cells indicate a Level of Service D.



As shown in **Table 9**, the Phase 4 capacity analysis results report very similar results to the existing, Phase 1 and Phase 2 conditions with all movements and approaches of the unsignalized intersections anticipated to operate with acceptable Levels-of-Service during the peak hours with the exception of the previously noted approaches that would still be expected to operate at LOS D. The Phase 4 capacity analysis results indicate that the temporary deficiencies that are anticipated to occur during Phase 3 will be eliminated by this phase of construction once elementary traffic returns to the east side of the campus and that the unsignalized intersections will generally have sufficient capacity to accommodate their anticipated traffic demand during phase 4 of construction.

#### *Final 'Build' Configuration*

**Table 10** summarizes the HCS Intersection Capacity Analysis and details the Levels-of-Service and delay experienced under the final 'Build' traffic conditions during the 'Middle School Peak Hours' & 'Elementary Schools Peak Hours' for the signalized intersection within the study area. See **Appendix G** for the HCS analysis printouts.

Table 10: HCS Intersection Capacity Analysis Summary Final 'Build' Conditions – Signalized Intersection								
Intersection / Movement	'Middle School Peak Hours'				'Elementary School Peak Hours'			
	AM Peak		PM Peak		AM Peak		PM Peak	
	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)
<b>State Route 303 / N. Hayden Parkway</b>								
Eastbound Left-Thru-Right	C	21.4	B	19.0	C	23.3	C	21.1
<i>Eastbound Approach</i>	C	21.4	B	19.0	C	23.3	C	21.1
Westbound Left-Thru-Right	B	19.1	B	18.4	B	16.6	B	17.4
<i>Westbound Approach</i>	B	19.1	B	18.4	B	16.6	B	17.4
Northbound Left-Thru-Right	B	19.5	B	17.6	C	20.9	B	18.9
<i>Northbound Approach</i>	B	19.5	B	17.6	C	20.9	B	18.9
Southbound Left-Thru-Right	C	21.3	B	19.0	C	23.4	C	21.1
<i>Southbound Approach</i>	C	21.3	B	19.0	C	23.4	C	21.1
<b>Intersection Total</b>	<b>C</b>	<b>20.3</b>	<b>B</b>	<b>18.7</b>	<b>C</b>	<b>20.6</b>	<b>B</b>	<b>19.8</b>

As shown in **Table 10**, the SR-303 / N. Hayden Parkway intersection is anticipated to operate with acceptable Levels-of-Service during the peak hours under the final 'Build' conditions. These results indicate that the redistribution of school traffic representing the final 'Build' conditions of the school campus will have a limited impact to the operation of this intersection.

**Table 11** summarizes the HCS Intersection Capacity Analysis and details the Levels-of-Service and delay experienced under the final 'Build' traffic conditions during the 'Middle School Peak Hours' & 'Elementary Schools Peak Hours' for the unsignalized intersections within the study area. It should be noted that the N. Hayden Parkway / Evamere N. Access intersection and the N. Hayden Parkway / Evamere S. Access intersection during the 'Elementary School Peak Hours' were not evaluated under the final 'Build' conditions as there will be no more school traffic using these driveways during this timeframe. See **Appendix G** for the HCS analysis printouts.

Table 11: HCS Intersection Capacity Analysis Summary Final 'Build' Conditions – Unsignalized Intersections								
Intersection / Movement	'Middle School Peak Hours'				'Elementary School Peak Hours'			
	AM Peak		PM Peak		AM Peak		PM Peak	
	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)
<b>State Route 303 / N. Oviatt Street</b>								
Eastbound Left-Thru-Right	A	8.9	A	8.6	A	8.5	A	8.4
Eastbound Approach	A	2.9	A	1.4	A	1.5	A	1.8
Westbound Left-Thru-Right	A	8.1	A	8.1	A	8.2	A	8.3
Westbound Approach	A	0.5	A	0.6	A	0.9	A	0.8
Northbound Left-Thru-Right	D	33.3	C	19.1	D	25.0	C	22.7
Northbound Approach	D	33.3	C	19.1	D	25.0	C	22.7
Southbound Left-Thru-Right	C	25.0	C	18.0	C	20.3	C	21.0
Southbound Approach	C	25.0	C	18.0	C	20.3	C	21.0
<b>N. Oviatt Street / Elm Street</b>								
Westbound Left-Right	A	8.5	A	7.5	A	7.1	A	7.3
Westbound Approach	A	8.5	A	7.5	A	7.1	A	7.3
Northbound Thru-Right	A	9.7	A	7.6	A	7.5	A	7.8
Northbound Approach	A	9.7	A	7.6	A	7.5	A	7.8
Southbound Left-Thru	A	8.9	A	7.9	A	7.6	A	7.9
Southbound Approach	A	8.9	A	7.9	A	7.6	A	7.9
<b>Intersection Total</b>	<b>A</b>	<b>9.2</b>	<b>A</b>	<b>7.7</b>	<b>A</b>	<b>7.5</b>	<b>A</b>	<b>7.8</b>
<b>N. Oviatt Street / Franklin Street</b>								
Westbound Left-Right	C	22.3	B	11.5	B	10.0	B	10.7
Westbound Approach	C	22.3	B	11.5	B	10.0	B	10.7
Southbound Left-Thru	A	8.4	A	7.6	A	7.5	A	7.6
Southbound Approach	A	6.9	A	3.9	A	2.6	A	2.6

Note: Yellow highlighted cells indicate a Level of Service D.



**Table 11: HCS Intersection Capacity Analysis Summary (Cont.)**  
**Final 'Build' Conditions – Unsignalized Intersections**

Intersection / Movement	'Middle School Peak Hours'				'Elementary School Peak Hours'			
	AM Peak		PM Peak		AM Peak		PM Peak	
	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)
<b>Aurora Street / N. Oviatt Street</b>								
Eastbound Left-Thru-Right	A	8.1	A	7.6	A	8.1	A	8.1
Eastbound Approach	A	0.6	A	0.3	A	0.8	A	0.3
Westbound Left-Thru-Right	A	8.6	A	8.0	A	7.9	A	7.9
Westbound Approach	A	4.2	A	2.1	A	1.8	A	1.5
Northbound Left-Thru-Right	D	32.1	B	12.5	C	16.9	C	15.1
Northbound Approach	D	32.1	B	12.5	C	16.9	C	15.1
Southbound Left-Thru-Right	D	34.5	B	13.6	C	15.6	C	18.6
Southbound Approach	D	34.5	B	13.6	C	15.6	C	18.6
<b>Aurora Street / Franklin Street</b>								
Westbound Left-Thru	A	8.0	A	7.8	A	7.8	A	7.9
Westbound Approach	A	0.0	A	0.0	A	0.0	A	0.0
Northbound Left-Right	C	15.3	B	11.1	C	15.0	B	13.7
Northbound Approach	C	15.3	B	11.1	C	15.0	B	13.7
<b>Aurora Street / N. Hayden Parkway</b>								
Westbound Left-Thru	A	9.1	A	8.7	A	8.7	A	8.4
Westbound Approach	A	2.1	A	1.4	A	4.0	A	2.1
Northbound Left-Right	D	32.5	B	15.0	C	24.9	C	17.2
Northbound Approach	D	32.5	B	15.0	C	24.9	C	17.2
<b>N. Hayden Parkway / McDowell N. Access</b>								
Northbound Left-Thru	A	7.6	A	7.4	A	8.4	A	7.6
Northbound Approach	A	1.3	A	0.6	A	4.0	A	2.2
<b>N. Hayden Parkway / McDowell S. Access</b>								
Eastbound Left-Right	A	9.3	A	9.3	B	12.3	B	10.4
Eastbound Approach	A	9.3	A	9.3	B	12.3	B	10.4
<b>N. Hayden Parkway / E. Woods Elementary Drive</b>								
Eastbound Left-Right	B	11.7	B	10.7	C	22.4	B	12.6
Eastbound Approach	B	11.7	B	10.7	C	22.4	B	12.6
Northbound Left-Thru	A	7.7	A	7.5	A	8.6	A	7.9
Northbound Approach	A	3.6	A	2.8	A	5.3	A	3.0

Note: Yellow highlighted cells indicate a Level of Service D.



Table 11: HCS Intersection Capacity Analysis Summary (Cont.) – 'Build' Conditions – Unsignalized Intersections								
Intersection / Movement	'Middle School Peak Hours'				'Elementary School Peak Hours'			
	AM Peak		PM Peak		AM Peak		PM Peak	
	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)
<b>N. Hayden Parkway / Evamere S. Access</b>								
Eastbound Left-Right	B	10.5	B	10.1				
Eastbound Approach	B	10.5	B	10.1				
Northbound Left-Thru	A	8.7	A	8.5				
Northbound Approach	A	1.2	A	1.6				

As shown in **Table 11**, all movements and approaches of the unsignalized intersections within the study area are anticipated to operate with acceptable Levels-of-Service during the peak hours under the final 'Build' conditions with the exception of the same approaches that will continue to operate at LOS D during the AM peak hours. The analysis above indicates that the unsignalized intersections will generally have sufficient capacity to accommodate their projected traffic demand. When comparing the 'Build' conditions analysis to the Existing/Phase 1/Phase 2 analysis, it can be seen that the same four (4) approaches that were found to operate at LOS D under the Existing/Phase 1/Phase 2 conditions will remain unchanged, and thus not experience any further degradation as a result of the proposed changes in the school traffic patterns. These four (4) approaches currently operate at a LOS D and are anticipated to continue to operate at a LOS under the 'Build' conditions.

According to field observations, the Aurora Street / Franklin Street intersection currently experiences frequent periods of congestion and queuing during the arrival time period. Part of the reason for this issue is that both passenger vehicles and school buses enter the site at this intersection with school buses also using it to exit. This creates congestion and queuing as school buses need more time and larger gaps to enter/exit the campus. In order to provide the benefit of separating passenger vehicles from school buses, all passenger vehicles are to enter the site via N. Oviatt Street and exit via either N. Oviatt Street or Aurora Street while all school buses are to enter/exit via N. Hayden Parkway. This adds additional vehicles to the Aurora Street / N. Oviatt Street intersection, making it more difficult for side street vehicles to enter the mainline. Even though the proposed 'Build' conditions are only relocating this congestion issue and not improving it, the proposed campus layout should allow for school traffic to flow in and out of the site more easily.

Overall, the proposed access and campus configuration appears to be ideal in separating parent and bus drop-offs/pick-ups and distributing the traffic around the campus and thus avoiding the creation of choke points or bottlenecks where the majority of traffic would be attempting to enter or exit from a single access point.



### ***Traffic Signal Warrant Analysis***

Utilizing the projected Phase 3 traffic volumes, as specified in *Section 402-2* of the ODOT Traffic Engineering Manual (TEM), traffic signal warrant analyses were performed for the SR-303 / N. Oviatt Street and Aurora Street / N. Oviatt Street intersections. A traffic signal is considered warranted for construction if at least one (1) of a possible nine (9) 2009 Manual of Uniform Traffic Control Devices (MUTCD) warrant requirements are satisfied. For the analysis, only Warrant #3 was analyzed for the projected 'Middle School' and 'Elementary School' peak hour volumes. Warrant #3 is described below:

#### ***Warrant #3      Peak Hour Vehicular Volume***

The Peak Hour Vehicular Volume warrant is intended for application when traffic conditions are such that for one hour of the day, minor street traffic suffers undue delay in entering or crossing the major street. The Peak Hour Vehicular Volume warrant is satisfied when the minimum required volumes on the major and highest volume minor approach are met for any one hour period (any four consecutive 15-minute periods) on an average day.

In order to determine whether the study intersections meet the warrant requirements to justify a temporary traffic signal under the Phase 3 conditions considered in this study, the projected Phase 3 traffic volumes were compared to the volume thresholds for Warrant #3 (Peak Hour Volume). The results of the traffic signal warrant analyses are shown in **Table 12**. See **Appendix H** for the traffic signal warrant analysis.

Table 12: Traffic Signal Warrant Analysis Summary	
Intersection	Phase 3 Conditions
<b>Middle School Peak Hours</b>	
State Route 303 / N. Oviatt Street	Not Satisfied
Aurora Street / N. Oviatt Street	Not Satisfied
<b>Elementary School Peak Hours</b>	
State Route 303 / N. Oviatt Street	Not Satisfied
Aurora Street / N. Oviatt Street	Not Satisfied

As shown in **Table 12**, the traffic signal warrant analysis determined that the projected Phase 3 traffic volumes for the SR-303 / N. Oviatt Street and Aurora Street / N. Oviatt Street intersections never meet or exceed the volume thresholds of Warrant #3 (Peak Hour Volume) to warrant a temporary traffic signal. Even if traffic signals were to be warranted at these two (2) intersections, it would only be to accommodate a 20-30 minute surge of school traffic two (2) times a day only during Phase 3 of construction as it is assumed that these intersections operate with acceptable Levels-of-Service during all other hours of the day.



## **VII. Summary and Recommendations:**

This Traffic Impact Study is being prepared at the request of the Hudson City School District in association with the proposed construction of the new Hudson Middle School and associated central campus modifications in the City of Hudson, Ohio. The purpose of this particular Traffic Impact Study is to analyze the vehicular operating conditions in the vicinity of the Hudson City Schools Central Campus; both during and after its proposed construction to determine what, if any, impact the proposed project will have on the surrounding roadway network.

In Summary,

1. For purposes of this study, morning and afternoon counts were obtained on Tuesday, April 10<sup>th</sup>, 2018 between the hours of 7:00 AM to 9:30 AM for the school arrival period and from 2:00 PM to 4:30 PM for the school dismissal period. Counts were performed at the existing school campus driveways and five (5) surrounding intersections.
2. From the count data, it was determined that the study area experiences two (2) AM and two (2) PM peak hours due to the different start and dismissal times of the middle and elementary schools. The middle school's AM peak hour was identified to occur from 7:00 – 8:00 AM while its PM peak hour was identified to occur from 2:15 – 3:15 PM. The AM peak hour of the Elementary schools was identified to occur from 8:15 – 9:15 AM while their PM peak hour was identified to occur from 3:15 – 4:15 PM.
3. The proposed project plans to construct a new middle school facility, remodel the existing McDowell and East Woods Elementary Schools, demolish a portion of the existing Evamere Elementary School and convert the remainder into administrative and Hudson Community Education and Recreation (HCER) offices, and improve the internal roadway network. The new school campus will house PK – K and grades 3 – 8.
4. The three (3) school buildings will each be provided two (2) separate drop-off/pick-up loops with the new site configuration. A parent drop-off/pick-up loop will be provided in front each building. A dedicated bus drop-off/pick-up loop will be provided for the middle school on the northeast side of the building while the McDowell and East Woods Elementary Schools will be provided a shared bus drop-off/pick-up located between the two (2) buildings.
5. The proposed campus will utilize all existing access points with the exception of the Evamere Elementary School N. Access Drive which is planned to be eliminated.
6. The school campus is proposed to be constructed in four (4) phases. **Phases 1 & 2** will construct the new middle school, the traffic circle in front of the middle school, and the middle school's bus drop-off/pick-up area. **Phase 3** will renovate the existing McDowell and East Woods Elementary Schools and finish upgrades to the campus' internal roadway network. **Phase 4** will partially demolish the Evamere Elementary school and remodel the remainder for



administrative and HCER offices. After the completion of Phase 4, the existing middle school will be demolished, less the 1927 building. Additionally, a connector road from N. Oviatt Street to the middle school's traffic circle and a staff parking lot located on the west side of the new school will be constructed.

7. The existing school traffic was isolated from the traffic counts so that it could be redistributed and assigned to the proper driveways during each Phase of construction as well as the future 'Build' conditions based on existing travel volumes/patterns to and from the existing campus as well as the location of the access points and drop-off/pick-up loops.
8. The Existing/Phase 1/Phase 2 conditions capacity analysis determined that all study intersections operate with acceptable Levels-of-Service during the peak hours with the exception of several unsignalized side street approaches that are currently operating at LOS D.
9. Aside from the approaches that will continue to operate at LOS D, the Phase 3 conditions capacity analysis determined that the SB approach of the SR-303 / N. Oviatt Street intersection (Elementary School AM Peak) and the NB approach of the Aurora Street / N. Oviatt Street intersection (Middle School AM Peak) are anticipated to degrade to an unacceptable LOS E. This will be a temporary condition that is contained to this one year construction phase.
10. The Phase 4 conditions capacity analysis determined that all study intersections are anticipated to operate with acceptable Levels-of-Service during the peak hours, similar to the Existing/Phase 1/Phase 2 conditions results, and that the approaches previously found to operate at LOS D will continue to do so without further degradation. The previous issues arising under Phase 3 where two approaches will temporarily degrade to LOS E will have been eliminated by this phase of construction.
11. The Final 'Build' conditions capacity analysis also determined that all study intersections are anticipated to operate with acceptable Levels-of-Service during the peak hours, similar to the Existing/Phase 1/Phase 2 conditions results, and that the approaches previously found to operate at LOS D will continue to do so without further degradation. As such, the proposed Middle School project will not result in any further degradation as a result of the proposed changes in the school traffic patterns.
12. The traffic signal warrant analysis determined that the projected Phase 3 traffic volumes for the SR-303 / N. Oviatt Street and Aurora Street / N. Oviatt Street intersections never meet or exceed the volume thresholds of Warrant #3 (Peak Hour Volume) to warrant a temporary traffic signal under Phase 3 conditions.

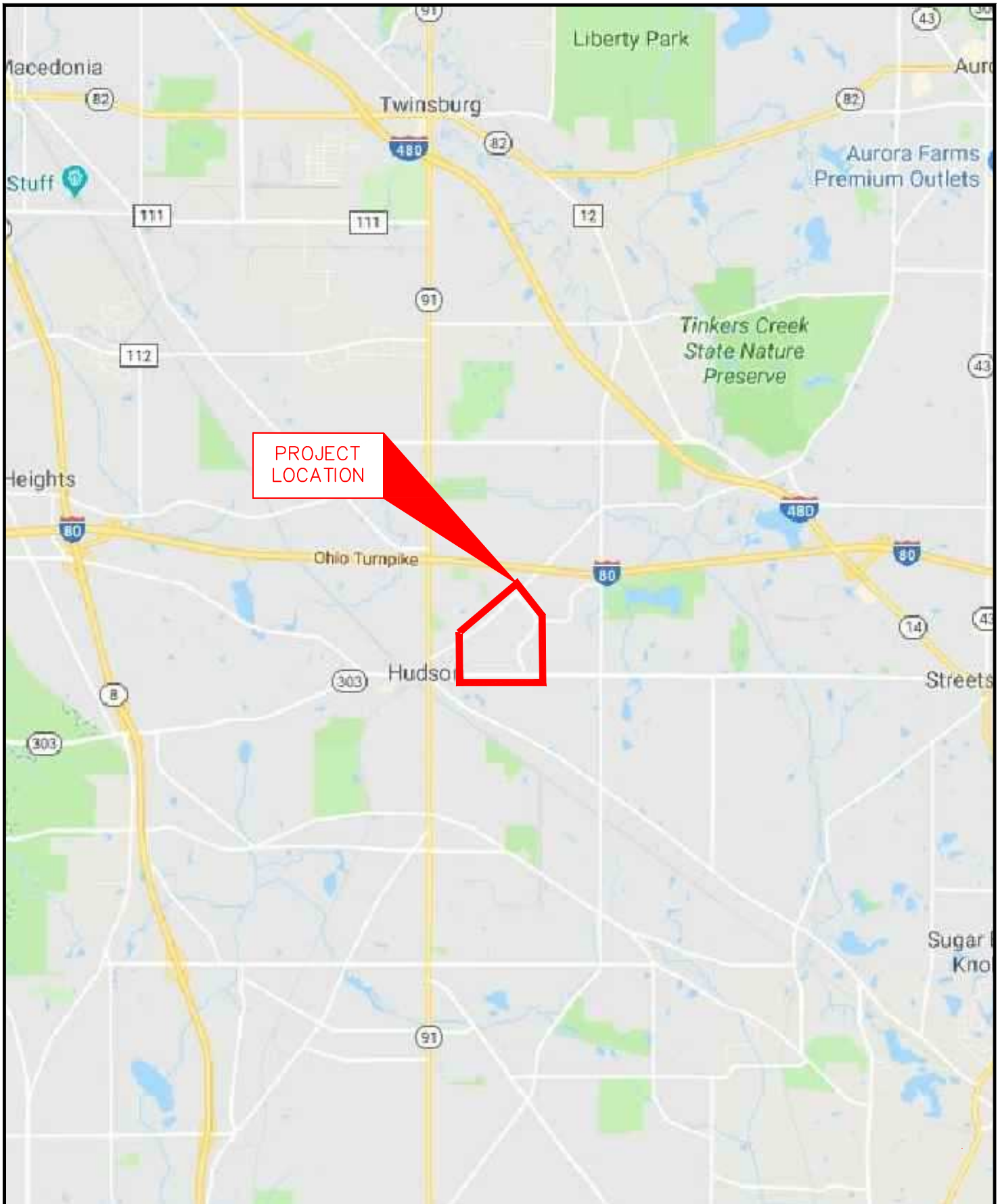


Based on the analysis contained in this study, the proposed Hudson City Schools Central Campus project is not anticipated to have an adverse impact on the surrounding roadway network and will provide adequate accessibility to and from the site under the projected traffic conditions. Based on the information and analyses in this study, GPD Group recommends the following:

1. The proposed central campus should be constructed as planned utilizing six (6) of the seven (7) existing campus access points.
2. During each phase of construction as well as under the final proposed campus conditions, that the traffic circulation patterns provided in this study should be followed and maintained in order to avoid creating bottlenecks or choke points and ensure ideal traffic flows both internally to the campus and externally to the surrounding roadway network.



## FIGURES



N.T.S.

FIGURE 1

PROJECT LOCATION MAP

JUNE 2018



Glaus, Pyle, Schomer, Burns & DeHaven, Inc.  
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Drawing File: C:\Users\Public\Documents\New Hudson Middle School\Traffic\Figure 2 - Aerial Photograph.dwg  
Date: May 24, 2017  
Time: 6:22 am  
Technician: bferrel

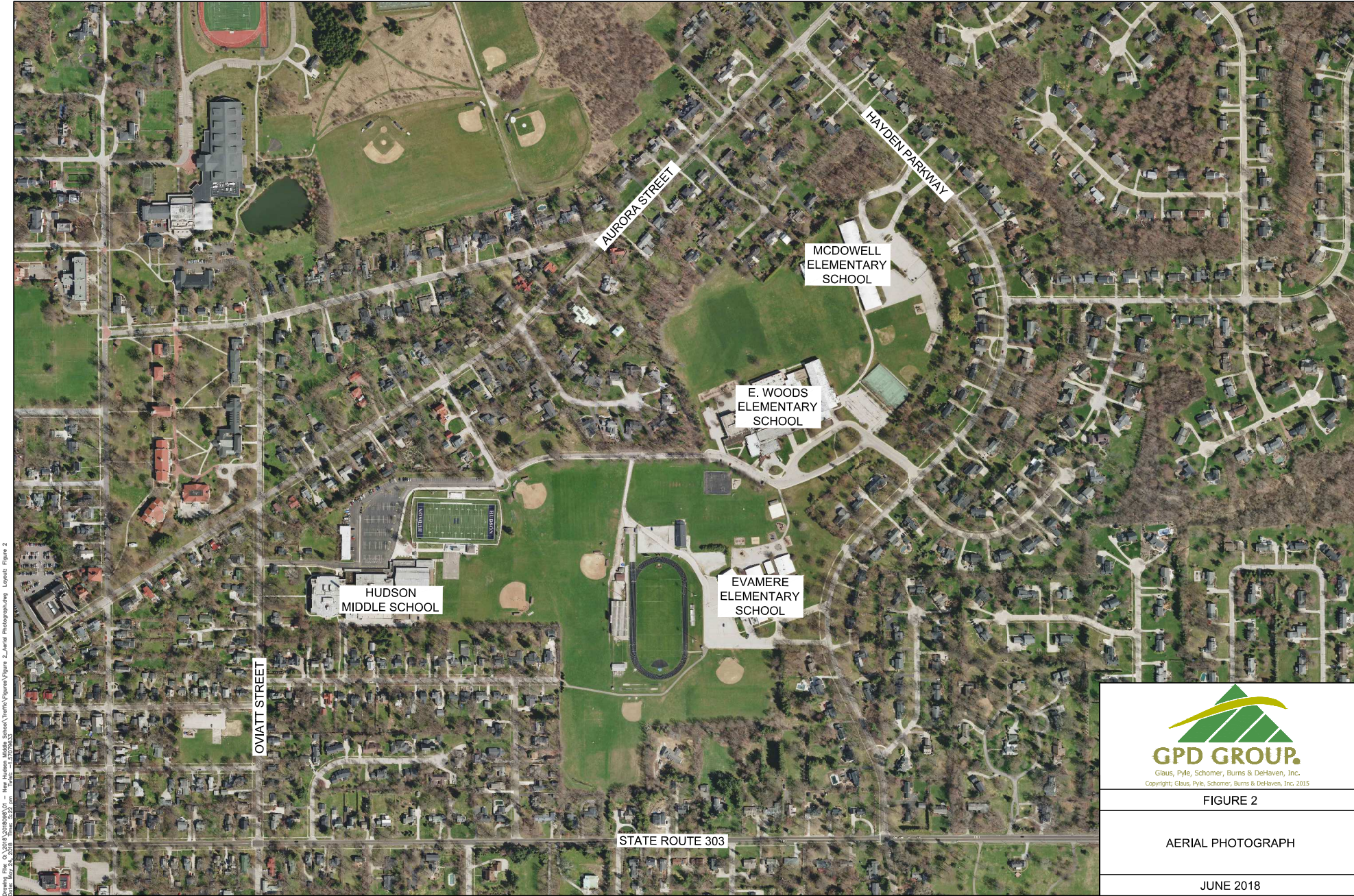


FIGURE 2

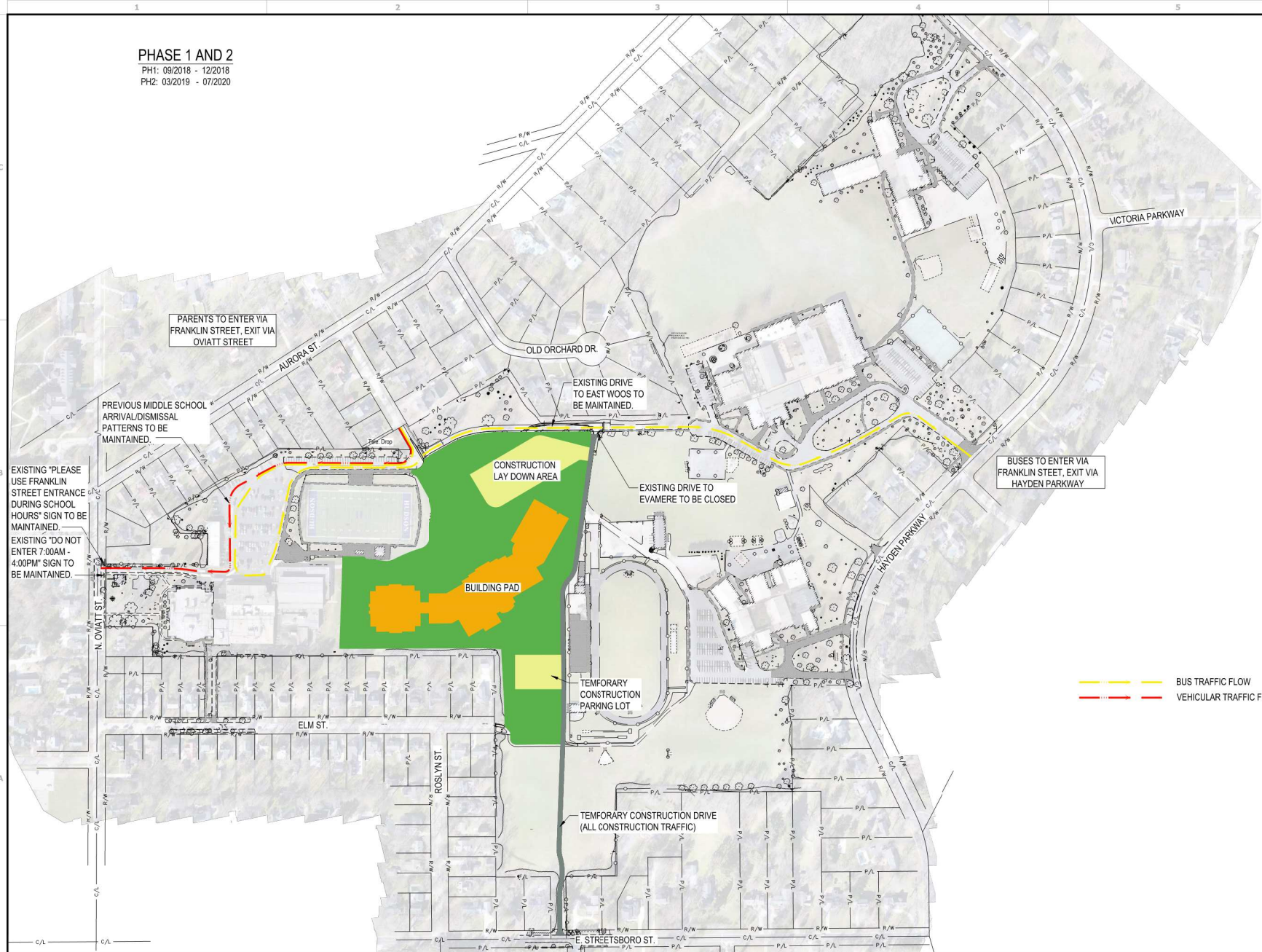
AERIAL PHOTOGRAPH

JUNE 2018



# PHASE 1 AND 2

PH1: 09/2018 - 12/2018  
PH2: 03/2019 - 07/2020



--- BUS TRAFFIC FLOW  
--- VEHICULAR TRAFFIC FLOW



REV.	DATE	DESCRIPTION

HUDSON MIDDLE SCHOOL  
77 OVIATT ST., HUDSON, OH 44236  
MIDDLE SCHOOL  
PHASE 1 AND 2 TRAFFIC FLOW

ISSUED FOR:	
PERMIT	-
BID	-
CONSTRUCTION	-
RECORD	-

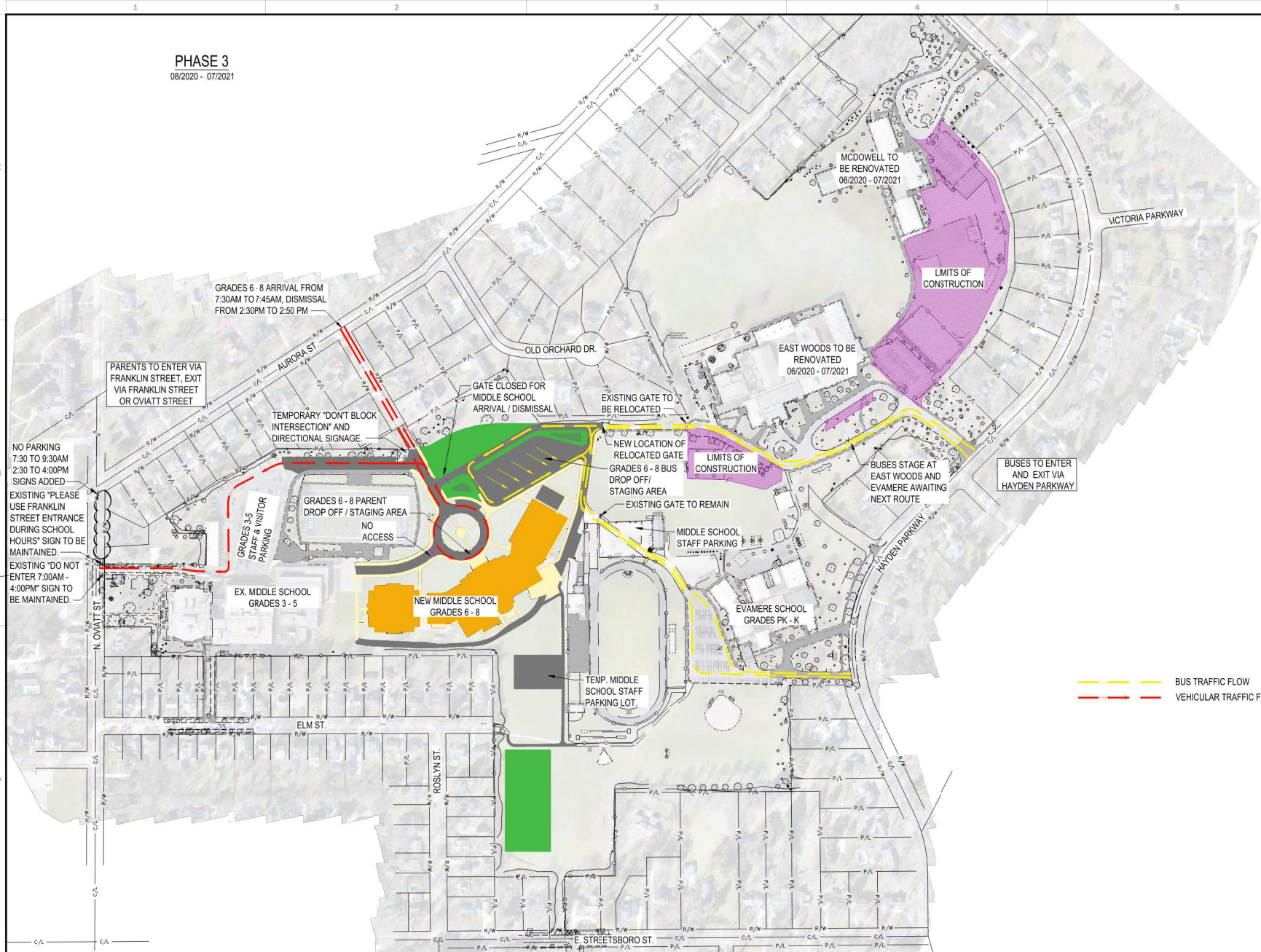
PROJECT MANAGER	DESIGNER

JOB NO.  
2018098.01

ESP



**PHASE 3**  
08/2020 - 07/2021



REV.	DATE	DESCRIPTION

**HUDSON MIDDLE SCHOOL**  
 77 OVIATT ST., HUDSON, OH 44236

**MIDDLE SCHOOL**  
 PHASE 3 TRAFFIC FLOW

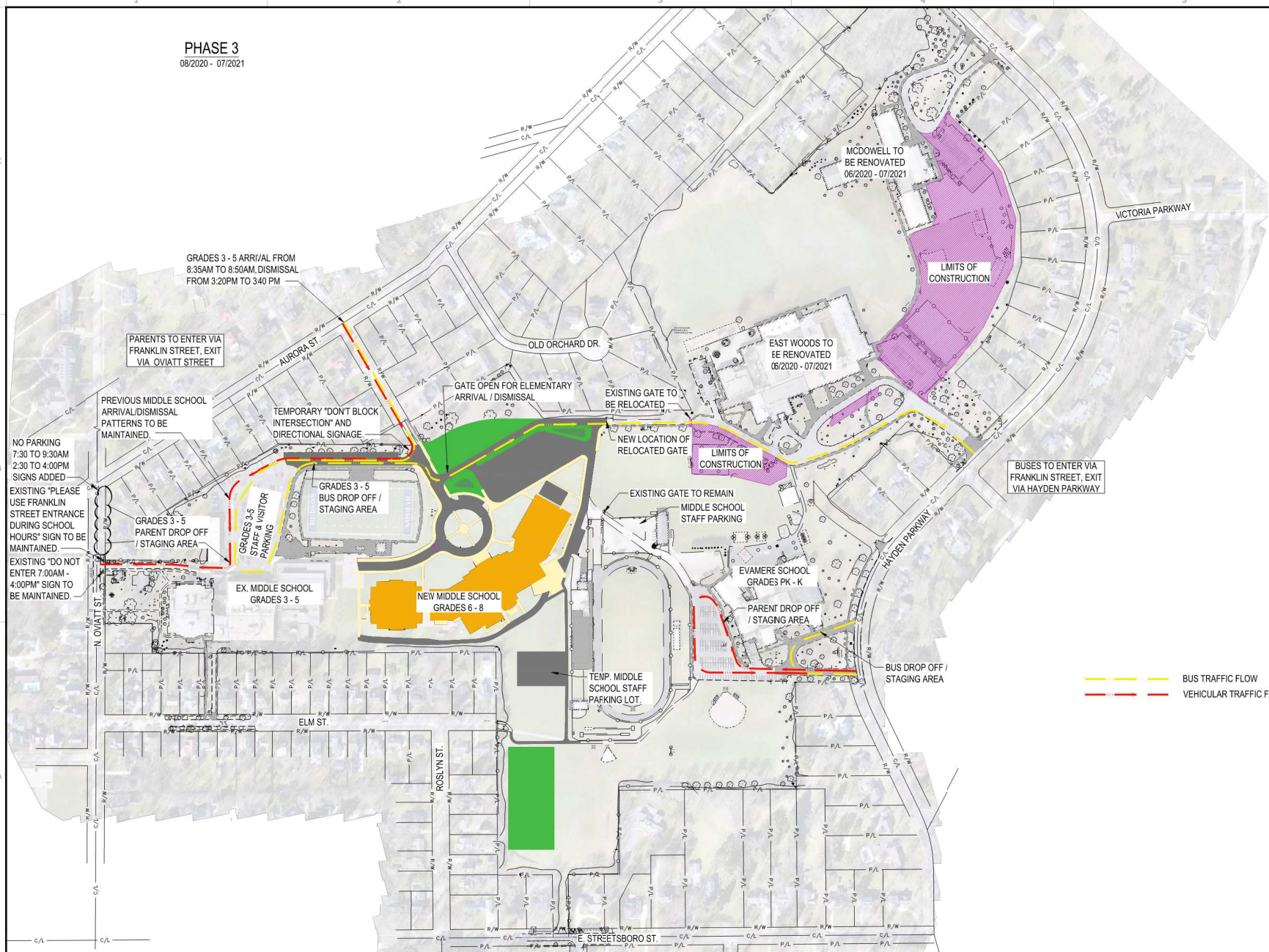
ISSUED FOR:	
PERMIT	-
BID	-
CONSTRUCTION	-
RECORD	-
PROJECT MANAGER	DESIGNER

JOB NO.  
**2018098.01**

**PH3A1**



**PHASE 3**  
08/2020 - 07/2021



REV.	DATE	DESCRIPTION

**HUDSON MIDDLE SCHOOL**  
77 OVIATT ST., HUDSON, OH 44236

**ELEMENTARY SCHOOL**  
PHASE 3 TRAFFIC FLOW

ISSUED FOR:	
PERMIT	-
BID	-
CONSTRUCTION	-
RECORD	-

PROJECT MANAGER	DESIGNER

JOB NO.  
**2018098.01**

**PH3A2**



**PHASE 4**  
07/2021 - 07/2022

PARENTS TO ENTER VIA FRANKLIN STREET, EXIT VIA FRANKLIN STREET OR VIATT STREET

NO PARKING 7:30 TO 9:30AM 2:30 TO 4:00PM SIGNS TO BE MAINTAINED

EXISTING "PLEASE USE FRANKLIN STREET ENTRANCE DURING SCHOOL HOURS" SIGN TO BE MAINTAINED

EXISTING "DO NOT ENTER 7:00AM - 4:00PM" SIGN TO BE MAINTAINED

TEMPORARY "DON'T BLOCK INTERSECTION" AND DIRECTIONAL SIGNAGE OVERFLOW PARKING TO BE MAINTAINED

GRADES 6 - 8 BUS DROP OFF STAGING AREA GATE CLOSED FOR MIDDLE SCHOOL ARRIVAL / DISMISSAL

EXISTING GATE

EXISTING GATE

MIDDLE SCHOOL STAFF PARKING

EVAMERE - PARTIAL DEMO/RENOVATION - FOR DISTRICT OFFICES

CONSTRUCTION AREA - NO BUS TRAFFIC

TEMP. MIDDLE SCHOOL STAFF PARKING LOT

NEW MIDDLE SCHOOL GRADES 6 - 8

EXISTING MIDDLE SCHOOL BUILDING AND PARKING LOT DEMO

GRADES 6 - 8 PARENT DROP OFF / STAGING AREA

1927 BUILDING TO REMAIN

BYPASS LANE TO BE MAINTAINED THROUGH PARKING LOT

OLD ORCHARD DR.

AURORA ST.

ELM ST.

ROSLIN ST.

E. STREETSBORO ST.

HAYDEN PARKWAY

VICTORIA PARKWAY

MCDOWELL GRADES PK - K

EAST WOODS GRADES 3 - 5

BUS TRAFFIC FLOW

VEHICULAR TRAFFIC FLOW

**GPD GROUP.**  
Glaus, Pyle, Schomer, Burns & DeHaven, Inc.

520 South Main Street  
Akron, OH 44311  
330.572.2100 Fax 330.572.2101

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[illegible]

HUDSON MIDDLE SCHOOL  
77 OVIATT ST., HUDSON, OH 44236

---

MIDDLE SCHOOL  
PHASE 4 TRAFFIC FLOW

ISSUED FOR:	
PERMIT	---
BID	---
CONSTRUCTION	---
RECORD	---

PROJECT MANAGER	DESIGNER

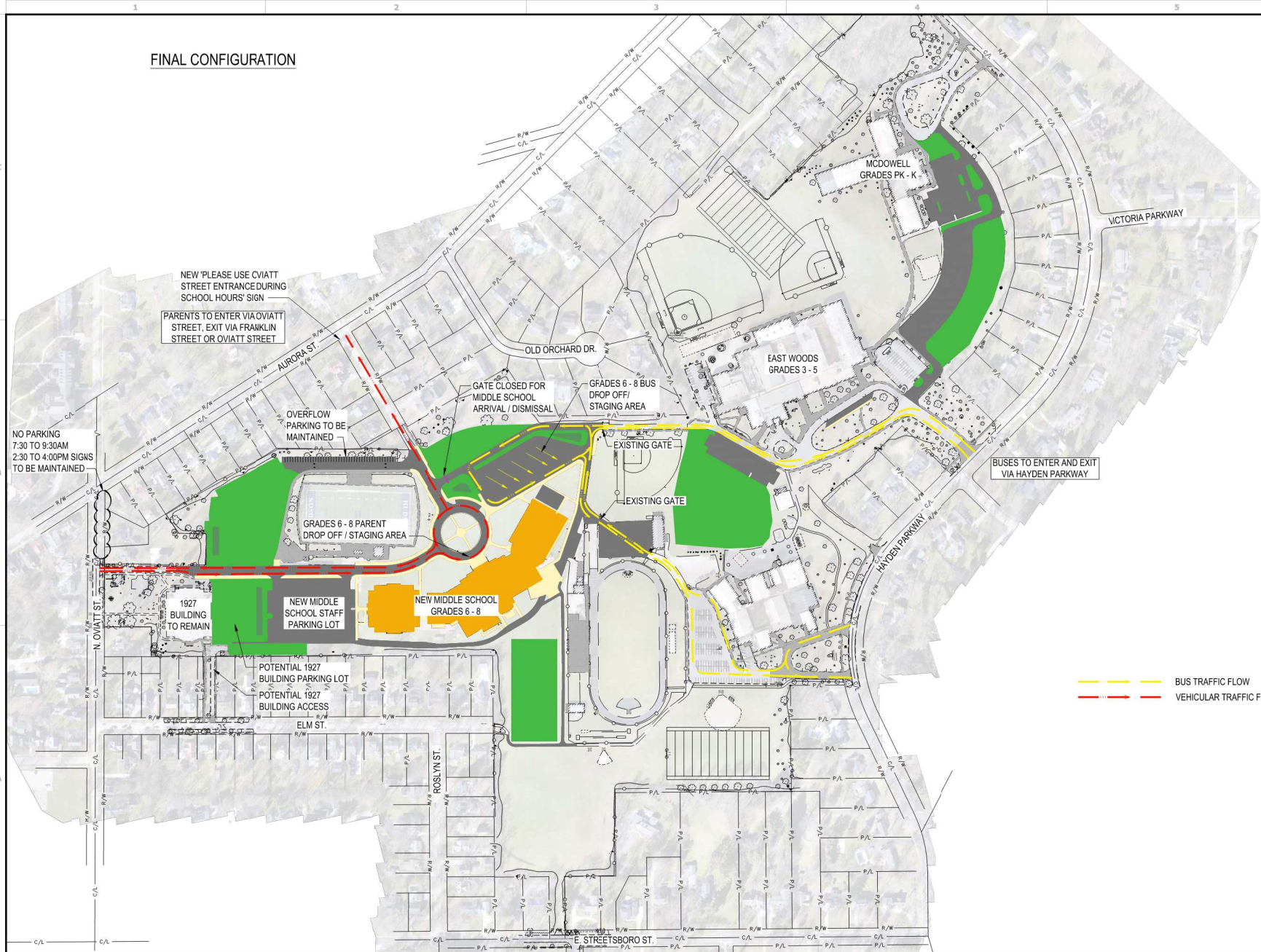
JOB NO.  
2018098.01

PH4





# FINAL CONFIGURATION



Drawn: New Hudson Middle School Traffic Flow Mapping.dwg  
 August 20, 2018 8:14 AM - longht

REV.	DATE	DESCRIPTION

**HUDSON MIDDLE SCHOOL**  
 77 OVIATT ST., HUDSON, OH 44236

**MIDDLE SCHOOL**  
**FINAL TRAFFIC FLOW**

ISSUED FOR:	
PERMIT	-
BID	-
CONSTRUCTION	-
RECORD	-

PROJECT MANAGER	DESIGNER

JOB NO.  
**2018098.01**

**FINAL**