



# City of Cambridge

COMMITTEE REPORT #4A

IN CITY COUNCIL

November 9, 1998

COUNCILLOR DAVIS

ORDERED: That the issue of the enforcement of truck restrictions before 7:00 a.m. be referred to the City Manager for a plan and report.

In City Council November 9, 1998.  
Adopted by the affirmative vote of nine members.  
Attest:- D. Margaret Drury, City Clerk.

A true copy;

ATTEST:-

A handwritten signature in cursive script that reads "D. Margaret Drury".

D. Margaret Drury  
City Clerk



# City of Cambridge

COMMITTEE REPORT #4B

IN CITY COUNCIL

November 9, 1998

COUNCILLOR BORN

ORDERED: That the City Manager be and hereby is requested to consider appropriating a sum sufficient in the budget for the purpose of supplementing the cordon count data information next year, in particular, to have cordon counts conducted in Harvard and Central Square.

In City Council November 9, 1998.

Adopted by the affirmative vote of nine members.

Attest:- D. Margaret Drury, City Clerk.

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ATTEST:-

D. Margaret Drury  
City Clerk



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*X Margaret Drury*

ATTEST:-

D. Margaret Drury  
City Clerk

2.

Ms. Clippinger further stated that the map contained in the report shows a variety of things, such as:

- identifies all streets with a truck restriction;
- identifies all cordon counts; and
- identifies the volume of trucks entering and exiting the city in a 24-hour period.

She stated that there are 12 count locations not shown on the map. The numbers from these twelve locations are included, but they do not appear on the map, she stated. She informed the committee that of all the counted locations only five locations have a count where the truck volume is 5% or more of the average daily traffic. These locations are as follow:

- Cambridge Street;
- Binney Street;
- Warren Street;
- Kirkland Street; and
- Cameron Avenue.

Councillor Davis asked Ms. Clippinger whether, in light of the 5% standard that is required by the State for the imposition of a truck restriction, there are only five streets in the city that meet this standard. Ms. Clippinger responded in the affirmative. Councillor Davis asked could there be streets with higher than 5% of the average daily truck traffic, but were not covered by the cordon counts. Ms. Clippinger responded in the affirmative. Ms. Clippinger further responded that these five locations were used for trucks that are entering and exiting around the periphery of the city.

Councillor Russell asked how the periphery was determined. Ms. Clippinger responded that the city started with the counts taken in 1972, 1981 and 1987 and picked historical counts and then picked additional locations. The periphery is inside of Fresh Pond Parkway, she stated. She further stated that it is easier to do counts at these locations and the city has historically taken these counts. She also stated that each restricted street has had trucks counted and the information has been sent to the Police Department to focus their attention on enforcement.

Ms. Clippinger stated that the charts in the report indicated that 13,657 trucks enter and exit the city daily at 39 locations. The time of the day is also broken down on the charts. Trucks peak between 8 a.m. and 10 a.m. Thirteen percent (13%) of all trips by trucks, or 1,809 truck trips, occur during the hours of 7:00 p.m. and 7:00 a.m. Five percent (5%) of trucks entering and exiting the city, or 743 trucks do so during the hours of 11:00 p.m. to 6:00 a.m. Ms. Clippinger stated that the period of 5:00 a.m. to 7:00 a.m. is the time when truck volume rapidly increases and this is the time when the city hears complaints from residents.

Councillor Davis questioned Ms. Clippinger about the chart in the report containing the counts taken of trucks carrying hazardous material. Ms. Clippinger stated that 13 out of the 23 locations counted had more than 10 hazardous material carriers per day. Of these, she stated, one-half are gasoline trucks and one-third are home heating carriers. Ms. Clippinger gave these statistics:

- 59% are gasoline trucks;
- 32% are fuel oil trucks; and
- 9% are other trucks.

Councillor Davis asked what was the percentage of trucks carrying hazardous material going through the city. Ms. Clippinger responded that there was a total of 884 trucks carrying hazardous material per day of the 23 locations where they were counted. She also stated that there are a lot of gas locations in the city but not all trucks have a destination in Cambridge. She stated that the License Commission has a list of 115 locations carrying 1,000 gallons or more of gas in the city. Ms. Clippinger further stated that 87% of gasoline carriers are large trailer trucks and the trips peak at 6:00 a.m. Sixty percent (60%) of fuel oil carriers are single unit carriers and peak from 7:00 a.m. to 1:00 p.m. These are smaller trucks and the city does not hear complaints about them. She also stated that in no hour did these smaller trucks exceed ten.

Councillor Born stated that this information is very useful. She asked if there is other data the city could gather from these counts, such as getting interior information in the city to see where in Cambridge the trucks are going. Councillor Born asked how much work was involved with doing these counts. Ms. Clippinger stated that it was an effort to get these statistics here tonight. This data will allow the city to make important policy decisions. Additional counts will be done in May, 1999 on Kirkland Street and adjacent areas such as Central and Harvard Squares. Ms. Clippinger informed the committee that the city does not have any way to study the destination of the trucks. She stated that the city will try to take additional interior counts where the majority of the truck trips are occurring. She stated that the counts taken on Kirkland Street in 1990 and 1998 changed very little. Councillor Born stated that discrete interior intersection counts could be done and with this data further analysis could be done. Councillor Born asked if this was the first time this information is available.

Ms. Clippinger responded in the affirmative. Councillor Born asked if this information would be sent to the Truck Committee. Ms. Clippinger stated that she would forward this information to the Truck Committee tomorrow.

Mr. Rossi informed the committee that this data can be transmitted to the Police Department to decide on the deployment of their personnel and this will make the city's truck enforcement more efficient.

Councillor Born inquired about the cost of the counts. Ms. Clippinger stated that the cost was between \$80,000 and \$100,000 to have the data in a format for the city to use. Mr. Rossi stated that this cost was for the initial study. More money will be spent to make refinements. Ms. Clippinger stated that the vehicle counts are not organized in a way that is easy for us to figure ways to use the data in response to specific questions that are generated.

Councillor Russell stated that based on no change in the data taken in 1990 and 1998 on Kirkland Street an assumption could be made that this route has not changed. Ms. Clippinger stated that Brattle Street counts could be looked at for changes. We do not know where Kirkland Street trucks are coming from or where they are going. Mr. Rossi stated the Big Dig changes the count numbers. Trucks that are going west from Chelsea down Western Avenue are going through Cambridge. The city, he said, has more construction going on now than it did ten years ago. Councillor Russell stated that the public thinks truck traffic is worse today because the trucks are bigger.

Councillor Davis stated that large trucks are a nuisance, they are noisy and residents complain. The data collected shows that the time of day, 5:00 a.m. to 7:00 a. m., is the time when most complaints are received by the city. The data shows this is a busy time and the staffing of the truck team does not cover this period. She stated that since the total volume increases in this period and asked if enforcement could be handled better. Police Sergeant Jones responded that those enforcement efforts are done by regular officers and are not done specifically by the truck team during this time period. Councillor Davis asked what was the enforcement in the 6:00 a.m. time period. Sergeant Jones stated that from 5:00 a.m. to 7:40 a.m. the patrol division receive truck enforcement assignments and they are usually handled by Car 3 and 3R who are assigned to River Street. Councillor Davis asked when the truck team covers truck enforcement. Sergeant Jones responded the truck team covers truck enforcement from 7:40 a.m. to 4:00 p.m. Councillor Davis stated that there is a noise restriction until 7:00 a.m. and noise ordinance enforcement is not being done with trucks. She would like a deterrent to turn trucks away during this time. Councillor Davis made the following motion:

ORDERED: That the issue of the enforcement of truck restrictions before 7:00 a. m. be referred to the City Manager for a plan and report.

Councillor Davis asked if the city to receives funding from the Big Dig for the collection of this data. She also asked if there is any data to conclude the trucks going through Cambridge are related to the Big Dig or the Central Artery. Ms. Clippinger stated that the city does not know if they are related to the Big Dig. The city added additional locations to the counts to give the city data to look at the Big Dig activities and will mitigate to make sure the Big Dig does not adversely impact Cambridge.

Councillor Davis opened the meeting up to the public and the committee heard from Geneva Malenfant, 75 Henry Street, member of the Truck Committee, who stated that she was happy to get the data. She stated that to designate a specific truck route around the city is not workable. She stated that it is better to have trucks on many streets in the city than on just one street. She stated that she is interested to know if the trucks travelling on Main Street and Massachusetts Avenue are just going through the city. Ms. Clippinger stated that counts need to be done in the Harvard and Central Square area in May, 1999.

No one else appeared.

Councillor Davis made the motion to refer this report to the full City Council and the Truck Committee. The motion carried.

Councillors Davis, Russell and Born thanked everyone for their work on this data collection effort.

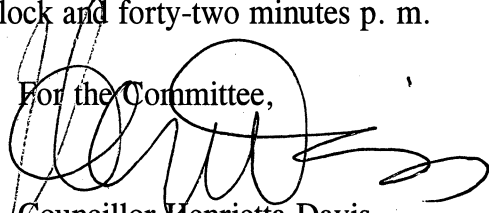
At the conclusion Councillor Born made the following motion:

ORDERED: That the City Manager be and hereby is requested to consider appropriating a sum sufficient in the budget for the purpose of supplementing the cordon count data information next year, in particular, to have cordon counts conducted in Harvard and Central Square.

The motion carried on a voice vote.

The hearing adjourned at seven o'clock and forty-two minutes p. m.

For the Committee,

  
Councillor Henrietta Davis,

Chair

TRUCK DATA COLLECTION  
CITY OF CAMBRIDGE  
FOR  
CITY COUNCIL TRANSPORTATION COMMITTEE  
TUESDAY  
OCTOBER 21, 1998

#### A. Data collection:

The city initiated a major data collection effort in May 1998 in response to the increasing need to have comprehensive information about vehicle trips including trucks and hazardous materials carriers that enter and exit the city along its periphery and at some other key locations. This is the first time that the city has proactively taken counts at such a large number of locations.

In 1972, 1981 and 1987, cordon counts were taken at the set locations that are on the periphery of the city. For the purpose of the cordon count effort, the western count locations are inside Fresh Pond Parkway. None of the previous counts included a classification count, to identify the type of vehicles entering and exiting the city. Prior to the current data collection effort truck counts were only done as part of the engineering studies prepared by the Department for submission to the State for a truck restriction or as part of a developer's traffic study.

The 1998 counts were performed at 51 locations. Classification counts were conducted at all locations and hazardous materials carriers were counted at 23 of these sites..

The list of locations at which counts were taken and the types of counts is attached.

All of the machine counts were taken for 7 consecutive days (Monday thru Sunday). These included both the standard traffic counts and the vehicle classification counts. At 25 locations manual vehicle classification and hazardous material counts were taken for a minimum of 24 consecutive hours on a Tuesday, Wednesday, or Thursday and a Saturday. The direction, size and placard were recorded and summarized in 15 minute increments.

The machine truck classification counts break the vehicles down into 13 categories. The list of categories is attached.

## 1998 MAY COUNT PROGRAM LOCATIONS

### Cordon Counts (39 locations)

Ames	north of Memorial Drive	
Beech	east of Mass. Ave.	with HMC
Binney	west of Land Blvd.	with HMC
Brattle	west of Lexington Ave.	with HMC
Brookline	south of Granite	
Cambridge St.	east of First	with HMC
Cameron	east of Fair Oaks	
Concord	east of Fresh Pond Parkway	with HMC
Day	east of Mass.	
DeWolfe	east of Memorial Drive	
Dover	east of Mass.	
First	north of Land Blvd.	
Gore St.	at City Line	
Hampshire St.	north of Cambridge	
Huron Ave.	west of Larch Rd.	
J.F.K.	north of Memorial Dr.	with HMC
Kirkland St.	east of Myrtle	with HMC
Magazine St.	north of Memorial Dr.	
Main St.	west of Memorial Dr.	with HMC
Mass. Ave.	north of Memorial dr.	with HMC
Mass. Ave.	south of Magoun	with HMC
Memorial Dr.	south of Mt. Auburn	
Mt. Auburn	west of Trail	with HMC
Oxford	north of Forest	
Pleasant	west of Florence	
Plympton	east of Memorial Drive	
Prospect	north of Cambridge	with HMC
Rindge	east of Alewife Brook Pkwy	
River	east of Memorial Dr.	with HMC
Russell	east of Mass.	
Scott	west of Bryant	
Somerville Ave.	east of white	with HMC
Springfield	north of Cambridge	
Third	south of O'Brien Hwy	with HMC
Vassar	north of Memorial Dr.	
Wadsworth	north of Memorial Dr.	
Warren	north of Cambridge	
Webster	north of Cambridge	
Western	east of Memorial Dr.	with HMC

**Alewife Area (6 locations)**

Alewife Brook Pkwy.	west of Whittemore	
Concord	east of Blanchard	
Fresh Pond Pkwy.	south of Concord	with HMC
Route 2	west of Alewife Brook Pkwy.	with HMC
MBTA Access Rd.	north of egress	
MBTA Egress Rd.	north of Alewife Center Dr.	with HMC

**O'Brien Highway Area (4 locations)**

Gilmore Bridge	Charlestown Ave. north of O'Brien Highway	with HMC
Land Blvd.	south of O'Brien Highway	with HMC
O'Brien Highway	east of Land Blvd.	with HMC
O'Brien Highway	west of Land Blvd	with HMC

**West Cambridge (2 locations)**

Huron Ave.	east of Grove
Mt. Auburn	west of Homer

NOTE: HMC means Hazardous Materials Carriers were also counted

## **FWHA SCHEME "F" VEHICLE CLASSIFICATIONS**

<b>F1</b>	<b>Motorcycles</b>
<b>F2</b>	<b>Passenger Cars</b>
<b>F3</b>	<b>Other Two-Axle, Four-Tire Single-Unit Vehicles</b>
<b>F4</b>	<b>Buses</b>
<b>F5</b>	<b>Two-Axle, Six-Tire Single-Unit Trucks</b>
<b>F6</b>	<b>Three-Axle, Single-Unit Trucks</b>
<b>F7</b>	<b>Four or More Axle, Single-Unit Trucks</b>
<b>F8</b>	<b>Four or Less Axle, Single-Trailer Trucks</b>
<b>F9</b>	<b>Five-Axle, Single-Trailer Trucks</b>
<b>F10</b>	<b>Six or More Axle, Single-Trailer Trucks</b>
<b>F11</b>	<b>Five or Less Axle, Multi-Trailer Trucks</b>
<b>F12</b>	<b>Six-Axle, Multi-Trailer Trucks</b>
<b>F13</b>	<b>Seven or More Axle, Multi-Trailer Trucks</b>

B. Count Data Summaries and Conclusions All trucks

1. **MAP.** The attached map shows two way truck volumes at the 39 cordon locations
2. Total truck volumes at 12 locations not shown on the attached map.

Alewife/West Cambridge area

	<u>Trucks</u>
Route 2 West of Alewife Brook Pkwy.	1,094
Concord Ave. east of Blanchard	749
Alewife Brook Pkwy. West of Whitmore Ave.	644
Fresh Pond Pkwy. South of Concord Ave.	459
Huron Ave. East of Grove St.	107
T Access Rd. North of Egress Rd.	73
T Egress Rd. North of Alewife Center Dr.	52

O'Brien Highway area

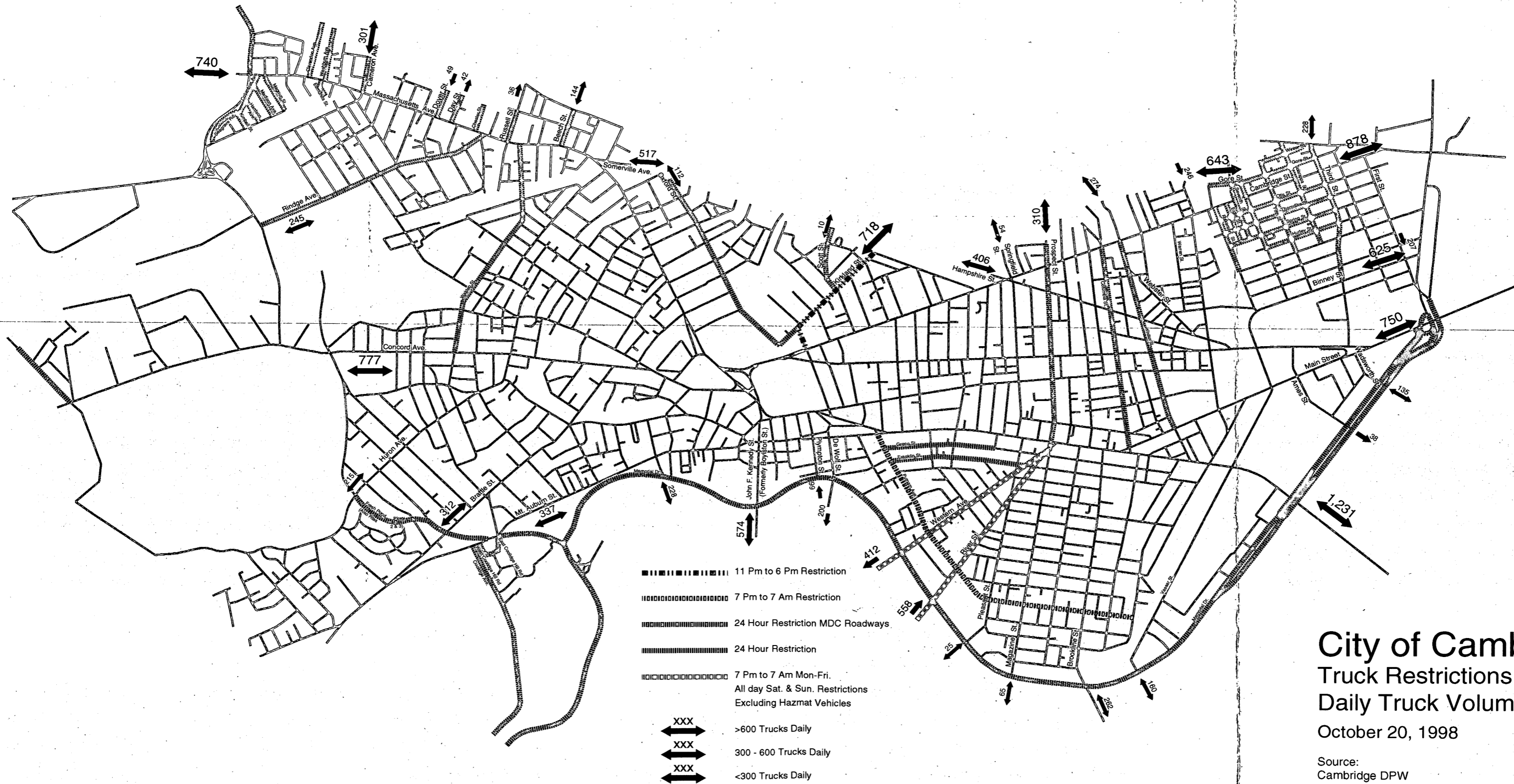
	<u>Trucks</u>
O'Brien Hwy. West of Land Blvd.	1,236
O'Brien Hwy. East of Land Blvd.	1,469
Land Blvd. South of O'Brien Hwy.	686
Charlestown Ave. (Gillmore Bridge) North of O'Brien Hwy.	640

3. Of all locations counted, there were only five locations where trucks are 5% or more of average daily traffic. They are as follows:

<u>Location</u>	<u># of trucks</u>	<u>%of AWDT</u>
Cambridge St. east of First St.	878	5.5%
Binney St. west of Land Blvd.	625	5.4%
Cameron Ave. east of Fair Oaks	301	5.1%
Warren St. north of Cambridge St.	246	5.0%
* Kirkland St. east of Myrtle St.	718	5.0%

4. Graphs of hourly truck volumes at the 13 locations on which there are truck restrictions have been given to the Police Department to guide them in targeting their enforcement efforts.

\* Count was taken before 11 p.m. to 6 a.m. truck restriction was posted

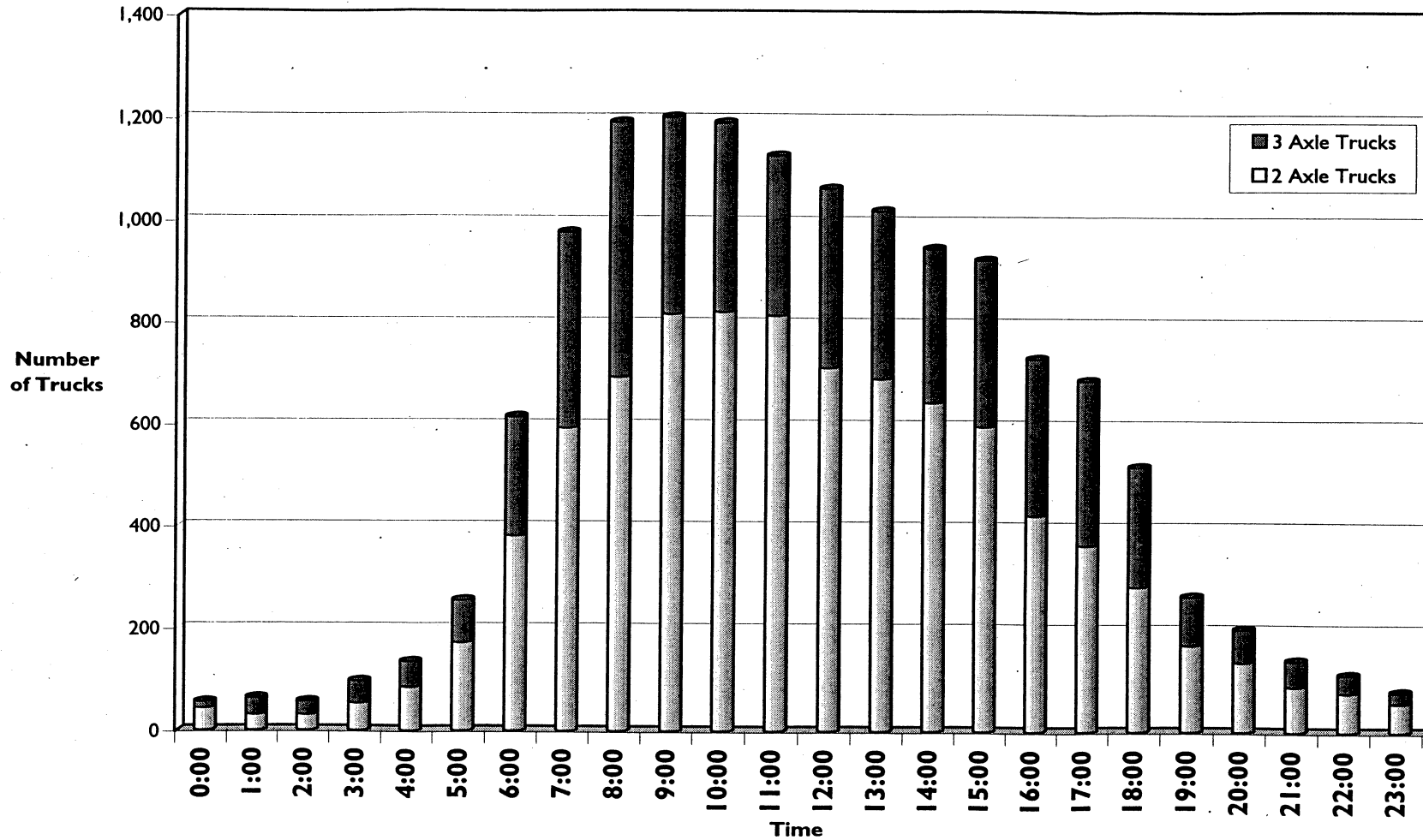


**GRAPH #1.** Total daily truck volume for the 39 cordon locations. (see attached chart)

Findings:

- The total number of trucks entering and exiting the city at the 23 cordon locations is 13,657 based on the Wednesday counts for each location.
- Truck trips peak between 8 and 10 a.m.
- Night time trucks is a small percentage of the total truck volumes
  - 7p.m. - 7a.m. 13%
  - 11p.m. - 6a.m. 5%
- Volumes increase rapidly from 5 a.m. to 7a.m.

**Total Daily Truck Volume for  
39 Cordon Locations**



**Total Truck Volume: 13,657 Trucks Per Day (tpd)**  
**7pm to 7am - 13% of Total Truck Volume (1,809 tpd)**  
**11pm to 6am - 5% of Total Truck Volume (743 tpd)**  
 Source: 1998 Citywide Traffic Count Program

**C. Data count summaries and conclusions --- hazardous material carriers**

**Graph #2.** Hazardous materials carriers counts at locations with more than 10 trucks per day.

**Findings:**

- 13 of the 23 locations counted had more than 10 hazardous material carriers per day.
- More than half of the hazardous material carriers on these streets are gasoline trucks and a third are home heating oil.

**Graph #3** Gasoline carrier daily truck volumes.

**Findings:**

- Most gasoline carriers are large trailer trucks (87%)
- Gasoline trips peak at 6 a.m.

**GRAPH #4** Fuel oil carrier daily truck volumes

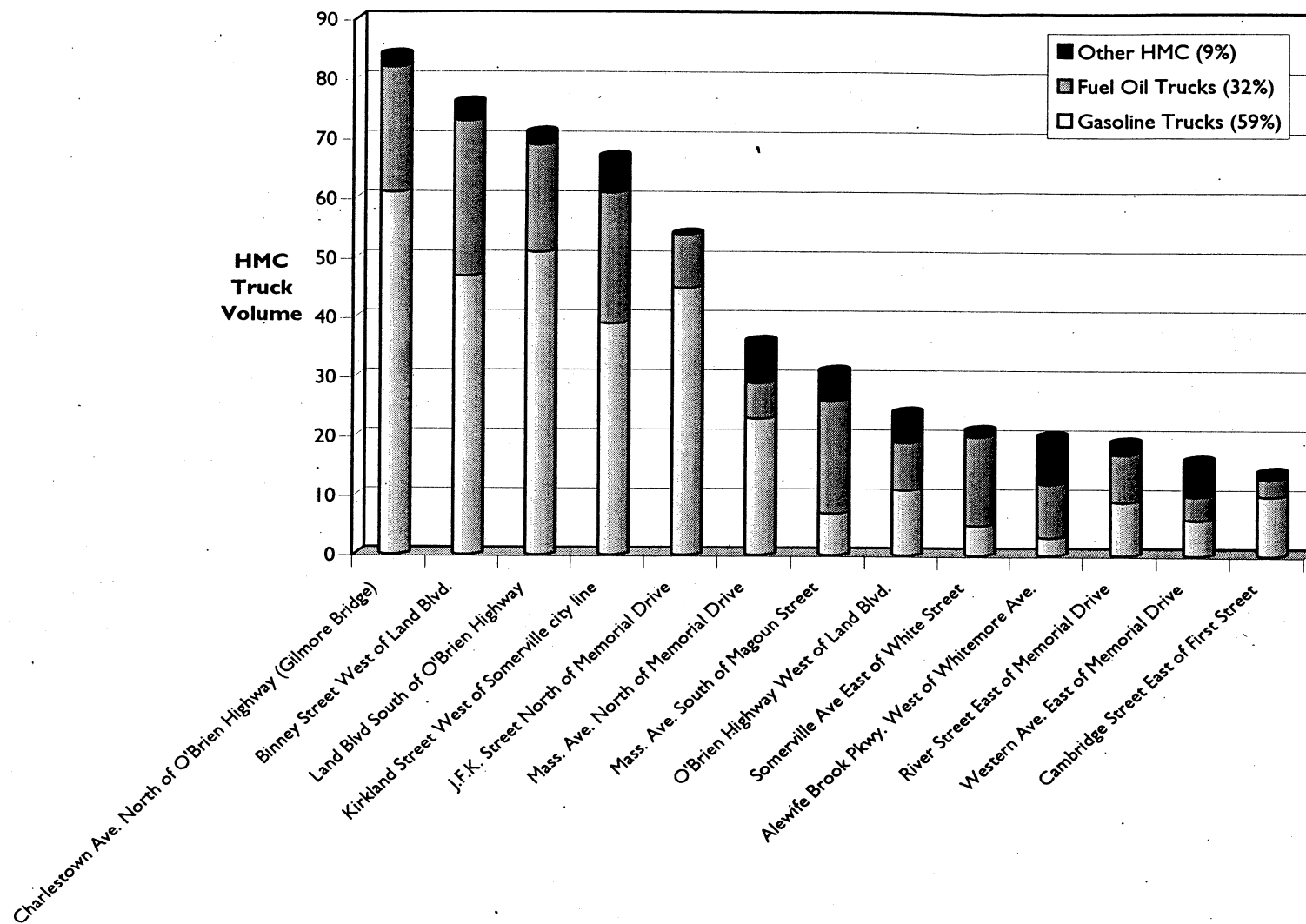
**Findings:**

- 2/3 of fuel oil trucks are smaller single unit trucks.
- They peak at 7a.m. and 1p.m.

**GRAPH #5** Other materials carrier daily truck volumes

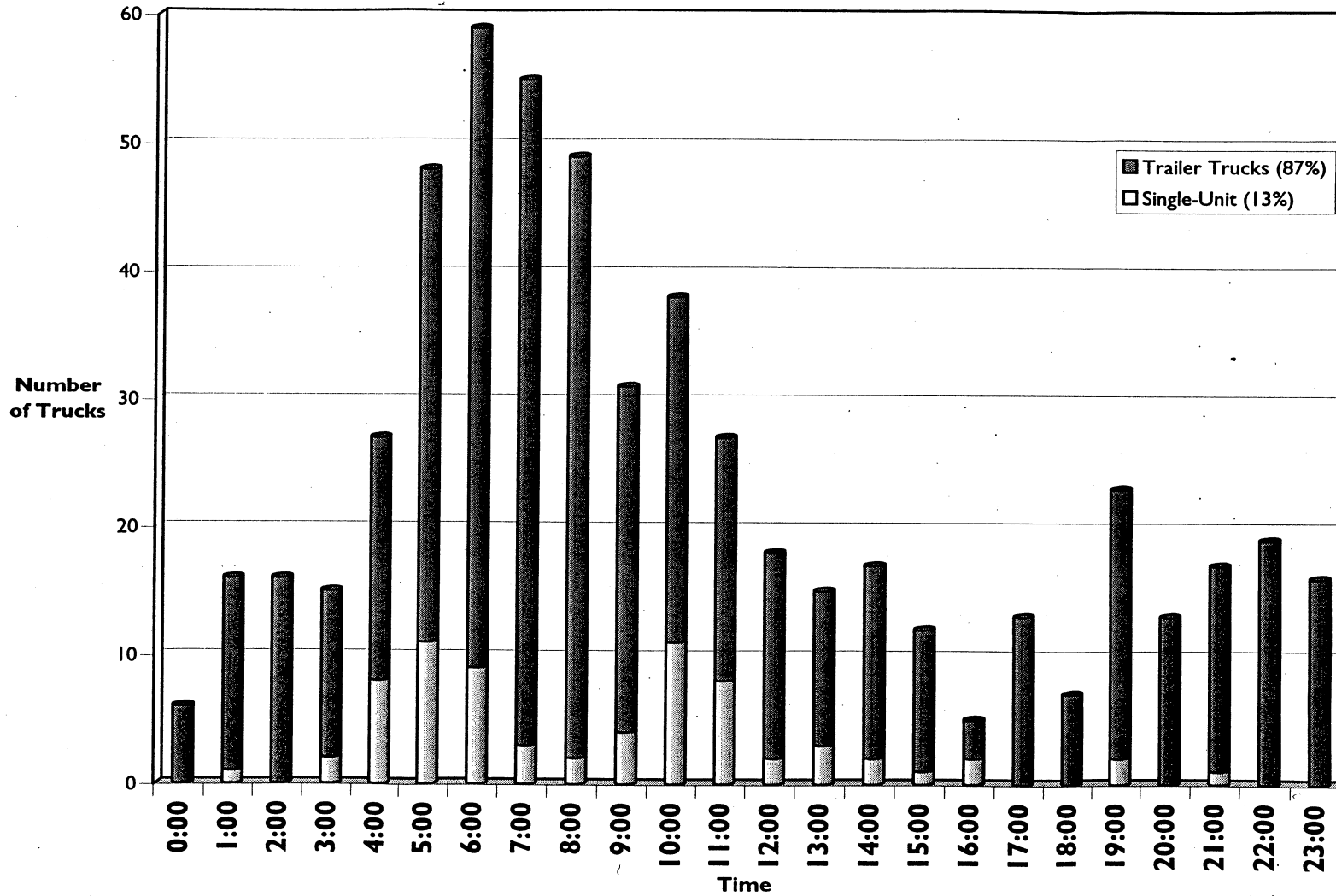
- At no location do hourly volumes for other hazardous material carriers exceed 10 per hour.

### Hazardous material carriers (HMC) Counts and Type for Locations With >10 HMC Trucks Per Day



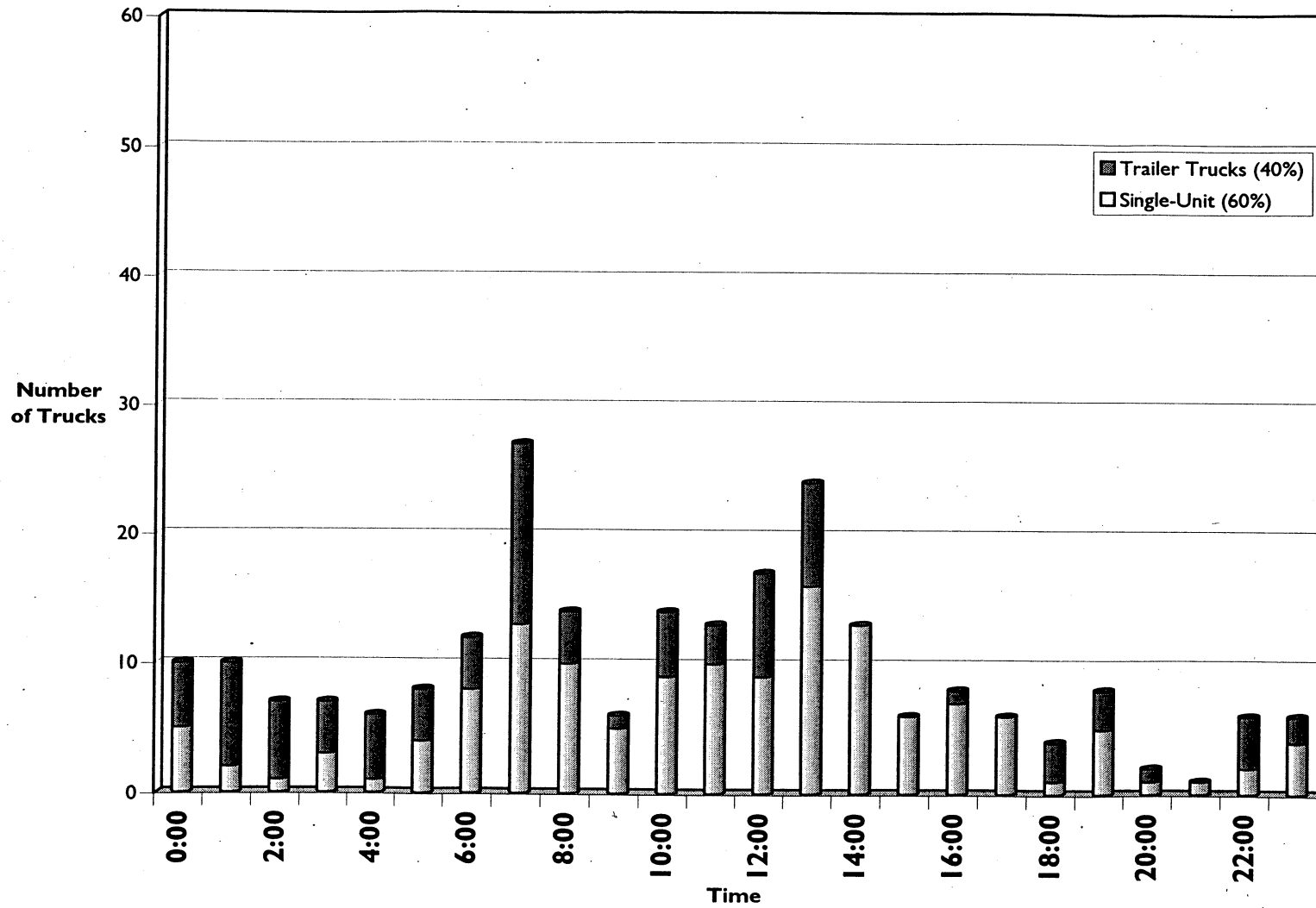
**Source: 1998 Citywide Traffic Count Program**

**Gasoline Carrier Daily Truck Volume  
Total of 23 Locations**



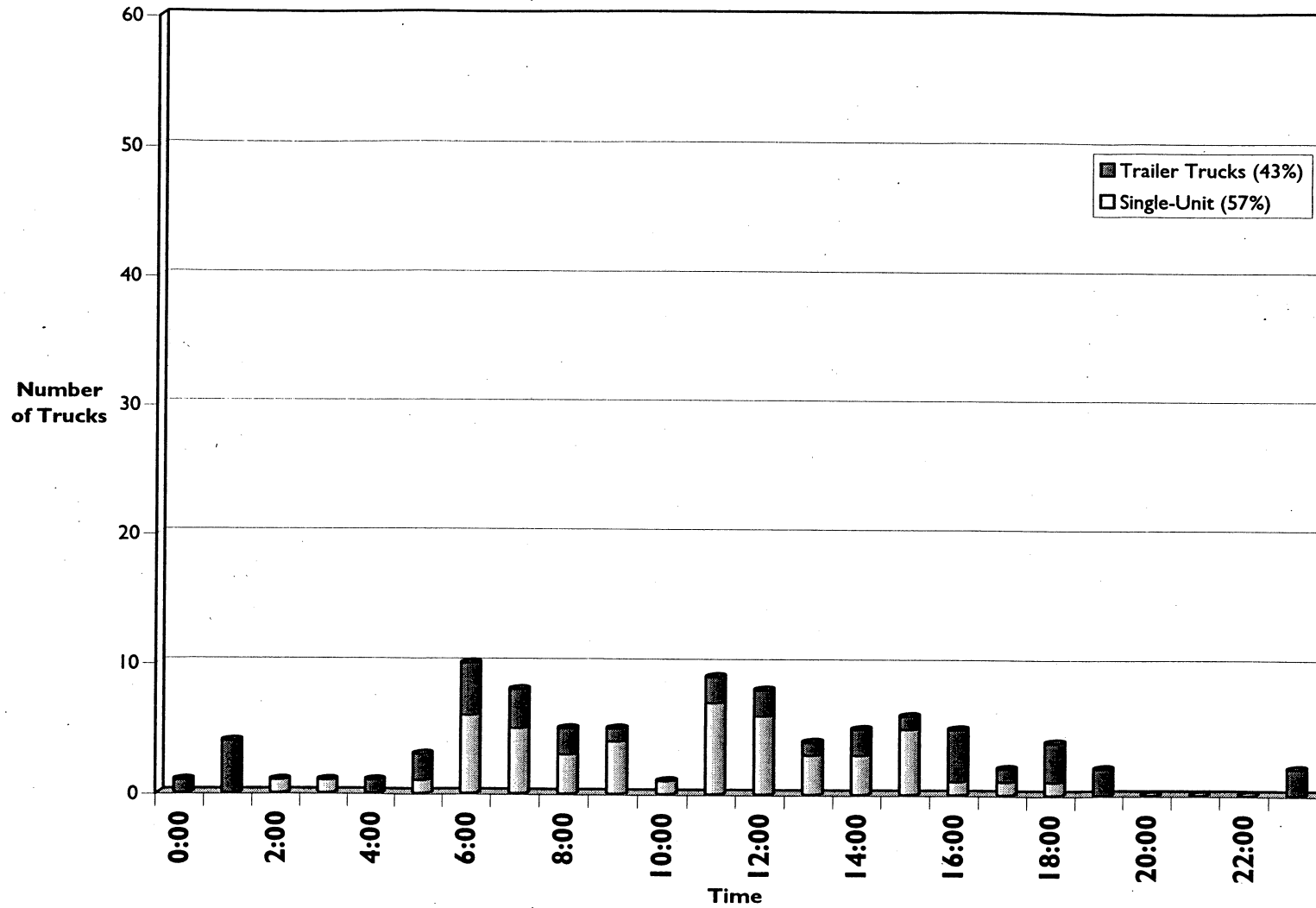
**Source: 1998 Citywide Traffic Count Program**

### Fuel Oil Carriers Daily Truck Volume Total of 23 Locations



Source: 1998 Citywide Traffic Count Program

### Other Hazardous Material Carriers Daily Truck Volume Total of 23 Locations



Source: 1998 Citywide Traffic Count Program

# City of Cambridge

In City Council November 9, 1998

The Traffic and Transportation Committee conducted a public meeting on Wednesday, October 21, 1998 at six o'clock and forty minutes p. m. in the Sullivan Chamber.

Present at the meeting were Councillor Henrietta Davis, Chair of the Committee, Councillors Born and Russell; Richard Rossi, Deputy City Manager, Don Drisdell, Deputy City Solicitor, Sue Clippinger, Director of Traffic, Parking and Transportation; Lauren Preston, Deputy Director of Traffic, Parking and Transportation; John O'Donoghue and Jack Albert from the Fire Department; Sergeant Jones, Police Department and Donna P. Lopez, Deputy City Clerk.

The purpose of the meeting was to discuss cordon counts and hazardous cargo issues.

Councillor Davis opened the hearing by stating that the committee would receive a report from Ms. Clippinger on the cordon counts.

Ms. Clippinger reviewed the report entitled "Truck Data Collection" attached to this report as **ATTACHMENT A**. She informed the committee that in May of 1998 the city undertook a major data collection effort. Vehicle counts were taken around the city. These counts were taken at 51 locations. Classification counts were conducted at all locations and hazardous materials carriers were counted at 23 of these sites. Ms. Clippinger stated that cordon counts were defined as counts taken at locations around the periphery of the City. The western count locations are inside Fresh Pond Parkway, she said. Ms. Clippinger stated that none of the previous counts included classification counts that could identify the type of vehicles entering and exiting the city. Machine counts were taken for seven consecutive days and included both traffic counts and vehicle classification counts, she said. Also, she stated that at 25 locations manual vehicle classification and hazardous material counts were taken. The direction, size of the vehicle and the placard were listed and summarized in fifteen-minute increments, she said. The machine truck classification counts were broken down by vehicle into 13 categories, as outlined on page five of the Truck Data Collection Report attached.

Committee Report #4

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A communication from Councillor Davis,  
Chair of the Traffic and Transportation  
Committee, for a meeting held on October  
21, 1998 for the purpose of discussing  
cordon counts and hazardous cargo issues.

In City Council November 9, 1998

*Report Accepted  
& placed on file  
2 orders adopted*