

# Traffic Planning Project Brief

To: **Sarah Dring and Eric Carlson**  
ECA Architects & Planners

From: Bill Grieve, P.E., PTOE  
Senior Transportation Engineer

Date: June 29, 2021

Subject: ***Proposed Gas Station and Apartment  
1023 W. Main Street (IL 64) – St. Charles, Illinois***

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Gewalt Hamilton Associates, Inc. (GHA) has considered the traffic planning requirements of the above captioned project. As proposed, a new gas station with six fueling stations, a convenience store, and an apartment for the site manager would be located at a former gas station at 1023 W. Main Street in St. Charles, Illinois. We offer the following information for your consideration.

## Background Information

- The site is located in the southeast corner of the W. Main Street (IL 64) intersection with S 11th Street in St. Charles, Illinois (see *Exhibit 1*).
- *Exhibit 2* illustrates and *Appendix A* provides a photo inventory of the current traffic operations in the site vicinity. Main Street (IL 64) is an east-west route that is under the jurisdiction of the Illinois Department of Transportation (IDOT) and is classified as a Strategic Regional Arterial (SRA) route. As an SRA, more stringent site access guidelines are usually required.
- IL 64 has two travel lanes in each direction and a two-way center left turn lane in the site vicinity. The posted speed limit is 30-mph. On-street parking is prohibited.
- S 11<sup>th</sup> Street is a local north-south street that has its northern terminus at IL 64 where it has Stop control. S 11<sup>th</sup> Street serves a park and school about two blocks to the south.
- The site currently has three access drives, all of which appeared to previously allow all movements; two on IL 64 and one on S 11<sup>th</sup> Street.

## Site Traffic Characteristics

- *Exhibit 3* illustrates the proposed site plan. The previous gas station had four fueling positions and a small convenience store. As proposed, there will be six fueling positions, a larger C-store, and an apartment on the 2<sup>nd</sup> floor for the site manager to reside in. The C-store will offer a variety of beverages and snacks for off-site consumption. It can be expected that about 25-30% of those who stop for fuel may also go into the C-store, while their vehicle is at the pump.
- The gas station will be open 7 days a week from 5 AM to 11 PM. One employee will be on-duty with an occasional supervisor in attendance for short periods of time.

- It is proposed that all three current access drives remain. However, the on-site travel pattern will change. The west drive on Main Street will be one-way in and the east drive will operate one-way out. This will help eliminate on-site vehicle conflicts and potential congestion. The drive on S 11<sup>th</sup> Street will remain two-way but is expected to have minimal customer activity.
- *Exhibit 4* summarizes the site traffic characteristics, including the projected trip generations and trip distribution. Also provided is a comparison to the previous gas station trip generations. Pertinent comments include:
  - Per ITE, about 65% of gas station trips will be “pass-by” in nature. These are trips made by vehicles already traveling on the adjacent roads, perhaps as a stop for fuel or a beverage / snack on the way to work in the morning.
  - The new gas station and apartment is expected to generate about one additional driveway trip every two minutes than the original gas station.
  - As with many service-related commercial uses, the trip distribution will be focused on the convenience of right turns in and out movements. This “rule of 65s” suggests that only about 30% of the site trips will be oriented along Main Street as left turns in and left turns out. The use of the S 11<sup>th</sup> Street access should be limited to locally generated trips, only about 5%.

*Key Finding.* As can be seen from *Exhibit 4 – Part A*, the proposed gas station and apartment will generate only a few additional “new” trips from the previous gas station use. It is estimated that only about one additional new trip will be generated every ten minutes during the weekday morning and evening peak hours.

- *Exhibit 5* illustrates the project traffic assignment. It considers the site traffic characteristics provided in *Exhibit 4*, as well as historical background traffic data available from the Illinois Department of Transportation (IDOT), which is provided in *Appendix B*. The IDOT counts are from March 2019, prior to the Covid pandemic.
- As can be seen from *Exhibit 5*, left turns in and out of the site will be limited to about one trip every three minutes during the morning and evening peak hours. Per the site plan (see *Exhibit 3*) and aerial imagery, the site’s depressed curbs along IL 64 can accommodate two vehicles side-by-side. This will allow a customer exiting to the east to make their right turn without having to wait for vehicle turning left out to find a gap in opposing traffic on IL 64. It should also be noted that the center two-way left turn lane will provide staging for a “two-step” left turn exit.

### **On-Site Planning Elements**

- *Exhibit 6* illustrates the path of a fueling tanker truck. As can be seen, it will enter from the S 11<sup>th</sup> Street access drive, then depart from the tank-hold via S 11<sup>th</sup> Street then east on Main Street. It is anticipated that there will be one to two fuel deliveries per week. They should be scheduled to avoid busier gas station customer activity.
- As noted, the access drives on Main Street will operate one-way inbound at the west drive and one-way outbound at the east drive. This will help to minimize any potential vehicle conflicts and congestion in the Main Street / S 11<sup>th</sup> Street intersection influence area. Exiting site traffic should have Stop control at both the Main Street and S 11<sup>th</sup> Street access drives. Pavement striping may also be helpful to emphasize the one-way access operations.

- It is our understanding that the parking provided meets City code requirements. One parking space is required for the apartment. It should be located at the east end of the site away from gas station customer activity. It should also be remembered that many of the C-store customers will also be refueling their vehicles. There will be six parking spaces available at the pump islands in addition to the three parking spaces located at the west end of the site.
- The trash enclosure will be located in the southwest corner of the site. Refuse pick-up will be a few times a week. As with the fueling trucks, trash pick-up should be scheduled as much as possible to avoid busy customer times. C-store deliveries are also anticipated to be limited per week.

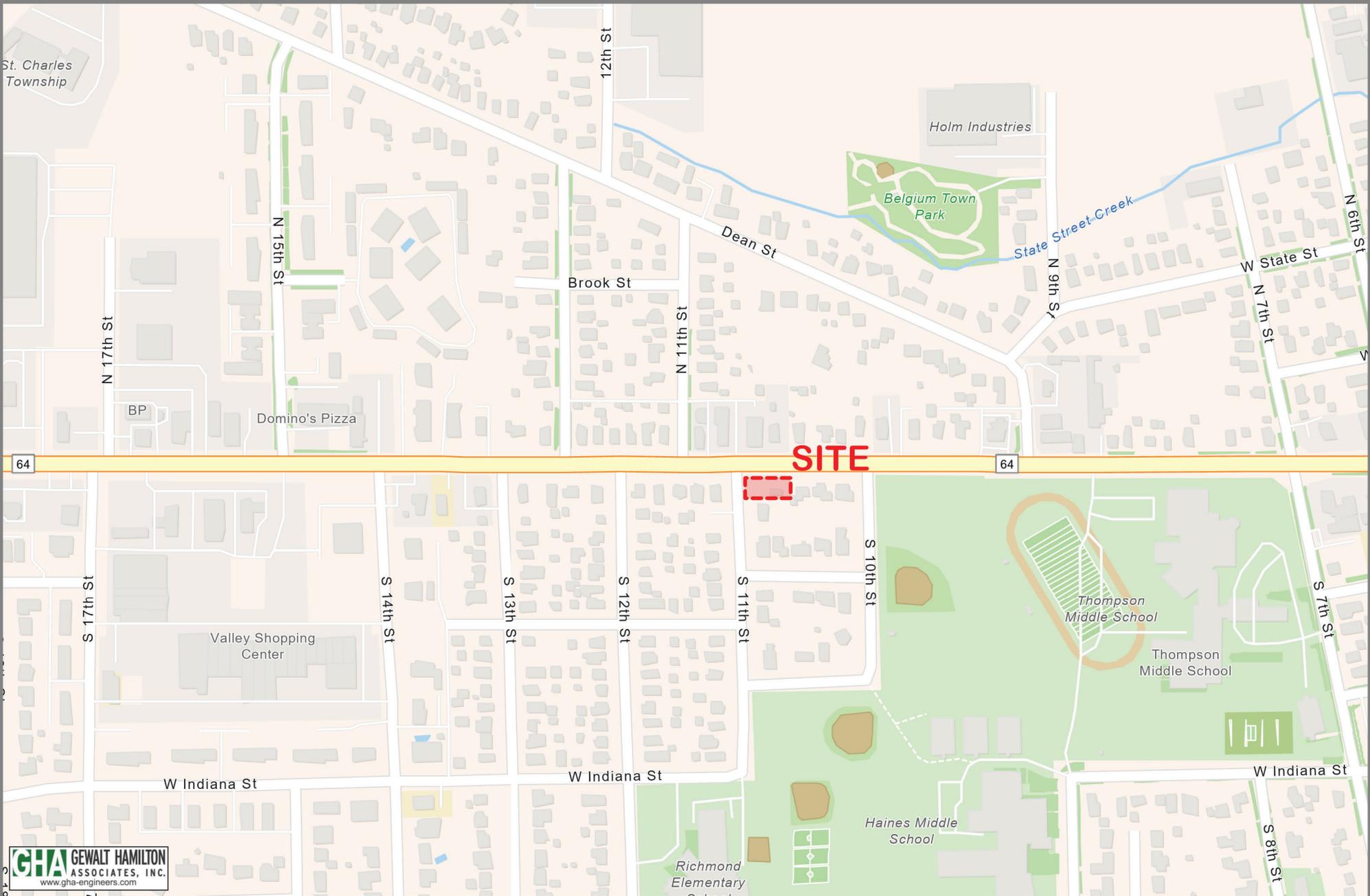
\* \* \* \* \*

This Traffic Planning Project Brief prepared by:



**William C. Grieve, P.E., PTOE**  
Senior Transportation Engineer  
bgrieve@gha-engineers.com

# EXHIBITS

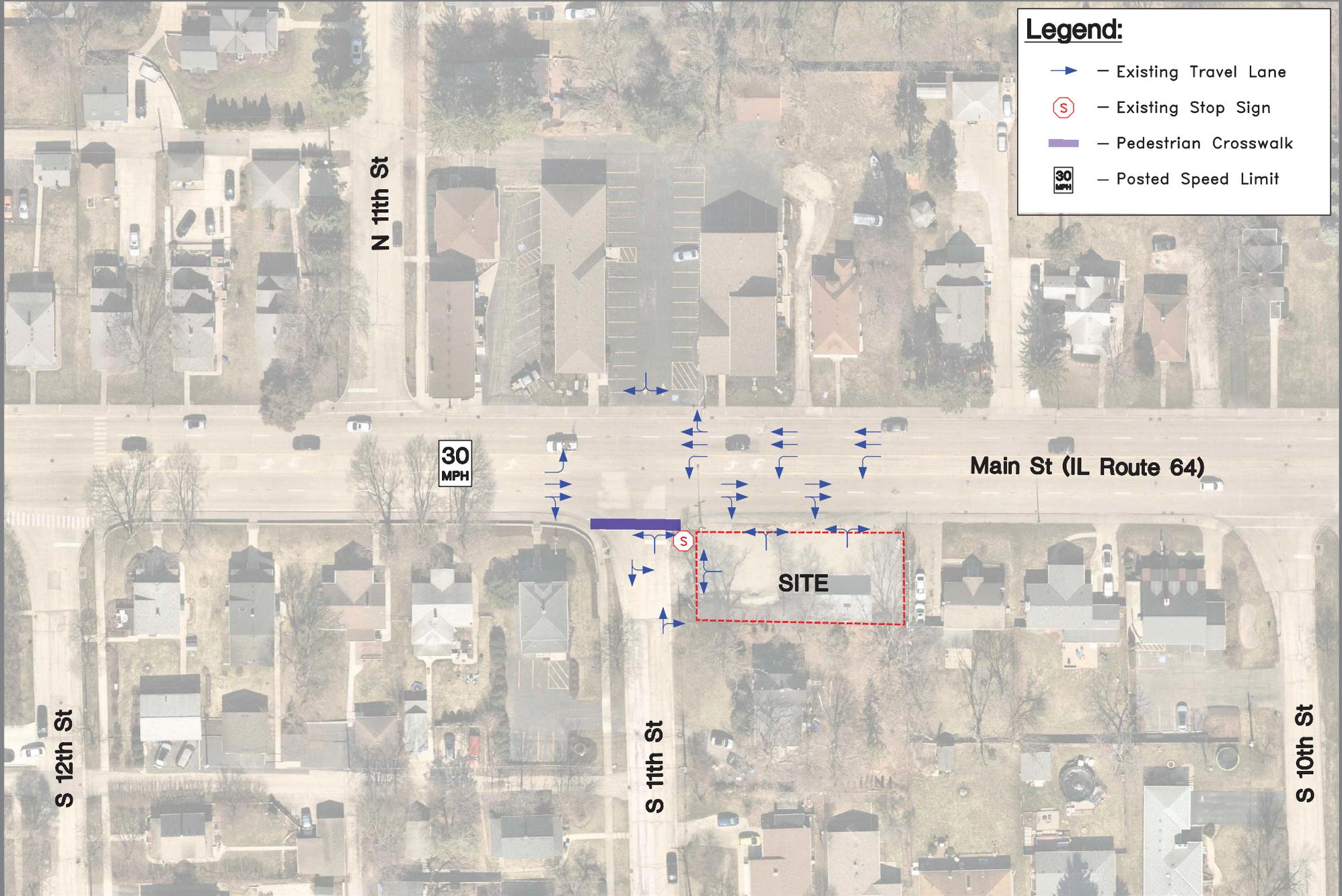


**GHA** GEWALT HAMILTON  
ASSOCIATES, INC.  
www.gha-engineers.com



1 inch = 530  
Feet

**Exhibit 1 - Location Map**  
Proposed Gas Station Redevelopment  
St. Charles, IL



REMOVE DUAL HEADED PROPERTY LIGHT  
 30" MAX. HT IN 20'  
 CORNER SITE TRIANGLE

NEW PYLON SIGN IN NEW  
 LANDSCAPING BED W/ CURB.  
 TOP/SIGN AT 15'

EXIST. STOP SIGN

Main St. IL-64 (width varies)

EXIST. DEPRESSED CURB

EXIST. DEPRESSED CURB

11th St. (60')

EXIST. APRON  
 ACCESS TO 11TH ST  
 N01°38'07"W  
 60.00'

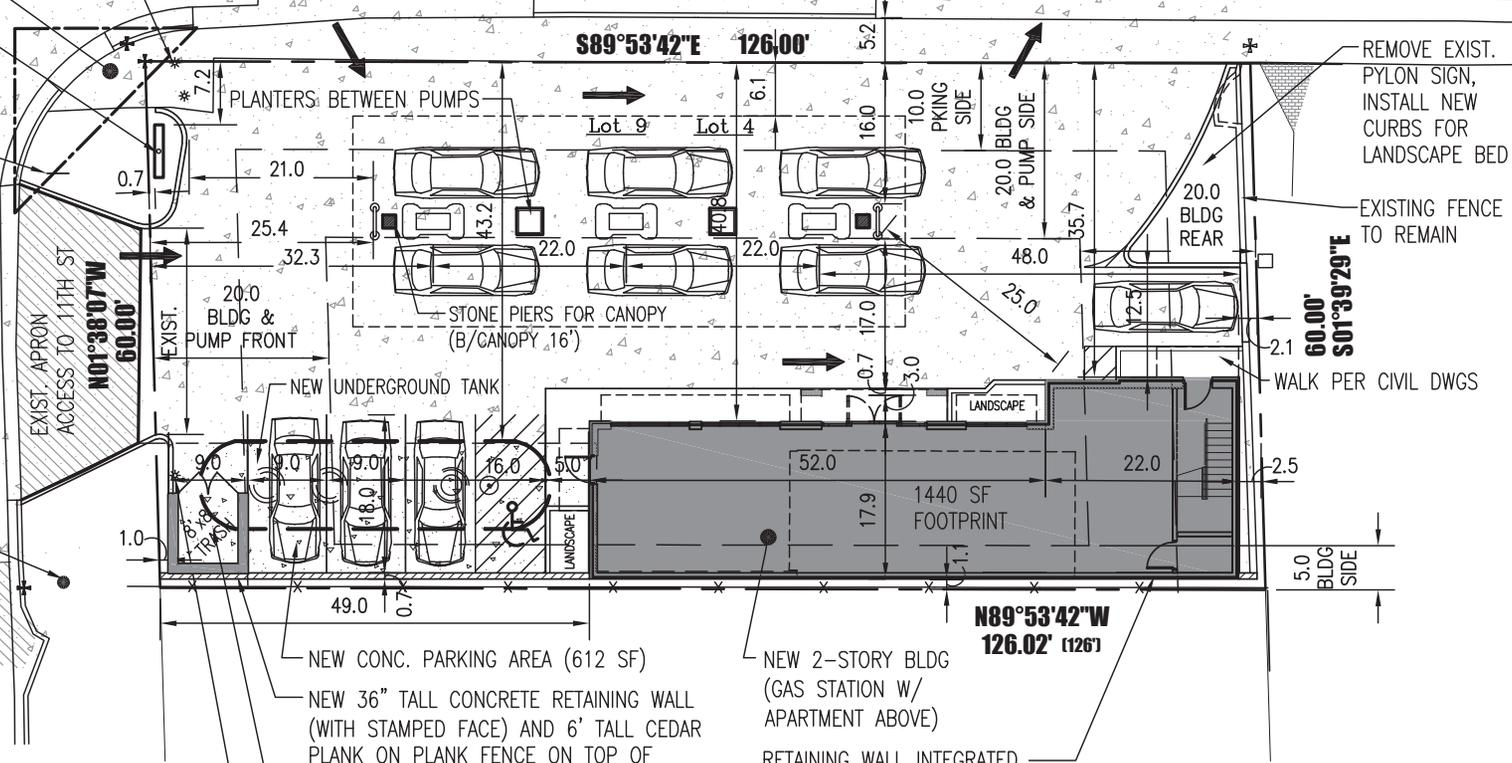
REMOVE EXIST.  
 PYLON SIGN,  
 INSTALL NEW  
 CURBS FOR  
 LANDSCAPE BED

EXISTING FENCE  
 TO REMAIN

60.00'  
 S01°39'29"E

WALK PER CIVIL DWGS

EXIST. UTILITY POLE



- NEW CONC. PARKING AREA (612 SF)
- NEW 36" TALL CONCRETE RETAINING WALL (WITH STAMPED FACE) AND 6' TALL CEDAR PLANK ON PLANK FENCE ON TOP OF WALL ALONG SOUTH PROPERTY
- CEDAR PERGOLA ABOVE 8'x8' MASONRY TRASH ENCLOSURE
- REMOVE EXISTING LIGHT POLE.

- NEW 2-STORY BLDG (GAS STATION W/ APARTMENT ABOVE)
- RETAINING WALL INTEGRATED W/ BUILDING STRUCTURE FOR LENGTH OF BUILDING

1 PROPOSED SITE PLAN



Exhibit 3 - Site Plan

Preliminary Site Plan

# Gas Station

1023 W. Main Street  
 St. Charles, IL 60174

## Exhibit 4 Traffic Characteristics

*Proposed Gas Station and Apartment - 1023 W. Main Street (IL 64) - St. Charles, IL*

### Part A. Trip Generations

Land Use	Size	ITE Code	Weekday Peak Hours								Daily	
			Morning				Evening				Sum	New
			In	Out	Sum	New	In	Out	Sum	New	Sum	New
<b>Step 1. Proposed Development</b>												
Gas Station w/ C-Store	1,440 SF 6 fuel positions	#945	55	54	109	38	65	62	127	44	2,074	726
Apartment	1 Dwelling	#220	0	1	1	1	1	0	1	1	7	7
		<b>Totals =</b>	55	55	110	39	66	62	128	45	2,081	733
<b>Step 2. Previous Development</b>												
Gas Station w/ C-Store	850 SF 4 fuel positions	#945	33	32	65	34	38	37	75	38	1,224	430
		<b>Totals =</b>	33	32	65	34	38	37	75	38	1,224	430
		<b>Step 3. Increments (Step 1. - Step 2.) =</b>	<b>+22</b>	<b>+23</b>	<b>+45</b>	<b>+5</b>	<b>+28</b>	<b>+25</b>	<b>+53</b>	<b>+7</b>	<b>+857</b>	<b>+303</b>

Notes:

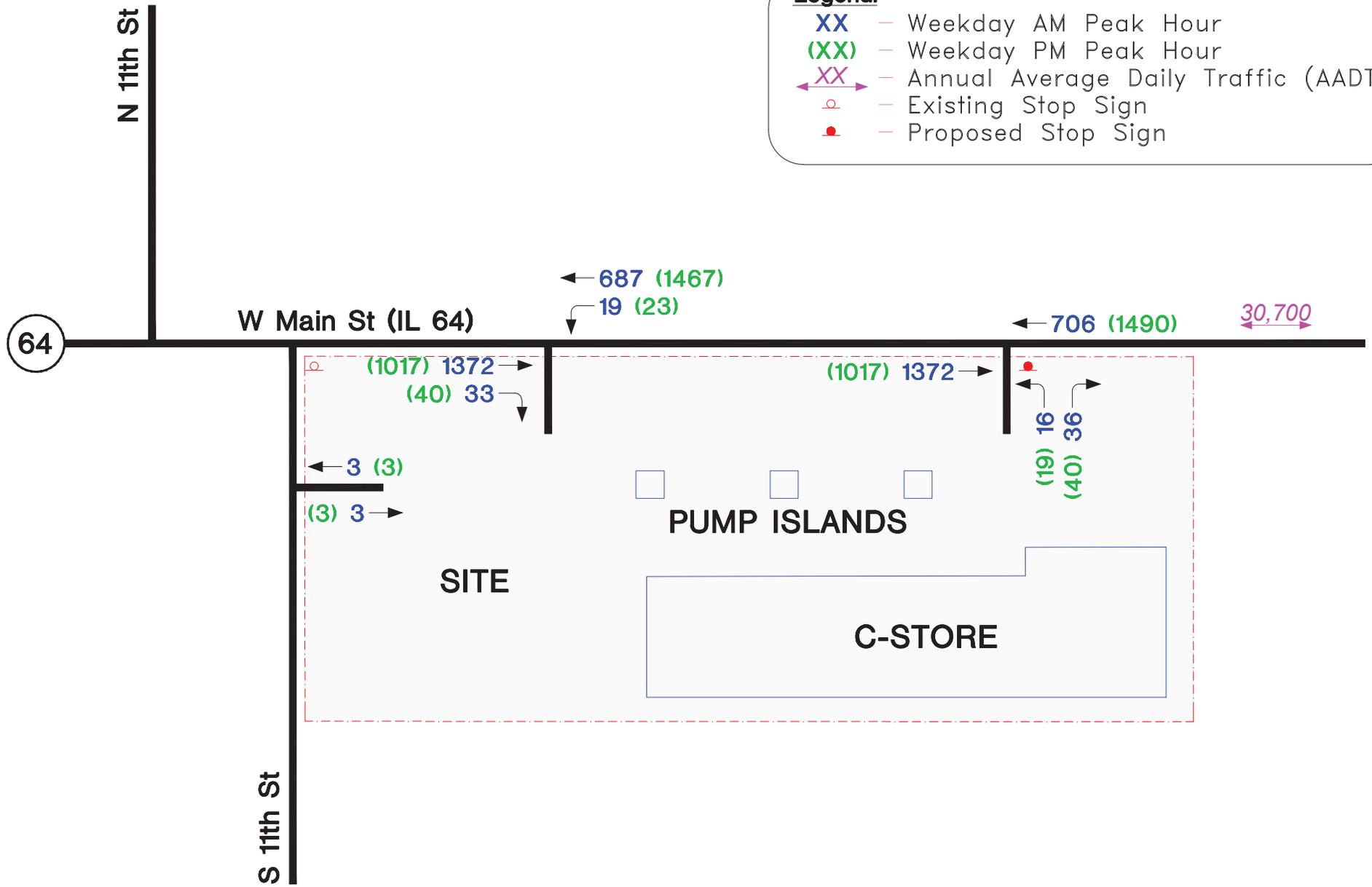
- 1) Source: Institute of Transportation Engineers (ITE) Trip Generation Manual (10th Edition)
- 2) Per ITE, 65% or more of the gas station trips could be "pass-by" in nature.
- 3) The discounts for pass-by trips were not taken in order to test maximum site impacts.

### Part B. Trip Distribution

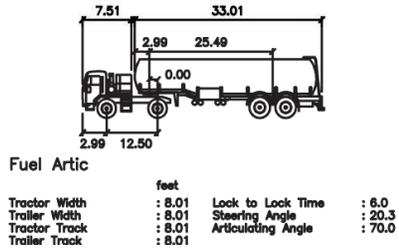
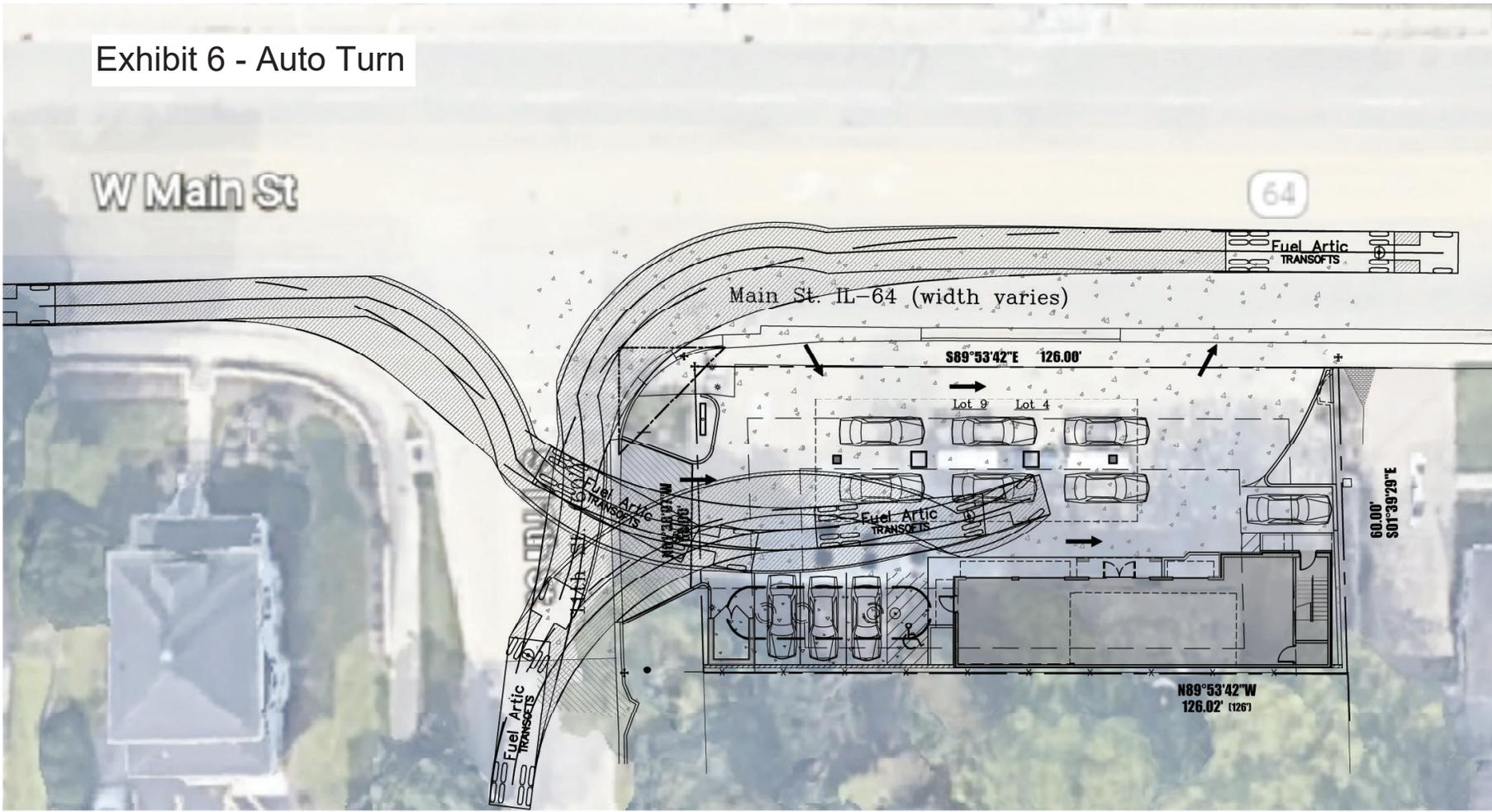
Route & Direction	Percent Use	
	Approach Site From	Depart Site To
Main Street (IL 64)		
- East of Site	30%	65%
- West of 11th Street	65%	30%
11th Street		
- South of Site	5%	5%
<b>Totals =</b>	<b>100%</b>	<b>100%</b>

**Legend:**

- XX — Weekday AM Peak Hour
- (XX) — Weekday PM Peak Hour
- XX — Annual Average Daily Traffic (AADT)
- o — Existing Stop Sign
- — Proposed Stop Sign



# Exhibit 6 - Auto Turn



24 N BENNETT ST.  
GENEVA, IL 60134  
PHONE 630 608 0500  
FAX 630 839 8875

**ECA**  
ARCHITECTS  
AND  
PLANNERS

PROFESSIONAL DESIGN FIRM  
NO. 184 005766

Preliminary Site Plan

## Gas Station

1023 W. Main Street  
St. Charles, IL 60174

DRAWN BY:	SBD/ERC
DATE:	05-14-2021
REV 1:	
REV 2:	
REV 3:	
REV 4:	

Turning Exhibit

SHEET

EX-3

IF PRINTED TO SCALE, BOTH THESE BARS WILL MEASURE 1" [1][2][3][4][5][6][7][8][9][10]

**APPENDIX A**  
*Photo Inventory*



Looking north along S 11<sup>th</sup> St at Main St



Looking north at West Site Access from S 11<sup>th</sup> St



Looking east along Main St at S 11<sup>th</sup> St



Looking east through Site from S 11<sup>th</sup> St



Looking west along Main St at Site



Looking west through Site



Looking north from site at Northwest Site Access



Looking north from site at Northeast Site Access

**APPENDIX B**  
*IDOT Traffic Count Summary Sheets*



# Volume Count Report

LOCATION INFO	
Location ID	045 0009_EB
Type	LINK
Funct'l Class	3
Located On	Main St
From Road	Randall Rd
To Road	2ND ST
Direction	EB
County	Kane
Community	ST CHARLES
MPO ID	
HPMS ID	
Agency	Illinois DOT

COUNT DATA INFO	
Count Status	Accepted
Start Date	Wed 3/13/2019
End Date	Thu 3/14/2019
Start Time	1:00:00 PM
End Time	1:00:00 PM
Direction	Approach
Notes	
Station	045_IL 64 (W Main St) & IL 31 (S 2nd St)
Study	
Speed Limit	
Description	
Sensor Type	
Source	TcdsBinToVol
Latitude,Longitude	

INTERVAL:60-MIN	
Time	Hourly Count
0:00-1:00	71
1:00-2:00	43
2:00-3:00	42
3:00-4:00	59
4:00-5:00	202
5:00-6:00	459
6:00-7:00	1,163
7:00-8:00	1,372
8:00-9:00	1,233
9:00-10:00	831
10:00-11:00	814
11:00-12:00	896
12:00-13:00	906
13:00-14:00	868
14:00-15:00	961
15:00-16:00	974
16:00-17:00	1,017
17:00-18:00	1,004
18:00-19:00	825
19:00-20:00	699
20:00-21:00	579
21:00-22:00	389
22:00-23:00	216
23:00-24:00	137
<b>Total</b>	15,760
<b>AM Peak</b>	07:00-08:00 1,372
<b>PM Peak</b>	16:00-17:00 1,017



# Volume Count Report

LOCATION INFO	
Location ID	045 0009_WB
Type	LINK
Funct'l Class	3
Located On	Main St
From Road	Randall Rd
To Road	2ND ST
Direction	WB
County	Kane
Community	ST CHARLES
MPO ID	
HPMS ID	
Agency	Illinois DOT

COUNT DATA INFO	
Count Status	Accepted
Start Date	Wed 3/13/2019
End Date	Thu 3/14/2019
Start Time	1:00:00 PM
End Time	1:00:00 PM
Direction	Approach
Notes	
Station	045_IL 64 (W Main St) & IL 31 (S 2nd St)
Study	
Speed Limit	
Description	
Sensor Type	
Source	TcdsBinToVol
Latitude,Longitude	

INTERVAL:60-MIN	
Time	Hourly Count
0:00-1:00	105
1:00-2:00	60
2:00-3:00	42
3:00-4:00	45
4:00-5:00	91
5:00-6:00	197
6:00-7:00	363
7:00-8:00	687
8:00-9:00	792
9:00-10:00	754
10:00-11:00	759
11:00-12:00	854
12:00-13:00	1,004
13:00-14:00	861
14:00-15:00	1,128
15:00-16:00	1,322
16:00-17:00	1,467
17:00-18:00	1,528
18:00-19:00	1,099
19:00-20:00	837
20:00-21:00	613
21:00-22:00	483
22:00-23:00	277
23:00-24:00	160
<b>Total</b>	15,528
<b>AM Peak</b>	11:00-12:00 854
<b>PM Peak</b>	17:00-18:00 1,528



# Volume Count Report

LOCATION INFO	
Location ID	045 0009
Type	LINK
Funct'l Class	3
Located On	Main St
From Road	Randall Rd
To Road	2ND ST
Direction	2-WAY
County	Kane
Community	ST CHARLES
MPO ID	
HPMS ID	
Agency	Illinois DOT

COUNT DATA INFO	
Count Status	Accepted
Start Date	Wed 3/13/2019
End Date	Thu 3/14/2019
Start Time	1:00:00 PM
End Time	1:00:00 PM
Direction	2-WAY
Notes	
Station	045_IL 64 (W Main St) & IL 31 (S 2nd St)
Study	
Speed Limit	
Description	
Sensor Type	
Source	CombineVolumeCountsIncremental
Latitude,Longitude	

INTERVAL:60-MIN	
Time	Hourly Count
0:00-1:00	176
1:00-2:00	103
2:00-3:00	84
3:00-4:00	104
4:00-5:00	293
5:00-6:00	656
6:00-7:00	1,526
7:00-8:00	2,059
8:00-9:00	2,025
9:00-10:00	1,585
10:00-11:00	1,573
11:00-12:00	1,750
12:00-13:00	1,910
13:00-14:00	1,729
14:00-15:00	2,089
15:00-16:00	2,296
16:00-17:00	2,484
17:00-18:00	2,532
18:00-19:00	1,924
19:00-20:00	1,536
20:00-21:00	1,192
21:00-22:00	872
22:00-23:00	493
23:00-24:00	297
<b>Total</b>	31,288
<b>AM Peak</b>	07:00-08:00 2,059
<b>PM Peak</b>	17:00-18:00 2,532



## Hampton, Lenzini and Renwick, Inc.

Civil Engineers • Structural Engineers • Land Surveyors • Environmental Specialists  
www.hlrengineering.com

# Memorandum

**To:** City of St. Charles  
ATTN: Ms. Ellen Johnson

**From:** Hampton Lenzini & Renwick, Inc. (HLR)  
Callie Castro, PE, PTOE and Amy McSwane, PE, PTOE

**Date:** 7/13/2021

**Re:** 1023 W. Main Street (IL 64) – Proposed Gas Station and Apartment

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HLR has reviewed the subject traffic study submitted on June 29, 2021 by Gewalt Hamilton Associates, Inc. (GHA). The following comments were noted for consideration.

### Traffic Study and Site Plan Comments

1. Was a traffic analysis conducted for the site driveways and the intersection of 11<sup>th</sup> Street at Main Street? How do they operate with new trips and existing traffic? Are there any existing operational issues?
2. What are the peak hours/periods used in this study for the proposed site? Include in study.
3. Under Site Traffic, where is the value of 25-30% for those who may stop for fuel may also go to the C-store assumed from? Clarify and reference in discussion.
4. What is the “rule of 65’s” based on? Clarify/reference in the study. The assumed directional distribution to and from the site should also align with existing traffic patterns along Main Street.
5. Include City Code parking requirements in Appendix and detail in study.
6. The proposed site plan shows less than 10’ of travel way between cars parked at the service pumps and the sidewalk on north side of the site/the convenience store on the south side of the property. There is concern if there is enough room for vehicles to maneuver the site properly. Provide passenger vehicle Auto-Turn exhibit for the proposed site plan.
7. There does not seem to be any curb or physical separation between the vehicle travel way and the sidewalk on the north side of the site which is a safety concern for pedestrians using the sidewalk.
8. Main Street (IL 64) is an SRA route. Per IDOT guidelines for SRA routes, it is recommended to consolidate curb cuts/driveways and provide access onto non-SRA routes. Right-in right-out only access is most desirable along SRA routes.
  - a. There is safety concern with the amount of conflict points between motorists entering and exiting the site using three different driveways (two on an SRA route), vehicles

entering and exiting the pumps, and pedestrians/bicyclists that use the sidewalk along Main Street.

- b. There is also a safety concern with how close the existing western driveway on Main Street is to 11<sup>th</sup> Street. This driveway could create conflict for vehicles turning into the gas station and vehicles turning onto Main Street from 11<sup>th</sup> Street.
9. The existing driveways along Main Street are very wide. There is major concern if these driveways are to remain as is that there is nothing to stop drivers from using both driveways as full access driveways. Drivers don't always follow pavement markings and posted signage. Narrower driveways and curbs/physical separation should be considered to effectively direct drivers to the correct driveway.
10. The traffic study mentions the proposed driveways can accommodate vehicles side-by-side when exiting the site. Is it necessary to provide a left and a right turn lane to exit? Was a capacity analysis done showing the need to have two exiting lanes based on the proposed traffic volumes?
11. Based on the circulation arrows on the current proposed site plan, does the driveway on 11<sup>th</sup> Street need to be full access if all vehicles are expected to travel in one-way direction through the site?

If you have any questions or concerns regarding this study, please contact HLR at 847-697-6700.

## Memorandum

To: **Eric Carlson**  
ECA Architects & Planners

625 Forest Edge Drive, Vernon Hills, IL 60061

TEL 847.478.9700 ■ FAX 847.478.9701

www.gha-engineers.com

From: Bill Grieve, P.E., PTOE  
Senior Transportation Engineer

Date: July 26, 2021

Subject: Hampton, Lenzini and Renwick, Inc. (HLR) Review Comments  
Proposed Gas Station and Apartment  
1023 W. Main Street, St. Charles, Illinois

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Gewalt Hamilton Associates, Inc. (GHA) has received the review comments from HLR dated July 13, 2021 regarding the above captioned project. As proposed, a gas station and an apartment would be developed at 1023 W. Main Street in St. Charles, Illinois on a former gas station site. We offer the following responses for your consideration.

1. Was a traffic analysis conducted for the site driveways and the intersection of 11<sup>th</sup> Street at Main Street? How do they operate with new trips and existing traffic? Are there any existing operational issues?  
**Response:** Per City guidance, we did not perform a full Traffic Impact Study (TIS). Traffic counts were not conducted. Instead, we used available data from the IDOT web-site.
2. What are the peak hours/periods used in this study for the proposed site? Include in study.  
**Response:** The street peak hours generally occur between 7-9 AM and 4-6 PM. The available IDOT data along Main Street suggests that the peak hours occur from 7-8 AM and 5-6 PM.
3. Under Site Traffic, where is the value of 25-30% for those who may stop for fuel may also go to the C-store assumed from? Clarify and reference in discussion.  
**Response:** The client provided the information on the percentage of multi-use stops. This percentage is also consistent with historical GHA survey data at similar developments. This factor was not used in our evaluation.
4. What is the "rule of 65's" based on? Clarify/reference in the study. The assumed directional distribution to and from the site should also align with existing traffic patterns along Main Street.  
**Response:** The "Rule of 65s" has evolved from a combination of client data and GHA traffic counts and observations at many service-oriented businesses, such as gas stations and fast-food restaurants. It is logical that drivers would elect to perform easier right turn in/out movements instead of negotiating left turns across busy traffic. The GHA traffic assignment reflects this especially during the busy AM peak hour when eastbound Main Street traffic is almost double the westbound traffic.
5. Include City Code parking requirements in Appendix and detail in study.  
**Response:** The parking requirements and calculations are provided on the ECA site plans.

6. The proposed site plan shows less than 10' of travel way between cars parked at the service pumps and the sidewalk on north side of the site/the convenience store on the south side of the property. There is concern if there is enough room for vehicles to maneuver the site properly. Provide passenger vehicle Auto-Turn exhibit for the proposed site plan.

**Response:** Knoche Engineering will be providing the requested AutoTurn template.

7. There does not seem to be any curb or physical separation between the vehicle travel way and the sidewalk on the north side of the site which is a safety concern for pedestrians using the sidewalk.

**Response:** The site does not now have a buffer.

8. Main Street (IL 64) is an SRA route. Per IDOT guidelines for SRA routes, it is recommended to consolidate curb cuts/driveways and provide access onto non-SRA routes. Right-in right-out only access is most desirable along SRA routes.

- a. *There is safety concern with the amount of conflict points between motorists entering and exiting the site using three different driveways (two on an SRA route), vehicles entering and exiting the pumps, and pedestrians/bicyclists that use the sidewalk along Main Street*

**Response:** We believe that the shift to a one-way in and out operation at the site drives will be an improvement to the previous operations.

- b. There is also a safety concern with how close the existing western driveway on Main Street is to 11<sup>th</sup> Street. This driveway could create conflict for vehicles turning into the gas station and vehicles turning onto Main Street from 11<sup>th</sup> Street.

**Response:** The drive on 11<sup>th</sup> Street is important from a site access standpoint for fuel tankers. The drive also provides access for the trips oriented to/from the south on 11<sup>th</sup> Street.

9. The existing driveways along Main Street are very wide. There is major concern if these driveways are to remain as is that there is nothing to stop drivers from using both driveways as full access driveways. Drivers don't always follow pavement markings and posted signage. Narrower driveways and curbs/physical separation should be considered to effectively direct drivers to the correct driveway.

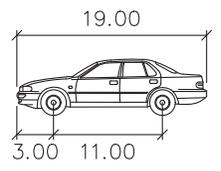
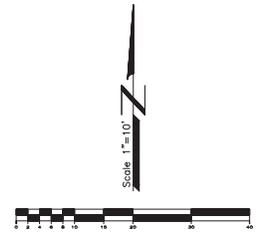
**Response:** Appropriate signing and striping should be provided to effectively narrow the drives.

10. The traffic study mentions the proposed driveways can accommodate vehicles side-by-side when exiting the site. Is it necessary to provide a left and a right turn lane to exit? Was a capacity analysis done showing the need to have two exiting lanes based on the proposed traffic volumes?

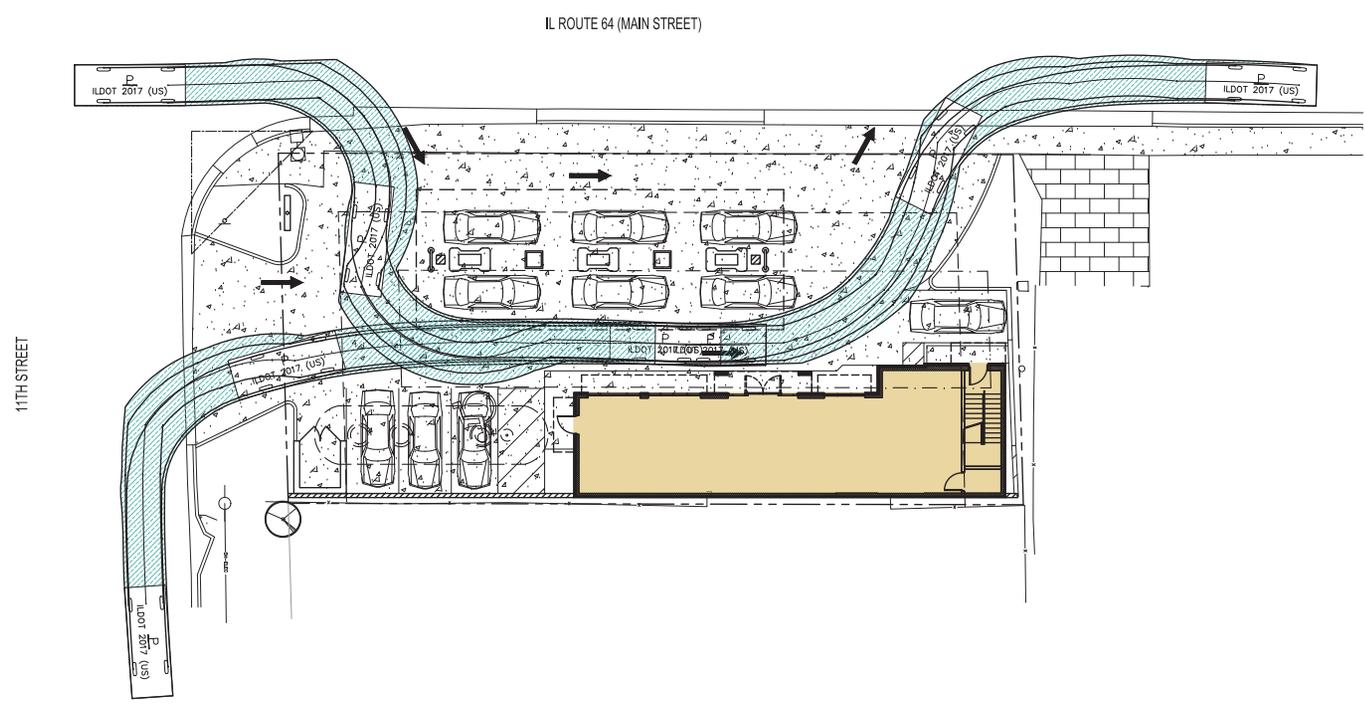
**Response:** As noted, this was not a full TIS so capacity analyses were not conducted. From a planning standpoint it seems reasonable that separate outbound left and right turns would help promote more efficient operations.

11. Based on the circulation arrows on the current proposed site plan, does the driveway on 11<sup>th</sup> Street need to be full access if all vehicles are expected to travel in one-way direction through the site?

**Response:** Full access for the driveway on 11<sup>th</sup> Street will allow those vehicles destined to the south to not have to circulate along Main Street as "back-track" movements.



- P
- Width : 7.00 feet
  - Track : 6.00
  - Lock to Lock Time : 6.0
  - Steering Angle : 31.9



REVISIONS					
NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION

## TURNING EXHIBIT

GAS STATION  
1023 W. MAIN STREET  
ST. CHARLES, ILLINOIS



**Craig R. Knoche & Associates**  
Civil Engineers, P.C.  
1161 Commerce Drive • Geneva, IL 60134 • phone (630) 849-2270 • fax (630) 849-2272

DATE	7/29/21	C1.2
FILE	21-006 C10	
JOB NO.	21-006	

## Memorandum

To: **Eric Carlson**  
ECA Architects & Planners

From: Bill Grieve, P.E., PTOE  
Senior Transportation Engineer

Date: July 26, 2021

Subject: Hampton, Lenzini and Renwick, Inc. (HLR) Review Comments  
Proposed Gas Station and Apartment  
1023 W. Main Street, St. Charles, Illinois

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Gewalt Hamilton Associates, Inc. (GHA) has received the review comments from HLR dated July 13, 2021 regarding the above captioned project. As proposed, a gas station and an apartment would be developed at 1023 W. Main Street in St. Charles, Illinois on a former gas station site. We offer the following responses for your consideration.

1. Was a traffic analysis conducted for the site driveways and the intersection of 11<sup>th</sup> Street at Main Street? How do they operate with new trips and existing traffic? Are there any existing operational issues?

**Response:** Per City guidance, we did not perform a full Traffic Impact Study (TIS). Traffic counts were not conducted. Instead, we used available data from the IDOT web-site.

**Concur.**

2. What are the peak hours/periods used in this study for the proposed site? Include in study.

**Response:** The street peak hours generally occur between 7-9 AM and 4-6 PM. The available IDOT data along Main Street suggests that the peak hours occur from 7-8 AM and 5-6 PM.

**Include peak hours in traffic study.**

3. Under Site Traffic, where is the value of 25-30% for those who may stop for fuel may also go to the C-store assumed from? Clarify and reference in discussion.

**Response:** The client provided the information on the percentage of multi-use stops. This percentage is also consistent with historical GHA survey data at similar developments. This factor was not used in our evaluation.

**Include this clarification in traffic study and note that it was not used in the evaluation.**

4. What is the "rule of 65's" based on? Clarify/reference in the study. The assumed directional distribution to and from the site should also align with existing traffic patterns along Main Street.

**Response:** The "Rule of 65s" has evolved from a combination of client data and GHA traffic counts and observations at many service-oriented businesses, such as gas stations and fast-food restaurants. It is logical that drivers would elect to perform easier right turn in/out movements instead of negotiating left turns across busy traffic. The GHA traffic assignment reflects this especially during the busy AM peak hour when eastbound Main Street traffic is almost double the westbound traffic.

**The "rule of 65's" sounds more like engineering judgment based on x,y,z. Describing this as a rule is misleading.**

5. Include City Code parking requirements in Appendix and detail in study.

**Response:** The parking requirements and calculations are provided on the ECA site plans.

**Concur, however the site plan attached to the traffic study did not include the parking requirements.**

6. The proposed site plan shows less than 10' of travel way between cars parked at the service pumps and the sidewalk on north side of the site/the convenience store on the south side of the property. There is concern if there is enough room for vehicles to maneuver the site properly. Provide passenger vehicle Auto-Turn exhibit for the proposed site plan.

**Response:** Knoche Engineering will be providing the requested AutoTurn template.

**AutoTurn was received.**

7. There does not seem to be any curb or physical separation between the vehicle travel way and the sidewalk on the north side of the site which is a safety concern for pedestrians using the sidewalk.

**Response:** The site does not now have a buffer.

**We maintain our original safety concern for pedestrians described in comment 7.**

8. Main Street (IL 64) is an SRA route. Per IDOT guidelines for SRA routes, it is recommended to consolidate curb cuts/driveways and provide access onto non-SRA routes. Right-in right-out only access is most desirable along SRA routes.

- a. *There is safety concern with the amount of conflict points between motorists entering and exiting the site using three different driveways (two on an SRA route), vehicles entering and exiting the pumps, and pedestrians/bicyclists that use the sidewalk along Main Street*

**Response:** We believe that the shift to a one-way in and out operation at the site drives will be an improvement to the previous operations.

- b. There is also a safety concern with how close the existing western driveway on Main Street is to 11<sup>th</sup> Street. This driveway could create conflict for vehicles turning into the gas station and vehicles turning onto Main Street from 11<sup>th</sup> Street.

**Response:** The drive on 11<sup>th</sup> Street is important from a site access standpoint for fuel tankers. The drive also provides access for the trips oriented to/from the south on 11<sup>th</sup> Street.

**The concern was with the western driveway proximity to 11th St, not the driveway on 11th St.**

9. The existing driveways along Main Street are very wide. There is major concern if these driveways are to remain as is that there is nothing to stop drivers from using both driveways as full access driveways. Drivers don't always follow pavement markings and posted signage. Narrower driveways and curbs/physical separation should be considered to effectively direct drivers to the correct driveway.

**Response:** Appropriate signing and striping should be provided to effectively narrow the drives.

**We maintain our original concerns described in comment 9.**

10. The traffic study mentions the proposed driveways can accommodate vehicles side-by-side when exiting the site. Is it necessary to provide a left and a right turn lane to exit? Was a capacity analysis done showing the need to have two exiting lanes based on the proposed traffic volumes?

**Response:** As noted, this was not a full TIS so capacity analyses were not conducted. From a planning standpoint it seems reasonable that separate outbound left and right turns would help promote more efficient operations.

**From a traffic and safety standpoint, there should be justification or engineering judgment based on x,y,z for two exiting lanes at this driveway.**

11. Based on the circulation arrows on the current proposed site plan, does the driveway on 11<sup>th</sup> Street need to be full access if all vehicles are expected to travel in one-way direction through the site?

**Response:** Full access for the driveway on 11<sup>th</sup> Street will allow those vehicles destined to the south to not have to circulate along Main Street as "back-track" movements.

**If the site is to operate in a one-way manner based on the circulation arrows shown in the site plan, how are vehicles suppose get to the exit on 11th Street without traveling the wrong direction within the site? If pumps are occupied there is not enough room for two-way travel throughout the site.**