

PB# 88-42

**Rt.32 Shopping Center
(Withdrawn)**

35-1-102

Withdrawn 5/27/97

County File No. NW 31 90 M

COUNTY PLANNING REFERRAL

(Mandatory County Planning Review under Article 12-B,
Section 239, Paragraphs 1, m & n, of the
General Municipal Law)

Application of Rte. 32 Associates

for a Site Plan - Within 500' of NYS Rte. 32

County Action: Local Determination

LOCAL MUNICIPAL ACTION

The Above-cited application was:

Denied Approved

Approved subject to County recommendations

.....
(Date of Local Action)

.....
(Signature of Local Official)

This card must be returned to the Orange County Department of Planning
within 7 days of local action.

General Receipt

TOWN OF NEW WINDSOR

555 Union Avenue
New Windsor, N. Y. 12550

10095

Received of

Rt. 32 Associates \$ 25.00

For

Twenty-five and 00 DOLLARS

Planning Board App Fee 100 #88-42

DISTRIBUTION

FUND	CODE	AMOUNT
<u>CR #1001</u>		<u>25.00</u>

By

Pauline H. Townsend

Town Clerk

Title

LOCAL MUNICIPAL ACTION

The Above-cited application was:

Denied Approved

Approved subject to County recommendations

.....
(Date of Local Action)

.....
(Signature of Local Official)

This card must be returned to the Orange County Department of Planning
within 7 days of local action.

General Receipt

10095

TOWN OF NEW WINDSOR

555 Union Avenue
New Windsor, N. Y. 12550

Nov 15 1988

Received of

Rt 32 Associates \$ 25.00

Twenty-five and 00 DOLLARS

For

Planning Board App Fee 100 #88-42

DISTRIBUTION

FUND	CODE	AMOUNT
<u>CR #1001</u>		<u>25.00</u>

By Pauline H. Townsend
Town Clerk

Title

TOWN OF NEW WINDSOR

555 Union Avenue
New Windsor, NY 12553

General Receipt

16351

May 23 1997

Received from

New Windsor Business Park Assoc. \$ 974.00

Nine Hundred Seventy-four and 00/100 DOLLARS

For

Planning Board Engineer's Fee #88-42

DISTRIBUTION:

FUND	CODE	AMOUNT
<u>CR #1224</u>		<u>\$974.00</u>

By Dorothy H. Hansen
Town Clerk

TITLE



555 BLOOMING GROVE TURNPIKE • NEWBURGH, NY 12550-7896 • (914) 562 - 4391

TRAFFIC IMPACT STUDY

FOR

**ROUTE 32 ASSOCIATES
147-39 175TH STREET
JAMAICA, NEW YORK**

**Date: July 1990
Job #88015.04**

TRAFFIC IMPACT STUDY

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SECTION I. INTRODUCTION

A. PROJECT DESCRIPTION

A 53,000± square foot mall is proposed to be constructed in the Town of New Windsor, New York. As shown on the attached Site Plan, the site is located on a 5.7 acre parcel of land situated on the west side of NYS Route 32. Access to the site is proposed via two driveways. Driveway 1 will be located nearest to Vails Gate and will have no restricted movements. Driveway 2 will be located nearest to the City of Newburgh and the exiting left turn movement will be prohibited. Both driveways will form T shaped intersections with Route 32. The Project is expected to be completed in 1991 the design year used for analyses purposes in this study.

B. THE SCOPE OF STUDY

The purpose of this study is to evaluate the site's access and to recommend any roadway improvements which may be required.

On the 25th and 26th of October, 1988, the NYS Department of Transportation conducted a traffic survey at key intersections along Route 32 in the Town of New Windsor. These results were used to create a 1988 count of the existing traffic conditions on Route 32 in the vicinity of the Project site. Data was collected

through field inspections which included roadway geometrics, traffic control, traffic flow characteristic, speed limits and the location of other developments in the area.

The existing traffic volumes were then projected to the project design year of 1991 using an appropriate growth factor to take into account normal background traffic growth in the area. Also estimates of traffic generated by the Washington Green project were made and added to the adjusted traffic volumes creating the 1991 projected external traffic volumes. Estimates of traffic to be generated by the proposed shopping mall were made and added to the 1991 projected external traffic volumes to obtain the 1991 combined traffic volumes.

The projected external traffic volumes in 1991 and the 1991 combined traffic volumes were compared to roadway capacities to determine operating conditions at important locations in the vicinity of the site.

SECTION II. EXISTING CONDITIONS

A. Existing Roadway Network

Access to the site will be provided by NYS Route 32. Below is a brief description of the adjoining roadway network.

Route 32: This NYS highway begins north of the project site and runs south-southwest to an intersection with Route 17 north of Harriman. In the vicinity of the site, this roadway has two (2) 12 foot travel lanes plus the 6 foot shoulder in each direction.

Forge Hill Road: This roadway begins at Route 300 in Vails Gate and travels westward across Routes 32 and 94 to Route 9W. To the west of Route 94, this is a town road, to the east is county Route 74. In the vicinity of the site it has a 30 foot roadway width.

Washington Drive: This 34 foot wide roadway serves 210 two-bedroom condominium units. At present this roadway is owned by the developers of the Washington Green project, Exeter Building Corp.; However, this road is intended to be offered for dedication to the Town of New Windsor in the near future. This road is not a through road, but forms a loop with the solitary means of access to Washington Green from the intersection adjacent to the project site.

B. 1988 Existing Traffic Volumes

Traffic volumes were acquired from the aforementioned NYS Department of Transportation Traffic Volumes Counts. Using this information, the existing traffic volumes were established for O.F.H. road during the peak hour. Based upon review of these existing traffic volumes and the traffic generating characteristics of the proposed mall the following peak hour was determined to be critical with respect to this analysis: Peak PM Highway hour: 4:30 to 5:30 PM. Please refer to figure 2 and 3 for the traffic volumes for all movements for the PM highway hour. Please refer to figure 3 which indicates the level of service for the key movements for Old Forge Hill Road.

C. Key Locations

Based upon a review of the existing traffic volumes and the effects of site generated traffic on the adjoining roadway, the following locations were determined to require detailed traffic analysis:

1. Old Forge Hill Road*
2. Washington Drive
3. Mall entrance 1
4. Mall entrance 2

*Only Old Forge Hill Road was analyzed using the 1988 figures as Washington Drive did not exist at that time.

D. Description of Analysis

To properly identify the existing operating conditions at the key intersection identified previously, it was necessary to perform a capacity analysis. Capacity analysis compares traffic volumes at an intersection to the intersection capacity to determine operating conditions. The capacity analyses were performed in accordance with the procedures described in the 1985 highway capacity manual published by the Transportation Circuit Board.

The terminology used in identifying traffic flow conditions implies levels of service. Level of Service A representing the ideal condition. Level of Service F the worst condition. A Level of Service C is used as a design standard with Level of Service D acceptable during peak periods. Refer to Appendix D for a more detailed discussion on Levels of Service.

The unsignalized intersection capacity analyses utilized in this report for Washington Drive and the mall entrances is a procedure developed for stop and yield controlled intersections. The procedure is based upon the utilization of critical gaps in the major traffic stream and computes a level of service for each individual movement. On Washington Drive it can normally be expected that the uncontrolled major street

traffic will exhibit favorable operating conditions while the side street traffic will experience some delays turning left to cross a major traffic stream.

Utilizing these criteria, a capacity analysis was performed at the key location in the vicinity of the site using the 1988 existing traffic volumes of the peak PM hour.

E. Analysis of Existing Traffic Conditions

A Capacity analysis was conducted at Old Forge Hill Road using the 1988 existing traffic volumes. Shown on Figure 3 are the Levels of Service for the peak PM hour at this intersection. Copies of this analysis can be found in Appendix C attached. The capacity analysis is summarized below.

1. Old Forge Hill Road and Route 32. Presently Route 32 crosses Old Forge Hill Road with one lane in both the north and southbound directions. There is a wide paved shoulder which allows through and right hand turn vehicles to proceed while left hand turn vehicles queue. This intersection is controlled by a pre-timed signal with a cycle of approximately 77 seconds.

The results of the signaled intersection capacity analysis conducted at this location indicate that a level of service of C existed at this intersection in 1988 during the peak PM highway hour.

SECTION III. NO-BUILD ANALYSIS

A. Methodology of Analysis

During this study, traffic volumes on the roadway surrounding the site were obtained from NYSDOT Traffic Counts to determine the 1988 existing traffic volumes for the peak PM hour. These volumes were then analyzed to determine the existing operating conditions at Old Forge Hill Road. Existing traffic volumes were then projected to the design year (1991) using a 2% growth factor to account for normal traffic growth in the area.

Also an estimate of the traffic to be generated by the Washington Green development was made and added to the projected traffic volumes. The resulting 1991 projected external traffic volumes were then compared to roadway capacities to determine future traffic conditions without the proposed mall.

B. 1991 Projected External Traffic Volumes

In order to account for an increase in traffic due to regional traffic growth in the area. The 1988 existing traffic volumes were increased by factor of 2% per year to reflect normal annual traffic growth in the vicinity of the site.

In addition, estimates of the traffic generated by the

Washington Green project were made and incorporated into the projected traffic volumes. While the design year for the Washington Green development is 1995 a conservative approach was taken in determining the traffic generated by this project. It was assumed that all 210 two bedroom condominium units will be constructed and in use in 1991.

Below is a listing of the traffic volumes generated by the full development of the Washington Green project.

WASHINGTON GREEN
PM PEAK HOUR

IN	OUT	
.37	.18	Passenger cars per unit
<u>210</u>	<u>210</u>	Units
78	38	

The 1991 projected external traffic volumes which take into account normal regional traffic growth as well as the additional traffic generated by other developments in the area are shown in Figures number 5 and 6 for the peak PM highway hour.

C. No-Build Traffic Analysis

Capacity analysis were performed for Old Forge Hill Road and Washington Drive using the 1991 project external traffic volumes for the PM peak hour. Results of the capacity analysis at these intersections are indicated below and the corresponding peak hour levels of services are summarized in

Figures No. 6 and No. 7.

1. Old Forge Hill Road and Route 32. Results of the signalized capacity analysis conducted at this location using the 1991 projected external traffic volumes indicate that a level of service E will be experienced at this location during the peak PM highway hour. This level of service during the peak PM highway hour indicates the effects of normal traffic growth in the area as well as the traffic volumes generated by the Washington Green project. Refer to Appendix A Figures 4 and 6.

2. Washington Drive and Route 32. Results of the unsignalized capacity analysis conducted at this intersection using the 1991 projected external traffic volumes indicates that a level of service E will be experienced by the east bound left hand turn movement during the peak PM highway hour, while a level of service of A will be experienced by the north and south bound Route 32 through traffic. Refer to Appendix A Figures 5 and 7.

SECTION IV. SITE IMPACT ANALYSIS

A. Hourly Trip Generation Rates

The ability of the subject roadways to process future traffic volumes during the peak hour is estimated by comparing the anticipated traffic volumes to the roadway's capacity. In order to perform this comparison, it is necessary to combine the projected external traffic volumes with the anticipated new traffic which is generated by the proposed development. The site generated traffic volumes or the estimated number of vehicular trips entering and exiting the shopping center is generally expressed in terms of trips per hour per 1,000 SF of total floor area.

The site generated traffic volumes for the peak hours of analysis were developed from data published by the Institute of Transportation Engineers (ITE). Based upon this information, it is anticipated that the project will generate 121 entering vehicles and 106 exiting vehicles during peak PM highway hour.

B. Shopper Traffic

The methodology used in this study in assigning the site generated traffic volumes to the existing roadway network are based upon the arrival/departure distribution shown in Figure number 8. This distribution was obtained assuming that not

all trips to the proposed shopping center will be new trips. This assumption is generally termed a "shopper credit" and takes into account that portion of vehicular trips that would have been seen on the existing roadway network even if this site were not developed. Many of these trips are already being made to other existing commercial developments in the area along Route 32. Additionally it takes into account that portion of future trips to the proposed shopping center which will be a secondary part of a link trip, for example: from work to the shopping center to home trip by commuter traffic that would have passed by the site regardless of whether or not the shopping center is constructed.

A 25% shopper credit has been factored into the site generated traffic. Shown in Table number 1 in Appendix B are the hourly trip generation rates and proposed site generated traffic volumes. This table also indicates the amount of anticipated new traffic to be added to the existing roadway network.

C. Arrival/Departure Distribution

The arrival/departure distribution of site traffic was developed using the existing traffic volume distribution observed at the local roadway network and adjusted with the population densities in the area. A distribution of traffic to and from the proposed site shown on Figure number 8 in Appendix A of the study.

D. The 1991 combined traffic volumes.

The adjusted site generated traffic volumes were added to the 1991 projected external traffic volumes using the arrival/departure distribution. This resulted in the 1991 combined traffic volumes. These volumes are shown on Figure numbers 9,10,11,12 for the peak PM hour.

E. Build Analysis

In order to determine what improvements if any would be needed to serve future traffic volumes, capacity analysis were conducted at Old Forge Hill Road, Washington Drive, and the two proposed mall entrances to Route 32 using the 1991 combined traffic volumes for the peak PM hour. The results of the capacity analysis conducted at each intersection are summarized below and the peak hour levels of service are summarized in Figures 7, 12, and 13 in Appendix A of this study.

1. Old Forge Hill Road and Route 32. The results of the capacity analysis indicate that this intersection would be over capacity for the eastbound and southbound left turns. In order to alleviate this condition, separate left turn lanes would be installed in all directions and the traffic signal would be re-phased to include an exclusive left turn phase for all directions.

2. Route 32 and Washington Drive. The results of the unsignalized capacity analysis conducted at this intersection using the 1991 combined traffic volumes indicate that a level of service of "E" will be experienced in the left turn movement onto Route 32. (This left turn movement experienced the same level of service in the No-Build Analysis.)

3. Route 32 and Proposed Mall Entrances. The results of the unsignalized capacity analysis conducted at this intersection indicate that acceptable levels of service will be experienced in all directions except for the left turn onto Route 32. This condition is due to the existing traffic volumes on Route 32 which are minimally effected by the additional traffic generated from this Project.

SECTION V. CONCLUSION

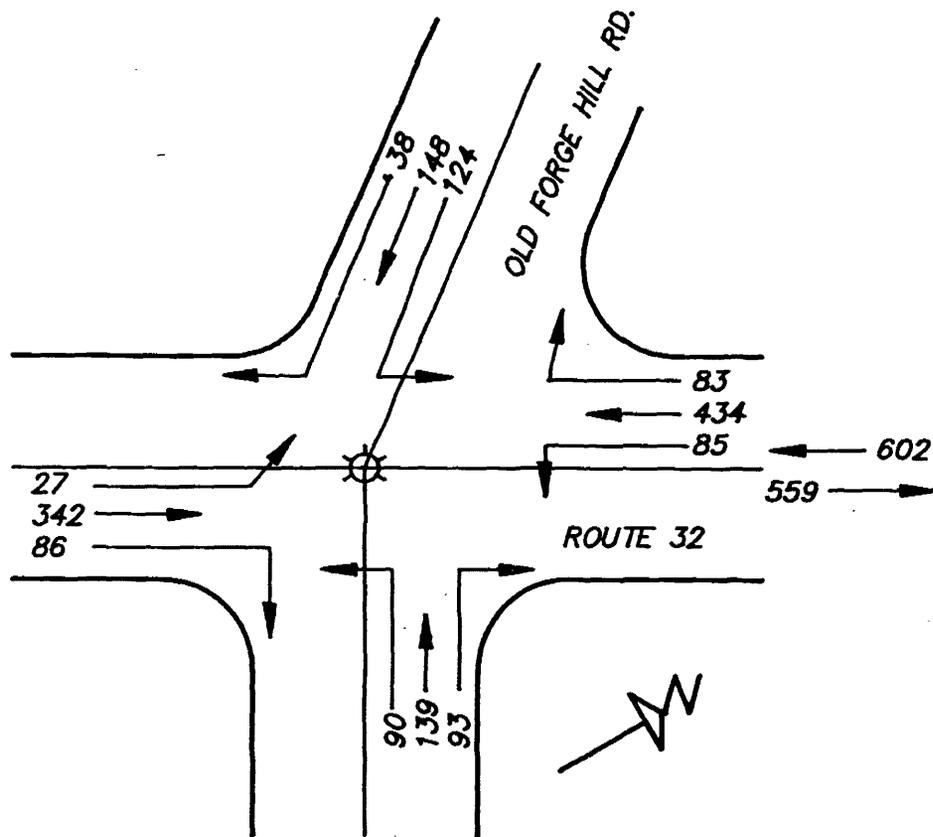
A. Summary

Based upon the analyses contained in this report, it is shown that in 1991 the signalized intersection at Old Forge Hill Road and Route 32 will experience unacceptable levels of service. Also, all unsignalized roadway access will experience unacceptable left turn movements onto Route 32. This is due to normal regional growth and the anticipated extra traffic from Washington Green.

Therefore in the design year, 1991, the traffic conditions will be compromised, however the deficiencies are not as a result of traffic changes generated by this proposed project, but as a result of the geometry and capacities of the present roadway and interchange configurations serving the overall region.

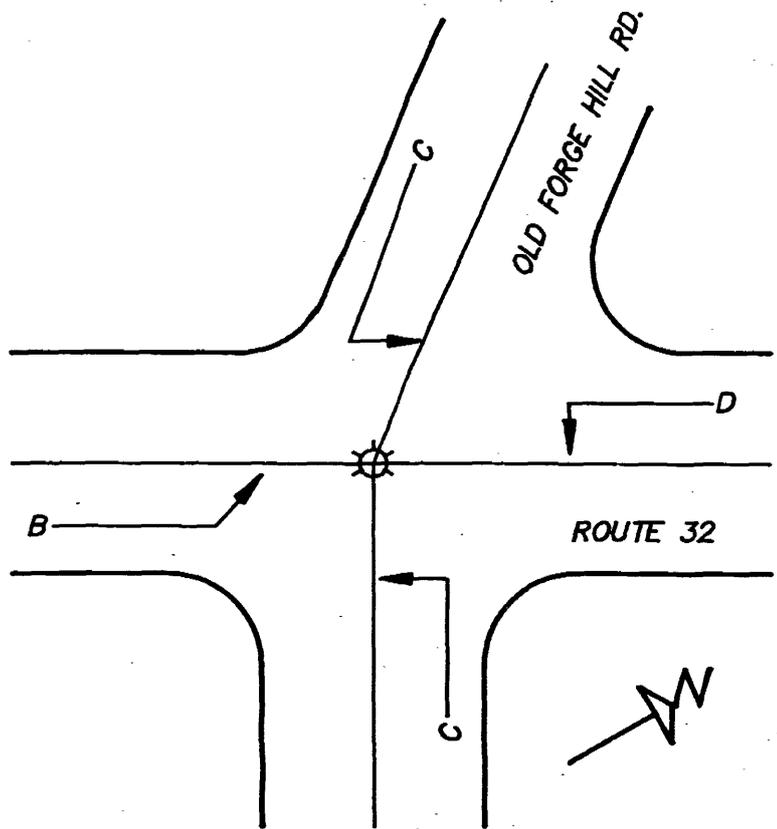
APPENDIX A

FIGURES



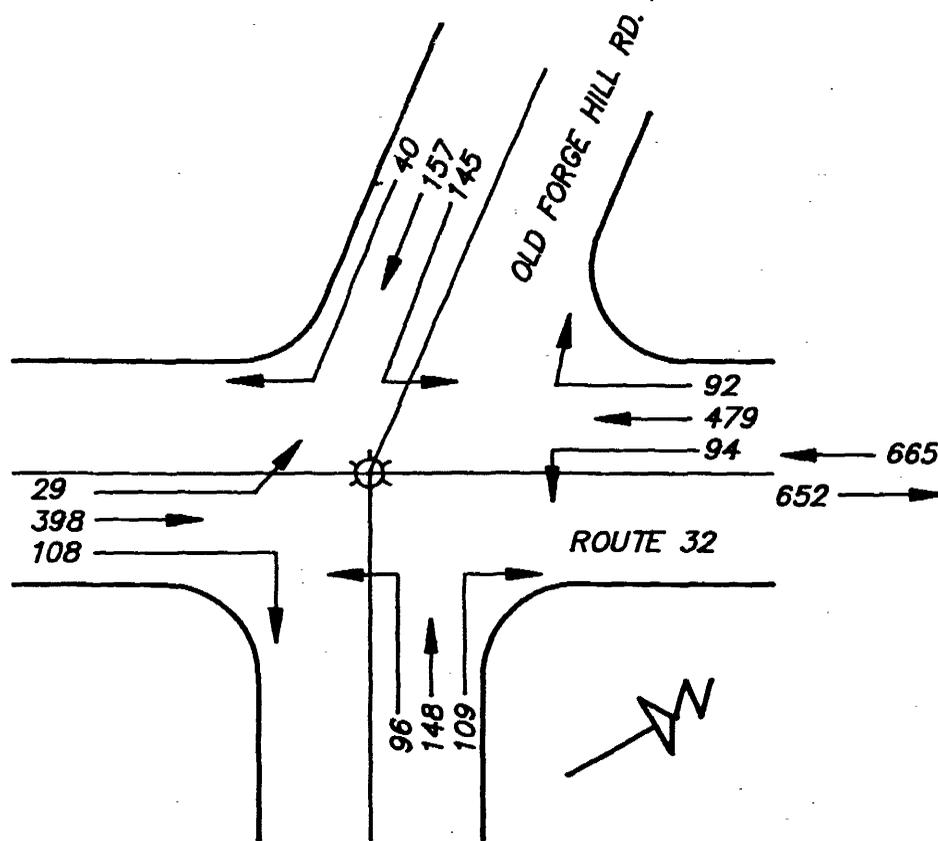
TRAFFIC VOLUMES
 OLD FORGE HILL ROAD
 1988 "PM PEAK"

FIGURE NO. 2



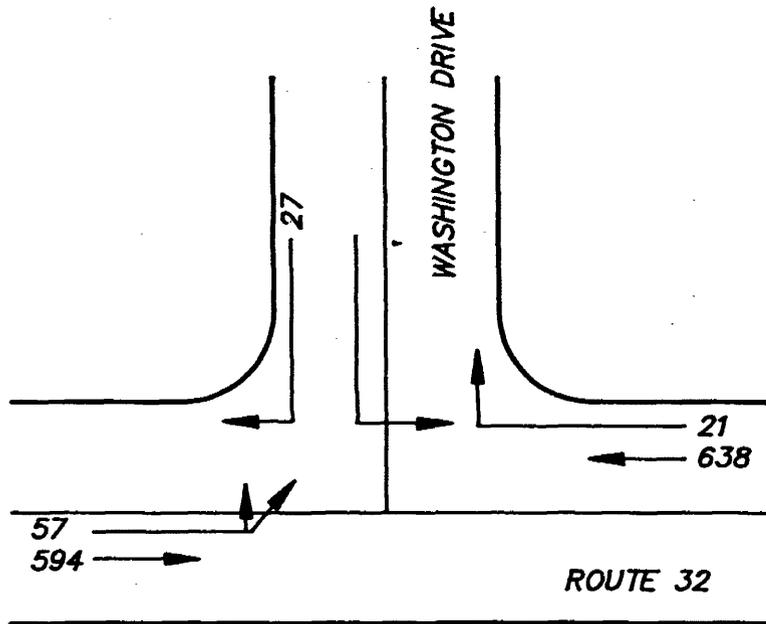
**LEVEL OF SERVICE DIAGRAM
OLD FORGE HILL ROAD
1988 "PM PEAK"**

FIGURE NO. 3



TRAFFIC VOLUMES
 OLD FORGE HILL ROAD
 1991 "PM PEAK"
 "NO BUILD"

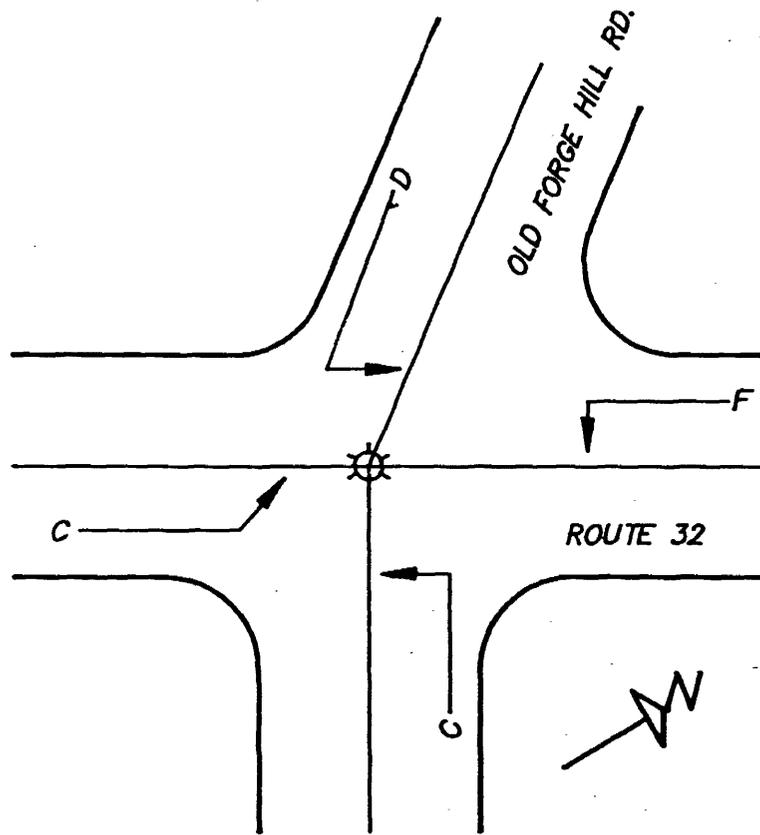
FIGURE NO. 4



**TRAFFIC VOLUMES
WASHINGTON DRIVE
1991 "NO BUILD"**

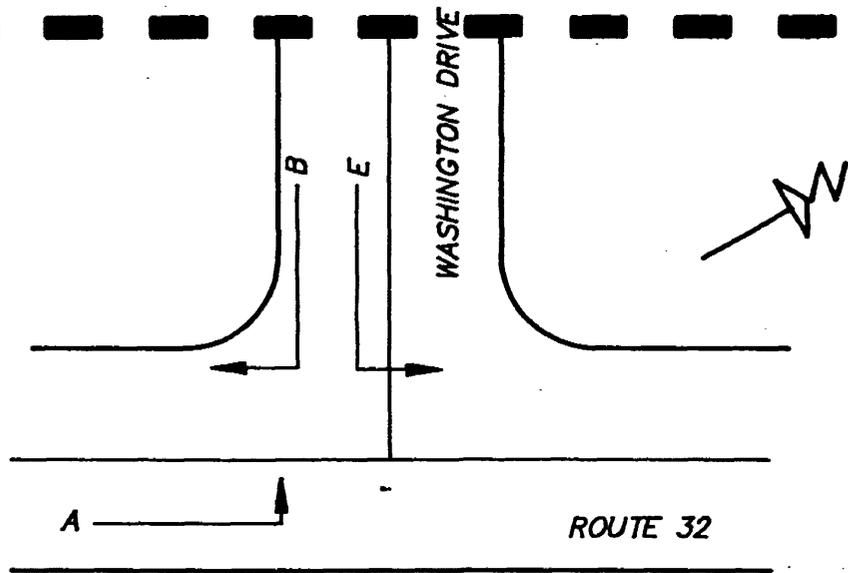


FIGURE NO. 5

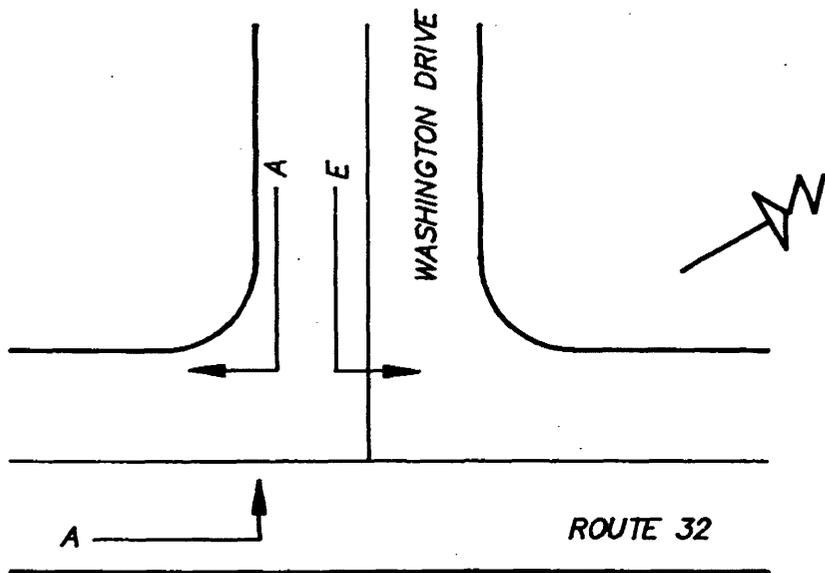


LEVEL OF SERVICE DIAGRAM
OLD FORGE HILL ROAD
1991 "PM PEAK"
"NO BUILD"

FIGURE NO. 6



**LEVEL OF SERVICE DIAGRAM
WASHINGTON DRIVE
1991 "BUILD"**



**LEVEL OF SERVICE DIAGRAM
WASHINGTON DRIVE
1991 "NO BUILD"**

FIGURE NO. 7

SITE GENERATED ARRIVAL - DEPARTURE DISTRIBUTION

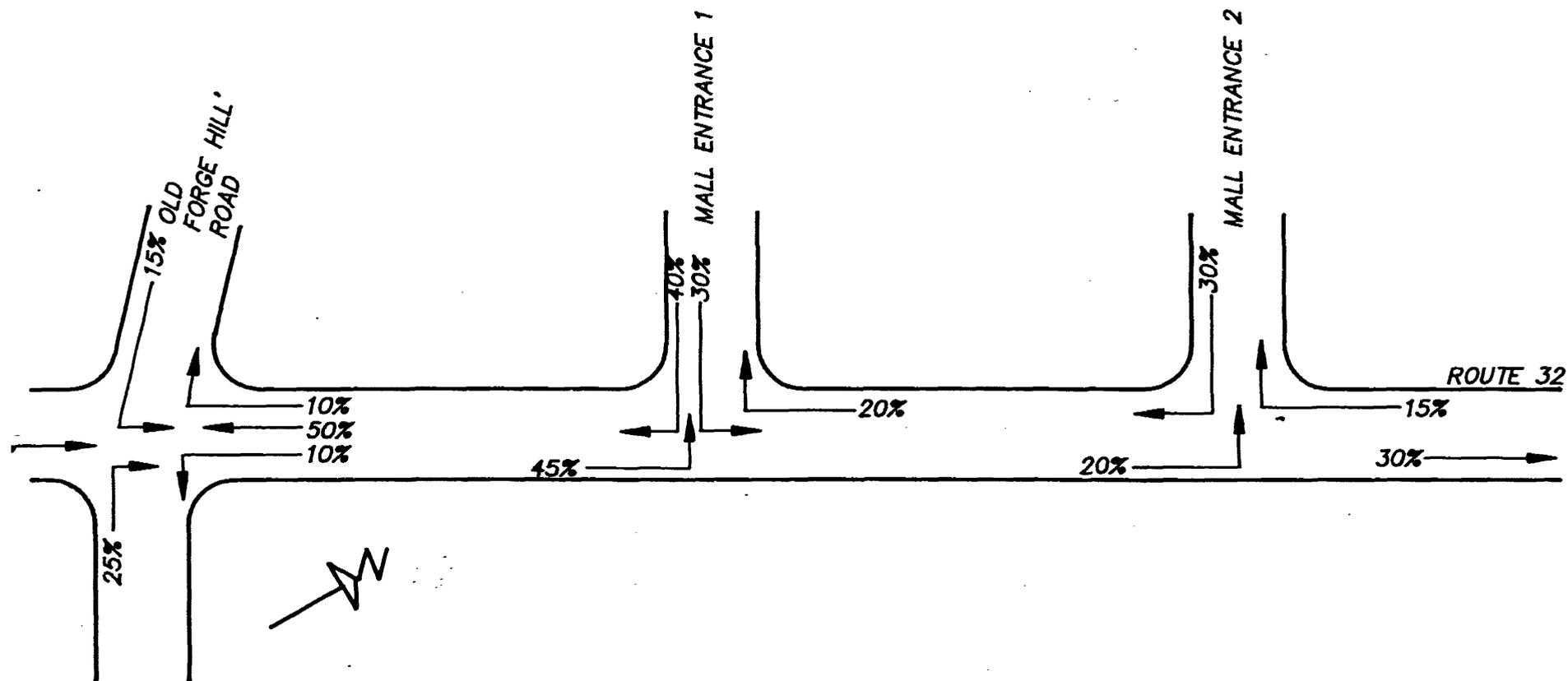
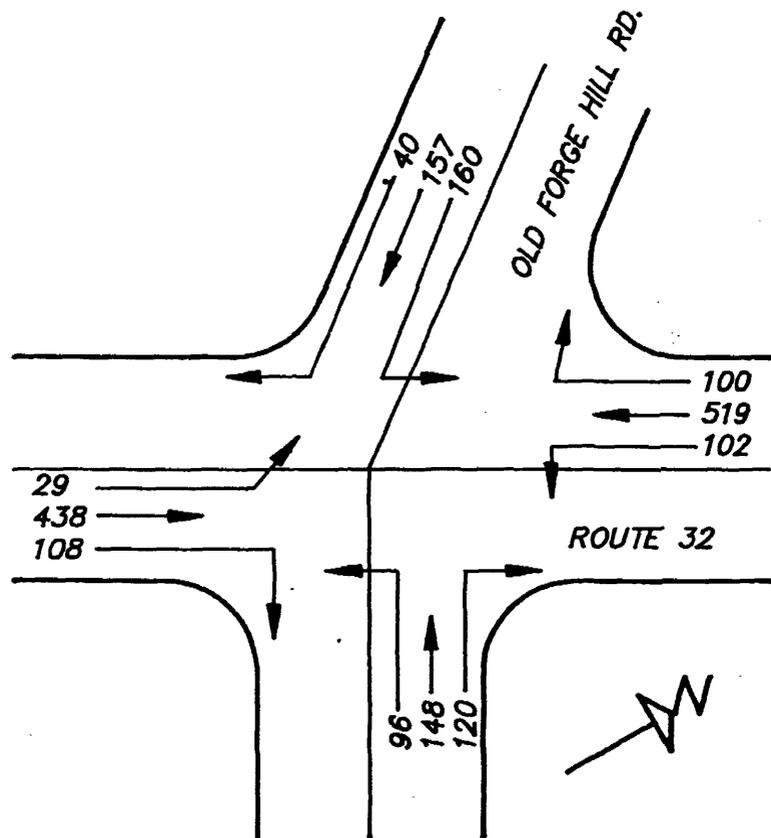
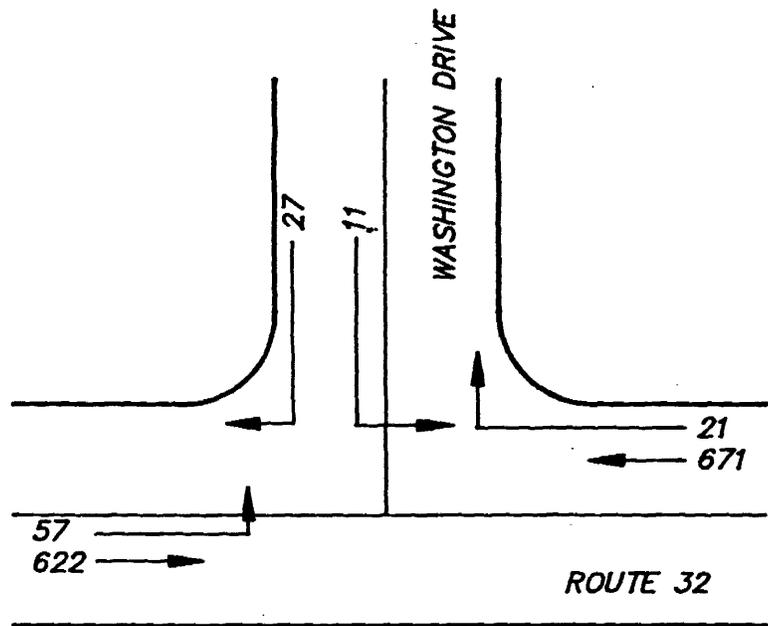


FIGURE NO. 8



**TRAFFIC VOLUMES
 OLD FORGE HILL ROAD
 1991 "BUILD"**

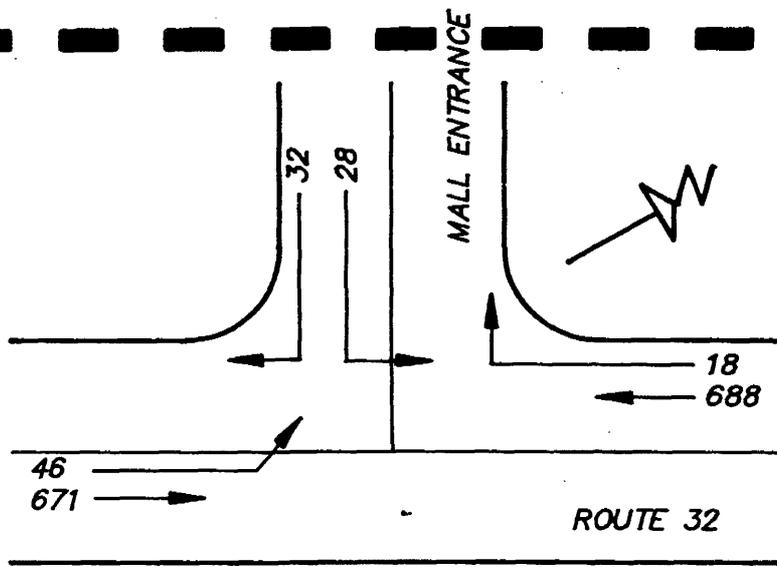
FIGURE NO. 9



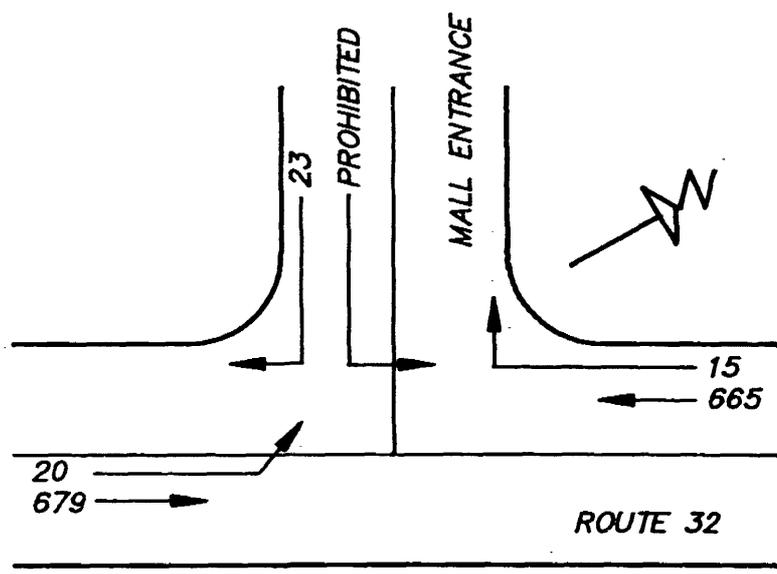
**TRAFFIC VOLUMES
WASHINGTON DRIVE
1991 "BUILD"**



FIGURE NO. 10

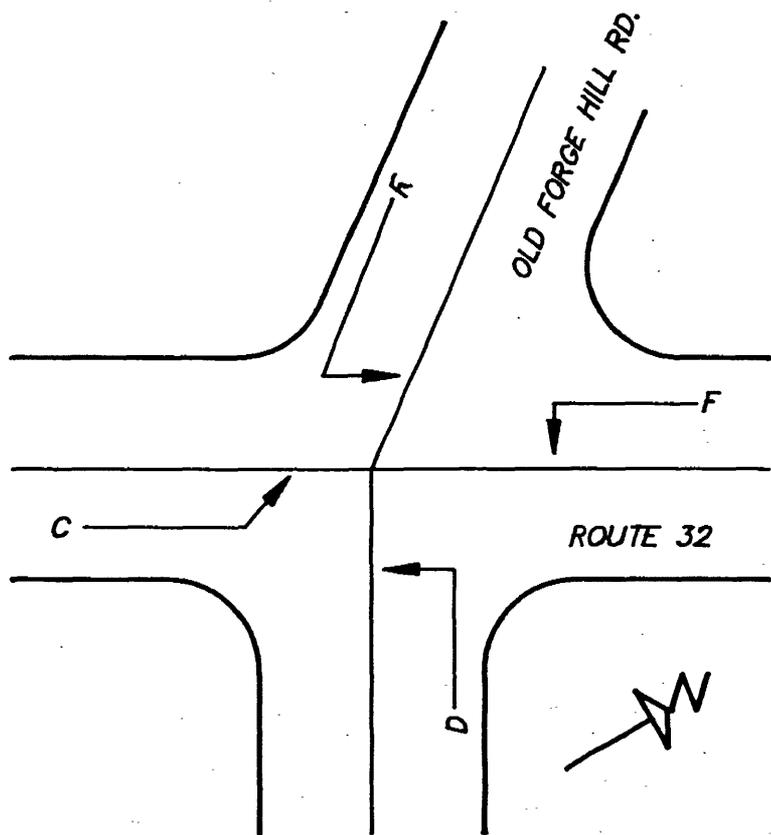


TRAFFIC VOLUMES
MALL 1
1991 "BUILD"



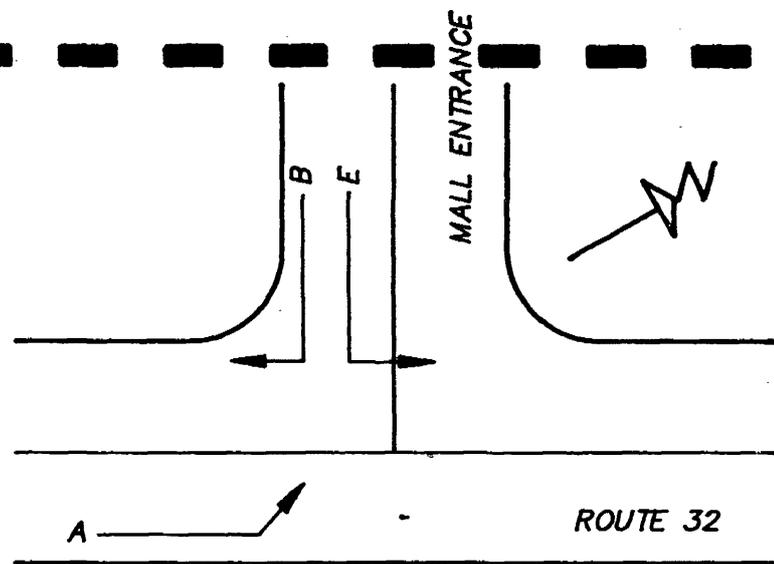
TRAFFIC VOLUMES
MALL 2
1991 "BUILD"

FIGURE NO. 11

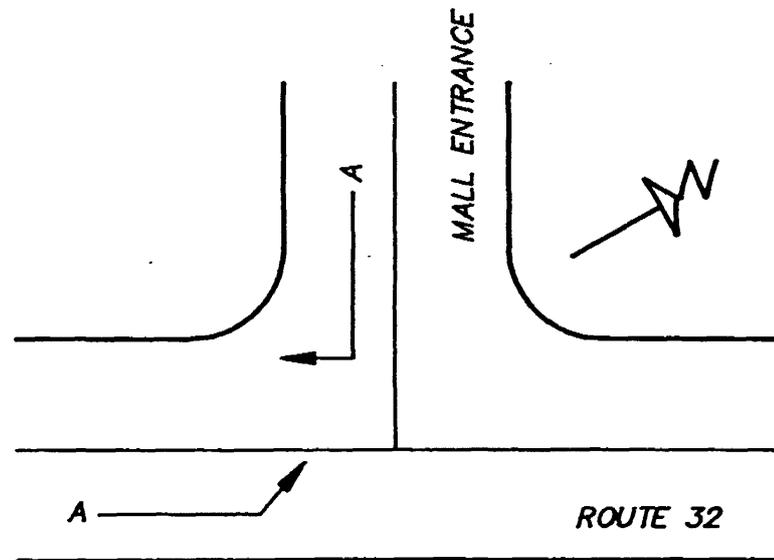


**LEVEL OF SERVICE DIAGRAM
OLD FORGE HILL ROAD
1991 "BUILD"**

FIGURE NO. 12



**LEVEL OF SERVICE DIAGRAM
MALL 1
1991 "BUILD"**



**LEVEL OF SERVICE DIAGRAM
MALL 2
1991 "BUILD"**

FIGURE NO. 13

APPENDIX B

TABLES

TABLE NO. 1

HOURLY TRIP GENERATION RATES

	IN	AM OUT	TOTAL	IN	PM OUT	TOTAL
Restaurant (225 seats)	3	3	7	32	14	46
Retail 47,138 SF	37	16	53	89	92	181
Total	40	20	60	121	106	227

* Restaurant Rates
per seat

	IN	AM OUT	IN	PM OUT
	.01	.02	.14	.06

* Retail Rates
per 1000 SF

	IN	AM OUT	IN	PM OUT
	.78	.34	1.88	1.96

APPENDIX C
CAPACITY ANALYSES

1988

OLD FORGE HILL ROAD

AND

ROUTE 32

1985 HCM: SIGNALIZED INTERSECTIONS

SUMMARY REPORT

INTERSECTION..Forge Hill Road/Route 32

AREA TYPE.....CBD

ANALYST.....CDF

DATE.....7/23/90

TIME.....1988 pm

COMMENT.....

	VOLUMES					GEOMETRY							
	EB	WB	NB	SB		EB	WB	NB	SB				
LT	124	90	27	85	:	LTR	12.0	LTR	12.0	LTR	12.0	LTR	12.0
TH	148	139	342	434	:		12.0		12.0		12.0		12.0
RT	38	93	86	83	:		12.0		12.0		12.0		12.0
RR	6	14	13	12	:		12.0		12.0		12.0		12.0
					:		12.0		12.0		12.0		12.0
					:		12.0		12.0		12.0		12.0

	ADJUSTMENT FACTORS									
	GRADE (%)	HV (%)	ADJ Y/N	PKG Nm	BUSES Nb	PHF	FEDS	PED. Y/N	BUT. min T	ARR. TYPE
EB	0.00	2.00	N	0	0	0.90	5	N	13.8	3
WB	0.00	2.00	N	0	0	0.90	5	N	13.8	3
NB	0.00	2.00	N	0	0	0.90	5	N	13.8	3
SB	0.00	2.00	N	0	0	0.90	5	N	13.8	3

SIGNAL SETTINGS										CYCLE LENGTH = 77.0				
		PH-1	PH-2	PH-3	PH-4			PH-1	PH-2	PH-3	PH-4			
EB	LT	X				NB	LT	X						
	TH	X					TH	X						
	RT	X					RT	X						
	PD						PD							
WB	LT	X				SB	LT	X						
	TH	X					TH	X						
	RT	X					RT	X						
	PD						PD							
GREEN	26.0	0.0	0.0	0.0	GREEN	40.0	0.0	0.0	0.0	0.0				
YELLOW	5.5	0.0	0.0	0.0	YELLOW	5.5	0.0	0.0	0.0	0.0				

LEVEL OF SERVICE							
	LANE GRP.	V/C	G/C	DELAY	LOS	APP. DELAY	APP. LOS
EB	LTR	0.816	0.370	24.9	C	24.9	C
WB	LTR	0.750	0.370	20.7	C	20.7	C
NB	LTR	0.686	0.552	11.4	B	11.4	B
SB	LTR	0.977	0.552	34.4	D	34.4	D

INTERSECTION: Delay = 23.9 (sec/veh) V/C = 0.912 LOS = C

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... Forge Hill Road

NAME OF THE NORTH/SOUTH STREET..... Route 32

AREA TYPE..... CBD

NAME OF THE ANALYST..... CDF

DATE OF THE ANALYSIS..... 7/23/90

TIME PERIOD ANALYZED..... 1988 pm

OTHER INFORMATION:

TRAFFIC VOLUMES

	EB	WB	NB	SB
LEFT	124	90	27	85
THRU	148	139	342	434
RIGHT	38	93	86	83
RTOR	6	14	13	12

(RTOR volume must be less than or equal to RIGHT turn volumes.)

INTERSECTION GEOMETRY

NUMBER OF LANES PER DIRECTION INCLUDING TURN BAYS:

EASTBOUND = 1 WESTBOUND = 1 NORTHBOUND = 1 SOUTHBOUND = 1

LANE	EB		WB		NB		SB	
	TYPE	WIDTH	TYPE	WIDTH	TYPE	WIDTH	TYPE	WIDTH
1	LTR	12.0	LTR	12.0	LTR	12.0	LTR	12.0
2								
3								
4								
5								
6								

- L - EXCLUSIVE LEFT LANE
- LT - LEFT/THROUGH LANE
- LR - LEFT/RIGHT ONLY LANE
- LTR - LEFT/THROUGH/RIGHT LANE
- T - EXCLUSIVE THROUGH LANE
- TR - THROUGH/RIGHT LANE
- R - EXCLUSIVE RIGHT LANE

ADJUSTMENT FACTORS

	GRADE (%)	HEAVY VEH. (%)	ADJACENT PKG (Y/N)	BUSES (Nm)	BUSES (Nb)	PHF
EASTBOUND	0.00	2.00	N	0	0	0.90
WESTBOUND	0.00	2.00	N	0	0	0.90
NORTHBOUND	0.00	2.00	N	0	0	0.90
SOUTHBOUND	0.00	2.00	N	0	0	0.90

Nm = number of parking maneuvers/hr; Nb = number of buses stopping/hr

	CONFLICTING PEDS (peds/hour)	PEDESTRIAN BUTTON (Y/N)	PEDESTRIAN BUTTON (min T)	ARRIVAL TYPE
EASTBOUND	5	N	13.8	3
WESTBOUND	5	N	13.8	3
NORTHBOUND	5	N	13.8	3
SOUTHBOUND	5	N	13.8	3

min T = minimum green time for pedestrians

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... Forge Hill Road

SIGNAL SETTINGS - OPERATIONAL ANALYSIS

PRETIMED LOST TIME/PHASE = 3.0 CYCLE LENGTH = 77.0

EAST/WEST PHASING

	PHASE-1	PHASE-2	PHASE-3	PHASE-4
EASTBOUND				
LEFT	X			
THRU	X			
RIGHT	X			
PEDS				
WESTBOUND				
LEFT	X			
THRU	X			
RIGHT	X			
PEDS				
NORTHBOUND RT	X			
SOUTHBOUND RT	X			
GREEN	26.0	0.0	0.0	0.0
YELLOW + ALL RED	5.5	0.0	0.0	0.0

NORTH/SOUTH PHASING

	PHASE-1	PHASE-2	PHASE-3	PHASE-4
NORTHBOUND				
LEFT	X			
THRU	X			
RIGHT	X			
PEDS				
SOUTHBOUND				
LEFT	X			
THRU	X			
RIGHT	X			
PEDS				
EASTBOUND RT	X			
WESTBOUND RT	X			
GREEN	40.0	0.0	0.0	0.0
YELLOW + ALL RED	5.5	0.0	0.0	0.0

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... Forge Hill Road
 NAME OF THE NORTH/SOUTH STREET... Route 32

VOLUME ADJUSTMENT WORKSHEET

	MVT. VOL.	PHF	ADJ. VOL.	LANE GRP.	LANE GRP. NO. VOL. LN	LANE UTIL. FACT.	GROWTH FACT.	ADJ. GRP. VOL.	PROP LT	PROP RT
EB										
LT	124	0.90	138							
TH	148	0.90	164	LTR	337 1	1.000	1.000	337	0.41	0.10
RT	38	0.90	35							
WB										
LT	90	0.90	100							
TH	139	0.90	154	LTR	342 1	1.000	1.000	342	0.29	0.26
RT	93	0.90	87							
NB										
LT	27	0.90	30							
TH	342	0.90	380	LTR	492 1	1.000	1.000	492	0.06	0.17
RT	86	0.90	82							
SB										
LT	85	0.90	94							
TH	434	0.90	482	LTR	656 1	1.000	1.000	656	0.14	0.12
RT	83	0.90	79							

* Denotes a Defacto Left Turn Lane Group

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... Forge Hill Road
 NAME OF THE NORTH/SOUTH STREET... Route 32
 DATE AND TIME OF THE ANALYSIS.... 7/23/90 ; 1988 pm
 OTHER INFORMATION:

SUPPLEMENTARY WORKSHEET FOR LEFT-TURN ADJUSTMENT FACTOR

INPUT VARIABLES	EB	WB	NB	SB
Cycle Length, C (sec)	77.0	77.0	77.0	77.0
Effective Green, G (sec)	28.5	28.5	42.5	42.5
Number of Lanes, N	1	1	1	1
Total Approach Flow Rate, Va (vph)	337	342	492	656
Mainline Flow Rate, Vm (vph)	200	242	462	561
Left-Turn Flow Rate, Vlt (vph)	138	100	30	94
Proportion of LT, Plt	0.408	0.293	0.061	0.144
Opposing Lanes, No	1	1	1	1
Opposing Flow Rate, Vo (vph)	242	200	561	462
Prop. of LT in Opp. Vol., Plto	0.000	0.000	0.000	0.000
COMPUTATIONS	EB	WB	NB	SB
$Sop = (1800No) / (1 + Plto((400 + Vm) / (1400 - Vm)))$	1800	1800	1800	1800
$Yo = Vo / Sop$	0.134	0.111	0.312	0.256
$Gu = (G - C * Yo) / (1 - Yo)$	20.975	22.449	26.861	30.603
$Fs = (875 - 0.625Vo) / 1000$	0.724	0.750	0.524	0.587
$P1 = Plt(1 + ((N - 1)G) / (Fs * Gu + 4.5))$	0.408	0.293	0.061	0.144
$Gq = G - Gu$	7.525	6.051	15.639	11.897
$Pt = 1 - P1$	0.592	0.707	0.939	0.856
$Gf = 2Pt(1 - (Pt * 0.5Gq)) / P1$	2.496	3.139	11.965	7.174
$E1 = 1800 / (1400 - Vo)$	1.55	1.50	2.15	1.92
$Fm = Gf / G + (Gu / G)(1 / (1 + P1(E1 - 1))) + (2 / G)(1 + P1)$	0.787	0.888	0.922	0.859
$Flt = (Fm + N - 1) / N$	0.787	0.888	0.922	0.859

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... Forge Hill Road
 NAME OF THE NORTH/SOUTH STREET... Route 32
 DATE AND TIME OF THE ANALYSIS.... 7/23/90 ; 1988 pm
 OTHER INFORMATION:

SATURATION FLOW ADJUSTMENT WORKSHEET

	IDEAL											ADJ.
	SAT.	NO.	f	f	f	f	f	f	f	f	f	SAT.
	FLOW	LNS	W	HV	G	p	BB	A	RT	LT	FLOW	
EB												
LTR	1800	1	1.000	0.990	1.000	1.000	1.000	0.900	0.886	0.787	1117	
WB												
LTR	1800	1	1.000	0.990	1.000	1.000	1.000	0.900	0.865	0.888	1232	
NB												
LTR	1800	1	1.000	0.990	1.000	1.000	1.000	0.900	0.877	0.922	1297	
SB												
LTR	1800	1	1.000	0.990	1.000	1.000	1.000	0.900	0.883	0.859	1217	

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... Forge Hill Road
 NAME OF THE NORTH/SOUTH STREET... Route 32
 DATE AND TIME OF THE ANALYSIS.... 7/23/90 ; 1988 pm
 OTHER INFORMATION:

	ADJ. FLOW RATE (v)	ADJ. SAT. FLOW RATE (s)	FLOW RATIO (v/s)	GREEN RATIO (g/C)	LANE GROUP CAPACITY (c)	v/c RATIO
EB						
LTR	337	1117	0.302	0.370	414	0.816 *
WB						
LTR	342	1232	0.277	0.370	456	0.750
NB						
LTR	492	1297	0.379	0.552	716	0.686
SB						
LTR	656	1217	0.539	0.552	671	0.977 *

Cycle Length, C = 77.0 sec.

Sum (v/s) critical = 0.841

Lost Time Per Cycle, L = 6.0 sec.

X critical = 0.912

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... Forge Hill Road

NAME OF THE NORTH/SOUTH STREET... Route 32

DATE AND TIME OF THE ANALYSIS.... 7/23/90 ; 1988 pm

OTHER INFORMATION:

LEVEL-OF-SERVICE WORKSHEET

	v/c	g/C	CYCLE	DELAY	LANE	DELAY	LANE	LANE	DELAY	LOS
	RATIO	RATIO	LEN.	d	GROUP	d	PROG. GRP.	GRP.	BY	BY
				1	CAP.	2	FACT. DELAY	LOS	APP.	APP.
EB										
LTR	0.816	0.370	77.0	16.6	414	8.3	1.00 24.9	C	24.9	C
WB										
LTR	0.750	0.370	77.0	16.1	456	4.7	1.00 20.7	C	20.7	C
NB										
LTR	0.686	0.552	77.0	9.5	716	1.9	1.00 11.4	B	11.4	B
SB										
LTR	0.977	0.552	77.0	12.7	671	21.6	1.00 34.4	D	34.4	D

Intersection Delay = 23.9 (sec/veh) Intersection LOS = C

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... Forge Hill Road
 NAME OF THE NORTH/SOUTH STREET... Route 32
 DATE AND TIME OF THE ANALYSIS.... 7/23/90 ; 1988 pm
 OTHER INFORMATION:

OLD FORGE HILL ROAD

AND

ROUTE 32

"NO BUILD"

1991

1985 HCM: SIGNALIZED INTERSECTIONS

SUMMARY REPORT

 INTERSECTION: Forge Hill Road/Route 32
 AREA TYPE: CBD
 ANALYST: CDF
 DATE: 7/23/90
 TIME: 1991
 COMMENT: No Build

	VOLUMES				:	GEOMETRY			
	EB	WB	NB	SB		EB	WB	NB	SB
LT	145	96	29	94	:	LTR 12.0	LTR 12.0	LTR 12.0	LTR 12.0
TH	157	148	398	479	:	12.0	12.0	12.0	12.0
RT	40	99	108	92	:	12.0	12.0	12.0	12.0
RR	6	14	13	12	:	12.0	12.0	12.0	12.0
					:	12.0	12.0	12.0	12.0
					:	12.0	12.0	12.0	12.0

	ADJUSTMENT FACTORS									
	GRADE (%)	HV (%)	ADJ Y/N	PKG Nm	BUSES Nb	PHF	PEDS	FED. Y/N	BUT. min T	ARR. TYPE
EB	0.00	2.00	N	0	0	0.90	5	N	8.5	3
WB	0.00	2.00	N	0	0	0.90	5	N	8.5	3
NB	0.00	2.00	N	0	0	0.90	5	N	8.5	3
SB	0.00	2.00	N	0	0	0.90	5	N	8.5	3

	SIGNAL SETTINGS				CYCLE LENGTH = 77.0			
	PH-1	PH-2	PH-3	PH-4	PH-1	PH-2	PH-3	PH-4
EB	LT X				NB	LT X		
	TH X					TH X		
	RT X					RT X		
	PD					PD		
WB	LT X				SB	LT X		
	TH X					TH X		
	RT X					RT X		
	PD					PD		
GREEN	26.0	0.0	0.0	0.0	GREEN	40.0	0.0	0.0
YELLOW	5.5	0.0	0.0	0.0	YELLOW	5.5	0.0	0.0

	LEVEL OF SERVICE						
	LANE GRP.	V/C	G/C	DELAY	LOS	APP. DELAY	APP. LOS
EB	LTR	0.938	0.370	39.4	D	39.4	D
WB	LTR	0.811	0.370	24.0	C	24.0	C
NB	LTR	0.826	0.552	16.4	C	16.4	C
SB	LTR	1.157	0.552	106.3	F	106.3	F

INTERSECTION: Delay = 53.9 (sec/veh) V/C = 1.069 LOS = E

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... Forge Hill Road

NAME OF THE NORTH/SOUTH STREET..... Route 32

AREA TYPE..... CBD

NAME OF THE ANALYST..... CDF

DATE OF THE ANALYSIS..... 7/23/90

TIME PERIOD ANALYZED..... 1991

OTHER INFORMATION:

No Build

TRAFFIC VOLUMES

	EB	WB	NB	SB
LEFT	145	96	29	94
THRU	157	148	398	479
RIGHT	40	99	108	92
RTOR	6	14	13	12

(RTOR volume must be less than or equal to RIGHT turn volumes.)

NUMBER OF LANES PER DIRECTION INCLUDING TURN BAYS:

EASTBOUND = 1 WESTBOUND = 1 NORTHBOUND = 1 SOUTHBOUND = 1

LANE	EB		WB		NB		SB	
	TYPE	WIDTH	TYPE	WIDTH	TYPE	WIDTH	TYPE	WIDTH
1	LTR	12.0	LTR	12.0	LTR	12.0	LTR	12.0
2								
3								
4								
5								
6								

- L - EXCLUSIVE LEFT LANE
- LT - LEFT/THROUGH LANE
- LR - LEFT/RIGHT ONLY LANE
- LTR - LEFT/THROUGH/RIGHT LANE
- T - EXCLUSIVE THROUGH LANE
- TR - THROUGH/RIGHT LANE
- R - EXCLUSIVE RIGHT LANE

ADJUSTMENT FACTORS

	GRADE (%)	HEAVY VEH. (%)	ADJACENT PKG Y/N	BUSES (Nm)	BUSES (Nb)	PHF
EASTBOUND	0.00	2.00	N	0	0	0.90
WESTBOUND	0.00	2.00	N	0	0	0.90
NORTHBOUND	0.00	2.00	N	0	0	0.90
SOUTHBOUND	0.00	2.00	N	0	0	0.90

Nm = number of parking maneuvers/hr; Nb = number of buses stopping/hr

	CONFLICTING PEDS (peds/hour)	PEDESTRIAN BUTTON (Y/N)	PEDESTRIAN BUTTON (min T)	ARRIVAL TYPE
EASTBOUND	5	N	8.5	3
WESTBOUND	5	N	8.5	3
NORTHBOUND	5	N	8.5	3
SOUTHBOUND	5	N	8.5	3

min T = minimum green time for pedestrians

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... Forge Hill Road

OTHER INFORMATION:

No Build

SIGNAL SETTINGS - OPERATIONAL ANALYSIS

PRETIMED LOST TIME/PHASE = 3.0 CYCLE LENGTH = 77.0

EAST/WEST PHASING

	PHASE-1	PHASE-2	PHASE-3	PHASE-4
EASTBOUND				
LEFT	X			
THRU	X			
RIGHT	X			
PEDS				
WESTBOUND				
LEFT	X			
THRU	X			
RIGHT	X			
PEDS				
NORTHBOUND RT	X			
SOUTHBOUND RT	X			
GREEN	26.0	0.0	0.0	0.0
YELLOW + ALL RED	5.5	0.0	0.0	0.0

NORTH/SOUTH PHASING

	PHASE-1	PHASE-2	PHASE-3	PHASE-4
NORTHBOUND				
LEFT	X			
THRU	X			
RIGHT	X			
PEDS				
SOUTHBOUND				
LEFT	X			
THRU	X			
RIGHT	X			
PEDS				
EASTBOUND RT	X			
WESTBOUND RT	X			
GREEN	40.0	0.0	0.0	0.0
YELLOW + ALL RED	5.5	0.0	0.0	0.0

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... Forge Hill Road

NAME OF THE NORTH/SOUTH STREET... Route 32

OTHER INFORMATION:
No Build

VOLUME ADJUSTMENT WORKSHEET

=====

	MVT. VOL.	PHF	ADJ. VOL.	LANE GRP.	LANE GRP. NO. VOL. LN	LANE UTIL. FACT.	GROWTH FACT.	ADJ. GRP. VOL.	PROP LT	PROP RT
EB										
LT	145	0.90	161							
TH	157	0.90	174	LTR	373 1	1.000	1.000	373	0.43	0.10
RT	40	0.90	37							
WB										
LT	96	0.90	107							
TH	148	0.90	164	LTR	365 1	1.000	1.000	365	0.29	0.26
RT	99	0.90	94							
NB										
LT	29	0.90	32							
TH	398	0.90	442	LTR	580 1	1.000	1.000	580	0.06	0.18
RT	108	0.90	106							
SB										
LT	94	0.90	104							
TH	479	0.90	532	LTR	726 1	1.000	1.000	726	0.14	0.12
RT	92	0.90	89							

* Denotes a Defacto Left Turn Lane Group

IDENTIFYING INFORMATION

 NAME OF THE EAST/WEST STREET..... Forge Hill Road
 NAME OF THE NORTH/SOUTH STREET... Route 32
 DATE AND TIME OF THE ANALYSIS.... 7/23/90 ; 1991
 OTHER INFORMATION:
 No Build

SUPPLEMENTARY WORKSHEET FOR LEFT-TURN ADJUSTMENT FACTOR

INPUT VARIABLES	EB	WB	NB	SB
Cycle Length, C (sec)	77.0	77.0	77.0	77.0
Effective Green, G (sec)	28.5	28.5	42.5	42.5
Number of Lanes, N	1	1	1	1
Total Approach Flow Rate, Va (vph)	373	365	580	726
Mainline Flow Rate, Vm (vph)	212	258	548	621
Left-Turn Flow Rate, Vlt (vph)	161	107	32	104
Proportion of LT, Plt	0.432	0.292	0.056	0.144
Opposing Lanes, No	1	1	1	1
Opposing Flow Rate, Vo (vph)	258	212	621	548
Prop. of LT in Opp. Vol., Plto	0.000	0.000	0.000	0.000

COMPUTATIONS	EB	WB	NB	SB
$Sop=(1800No)/((1+Plto((400+Vm)/(1400-Vm)))$	1800	1800	1800	1800
$Yo=Vo/Sop$	0.144	0.118	0.345	0.305
$Gu=(G-C*Yo)/(1-Yo)$	20.369	22.029	24.308	27.391
$Fs=(875-0.625Vo)/1000$	0.713	0.743	0.487	0.532
$P1=Plt(1+((N-1)G)/(Fs*Gu+4.5))$	0.432	0.292	0.056	0.144
$Gq=G-Gu$	8.131	6.471	18.192	15.109
$Pt=1-P1$	0.568	0.708	0.944	0.856
$Gf=2Pt(1-(Pt**0.5Gq))/P1$	2.366	3.261	13.787	8.220
$E1=1800/(1400-Vo)$	1.58	1.52	2.31	2.11
$Fm=Gf/G+(Gu/G)(1/(1+P1(E1-1)))+(2/G)(1+P1)$	0.756	0.877	0.907	0.803
$Flt=(Fm+N-1)/N$	0.756	0.877	0.907	0.803

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... Forge Hill Road
 NAME OF THE NORTH/SOUTH STREET... Route 32
 DATE AND TIME OF THE ANALYSIS..... 7/23/90 ; 1991
 OTHER INFORMATION:
 No Build

SATURATION FLOW ADJUSTMENT WORKSHEET

	IDEAL											ADJ.
	SAT.	NO.	f	f	f	f	f	f	f	f	f	SAT.
	FLOW	LNS	W	HV	G	p	BB	A	RT	LT	FLOW	
EB												
LTR	1800	1	1.000	0.990	1.000	1.000	1.000	0.900	0.886	0.756	1074	
WB												
LTR	1800	1	1.000	0.990	1.000	1.000	1.000	0.900	0.865	0.877	1216	
NB												
LTR	1800	1	1.000	0.990	1.000	1.000	1.000	0.900	0.875	0.907	1273	
SB												
LTR	1800	1	1.000	0.990	1.000	1.000	1.000	0.900	0.883	0.803	1137	

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... Forge Hill Road
 NAME OF THE NORTH/SOUTH STREET... Route 32
 DATE AND TIME OF THE ANALYSIS.... 7/23/90 ; 1991
 OTHER INFORMATION:
 No Build

CAPACITY ANALYSIS WORKSHEET

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	ADJ. FLOW RATE (v)	ADJ. SAT. FLOW RATE (s)	FLOW RATIO (v/s)	GREEN RATIO (g/C)	LANE GROUP CAPACITY (c)	v/c RATIO
EB LTR	373	1074	0.347	0.370	398	0.938 *
WB LTR	365	1216	0.300	0.370	450	0.811
NB LTR	580	1273	0.456	0.552	703	0.826
SB LTR	726	1137	0.638	0.552	628	1.157 *

Cycle Length, C = 77.0 sec.

Sum (v/s) critical = 0.986

Lost Time Per Cycle, L = 6.0 sec.

X critical = 1.069

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... Forge Hill Road

NAME OF THE NORTH/SOUTH STREET... Route 32

DATE AND TIME OF THE ANALYSIS.... 7/23/90 ; 1991

OTHER INFORMATION:

No Build

LEVEL-OF-SERVICE WORKSHEET

	v/c	g/C	CYCLE	DELAY	LANE	DELAY	PROG.	LANE	LANE	DELAY	LOS
	RATIO	RATIO	LEN.	d	GROUP	d	FACT.	GRP.	GRP.	BY	BY
				1	CAP.	2		DELAY	LOS	APP.	APP.
EB											
LTR	0.938	0.370	77.0	17.8	398	21.7	1.00	39.4	D	39.4	D
WB											
LTR	0.811	0.370	77.0	16.6	450	7.4	1.00	24.0	C	24.0	C
NB											
LTR	0.826	0.552	77.0	10.8	703	5.6	1.00	16.4	C	16.4	C
SB											
LTR	1.157	0.552	77.0	16.2	628	90.1	1.00	106.3	F	106.3	F

Intersection Delay = 53.9 (sec/veh) Intersection LOS = E

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... Forge Hill Road
 NAME OF THE NORTH/SOUTH STREET... Route 32
 DATE AND TIME OF THE ANALYSIS.... 7/23/90 ; 1991
 OTHER INFORMATION:
 No Build

WASHINGTON DRIVE

1991

"NO BUILD"

IDENTIFYING INFORMATION

AVERAGE RUNNING SPEED, MAJOR STREET.. 45
 PEAK HOUR FACTOR..... 1
 AREA POPULATION..... 150000
 NAME OF THE EAST/WEST STREET..... Washington Drive
 NAME OF THE NORTH/SOUTH STREET..... Route 32
 NAME OF THE ANALYST..... CDF
 DATE OF THE ANALYSIS (mm/dd/yy)..... 7-23-90
 TIME PERIOD ANALYZED..... 1991 pm
 OTHER INFORMATION.... No Build

INTERSECTION TYPE AND CONTROL

INTERSECTION TYPE: T-INTERSECTION
 MAJOR STREET DIRECTION: NORTH/SOUTH
 CONTROL TYPE EASTBOUND: STOP SIGN

TRAFFIC VOLUMES

	EB	WB	NB	SB
LEFT	11	--	57	0
THRU	0	--	594	638
RIGHT	27	--	0	21

NUMBER OF LANES

	EB	WB	NB	SB
LANES	1	--	1	1

ADJUSTMENT FACTORS

Page-2

	PERCENT GRADE	RIGHT TURN ANGLE	CURB RADIUS (ft) FOR RIGHT TURNS	ACCELERATION LANE FOR RIGHT TURNS
EASTBOUND	0.00	90	25	N
WESTBOUND	----	---	---	-
NORTHBOUND	0.00	90	20	N
SOUTHBOUND	0.00	90	20	N

VEHICLE COMPOSITION

	% SU TRUCKS AND RV'S	% COMBINATION VEHICLES	% MOTORCYCLES
EASTBOUND	0	0	0
WESTBOUND	---	---	---
NORTHBOUND	0	0	0
SOUTHBOUND	0	0	0

CRITICAL GAPS

	TABULAR VALUES (Table 10-2)	ADJUSTED VALUE	SIGHT DIST. ADJUSTMENT	FINAL CRITICAL GAP
MINOR RIGHTS				
EB	6.10	6.10	0.00	6.10
MAJOR LEFTS				
NB	5.30	5.30	0.00	5.30
MINOR LEFTS				
EB	7.40	7.40	0.00	7.40

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... Washington Drive
NAME OF THE NORTH/SOUTH STREET..... Route 32
DATE AND TIME OF THE ANALYSIS..... 7-23-90 ; 1991 pm
OTHER INFORMATION.... No Build

CAPACITY AND LEVEL-OF-SERVICE

MOVEMENT	FLOW-RATE v (pcph)	POTENTIAL CAPACITY c (pcph) p	ACTUAL MOVEMENT CAPACITY c (pcph) M	SHARED CAPACITY c (pcph) SH	RESERVE CAPACITY c = c - v R SH	LOS
MINOR STREET						
EB LEFT	12	103	95	> 95	> 83	E
RIGHT	30	441	441	> 215	> 173	D
				> 441	> 411	A
MAJOR STREET						
NB LEFT	63	547	547	547	484	A

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... Washington Drive
 NAME OF THE NORTH/SOUTH STREET.... Route 32
 DATE AND TIME OF THE ANALYSIS..... 7-23-90 ; 1991 pm
 OTHER INFORMATION.... No Build

OLD FORGE HILL ROAD

1991

"BUILD"

1985 HCM: SIGNALIZED INTERSECTIONS

SUMMARY REPORT

INTERSECTION..Forge Hill Road/Route 32

AREA TYPE.....CBD

ANALYST.....CDF

DATE.....7/23/90

TIME.....1991

COMMENT.....Build

	VOLUMES				:	GEOMETRY							
	EB	WB	NB	SB		EB	WB	NB	SB	EB	WB	NB	SB
LT	160	96	29	102	:	LTR	12.0	LTR	12.0	LTR	12.0	LTR	12.0
TH	157	148	438	519	:		12.0		12.0		12.0		12.0
RT	40	120	108	100	:		12.0		12.0		12.0		12.0
RR	6	14	13	12	:		12.0		12.0		12.0		12.0
					:		12.0		12.0		12.0		12.0
					:		12.0		12.0		12.0		12.0

ADJUSTMENT FACTORS										
	GRADE (%)	HV (%)	ADJ Y/N	PKG Nm	BUSES Nb	PHF	PEDS	PED. Y/N	BUT. min T	ARR. TYPE
EB	0.00	2.00	N	0	0	0.90	5	N	8.5	3
WB	0.00	2.00	N	0	0	0.90	5	N	8.5	3
NB	0.00	2.00	N	0	0	0.90	5	N	8.5	3
SB	0.00	2.00	N	0	0	0.90	5	N	8.5	3

SIGNAL SETTINGS						CYCLE LENGTH = 77.0				
		PH-1	PH-2	PH-3	PH-4		PH-1	PH-2	PH-3	PH-4
EB	LT	X				NB	LT	X		
	TH	X					TH	X		
	RT	X					RT	X		
	PD						PD			
WB	LT	X				SB	LT	X		
	TH	X					TH	X		
	RT	X					RT	X		
	PD						PD			
GREEN		26.0	0.0	0.0	0.0	GREEN	40.0	0.0	0.0	0.0
YELLOW		5.5	0.0	0.0	0.0	YELLOW	5.5	0.0	0.0	0.0

LEVEL OF SERVICE							
	LANE GRP.	V/C	G/C	DELAY	LOS	APP. DELAY	APP. LOS
EB	LTR	1.034	0.370	64.4	F	64.4	F
WB	LTR	0.860	0.370	27.7	D	27.7	D
NB	LTR	0.903	0.552	22.6	C	22.6	C
SB	LTR	1.310	0.552	*	*	*	*

INTERSECTION: Delay = * (sec/veh) V/C = 1.199 LOS = *

1985 HCM: SIGNALIZED INTERSECTIONS

IDENTIFYING INFORMATION

=====

NAME OF THE EAST/WEST STREET..... Forge Hill Road

NAME OF THE NORTH/SOUTH STREET..... Route 32

AREA TYPE..... CBD

NAME OF THE ANALYST..... CDF

DATE OF THE ANALYSIS..... 7/23/90

TIME PERIOD ANALYZED..... 1991

OTHER INFORMATION:
Build

TRAFFIC VOLUMES

=====

	EB	WB	NB	SB
LEFT	160	96	29	102
THRU	157	148	438	519
RIGHT	40	120	108	100
RTOR	6	14	13	12

(RTOR volume must be less than or equal to RIGHT turn volumes.)

DATE AND TIME OF THE ANALYSIS.... 7/23/90 ; 1991
OTHER INFORMATION:
Build

SIGNAL SETTINGS - OPERATIONAL ANALYSIS

Page-3

PRETIMED LOST TIME/PHASE = 3.0 CYCLE LENGTH = 77.0

EAST/WEST PHASING

	PHASE-1	PHASE-2	PHASE-3	PHASE-4
EASTBOUND				
LEFT	X			
THRU	X			
RIGHT	X			
PEDS				
WESTBOUND				
LEFT	X			
THRU	X			
RIGHT	X			
PEDS				
NORTHBOUND RT	X			
SOUTHBOUND RT	X			
GREEN	26.0	0.0	0.0	0.0
YELLOW + ALL RED	5.5	0.0	0.0	0.0

NORTH/SOUTH PHASING

	PHASE-1	PHASE-2	PHASE-3	PHASE-4
NORTHBOUND				
LEFT	X			
THRU	X			
RIGHT	X			
PEDS				
SOUTHBOUND				
LEFT	X			
THRU	X			
RIGHT	X			
PEDS				
EASTBOUND RT	X			
WESTBOUND RT	X			
GREEN	40.0	0.0	0.0	0.0
YELLOW + ALL RED	5.5	0.0	0.0	0.0

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... Forge Hill Road
NAME OF THE NORTH/SOUTH STREET... Route 32

OTHER INFORMATION:
Build

VOLUME ADJUSTMENT WORKSHEET

Page-4

	MVT. VOL.	PHF	ADJ. VOL.	LANE GRP.	LANE GRP. NO.	LANE UTIL. FACT.	GROWTH FACT.	ADJ. GRP. VOL.	PROP LT	PROP RT
EB										
LT	160	0.90	178							
TH	157	0.90	174	LTR	390	1	1.000	1.000	390	0.46 0.10
RT	40	0.90	37							
WB										
LT	96	0.90	107							
TH	148	0.90	164	LTR	388	1	1.000	1.000	388	0.27 0.30
RT	120	0.90	117							
NB										
LT	29	0.90	32							
TH	438	0.90	487	LTR	625	1	1.000	1.000	625	0.05 0.17
RT	108	0.90	106							
SB										
LT	102	0.90	113							
TH	519	0.90	577	LTR	788	1	1.000	1.000	788	0.14 0.12
RT	100	0.90	98							

* Denotes a Defacto Left Turn Lane Group

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... Forge Hill Road
NAME OF THE NORTH/SOUTH STREET... Route 32
DATE AND TIME OF THE ANALYSIS.... 7/23/90 ; 1991
OTHER INFORMATION:
Build

INPUT VARIABLES	EB	WB	NB	SB
Cycle Length, C (sec)	77.0	77.0	77.0	77.0
Effective Green, G (sec)	28.5	28.5	42.5	42.5
Number of Lanes, N	1	1	1	1
Total Approach Flow Rate, Va (vph)	390	388	625	788
Mainline Flow Rate, Vm (vph)	212	282	593	675
Left-Turn Flow Rate, Vlt (vph)	178	107	32	113
Proportion of LT, Plt	0.456	0.275	0.052	0.144
Opposing Lanes, No	1	1	1	1
Opposing Flow Rate, Vo (vph)	282	212	675	593
Prop. of LT in Opp. Vol., Plto	0.000	0.000	0.000	0.000

COMPUTATIONS	EB	WB	NB	SB
$Sop = (1800N_o) / ((1 + Plto((400 + V_m) / (1400 - V_m)))$	1800	1800	1800	1800
$Y_o = V_o / Sop$	0.157	0.118	0.375	0.329
$Y_u = (G - C * Y_o) / (1 - Y_o)$	19.499	22.029	21.811	25.564
$F_s = (875 - 0.625V_o) / 1000$	0.699	0.743	0.453	0.505
$P_1 = Plt(1 + ((N - 1)G) / (F_s * G_u + 4.5))$	0.456	0.275	0.052	0.144
$q = G - G_u$	9.001	6.471	20.689	16.936
$P_t = 1 - P_1$	0.544	0.725	0.948	0.856
$G_f = 2P_t(1 - (P_t * 0.56q)) / P_1$	2.230	3.413	15.513	8.710
$E_1 = 1800 / (1400 - V_o)$	1.61	1.52	2.48	2.23
$F_m = G_f / G + (G_u / G)(1 / (1 + P_1(E_1 - 1))) + (2 / G)(1 + P_1)$	0.716	0.886	0.891	0.770
$F_{lt} = (F_m + N - 1) / N$	0.716	0.886	0.891	0.770

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... Forge Hill Road

NAME OF THE NORTH/SOUTH STREET... Route 32

DATE AND TIME OF THE ANALYSIS.... 7/23/90 ; 1991

OTHER INFORMATION:

Build

SATURATION FLOW ADJUSTMENT WORKSHEET

	IDEAL											ADJ.
	SAT.	NO.	f	f	f	f	f	f	f	f	f	SAT.
	FLOW	LNS	W	HV	G	p	BB	A	RT	LT		FLOW
EB												
LTR	1800	1	1.000	0.990	1.000	1.000	1.000	0.900	0.887	0.716		1018
WB												
LTR	1800	1	1.000	0.990	1.000	1.000	1.000	0.900	0.859	0.886		1220
NB												
LTR	1800	1	1.000	0.990	1.000	1.000	1.000	0.900	0.877	0.891		1253
SB												
LTR	1800	1	1.000	0.990	1.000	1.000	1.000	0.900	0.883	0.770		1090

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... Forge Hill Road
 NAME OF THE NORTH/SOUTH STREET... Route 32
 DATE AND TIME OF THE ANALYSIS.... 7/23/90 ; 1991
 OTHER INFORMATION:
 Build

CAPACITY ANALYSIS WORKSHEET

Page-7

	ADJ. FLOW RATE (v)	ADJ. SAT. FLOW RATE (s)	FLOW RATIO (v/s)	GREEN RATIO (g/C)	LANE GROUP CAPACITY (c)	v/c RATIO
EB						
LTR	390	1018	0.383	0.370	377	1.034 *
WB						
LTR	388	1220	0.318	0.370	452	0.860
NB						
LTR	625	1253	0.499	0.552	692	0.903
SB						
LTR	788	1090	0.723	0.552	602	1.310 *

Cycle Length, C = 77.0 sec.

Sum (v/s) critical = 1.106

Lost Time Per Cycle, L = 6.0 sec.

X critical = 1.199

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... Forge Hill Road

NAME OF THE NORTH/SOUTH STREET... Route 32

DATE AND TIME OF THE ANALYSIS.... 7/23/90 ; 1991

OTHER INFORMATION:

Build

	v/c	g/C	CYCLE	DELAY	LANE	DELAY	PROG.	LANE	LANE	DELAY	LOS
	RATIO	RATIO	LEN.	d	GROUP	d	FACT.	GRP.	GRP.	BY	BY
				1	CAP.	2		DELAY	LOS	APP.	APP.
EB											
LTR	1.034	0.370	77.0	18.8	377	45.6	1.00	64.4	F	64.4	F
WB											
LTR	0.860	0.370	77.0	17.0	452	10.7	1.00	27.7	D	27.7	D
NB											
LTR	0.903	0.552	77.0	11.7	692	10.9	1.00	22.6	C	22.6	C
SB											
LTR	1.310	0.552	77.0	*	602	*	1.00	*	*	*	*

Intersection Delay = * (sec/veh)

Intersection LOS = *

* Delay and LOS not meaningful when any v/c is greater than 1.2

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... Forge Hill Road

NAME OF THE NORTH/SOUTH STREET... Route 32

DATE AND TIME OF THE ANALYSIS.... 7/23/90 ; 1991

OTHER INFORMATION:

Build

WASHINGTON DRIVE

1991

"BUILD"

IDENTIFYING INFORMATION

AVERAGE RUNNING SPEED, MAJOR STREET.. 45
 PEAK HOUR FACTOR..... 1
 AREA POPULATION..... 150000
 NAME OF THE EAST/WEST STREET..... Washington Drive
 NAME OF THE NORTH/SOUTH STREET..... Route 32
 NAME OF THE ANALYST..... CDF
 DATE OF THE ANALYSIS (mm/dd/yy)..... 7-23-90
 TIME PERIOD ANALYZED..... 1991 pm
 OTHER INFORMATION.... Build

INTERSECTION TYPE AND CONTROL

INTERSECTION TYPE: T-INTERSECTION
 MAJOR STREET DIRECTION: NORTH/SOUTH
 CONTROL TYPE EASTBOUND: STOP SIGN

TRAFFIC VOLUMES

	EB	WB	NB	SB
LEFT	11	--	57	0
THRU	0	--	622	671
RIGHT	27	--	0	21

NUMBER OF LANES

	EB	WB	NB	SB
LANES	1	--	1	1

	PERCENT GRADE	RIGHT TURN ANGLE	CURB RADIUS (ft) FOR RIGHT TURNS	ACCELERATION LANE FOR RIGHT TURNS
EASTBOUND	0.00	90	25	N
WESTBOUND	---	---	---	-
NORTHBOUND	0.00	90	20	N
SOUTHBOUND	0.00	90	20	N

VEHICLE COMPOSITION

	% SU TRUCKS AND RV'S	% COMBINATION VEHICLES	% MOTORCYCLES
EASTBOUND	0	0	0
WESTBOUND	---	---	---
NORTHBOUND	0	0	0
SOUTHBOUND	0	0	0

CRITICAL GAPS

	TABULAR VALUES (Table 10-2)	ADJUSTED VALUE	SIGHT DIST. ADJUSTMENT	FINAL CRITICAL GAP
MINOR RIGHTS				
EB	6.10	6.10	0.00	6.10
MAJOR LEFTS				
NB	5.30	5.30	0.00	5.30
MINOR LEFTS				
EB	7.40	7.40	0.00	7.40

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... Washington Drive
 NAME OF THE NORTH/SOUTH STREET.... Route 32
 DATE AND TIME OF THE ANALYSIS..... 7-23-90 ; 1991 pm
 OTHER INFORMATION.... Build

CAPACITY AND LEVEL-OF-SERVICE

MOVEMENT	FLOW-RATE	POTENTIAL CAPACITY	ACTUAL MOVEMENT CAPACITY	SHARED CAPACITY	RESERVE CAPACITY	LOS
	v (pcph)	c (pcph) p	c (pcph) M	c (pcph) SH	c = c - v R SH	
MINOR STREET						
EB LEFT	12	92	85 >	85 >	73 >	E
RIGHT	30	422	422 >	196 >	155 >	D
				422 >	392 >	B
MAJOR STREET						
NB LEFT	63	525	525	525	463	A

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... Washington Drive
 NAME OF THE NORTH/SOUTH STREET..... Route 32
 DATE AND TIME OF THE ANALYSIS..... 7-23-90 ; 1991 pm
 OTHER INFORMATION..... Build

MALL 1
BUILD 1991

IDENTIFYING INFORMATION

AVERAGE RUNNING SPEED, MAJOR STREET.. 45
 PEAK HOUR FACTOR..... 1
 AREA POPULATION..... 150000
 NAME OF THE EAST/WEST STREET..... Mall 1
 NAME OF THE NORTH/SOUTH STREET..... Route 32
 NAME OF THE ANALYST..... CDF
 DATE OF THE ANALYSIS (mm/dd/yy)..... 7-23-90
 TIME PERIOD ANALYZED..... 1991 pm
 OTHER INFORMATION.... Build

INTERSECTION TYPE AND CONTROL

INTERSECTION TYPE: T-INTERSECTION
 MAJOR STREET DIRECTION: NORTH/SOUTH
 CONTROL TYPE EASTBOUND: STOP SIGN

TRAFFIC VOLUMES

	EB	WB	NB	SB
LEFT	28	--	46	0
THRU	0	--	671	688
RIGHT	32	--	0	18

NUMBER OF LANES

	EB	WB	NB	SB
LANES	1	--	1	1

	PERCENT GRADE	RIGHT TURN ANGLE	CURB RADIUS (ft) FOR RIGHT TURNS	ACCELERATION LANE FOR RIGHT TURNS
EASTBOUND	0.00	90	25	N
WESTBOUND	---	---	---	---
NORTHBOUND	0.00	90	20	N
SOUTHBOUND	0.00	90	20	N

VEHICLE COMPOSITION

	% SU TRUCKS AND RV'S	% COMBINATION VEHICLES	% MOTORCYCLES
EASTBOUND	0	0	0
WESTBOUND	---	---	---
NORTHBOUND	0	0	0
SOUTHBOUND	0	0	0

CRITICAL GAPS

	TABULAR VALUES (Table 10-2)	ADJUSTED VALUE	SIGHT DIST. ADJUSTMENT	FINAL CRITICAL GAP
MINOR RIGHTS				
EB	6.10	6.10	0.00	6.10
MAJOR LEFTS				
NB	5.30	5.30	0.00	5.30
MINOR LEFTS				
EB	7.40	7.40	0.00	7.40

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... Mall 1
NAME OF THE NORTH/SOUTH STREET.... Route 32
DATE AND TIME OF THE ANALYSIS..... 7-23-90 ; 1991 pm
OTHER INFORMATION.... Build

CAPACITY AND LEVEL-OF-SERVICE

MOVEMENT	FLOW-RATE v (pcph)	POTENTIAL CAPACITY c _p (pcph)	ACTUAL MOVEMENT CAPACITY c _M (pcph)	SHARED CAPACITY c _{SH} (pcph)	RESERVE CAPACITY c _R = c _{SH} - v	LOS
MINOR STREET						
EB LEFT	31	83	79	79	48	E
RIGHT	35	413	413	138	72	E
MAJOR STREET						
NB LEFT	51	516	516	516	465	A

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... Mall 1
 NAME OF THE NORTH/SOUTH STREET.... Route 32
 DATE AND TIME OF THE ANALYSIS..... 7-23-90 ; 1991 pm
 OTHER INFORMATION..... Build

MALL 2
BUILD 1991

IDENTIFYING INFORMATION

AVERAGE RUNNING SPEED, MAJOR STREET.. 45
 PEAK HOUR FACTOR..... 1
 AREA POPULATION..... 150000
 NAME OF THE EAST/WEST STREET..... Mall 2
 NAME OF THE NORTH/SOUTH STREET..... Route 32
 NAME OF THE ANALYST..... CDF
 DATE OF THE ANALYSIS (mm/dd/yy)..... 7-23-90
 TIME PERIOD ANALYZED..... 1991 pm
 OTHER INFORMATION.... Build

INTERSECTION TYPE AND CONTROL

INTERSECTION TYPE: T-INTERSECTION
 MAJOR STREET DIRECTION: NORTH/SOUTH
 CONTROL TYPE EASTBOUND: STOP SIGN

TRAFFIC VOLUMES

	EB	WB	NB	SB
LEFT	0	--	20	0
THRU	0	--	679	665
RIGHT	23	--	0	15

NUMBER OF LANES

	EB	WB	NB	SB
LANES	1	--	1	1

ADJUSTMENT FACTORS

Page-2

	PERCENT GRADE	RIGHT TURN ANGLE	CURB RADIUS (ft) FOR RIGHT TURNS	ACCELERATION LANE FOR RIGHT TURNS
EASTBOUND	0.00	90	25	N
WESTBOUND	----	---	---	-
NORTHBOUND	0.00	90	20	N
SOUTHBOUND	0.00	90	20	N

VEHICLE COMPOSITION

	% SU TRUCKS AND RV'S	% COMBINATION VEHICLES	% MOTORCYCLES
EASTBOUND	0	0	0
WESTBOUND	---	---	---
NORTHBOUND	0	0	0
SOUTHBOUND	0	0	0

CRITICAL GAPS

	TABULAR VALUES (Table 10-2)	ADJUSTED VALUE	SIGHT DIST. ADJUSTMENT	FINAL CRITICAL GAP
MINOR RIGHTS				
EB	6.10	6.10	0.00	6.10
MAJOR LEFTS				
NB	5.30	5.30	0.00	5.30
MINOR LEFTS				
EB	7.40	7.40	0.00	7.40

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... Mall 2
 NAME OF THE NORTH/SOUTH STREET.... Route 32
 DATE AND TIME OF THE ANALYSIS..... 7-23-90 ; 1991 pm
 OTHER INFORMATION.... Build

CAPACITY AND LEVEL-OF-SERVICE

MOVEMENT	FLOW-RATE v (pcph)	POTEN-TIAL	ACTUAL	SHARED		RESERVE		LOS
		CAPACITY c (pcph) p	MOVEMENT CAPACITY c (pcph) M	CAPACITY c (pcph) SH	CAPACITY c (pcph) R	CAPACITY c - v SH		
MINOR STREET								
EB LEFT	0	90	88	>	88	>	88	> E
				>	427	>	402	> A
RIGHT	25	427	427	>	427	>	402	> A
MAJOR STREET								
NB LEFT	22	533	533		533		511	A

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... Mall 2
 NAME OF THE NORTH/SOUTH STREET.... Route 32
 DATE AND TIME OF THE ANALYSIS..... 7-23-90 ; 1991 pm
 OTHER INFORMATION.... Build

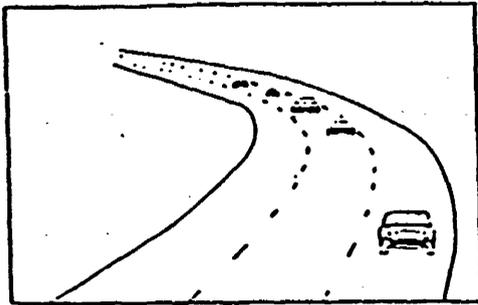
APPENDIX D
STANDARDS

LEVELS OF SERVICE

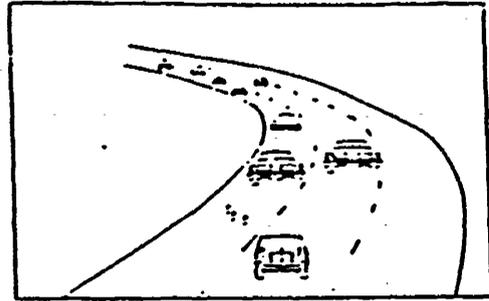
The 1965 Highway Capacity Manual (Special Report No. 87), published by the Highway Research Board, established a system by which highway facilities are examined for their adequacy to handle traffic volumes. The basic considerations are various "Levels of Service", as illustrated on Page 2 and described on Pages 3 and 4.

Intersection capacity and Levels of Service are dependent upon a number of factors, including but not limited to, the following:

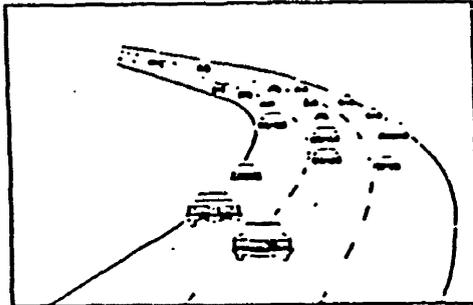
1. Approach width
2. Parking conditions
3. One-way or two-way traffic operations
4. Turning movements
5. Presence of trucks and buses
6. Metropolitan area population
7. Location within metropolitan area
8. Signal timing
9. Variations in demand
10. Pedestrian congestion
11. Presence and location of bus stops



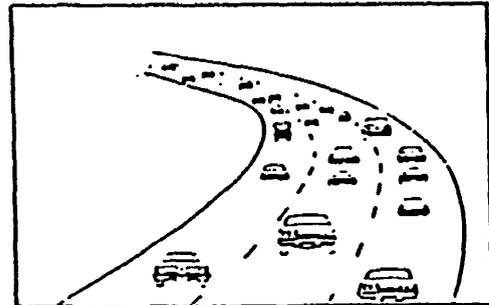
LEVEL OF SERVICE A



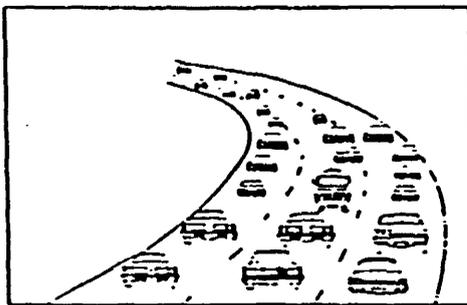
LEVEL OF SERVICE B



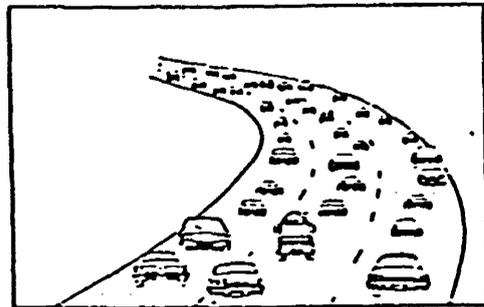
LEVEL OF SERVICE C



LEVEL OF SERVICE D



LEVEL OF SERVICE E



LEVEL OF SERVICE F

DESCRIPTION:

Level of Service "A" - conditions of free flow with relatively low volumes. There is little or no restriction to maneuverability due to the presence of other vehicles. Drivers can maintain their desired speed and will experience little or no delay. Average overall travel speed of 30 mph provided, with a Load Factor at intersections near the limit of 0.0. (Load Factor is the degree of utilization of an individual intersection approach expressed as a ratio of the number of green phases that are loaded, or fully utilized, to the number of green phases available per approach for the same time period.)

Level of Service "B" - within the zone of stable flow, but speed somewhat restricted due to traffic conditions. There will still be reasonable freedom for drivers to select their speed and lane of operation, and probability of restricted flow is low. Average overall speed of 25 mph is provided, with a Load Factor at intersections of approximately 0.1.

Level of Service "C" - within the zone of stable flow, but speed and maneuverability closely controlled by relatively high volumes. Drivers are restricted in their freedom to select their own speeds, change lanes and/or pass. Satisfactory operating speed is obtained, with service volumes suitable for design practices. Average overall speed of 20 mph is provided, with a Load Factor at intersections of approximately 0.3.

Level of Service "D" - approaching unstable flow but still maintaining tolerable operating speeds. Fluctuations in volumes with temporary restrictions may cause substantial drops in operating speed. Drivers have little freedom to maneuver; comfort and convenience become more restricted. Conditions are tolerable for short periods of time. Average overall speed is down to 15 mph. Delays at intersections may become extensive with some cars waiting two or more cycles. Load Factor at intersections of approximately 0.7.

Level of Service "E" - usually defined as "Capacity" of the roadway. A typical speed is approximately 15 mph. The flow may be somewhat unsuitable with momentary stoppages necessary, and back up on approaches to intersections. Load Factor at intersections in range of 0.7 to 1.0.

Level of Service "F" - described as "forced flow". Demand volumes exceed capacity and speeds are substantially reduced. Stoppages vary in duration due to downstream congestion. Vehicular back ups extend from signalized intersections through unsignalized intersections.

MAY 28 1997 03:00PM NEW

RUBIN MANAGEMENT INC.

CAROLLE

P. 12

Rubin Management Inc.

147-30 175 STREET, JAMAICA, NEW YORK 11434, PHONE 718-885-4577
FAX 718-244-1141

May 27, 1997

New Windsor Town Hall
Town Of New Windsor
555 Union Avenue
New Windsor, NY 12553

Attention: Town of New Windsor Planning Board

Re: Route 32 Associates
5.7 Acres on Route 32
New Windsor, New York

To Whom It May Concern,

Please be advised that at this time we would like all previous applications for site plan approval for the above referenced site be withdrawn so that we can move forward with a proposed minor subdivision approval.

Thank you for your time in this matter.

Sincerely yours,



Jonathan Miller
Route 32 Associates
JM/lah



MARY McPHILLIPS
County Executive

Department of Planning
& Development

124 Main Street
Goshen, New York 10924
(914) 294-5151

PETER GARRISON Commissioner
VINCENT HANCOCK Deputy Commissioner

ORANGE COUNTY DEPARTMENT OF PLANNING & DEVELOPMENT
239 L, M or N Report

This proposed action is being reviewed as an aid in coordinating such action between and among governmental agencies by bringing pertinent inter-community and Countywide considerations to the attention of the municipal agency having jurisdiction.

Referred by Town of NEW WINDSOR D P & D Reference No. ^{NWT} 31-90M
County I.D. No. 35 1 1 1102

Applicant ROUTE 32 ASSOCIATES

Proposed Action: SITE PLAN: RETAIL STORES

State, County, Inter-Municipal Basis for 239 Review Within 500 ft. of NYS RTE. 32

Comments: There are no significant inter-community or countywide considerations to bring to attention.

Related Reviews and Permits _____

County Action: Local Determination XXXX Disapproved _____ Approved _____

Approved subject to the following modifications and/or conditions: _____

NW. 2, 1990
Date

Peter Garrison
Commissioner



STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
4 BURNETT BOULEVARD
POUGHKEEPSIE, N.Y. 12603

ALBERT J. BAUMAN
REGIONAL DIRECTOR

FRANKLIN E. WHITE
COMMISSIONER

September 17, 1990

Mr. Scott Kartiganer
Kartiganer Associates, P.C.
555 Blooming Grove Turnpike
Newburgh, New York 12550

RE: Access Drive - Route 32 (SH 9033)
Route 32 Associates
Town of New Windsor, Orange County

Dear Mr. Kartiganer:

This is in response to your letter of transmittal of July 27, 1990, requesting a review of the site plan and associated Traffic Impact Report for the subject commercial development to be located in the southwest quadrant of the Route 32 - Washington Avenue intersection in the Town of New Windsor.

We offer the following recommendations concerning the site plan:

1. A left turn lane with 125 ft. of storage shall be provided at the southerly drive;
2. The northerly drive shall be restricted to a one-way ingress for south-bound traffic only. No left turns shall be allowed from Route 32;
3. A sidewalk maintenance resolution from the Town of New Windsor must be submitted with the Highway Work Permit application in order that the new sidewalk can be placed within the State's right-of-way;
4. A complete drainage analysis must be submitted to the local Residency Office in Newburgh for their approval.

We have indicated in red on the attached plans the aforementioned comments.

If there are any further questions or comments, please advise.

Very truly yours,

M. J. MIGNOGNA
REGIONAL TRAFFIC ENGINEER

MJM/DCF/tjh
Attachments

By:

D. C. Fayette
Civil Engineer I (Traffic)

PROPOSED SHOPPING CENTER SITE

STATE ROUTE 32

ROUTE 32 ASSOCIATES

1. Governing Instrument: Will there be a written agreement with the Town of New Windsor ("Town") to ensure that the shopping center is properly built, maintained and repaired, such as a Special Use Permit Ordinance, Indenture or Maintenance Agreement? The Town should have the ability to levy fines for non-compliance and have step-in rights to perform the property owner's obligations upon a default with reimbursement paid by the property owner to the Town, plus interest.

2. Construction:
 - (a) Security to Ensure Owner's Completion of Construction: What vehicle will secure the performance by the owner of the completion of the construction of the shopping center?
 - (i) What is the net worth of Route 32 Associates?
 - (ii) Will a performance and/or payment bond be required by the Town?
 - (iii) Will a letter of credit be posted in favor of the Town?
 - (iv) Are any personal guaranties of the commitments of Route 32 Associates required by the Town?

 - (b) Appearance:
 - (i) Rooftop Units: Should be screened and properly maintained.

 - (ii) Dumpsters and Compactors: 1. Should be enclosed and not be visible. Employ use of masonry enclosures and gates. 2. Should be located near a drain to avoid foul smells and dangerous conditions (i.e., freezing) of liquids which may spill out of dumpster. 3. Install a frost free hose bib in dumpster area.

 - (iii) Garbage: Trash cans should be located on site for use by customers, etc. and site should be policed on a regular basis.

(iv) Building Exterior: Elevations should be architecturally pleasing and harmonious and the exterior finish on the sides and the rear of all buildings should be consistent with the exterior finish on the front of the buildings.

(v) Building Setbacks: Side and rear yard setbacks should be required in addition to front yard setbacks. What are these requirements in terms of footage?

(vi) Landscaping: 1. Landscape buffers should be required in the frontage along Rt. 32 and on sides and rear of property. 2. On site landscaping in the paved parking areas should be utilized (i.e. use of landscaped islands).

(vii) Fencing: Stockade, masonry or chainlink fences with a dark green plastic coating should be required along the property line parallel to Washington Drive and the rear property line adjacent to Washington Green. Minimum eight (8') feet in height.

(viii) Loading Zones: Should be properly screened with masonry or fencing.

(ix) Parking Stalls: 1. No variances from minimum code requirements. 2. Restrict # of "compact spaces".

(x) Drainage: No surface water run-off which damages adjacent property, by erosion, ponding or otherwise, should be permitted to flow from the shopping center site. Should be designed so as to not overburden existing systems. Is on site detention or retention required to prevent overburdening?

(xi) Sidewalks: Four (4') foot wide concrete sidewalks should be required along the entire street frontage of Rt. 32 and be properly maintained.

(xii) Curbs and gutters: Curbs and gutters should be placed along all street frontage and concrete curbs should be placed on all parking lots and be properly maintained.

(xiii) Site Lighting: All site lighting should include down casting of lighting and shielding of light from the adjacent Washington Green property and be properly maintained.

3. Deliveries: Deliveries to, and the parking of delivery vehicles and trailers at, any business establishment located at the shopping center should be prohibited between the hours of 7:00 p.m. and 8:00 a.m. daily (except until 10:00 a.m. on Saturdays and Sundays).

4. Hours of Operation: The hours of operation for all establishments should be limited to the hours between 9:30 a.m. and 9:00 p.m. daily.
5. Maintenance of Common Areas: The hours for lot cleaning and operation of property maintenance equipment should be limited to the hours between 8:00 a.m. and 10:00 p.m.
6. On Site Storage: The outside storage of any equipment or goods should be strictly prohibited.
7. Subdivision: The shopping center parcel should not be subdivided unless, prior to or in conjunction with the subdivision, the entirety of the parcels shall be made subject to a recorded agreement in a form acceptable to the Town, providing for the integrated operation and maintenance of parking areas, lanes, drives and other common areas situated from time-to-time on the parcels and providing for the designation of an owner (or an affiliate or agent of an owner) of one of the subdivided parcels within the parcel as the party responsible for the supervision of the operation, management and maintenance of the common areas of the parcels and as the party (i) which the Town may contact in the event of maintenance, repair or security problems relating to the common areas on any part of the parcels and (ii) upon whom judicial process may be served.
8. Restaurants: Will they be permitted? If so what type of emission control of kitchen odors will be utilized. Their hours of operation should comply with #4 above.
9. Prohibited Uses:
 - (a) No portion of the shopping center should be used for a business or use which creates strong, unusual or offensive odors, fumes, dust or vapors; is a public or private nuisance as defined below; emits noise or sounds which are objectionable due to intermittence, beat, frequency, shrillness or loudness; creates unusual fire, explosive or other hazards; or increases the rate of insurance for any owner of property adjacent thereto or decreases the value of any land adjacent thereto. A "nuisance" shall include, without limitation, any of the following conditions:
 - (1) Any emission of dust, sweepings, dirt, or cinders into the atmosphere, or discharges of liquid, solid waste, or other harmful matter onto, or under, the land or into any stream, river or body of water if such emission or discharge may adversely affect the use, or intended use, of any land, or any portion of

land adjacent to the shopping center, or which may adversely affect the health, safety or comfort of persons in the vicinity, or the discharge of wastes or any substance or material of any kind into any publicly maintained sewer serving the shopping center, or any part thereof, in violation of any law, rule or regulation of any public body having jurisdiction thereof;

(2) The discharge into the air, onto, or under, the land, or into any stream, river or other body of water, or into any of the utilities or sewers, or the improper storage of any gas, substance or material which is determined to be a toxic or hazardous material or substance under any Federal, State or local statute, regulation, ordinance or other governmentally ratified report or study; and

(3) Without limiting the foregoing, the escape or discharge of fumes, odors, gases, vapors, acids or other substances into the atmosphere if such escape or discharge may be detrimental to the health, safety or welfare of persons, may interfere with the comfort of persons within the vicinity, or may be harmful to the improvements on the property or vegetation thereon.

(b) (i) No portion of the shopping center shall be used for any of the following purposes: cemetery; mortuary; a so-called "head-shop"; video or other type of gameroom or arcade; carnival; off-track betting parlor; pawn shop; business selling so-called "second-hand goods"; junk yard; flea market; recycling facility or stockyard; motor vehicle or boat dealership, repair shop (including lubrication and/or service center), body and fender shop, car wash facility, or motor vehicle or boat storage facility; theatre, movie theatre, auditorium, sports or other entertainment viewing facility, (whether live, film, audio/visual or video); discotheque, dance hall, bar or night club; billiard parlor; massage parlor; dry cleaning or laundry plant (except as to an establishment which receives and dispenses items for launder and/or dry cleaning but the processing of which such items is done elsewhere); industrial or manufacturing uses; catering hall; restaurant; factory uses; any business servicing motor vehicles or selling gasoline or diesel fuel at retail or wholesale and services relating thereto, including, without limitation, any quick lube oil change services, or any other vehicle mechanical service or repair facility; hotel/motel uses; warehousing (excluding any warehousing incidental to the operation of permitted retail uses being conducted thereat).

(ii) No portion of the shopping center shall be used or occupied as an adult book store or a store selling or exhibiting pornographic materials. As used herein, "an adult book store or store selling or exhibiting pornographic materials" shall include, without limitation, a store displaying for sale or exhibition books, magazines or other publications containing any combination of photographs, drawings or sketches of a sexual nature, which are not primarily scientific or educational (collectively "Sex Magazines"), or a store offering for exhibition, sale or rental video cassettes or other medium capable of projecting, transmitting or reproducing, independently or in conjunction with another device, machine or equipment, an image or series of images, the content of which has been rated "X" or "NC-17" (or any succeeding like rating) by the Motion Picture Rating Association, or any successor thereto.

10. Access: 1. Where will curb cuts be located? 2. Will either a left hand turn lane be constructed to safely accommodate left hand turns into the shopping center from Rt. 32 or a median be constructed to prohibit left hand turns into the shopping center from Rt. 32? 3. Will an acceleration lane be constructed on Rt. 32?

/ld:1488P



STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
4 BURNETT BOULEVARD
POUGHKEEPSIE, N.Y. 12603

ALBERT J. BAUMAN
REGIONAL DIRECTOR

FRANKLIN E. WHITE
COMMISSIONER

March 19, 1990

Mr. Scott T. Kartiganer, P.E.
Kartiganer Associates, P.C.
555 Blooming Grove Turnpike
Newburgh, New York 12550-7896

RE: Access Drive - Route 32 (SH 9033)
Route 32 Associates
Town of New Windsor, Orange County

Dear Mr. Kartiganer:

This is in response to your letter dated February 9, 1990, requesting a review of the site plan dated December 6, 1989 (revision) for the proposed commercial development to be located in the southwest quadrant of the Route 32/Washington Avenue intersection in the Town of New Windsor.

Conceptually, we agree with the location of the "Main Entrance" drive as indicated on the plan; however, prior to our final review of the site, we shall require a traffic impact study be submitted in order that we may determine the extent of the impact this project will have on the State highway system and the necessary mitigating measures. At that time, we will decide on the design and location of the secondary access as requested by the developer and the Town of New Windsor.

Please submit the impact study directly to this office for our review. If there are any further questions or comments, please advise.

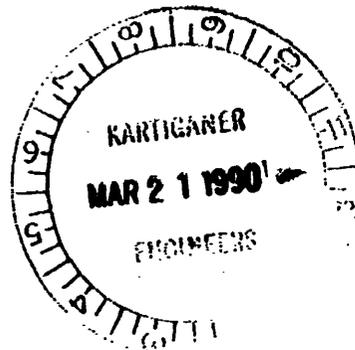
Very truly yours,

M. J. MIGNOGNA
REGIONAL TRAFFIC ENGINEER

By: 

D. C. Fayette
Civil Engineer I (Traffic)

MJM/DCF/tjh



Planning Board
Town of New Windsor
555 Union Avenue
New Windsor, NY 12550

(This is a two-sided form)

Date Received _____
Meeting Date _____
Public Hearing _____
Action Date _____
Fees Paid _____

APPLICATION FOR SITE PLAN, LOT-LINE CHANGE
OR SUBDIVISION PLAN APPROVAL

1. Name of Project Route 32 Shopping Center
2. Name of Applicant Route 32 Associates Phone (718) 995-4577
Address 147-39 175th Street, Jamaica, N.Y. 11434
(Street No. & Name) (Post Office) (State) (Zip)
3. Owner of Record Jonathon Miller Phone (718) 995-4577
Address 147-39 175th Street, Jamaica, N.Y. 11434
(Street No. & Name) (Post Office) (State) (Zip)
4. Person Preparing Plan Kartiganer Associates Phone (914) 562-4391
Address 555 Blooming Grove Turnpike, Newburgh, N.Y. 12550
(Street No. & Name) (Post Office) (State) (Zip)
5. Attorney _____ Phone _____
Address _____
(Street No. & Name) (Post Office) (State) (Zip)
6. Location: On the West side of Route 32
2000 feet South
(Direction)
of Willow Lane
(Street)
7. Acreage of Parcel 5.70 ± Acres 8. Zoning District C / PO
9. Tax Map Designation: Section 35 Block 1 Lot 102
10. This application is for Site Plan Approval
11. Has the Zoning Board of Appeals granted any variance or a special permit concerning this property? No

If so, list Case No. and Name _____

12. List all contiguous holdings in the same ownership NONE
Section _____ Block _____ Lot(s) _____

Attached hereto is an affidavit of ownership indicating the dates the respective holdings of land were acquired, together with the liber and page of each conveyance into the present owner as recorded in the Orange County Clerk's Office. This affidavit shall indicate the legal owner of the property, the contract owner of the property and the date the contract of sale was executed.

IN THE EVENT OF CORPORATE OWNERSHIP: A list of all directors, officers and stockholders of each corporation owning more than five percent (5%) of any class of stock must be attached.

OWNER'S ENDORSEMENT
(Completion required ONLY if applicable)

COUNTY OF ORANGE
SS.:
STATE OF NEW YORK

_____ being duly sworn, deposes and says
that he resides at _____
in the County of _____ and State of _____
and that he is (the owner in fee) of _____
(Official Title)
of the Corporation which is the Owner in fee of the premises
described in the foregoing application and that he has authorized
_____ to make the foregoing
application for Special Use Approval as described herein.

I HEREBY DEPOSE AND SAY THAT ALL THE ABOVE STATEMENTS AND INFORMATION, AND ALL STATEMENTS AND INFORMATION CONTAINED IN THE SUPPORTING DOCUMENTS AND DRAWINGS ATTACHED HERETO ARE TRUE.

Sworn before me this

24 day of June 1988

Joseph M. Johnson
Notary Public

[Signature]
Owner's Signature)
[Signature]
(Applicant's Signature)

(Title)

JOSEPH M. JOHNSON
Notary Public, State of New York
No. 144518107
Qualified in Nassau County
Commission Expires June 30, 1988

SHORT ENVIRONMENTAL ASSESSMENT FORM

Appendix B Part 617

Project Title: Route 32 Shopping Center

Location: Town of New Windsor, Orange County, New York State

ID Number: _____

INSTRUCTIONS:

- (a) In order to answer the questions in this short EAF it is assumed that the preparer will use currently available information concerning the project and the likely impacts of the action. It is not expected that additional studies, research or other investigations will be undertaken.
- (b) If any question has been answered **Yes**, the project may have a significant effect and the full Environmental Assessment Form is necessary. **Maybe** or **Unknown** answers should be considered as **Yes** answers.
- (c) If all questions have been answered **No** it is likely that this project will not have a significant effect.
- (d) If additional space is needed to answer the questions, please use the back of the sheet or provide attachments as required.

ENVIRONMENTAL ASSESSMENT

	YES	NO
1. Will project result in a large physical change to the project site or physically alter more than 10 acres of land?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. Will there be a major change to any unique or unusual land form found on the site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3. Will project alter or have a large effect on an existing body of water?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4. Will project have an adverse impact on groundwater quality?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5. Will project significantly effect drainage flow on adjacent sites?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6. Will project affect any threatened or endangered plant or animal species?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7. Will project result in a major adverse effect on air quality?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
8. Will project have a major effect on the visual character of the community or scenic views or vistas known to be important to the community?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
9. Will project adversely impact any site or structure of historic, prehistoric, or paleontological importance or any site designated as a Critical Environmental Area by a local agency?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
10. Will project have a major adverse effect on existing or future recreational opportunities?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
11. Will project result in major traffic problems or cause a major effect to existing transportation systems?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
12. Is project non-farm related and located within a certified agricultural district?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
13. Will project regularly cause objectionable odors, noise, glare, vibration, or electrical disturbance as a result of the project's operation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
14. Will project have any adverse impact on public health or safety?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
15. Will project affect the existing community by directly causing a growth in permanent population of more than 5 percent over a one-year period or have a major negative effect on the character of the community or neighborhood?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
16. Is there public controversy concerning any potential impact of the project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

FOR AGENCY USE ONLY

Preparer's Signature: _____ Date: _____

Preparer's Title: _____

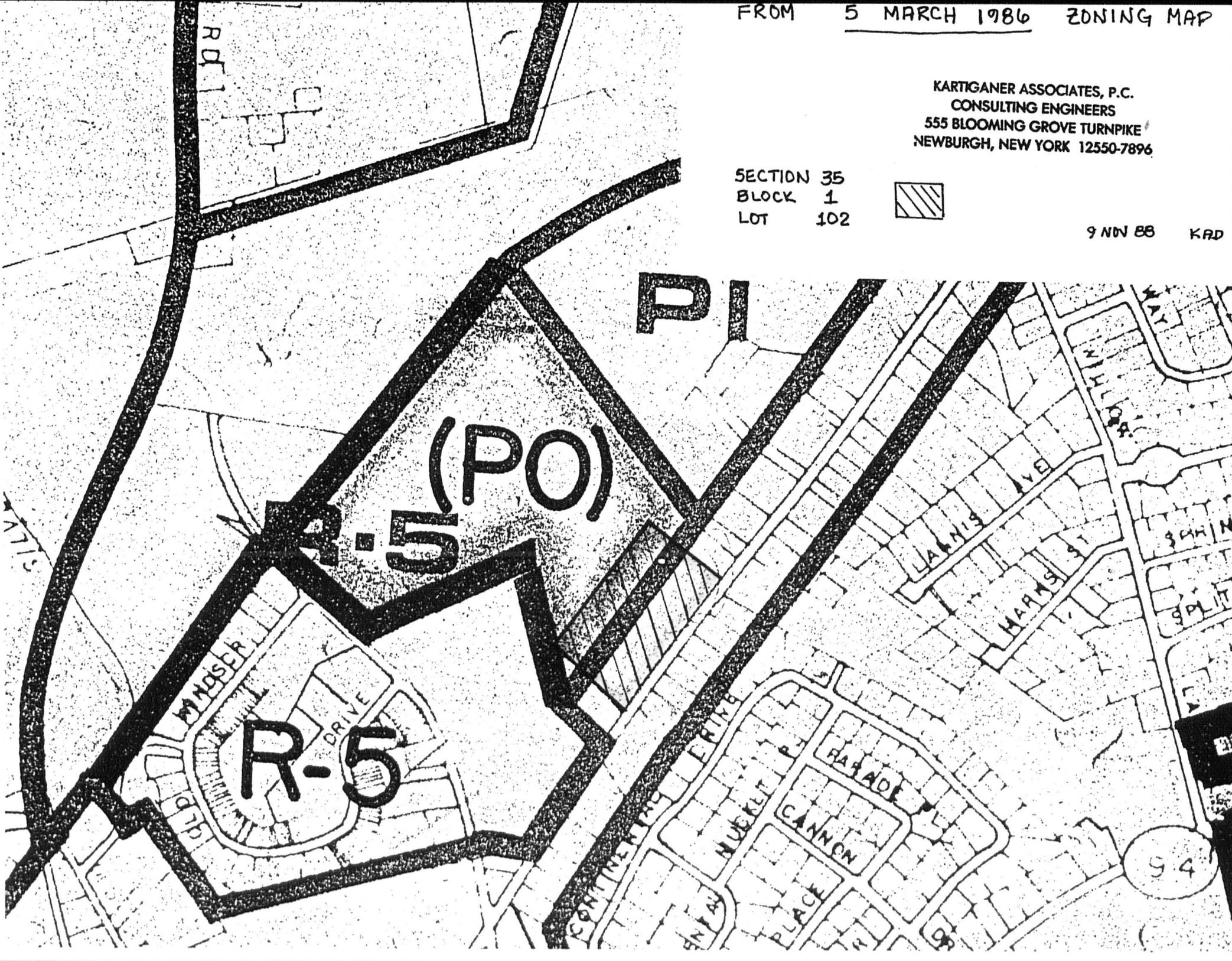
Agency: _____

KARTIGANER ASSOCIATES, P.C.
CONSULTING ENGINEERS
555 BLOOMING GROVE TURNPIKE
NEWBURGH, NEW YORK 12550-7896

SECTION 35
BLOCK 1
LOT 102



9 NOV 88 KAD



66.2
69.3A

66.1
9.7A

28
18.4 A(C)

35.2

42.1
7.8A

42.2
8.7A

32
2.5A(C)

30
12A

63
3.6 A(C)

62 10.6 A(C)

44
3A

43
1.4 A(C)

SECTION 38

SEE SEC
79
1" = 200'

64.2
35.3A

53.21
29.3A

47
1.2A

46

53.1
1A

54.2
3A

54.1

50
1A

52
3A

SECTION 42

58
2.8 A(C)

56
1.2A(C)

55
1.3A

59.22
39.5A

59.21

SECTION 45

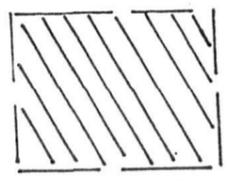
60
1A

61
13.7A

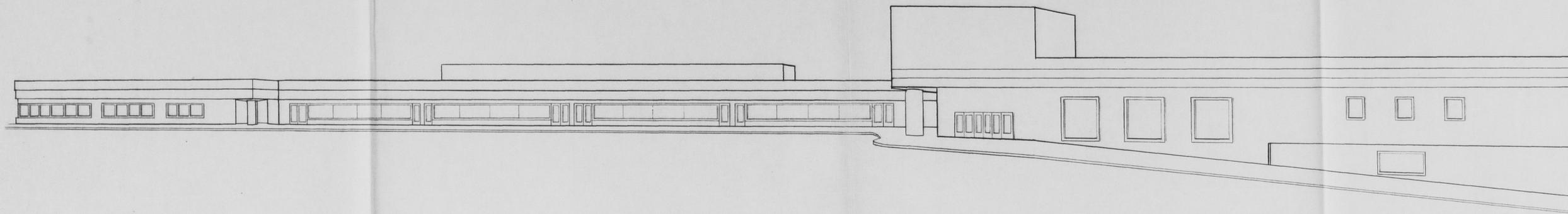
Common School
Dist No. 3

SECTION 49

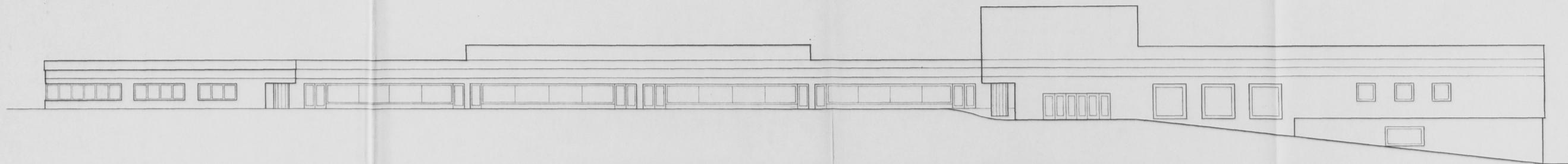
SECTION 35
BLOCK 1
LOT 102



KARTIGANER ASSOCIATES, P.C.
CONSULTING ENGINEERS
555 BLOOMING GROVE TURNPIKE
NEWBURGH, NEW YORK 12550-7896

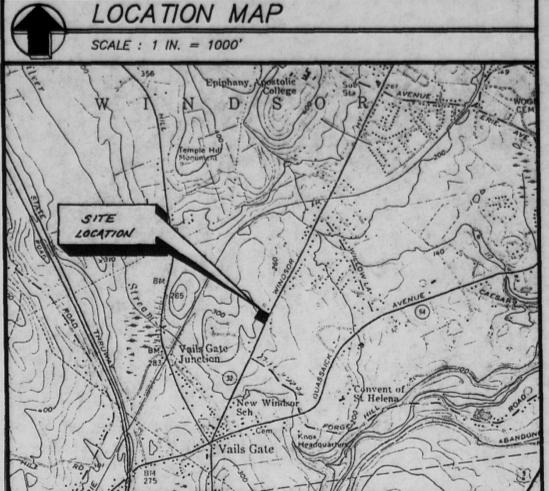
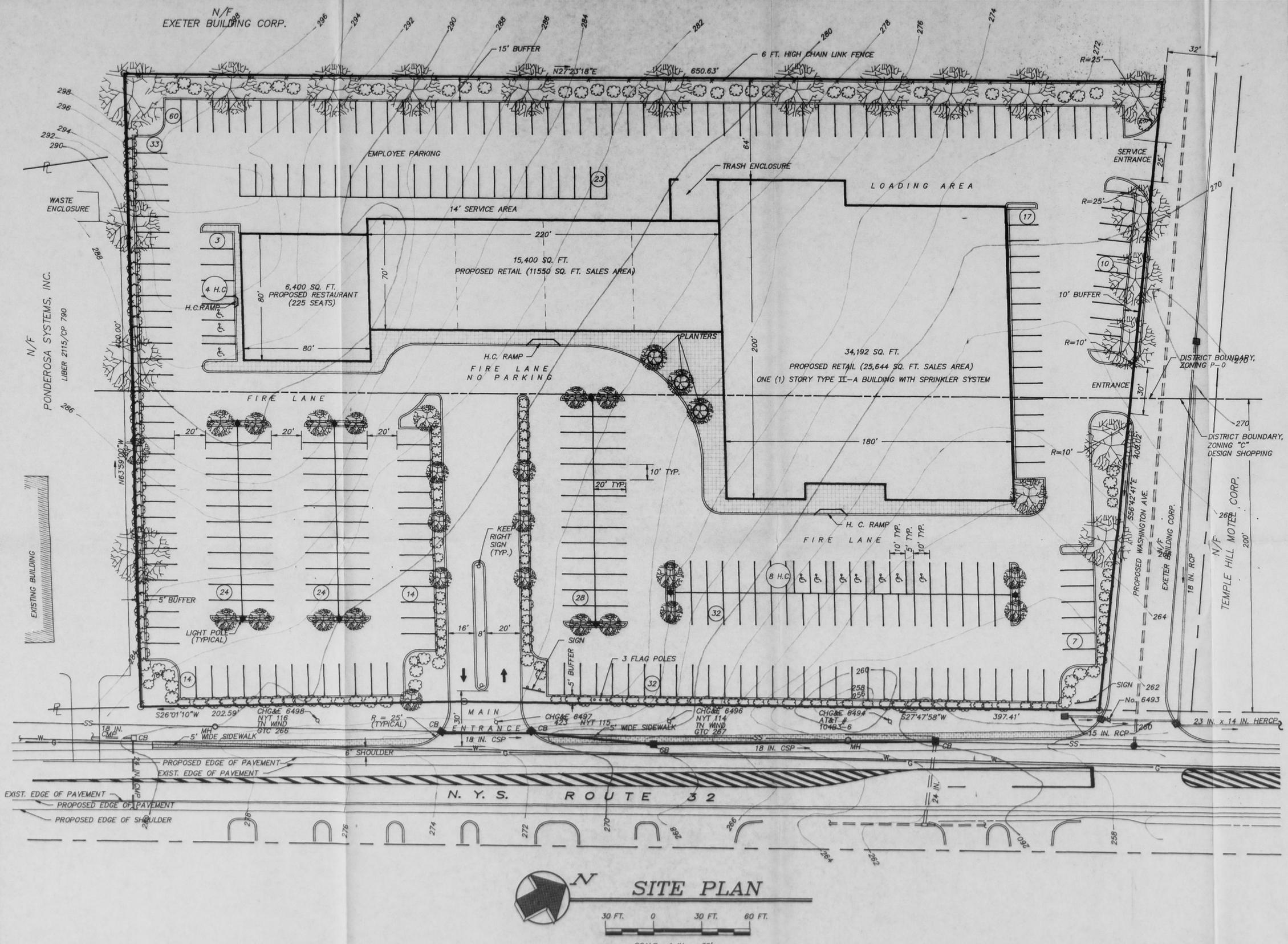


VIEW FROM EAST



ELEVATION

ROUTE 32 SHOPPING CENTER Route 32 New Windsor, N.Y.		
<small>Owner/Developer</small> ROUTE 32 ASSOCIATES <small>147-39 175th Street Jamaica, N.Y. 11434</small>	<small>Architect</small> WILLIAM LEGGIO ARCHITECTS <small>584 Broadway New York, N.Y. 10012 212-966-4443</small>	
<small>DWG TITLE:</small> PERSPECTIVE & ELEVATION	<small>DATE:</small> APRIL 1989 <small>SCALE:</small> 1"=16'-0"	<small>DWG NO.:</small> A-3



SITE INFORMATION

LOCATION: TOWN OF NEW WINDSOR, ORANGE COUNTY, NEW YORK

TAX MAP DESIGNATION: SEC. 35 BLK. 1 LOT 102

LOT AREA: 5.70± ACRES (248,292 SQ. FT.)

ZONED: DESIGN SHOPPING ("C")

PERMITTED USES: RETAIL STORES & BANKS (SEE "C" USE REGULATIONS COL. "A" #1) REQUIRES SITE PLAN APPROVAL BY PLANNING BOARD

BULK REGULATIONS

DISTRICT "C", GROUP DD.1 (DIST. "NC", GROUP "AA", USES COL. "A" #3)

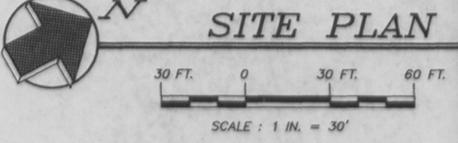
ITEM	REQUIRED	PROVIDED
SITE AREA	40,000 SQ. FT. MIN.	248,292 SQ. FT.
LOT WIDTH	200 FT. MIN.	400 FT.
FRONT YARD	60 FT. MIN.	65 FT. MIN.
REAR YARD	30 FT. MIN.	64 FT.
SIDE YARD	30 FT. MIN.	70 FT.
BOTH SIDE YARDS	70 FT. MIN.	135 FT.
FLOOR AREA RATIO	0.5 MAX.	0.22
BUILDING HEIGHT	4 IN./FT. TO NEAREST PROPERTY LINE	

PARKING REQUIREMENTS

TABLE OF USE REGULATIONS:
DIST. "C", COL. "E", #1 (DIST. "NC", COL. "E", #2, 6)

	REQUIRED	PROVIDED
RETAIL:	248 SPACES (1 SPACE PER 150 S.F. FLOOR AREA IN SALES USE)	258
RESTAURANT:	75 SPACES (1 SPACE PER 3 SEATS)	75

- NOTES:**
- BOUNDARY & TOPOGRAPHICAL SURVEY INFORMATION BASED UPON MAPS PREPARED BY PETER R. HUSTIS, L.L.S. OF BEACON, N.Y., LICENSE NO. 49205, FOR NEW WINDSOR ASSOCIATES, MAP ENTITLED "SUBDIVISION MAP FOR NEW WINDSOR ASSOCIATES" PARCEL 1, DATED JUNE 11, 1987.
 - TURNING LANE AND STRIPING PLAN FOR ROUTE 32 SHOWN AS APPROVED BY N.Y.S.D.O.T. FOR WASHINGTON GREEN COMPLEX.



REPRODUCTION OF THIS DOCUMENT IN WHOLE OR IN PART IS PROHIBITED EXCEPT WITH THE PERMISSION OF THE OFFICE OF ORIGIN.

UNAUTHORIZED ALTERATION OR ADDITION TO THIS PLAN IS A VIOLATION OF SECTION 7209 (2) OF THE NEW YORK STATE EDUCATION LAW.

SITE PLAN PREPARED FOR:

ROUTE 32 ASSOCIATES
147-39 175th STREET,
JAMAICA, N.Y. 11434

DRAWN: N.M. SCALE: 1 IN. = 30'
CHECKED: K.A.D. DATE: 28 JUNE 1988

KARTIGANER ASSOCIATES, P.C.
ENGINEERS
555 BLOOMING GROVE TURNPIKE, NEWBURGH, N.Y. 12550

SITE PLAN

SHEET: 1
OF: 1
JOB NO: 88015.00

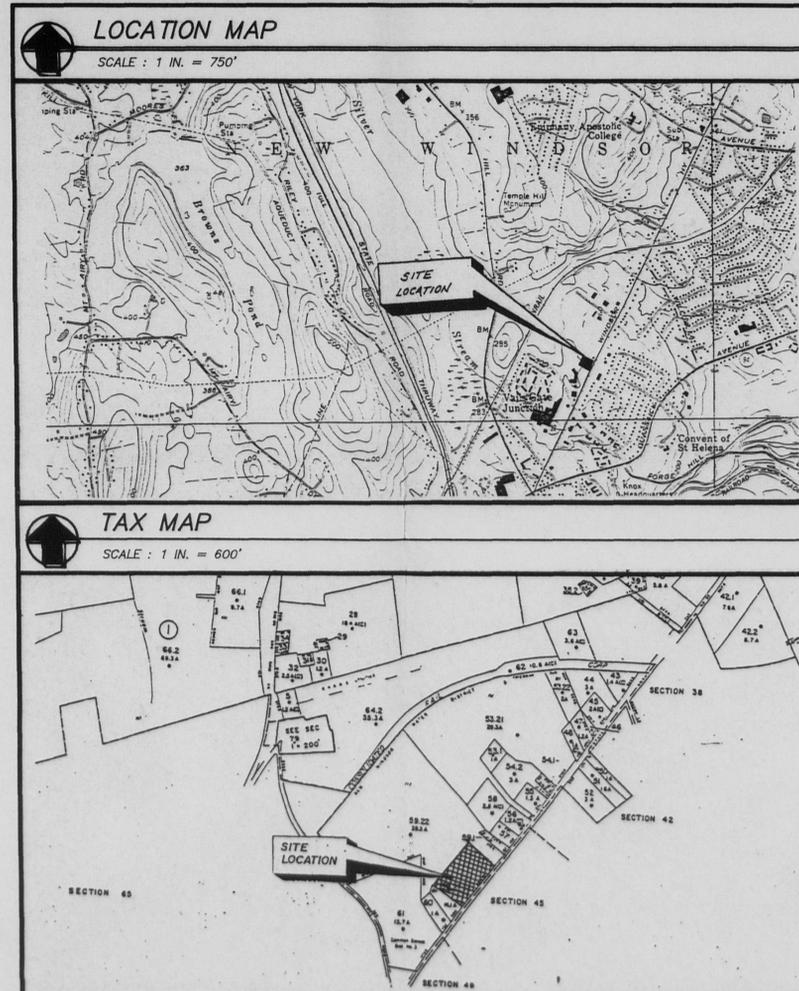
REV	DR	CK	DATE	DESCRIPTION
5	NM	KD	7 JUNE 89	REVISED REAR ZONING FROM R-5 TO P-0
4	NM	KD	9 APRIL 89	REVISED MAIN ENTRANCE & NORTHEAST CORNER CONTOURS
3	NM	KD	27 DEC. 88	REV. PER 14 DEC. 88 PLANNING BOARD MEETING
2	NM	KD	2 DEC. 88	REV. PER 9 NOV. 88 PLANNING BOARD MEETING
1	NM	KD	11 AUG 88	BUILDING & PARKING LOT REVISIONS

ROUTE 32 ASSOCIATES SHOPPING CENTER

ROUTE 32, NEW WINDSOR, ORANGE COUNTY, NEW YORK

DRAWING INDEX

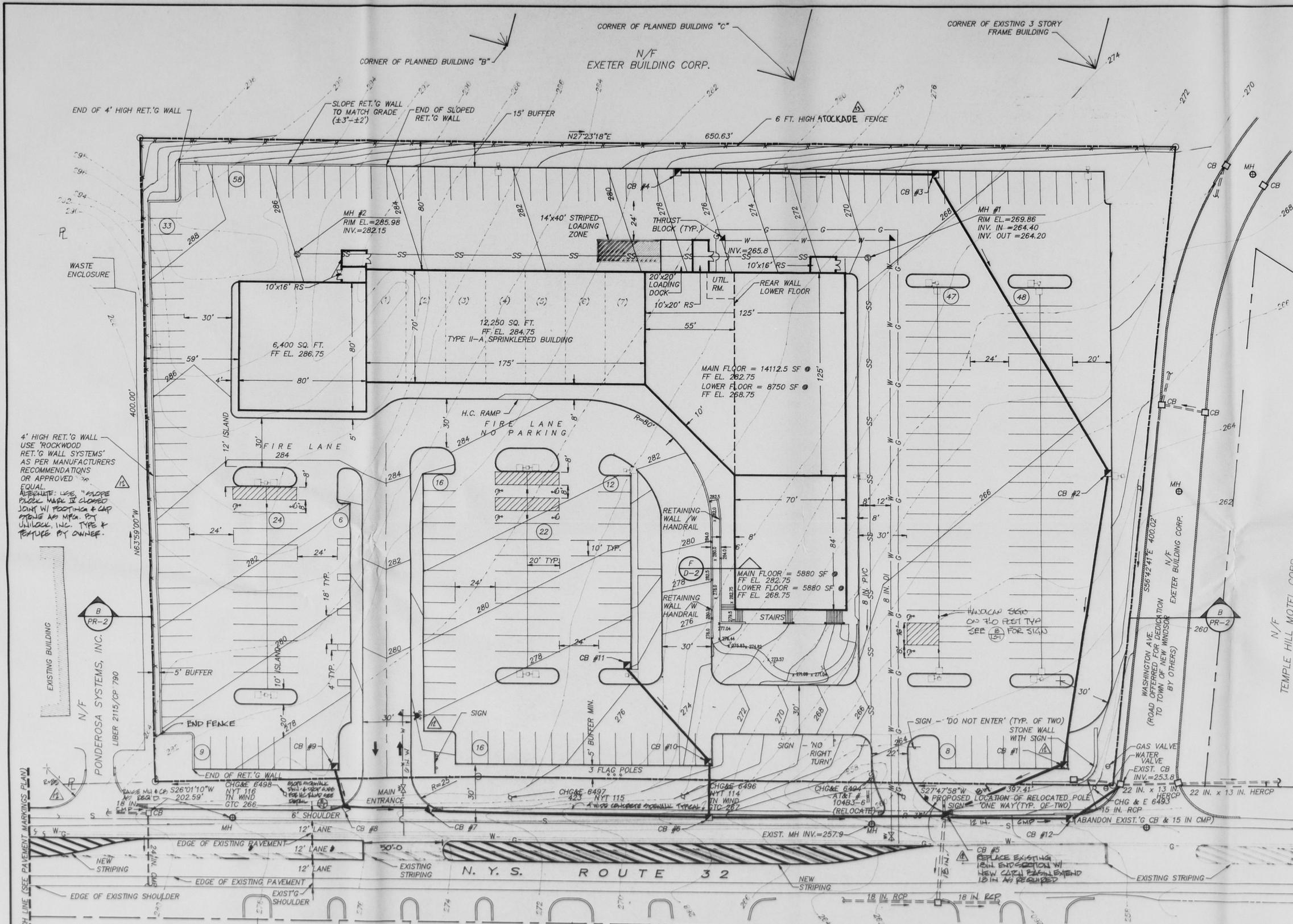
SHEET No.	DWG. No.	DESCRIPTION
T1	T-1	TITLE SHEET
1	P-1	SITE PLAN
2	D-1	UTILITIES DETAILS
3	D-2	SITework DETAILS
4	PR-1	STORM DRAIN PROFILES
5	PR-2	MISC. PROFILE & SECTIONS
E1	PM-1	ETC - ROAD IMPROVEMENTS
R2	TS-1	TYPICAL CROSS SECTIONS
L1	LS-1	LANDSCAPE PLAN.



REV	DR	CK	DATE	DESCRIPTION
			29 OCT 1990	GENERAL REV'S
KARTIGANER ASSOCIATES, P.C.				
CONSULTING ENGINEERS				
555 BLOOMING GROVE TURNPIKE, NEWBURGH, N.Y. 12550				
PH: 914-562-4391 FAX: 914-562-4395				
ROUTE 32 ASSOCIATES				
147-39 175TH STREET JAMAICA, NEW YORK 11434				
				TITLE SHEET
SCALE : AS SHOWN DATE : 26 JUNE 1990 DWG. NO. : T-1 DRAWN : MSO CHECKED : STK				SHEET: T1 OF: T1 JOB NO : 88015.00

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SITE INFORMATION	
LOCATION :	TOWN OF NEW WINDSOR ORANGE COUNTY, NEW YORK
TAX MAP DESIGNATION :	SEC. 35 BLK. 1 LOT 102
LOT AREA :	5.70± ACRES (248,292 SQ. FT.)
ZONED :	DESIGN SHOPPING ("C")
DESIGNATED USES:	RETAIL STORES

BULK REGULATIONS		
ITEM	REQUIRED	PROVIDED
SITE AREA	40,000 SQ. FT. MIN.	248,292 SQ. FT.
LOT WIDTH	200 FT. MIN.	600 FT.
FRONT YARD	60 FT. MIN.	105 FT.
REAR YARD	30 FT. MIN.	80 FT.
SIDE YARD	30 FT. MIN.	59 FT.
BOTH SIDE YARDS	70 FT. MIN.	264 FT.
FLOOR AREA RATIO	0.5 MAX.	0.22
BUILDING HEIGHT	4 IN./FT. TO NEAREST PROPERTY LINE ● 59 FT.	19'-8 MAX.
PARKING (5.5 SPACES PER 1000 SQ. FT.)		
BUILDING AREA		
LOWER FLOOR		14630 SF
MAIN FLOOR		38642.5 SF
TOTAL		53272.5 SF
PARKING	293	299

- NOTES :**
- BOUNDARY & TOPOGRAPHICAL SURVEY INFORMATION BASED UPON MAPS PREPARED BY PETER R. HUSTIS, L.L.S. OF BEACON, N.Y., LICENSE NO. 49205, FOR NEW WINDSOR ASSOCIATES, MAP ENTITLED "SUBDIVISION MAP FOR NEW WINDSOR ASSOCIATES' PARCEL 1, DATED JUNE 11, 1987. DATUM APPROXIMATES U.S.G.S. BENCH, REFERENCED IS S.S. M.H. LOCATED 250'± NORTH (ALONG N.Y.S. RT. 32) OF NORTH EAST CORNER OF PARCEL T.F. ELEV. = 247.0'
 - TURNING LANE AND STRIPING PLAN FOR ROUTE 32 SHOWN AS APPROVED BY N.Y.S.D.O.T. FOR WASHINGTON GREEN COMPLEX.
 - ALTERNATE C.B. - EXIT PIPING TO BE SET AT INVERT ELEVATIONS ALLOWING FLOW TO FAVOR EAST SIDE OF ROAD.
 - LOCATION OF BUILDING AND PUBLIC IMPROVEMENTS PER WASHINGTON GREEN GENERAL LAYOUT PLAN NO. 4272 REV. AND HIGHWAY PLAN REV. A.
 - LIGHTS ALONG REAR PARKING LOT SHALL BE DIRECTED TOWARDS BUILDING.
 - ACTUAL ELEVATIONS OF EXISTING WATER, SEWER, GAS, AND OTHER UTILITY LINES TO BE VERIFIED IN FIELD BY CONTRACTOR PRIOR TO CONSTRUCTION.
 - CONTRACTOR IS TO COORDINATE THE RELOCATION OF EXISTING UTILITIES AND IS TO ACQUIRE ALL APPLICABLE PERMITS.
 - RS - REFUSE STORAGE - ENCLOSURES TO BE CONSTRUCTED OF MASONRY 8' HIGH - COVERED TOP - OF SAME TYPE AND TEXTURE BLOCK AS BUILDING CONSTRUCTION. EACH ENCLOSURE SHALL BE PROVIDED WITH A 6" (DOUBLE 3"x3") WIDE CHAIN LINK TYPE GATE W/ PVC SLATS.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL APPLICABLE PERMITS.

REV	DR	CK	DATE	DESCRIPTION
1	MSO	STK	15 SEPT 1991	REV'D AS PER 11 SEPT 1991 MEETING
2	MSO	STK	8 APR 1991	REV'D AS PER PUBLIC HEARINGS & J.M.
3	MSO	STK	16 OCT 1990	REV'D AS PER MEETING & T.O.P. OF N.W. PER WASHINGTON GREEN
4	MSO	STK	22 SEPT 1990	GENERAL REVISIONS
5	MSO	STK	27 JULY 1990	GENERAL REVISIONS
6	MSO	STK	31 MAY 1990	GEN. REV.'S TO GRADING & PARKING
7	MSO	STK	21 MAR 1990	REV'D GRADING, DRAINAGE & ADDED UTILITIES.
8	SH	SK	28 SEPT. 89	REVISED LAYOUT PER J.M.
9	NM	KD	11 SEPT. 89	REVISED ZONING PER LOCAL LAW 8 OF 1989

KARTIGANER ASSOCIATES, P.C.
CONSULTING ENGINEERS
555 BLOOMING GROVE TURNPIKE, NEWBURGH, N.Y. 12550
PH: 914-562-4391 FAX: 914-562-4395

ROUTE 32 ASSOCIATES
147-39 175TH STREET JAMAICA, NEW YORK 11434

LEGEND

- W - EXISTING WATER LINE
- G - EXISTING GAS LINE
- S - EXISTING SANITARY SEWER
- SD - EXISTING STORM DRAIN
- C - EXISTING CURB
- NC - NEW CURB
- NSD - NEW STORM DRAIN
- 18 IN. CMP UNLESS OTHERWISE SHOWN
- MH - EXISTING MANHOLE
- CB - EXISTING CATCH BASIN
- NCB - NEW CATCH BASIN
- NSM - NEW SANITARY MANHOLE
- FH - NEW FIRE HYDRANT
- SS - NEW SANITARY SEWER
- N/F BARRY'S DINNETTES
- N/F NEWBURGH PORK STORE
- N/F KENTUCKY FRIED CHICKEN
- NOT IN USE

NEW LIGHTS SHALL BE MODEL NO. RML3400LX AS MANUFACTURED BY "STONCO". FOR TENON MINT'G USE ORDER NO.'S AS SHOWN.

NEW PATH LIGHTS SHALL BE MODEL NO. RMS3100MLX W/ 3' POLES.

RS REFUSE STORAGE (SEE NOTE 8).

ARCHITECTURAL NOTE: MASONRY ON THE REAR OF THE BUILDING IS TO BE UNIFORM WITH THE FRONT & SIDE ELEVATIONS

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TABLE OF DRAINAGE

CB #	RIM EL.	INV. IN	INV. IN	INV. OUT
CB #1	258.28	254.6 (CB #12)		253.8
CB #1	264.0		260.8	260.5
CB #2	265.5	262.7		262.7
CB #3	268.5	265.7		265.7
CB #4	277.0			274.2
CB #5	261.5	257.0	251.8	251.9
CB #6	267.0	264.0 (CB #7)		264.0
CB #7	274.0	270.8		270.8
CB #8	274.0	271.2		271.2
CB #9	277.0			272.65
CB #10	273.3	270.5		267.0
CB #11	277.0			274.2
CB #12	258.0	255.0		255.0

SITE PLAN

SCALE : 1 IN. = 30'

DATE : 28 JUNE 1988

DWG. NO.: P-1

DRAWN : MSO

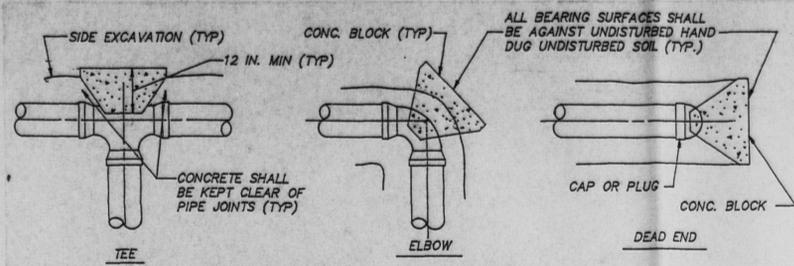
CHECKED : STK

SHEET: 1 OF: 5

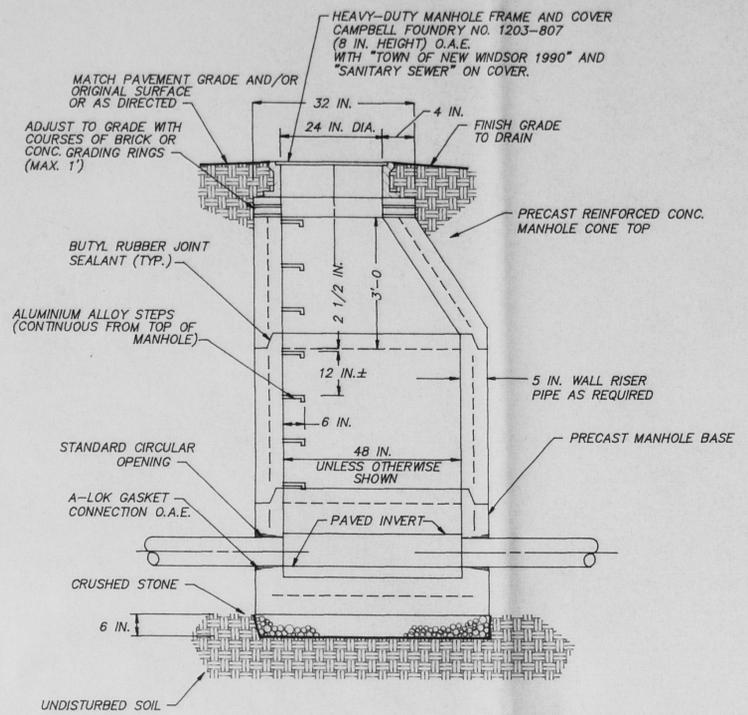
JOB NO : 88015.00

PIPE SIZE	MINIMUM BEARING AREAS IN DIRECTION OF THRUST IN SQUARE FEET			
	TEES & DEAD ENDS	90° ELBOW	45° ELBOW	22 1/2° ELBOW
3" OR 4"	1.3	1.0	0.6	0.3
6"	2.9	2.0	1.0	0.6
8"	5.1	3.6	2.0	1.0
10"	7.9	5.6	3.0	1.6

NOTE: BEARING AREAS ARE CALCULATED FOR 150 PSI TEST PRESSURE AND 3000 PSF ALLOWABLE SOIL BEARING. CONTRACTOR MUST ACCESS SOIL CONDITIONS AND PROVIDE BLOCKING WHICH WILL WITHSTAND TEST PRESSURES.

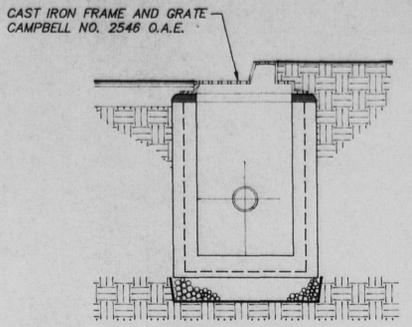


Y TYPICAL THRUST BLOCK INSTALLATION DETAILS
D-1 N.T.S.

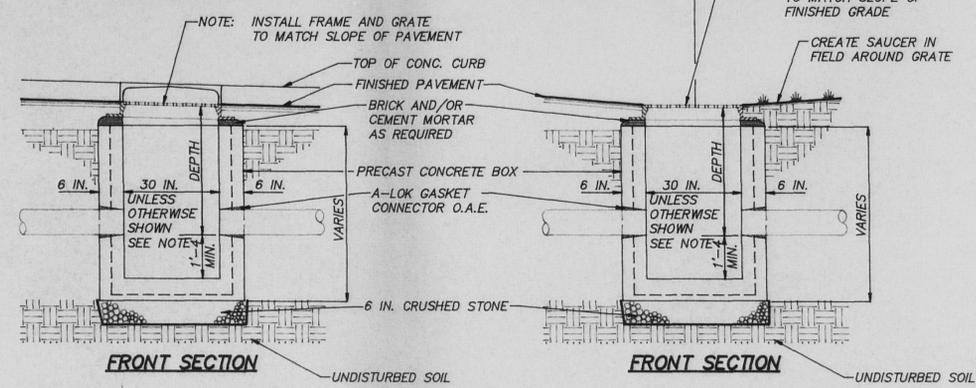


A TYPICAL MANHOLE SECTION
D-1 N.T.S.

NOTE: WHEN MANHOLE DEPTH RESTRICTS THE USE OF A TRANSITION SECTION AND/OR A CONE, USE A PRECAST FLAT TOP MANHOLE.



SIDE SECTION

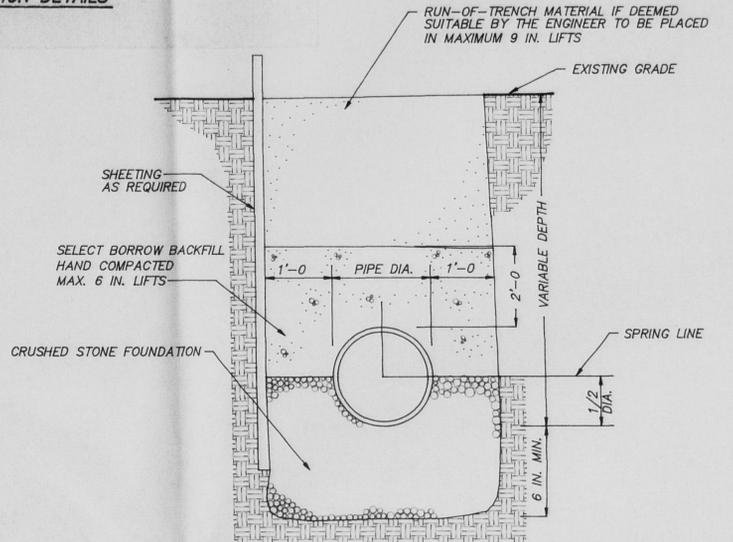


B TYPICAL CATCH BASIN W/ CURB INLET
D-1 N.T.S.

NOTE: SHALL MEET THE REQUIREMENTS OF THE N.Y.S.D.O.T. SPEC. 706.04. CATCH BASIN TYPE "J" UNLESS OTHERWISE SHOWN ON PLAN.

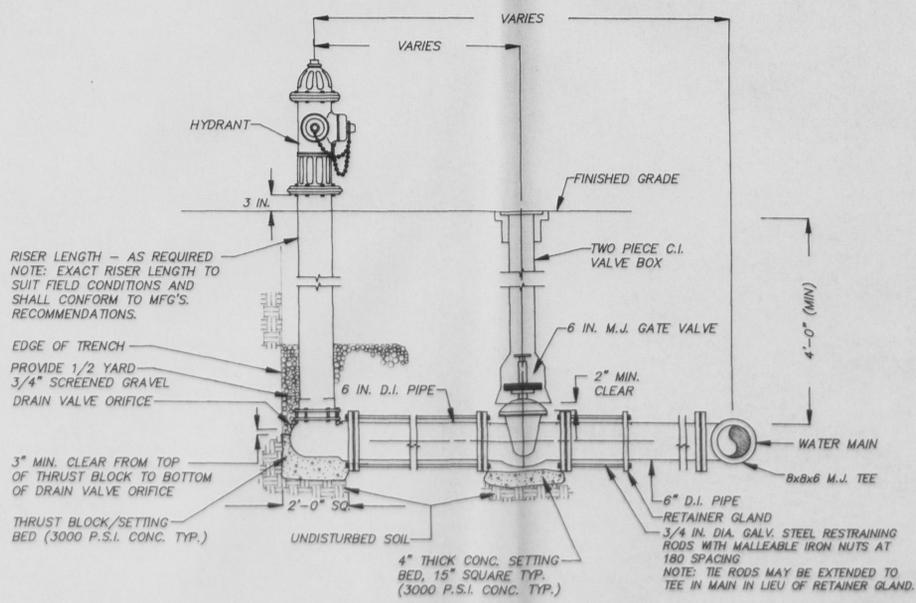
C TYPICAL CATCH BASIN
D-1 N.T.S.

NOTE: SHALL MEET THE REQUIREMENTS OF THE N.Y.S.D.O.T. SPEC. 706.04. CATCH BASIN TYPE "A" UNLESS OTHERWISE SHOWN ON PLAN.

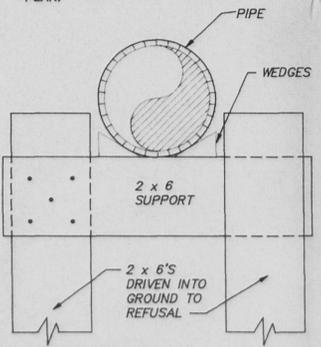


D EXCAVATION & BACKFILL DETAIL
D-1 N.T.S.

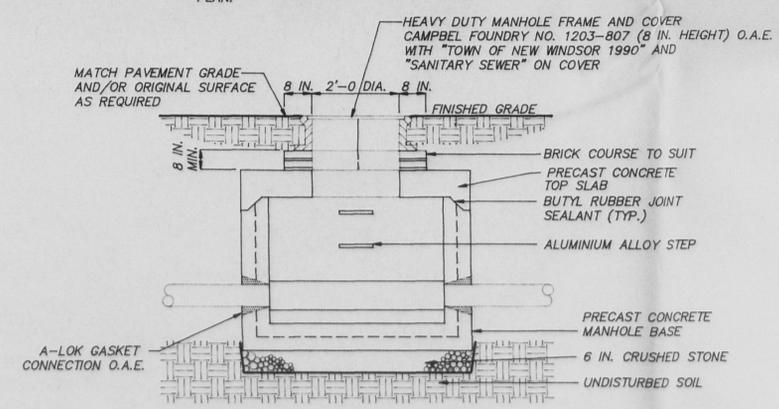
NOTE: SHEETING REQUIRED WHERE DEPTH OF EXCAVATION EXCEEDS 5' OR AS DIRECTED BY THE ENGINEER.



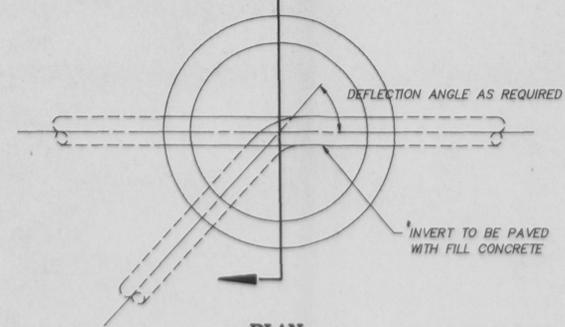
E HYDRANT ASSEMBLY DETAIL
D-1 N.T.S.



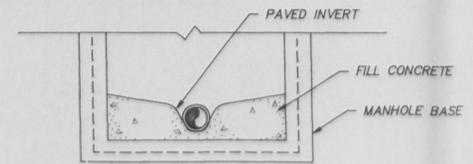
F SADDLE PILES
D-1 N.T.S.



G FLAT TOP MANHOLE DETAIL
D-1 N.T.S.



H PAVED MANHOLE INVERT DETAIL
D-1 N.T.S.



SECTION

REV	DR	CK	DATE	DESCRIPTION

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555 BLOOMING GROVE TURNPIKE, NEWBURGH, N.Y. 12550
PH: 914-562-4391 FAX: 914-562-4395

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147-39 175TH STREET JAMAICA, NEW YORK 11434

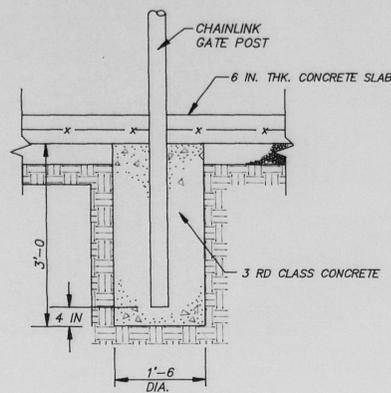


UTILITIES DETAILS

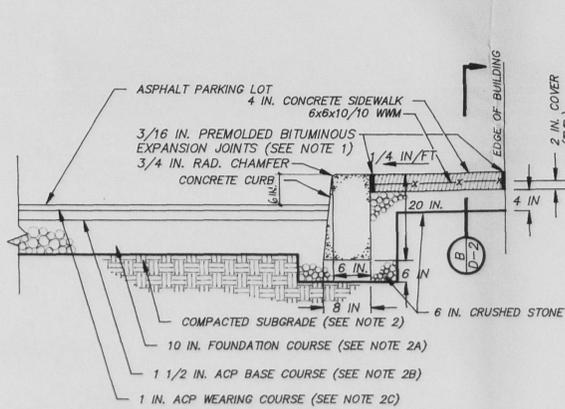
SCALE: AS NOTED SHEET: 2 OF: 5
DATE: 22 MAY 1990
DWG. NO.: D-1
DRAWN: MSO
CHECKED: STK
JOB NO.: 88015.00

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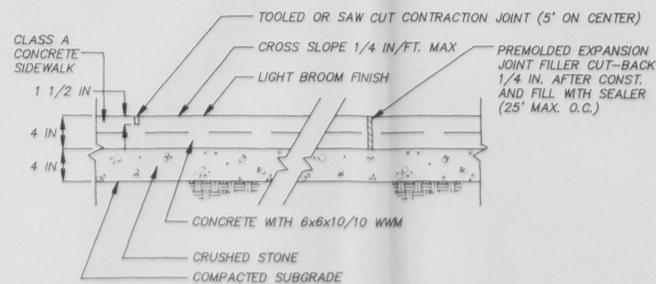
UNAUTHORIZED ALTERATION OR ADDITION TO THIS PLAN IS A VIOLATION OF SECTION 7209 (2) OF THE NEW YORK STATE EDUCATION LAW.



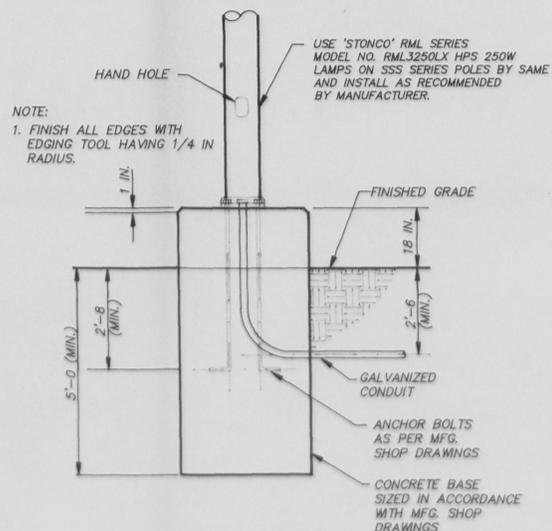
A FENCE POLE DETAIL
D-2 N.T.S.



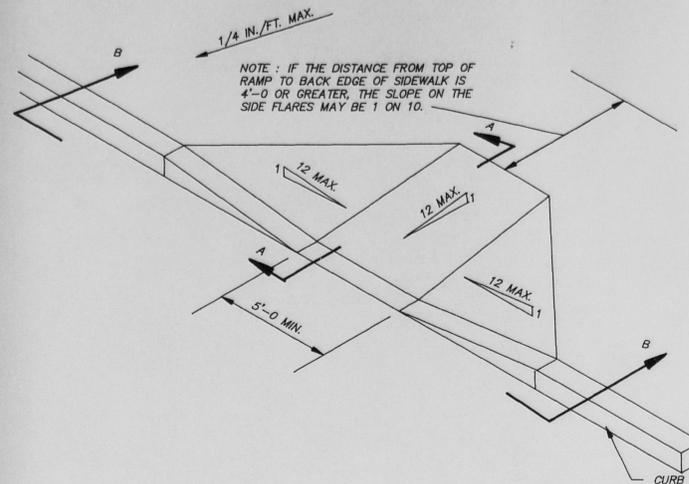
C PAVEMENT, CURB, AND WALKWAY DETAIL
D-2 N.T.S.



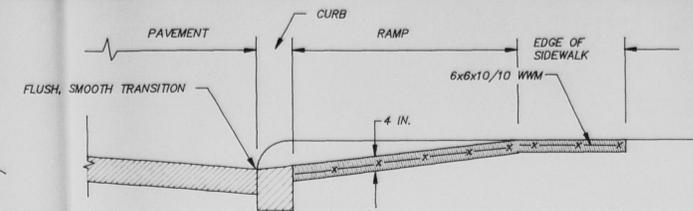
B CONCRETE SIDEWALK
D-2 N.T.S.



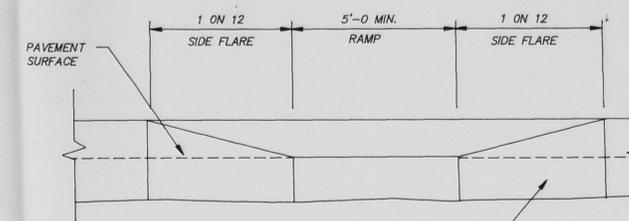
D TYPICAL LIGHT POLE DETAIL
D-2 N.T.S.



E SIDEWALK CURB RAMP, TYPE A
D-2 N.T.S.

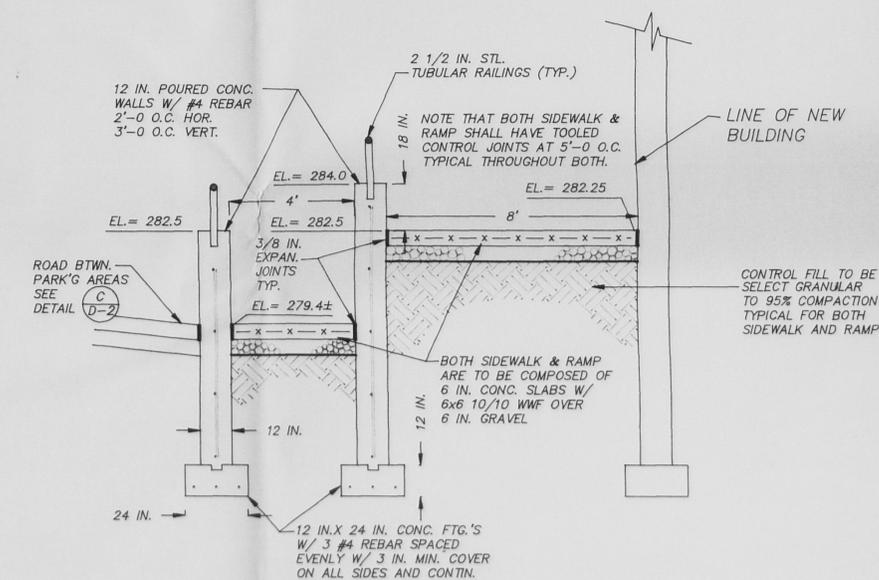


SECTION A-A
NOT TO SCALE



SECTION B-B
NOT TO SCALE

- NOTES:
- EXPANSION JOINTS SPACED EVERY 25' MIN. FROM START TO FINISH OF CURBING. MATCH WITH SIDEWALK WHERE APPLICABLE. CUTBACK 1/4 IN. AFTER CONSTRUCTION AND FILL WITH SEALER.
 - PAVEMENT COURSES:
 - FOUNDATION COURSE; N.Y.S.D.O.T. SECTION 304.2 "SUBBASE COURSE NO. 4".
 - BASE COURSE; N.Y.S.D.O.T. SECTION 403 ITEM 403.13, "ASPHALT CONCRETE-TYPE 3, BINDER COURSE".
 - WEARING COURSE; N.Y.S.D.O.T. SECTION 403 ITEM 403.1701, "ASPHALT CONCRETE-TYPE 6F TOP COURSE".



F SECTION THRU SIDEWALK & H.C. RAMP
D-2 N.T.S.

REV	DR	CK	DATE	DESCRIPTION
			26 JULY 1990	GEN. REV.'S AND OMITTED WASTE ENG. DET.'L
KARTIGANER ASSOCIATES, P.C. CONSULTING ENGINEERS 555 BLOOMING GROVE TURNPIKE, NEWBURGH, N.Y. 12550 PH: 914-562-4391 FAX: 914-562-4395				

ROUTE 32 ASSOCIATES

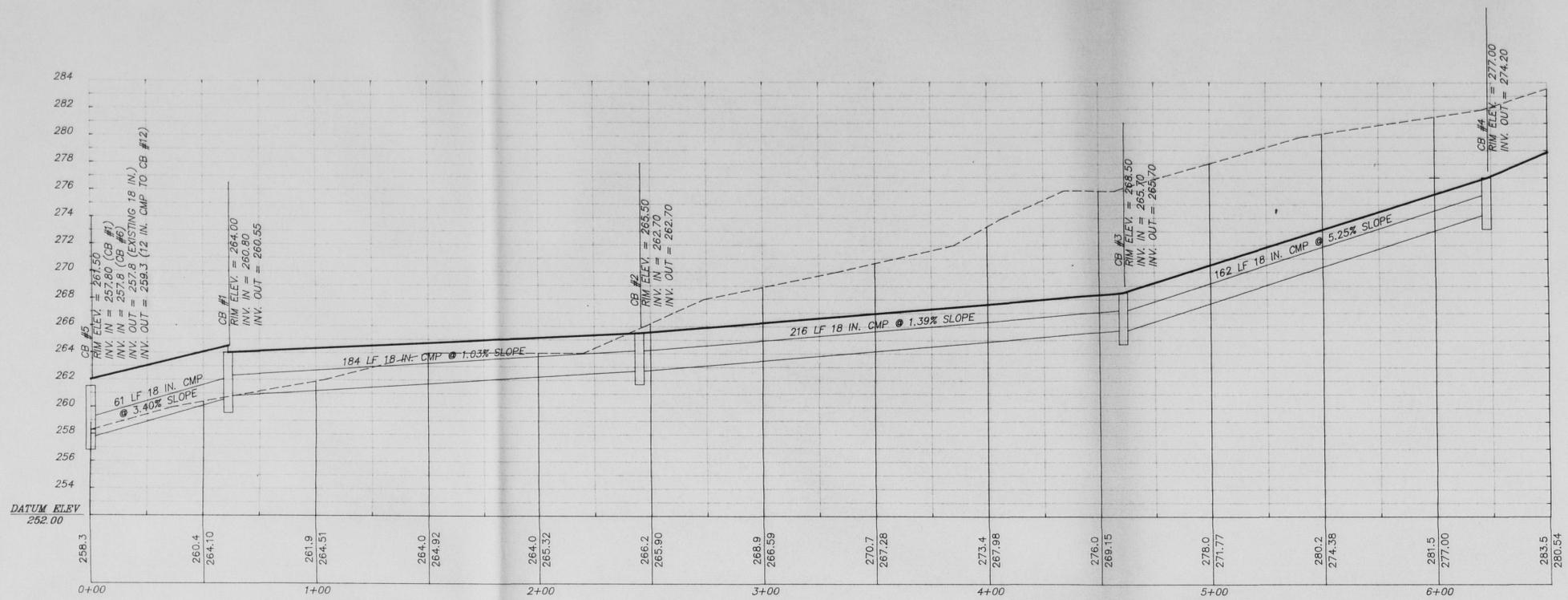
147-39 175TH STREET JAMAICA, NEW YORK 11434

SITWORK DETAILS

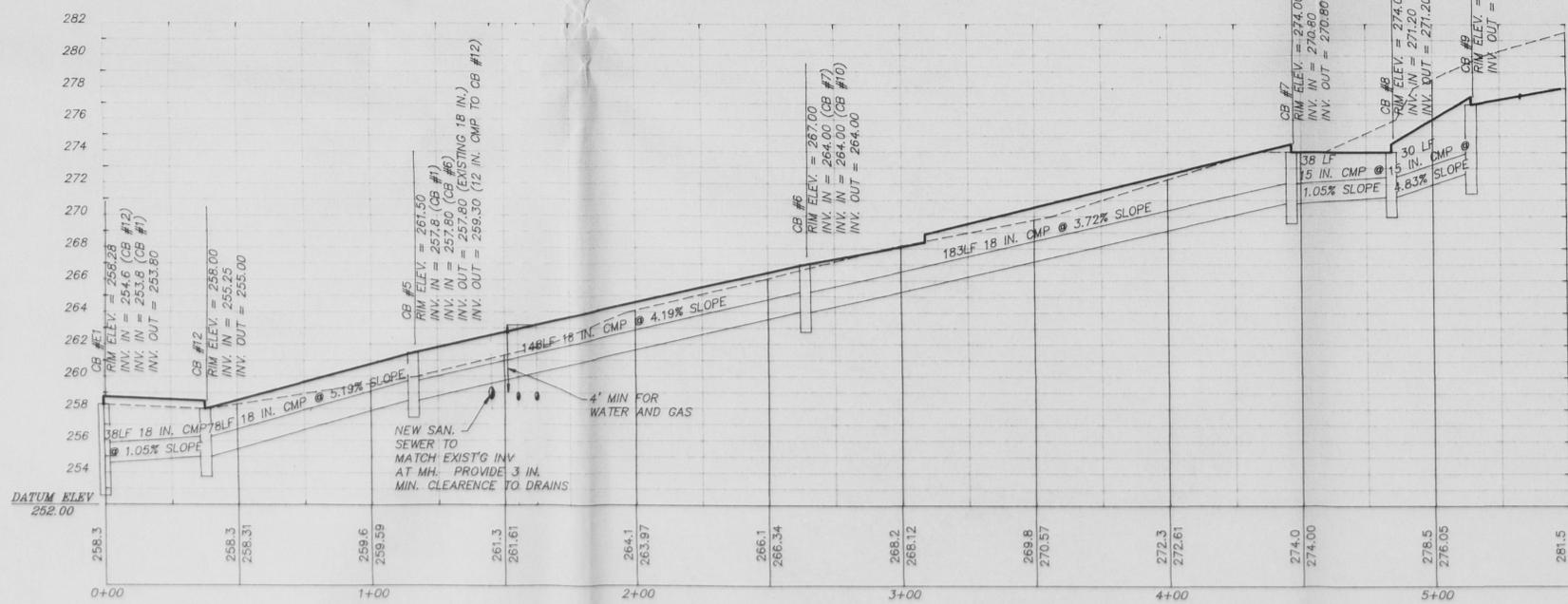
SCALE : AS NOTED SHEET: 3 OF: 5
DATE : 22 MAY 1990
DWG. NO.: D-2
DRAWN : MSO
CHECKED : STK
JOB NO : 88015.00

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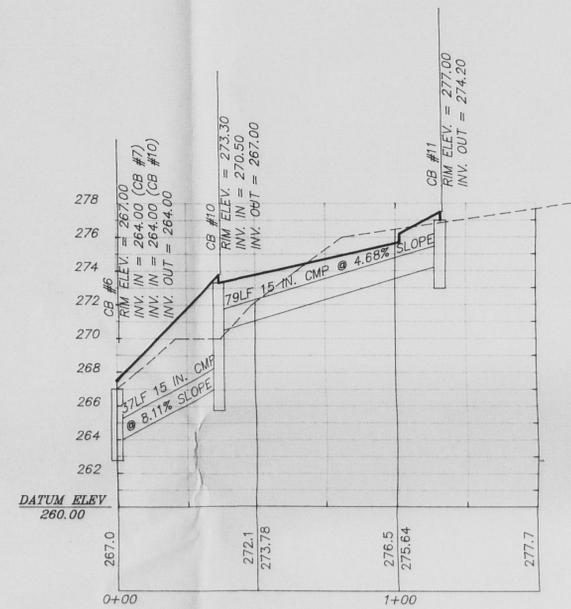
UNAUTHORIZED ALTERATION OR ADDITION TO THIS PLAN IS A VIOLATION OF SECTION 7209 (2) OF THE NEW YORK STATE EDUCATION LAW.



A STORM DRAIN PROFILE of CB'S E1-4
 PR-1 HORIZONTAL SCALE: 1 IN. = 30'
 VERTICAL SCALE: 1 IN. = 5'



B STORM DRAIN PROFILE of CB'S E1, 12, & 5-9
 PR-1 HORIZONTAL SCALE: 1 IN. = 30'
 VERTICAL SCALE: 1 IN. = 5'



C STORM DRAIN PROFILE of CB'S 6, 10, & 11
 PR-1 HORIZONTAL SCALE: 1 IN. = 30'
 VERTICAL SCALE: 1 IN. = 5'

2	MSO	DR	29 OCT 1990	GENERAL REVISIONS
1	MSO	MRC	17 JULY 1990	GENERAL REVISIONS
REV	DR	CK	DATE	DESCRIPTION

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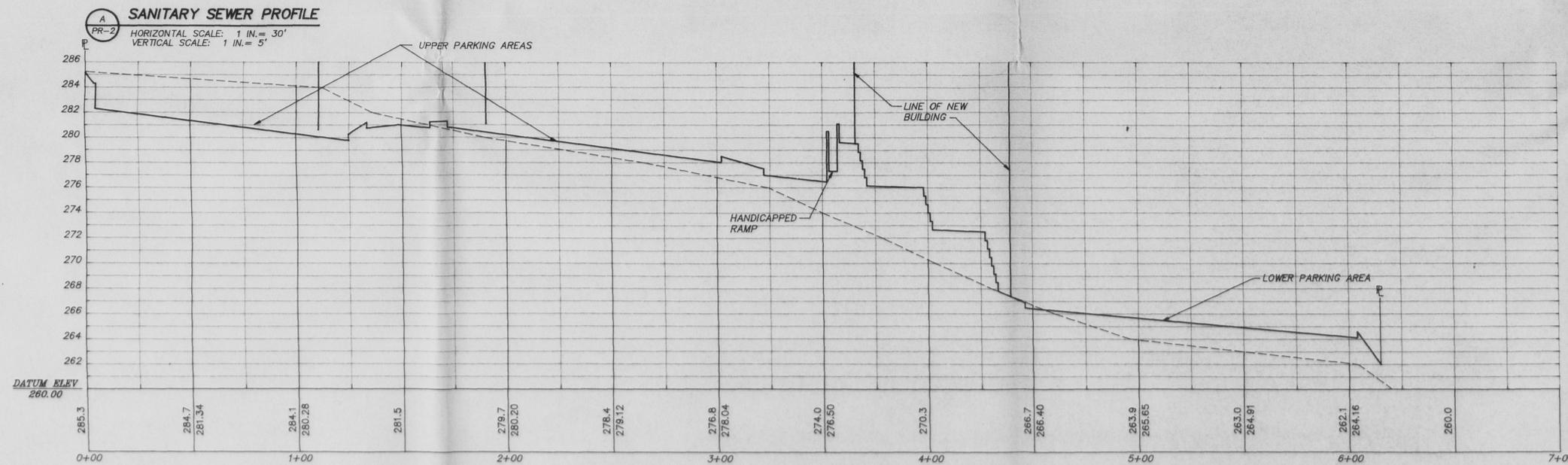
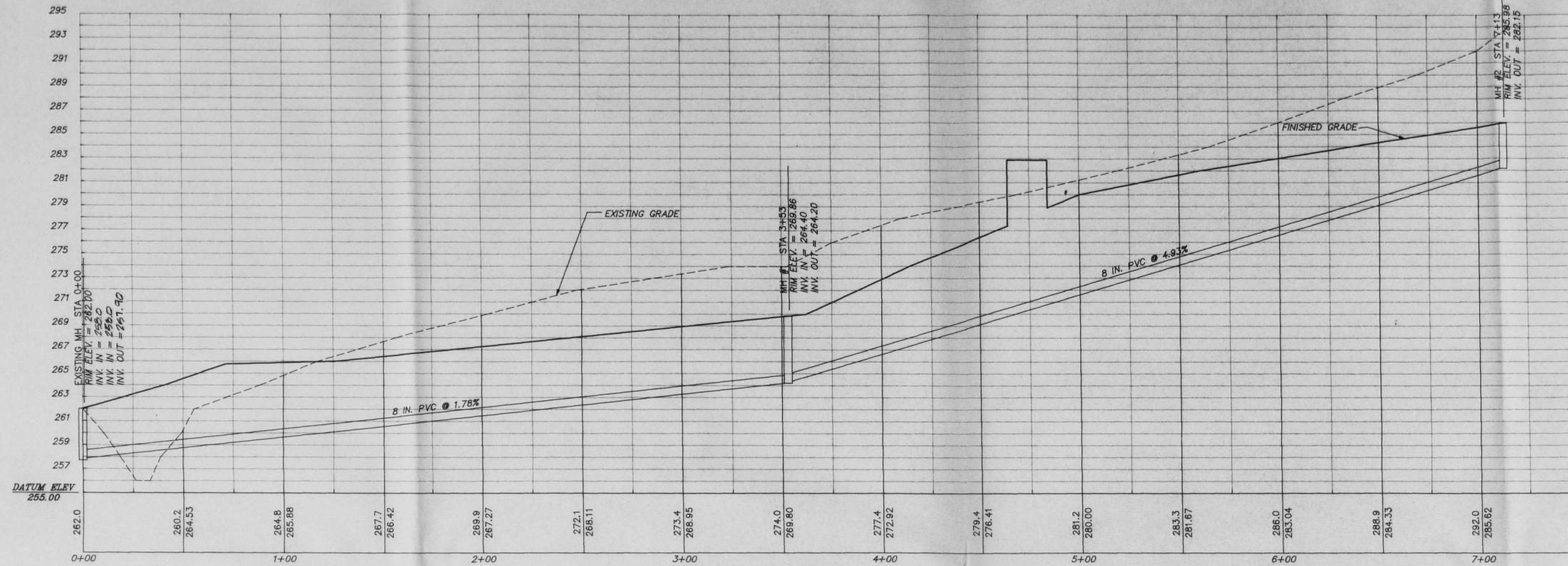


STORM DRAIN PROFILES

SCALE: AS SHOWN SHEET: 4 OF: 5
 DATE: 29 JUNE 1990
 DWG. NO.: PR-1
 DRAWN: MSO
 CHECKED: STK
 JOB NO.: 88015.00

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LONGITUDINAL CROSS SECTION of SITE (THROUGH STAIR)
 PR-2 HORIZONTAL SCALE: 1 IN. = 30'
 VERTICAL SCALE: 1 IN. = 5'

2	MSO	MRC	17 JULY 1990	GENERAL REVISIONS
1	MSO	MRC	17 JULY 1990	GENERAL REVISIONS
REV	DR	CK	DATE	DESCRIPTION

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SANITARY SEWER PROFILE & LONGITUDINAL CROSS SECTION

SCALE: AS SHOWN SHEET: 5 OF: 5
 DATE: 29 JUNE 1990
 DWG. NO.: PR-2
 DRAWN: MSO
 CHECKED: STK
 JOB NO.: 88015.00

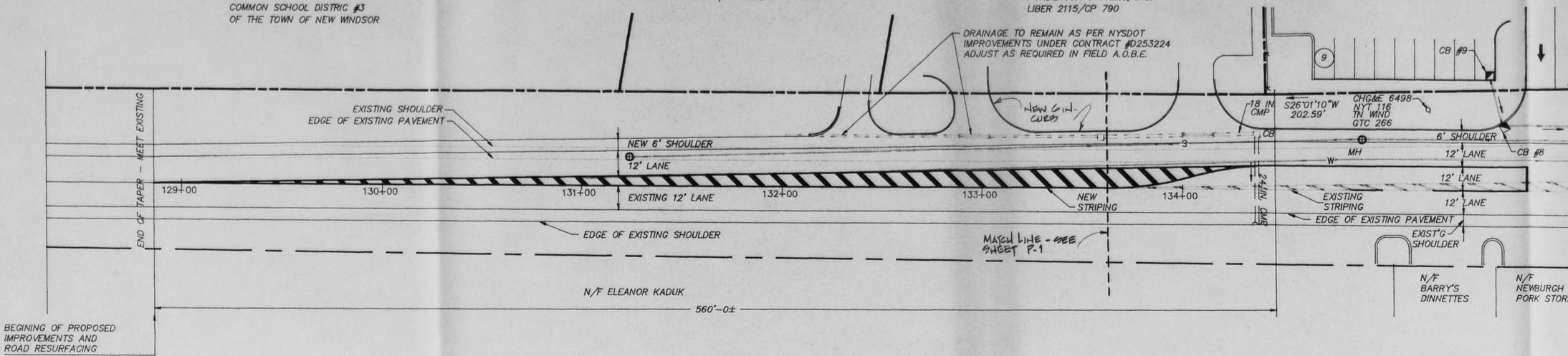
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N/F TRUSTEES OF THE
COMMON SCHOOL DISTRICT #3
OF THE TOWN OF NEW WINDSOR

N/F ALBERT HOWELL

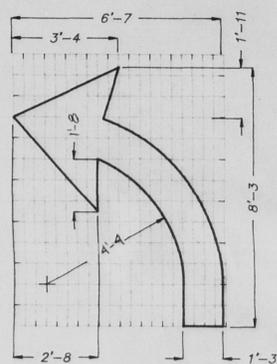
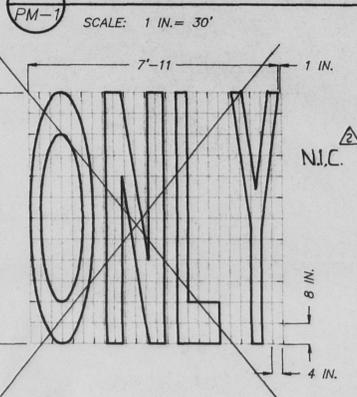
PONDEROSA SYSTEMS, INC.
LIBER 2115/CP 790



NOTES :

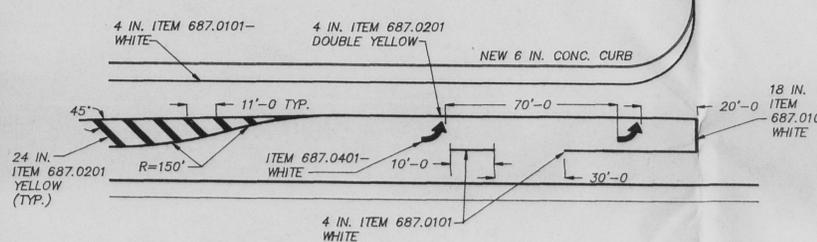
- ITEM NUMBERS AS THEY APPEAR REFER TO N.Y.S.D.O.T. SPECIFICATION NUMBERS.
- INVERTS AND TOP OF GRATES FOR DRAINAGE IMPROVEMENTS TO BE SET IN FIELD BY E.I.C.
- REFER TO SHEET P-1 OF CONSTRUCTION SET FOR ADDITIONAL NOTES.
- RAISE SEWER MH'S AS REQUIRED TO MEET NEW FINISHED PAVEMENT SURFACES.
- SEE N.Y.S.D.O.T. PROJECT D253224 FOR TYPICAL DRIVEWAY DETAILS.
- EXISTING DRAINAGE AND EXISTING IMPROVEMENTS SHOWN ARE FROM N.Y.S.D.O.T. SHEET 27 OF 96 CONTRACT D253224. PROPOSED IMPROVEMENTS UNDER SAID PROJECT ARE SHOWN AS EXISTING. CONTRACTOR IS TO VERIFY IN FIELD AND TO COORDINATE NEW CONSTRUCTION WITH THE N.Y.S.D.O.T. LOCAL RESIDENCY.
- FOR LOCATION OF CONCRETE SIDEWALKS SEE DWG. P-1.
- UNDEVELOPED ACCESS SHALL BE INSTALLED IN THE FORM OF RAMPS AT ALL CURB CURBS SEE DETAIL E-D-2

A PARTIAL SITE PLAN - NEW PAVEMENT MARKING LOCATIONS



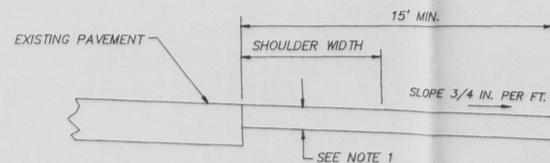
B PAVEMENT ARROW (WHITE) & 'ONLY' DETAIL (WHITE)

Scale: 3/8 IN. = 1'-0"



C DETAILED PAVEMENT MARKING LOCATIONS

Scale: 1 IN. = 30'
NOTE: ALL MARKINGS SHALL BE OF THERMOPLASTIC REFLECTORIZED PAVEMENT STRIPING AS APPROVED BY THE N.Y.S.D.O.T.



- NOTES :
- SHOULDER PAVING - SEE ROAD IMPROVEMENTS SECTIONS FOR MATERIALS IN SHOULDER

D SHOULDER DETAIL

Scale: N.T.S.

LEGEND

- W- EXISTING WATER LINE
- G- EXISTING GAS LINE
- S- EXISTING SANITARY SEWER
- SD- EXISTING STORM DRAIN
- C- EXISTING CURB
- NC- NEW CURB
- NSD- NEW STORM DRAIN
- 18 IN. CMP UNLESS OTHERWISE SHOWN
- ⊙ EXISTING MANHOLE
- ⊠ EXISTING CATCH BASIN
- ⊡ NEW CATCH BASIN
- ⊙ NEW SANITARY MANHOLE
- ⊙ NEW FIRE HYDRANT
- SS- NEW SANITARY SEWER

NOTE: IT IS THE RESPONSIBILITY OF THE NYSDOT PERMITTEE TO COORDINATE HIS WORK ACTIVITIES WITH THE STATE CONTRACTOR FOR CONTRACT D253224. PERMITTEE IS TO CONSULT WITH THE STATES ENGINEER-IN-CHARGE (E.I.C.) W. GREENING AT (914) 565-7951

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REV	DR	CK	DATE	DESCRIPTION
1	MSD	STK	19 OCT 1991	ADDED ORIGINAL NOTES
2	AK	AK	8 APR 1991	DOT. NOTE, REMOVED "ONLY" MARKING
3	MSD	STK	23 OCT 1990	GENERAL REV'S

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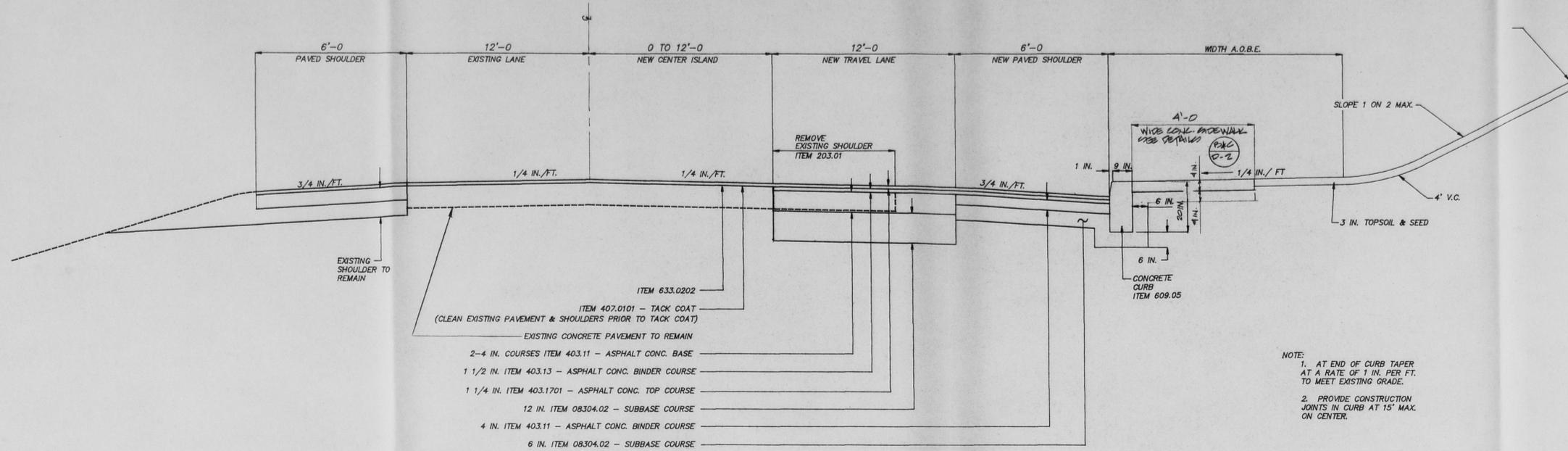
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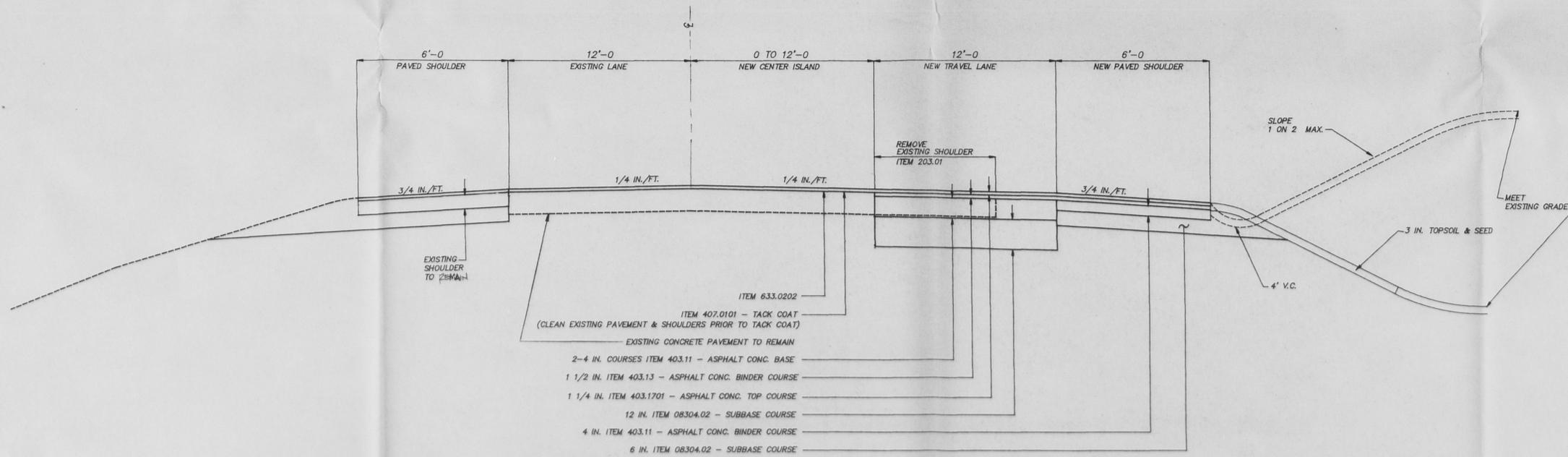


ROUTE 32 ROAD IMPROVEMENTS

SCALE : AS SHOWN SHEET: E1 OF: 2
DATE : 19 OCT. 1990
DWG. NO.: PM-1
DRAWN : MSD
CHECKED : STK
JOB NO : 88015.00



A
TS-1
TYPICAL ROAD WIDENING SECTION (CURB)



B
TS-1
TYPICAL ROAD WIDENING SECTION (NO CURB)

REV	DR	CK	DATE	DESCRIPTION
1	MSO	CK	19 SEP 1991	REV'D PER A FOR CONC. SIDEWALKS
2	MSO	CK	29 OCT 1990	GENERAL REV'S

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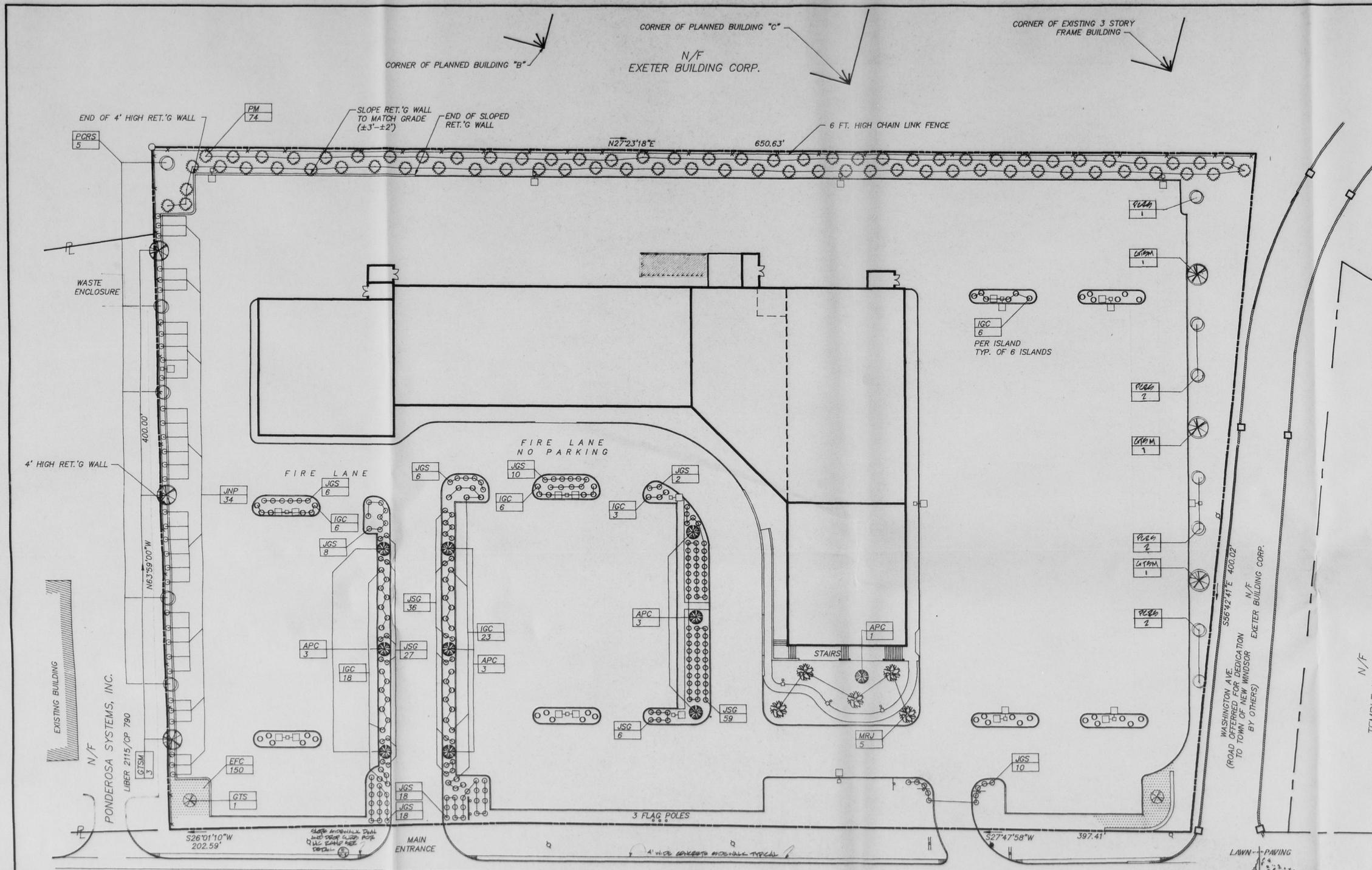


**ROUTE 32
ROAD IMPROVEMENTS**

SCALE : AS SHOWN SHEET: 22 OF: 2
DATE : 23 OCT 1990
DWG. NO.: TS-1
DRAWN : MSO
CHECKED : STK JOB NO : 88015.00

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PLANTING LIST				
SYMBOL	QUANTITY	BOTANICAL NAME COMMON NAME	ABBR.	SIZE
○	34	JUNIPERUS PROCUMBENS JAPANESE GARDEN JUNIPER	JNP	18 IN.
○	60	JUNIPER GOLD STAR	JGS	18 IN.
○	110	JUNIPER SARGENT GLAUCA	JSG	18 IN.
○	92	ILEX GLABRA COMPACTA COMPACT INKBERRY	IGC	24 IN.
○	12	PYRUS CALLERYANA "REDSPIRE" REDSPIRE FLOWERING PEAR	PCRS	2.5 IN.
○	10	ACER PLATANOIDES COL. COLMNAR NORWAY MAPLE	APC	2.5 IN.
○	5	MALUS RED JEWEL RED JEWEL CRABAPPLE	MRJ	2 IN.
○	2	GLEDITSIA TRIACANTHUS "SUNBURST" - GOLDEN HONEY LOCUST	GTS	2.5 IN.
○	6	GLEDITSIA TRIACANTHUS "SHADEMASTER" LOCUST	GTSM	2.5 IN.
○	74	PSEUDOTSUGA MENZELII DOUGLAS FIR	PM	6 FT.
○	300	ECONYMUS FORTUNEI COLORATUS PURPLELEAF WINTERCREEPER	EFC	4 IN.

- NOTES:**
- LANDSCAPING NOTES:**
ALL TREES AND SHRUBS MUST MEET OR EXCEED STANDARDS SET BY THE AMERICAN ASSOCIATION OF NURSERYMEN, YEAR OF LATEST REVISION.
 - LAWN AREAS:**
A. LAWN AREAS ARE TO HAVE A MINIMUM OF 4 IN. SOIL MIX CONSISTING OF TWO PARTS SCREENED TOP SOIL AND ONE PART "ALL-GRO" ORGANIC COMPOST, O.A.E., THOROUGHLY MIXED OVER 4 IN. OF SCREENED TOP SOIL.
B. SEED STARTER FERTILIZER - TO BE "DEVITT'S" PROFESSIONAL SEED STARTER FORMULA 12-19-22, O.A.E., ALSO USE AMPLE PELLETTIZED DOLOMITIC LIMESTONE AT A RATE OF 40 LBS. PER 2000 SQ. FT.
C. GRASS SEED - TO BE "DEVITT'S" PROFESSIONAL MIX, O.A.E., AT A RATE OF 1LB. PER 600 SQ. FT.
* - OPTIONAL - 6 LBS. "SOIL MOIST" WATER RETENTION ADDITIVE, AOB, PER 1000 SQ. FT. WORKED INTO SOIL A MINIMUM OF 3-5IN.
 - SHRUB & TREE PLANTING:**
TREES ARE TO BE PLANTED IN A SOIL MIX OF 3 PARTS TOP SOIL, 3 PARTS PEAT MOSS, 1 PART COMPOSTED COW MANURE, AND 1 OZ. SOIL MOIST PER 12 IN. OF SOIL BALL. COVER WITH A MIN. 3 IN. "CEDARSCAPE", SHREDDED CEDAR MULCH. TREES OVER 8' ARE TO BE STAKED WITH TWO OAK STAKES 2 IN. x 2 IN. x 6'. TREES UNDER 8' ARE TO BE STAKED WITH "DEVITT'S" TREE STAKE KITS O.A.E.
 - FLOWER BEDS:**
FLOWER BEDS ARE TO HAVE A MINIMUM OF 4 IN. "ALL-GRO" ORGANIC COMPOST, O.A.E., OVER 4 IN. SCREENED TOP SOIL.
 - PLAN WAS PREPARED WITH HORTICULTURAL ASSISTANCE FROM MAHLAN R. SOLBORPHE.

REV	DR	CK	DATE	DESCRIPTION
3	MSD	ATK	15 SEPT 1991	REVISED AS PER 11 SEPT 1991 MTA.
2	MSD	ATK	4 SEPT 1991	REVISED SHERE HAZARD/CLASH ARE & HAZARD TREE & NAME ARE
1	MSD	ATK	23 OCT 1990	GEN. REVISIONS

KARTIGANER ASSOCIATES, P.C.
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ROUTE 32 ASSOCIATES
147-39 175TH STREET JAMAICA, NEW YORK 11434

LANDSCAPING PLAN
SCALE: 1 IN. = 30'
DATE: 2 OCT 1990
DWG. NO.: LS-1
DRAWN: MSD
CHECKED: STK
SHEET: 11 OF: 11
JOB NO.: 88015.00

LEGEND

- EXISTING CURB
- NEW CURB
- NEW LIGHTS SHALL BE MODEL NO. RML340QLX AS MANUFACTURED BY "STONCO". FOR TENON MNT'G USE ORDER NO.'S AS SHOWN.
- NEW PATH LIGHTS SHALL BE MODEL NO. RMS3100NLXL W/ 3' POLES.

LEGEND

- N/F BARRY'S DINNETTES
- N/F NEWBURGH PORK STORE
- N/F KENTUCKY FRIED CHICKEN
- NOT IN USE

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SITE PLAN
SCALE: 1 IN. = 30'

DETAIL TREE PLANTING