

Exhibit # 8  
1346-95



ENGINEERS & PLANNERS, INC.

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June 30, 1995

Mr. Thomas M. Breen  
Attorney at Law  
619 South Addison Road  
Addison, Illinois 60101

Subject: Traffic Impact Analysis  
Metro Chicago Lodge/Umbrasas  
Route 2, 12So12 Lemont Road.  
Lemont, Illinois

Gentlemen:

Per your request of Friday, June 23, 1995, we have analyzed the anticipated traffic impacts to Lemont Road (DuPage County Highway 9) which may result from the proposed development (hereafter referred to as Metro Chicago Lodge). We understand that a new building with approximate dimensions of 114 feet by 60 feet (or 6,840 square feet) is planned for future use as a Moose Lodge at the address referenced above (see Location Map, Exhibit 1).

PURPOSE OF ANALYSIS

The purpose of this analysis is to determine if the proposed development is anticipated to impact Lemont Road traffic operations occurring during the evening (6 to 8 p.m.) weekday hours. The morning, mid-day hours were not analyzed because it is our understanding that the patron services will not be provided until after 6 p.m. **This analysis was not undertaken to determine if a fee should be assessed under provisions of the DuPage County Fair Share Road Improvement Impact Fee Ordinance.**

ANALYSIS PROCESS

1. Determine building use, occupancy, and hours of operation.
2. Contact review agencies to determine analysis requirements.
3. Meet with DuPage County Division of Transportation. Obtain a copy of available Lemont Road traffic data.
4. Visit site. Record observations.
5. Analyze data and document assumptions.
6. Document Findings.
7. If needed, recommend access improvements.

EXISTING SITE CONDITIONS

Lemont Road is a four lane undivided arterial street (see photos on Exhibit 2). A residential driveway exists at the proposed access point on Lemont Road. The site plan proposes to build the Moose Lodge behind the existing residence (see draft site plan on Exhibit 3). Both buildings would use the existing residential driveway as access to Lemont Road. The centerline of this driveway is approximately 207 feet south of 103rd Street which is the nearest cross street. 103rd Street has two-way traffic, and is a T-intersection at Lemont Road. The west leg of the 103rd Street intersection is stop controlled.

## ANTICIPATED BUILDING USE

Meridian understands the proposed building is intended to be used as a meeting hall by a fraternal organization, and is commonly called a Moose Lodge. Food and alcohol are planned to be served on premises. The proposed site plan provides for approximately 102 parking stalls. Local membership for this Lodge is anticipated to number between 100 to 150 persons. We understand that the majority of patrons are anticipated to arrive after 6 p.m.

## OBSERVATIONS AND ASSUMPTIONS

- Site Traffic Survey information provided by the DCDOT for the Naperville Moose Lodge was interpolated for use in this study.
- The proposed Metro Chicago Lodge (6,840 square feet) is about 40 percent of the Naperville Moose Lodge (17,400 square feet) site floor area.
- Naperville Moose Lodge traffic figures can be factored down by 40 percent and arrival times can be adjusted to reflect Metro Chicago Lodge hours of operation (which start at 6 p.m.)
- The worst case turning movement into the proposed development would be a northbound left turn from Lemont Road. Based upon information provided by others, the directional split of traffic arriving at the proposed site is 50 percent from the north and 50 percent from the south along Lemont Road.
- Lemont Road traffic characteristics have not appreciably changed since the 14 hour count conducted at the 103rd Street intersection on August 10, 1994. Week end traffic volumes are assumed to be less than those experienced on week days.
- It is assumed that adequate turning movement sight distances exists for all cases at the proposed access point. A formal site distance study is beyond the scope of this analysis.
- The worst case scenario for traffic operation impacts to Lemont Road caused by the proposed development would occur during the peak week night between 6 and 8 p.m. when lodge patrons are first arriving.
- This analysis assumes a worst case condition where all of the arrivals occur within the 6-7 p.m. timeframe. Lodge patron visits to the site are assumed to exceed one-hour in duration. Traffic exiting the driveway during this timeframe is therefore assumed to be minimal.

## ANALYSIS FINDINGS

### *Lemont Road Traffic Characteristics*

Lemont Road has a 1994 Average Daily Traffic (ADT) of 26,400. The hourly volumes for the 5 to 6 p.m. period is 2627 vehicles. Volumes drop for 6 to 7 p.m. period to 1790 vehicles and to 1216 vehicles for the 7 to 8 p.m. period. About 7 percent of the ADT occurs between 6 and 7 p.m. The peak 15-minute volume for the 6 to 7 p.m. period starts at 6 p.m. with a volume of 520 vehicles.

### *Metro Chicago Lodge Site Traffic Characteristics*

Based on Naperville Moose Lodge traffic figures, the three highest driveway volumes were:

Date	Time	Naperville Volume	Adjusted Volume <sup>1</sup>
Thursday, March 23, 1995	2-3 p.m.	124	50
Friday, March 24, 1995	6-7 p.m.	86	35
Friday, March 24, 1995	7-8 p.m.	91	36

<sup>1</sup> Metro Chicago Lodge adjusted volumes at 40 percent of Naperville Lodge volumes.

Using the above figures, and Lemont Road traffic volumes, the following traffic volume assignments can be made for the intersection of the proposed driveway and Lemont Road:

Movement Description	Movement Designation	Volume	
		Typical	Peak <sup>1</sup>
Southbound Lemont Road through	V <sub>2</sub>	1051	1051
Southbound Lemont Road Right turn	V <sub>3</sub>	25	51
Northbound Lemont Road Left turn	V <sub>4</sub>	25	51
Northbound Lemont Road through	V <sub>5</sub>	739	739
Eastbound Chicago Metro Lodge drive left turn	V <sub>7</sub>	1	1
Eastbound Chicago Metro Lodge drive right turn	V <sub>9</sub>	1	1

<sup>1</sup> Peak volumes assume arrivals for an event that will fill all 102 parking spaces on site.

The Lemont Road intersection at the driveway was analyzed using procedures described in Chapter 10, Unsignalized Intersections, of the Highway Capacity Manual, Special Report 209 by the Transportation Research Board. Two analyses were conducted using the software version of the manual referenced above. The first assumed a typical arrival volume of 25 vehicles in each direction. The second assumes that a special event where peak traffic equals parking lot capacity and arrivals occur during the 6-7 p.m. hour. Results of these analyses indicates that Lemont Road will perform at Level of Service B in both conditions. The Level of Service provided for driveway traffic is anticipated to be D under typical conditions and E under peak conditions. Copies of the analyses have been included in the documentation section of this analysis.

#### *Metro Chicago Lodge Site Design Issues*

While a site distance study has not been performed, there was no readily apparent vertical profile deficiencies at the drive location. The increased volume of traffic using the driveway may be cause to consider access improvements discussed in the recommendations section below.

#### *Driveway queues and 103rd Street*

A passenger car in queue typically occupies about 25 feet of roadway space. The distance from the proposed drive to 103rd Street is about 207 feet. This means that there is room for about 8 southbound passenger cars to be queued between the driveway and 103rd Street. Assuming peak volume conditions for site usage, 51 vehicles will arrive within a one hour period. The arrival rate for that volume is about one vehicle per minute. Meridian feels that there is a low probability that 8 or more southbound vehicles will arrive at the same time. As long as the proposed driveway is wide enough to operate without hindrance, any queues which may develop should dissipate rapidly.

### RECOMMENDATIONS

Results of the Highway Capacity Manual analysis indicates that Lemont Road traffic operations are not anticipated to be adversely impacted. We feel that channelization improvements on Lemont Road (such as the addition of left or right turn lanes) are not warranted. The following improvements to the existing drive should be considered:

- Widen the existing drive to a minimum 16 feet to accommodate truck deliveries and two-way traffic.
- Regrade about 25 feet of the driveway immediately adjacent to Lemont Road to eliminate the driveway slope up to the shoulder. This regrading is anticipated to reduce incidents of tire slippage while drivers are attempting to enter Lemont Road during snowy or wet conditions.
- Consider the installation of a sign to better mark the Lodge entrance.

NEXT STEPS

1. Submit necessary documents to the DuPage County Development Department, Planning Division, for review and approval.
2. Contact the DuPage County Division of Transportation (phone 708-665-1155) to determine the permitting process for access to a County Highway.
3. If needed, submit documents for access permit approval.

Should you require additional information concerning this matter, please contact us immediately.

Very truly yours,

A handwritten signature in black ink, appearing to read "Mark D. Rinnan". The signature is fluid and cursive, with a long horizontal stroke at the end.

Mark Rinnan  
Project Engineer

cc: file