



Monitoring & Maintenance Engineering, Inc.

VIA EMAIL

Memorandum

To: Hayes Taylor, City of Dacula

From: Richard Smith, P.E.

Date: December 18, 2024

Re: Traffic Impact due to Indoor Soccer Field, 2694 Winder Highway

Description of Proposed Development

The facility will be comprised of one soccer field on the upper level, enclosed in a metal building. The lower level may only be half the area of the upper level and used for equipment storage and restrooms. Building footprint, driveway and parking are as shown in the Concept Plan.

Anticipated Use

The facility is designed to be used as an all-weather field for organized soccer clubs. The primary draw will be from Dacula schools and neighborhoods. The largest use of the facility is expected to be during the weekends and after school. The peak hour traffic flow entering the facility would be comprised of two club teams arriving for a scheduled match. Assuming large clubs may have 25 players, this could amount to a maximum of 50 vehicles arriving during the same hour. Most club teams will have members arriving from common schools and some ride sharing is to be expected.

Current Traffic Flow/Density

Attached to this memo is a summary report of a traffic counting station located on the Winder Highway approximately ½ mile east of the subject property. The only intersecting artery between the property and the counting station is Freeman's Mill Road. The counts reflected in the summary report should closely resemble the traffic count passing by the site.

Based on the traffic estimates for 2023 the maximum traffic traveling to the east during the evening rush hour is 628 vehicles per hour between 4 p.m. and 5 p.m. weekdays. This count has remained relatively constant over the previous three years.

Potential Improvements

Although impact to vehicle traffic is expected to be minimal from this development, extension of the current sidewalk on the north side of Winder Highway another 250' to 300' easterly would provide a safer passage for students on-foot from the nearby schools. Should Gwinnett County decide to retain the 6.3-acre property to the west, the addition of a bike path would also reduce vehicle impacts to the Winder Highway.

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TRAFFIC COUNT SUMMARY



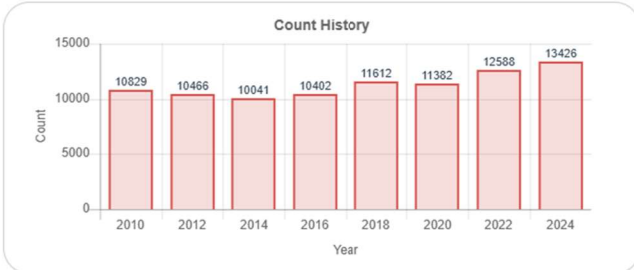
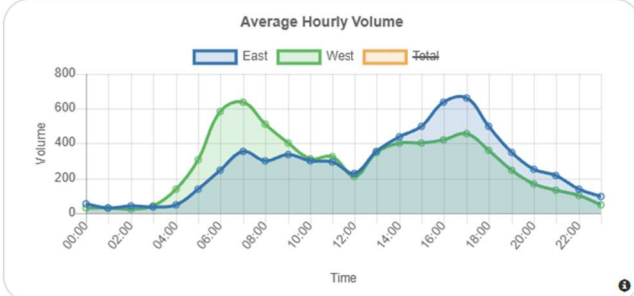
0000135_0041 - 135-0041 - US-29BU/SR8/Winder Hwy E of Harbins Rd
 County: Gwinnett
 Route number: 00000800
 LRS section: 1351000800
 Functional class: 4U - Minor Arterial (Urban)
 Coordinates: 33.99679, -83.88001

Site Data



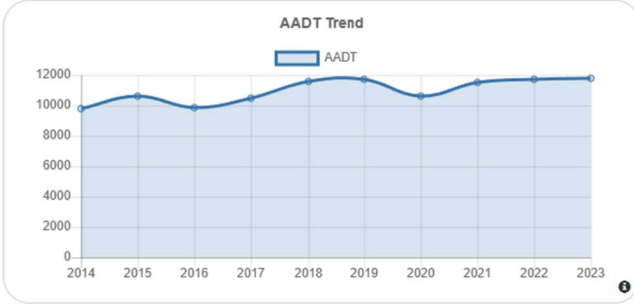
Count History

Year	Month	Count type	Duration	Count
2024	May	Class	48 hours	13,426
2022	April	Class	48 hours	12,588
2020	January	Class	48 hours	11,382
2018	January	Volume	48 hours	11,612
2016	February	Class	48 hours	10,402
2014	February	Volume	48 hours	10,041
2012	March	Volume	48 hours	10,466



Annual Statistics

Data Item	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Statistics type	-	Estimated	Actual	Estimated	Actual	Estimated	Actual	Estimated	Actual	Estimated
AADT	9,810	10,600	9,880	10,500	11,600	11,700	10,600	11,500	11,700	11,800
K-Factor	0.090	0.090	0.089	-	0.088	0.088	0.089	0.089	0.095	0.095
D-Factor	0.700	0.700	0.700	-	0.660	0.660	0.630	0.630	0.560	0.560
Future AADT	-	-	11,500	13,200	14,700	16,300	16,300	19,400	17,900	16,600



Vehicle Classification 2024

1. Motorcycles 2 axles, 2 or 3 wheels.		0.09%
2. Passenger cars 2 axles. Can have 1- or 2-axle trailers.		73.89%
3. Pickups, panels, vans 2-axle, 4-tire single units. Can have 1- or 2-axle trailers.		18.68%
4. Buses 2- or 3-axle, full length.		0.59%
5. Single-unit trucks 2-axle, 6-tire, (dual rear tires), single-unit trucks.		3.24%
6. Single-unit trucks 3-axle, single-unit trucks.		1.08%
7. Single-unit trucks 4 or more axle, single-unit trucks.		0.09%
8. Single-trailer trucks 3- or 4-axle, single-trailer trucks.		0.68%
9. Single-trailer trucks 5-axle, single-trailer trucks.		1.53%
10. Single-trailer trucks 6 or more axle, single-trailer trucks.		0.07%
11. Multi-trailer trucks 5 or less axle, multi-trailer trucks.		0%
12. Multi-trailer trucks 6-axle, multi-trailer trucks.		0%
13. Multi-trailer trucks 7 or more axle, multi-trailer trucks.		0.05%