

42-B-1

407 Commercial St.

Gas Station

AGA Realty Trust

added to Spreadsheet



**CITY OF PORTLAND, MAINE
DEVELOPMENT REVIEW APPLICATION
PLANNING DEPARTMENT PROCESSING FORM**

I. D. Number _____

Address: _____

Applicant AGA Realty Trust
P.O. Box 2528 So. Portland, ME 04106

07 February 1997
Application Date
Union Oil

Applicant's Mailing Address
T-T-Lin Steve Bradstreet, P.E.

Project Name/Description
407 Commercial St

Consultant/Agent
781-4753 (t) 781-4721

Address of Proposed Site
042-2-001

Applicant or Agent Daytime Telephone, Fax _____

Assessor's Reference: Chart-Block-Lot

Proposed Development (check all that apply):
 New Building Building Addition Change of Use Residential
 Office Retail Manufacturing Warehouse/Distribution Other (specify) Gas Station
48,744 Sq Ft

Proposed Building Square Feet or # of Units _____ Acreage of Site _____ Zoning _____

Check Review Required:

- | | | | |
|---|--|--|--|
| <input checked="" type="checkbox"/> Site Plan (major/minor) | <input type="checkbox"/> Subdivision # of lots _____ | <input type="checkbox"/> PAD Review | <input type="checkbox"/> 14-403 Streets Review |
| <input type="checkbox"/> Flood Hazard | <input type="checkbox"/> Shoreland | <input type="checkbox"/> Historic Preservation | <input type="checkbox"/> DEP Local Certification |
| <input type="checkbox"/> Zoning Conditional Use (ZBA/PB) | <input type="checkbox"/> Zoning Variance | <input type="checkbox"/> Single-Family Minor | <input type="checkbox"/> Other _____ |

Fees paid: site plan 300.00 subdivision _____

Approval Status:

Reviewer Kandi Talbot

- Approved Approved w/Conditions listed below Denied

- See attached sheet - PB Approval Hr dated 4/8/97
- _____
- _____
- _____

Approval Date 4/8/97 Approval Expiration 4/8/98 Extension to _____ date date Additional Sheets Attached

Condition Compliance Kandice Talbot 6/6/97 signature date

Performance Guarantee Required* Not Required

* No building permit may be issued until a performance guarantee has been submitted as indicated below

Performance Guarantee Accepted 6/6/97 \$168,630.00 4/30/98
date amount expiration date

Inspection Fee Paid 6/2/97 \$2,866.70
date amount

Performance Guarantee Reduced _____
date remaining balance signature

Performance Guarantee Released _____
date signature

Defect Guarantee Submitted _____
submitted date amount expiration date

Defect Guarantee Released _____
date signature

Blue Copy



CITY OF PORTLAND, MAINE
DEVELOPMENT REVIEW APPLICATION
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AGA Realty

Applicant

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Zoning

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- Subdivision # of lots _____
- PAD Review
- 14-403 Streets Review
- Flood Hazard
- Shoreland
- Historic Preservation
- DEP Local Certification
- Zoning Conditional Use (ZBA/PB)
- Zoning Variance
- Single-Family Minor
- Other _____

Fees paid: site plan _____ subdivision _____

Approval Status:

Reviewer Steve Bushey

- Approved
- Approved w/Conditions listed below
- Denied

1. See attached sheet
2. _____
3. _____
4. _____

Approval Date 4/8/97 Approval Expiration 4/8/98 Extension to _____ date
 Additional Sheets Attached

Condition Compliance 6/6/97 signature Steve Bushey date KT

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Performance Guarantee Reduced _____ date _____ remaining balance _____ signature _____

Performance Guarantee Released _____ date _____ signature _____

Defect Guarantee Submitted _____ submitted date _____ amount _____ expiration date

Defect Guarantee Released _____ date _____ signature _____

T.Y. LIN INTERNATIONAL

February 10, 1997

Ms. Marge Schmuckal
City Hall
389 Congress Street
Portland, Maine 04101

Subject: Minor Site Plan Development
A.G.A. Realty Trust/Union Oil - Convenience Store and Gas Station

Dear Ms. Schmuckal:

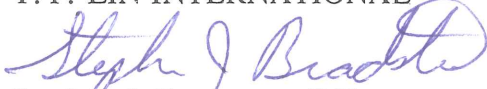
On behalf of our client, A.G.A. Realty Trust/Union Oil Company, T.Y. Lin is pleased to submit the attached package for Minor Site Plan Development. The submission includes:

- 1) Seven (7) copies of:
 - Standard Boundary Plan
 - Layout and Utilities Plan
 - Grading and Drainage Plan
 - Site Details
 - Landscape Plan
 - Pre and Post Development Drainage Plans
 - Building Elevations
 - Building Floor Plan
 - Site Lighting Plan
- 2) Seven (7) copies of the required written statements as set forth in Section 14-525.C in Article V. Site Plan.
- 3) A check for \$300.00 for the application fee.

If you have any questions, or require further information, please feel free to give me a call.

Sincerely,

T.Y. LIN INTERNATIONAL


Stephen J. Bradstreet, P.E.

SJB/llh
JN: 1139.00

WRITTEN STATEMENTS

1. Description of Proposed Uses
2. Total Land, Building and Canopy Areas
3. Summary of Existing and Proposed Easements
4. Types and Estimated Quantities of Solid Waste
5. Evidence of Availability of Off-Site Facilities
6. Stormwater Management Report
7. Construction Schedule
8. State and Federal Regulatory Approvals
9. Financial Capacity
10. Applicant's Title, Right or Interest
11. Unusual Natural Areas, Wildlife and Fisheries Habitats and Archaeological Sites

1. Description of Proposed Uses

The proposed development consists of the construction of a ±2288 square foot convenience store and sixteen (16) fuel pumps under a canopy. The convenience store will have a food preparation area, sales area, coolers, janitorial facilities, and male and female restrooms (accessible by ADA guidelines). The fueling facilities consist of four (4) fueling islands each with two (2) pumping units, each capable of serving two (2) vehicles. This provides the ability of serving a total of sixteen (16) vehicles under the canopy.

A remote diesel pump behind the convenience store will provide fuel for trucks and buses.

2. Total Land, Building and Canopy Areas

Total Land Area: ±1.12 acres (48,589 SF)

Building Floor Area: 2288 square feet

Canopy Area: 4464 square feet

3. Summary of Existing and Proposed Easements

There are no existing or proposed easements or other burdens now existing or to be placed on the property. A letter of agreement between the State and the Owner is attached indicating their approval of accessing a 20 foot wide strip of Department owned land during the time period required for the proposed removal of the underground tanks located adjacent to the State's property (see Exhibit 1).

4. Types and Estimated Quantities of Solid Waste

It is anticipated that this project will not generate significant solid waste products. A solid waste receptacle is located in the northwest corner of the lot. The owner will enter into a contract with a local waste removal contractor, to empty the receptacle on a regular schedule.

5. Evidence of Availability of Off-Site Facilities

The attached letters from the Portland Water District, the City and Northern Utilities indicate the availability of sewer, water and gas facilities (see Exhibit 2). The attached Traffic Impact Study addresses the street capacity (see Exhibit 2).

6. Stormwater Management Report

Pre-Development Drainage

The existing site, including the State of Maine parcel on the back of the site, drains through the gravel/paved lot and out to an existing catch basin on Commercial Street. The site is characterized by steep grass slopes to the south, west and north. Runoff sheet flows down the grass slopes and into the gravel/paved lot, where it appears to pond slightly in the northeast corner prior to flowing into the catch basin.

Based on MDOT's Highway Design Guide, Chapter 12, Drainage Design, the Rational method was utilized in determining runoff. It was determined that for a 25-year event, runoff would be ± 6.0 CFS.

Post-Development Drainage

The general flow characteristics of the site do not change under post-development conditions. Runoff sheet flows down the grass slopes into the paved area, is intercepted by new catch basins and outlets into the existing catch basin on Commercial Street. The paved area is divided into four separate drainage areas, each contributing flow to its own catch basin. It is anticipated that roof drains will connect directly to the rear two catch basins.

It was determined that for a 25-year event, runoff would increase marginally to ± 6.5 CFS, which is a $\pm 6.7\%$ increase over existing conditions (see Exhibit 3).

7. Construction Schedule

It is anticipated that construction will begin in July and continue through December. While the building is being constructed and the fuel pumps and new underground tanks are being installed, the existing service will remain in operation as long as feasible. Once the existing operation interferes with the proposed construction, the existing pumps and tanks will be removed to allow for completion of the site work.

8. State and Federal Regulatory Approvals

None required.

9. Financial Capacity

The Owner, AGA Realty Trust, has the financial capacity to take on bank financing for the proposed development (see Exhibit 4). The Owner's Contractor, Cimino Construction Co., has the technical ability to complete the project as designed, approved and within the outlined schedule.

10. Applicant's Title, Right or Interest

AGA Realty Trust was granted right, title and interest without any warranties or covenants as stated in the Release Deed dated November 22, 1995 (see Exhibit 5).

11. Unusual Natural Areas, Wildlife and Fisheries Habitats and Archaeological Sites

None on site.

EXHIBITS

	<u>Exhibit</u>
Summary of Existing and Proposed Easements	1
Evidence of Availability of Off-Site Facilities	2
Stormwater Calculations	3
Financial Capacity	4
Applicant's Title, Right or Interest	5



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
16 STATE HOUSE STATION
AUGUSTA, MAINE
04333-0016

ANGUS S. KING, JR.
GOVERNOR

January 23, 1997

JOHN G. MELROSE
COMMISSIONER

Union Oil Company
63 Ocean Street
South Portland, Me. 04106

Attn.: Gregory C. Shapiro

Re: Removal of fuel underground
tanks on Commercial Street in
Portland

Dear Mr. Shapiro:

This is to acknowledge your request for a temporary Construction Easement to remove underground fuel tanks at your Commercial Street property in Portland that abuts DOT LAND.

The Maine Department of Transportation will issue to Union Oil Company a permit allowing Union Oil Company to access a 20-foot wide strip of Department owned land during the time period required for the proposed removal of the underground tanks located on Union Oil Company property in Portland. The permit will be forthcoming in the near future.

We would want Union Oil Company to contact our Scarboro office at 883-5546 and inform our Division Engineer - Mr. Roger Gobeil of the dates that this project will take place. He will have the authority to approve the restoration of the Department's property that is to be affected.

If you have any questions please call me at 287-3681.

Very truly yours,

Fred Paganucci
Fred Paganucci
Property Management Section
Right-of-Way Division

FP:cl
cc: Steve Bradstreet
T Y Lin International
5 Fundy Road, Falmouth, Me. 04105



Portland Water District

225 Douglass St. • P.O. Box 3553 • Portland, ME 04104-3553

January 24, 1997

Customer Service Hotline (207) 761-8310

(207) 774-5961

FAX (207) 761-8307

Stephen J. Bradstreet, P.E.
T Y Lininternational
Fundy Road
Falmouth, Me 04105

RE: Union Oil Convenience Store & Gas
407 Commercial Street

Dear Mr. Bradstreet

Currently the District has a 12" water main located in Commercial Street in front of the proposed site. This main has adequate capacity of clean and healthful water to supply the needs of the convenience store/gas station. Based on your letter of 1/21/97 a one inch domestic water service with a 5/8" water meter should be a more and adequate domestic water service. There is no mention of a fire(sprinkler) service and I assume one is not required. If the need does arise for one, the District does have the capacity in Commercial Street to fulfill the need.

The estimated cost for the District to install a 1" domestic service would be around \$ 1800.00 from the 12" water main to the street line(property line) only. This cost would also include the cost to install the water meter and a remote reading device. If your contractor does all the digging, backfilling, and street restoration and the District only does the tap at the main and piping to the property line, including the curb stop & box, the estimated cost would be about \$ 450.00 (includes meter installation).

The current numbers from the hydrant in front of the site are as follows:

Hydrant # 64 Commercial 90' south of High St.

Static = 102 PSI

Pito 1 = 80 PSI

Flow = 1501 GPM

Test Date = 8/1/91

The District looks forward to serving your proposed project and if further information is needed please let me know.

Sincerely,
Portland Water District

Jim Pandiscio
MEANS Coordinator



Northern Utilities, Inc.

February 4, 1997

Steve Bradstreet
TY Lin International
5 Fundy Road
Falmouth, ME 04105

RE: Natural Gas Availability for 471 Commercial Street, Portland

Dear Steve:

Northern Utilities has adequate gas supply for the above referenced project and will install a natural gas service to the building at no cost.

Please feel free to call me with any questions.

Sincerely,

NORTHERN UTILITIES

Bill Howard
Sales Representative

TRAFFIC IMPACT STUDY
UNION OIL

Portland, Maine

January 1997

Prepared For:

*Union Oil Company
63 Ocean Street
South Portland, Maine 04106*

Prepared By:

*T. Y. Lin International
Consulting Engineers and Planners
5 Fundy Road
Falmouth, Maine 04105*

SECTION I - INTRODUCTION AND PURPOSE OF STUDY

Union Oil Company retained T.Y. Lin International (TYLI) to prepare a traffic impact study for the construction of a convenience store with gasoline pumps to be located on a parcel of land bounded by Commercial Street to the south, Park Street to the west and High Street to the east (see Figure 1). Currently the site contains a gasoline station with four (4) fueling stations for passenger cars and one (1) diesel fuel pump for trucks and buses. As currently planned, the project will contain a 2,240 square feet convenience store, twelve (12) fueling stations for passenger cars, and one (1) diesel fuel pump designated for trucks and buses.

Based upon discussions with the City of Portland, this study evaluated operational and safety conditions at the Commercial Street intersections with Park Street and High Street, and evaluated conditions at the site drives.

SECTION II - DATA COLLECTION

The Maine Department of Transportation (MDOT) provided the following information:

- Accident data for the most recent three years within the study area.
- Turning movement volumes at the Commercial Street/High Street and Commercial Street/Park Street intersections.
- Collision diagrams for all High Accident Locations (HAL)

TYLI collected the following information:

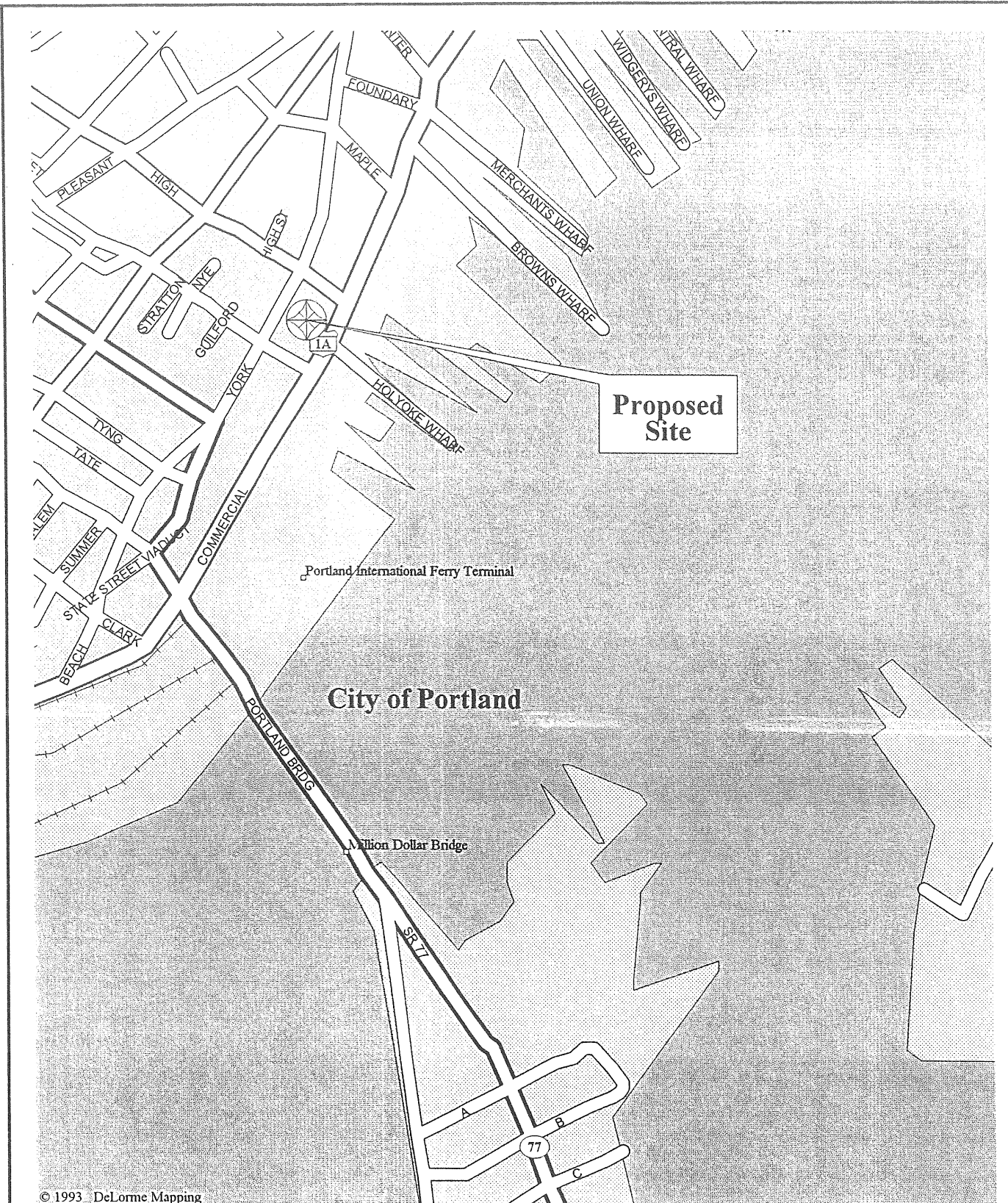
- Turning movement volumes at the existing site to determine current trip generation levels.

SECTION III - EXISTING/BASE TRAFFIC VOLUMES

The primary purpose of this study is to show what effect the proposed project will have on the local transportation system. In general, the critical traffic time period for a given project is directly associated with the peaking characteristics of both the project-related traffic and the area transportation system. Based upon a review of traffic conditions along Commercial Street and the trip generating characteristics of a Convenience store, this study assesses conditions during the weekday PM peak hour.

The MDOT performed turning movement counts at the Commercial Street/High Street and Commercial Street/Park Street intersections on Tuesday, August 22, 1995 and at the Commercial Street/Park Street intersection on Wednesday, September 13, 1995. Review of the traffic data collected indicates the weekday PM peak hour generally occurred between 4:30PM and 5:30PM.

The traffic pattern on any highway shows considerable variation in traffic volumes during different hours of the day and in hourly volumes throughout the year. It must be determined which of these hourly volumes should be used for analysis and design. It would be wasteful to predicate the design on the (maximum) peak hour traffic of the year, yet the use of average hourly traffic would result in



MAP CREATED USING DELORME MAP'EXPERT - FREEPORT, MAINE

UNION OIL PORTLAND, MAINE

SITE
LOCATION

JANUARY 1997

TY-LIN INTERNATIONAL

FIGURE 1

UT110101L.DWG

an inadequate design. The hourly traffic volume used in design should not be exceeded very often or by very much. On the other hand, it should not be so high that traffic would rarely be great enough to make full use of the facility. Based upon the relationship between highest hourly volumes and daily traffic volumes, it has been concluded that the hourly traffic used in design should be the 30th Highest Hour Volumes, or sometimes referred to as the Design hour Volume.

For this study, the Design Hour Volume was estimated from factors developed by MDOT. Based upon MDOT seasonal factors (Group Mean Factors), the turning movement counts performed in August and September generally represent 30th highest hour conditions. Therefore the turning movement counts were not adjusted.

Current plans indicate the proposed project will be constructed in 1997. Accordingly, the 1995 traffic volumes were factored to represent 1997 traffic conditions. Traffic volumes in 1997 were estimated from growth factors obtained from the PACTS travel demand forecasting model. Based upon the model, traffic volumes counted in 1995 were adjusted by 1.1 percent to estimate 1997 conditions.

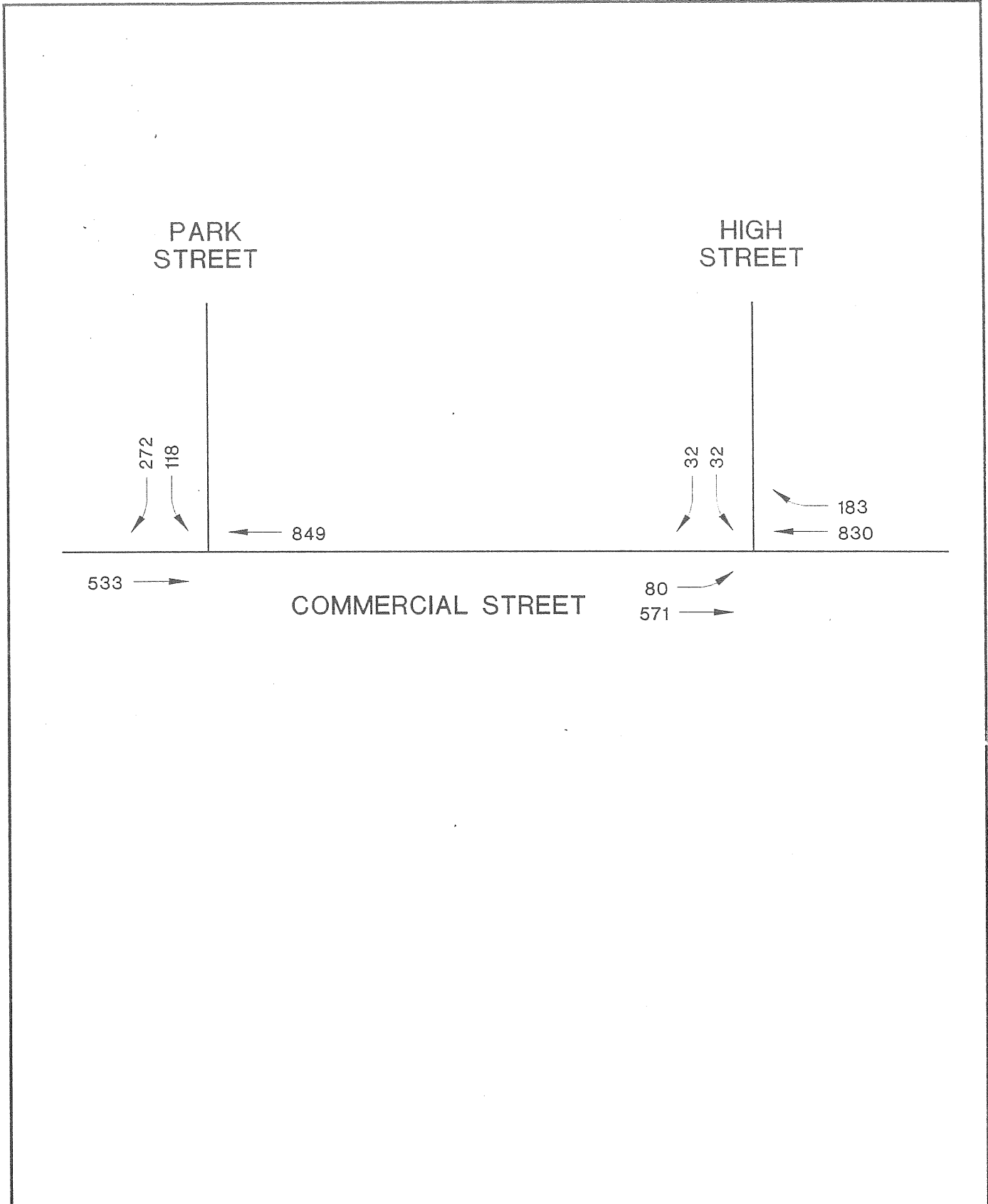
In addition to adjusting traffic for future growth, the traffic volumes were also adjusted to account for travel pattern changes following the opening of the Portland-South Portland Bridge. The adjustments were based upon traffic demand estimates conducted by MDOT.

Figure 2 presents the 1997 No-Build Traffic volumes during the weekday PM peak hour within the study area.

SECTION IV - SITE GENERATED TRAFFIC

Traffic generated from the proposed convenience store with gas pumps development was based upon traffic generation rates developed by the Institute of Transportation Engineers (ITE). According to data contained in the publication, Trip Generation, 5th Edition, Update, February 1995, a convenience market with gasoline pumps can be expected to generate 19.98 trips per fueling station during the weekday PM peak hour. Trip rates are also available using gross floor area as the independent variable in the estimation of trip levels. But significantly lower trip ends would result and therefore were not used in this study. In addition, a review of the current trip generating characteristics was performed, which indicated the site generates approximately 18.75 trips per fueling station, similar to the ITE data using fueling stations as the independent variable. Based upon a trip generation of 19.98 trips per fueling stations, and 12 proposed fueling stations, the proposed project is expected to generate 240 vehicles (120 vehicles entering/120 vehicles exiting) during the weekday PM peak hour. Based upon existing traffic counts at the site, no buses or trucks are expected to be generated to and from the site during the PM peak hour.

In order to estimate traffic levels to be added to the street network, it is important to add the net new traffic expected from the project site. Currently the project site contains a gas station with four fueling stations that will need to be subtracted from the total site estimate. Based upon a traffic count performed on Tuesday, January 14, 1997, 75 vehicles entered and exited the existing site during the PM peak hour.



UNION OIL PORTLAND, MAINE

1997 NO-BUILD
PM PEAK HOUR TRAFFIC VOLUMES

JANUARY 1997

TYLIN INTERNATIONAL

FIGURE 2

UNION OIL (DWIS)

Buildings such as retail establishments, restaurants, banks, service stations, and convenience markets attract a portion of their trips from traffic passing the site on the way from one location to another. Trip making where this phenomenon occurs can be broken down into the following three categories of trips:

- Primary Trips
- Pass-by Trips
- Diverted Trips

These trips are defined as follows:

Primary Trips are trips made for a specific purpose of visiting the generator. The stop at the generator is the primary reason for the trip. For example, a home to shopping to home combination of trips is a primary trip set.

Pass-By Trips are trips made as intermediate stops on the way from origin to a primary trip destination. Pass-by trips are attracted from traffic passing the site on an adjacent street that contains direct access to the generator. These trips do not require a diversion from another roadway.

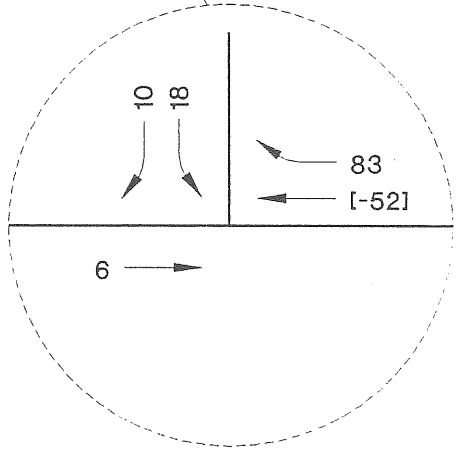
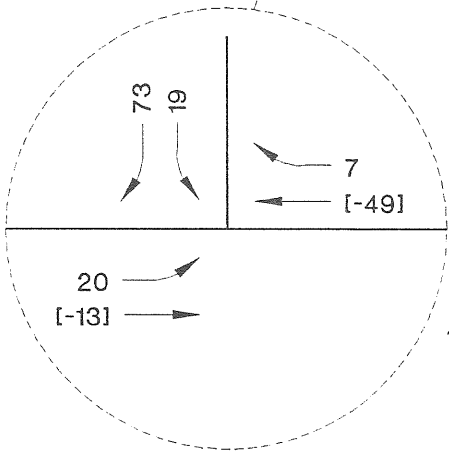
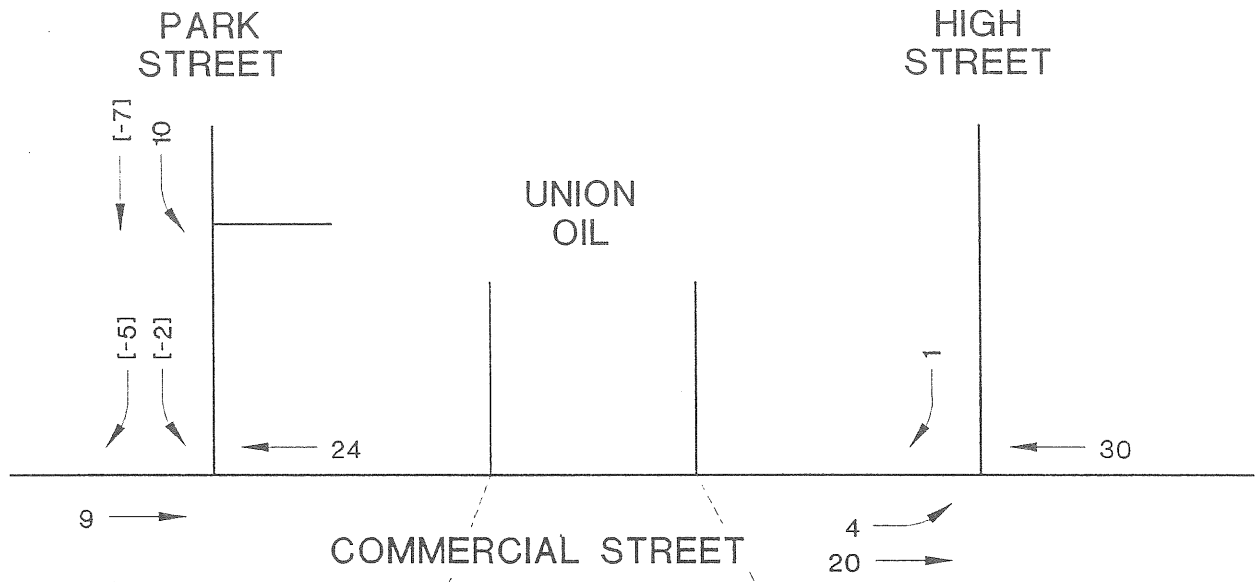
Diverted Linked Trips are attracted from the traffic volumes on roadways within the vicinity of the generator but which require a diversion from that roadway to another roadway to gain access to the site. These roadways could include street or freeways adjacent to the generator, but without access to the generator.

For this study it was assumed that 34% of the site traffic will be primary trips while the remaining traffic (66%) is Pass-by. This was based upon statistics contained in the publication, Trip Generation.

The following table summarizes the expected new traffic to be generated from the proposed project during the PM peak hour.

	ENTER	EXIT	TOTAL
Proposed Site	120	120	240
Existing "Primary Trips"	13	13	26
Pass-by	79	79	158
Total "New Traffic"	28	28	56

Distribution of the new development traffic volumes was based upon existing travel patterns. Figure 3 presents the site generated traffic volume during the weekday PM peak hour.



[XXX] - PASS-BY TRIPS

UNION OIL PORTLAND, MAINE

SITE GENERATED
PM PEAK HOUR TRAFFIC VOLUMES

JANUARY 1997

TYLIN INTERNATIONAL

FIGURE 3

(U:\110101L.DWG)

SECTION V - BUILD TRAFFIC VOLUME

The Build Traffic volumes within the study area were estimated for 1997. The Build volumes were estimated by adding the site generated traffic depicted on Figure 3 to the 1997 No-Build traffic volumes located on Figure 2. Figure 4 presents the 1997 Build Weekday PM peak hour volume at the study intersections.

SECTION VI - INTERSECTION ANALYSIS

To evaluate the impact of traffic generated by the proposed development, capacity analysis was performed at the study intersections for the 1997 No-Build and Build conditions.

The standard used to evaluate traffic operating conditions of the transportation system is referred to as Level of Service (LOS). This is a qualitative assessment of the quantitative effect of factors such as speed, volumes of traffic, geometric features, traffic interruptions, and freedom to maneuver.

LOS analysis was based upon procedures contained in the 1994 Highway Capacity Manual, Transportation Research Board. Unsignalized intersection LOS is based on vehicular delay. The LOS procedure computes capacity for each movement that has a conflict, based upon the critical time gap required to complete the maneuver and the volume of traffic that is opposing the movement. The following table describes the relationship between delay and LOS.

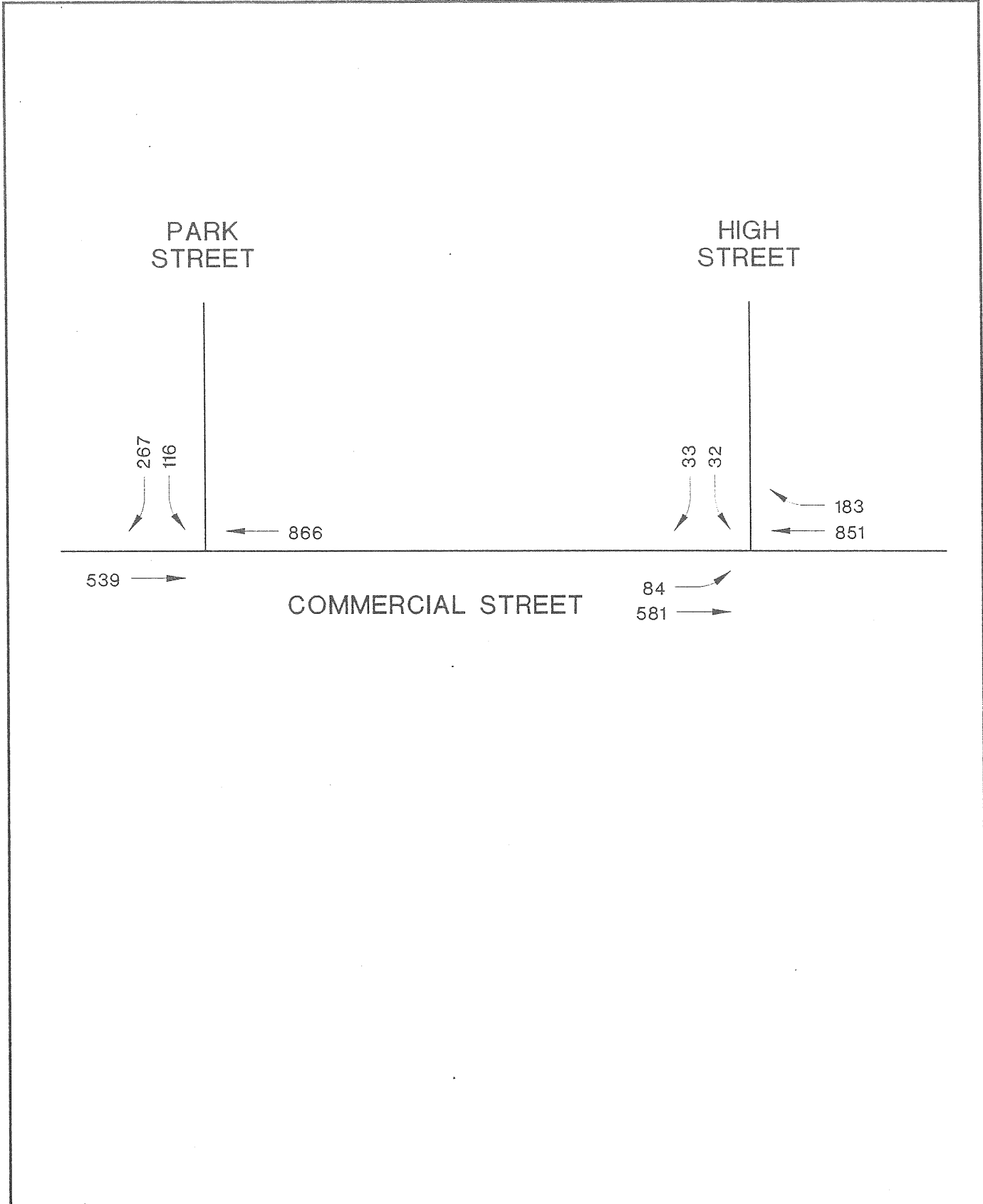
Unsignalized Level of Service

Level of Service	Average Delay
A	<5.1
B	5.1 to 10
C	10.1 to 20
D	20.1 to 30
E	30.1 to 45
F	> 45

The results of the analyses are presented in the following tables.

Commercial Street/Park Street No-Build(Build)

Movement	Level of Service	Avg. Total Delay	95% Queue
Park St. Left	F(F)	189.6(211.1)	10.5(11.0)
Park St. Right	D(D)	21.1(21.8)	4.9(5.0)
Overall Intersection	C(C)	15.9(17.0)	N/A



UNION OIL PORTLAND, MAINE

1997 BUILD
PM PEAK HOUR TRAFFIC VOLUMES

JANUARY 1997

TYLIN INTERNATIONAL

FIGURE 4

UNION OIL.DWG57

**Commercial Street/High Street
No-Build(Build)**

Movement	Level of Service	Avg. Total Delay	95% Queue
High St. Left/Right	F(F)	71.4(85.9)	3.5(4.0)
Commercial St. Left	B(B)	9.3(9.8)	0.8(0.9)
Overall Intersection	A(A)	3.1(3.6)	N/A

As presented above, level of service is expected to remain unchanged following the build-out of the project at both the Commercial Street/High Street and Commercial Street/Park Street intersections. Long delays currently exists for left-turn movements from both High Street and Park Street and will continue following the construction of the project.

A 1995 design study sponsored by the MDOT reviewed traffic conditions at the Commercial Street/Park Street and Commercial Street/High Street intersections. According to that study, traffic signals are currently warranted at the Commercial Street/Park Street intersection, but are not warranted at the Commercial Street/High Street intersection. Accordingly, the City should further investigate and program for the installation of traffic signals at the Park Street intersection.

SECTION VII - SAFETY ANALYSIS

Accident data in the vicinity of the project was obtained from MDOT for the most recent available three year period (1993-1995). A summary of the safety data is presented in the following table.

MDOT considers a Critical Rate Factor (CRF) of 1.0 and 8 accidents over a three year period as a general guideline to identify potential safety deficiencies. The following table summarizes the accident history in the vicinity of the project.

1993-1995 Accident History

Location	Accidents	Critical Rate Factor
Commercial/Park	17	2.25
Commercial/High	11	1.35
Commercial St./High-Park	5	0.79

As indicated in the above table, the Commercial Street/Park Street and Commercial Street/High Street intersections satisfy the MDOT guidelines for a potentially accident deficient location. Accordingly, further detailed analyses was performed. In conjunction with a MDOT sponsored design project for Commercial Street, accident collision diagrams were prepared at the two study intersections for accidents occurring during the three year period 1992-1994. While this data does not include accidents reported in 1995, it does provide a reasonable sample of the accident patterns that current exist. The following summarizes each location in detail.

- Commercial Street/High Street - A review of the collision diagram indicates the most prevalent accident patterns were cross-traffic collisions (2 accidents), rear-end collisions (3 accidents),

angle collisions (2 accidents), and parking maneuver collision (4 accidents). No correctable pattern was identified

- Commercial Street/Park Street - A review of the collision diagram indicates the most prevalent accident pattern was rear-end collisions, with the majority occurring on the Park Street approach. The most common contributing factor for these rear-end collisions was driver inattention. It is likely that the rear-end collisions area related to long vehicular delays on the Park Street approach.

SECTION VII- CONCLUSIONS AND RECOMMENDATIONS

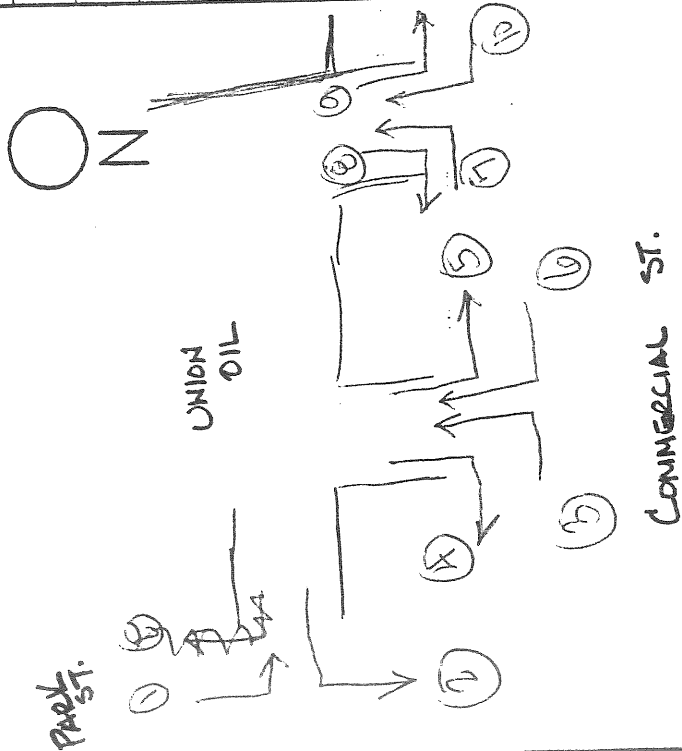
1. The proposed convenience store with gas pumps project is expected to generate 120 vehicles entering the site and 120 vehicles exiting the site during the weekday PM peak hour. Of the 240 total vehicle trips, 56 vehicles are expected to be "New" vehicles added to the area street network.
2. Results of the capacity analyses indicate the level of service at the intersections of Commercial Street/Park Street and Commercial Street/High Street will remain unchanged following the construction of the project. Long delays currently exist for left-turn movements from both High Street and Park Street, and will continue following build-out of the project.
3. Accident data supplied by the MDOT indicates both the Commercial Street/High Street and Commercial Street/Park Street intersections are High Accident Locations. Review of detailed collision diagrams indicates no correctable accident pattern were identified at the High Street intersection. At The Park Street intersection, operational improvements (i.e. traffic signal installation) will likely help to correct deficiencies.
4. As discussed in Section VI, a MDOT study indicated that traffic signals are currently (without the proposed project) warranted at the Commercial Street/Park Street intersection. Accordingly, the City should consider installing traffic signals at this location.

APPENDIX

TURNING MOVEMENT COUNT

PLEASE INDICATE SIGNAL CONTROL FOR EACH APPROACH. eg: STOP, YIELD, FULL SIGNAL, FLASHING RED/YELLOW

INTERSECTION: COMMERCIAL ST. / UNION OIL
 LOCATION: _____



TIME PERIOD	1	2	3	4	5	6	7	8	9	10	11	12
1:00-1:15	0	0	3	5	2	0	0	1	0	3	14	
1:15-1:30	0	0	5	10	2	4	0	4	2	4	13	
1:30-1:45	1	0	7	13	5	5	0	4	4	13	25	
1:45-2:00	2	0	10	17	10	5	0	5	5	18	16	
2:00-2:15	2	0	10	24	9	5	0	5	0	25	20	
2:15-2:30	3	0	11	28	9	10	0	7	9	29	14	
2:30-2:45	4	0	13	32	10	10	0	7	10	32	12	
2:45-3:00	5	0	15	34	12	10	0	8	12	33	11	
3:00-3:15												
3:15-3:30												
3:30-3:45												
3:45-4:00												
TOTAL H.V. VOLUME												

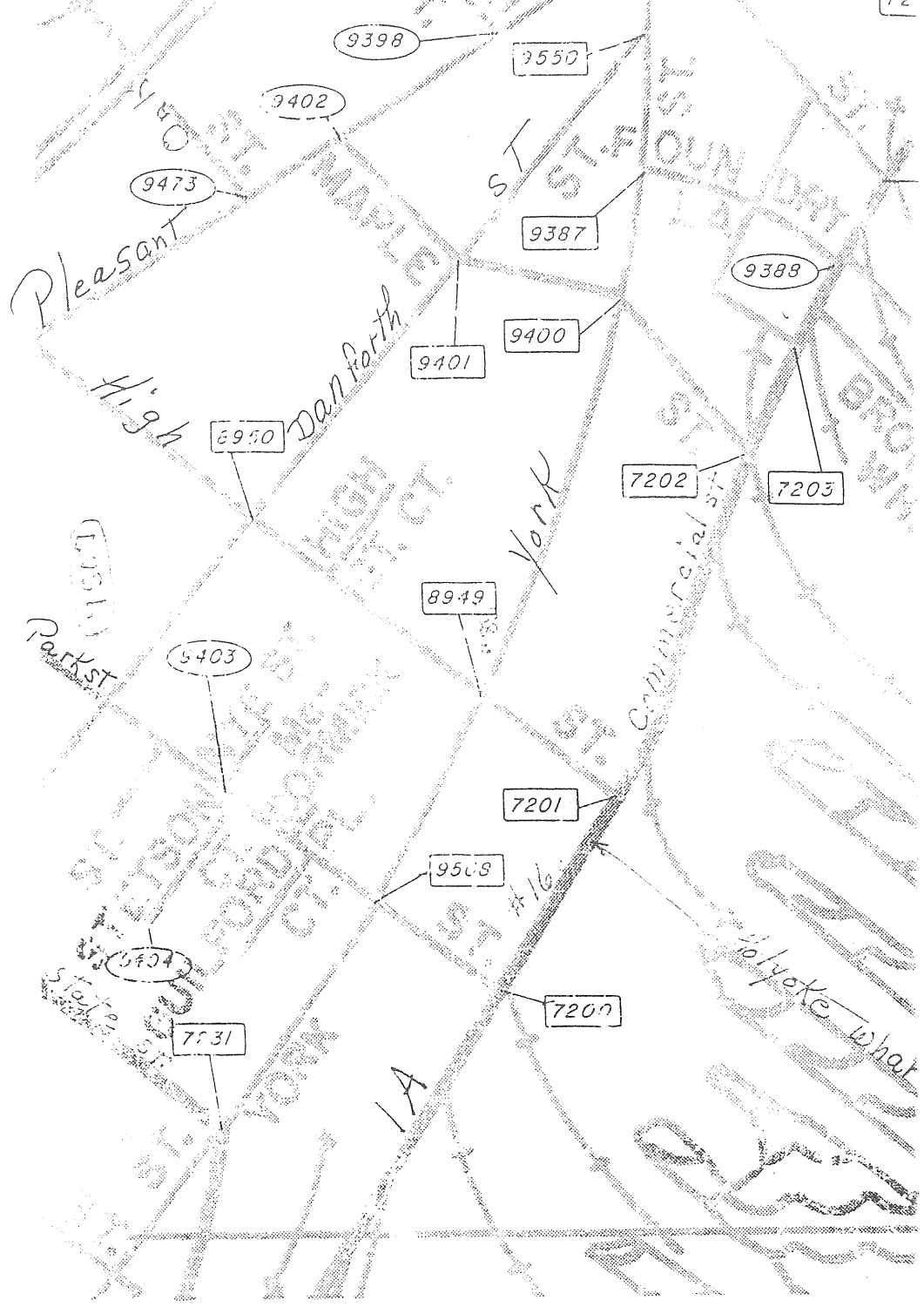
TOTAL H.V. VOLUME = HEAVY VEHICLES: ANY VEHICLE WITH 6 TIRES OR MORE.

DATE: 1-14-97
 OBSERVER: DAF
 WEATHER: CLOUDY WINDY, COLD
 REMARKS: _____
 JOB NO.: _____

DATA FILENAME: _____

335

14



77

3039

U.S. FEDERAL BUREAU OF INVESTIGATION

U.S. FEDERAL BUREAU OF INVESTIGATION

MAINE DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING

TINACC30

ACCIDENT SUMMARY INPUT

TYPE OF STUDY: NODES AND LINKS TYPE OF REQUEST: ACCIDENT I & II WITH LINK DETAIL
STUDY PERIOD: FROM MONTH 01 YEAR 93 TO MONTH 12 YEAR 95

INPUT COMMENTS

REQUEST: COMMERCIAL ST FROM PARK ST TO HIGH ST
TOWN(S): PORTLAND

INPUT DATA

ROUTE	COUNTY	FIRST NODE	EXCLUDE FIRST	DISTANCE	SECOND NODE	LAST NODE	EXCLUDE LAST	DISTANCE
0001A	05	7200	0	0.00	7201	7201	0	0.00

MAINE DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING

TINACC30

ACCIDENT SUMMARY I

COUNTY LOW TOWN#	HIGH NODE	STREET NAME OR ROUTE #	U/R	TOTAL ACCTS	LINK LENGTH	INJURY K	ACCIDENTS A	ACCIDENTS B	ACCIDENTS C	ACCIDENTS PD	PERCENT INJURY	ANNUAL HM VEH-MILES	ANNUAL M ENT-VEHS	ACCIDENT-RATES LINK	CRITI RATE	CRF
05	7200	POR, COMMERCIAL, PARK ST. 2	2	17		0	0	1	2	14	17.6	4.862	1.17	0.52	2.25	
05	7201	POR, COMMERCIAL, HIGH ST. 2	2	11		0	0	0	4	7	36.4	5.345	0.59	0.51	1.35	
NODE SUBTOTALS-				28		0	0	1	6	21	25.0	10.207	0.91	0.44	2.07	

MAINE DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING

TINACC30

ACCIDENT SUMMARY I

COUNTY LOW TOWN#	HIGH NODE	STREET NAME OR ROUTE #	U/R	TOTAL ACCTS	LINK LENGTH	INJURY K	ACCIDENTS A	ACCIDENTS B	ACCIDENTS C	ACCIDENTS PD	PERCENT INJURY	ANNUAL HM VEH-MILES	ANNUAL M ENT-VEHS	ACCIDENT-RATES LINK	CRITI RATE	CRF
05170	7200	7201 COMMERCIAL ST	2	5	0.08	0	0	0	2	3	40.0	0.00379	439.75	439.75	555.99	0.00
		LINK SUBTOTALS-		5	0.08	0	0	0	2	3	40.0	0.00379	439.75	439.75	555.99	0.00
		GRAND TOTALS-		33	0.08	0	0	1	8	24	27.3	0.00379	10.207	2902.37	896.15	3.24

MAINE DEPARTMENT OF TRANSPORTATION
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TINACC30

ACCIDENT SUMMARY II - CHARACTERISTICS

ACCIDENT TYPE	* ST ROAD	CURV ROAD	TYPE OF LOCATION					TOTAL	INJURY DATA			
			**AT 3-LEG	**AT 4-LEG	DRIVE 5-LEG	BRIDGE WAYS	INTER CHANGE		UN KNOWN	SEV CODE	INJURY ACCIDENTS	NUMBER OF INJURIES
OBJECT IN ROAD	0	0	0	0	0	0	0	0	0	0	0	0
REAR END/SIDESWIPE	0	0	16	0	3	0	0	0	0	0	0	0
HEAD-ON/SIDESWIPE	2	0	0	0	0	0	0	0	0	0	1	1
INTERSECTION MOVEMENT	0	0	6	0	2	0	0	0	0	0	8	13
PEDESTRIANS	0	0	1	0	0	0	0	0	0	0	24	24
TRAIN	0	0	0	0	0	0	0	0	0	0	33	33
RAN OFF ROAD	0	0	0	0	0	0	0	0	0	0	0	0
ANIMAL	0	0	0	0	0	0	0	0	0	0	0	0
SLED/BIKE	0	0	0	0	0	0	0	0	0	0	0	0
FIXED OBJECT	0	0	0	0	0	0	0	0	0	0	0	0
NON COLLISION	0	0	1	0	0	0	0	0	0	0	0	0
UNKNOWN	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	2	0	26	0	5	0	0	0	0	0	33	33

FIXED OBJECT STRUCK

FIXED OBJECT STRUCK	TRAFFIC CONTROL DEVICES		ROAD CHARACTER	
	TRAFFIC CONTROL DEVICES	UN KNOWN	ROAD CHARACTER	UN KNOWN
CONSTRUCTION BARRICADES	0	0	LEVEL STRAIGHT	17
TRAFFIC SIGNAL	0	0	LEVEL CURVED	0
R/R CROSSING	0	0	ON GRADE STRAIGHT	10
LIGHT POLE	0	0	ON GRADE CURVED	0
UTILITY POLE	0	0	TOP OF HILL STRAIGHT	0
SIGN POST	0	0	TOP OF HILL CURVED	0
MAIL BOXES	0	0	BOTTOM OF HILL STRAIGHT	5
OTHER POLES/POSTS	0	0	BOTTOM OF HILL CURVED	1
FIRE PLUG/PARK METER	0	0	UNKNOWN	0
TREE/SHRUBBERY	0	0	TOTAL	33
CRASH CUSHION	0	0		
MEDIAN SAFETY BARRIER	0	0		
BRIDGE PIERS	0	0		
OTHER GUARDRAILS	0	0		
FENCING NOT BARRIER	0	0		
CULVERT HEADWALL	0	12		
EMBANKMENT/DITCH	0	0		
BUILDING WALL	0	0		
ROCK OUTCROPPING/LEDGE	0	0		
OTHER	0	0		
UNKNOWN	0	0		
TOTAL	0	13		

MAINE DEPARTMENT OF TRANSPORTATION
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TINACC30

ACCIDENT SUMMARY II - CHARACTERISTICS

APPARENT CONTRIBUTING FACTOR *	DR 1	DR 2	DR 3	DR 4	DR 5	DR OTHER	TOTAL	APPARENT PHYSICAL CONDITION *	DR 1	DR 2	DR 3	DR 4	DR 5	DR OTHER	TOTAL
HUMAN FACTORS															
NO IMPROPER DRIVING	23	12	1	0	0	0	36	PHYSICAL CONDITION *							
FAIL TO YIELD R-WAY	3	3	0	0	0	0	6	NORMAL	32	32	2	0	0	0	66
ILLEGAL UNSAFE SPEED	2	0	0	0	0	0	2	UNDER THE INFLUENCE	1	1	0	0	0	0	2
FOLLOW TOO CLOSE	1	3	0	0	0	0	4	DRINKING	0	0	0	0	0	0	0
DISREGARD TRAF CONTROL	1	0	0	0	0	0	1	USING DRUGS	0	0	0	0	0	0	0
DRIVING LEFT OF CENTER	0	1	0	0	0	0	1	ASLEEP	0	0	0	0	0	0	0
IMPROPER PASSING	0	0	0	0	0	0	0	FATIGUED	0	0	0	0	0	0	0
IMPROPER LANE CHANGE	1	2	0	0	0	0	3	ILL	0	0	0	0	0	0	0
IMPROPER START/STOP	0	0	0	0	0	0	0	HANDICAPPED	0	0	0	0	0	0	0
IMPROPER TURN	0	0	0	0	0	0	0	OTHER/UNKNOWN	0	0	0	0	0	0	0
UNSAFE BACKING	0	1	0	0	0	0	1	TOTAL	33	33	2	0	0	0	68
NO PROPER SIGNAL	0	0	0	0	0	0	0								
IMPEDING TRAFFIC	0	0	0	0	0	0	0								
DRIVER INATTENTION	0	9	0	0	0	0	9								
DRIVER INEXPERIENCE	0	1	0	0	0	0	1								
PEDESTRIAN VIOLATION	0	0	0	0	0	0	0								
PHYSICAL IMPAIRMENT	0	0	0	0	0	0	0								
VISION OBSCURED GLASS	0	0	0	0	0	0	0								
VISION OBSCURED LIGHT	0	0	0	0	0	0	0								
VISION OBSCURED OTHER	0	0	1	0	0	0	1								
OTHER HUMAN FACTOR	0	0	0	0	0	0	0								
DEFECTIVE BRAKES	1	1	0	0	0	0	2	TYPE OF UNIT							
HIT & RUN	0	0	0	0	0	0	0	DRIVER							
BIKE								BIKE							
VEHICULAR FACTORS								SNOW SLED							
DEFECTIVE TIRE	0	0	0	0	0	0	0	AGE							
DEFECTIVE LIGHTS	0	0	0	0	0	0	0	9-UNDER	0	0	0	0	0	0	0
INADEQUATE WINDSHIELD	0	0	0	0	0	0	0	10-14	0	0	0	0	0	0	0
OVERSIZE/OVERWEIGHT	0	0	0	0	0	0	0	15-19	3	0	0	0	0	0	3
OTHER VEHICLE DEFECT	1	0	0	0	0	0	1	20-24	8	0	0	0	0	0	9
UNKNOWN	0	0	0	0	0	0	0	25-29	13	0	0	0	0	0	13
TOTAL	33	33	2	0	0	0	68	30-39	20	0	0	0	0	0	20
								40-49	14	0	0	0	0	0	14
								50-59	3	0	0	0	0	0	3
								60-69	2	0	0	0	0	0	2
								70-79	1	0	0	0	0	0	1
								80-OVER	2	0	0	0	0	0	2
								UNKNOWN	1	0	0	0	0	0	1
								TOTAL	67	0	1	0	0	0	68

MAINE DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING

TINACC30

ACCIDENT SUMMARY II - CHARACTERISTICS

WEATHER	LIGHT * CONDITION *	R O A D S U R F A C E											TOTAL			
		WET SAND	SNOW SAND	ICE SAND	MUD	DEBRIS	OIL	SNOW	ICE	OTHER	ICE	OTHER				
CROSS WINDS	DAWN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(0)	DAYLIGHT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DUSK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SAND/DUST	DAWN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(0)	DAYLIGHT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DUSK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CLOUDY	DAWN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(7)	DAYLIGHT	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
	DUSK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	1	0	0	0	0	0	0	0	0	0	0	2	0	0	3
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OTHER	DAWN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(0)	DAYLIGHT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DUSK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

ROAD SURFACE TOTALS 23 2 1 1 1 0 0 0 2 4 0 0 33

MAINE DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING

TINACC30

ACCIDENT SUMMARY INPUT

TYPE OF STUDY: NODES AND LINKS TYPE OF REQUEST: ACCIDENT I & II WITH LINK DETAIL
STUDY PERIOD: FROM MONTH 01 YEAR 93 TO MONTH 12 YEAR 95

INPUT COMMENTS

REQUEST: COMMERCIAL ST FROM PARK ST TO HIGH ST
TOWN(S): PORTLAND

INPUT DATA

ROUTE	COUNTY	FIRST NODE	EXCLUDE FIRST	DISTANCE	SECOND NODE	LAST NODE	EXCLUDE LAST	DISTANCE
0001A	05	7200	0	0.00	7201	7201	0	0.00

MAINE DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING

TINACC30

LINK DETAIL

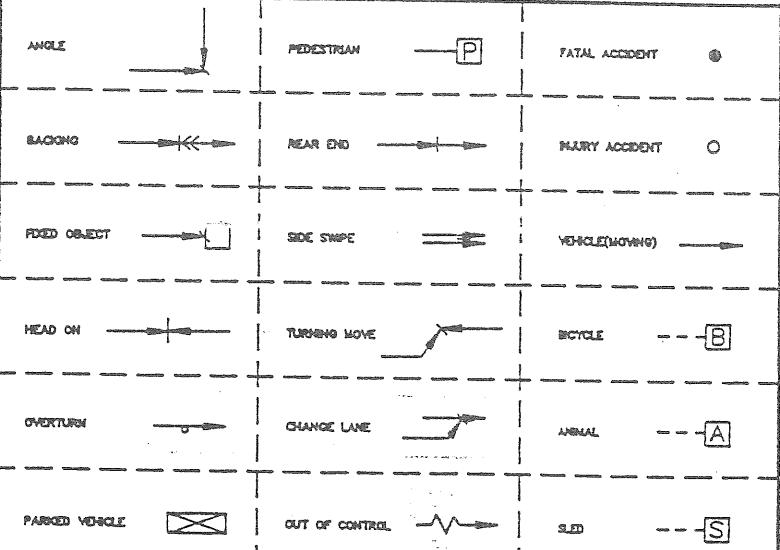
TOWN#	STREET NAME OR ROUTE #	LOW NODE	HIGH NODE	DISTANCE	TOTAL ACCIDENTS	INJURY ACCIDENTS K A B C PD	A C C I D E N T R E P O R T N U M B E R S	R E P O R T N U M B E R S
05170	COMMERCIAL ST	7200	7201	0.1	5	0 0 0 0 2 3	9401702	9428712 9430601
TOTALS--					5	0 0 0 0 2 3		9445869 9525746

COLLISION DIAGRAM

LOCATION Commercial St / High St TOWN Portland SHEET 1 OF 1
 NODE NO(S) 7201 SYSTEM _____ URBAN RURAL R/U _____
 YEARS REVIEWED 1992-1994 PREPARED BY DAF DATE PREPARED 11-14-95

CRITICAL RATE FACTOR: _____ EQUIV. PROP. DAMAGE ACC/YEAR: _____ ACC/MEV: _____

- | | |
|---|---|
| <p>LIGHT CONDITIONS</p> <ol style="list-style-type: none"> 1 DARK 2 DAYLIGHT 3 DUSK 4 DARK (STREET LIGHTS ON) 5 DARK (NO STREET LIGHTS) 6 DARK (STREET LIGHTS OFF) 7 OTHER <p>ROAD CONDITIONS</p> <ol style="list-style-type: none"> 1 DRY 2 WET 3 SNOW, SLUSH - SANDED 4 ICE, PACKED SNOW - SANDED 5 MUDDY 6 DEBRIS 7 OILY 8 SNOW, SLUSH - NOT SANDED 9 ICE, PACKED SNOW - NOT SANDED 10 OTHER <p>APPARENT PHYSICAL CONDITION</p> <ol style="list-style-type: none"> 1 NORMAL 2 UNDER THE INFLUENCE 3 HAD BEEN DRIVING 4 HAD BEEN USING DRUGS 5 ASLEEP 6 FATIGUED 7 ILL 8 HANDICAPPED 9 OTHER | <p>APPARENT CONTRIBUTING FACTORS</p> <ol style="list-style-type: none"> 1 NO IMPROPER ACTION 2 FAIL TO YIELD RIGHT OF WAY 3 ILLEGAL, UNSAFE SPEED 4 FOLLOW TOO CLOSE 5 DISREGARD TRAFFIC CONTROL DEVICE 6 DRIVING LEFT OF CENTER - NO PASSING 7 IMPROPER PASS - OVERTAKING 8 IMPROPER, UNSAFE LANE CHANGE 9 IMPROPER PASSING, START, STOP 10 IMPROPER TURN 11 UNSAFE BACKING 12 NO SIGNAL OR IMPROPER SIGNAL 13 IMPEDING TRAFFIC 14 DRIVER INATTENTION - DISTRACTION 15 DRIVER INEXPERIENCE 16 PEDESTRIAN VIOLATION ERROR 17 PHYSICAL IMPAIRMENT 18 VISION OBSCURED - WINDSHIELD GLASS 19 VISION OBSCURED - SUN, HEADLIGHTS 20 OTHER VISION OBSCUREMENT 30 OTHER HUMAN VIOLATION FACTOR 31 HIT AND RUN 41 DEFECTIVE BRAKES 42 DEFECTIVE TIRE - TIRE FAILURE 43 DEFECTIVE LIGHTS 44 DEFECTIVE SUSPENSION 45 DEFECTIVE STEERING 50 OTHER VEHICLE DEFECT OR FACTOR 51 UNKNOWN <p>INJURY TYPE</p> <ol style="list-style-type: none"> 1 KILLED 2 INCAPACITATING 3 NON-INCAPACITATING 4 POSSIBLE INJURY 5 NO INJURY |
|---|---|



ITEM #	REPORT NUMBER	DATE	TIME	INJURIES				LIGHT COND. #5	ROAD COND. #6	CONTRIBUTING FACTOR				PHYSICAL CONDITION		OTHER
				1	2	3	#25			#15	#16	#17	#18	#19	#20	
	32445	9.26.92	19:07	5	2			4	2	1	16	-	-	1	2	hit a drunk ped
2	43122	12.22.92	16:45	5	5	5		4	1	4	1	14	1	1	1	
	14847	4.25.92	16:40	5	5	5		2	1	20	1			1	1	veh 1 backing from between parked cars
U	31046	9.7.92	10:30	5				2	1	14	1			1	1	veh 1 door left open, parked up hitting unattended vehicle
J	10240	3.4.93	1553	5	5			2	1/2	1	6	51	51	1	1	wet tracking in road showed v-2 was making its turn left of c
'	22172	6.15.93	805	5	5			2	1	2	1			1	1	
1	43887	12.10.93	830	5	5	5		2	1	1	14	51	51	1	1	
'	21003	6.3.93	313	4				6	1	1	1			1	n/a	avoided a cat
9	32325	9.11.94	10:08	5	5	5	5	2	1	1	8			1	1	veh 2 was going to go it then went rt instead
>	36299	10.7.94	17:23	5	4			2	1	3	2			1	1	