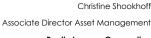
## Club Car Wash Redevelopment of Vacant Site at 8340 NW Roanridge Road (Southeast Corner I-29 and Barry Road) Kansas City, Missouri

### NPD Committee Meeting 9.30.25 Supplemental Information

### **Contents:**

- 1. PowerPoint Slides Overview and Select Topics to Highlight
- 2. Landowner Letter Request of City Support
- 3. Development Plan Drawings
- 4. Traffic Information Study and its Addendum





**Realty Income Corporation** 

11995 El Camino Real, San Diego, CA 92130 New York Stock Exchange Symbol "O" Direct Dial: 858-284-5000

E-Mail: cshookhoff@realtyincome.com

REALTY INCOME

The Monthly Dividend Company®

September 29, 2025

Re: Club Car Wash – 8340 NW Roanridge Rd., Kansas City, MO

#### To Whom It May Concern,

Realty Income is the owner of the property located at 8340 NW Roanridge Road, which is currently under lease to Club Car Wash. Realty Income owns nearly 50 assets in the Kansas City MSA and more than 15,600 properties globally Club Car Wash leases several of these properties and has consistently proven to be an excellent tenant and valued partner. We look forward to expanding that relationship through additional locations in the future.

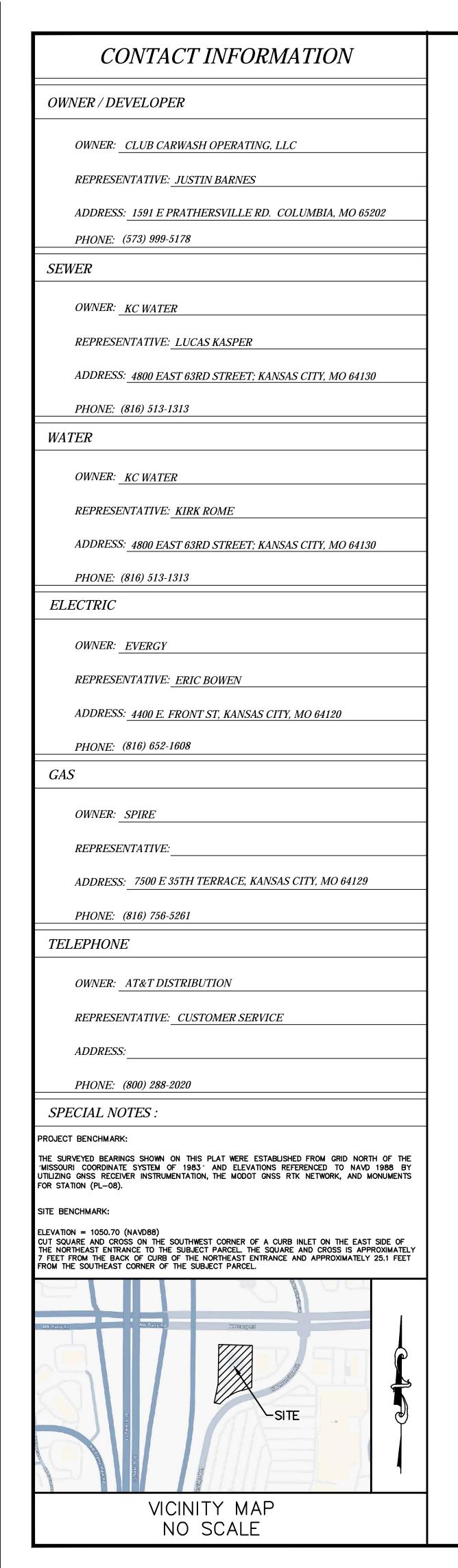
The property at 8340 NW Roanridge Road was formerly an On The Border restaurant. Unfortunately, the building is outdated and would be cost-prohibitive to re-tenant with another restaurant. To date, we have not received interest from qualified restaurant operators to backfill the space. Based on market conditions, we believe the highest and best use of the property is to demolish the existing structure and redevelop the site.

Realty Income is in full support of Club Car Wash's proposal to redevelop this property. We believe their investment will transform an underutilized, outdated building into a productive asset that will benefit both the surrounding community and the City of Kansas City.

We respectfully request the City's support for this project and the redevelopment of the property, allowing Club Car Wash to bring another successful operation to the community while enhancing the overall vitality of the corridor.

Sincerely,

Christine Shookhoff



# DEVELOPMENT AND PROJECT PLAN CLUB CARWASH KANSAS CITY, MISSOURI



PROJECT ADDRESS 8340 NW ROANRIDGE KANSAS CITY, MISSOURI 64136

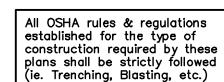
PROJECT NO. M24-8896A



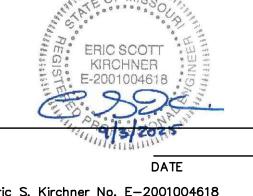
- CIVIL ENGINEERING
- LAND SURVEYING
- ARCHITECTURE
- SITE DEVELOPMENT
- MASTER PLANNING
- GENERAL CONSULTING

8 EAST MAIN STREET, WENTZVILLE, MISSOURI 63385 TELEPHONE (636) 332-4574 FAX (636) 327-0760 E-MAIL wentmail@cochraneng.com

**REVISED JUNE 11, 2025 REVISED JUNE 17, 2025 REVISED SEPTEMBER 3, 2025** 







SHEET INDEX

SITE PLAN\_

EXISTING CONDITIONS \_\_\_\_\_\_\_1 OF 6

UTILITY PLAN\_\_\_\_\_

GRADING PLAN \_\_\_\_\_

PHOTOMETRICS PLAN\_\_\_\_\_

LANDSCAPE PLAN\_\_\_\_\_

**CALL OR CLICK 3 DAYS BEFORE YOU DIG** 

Eric S. Kirchner No. E-2001004618 Registered Professional Engineer State of Missouri for Cochran Engineering & Surveying

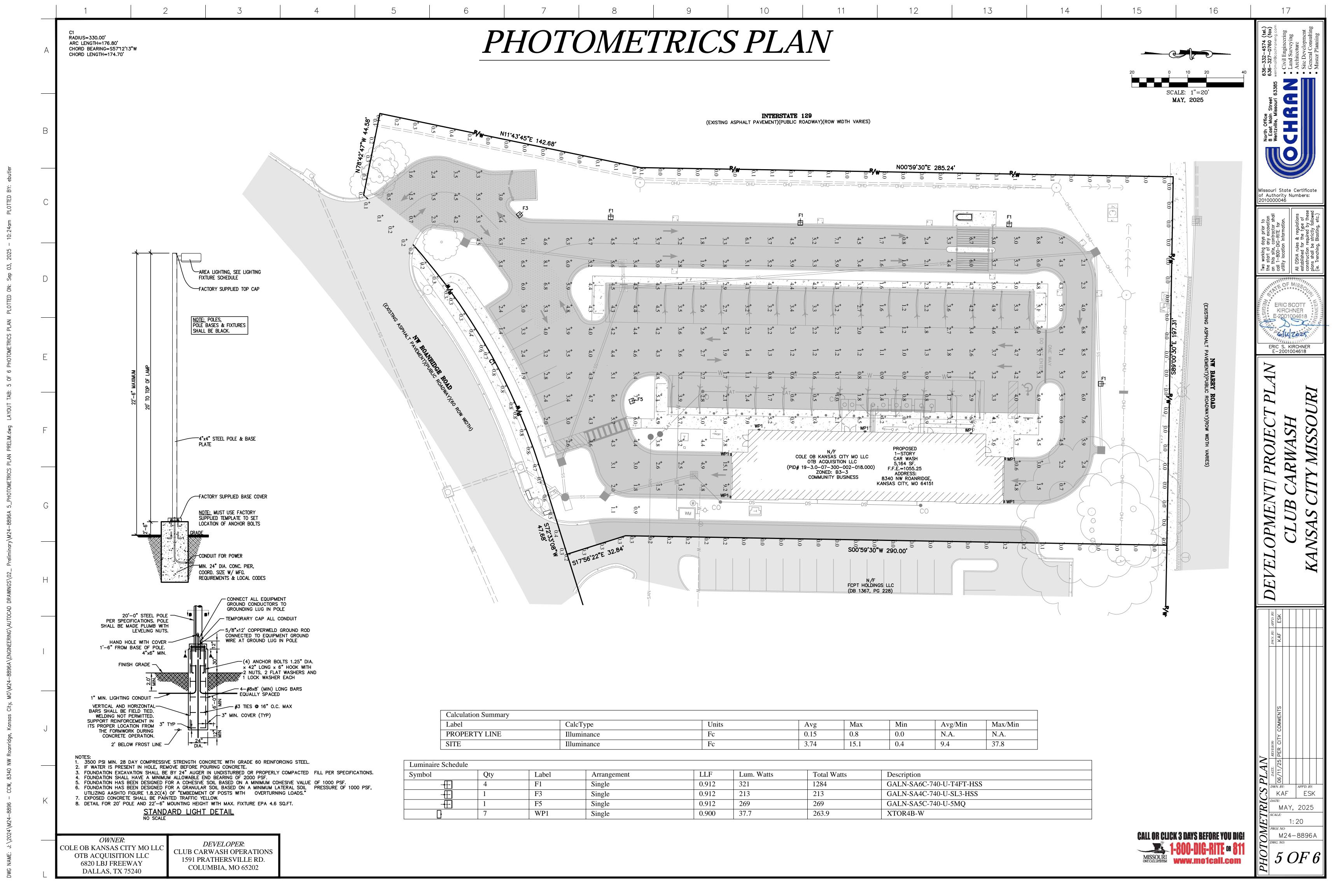
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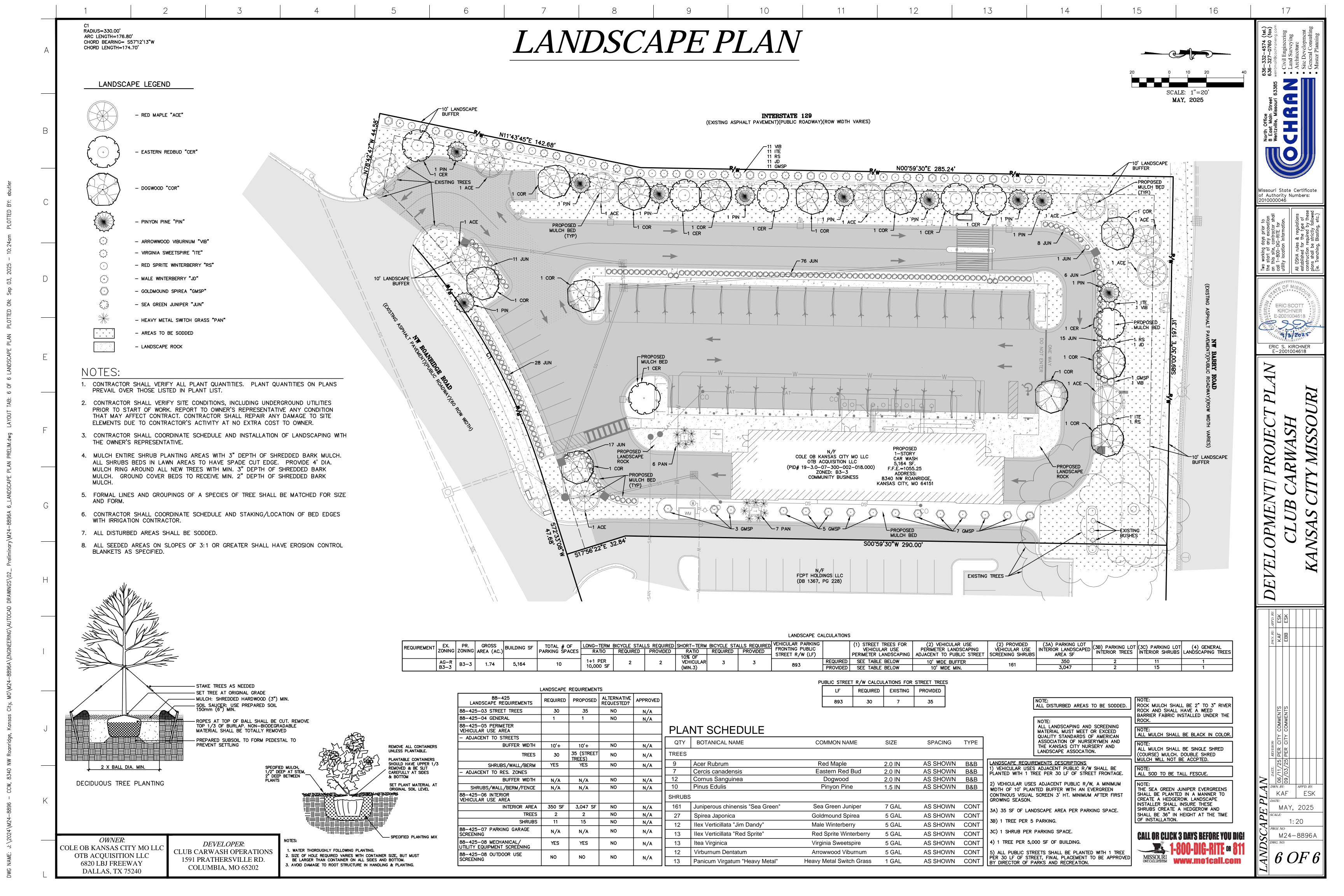
PLAT BOOK 18 PAGE 261 OF THE PLATTE COUNTY, MISSOURI RECORDS IN THE SOUTHWEST QUARTER OF SECTION 7, TOWNSHIP 51 NORTH, RANGE 33 WEST, KANSAS CITY. PLATTE COUNTY, MISSOURI, ARE BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: BEGINNING AT A CUT CROSS AT THE NORTHEAST CORNE INE OF NW BARRY ROAD, A PUBLIC ROAD OF VARIABLE DO DEGREES 59 MINUTES 30 SECONDS WEST 290.00 FEET THENCE SOUTH 17 DEGREES 26 MINUTES 52 SECOND ROANRIDGE ROAD, A 60 FOOT WIDE PUBLIC ROAD: THENCE ALONG SAID NORTH LINE SOUTH 72 DEGREES 33 MINUTES 08 SECONDS WEST 47.68 FEET TO A POINT ON A CURVE TO THE LEFT WITH A RADIUS OF 330.00 FEET AND A SECONDS WEST 174.70 FEET; THENCE ALONG SAID CURVE INTERSTATE HIGHWAY 129, A PUBLIC ROAD OF VARIABLE WIDTH; THENCE NORTH 78 DEGREES 42 MINUTES 47 SECONDS WEST 44.58 FEET; THENCE NORTH 11 DEGREES 43 MINUTES 45 SECONDS EAST 142.68 FEET; THENCE NORTH 00 DEGREES 59 MINUTES 30 SECONDS EAS 285.24 FEET TO A POINT ON THE AFOREMENTIONED SOUTH LINE OF NW BARRY ROAD; THENCE ALONG SAID SOUTH LINE SOUTH 89 DEGREES 00 MINUTES 30 SECONDS EAST 197.31 FEET TO THE POINT OF BEGINNING AND CONTAINING 75,576 CALCULATIONS MADE BY COCHRAN ENGINEERING DURING

TRACT OF LAND BEING LOT 4 OF BARRYWOODS CROSSING, ACCORDING TO THE PLAT THEREOF RECORDED IN

o		MO-152
INTERSTATE 29	NW 1/4	NE 1/4
E		07 NW BARRY RD
	SITE	
	SW 1/4	SE 1/4
	LOC	ATION MAP

SECTION 07-T51N-R33W NO SCALE





cbbtraffic.com

August 28, 2025 Revised September 29, 2025

Mr. Eric Kirchner, P.E. Cochran Engineering 8 East Main Street Wentzville, Missouri 63385

RE: Traffic Impact Study - Proposed Club Car Wash 8340 NW Roanridge Road Kansas City, Missouri CBB Job No. 076-25

#### Dear Mr. Kirchner:

As requested, CBB has completed a traffic impact study pertaining to the proposed Club Car Wash in Kansas City, Missouri. The development site is located at 8340 NW Roanridge Road in the southwest quadrant of the NW Barry Road and NW Roanridge Road intersection as depicted in Figure 1.

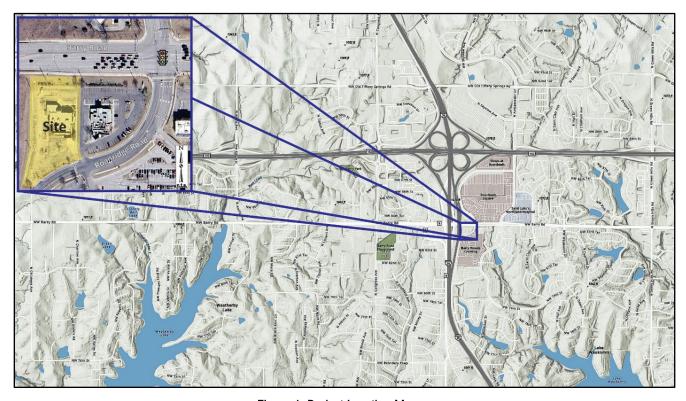


Figure 1: Project Location Map

119 South Main Street

Saint Charles, MO 63301



Proposed Club Car Wash Traffic Impact Study Kansas City, Missouri August 28, 2025 - Revised September 29, 2025 Page 2 of 21

It is our understanding that the site was previously occupied by an On-The-Border restaurant with access provided via two existing drives on NW Roanridge Road. The east drive is a shared access with the adjacent Chili's restaurant. Based on the concept plan provided by you, the proposed development will include a 5,164 square foot (SF) tunnel car wash. Access to the development is proposed via the existing access drives on NW Roanridge Road. A schematic of the concept plan is shown in **Exhibit 1**.

The purpose of this study was to determine the number of trips that would be generated by the proposed development; evaluate the impact of those trips on operating conditions along the adjacent roadways; and determine the ability of motorists to safely enter and exit the site. If necessary, roadway improvements and/or traffic control modifications were recommended to mitigate the impact of the development. The focus of our analysis was the weekday Midday and PM peak hours.

CBB discussed the scope of work for this traffic study with the City of Kansas City at the commencement of the traffic study process. CBB also provided the City a Technical Memo summarizing the existing traffic volumes, the proposed site trip generation and directional distribution estimates, and the analysis scenarios and gained their consensus on the assumptions prior to completing the traffic analyses.

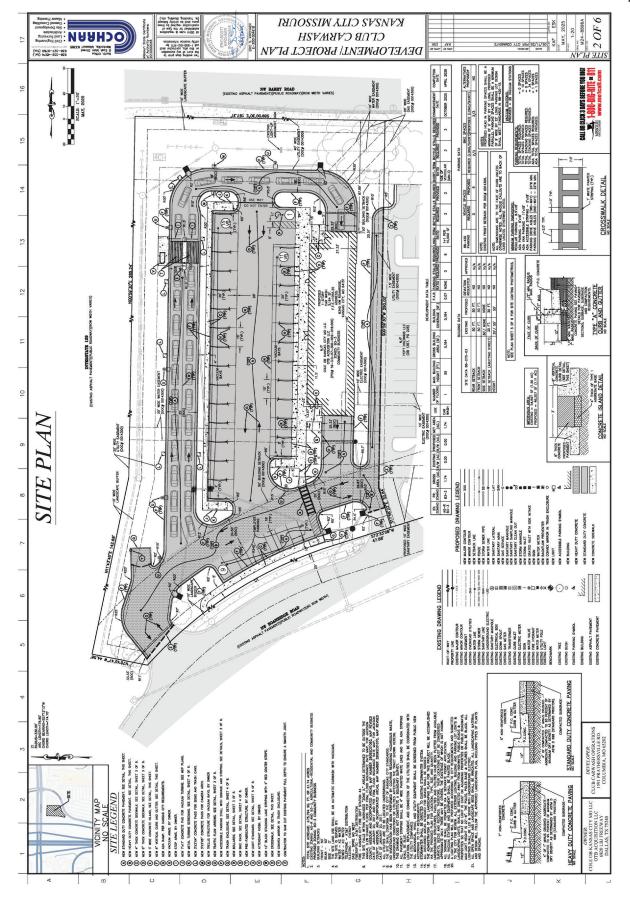
As requested, the traffic impact study evaluated the following analysis scenarios for the weekday Midday and PM peak hours:

- 2025 Conditions
  - √ 2025 Existing
  - ✓ 2025 Build (Existing plus site trips)

As requested, the study evaluated the following study intersections:

- NW Barry Road and NW Roanridge Road;
- NW Roanridge Road and East Site/Chili's/Retail Drive; and
- NW Roanridge Road and West Site Drive.

The following report presents the methodology and findings relative to the 2025 Existing and 2025 Build conditions.





Proposed Club Car Wash Traffic Impact Study Kansas City, Missouri August 28, 2025 - Revised September 29, 2025 Page 4 of 21

#### **EXISTING CONDITIONS**

Area Roadway System: NW Barry Road is an east-west Minor Arterial owned and maintained by the City of Kansas City. Throughout the study area, NW Barry Road is generally median divided and provides six lanes: three lanes in each direction. Sidewalks are provided along both sides of the roadway, and no bike facilities are provided along this section of NW Barry Road. The posted speed limit is 40 miles per hour (mph).

**NW Roadridge Road** is a north-south Major Collector that is owned and maintained by the City of Kansas City. Near the site, NW Roanridge Road provides three lanes: one northbound lane and two southbound lanes. Within the study area, there are four northbound lanes (two left-turn lanes, one through lane, and one right-turn lane at the NW Barry Road signal). The northbound right-turn lane extends back to the first retail driveway approximately 165 feet south of NW Barry Road. The left-turn lanes extend back to the Chili's/Retail Drive approximately 450 feet south of NW Barry Road. Sidewalks are provided along both sides of the roadway, and no bike facilities are provided within the study area. There is no speed limit posted on the roadway that CBB could identify.

The intersection of NW Barry Road and NW Roanridge Road/Boardwalk Avenue operates under signal control. The eastbound and westbound NW Barry Road approaches provide two left-turn lanes, three through lanes, and one right-turn lane. The northbound NW Roanridge Road approach provides two left-turn lanes, one through lane, and one right-turn lane. The southbound Boardwalk Avenue approach provides one left-turn lane, one through lane, and two right-turn lanes. The eastbound, westbound, and northbound left-turns operate under protected only phasing while the southbound left-turn operates under protected plus permissive phasing. Marked crosswalks with pedestrian countdown timers and pushbuttons are provided across the east, west, and south legs of the intersection. **Figure 2** provides an aerial view of the NW Barry Road and NW Roanridge Road/Boardwalk Avenue intersection.

The intersection of NW Roanridge Road and East Site/Chili's/Retail Drive operates under side-street stop control with NW Roanridge Road acting as the free-flow roadway. While no traffic control is present on the Site/Chili's Drive, the intersection functions as a side-street stop. The East Site/Chili's Drive and Retail Drive approaches provide a single shared lane. The northbound NW Roanridge Road approach provides a single shared lane. The southbound NW Roanridge Road approach provides one shared left-turn/through lane and one shared through/right-turn lane. **Figure 3** provides an aerial view of the NW Roanridge Road and East Site/Chili's/Retail Drive intersection. There is a marked pedestrian crosswalk with striping and signing to cross the south side of the intersection.





Figure 2: Aerial View of the NW Barry Road and NW Roanridge Road Intersection



Figure 3: Aerial View of the NW Roanridge Road and East Site/Chili's/Retail Drive Intersection



The intersection of NW Roanridge Road and West Site Drive operates under side-street stop control with NW Roanridge Road acting as the free-flow roadway. While no traffic control is present on the West Site Drive, the intersection functions as a side-street stop. The West Site Drive approach provides a single shared lane. The northbound NW Roanridge Road approach provides a single shared lane. The southbound NW Roanridge Road approach provides one through lane and one shared through/right-turn lane. **Figure 4** provides an aerial view of the NW Roanridge Road and West Site Drive intersection.



Figure 4: Aerial View of the NW Roanridge Road and West Site Drive Intersection

**2025 Existing Traffic Volumes:** Video turning movement traffic counts were conducted on Tuesday, August 12, 2025, at the following intersections from 12:00 p.m. to 6:00 p.m.:

- NW Barry Road and NW Roanridge Road; and
- NW Roanridge Road and Chili's/Retail Drive.

Based on the traffic data collected, the weekday Midday peak hour occurred between 12:00 and 1:00 p.m. and weekday PM peak hour occurred between 4:45 and 5:45 p.m. The 2025 Existing Traffic Volumes are summarized in **Exhibit 2**. The existing traffic volumes were rounded to the nearest 5 vehicles per hour (vph) for volumes over 5 vph.

Given the traffic characteristics in the area and the anticipated trip generation for the proposed development, the weekday Midday and PM peak periods would likely represent a "worst-case scenario" with regards to the traffic impact. If traffic operations are acceptable during these peak periods, it can be reasoned that conditions would be acceptable throughout the remainder of the day.

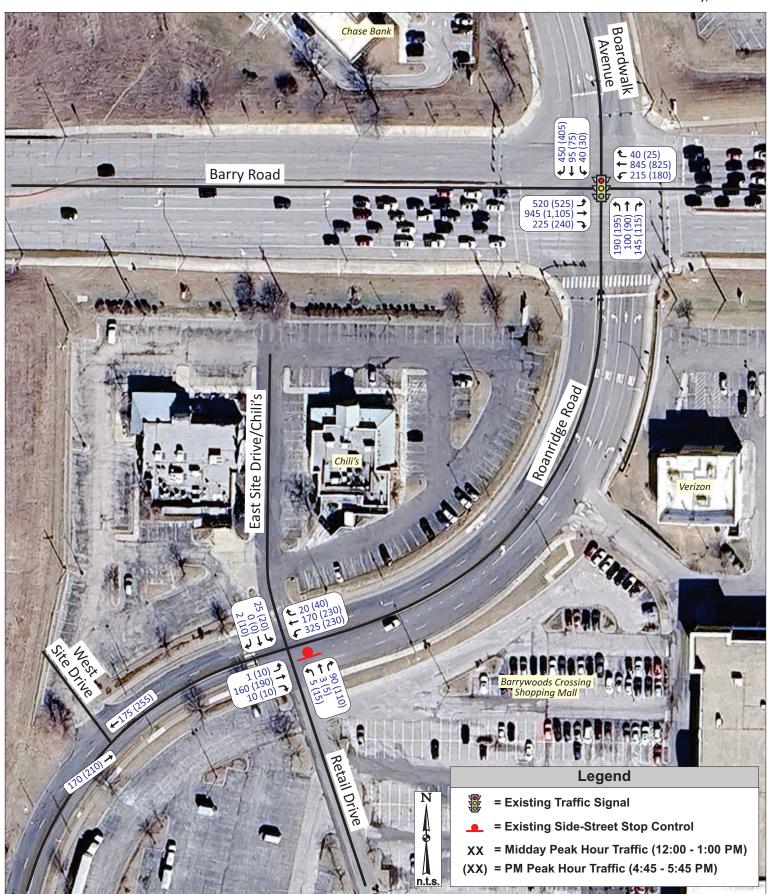


Exhibit 2: 2025 Existing Traffic Volumes



Proposed Club Car Wash Traffic Impact Study Kansas City, Missouri August 28, 2025 - Revised September 29, 2025 Page 8 of 21

#### **PROPOSED SITE**

**Proposed Land Use:** Based on the concept plan provided by you, the proposed development will include a 5,164 square foot (SF) tunnel car wash.

**Site Access:** Access to the development is proposed via the two existing access drives on NW Roanridge Road. The east drive is a shared access with the adjacent Chili's restaurant.

Note that the sight distance was not measured in the field to evaluate the available sight distance as the drives are existing and no modifications to the drives are proposed.

Careful consideration should be given to sight distance obstructions when planning future aesthetics enhancements, such as signs, berms, fencing and landscaping, to ensure that these improvements do not obstruct the view of entering and exiting traffic at the intersection of all drives with the public roadways. It is generally recommended that all improvements higher than 3 ½ feet above the elevation of the nearest pavement edge be held back at least 20 feet from the traveled roadway.

**Trip Generation:** Forecasts were prepared to estimate the amount of traffic the proposed development would generate during the weekday Midday and PM peak periods. Based on hourly data provided by the owner for their car washes, the proposed car wash is estimated to average 35 washes in the Midday peak hour and 40 washes in the PM peak hour on a typical day.

Traffic forecasts for the car wash were also estimated based upon information provided in the *Trip Generation Manual*, 11<sup>th</sup> Edition, published by the Institute of Transportation Engineers (ITE). This manual, which is a standard resource for transportation engineers, is based on a compilation of nationwide studies documenting the characteristics of various land uses. ITE Code 948, Automated Car Wash, was used for the proposed Club Car Wash. However, ITE does not provide any Midday peak hour trip estimates for an automated car wash. The peak hour of adjacent street traffic (one hour between 4 and 6 p.m.) was utilized for the PM peak hour trip generation.

**Table 1** provides a comparison of the trip generation derived from the owner's anticipated operations and the data found in the ITE *Trip Generation Manual*.

Based on the available data, the proposed Club Car Wash is expected to generate approximately 70 total trips in the Midday peak hour and 78 to 80 total trips in the PM peak hour. The analysis will utilize the trips highlighted in yellow which were provided by the owner.



Table 1: Trip Generation Estimate – Proposed Club Car Wash

Land Use	Size	Weekday Midday Peak Hour			Weekday PM Peak Hour			
Eurid 030		ln	Out	Total	ln	Out	Total	
Estimate Based on Owner/Operator Data								
Club Car Wash	1 tunnel	35	35	70	40	40	80	
Estimate Based on ITE Trip Manual								
Automated Car Wash (ITE Land Use 948)	1 tunnel	No Data Available		39	39	78		

Trip forecasts were also prepared to compare the trips associated with the previous restaurant on the site to the proposed car wash. Trips for the previous On-The-Border restaurant were estimated using ITE Code: 932 High-Turnover Sit-Down Restaurant. The peak hour of adjacent street traffic (one hour between 4 and 6 p.m.) was utilized for the PM peak hour trip generation. ITE does not provide Midday peak hour trip estimates for a high-turnover sit-down restaurant, so the existing traffic volumes to and from the Chili's were used as it would be representative of what the prior sit-down restaurant would likely generate. **Table 2** shows the trip estimate for the prior restaurant on the site.

Table 2: Trip Generation Estimate – Previous Restaurant Use

Land Use	Size	Weekday Midday Peak Hour			Weekday PM Peak Hour			
Lanu USG		ln	Out	Total	In	Out	Total	
Estimate Based on ITE Trip Manual								
Existing Chili's HTSD Restaurant		24	27	51				
HTSD Restaurant (ITE Land Use 932)	~ 7,500 SF				41	27	68	

As can be seen when comparing Tables 1 and 2, the proposed car wash is expected to generate approximately 19 more trips in the Midday peak hour and approximately 12 more trips during the PM peak hour when compared to the previous restaurant on the site.

**Trip Distribution:** The new trips for the proposed Club Car Wash were assigned into and out of the site based upon an assumed directional distribution. Based upon the existing travel patterns in the area and surrounding area, it is anticipated that the distribution of site-generated trips would be as summarized in **Table 3**.

Proposed Club Car Wash Traffic Impact Study Kansas City, Missouri August 28, 2025 - Revised September 29, 2025 Page 10 of 21

Table 3: Trip Distribution Assumptions – Proposed Club Car Wash

DIRECTION OF TRAVEL	TRIP DISTRIBUTION ASSUMPTIONS		
To/from the east on NW Barry Road	40%		
To/from the west on NW Barry Road	45%		
To/from the south on NW Roanridge Road	15%		

The resulting assignment of site-generated trips for the weekday Midday and PM peak hours is summarized in **Exhibit 3**.

**2025 Build Traffic Volumes:** The proposed site-generated trips (Exhibit 3) were added to the 2025 Existing Traffic Volumes (Exhibit 2) to determine the total volume in the forecasted scenario. The forecasted, or 2025 Build, traffic volumes for the weekday Midday and PM peak hours are shown in **Exhibit 4.** 

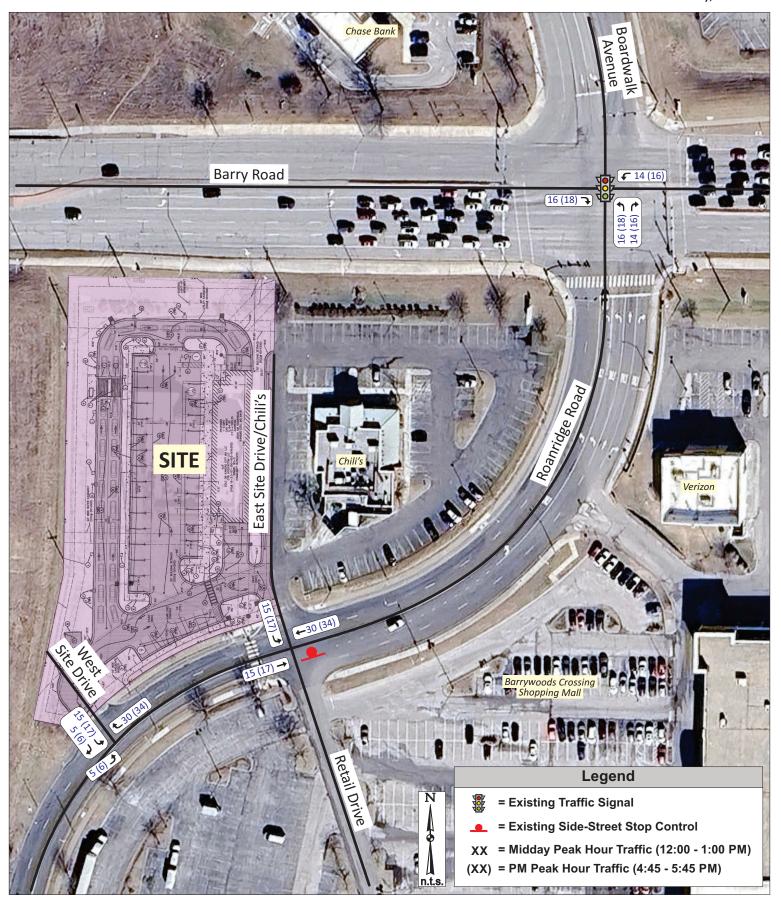


Exhibit 3: Site-Generated Trips

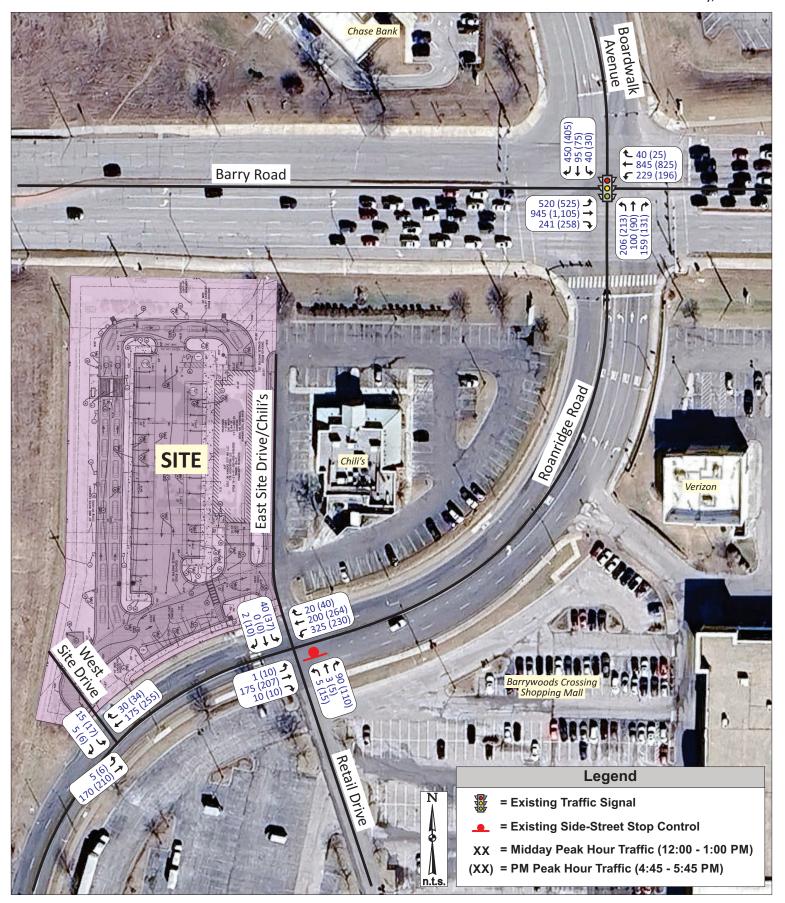


Exhibit 4: 2025 Build Traffic Volumes



#### **QUEUING ESTIMATE**

Car Wash Entrance Queuing Estimate: In order to facilitate the car wash operations, the operator will provide two payment lanes that converge to one entry lane to the car wash tunnel. The eastern payment lane into the car wash would serve members only in which customers with memberships would scan their vehicle and enter the car wash, while the western payment lane would be staffed by an attendant and serve non-members (cash customers) and gift cards.

Based on the site plan, approximately 180 feet of storage is provided between the entry into the wash tunnel and the convergence point after the payment gate. The monthly pass lane as well as the non-member lane each extend approximately 240 feet with another 80 feet provided before the queue would extend off the site and onto NW Roanridge Road for a total of approximately 740 feet of storage, see **Figure 5**. The total available storage on the site, which could be up to 740 feet, would accommodate approximately 28 vehicles on-site (assuming 25 feet per vehicle) before the car wash queue would impact NW Roanridge Road.

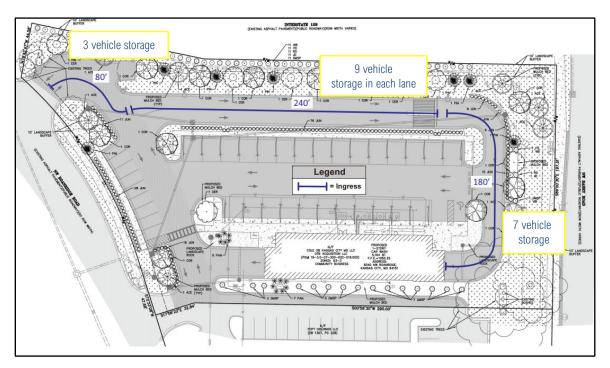


Figure 5: Proposed Club Carwash – Available Vehicle Stacking at Car Wash Entry

Based on the operations of the mechanical equipment and the continuous conveyance system, a new vehicle will be able to enter the proposed car wash every 30 seconds, a maximum rate of 120 vehicles per hour.

As previously noted, the trip estimate for the Club Car Wash is based upon data provided by the owner. The proposed car wash is estimated to perform about 40 washes in the PM peak hour on a typical day.



Proposed Club Car Wash Traffic Impact Study Kansas City, Missouri August 28, 2025 - Revised September 29, 2025 Page 14 of 21

In order to estimate the potential queue lengths in the car wash service lanes, vehicles were assumed to have 30 second headways as confirmed by Club Car Wash. Consequently, the average capacity of the car wash would be 120 vehicles per hour:

Scale Capacity Flow = 
$$\frac{3600 \text{ seconds per hour}}{30 \text{ seconds per vehicle}} \approx 120 \frac{\text{vehicles}}{10 \text{ hour}}$$

As previously mentioned, the typical peak hour arrivals to the car wash are expected to be 40 vehicles during the PM peak hour. According to queuing theory, the typical maximum number of vehicles queued is expected to be 0.5 vehicles assuming a uniform arrival rate, see the formula below:

With a service rate of one vehicle every 30 seconds and 40 vehicles entering the car wash during the peak hour of the day, the queue entering the car wash is expected to be one vehicle on average, or approximately 25 feet, at any one time. Based on the available queue storage area of approximately 740 feet, 28 cars can be accommodated within the storage areas. Given the calculated average queue of one vehicle at the car wash entrance, the car wash queues are not expected to be problematic and are not expected to queue out of the site or impact NW Roanridge Road.

Obviously, there would be some infrequent days when the car wash is in high demand, such as a warm sunny day following a snow event. Based on data provided by Club Car Wash, these special event days occur about 10 times a year and result in up to 115 washes in the peak hour. According to queuing theory, if there were 115 washes in a single hour, the maximum number of vehicles queued is expected to be 23 vehicles, see the formula below:

Again, based on the available queue storage area of approximately 740 feet, 28 cars can be accommodated within the storage areas. As such, the estimated special event day queue of 23 vehicles would still be adequately contained on site.

Furthermore, like any other convenience-oriented service, if there is a long enough line for that service, a patron may decide to return at a later time or just not purchase the service. If the car wash lanes are full, i.e., 28 vehicles waiting for a car wash, it is likely a customer may not want to wait in the long queue to get a car wash at that specific moment.

It is our opinion that the proposed 740 feet of storage (28 vehicles) on-site will provide adequate storage to accommodate the proposed car wash demands.



#### **2025 TRAFFIC ANALYSIS**

**Study Procedures:** The 2025 Existing and Build operating conditions for the study area intersections were evaluated using SYNCHRO 11, which is based on procedures outlined in the Highway Capacity Manual (HCM) to determine estimates of capacity and operational performance of signalized and unsignalized intersections.

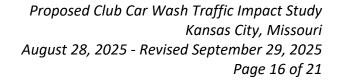
The operating conditions were graded in accordance with six levels of traffic service (Level A "Free Flow" to Level F "Fully Saturated") established by the Highway Capacity Manual. Levels of service (LOS) are measures of traffic flow which consider such factors as speed, delay, traffic interruptions, safety, driver comfort, and convenience. Level C, which is normally used for highway design, represents a roadway with volumes ranging from 70% to 80% of its capacity. However, Level D is generally considered acceptable for peak period conditions in urban and suburban areas.

The thresholds that define level of service at an intersection are based upon the type of control used (i.e., whether it is signalized or unsignalized) and the calculated delay. For signalized and all-way stop intersections, the average control delay per vehicle is estimated for each movement and aggregated for each approach and then the intersection as a whole. At intersections with partial (side-street) stop control, delay is calculated for the minor movements only since motorists on the main road are not required to stop.

Level of service is directly related to control delay. At signalized intersections, the level of service criteria differs from that at unsignalized intersections primarily because varying transportation facilities create different driver expectations. The expectation is that a signalized intersection is designed to carry higher traffic volumes and consequently may experience greater delay than an unsignalized intersection. **Table 4** summarizes the thresholds used in the analysis for signalized and unsignalized intersections.

Table 4: Level of Service Thresholds

1 (1 00)	CONTROL DELAY PER VEHICLE (SEC/VEH)			
LEVEL OF SERVICE (LOS)	SIGNALIZED INTERSECTIONS	Unsignalized Intersections		
А	<u>&lt;</u> 10	0-10		
В	> 10-20	> 10-15		
С	> 20-35	> 15-25		
D	> 35-55	> 25-35		
E	> 55-80	> 35-50		
F	> 80	> 50		





**2025 Operating Conditions:** The study intersections were evaluated using the methodologies described previously. The HCM 6<sup>th</sup> Edition results generated by the SYNCHRO software were used for unsignalized intersections. **Table 5** summarizes the results of this analysis, which reflects the 2025 Existing and 2025 Build operating conditions and average delay at the study intersections during the weekday Midday and PM peak hours. The Synchro estimated 95<sup>th</sup> percentile queue length for movements with a queue over 50 feet is also shown in the table.

Table 5: 2025 Capacity Analysis Summary

Interportion / Approach	Weekday Midd	lay Peak Hour	Weekday PM Peak Hour				
Intersection / Approach	2025 Existing	2025 Build	2025 Existing	2025 Build			
NW Barry Road and NW Roanridge Road (Signalized)							
Eastbound NW Barry Road Approach	C (28.1) 95 <sup>th</sup> Q: 250' L	C (28.1) 95 <sup>th</sup> Q: 250' L	C (25.3) 95 <sup>th</sup> Q: 290' TH	C (25.6) 95 <sup>th</sup> Q: 290' TH			
Westbound NW Barry Road Approach	C (34.4) 95 <sup>th</sup> Q: 230' TH	D (35.3) 95 <sup>th</sup> Q: 230' TH	D (37.9) 95 <sup>th</sup> Q: 260' TH	D (38.6) 95 <sup>th</sup> Q: 260' TH			
Northbound NW Roanridge Road Approach	C (32.1) 95 <sup>th</sup> Q: 110' TH	C (32.0) 95 <sup>th</sup> Q: 110' TH	D (37.5) 95 <sup>th</sup> Q: 110' TH	D (37.0) 95 <sup>th</sup> Q: 115' L			
Southbound Boardwalk Avenue Approach	B (18.8) 95 <sup>th</sup> Q: 115' TH	B (19.0) 95 <sup>th</sup> Q: 120' TH	B (14.6) 95 <sup>th</sup> Q: 100' TH	B (14.7) 95 <sup>th</sup> Q: 100' TH			
Overall	C (29.0)	C (29.2)	C (28.5)	C (28.9)			
NW Roanridge Road and East Site/Chili's/Retail Drive (Side-Street Stop)							
East Site/Chili's Drive Approach	E (43.6)	F (60.0)	D (29.4)	E (44.0)			
Retail Drive Approach	B (11.8)	B (12.1)	B (13.5)	B (14.1)			
Northbound NW Roanridge Road Approach	Free Flow	Free Flow	Free Flow	Free Flow			
Southbound NW Roanridge Road Approach	Free Flow	Free Flow	Free Flow	Free Flow			
NW Roanridge Road and West Site Drive (Side-Street Stop)							
West Site Drive Approach		B (10.8)		B (11.9)			
Northbound NW Roanridge Road Approach	A (<1.0)	A (<1.0)	A (<1.0)	A (<1.0)			
Southbound NW Roanridge Road Approach	Free Flow	Free Flow	Free Flow	Free Flow			

X (XX.X) - Level of Service (Vehicular delay in seconds per vehicle)

95th percentile queue for the critical movement of the approach and lane (L-Left, LTR-Shared Left/Thru/Right, R-Right)

As shown in **Table 5**, all approaches at the signalized intersection of NW Barry Road and NW Roanridge Road operate at acceptable levels of service (i.e., LOS D or better) under existing conditions during both the Midday and PM peak hours. In the 2025 Build condition (with the proposed site trips), all approaches at the intersection of NW Barry Road and NW Roanridge Road are forecasted to continue to operate at acceptable levels of service (i.e., LOS D or better) during both the Midday and PM peak hours with negligible differences in delay as compared to the existing conditions.



Proposed Club Car Wash Traffic Impact Study Kansas City, Missouri August 28, 2025 - Revised September 29, 2025 Page 17 of 21

As shown in the table, the East Site/Chili's Drive approach at the NW Roanridge Road and East Site/Chili's/Retail Drive operates at LOS E under existing conditions during the Midday peak hour. In the 2025 Build condition, the East Site/Chili's Drive approach is forecasted to operate at LOS F with a delay of 60 seconds during the Midday peak hour and LOS E with a delay of 44 seconds during the PM peak hour. Based on the HCM estimated 95<sup>th</sup> percentile queue, the East Site/Chili's Drive and Retail Drive approaches are expected to be less than 50 feet in the Midday and PM peak hours.

As shown in the table, all approaches at the NW Roanridge Road and West Site Drive intersection are forecasted to operate at overall favorable levels of service (i.e., LOS A or B) during both the Midday and PM peak hours. Based on the HCM estimated 95<sup>th</sup> percentile queue, the West Site Drive approach is expected to be less than 50 feet in the Midday and PM peak hours.

In reviewing the internal site circulation for the proposed car wash, it is preferred that all entering trips to the car wash use the West Drive to reduce the conflict of customers exiting the car wash and entering traffic traveling in front of them trying to enter the site. In addition, the sight distance for vehicles exiting the East/Chili's Drive appears to be somewhat limited due to the retaining wall to the north along the side of the road.

To improve the internal circulation of the site and limit the vehicles exiting the East/Chili's Drive, it is recommended that the East Site Drive only serve the Chili's with all Club Car Wash trips using the existing West Site Drive. It is recommended that the shared drive be physically separated from the Club Car Wash by constructing a raised curb between the Chili's and car wash sites.

The Chili's and West Drives were reanalyzed assuming all Club Car Wash trips use the West Drive. **Figure 6** depicts the 2025 Build traffic volumes at the Chili's and West Site Drives intersections.



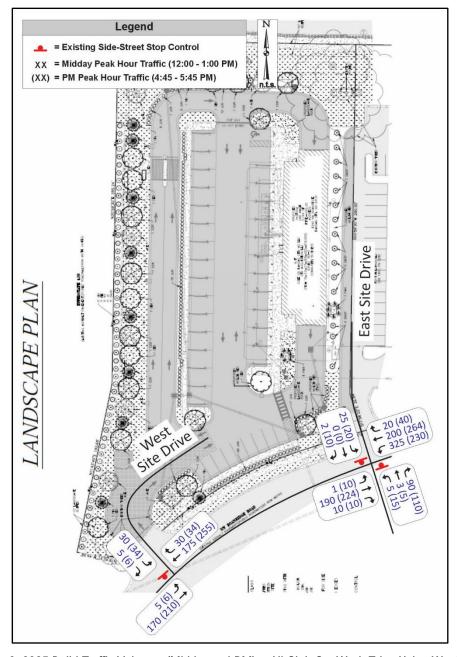


Figure 6: 2025 Build Traffic Volumes (Midday and PM) - All Club Car Wash Trips Using West Drive

**Table 6** summarizes the results of this analysis, which reflect the 2025 Build operating conditions based on HCM 6<sup>th</sup> Edition results generated by the SYNCHRO software during the weekday Midday and PM peak hours.



Table 6: 2025 Capacity Analysis Summary – Club Car Wash Using West Site Drive Only

Intersection / Approach	Weekday Midday Peak Hour	Weekday PM Peak Hour					
NW Roanridge Road and Chili's/Retail Drive (Side-Street Stop)							
East Chili's Drive Approach	F (50.9)	D (33.6)					
Retail Drive Approach	B (12.3)	B (14.4)					
Northbound NW Roanridge Road Approach	Free Flow	Free Flow					
Southbound NW Roanridge Road Approach	Free Flow	Free Flow					
NW Roanridge Road and West Site Drive (Side-Street Stop)							
West Site Drive Approach	B (11.4)	B (12.8)					
Northbound NW Roanridge Road Approach	Free Flow	Free Flow					
Southbound NW Roanridge Road Approach	Free Flow	Free Flow					

X (XX.X) - Level of Service (Vehicular delay in seconds per vehicle)

As shown in **Table 6**, the Chili's Drive approach is forecasted to operate at LOS F with a delay of approximately 51 seconds during the Midday peak hour and LOS D with a delay of approximately 34 seconds during the PM peak hour. Based on the HCM estimated 95<sup>th</sup> percentile queue, the Chili's Drive and Retail Drive approaches are again expected to be less than 50 feet in the Midday and PM peak hour.

As shown in the table, all approaches at the NW Roanridge Road and West Site Drive intersection are forecasted to operate at overall favorable Levels of service (i.e., LOS A or B) during both the Midday and PM peak hours with all new site trips using the West Drive. Based on the HCM estimated 95<sup>th</sup> percentile queue, the West Site Drive approach is again expected to be less than 50 feet in the Midday and PM peak hour.

In comparing Tables 5 and 6, shifting the car wash trips from the shared East Site/Chili's Drive to the West Site Drive improves the delay at the Chili's Drive approach by approximately 9 seconds during the Midday peak hour and 10 seconds during the PM peak hour compared to the 2025 Build condition in which Club Car Wash trips were split between the East and West site drives.

Consideration should be given to providing a centerline stripe on the West Drive to better define two-way travel. With the curve in the driveway approach it is important to make sure customers exiting the site do not impede the ability of customers to enter the site.



Proposed Club Car Wash Traffic Impact Study Kansas City, Missouri August 28, 2025 - Revised September 29, 2025 Page 20 of 21

#### **SUMMARY**

CBB completed the preceding study to address the traffic impacts associated with the proposed Club Car Wash located at 8340 NW Roanridge Road in Kansas City, Missouri.

In summary, the following findings should be considered in conjunction with the proposed development in the <u>2025 Build conditions</u>:

- To better define who has the right-of-way, it is recommended that a stop sign be installed for the Chili's Drive approach to NW Roanridge Road.
- To better define who has the right-of-way, it is recommended that a stop sign be installed for the West Site Drive approach to NW Roanridge Road.
- The proposed Club Car Wash is expected to generate approximately 70 total trips in the Midday peak hour and 80 total trips in the PM peak hour on average.
- It is our opinion that the proposed 740 feet of storage (28 vehicles) on-site will provide adequate storage to accommodate the proposed car wash demands.
- Careful consideration should be given to sight distance obstructions when designing the
  intersections or planning any future aesthetic enhancements, such as signage, berms,
  fencing and landscaping to ensure that these improvements do not obstruct the view
  of entering and exiting traffic at the intersections with the public roads. It is generally
  recommended that all improvements wider than two inches (posts, tree trunks, etc.)
  and higher than 3.5 feet above the elevation of the nearest pavement edge be held back
  at least 20 feet from the traveled roadway.
- Under the 2025 Existing conditions, the overall intersections as well as the individual approaches operate at LOS D or better during the Midday and PM peak hours with the exception of the Chili's Drive approach which currently operates at LOS E during the Midday peak hour.
- Under the 2025 Build conditions, the overall intersections as well as the individual approaches are forecasted to continue to operate at LOS D or better during the Midday and PM peak hours with the exception of the Chili's Drive approach which is forecasted to operate at LOS F during the Midday peak hour and LOS E during the PM peak hour.
- To improve the internal circulation of the site and limit the vehicles exiting to the East/Chili's Drive, it is recommended that the East Site Drive only serve the Chili's with all Club Car Wash trips using the existing West Site Drive. It is recommended that the shared drive be physically separated from the Club Car Wash by constructing a raised curb between the Chili's and car wash sites.

Shifting the car wash trips from the shared East Site/Chili's Drive to the West Site Drive improves the delay at the Chili's Drive approach by approximately 9 seconds during the Midday peak hour and 10 seconds during the PM peak hour compared to the 2025 Build condition in which Club Car Wash trips were split between the East and West site drives.



Proposed Club Car Wash Traffic Impact Study Kansas City, Missouri August 28, 2025 - Revised September 29, 2025 Page 21 of 21

We trust this traffic impact study adequately describes the forecasted traffic conditions that should be expected as a result of the proposed Club Car Wash in Kansas City, Missouri. If additional information is desired, please feel free to contact me at 314-449-9572 or <a href="mailto:swhite@cbbtraffic.com">swhite@cbbtraffic.com</a>.

Sincerely,

Shawn Lerai White, P.E., PTOE

Associate - Senior Traffic Engineer



September 29, 2025

Mr. Eric Kirchner, P.E. Cochran Engineering 8 East Main Street Wentzville, Missouri 63385

RE: Traffic Impact Study ADDENDUM - Proposed Club Car Wash

8340 NW Roanridge Road Kansas City, Missouri CBB Job No. 076-25

#### Dear Mr. Kirchner:

In accordance with your request, CBB has completed an addendum related to the proposed Club Car Wash in Kansas City, Missouri. CBB previously completed a traffic impact study for the Club Car Wash development, dated August 28, 2025. Based on review comments from the City, it was requested that the Saturday Midday peak hour also be evaluated as well as a review of historical crash data.

The following addendum presents the methodology and findings relative to the 2025 Existing and 2025 Build conditions during the Saturday Midday peak hour.

**Saturday Midday Traffic Volumes:** CBB collected additional traffic count data on Saturday, September 20, 2025 at the following intersections during the Saturday Midday peak period (12:00 - 2:00 p.m.).

- NW Barry Road and NW Roanridge Road; and
- NW Roanridge Road and East Site/Chili's/Retail Drive.

Based on the traffic data collected, the Saturday Midday peak hour occurred between 1:00 and 2:00 p.m. The 2025 Saturday Midday Existing Traffic Volumes are summarized in **Exhibit 1**. The existing traffic volumes were rounded to the nearest 5 vehicles per hour (vph) for volumes over 10 vph.



Exhibit 1: 2025 Existing Traffic Volumes - Saturday Midday



**Saturday Midday Trip Generation:** Forecasts were prepared to estimate the amount of traffic the proposed car wash would generate during the Saturday Midday peak period. Based on hourly data provided by the owner for their car washes, the proposed car wash is estimated to average 60 washes in the Saturday Midday peak hour on a typical day.

Traffic forecasts for the car wash were also estimated based upon information provided in the *Trip Generation Manual*, 11<sup>th</sup> Edition, published by the Institute of Transportation Engineers (ITE). ITE Code 948, Automated Car Wash, was used for the proposed Club Car Wash. The Saturday peak hour of generator was utilized for the Saturday Midday peak hour trip generation.

**Table 1** provides a comparison of the trip generation derived from the owner's anticipated operations and the data found in the ITE *Trip Generation Manual*.

Saturday Midday Peak Hour Land Use Size In Out Total Estimate Based on Owner/Operator Data Club Car Wash 60 1 tunnel 60 120 Estimate Based on ITE Trip Manual Automated Car Wash 1 tunnel 19 22 41 (ITE Land Use 948)

Table 1: Saturday Midday Trip Generation Estimate - Proposed Club Car Wash

The proposed Club Car Wash is expected to generate approximately 120 total trips based on the owner data and 41 total trips based on the ITE data in the Saturday Midday peak hour. The analysis will utilize the higher trip estimate, highlighted in yellow in Table 1, which was provided by the owner.

Trip forecasts were also prepared to compare the trips associated with the previous restaurant on the site to the proposed car wash. Trips for the existing On-The-Border restaurant were estimated using ITE Code: 932 High-Turnover Sit-Down Restaurant. The Saturday peak hour of generator was utilized for the Saturday Midday peak hour trip generation. The existing traffic volumes to and from the Chili's were also referenced as being representative of what the prior sit-down restaurant would likely generate. **Table 2** shows the trip estimate for the prior restaurant on the site.



Table 2: Trip Generation Estimate for Saturday Midday – Previous Restaurant Use

Land Use	Size	Saturday Midday Peak Hour			
Land 030		In	Out	Total	
Existing Chili's Trips			37	74	
HTSD Restaurant (ITE Land Use 932)	~ 7,500 SF	43	41	84	

As can be seen when comparing Tables 1 and 2, the proposed car wash is only expected to generate approximately 36 to 46 more trips during Saturday Midday peak hour when compared to the previous restaurant on the site.

The Club Car Wash trips from Table 1, 120 total trips, were assigned to the roadway network using the same trip distribution assumptions in the August Traffic Impact Study. The resulting assignment of site-generated trips for the Saturday Midday peak hour is summarized in **Exhibit 2.** 

**Saturday Midday 2025 Build Traffic Volumes:** The proposed site-generated trips (Exhibit 2) were added to the 2025 Saturday Midday Existing Traffic Volumes (Exhibit 1) to determine the total volume in the forecasted scenario. The forecasted, or 2025 Build, traffic volumes for the Saturday Midday peak hour are shown in **Exhibit 3.** 



Exhibit 2: Site-Generated Trips - Saturday Midday

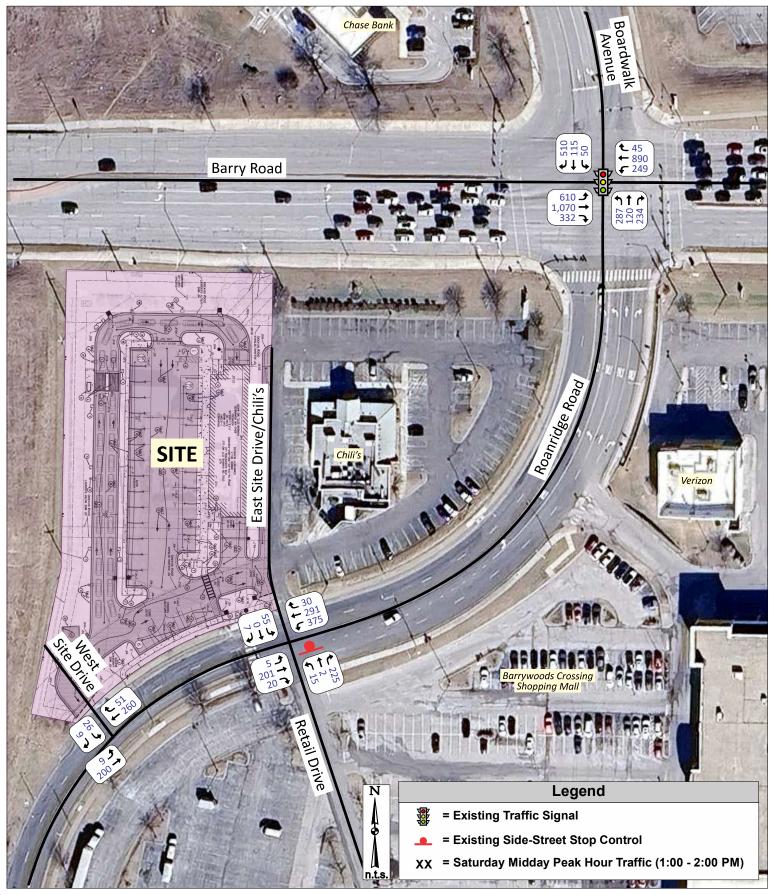


Exhibit 3: 2025 Build Traffic Volumes - Saturday Midday



**Saturday Midday 2025 Operating Conditions:** The study intersections were evaluated using SYNCHRO 11. The HCM 6<sup>th</sup> Edition results generated by the SYNCHRO software were used for unsignalized intersections. **Table 3** summarizes the results of this analysis, which reflects the 2025 Existing and 2025 Build operating conditions and average delay at the study intersections during the Saturday Midday peak hour. The Synchro estimated 95<sup>th</sup> percentile queue length for movements with a queue over 50 feet is also shown in the table.

Table 3: 2025 Saturday Midday Capacity Analysis Summary

Internation / Approach	Saturday Mic	dday Peak Hour					
Intersection / Approach	2025 Existing	2025 Build					
NW Barry Road and NW Roanridge Road (Signalized)							
Eastbound NW Barry Road Approach	C (28.9) 95 <sup>th</sup> Q: 275' L	C (29.4) 95 <sup>th</sup> Q: 280' TH					
Westbound NW Barry Road Approach	D (43.4) 95 <sup>th</sup> Q: 275' TH	D (45.4) 95 <sup>th</sup> Q: 285' TH					
Northbound NW Roanridge Road Approach	D (35.3) 95 <sup>th</sup> Q: 140' TH	D (35.5) 95 <sup>th</sup> Q: 145' L					
Southbound Boardwalk Avenue Approach	B (18.6) 95 <sup>th</sup> Q: 160' TH	B (19.3) 95 <sup>th</sup> Q: 180' TH					
Overall	C (32.0)	C (32.9)					
NW Roanridge Road and East Site/Chili's/Retail Drive (Side-Street Stop)							
East Site/Chili's Drive Approach	F (133) 95 <sup>th</sup> Q: 70'	F (>200) 95 <sup>th</sup> Q: 160'					
Retail Drive Approach	C (16.3) 95 <sup>th</sup> Q: 60'	C (17.8) 95 <sup>th</sup> Q: 65'					
Northbound NW Roanridge Road Approach	A (<1.0)	A (<1.0)					
Southbound NW Roanridge Road Approach	A (5.3)	A (5.0)					
NW Roanridge Road and West Site Drive (Side-Street S	Stop)						
West Site Drive Approach		B (12.2)					
Northbound NW Roanridge Road Approach	A (<1.0)	A (<1.0)					
Southbound NW Roanridge Road Approach	Free Flow	Free Flow					

X (XX.X) - Level of Service (Vehicular delay in seconds per vehicle)

95th percentile queue for the critical movement of the approach and lane (L-Left, LTR-Shared Left/Thru/Right, R-Right)

As shown in **Table 2**, all approaches at the signalized intersection of NW Barry Road and NW Roanridge Road operate at acceptable levels of service (i.e., LOS D or better) under existing conditions during Saturday Midday peak hour. In the 2025 Build condition (with the proposed site trips), all approaches at the intersection of NW Barry Road and NW Roanridge Road are



Proposed Club Car Wash Traffic Impact Study Addendum Kansas City, Missouri September 29, 2025 Page 8 of 13

forecasted to continue to operate at acceptable levels of service (i.e., LOS D or better) during Saturday Midday peak hour with negligible differences in delay as compared to the existing conditions.

As shown in the table, the East Site/Chili's Drive approach at NW Roanridge Road currently operates at LOS F with a delay of approximately 133 seconds on average with a 95<sup>th</sup> percentile queue of 70 feet during the Saturday Midday peak hour. In the 2025 Build condition, the East Site/Chili's Drive approach is forecasted to continue to operate at LOS F with a delay in excess of 200 seconds on average with a queue length of 160 feet during the Saturday Midday peak hour. In reality, it is likely the delay would be less given the nearby traffic signal that would create gaps in traffic along NW Roanridge Road.

While not desirable, it is not uncommon for unsignalized approaches on heavily traveled corridors to experience LOS F during busy times. The LOS F only occurs during the Saturday Midday peak period condition and represents a worse case scenario meaning that vehicles on the side streets will have to wait a little longer during that period. Given the Chili's approach already operates at LOS F during the Saturday Midday peak hour, any re-occupacy of the vacant parcel would lead to increased delay.

As shown in the table, all approaches at the NW Roanridge Road and West Site Drive intersection are forecasted to operate at overall favorable levels of service (i.e., LOS A or B) during the Saturday Midday peak hour. Based on the HCM estimated 95<sup>th</sup> percentile queue, the West Site Drive approach is expected to have a queue of less 50 feet in the Saturday Midday peak hour.

As discussed in the August Traffic Impact Study, in reviewing the internal site circulation for the proposed car wash, it is preferred that all entering and exiting trips to the car wash use the West Drive to reduce the conflict of customers exiting the car wash and entering traffic traveling in front of them trying to enter the site. In addition, the sight distance for vehicles exiting the East/Chili's Drive appears to be somewhat limited due to the retaining wall to the north along the side of the road.

To improve the internal circulation of the site, it is recommended that the East Site Drive only serve the Chili's with all Club Car Wash trips using the existing West Site Drive to limit the vehicles exiting the East/Chili's Drive and improve delay and shorten the queues at the East/Chili's Drive. It is recommended that the existing shared drive be physically separated from the Club Car Wash by constructing a raised curb between the Chili's and car wash sites.

The Chili's and West Drives were reanalyzed assuming all Club Car Wash trips use the West Drive. **Figure 1** depicts the 2025 Build traffic volumes at the Chili's and West Site Drives intersections.



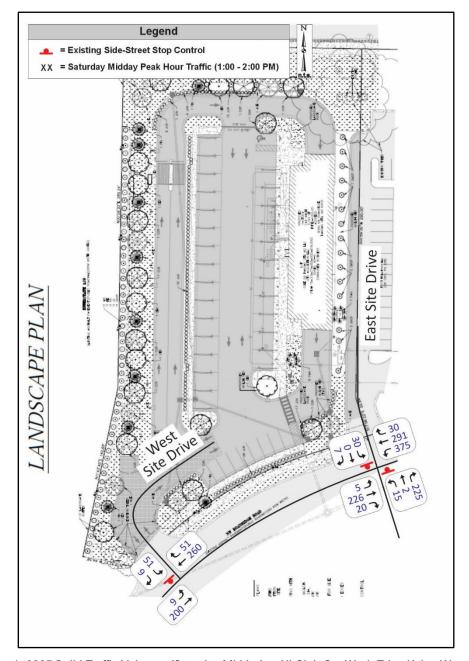


Figure 1: 2025 Build Traffic Volumes (Saturday Midday) - All Club Car Wash Trips Using West Drive

**Table 4** summarizes the results of this analysis, which reflect the 2025 Build operating conditions based on HCM 6<sup>th</sup> Edition results generated by the SYNCHRO software during the Saturday Midday peak hour.



Table 4: 2025 Saturday Midday Capacity Analysis Summary—Club Car Wash Using West Site Drive Only

Intersection / Approach	Saturday Midday Peak Hour
NW Roanridge Road and Chili's/Retail Drive (Side-Street Stop)	
East Chili's Drive Approach	F (>200) 95 <sup>th</sup> Q: 85'
Retail Drive Approach	C (18.9) 95 <sup>th</sup> Q: 70'
Northbound NW Roanridge Road Approach	A (<1.0)
Southbound NW Roanridge Road Approach	A (5.1)
NW Roanridge Road and West Site Drive (Side-Street Stop)	
West Site Drive Approach	B (13.1)
Northbound NW Roanridge Road Approach	A (<1.0)
Southbound NW Roanridge Road Approach	Free Flow

X (XX.X) - Level of Service (Vehicular delay in seconds per vehicle)

As shown in **Table 4**, the Chili's Drive approach is still forecasted to operate at LOS F with a delay in excess of 200 seconds during the Saturday Midday peak hour though the 95<sup>th</sup> percentile queue is reduced from 160 feet to 85 feet. As such, this does represent an improvement as compared to the Club Car Wash sharing the Chili's drive.

As shown in the table, all approaches at the NW Roanridge Road and West Site Drive intersection are forecasted to operate at overall favorable Levels of service (i.e., LOS A or B) during the Saturday Midday peak hour with all new site trips using the West Drive. Based on the HCM estimated 95<sup>th</sup> percentile queue, the West Site Drive approach is again expected to be less than 50 feet in the Saturday Midday peak hour.



#### Proposed Club Car Wash Traffic Impact Study Addendum Kansas City, Missouri September 29, 2025 Page 11 of 13

#### **Historical Crash Data Review**

**Existing Crash summary (2020-2024):** As requested by the City of Kansas City, the crash data from 2020 to 2024 was summarized for the study intersections.

<u>NW Barry Road and NW Roanridge Road</u>: Based on crash data, seventy-two (72) crashes occurred near the intersection of NW Barry Road and NW Roanridge Road in the past five years. Fifty-one (51) of the crashes were property damage only and with 21 minor injury. There were no serious injury or fatal crashes reported.

Six (6) minor injury crashes occurred in 2023, five (5) in 2020 and 2022, and three (3) in 2021 and two (2) minor injury crashes occurred in 2024. Sixteen (16) property damage only crashes occurred in 2020, 12 in 2021, 11 in 2023, eight (8) in 2022, and four (4) in 2024.

The predominant crash type was rear-end crashes with 40 of the 72 crashes being rear end crashes. There were 10 passing, five (5) left turn, three (3) changing lane, three (3) out of control, (3) right turn, two (2) right turn right angle, two (2) dual lefts collide, one (1) left turn right angle, one (1) right angle, one (1) head on, and one (1) other crash. A summary of the crash data by year is provided in **Table 5**.

<u>NW Roanridge Road and Chili's/Retail Drive</u>: Based on crash data, only four (4) crashes occurred near the intersection of NW Roanridge Road and the Chili's/Retail Drive in the past five years. Three (3) of the crashes were property damage only with one (1) minor injury. There were no serious injury or fatal crashes reported.

Two (2) of the four (4) crashes were rear end, one (1) left turn, and one (1) left turn right angle crash. A summary of the crash data by year is provided in **Table 6**.

<u>NW Roanridge Road and West Site Drive</u>: Based on crash data, two (2) crashes occurred near the intersection of NW Roanridge Road and the West Site Drive in the past five years. One (1) of the crashes was property damage only and the other one (1) was minor injury. There were no fatal or serious injury crashes reported.

One (1) of the two (2) crashes was rear end and the other one (1) was an out of control crash. A summary of the crash data by year is provided in **Table 7**.



Table 5: Crash Summary (2020-2024) – NW Barry Road and NW Roanridge Road (Signalized)

Type / Severity	2020	2021	2022	2023	2024	Total					
Rear End											
Minor Injury	5	2	4	4	1	16					
Property Damage Only	10	7	2	4	1	24					
Passing											
Property Damage Only	2	3	4	1	0	10					
Left Turn											
Minor Injury	0	1	0	1	0	2					
Property Damage Only	1	1	0	1	0	3					
Changing Lane											
Minor Injury	0	0	1	0	0	1					
Property Damage Only	1	0	0	1	0	2					
Out of Control											
Property Damage Only	1	1	0	0	1	3					
Right Turn											
Property Damage Only	0	0	1	1	1	3					
Right Turn Right Angle											
Property Damage Only	0	0	0	2	0	2					
Dual Lefts Collide											
Property Damage Only	1	0	0	0	1	2					
Left Turn Right Angle											
Minor Injury	0	0	0	1	0	1					
Right Angle											
Minor Injury	0	0	0	0	1	1					
Head On											
Property Damage Only	0	0	1	0	0	1					
Other											
Property Damage Only	0	0	0	1	0	1					
Total	21	15	13	17	6	72					



Table 6: Crash Summary (2020-2024) – NW Roanridge Road and Chili's/Retail Drive (Side-Street Stop)

Type / Severity	2020	2021	2022	2023	2024	Total			
Left Turn									
Minor Injury	0	0	0	0	1	1			
Rear End									
Property Damage Only	0	0	0	1	1	2			
Left Turn Right Angle									
Property Damage Only	0	1	0	0	0	1			
Total	0	1	0	1	2	4			

Table 7: Crash Summary (2020-2024) – NW Roanridge Road and West Site Drive (Side-Street Stop)

Type / Severity	2020	2021	2022	2023	2024	Total		
Rear End								
Minor Injury	0	0	0	1	0	1		
Out of Control								
Property Damage Only	0	0	1	0	0	1		
Total	0	0	1	1	0	2		

We trust this traffic impact study addendum adequately describes the forecasted traffic conditions that should be expected as a result of the proposed Club Car Wash in Kansas City, Missouri. If additional information is desired, please feel free to contact me at 314-449-9572 or <a href="mailto:swhite@cbbtraffic.com">swhite@cbbtraffic.com</a>.

Sincerely,

Shawn Derai White, P.E., PTOE

Associate - Senior Traffic Engineer

# Redevelopment of vacant 8340 Roanridge Rd



Eric Kirchner, PE Cochran





#### Club Car Wash Introduction

- Club Car Wash is one of the fastest growing express tunnel car wash operations in the country – reflecting customers' preference for our high-end vehicle service.
- Club Car Wash began operation in 2006.
- Club Car Wash is intentional with their growth. The growth is guided by a rigorous property grading system to ensure every locations aligns with operational goals and community needs.

- Club Car Wash currently has +230 open locations throughout the nation in the following states:
  - Missouri
  - Illinois
  - lowa
  - Wisconsin
  - Colorado
  - Kansas
  - Nebraska
  - Oklahoma
  - Texas
  - Arkansas
  - Tennessee
  - Minnesota



#### Site Selection Criteria

- Grading System
  - Grading system evaluate key factors such as:
    - Proximity to similar-use and compatible businesses
    - Placement within retail corridors to support customer driving trips combining multiple stops
    - Traffic Volume (vehicles per day)
    - This traffic mindfulness means most traffic is in the area for combined purposes

- Site Access
  - Primary and secondary access points are evaluated to ensure:
    - Safe, efficient entry/exit for customers
    - Minimal disruption to nearby vehicular and pedestrian traffic
    - On-Site Traffic Flow
    - On-Site Stacking Capacity

- Control of Market Saturation
  - To avoid overconcentration, Club Car Wash adheres to a **strategic density guideline** of <u>one express tunnel car wash per 30,000 residents.</u>
  - An average area member visits the site 3.5 times per month.
  - Club Car Wash focuses its analysis on express tunnel operators.
  - Self Serve and Wash/Lube Hybrid facilities are not direct comparables.

# Positive Local Community Economic Impact

- Club Car Wash will invest around \$5,000,000.00 towards this new location. They would not make that investment if they were not confident in the local area need for this site based on their site selection criteria.
- Club Car Wash estimates an initial redevelopment benefit to the City of around \$60,000 annual property taxes. Unlike some other new businesses or construction, CCW is not requesting any local tax or other incentives.
- Club Car Wash will generate around 15 new local jobs, and, an extra local employment benefit is that CCW prefers to promote from within to offer to as many front-line employees the opportunity to advance their skills and income. An average of 75% of CCW advanced positions are currently filled with employees promoted from within.

# Positive Local Community Economic Impact

- This site is in its seventh month vacant and deteriorating; the former restaurant filed bankruptcy. Club Car Wash is already collaborating with the nearby businesses and those businesses desire CCW's redevelopment impact.
- The site owner is a REIT that has supported Kansas City's tax base and economy
  with investment of nearly 50 area properties; they would appreciate reciprocal
  support of City Council to allow their further investment at this location.



#### Community Give-Back



- Supporting charities and local Children's Miracle network Hospitals is a core component of Club Car Wash's community engagement strategy after entering new markets. These partnerships generate an average of \$4,500 in donations during opening week, demonstrating our dedication to making an impact from the start.
- As a proud national sponsor of Children's Miracle Network (CMN) Hospitals, CCW was able to donate over \$1,130,000 to fund critical life-saving treatments, innovative research and financial assistance to families.
- \$12 Tuesday are utilized to generate donations to CMN Hospitals. The customer gets a discounted MVP wash and Club Car Wash donates a portion of each wash to CMN Hospitals.
- Club Car Wash employs residents of the community for their employees.



#### **Operational Facts**

- Club Car Wash utilizes a reclaim system to recycle water and reduce waste.

  Average recycle rate is 30 %.
- Sites are operated by actual employees on-site during business hours.
- Each location typically has 3-4 team members on site. These include a general manager, cashier, prep attendant and team lead.
- Operating Hours: 7am 8 pm (Mon-Sat) and 8 am 8pm (Sun)
- Staff performs lot checks at the start of every shift to keep property clean.
- Club Car Wash takes considerable pride in the maintenance and appearance of their sites.
- Also use camera surveillance security.
- Club Car Wash offers monthly memberships and single wash options.



## Site Configuration and Attributes

- All City staff requirements and requests met. No outstanding City staff concerns.
- Kansas City typical car wash Development Plan conditions will apply.
- At the City's request, a traffic study and accident study was completed, to City staff's approval.
- In response to the traffic study and at the City's request, a second ingress/egress point through the Chili's site was removed to improve traffic flow.



# Traffic Study Findings

• Proposed Club Car Wash results in minimal increase in trips as compared to the former

restaurant

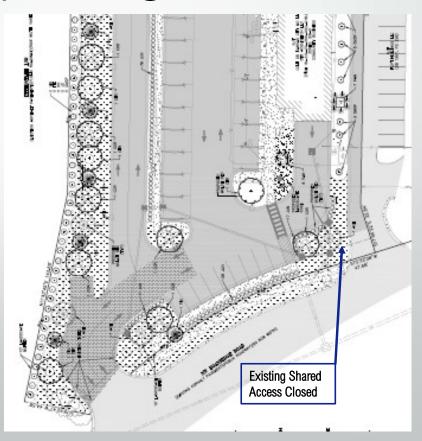
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Land Use	Weekday Midday Peak Hour		Weekday PM Peak Hour			Saturday Miday Peak Hour			
1111711111111	In	Out	Total	ln	Out Total		In	Out	Total
Prior Restaurant Use Trips (ITE Trip Manual Data)									
Sit-Down Restaurant	24	27	51	41	27	68	43	41	84
Propo	sed Clu	b Car Wa	ash Trips	(Owner	/Operato	r Data)			
Club Car Wash	35	35	70	40	40	80	60	60	120
Net Increase in Trips	11	8	19	(1)	13	12	17	19	36



# Traffic Study Findings

 To improve traffic flow and minimize any impact to the Chili's Drive, the TIS recommended that all Club Car Wash trips use the West Drive with the shared access to the Chili's Drive being removed.





## Traffic Study Findings

At Chili's/Retail Drive

less than one crash per year on average

(with the On-the-Border Restaurant open)

At West Drive

Only two crashes in last five years

(with the On-the-Border Restaurant open)

Table 6: Crash Summary (2020-2024) - NW Roanridge Road and Chili's/Retail Drive (Side-Street Stop)

Type / Severity	2020	2021	2022	2023	2024	Total			
Left Turn									
Minor Injury	0	0	0	0	1	1			
Rear End									
Property Damage Only	0	0	0	1	1	2			
Left Turn Right Angle									
Property Damage Only	0	1	0	0	0	1			
Total	0	1	0	1	2	4			

Table 7: Crash Summary (2020-2024) - NW Roanridge Road and West Site Drive (Side-Street Stop)

Type / Severity	2020	2021	2022	2023	2024	Total			
Rear End									
Minor Injury	0	0	0	1	0	1			
Out of Control									
Property Damage Only	0	0	1	0	0	1			
Total	0	0	1	1	0	2			



# Existing Nearby Car Washes





### Existing Nearby Car Washes

- Typically the industry analyzes a two-mile area.
- While five car washes do exist in said two-mile area, some have different business models.
- And, even with those similar to Club Car Wash, our rigorous site analysis criteria and our site selection to benefit our membership network, support the added vehicular amenity benefit to this neighborhood.
- This urban area exemplifies multiple examples of competing or similar businesses co-existing within the same two-mile business area (restaurants, clothing, services).