34A-B-1

2007-0023

84 Marginal Way
Medical office Bld.
Capital, LLC.

Logged on Spreadsheet

Mitchell
& Associates
LANDSCAPE ARCHITECTS

The Staples School
70 Center Street
Portland, Maine 04101
P: 207.774.4427
F: 207.874.2460
www.mitchellassociates.biz

January 24, 2008

Rick Knowland, Senior Planner
Portland Planning Department
389 Congress Street, 4th Floor
Portland, Maine 04101

RE: 84 Marginal Way
De Minimis Change Request
Atlantic Bayside Trust, f/k/a Capital LLC

Dear Rick:

Mitchell & Associates, on behalf of Atlantic Bayside Trust, is submitting for a De Minimis change request for the 84 Marginal Way project which received approval on January 9, 2007 and amended approval on March 27, 2007. The De Minimis change request is for installation of a standby emergency generator to be located along the rear of the building facing I-295.

The standby emergency generator specified is manufactured by Caterpillar and is 500 eKW. It will operate once weekly, to maintain the manufacturer's warranty, for a period of 15 minutes between 4pm and 6pm. The times have been coordinated with rush hour to minimize the noise disturbance. The generator will have a C15 Sound Attenuated Enclosure to bring the decibel level to 75.8 dBA at a distance of 7 meters (23 feet). All exhaust discharge from the equipment is vertical. To supplement screening from Preble Street Extension, we have provided additional shrubs as shown on the attached sketch. Please see attached cut-sheets for information and site layout plan for location.

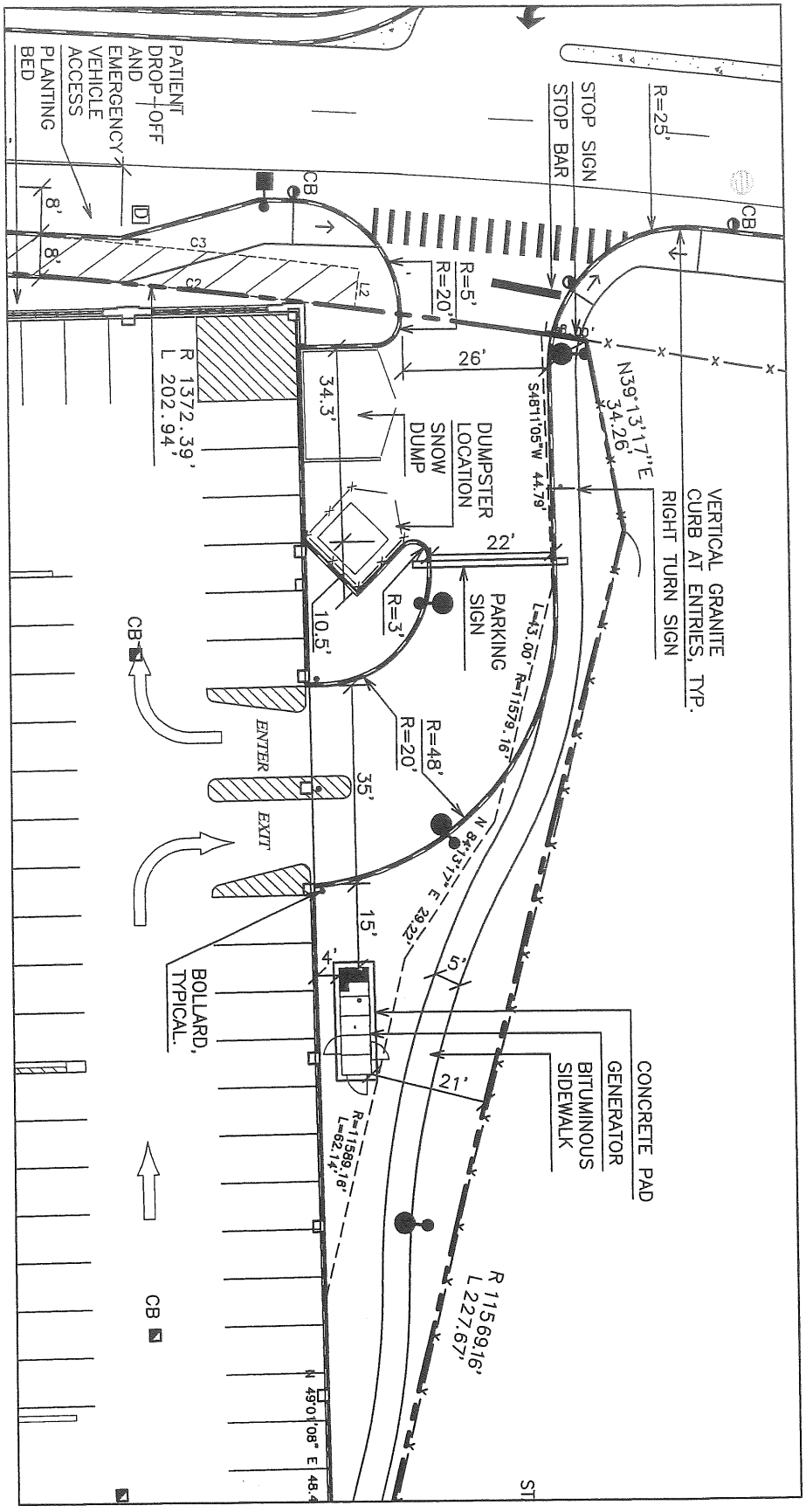
Should you require additional information, please feel free to contact me.

Sincerely,
Mitchell & Associates

Bob Metcalf

Enclosure

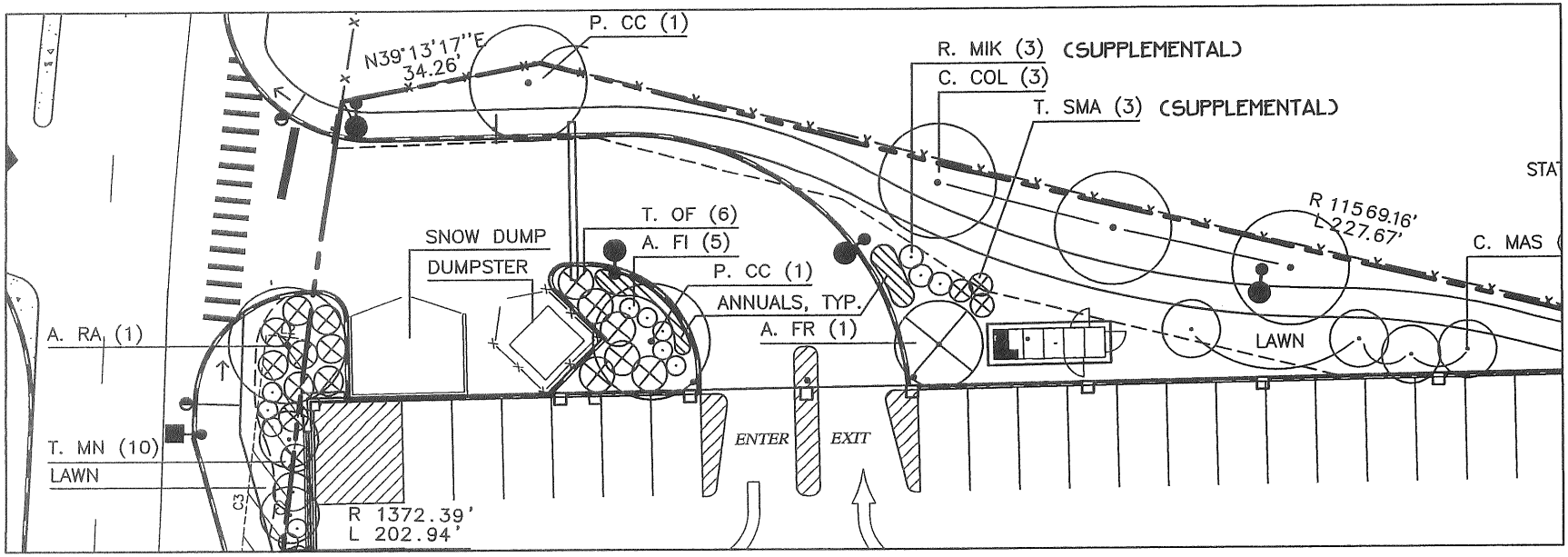
cc. Ed Marsh, Atlantic Bayside Trust
Pat Keating, Pizzagalli Construction
Judy Johnson, Harriman Associates



Mitchell & Associates Landscape Architects 70 Center Street Portland, Maine 04101 (207) 774-4427	Title: DE MINIMIS CHANGE REQUEST STANDBY EMERGENCY GENERATOR		North:
	Date: JAN. 24, 2008	Scale: 1"=30'	A
	Project: 84 MARGINAL WAY		

PLANT LIST - GROUND LEVEL

KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE
		TREES		
A. FR	1	ABIES FRASERI	FRASIER FIR	5'-6' HT
A. RA	1	ACER RUBRUM 'ARMSTRONG'	ARMSTRONG RED MAPLE	2 1/2"-3" CAL
C. MAS	4	CORNUS MAS	CORNELLIAN CHERRY	1 1/2"-2" CAL
C. COL	3	CORYLUS COLURNA	TURKISH FILBERT	2"-2 1/2" CAL
G. BM	4	GINGKO BILOBA 'MAYGAR"	MAYGAR GINGKO	2"-2 1/2" CAL
M. JE	7	MALUS 'JEWELCOLE'	PROFUSION FLOWERING CRAB	2"-2 1/2" CAL
M. ZUM	3	MALUS x ZUMI 'CALOCARPA'	ZUMI CALOCARPA FLOWERING CRAB	2 1/2"-3" CAL
P. CC	2	PYRUS 'CLEVELAND'	CLEVELAND ORNAMENTAL PEAR	2 1/2"-3" CAL
U. NH	6	ULMUS AMERICANA 'NEW HARMONY'	NEW HARMONY ELM	2 1/2"-3" CAL
		SHRUBS		
A. FI	21	AZALEA 'FIRESTAR'	FIRESTAR AZALEA	#5
A. WW	6	AZALEA 'WHITNEY'S WHITE'	WHITNEY'S WHITE AZALEA	#5
F. WE	25	FORSYTHIA 'WEEKEND'	WEEKEND FORSYTHIA	#5
J. OB	7	JUNIPERUS CHINENSIS 'OBELISK'	OBELISK JUNIPER	#5
J. SH	6	JUNIPERUS SQUAMATA 'HOLGER'	HOLGER JUNIPER	#5
R. HK	4	RHODODENDRON 'HONG KONG'	HONG KONG RHODODENDRON	2'-2 1/2'
R. MIK	3	RHODODENDRON 'MIKKELI'	MIKKELI RHODODENDRON	2'-2 1/2'
T. MN	20	TAXUS x MEDIA 'NIGRA'	NIGRA TAXUS	2'-2 1/2'
T. OF	6	THUJA OCCIDENTALIS 'FILIFORMIS'	THREAD ARBORVITAE	2'-2 1/2'
T. SMA	3	THUJA OCCIDENTALIS 'SMARAGD'	EMERALD GREEN ARBORVITAE	6'-7' HT



B

North:

Title: DE MINIMIS CHANGE REQUEST
STANDBY EMERGENCY GENERATOR

Date: JAN. 24, 2008

Scale: 1"=30'

Project: 84 MARGINAL WAY

Mitchell & Associates
Landscape Architects
70 Center Street
Portland, Maine 04101
(207) 774-4427

DIESEL GENERATOR SET

CATERPILLAR®

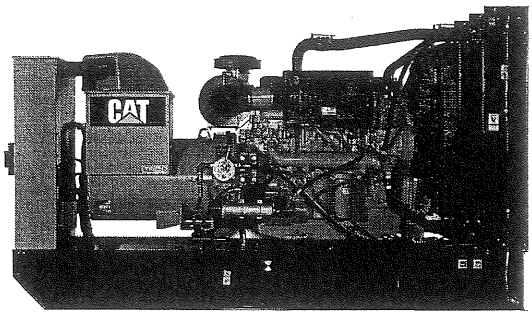


Image shown may not reflect actual package.

STANDBY
500 ekW 625 kVA
60 Hz 1800 rpm 480 Volts

Caterpillar is leading the power generation marketplace with Power Solutions engineered to deliver unmatched flexibility, expandability, reliability, and cost-effectiveness.

FEATURES

FUEL/EMISSIONS STRATEGY
- TIER 1 CAPABLE

FULL RANGE OF ATTACHMENTS
- Wide range of bolt-on system expansion attachments, factory designed and tested

SINGLE-SOURCE SUPPLIER
- Fully prototype tested with certified torsional vibration analysis available

WORLDWIDE PRODUCT SUPPORT
- Caterpillar® dealers provide extensive post sale support including maintenance and repair agreements
- Caterpillar dealers fill 99.7% of parts orders within 24 hours
- Caterpillar dealers have over 1,798 dealer branch stores operating in 200 countries
- The Cat® S•O•S℠ program cost effectively detects internal engine component condition, even the presence of unwanted fluids and combustion by-products

UL 2200
- UL 2200 listed packages are available. Certain restrictions may apply. Consult with your Caterpillar dealer network

CAT® C15 ATAAC DIESEL ENGINE
- Utilizes ACERT™ Technology
- Reliable, rugged, durable design
- Field-proven in thousands of applications worldwide
- Four-stroke diesel engine combines consistent performance and excellent fuel economy with minimum weight
- Electronic engine control

CAT GENERATOR
- Designed to match performance and output charactistics of Caterpillar diesel engines
- 2/3 Pitch
- UL 1446 Recognized Class H Insulation

CAT EMCP 3 CONTROL PANELS
- Controls designed to meet individual customer needs
- Options for power metering and protective relaying are available
- Options to meet UL/CSA/NFPA
- Rear mounted power center provides convenient location for control panel,and optional circuit breakers

STANDBY 500 ekW 625 kVA

60 Hz 1800 rpm 480 Volts

CATERPILLAR®

FACTORY INSTALLED STANDARD & OPTIONAL EQUIPMENT

System	Standard	Optional
Air Inlet	• Light Duty Air filter	• Canister Style Air Cleaners • Air Cleaner - single stage • Dual element • Heavy duty
Cooling	• Radiator package mounted(50°C) • Coolant drain line with valve terminated at edge of base • Fan and belt guards • Coolant level sight gauge • Caterpillar Extended Life Coolant	• Radiator removal • Radiator duct flange & guard
Exhaust	• Dry exhaust manifold • Flanged faced outlets • Stainless Steel Flex with split-cuff connection	• Mufflers • Manifold & Turbocharger guards • Elbows
Fuel	• Primary fuel filter with integral water separator • Secondary fuel filters • Fuel priming pump • Engine fuel transfer pump • Flex fuel lines • Engine fuel transfer pump • Fuel cooler* *Not included with packages without radiators	• Integral UL listed fuel tank base • Manual transfer pump • Fuel level switch
Generator	• Self excited • Class H insulation • Random Wound • 2/3 pitch • R448 voltage regulator with load adjustment module • IP23 Protection	• Permanent magnet excitation • CDVR with KVAR/PF control • AREP Excitation • Oversize and premium generators • Bearing/Stator temperature detection (premium generator) • 3 phase sensing • Anti-condensation space heaters • Cable access box • Reactive droop
Power Termination	• Power Terminator Strips Mounted inside Power Center • Segregated low voltage wiring panel	• Circuit breakers, UL listed, 3 pole • Circuit breakers, IEC compliant, 3 pole • Circuit breaker Shunt trip • Circuit breaker Auxillary contact • Top & bottom power cable entry • Floor standing UL breakers
Governor	• ADEM™A4	• Load share module
Control Panels	• EMCP 3.1 (rear mounted) • Speed adjust • Emergency stop pushbutton • Voltage adjust	• EMCP 3.2 & EMCP 3.3 (can be RH mounted) • Local annuniciator modules (NFPA 99/110) • Remote annunicator modules (NFPA 99/110) • Discrete I/O module
Lube	• Lubricating oil and filter • Oil drain line with valves • Fumes disposal • Gear type lube oil pump	• Manual sump pump
Mounting	• Formed steel wide base frame • Linear vibration isolation-seismic zone 4	• Formed steel wide base frame
Starting/Charging	• 24 volt starting motor • 45 amp charging alternator • Battery with rack and cables	• Jacket water heater with shut off valves • Block heater • Ether starting aids • Battery disconnect switch • Battery charger(5A,10A) • Oversize batteries
General	• Paint - Caterpillar yellow except rails and radiators gloss black • Flywheel and flywheel housing - SAE No.1	

STANDBY 500 ekW 625 kVA

60 Hz 1800 rpm 480 Volts

CATERPILLAR®

SPECIFICATIONS

CAT GENERATOR

Frame size.....LC6114F
Excitation.....Self Excited
Pitch.....0.6667
Number of poles.....4
Number of bearings..... Single Bearing
Insulation..... UL 1446 Recognized Class H with tropicalization and antiabrasion
- Consult your Caterpillar dealer for available voltages
IP Rating.....Drip Proof IP22
Alignment..... Pilot Shaft
Overspeed capability..... 125% of rated
Wave form Deviation (Line to Line)..... 2%
Voltage regulator.....3 Phase sensing with selectible volts/Hz
Voltage regulation.....Less than +/- 1/2% (steady state)
Less than +/- ½% (w/ 3% speed change)
Telephone influence factor.....Less than 50
Harmonic Distortion.....Less than 5%

CAT DIESEL ENGINE

C15 ATTAC, L-6, 4-stroke water-cooled diesel
Bore..... 137.20 mm (5.4 in)
Stroke..... 171.40 mm (6.75 in)
Displacement.....15.20 L (927.56 in^3)
Compression Ratio..... 16.1:1
Aspiration..... ATAAC
Fuel System..... MEUI
Governor Type..... Caterpillar ADEM control system

CAT EMCP 3 CONTROL PANELS

- EMCP 3.1 (Standard)
- UL/CSA/CE
- NEMA 1, IP22 enclosure
- Run/Auto/Stop control
- True RMS metering, 3-phase
- Speed Adjust
- Vandel cover (option)
- Voltage adjust
- Digital Indication for:
- RPM
- Operating hours
- Oil Pressure
- Coolant temperature
- System DC volts
- L-L volts, L-N volts, phase amps, Hz
- ekW, kVA, kVAR,kW-hr, %kW, PF,(EMCP3.2/3.3)
- Shutdowns with common indicating light for:
- Low oil pressure
- High coolant temperature
- Low coolant level
- Overspeed
- Emergency stop
- Failure to start (overcrank)
- Programmable protective relaying functions: (EMCP 3.2 & 3.3)
-Under and over voltage
-Under and over frequency
- Reverse power
- Overcurrent
- MODBUS isolated data link (RS-485 half-duplex EMCP 3.2 & 3.3)

STANDBY 500 ekW 625 kVA

60 Hz 1800 rpm 480 Volts

CATERPILLAR®

TECHNICAL DATA

Open Generator Set - - 1800 rpm/60 Hz/480 Volts	DM9115	
Tier 1 Capable		
Generator Set Package Performance		
Genset Power rating @ 0.8 pf	625 kVA	
Genset Power rating with fan	500 ekW	
Fuel Consumption		
100% load with fan	141.6 L/hr	37.4 Gal/hr
75% load with fan	107.9 L/hr	28.5 Gal/hr
50% load with fan	89.9 L/hr	23.7 Gal/hr
Cooling System[1]		
Air flow restriction (system)	0.12 kPa	0.48 in. water
Engine coolant capacity	20.8 L	5.5 gal
Inlet Air		
Combustion air inlet flow rate	40.2 m³/min	1419.7 cfm
Exhaust System		
Exhaust stack gas temperature	509.1 ° C	948.4 ° F
Exhaust gas flow rate	111.2 m³/min	3927.0 cfm
Exhaust system backpressure (maximum allowable)	6.8 kPa	27.3 in. water
Heat Rejection		
Heat rejection to coolant (total)	192 kW	10919 Btu/min
Heat rejection to exhaust (total)	497 kW	28264 Btu/min
Heat rejection to atmosphere from engine	120 kW	6824 Btu/min
Heat rejection to atmosphere from generator	29.1 kW	1654.9 Btu/min
Alternator[2]		
Motor starting capability @ 30% voltage dip	1428 skVA	
Frame	LC6114F	
Temperature Rise	130 ° C	266 ° F
Emissions (Nominal)[3]		
NOx g/hp-hr	5.78 g/hp-hr	
CO g/hp-hr	.39 g/hp-hr	
HC g/hp-hr	.01 g/hp-hr	
PM g/hp-hr	.017 g/hp-hr	

[1] Ambient capability at 300m (984 ft) above sea level. For ambient capability at other altitudes, consult your Caterpillar dealer. Air flow restriction (system) is added to existing restriction from factory. Generator temperature rise is based on a 40 C (104 F) ambient per NEMA MG1-32

[2] Generator temperature rise is based on a 40° C (104° F) ambient per NEMA MG1-32.

[3] Emissions data measurement procedures are consistent with those described in EPA CFR 40 Part 89, Subpart D & E and ISO8178-1 for measuring HC, CO, PM, NOx. Data shown is based on steady state operating conditions of 77°F, 28.42 in HG and number 2 diesel fuel with 35° API and LHV of 18,390 btu/lb. The nominal emissions data shown is subject to instrumentation, measurement, facility and engine to engine variations. Emissions data is based on 100% load and thus cannot be used to compare to EPA regulations which use values based on a weighted cycle.

STANDBY 500 ekW 625 kVA

60 Hz 1800 rpm 480 Volts

CATERPILLAR®

RATING DEFINITIONS AND CONDITIONS

Meets or Exceeds International Specifications: AS1359, AS2789, CSA, EGSA101P,IEC60034, ISO3046, ISO8528,NEMA MG 1-32, UL508, 72/23/EEC, 89/336/EEC, 98/37/EEC.

Standby - Output available with varying load for the duration of the interruption of the normal source power. Standby power in accordance with ISO8528. Fuel stop power in accordance with ISO3046, AS2789, and BS5514. Standby ambient temperatures shown indicate a coolant top tank temperature just below shutdown at 100 percent load.

Prime - Output available with varying load for an unlimited time. Prime power in accordance with ISO8528. 10% overload power in accordance with ISO3046, AS2789, and BS5514. Prime ambient temperatures shown indicate a coolant top tank temperature just below shutdown at 100 percent load.

Ratings are based on SAE J1995 standard conditions. These ratings also apply at ISO3046 standard conditions. **Fuel rates** are based on fuel oil of 35° API [16° C (60° F)] gravity having an LHV of 42 780 kJ/kg (18,390 Btu/lb) when used at 29° C (85° F) and weighing 838.9 g/liter (7.001 lbs/U.S. gal.). Additional ratings may be available for specific customer requirements. Consult your Caterpillar representative for details.

STANDBY 500 ekW 625 kVA

60 Hz 1800 rpm 480 Volts

CATERPILLAR®

DIMENSIONS

Package Dimensions		
Length	3775.1 mm	148.63 in
Width	1110.0 mm	43.7 in
Height	2091.0 mm	82.32 in
Weight	3881 kg	8,556 lb

Note: Do not use for installation design. See general dimension drawings for detail (Drawing #2899689).

Performance No.: DM9115

Feature Code:: C15DE4W

Source:: U.S. Sourced

19 May 2006

6872504

www.CAT-ElectricPower.com

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Materials and specifications are subject to change without notice. The International System of Units (SI) is used in this publication.

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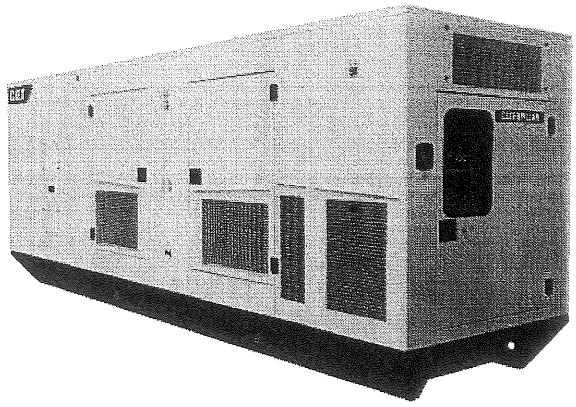


Picture shown may not reflect actual package.

C15 SOUND ATTENUATED ENCLOSURES

Larne 50 Hz/60 Hz

These sound attenuated, factory installed enclosures incorporate internally mounted super critical level silencers, designed for safety and aesthetic value on integral fuel tank bases or optional fabricated steel bases. These enclosures are of extremely rugged construction to withstand exposure to the elements of weather.

FEATURES

ROBUST/HIGHLY CORROSION RESISTANT CONSTRUCTION

- Factory installed
- Environmentally friendly, polyester powder baked paint
- 14 gauge steel
- Zinc plated or stainless steel fasteners
- Internally mounted super critical exhaust silencing system

EXCELLENT ACCESS

- Large cable entry area for installation ease
- Accommodates rear mounted breaker
- Double doors on both sides
- Vertically hinged doors allow 180° opening rotation
- Lube oil and coolant drains pipes to exterior of enclosure and terminated drain valves
- Radiator fill cover

SECURITY AND SAFETY

- Lockable access doors which give full access to control panel and breaker
- Cooling fan and battery charging alternator fully guarded
- Fuel fill, oil fill, coolant and battery can only be reached via lockable access
- Externally mounted emergency stop button
- Designed for spreader-bar lifting to ensure safety
- Control panel viewing window

OPTIONS

- Yellow or white paint
- Interior lighting system
- Skid base with dragging and fork pockets
- Integral fuel tank base

ENCLOSURES

CATERPILLAR®

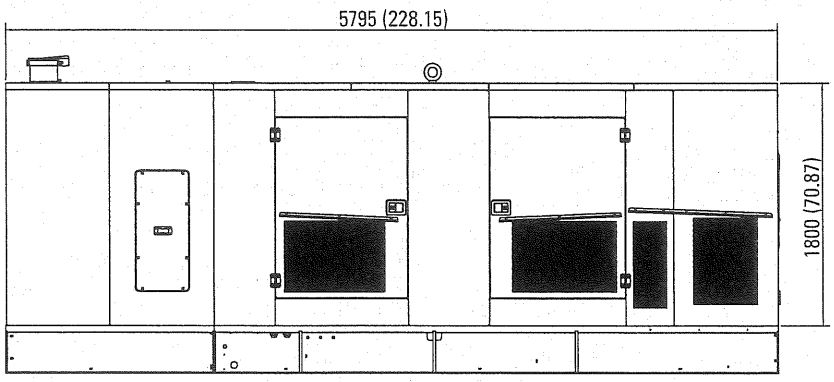
SOUND ATTENTUATED ENCLOSURE OPERATING CHARACTERISTICS

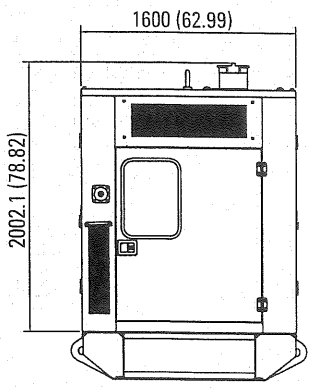
60 Hz SA Enclosure 1 Breaker			Ambient Capability*		Airflow Rate		Sound Pressure Levels dBA @ Full Load			Exhaust Back Pressure	
ekW	kVA	PP/SB	°C	°F	m³/s	Cfm	1 m	7 m	15 m	in/H₂O	kPa
550	687.5	SB	42	108	11.9	25,215	87.7	76.7	70.7	18.0	4.5
500	625.0	SB	46	115	11.9	25,215	87.0	75.8	69.8	16.0	4.0
455	568.8	PP	44	111	11.9	25,215	86.4	75.2	69.2	14.3	3.6
450	562.5	SB	47	117	9.9	20,978	84.6	74.6	68.6	14.1	3.5
410	512.5	PP	44	111	9.9	20,978	84.2	74.0	68.0	12.5	3.1
400	500.0	SB	50	122	9.9	20,978	84.1	73.9	67.9	12.2	3.0
365	456.3	PP	47	117	9.9	20,978	83.8	73.4	67.4	10.9	2.7
350	437.5	SB	54	129	9.9	20,978	83.7	73.2	67.2	10.4	2.6
320	400.0	PP	50	122	9.9	20,978	83.5	72.9	66.9	9.3	2.3

*Ambient measured with Caterpillar Extended Life Coolant

50 Hz SA Enclosure (Low Emissions)			Ambient Capability*		Airflow Rate		Sound Pressure Levels dBA @ Full Load			Exhaust Back Pressure	
kVA	ekW	PP/SB	°C	°F	m³/s	Cfm	1 m	7 m	15 m	in/H₂O	kPa
550	440	SB	45	113	7.7	16,315	81.3	70.8	64.8	12.4	3.08
500	400	PP	43	109	7.7	16,315	80.7	70.0	64.0	10.9	2.71
500	400	SB	48	118	7.7	16,315	80.7	70.0	64.0	10.9	2.71
455	364	PP	46	115	7.7	16,315	80.1	69.4	63.4	9.5	2.35
450	360	SB	52	126	7.7	16,315	80.1	69.3	63.3	9.3	2.31
410	328	PP	50	122	7.7	16,315	79.6	68.8	62.8	7.9	1.98
400	320	SB	56	133	7.7	16,315	79.5	68.6	62.6	7.6	1.89
365	292	PP	53	127	7.7	16,315	79.2	68.2	62.2	6.4	1.60

*Ambient measured with Caterpillar Extended Life Coolant





Approximate weight of enclosure package: 4984 kg (10,988 lb). Exact weight is dependent on options. Enclosure weight includes: sound attenuated enclosure, exhaust system, extended base and generator set. Caterpillar is pleased to offer these additional generator set enclosure colors: white and yellow.

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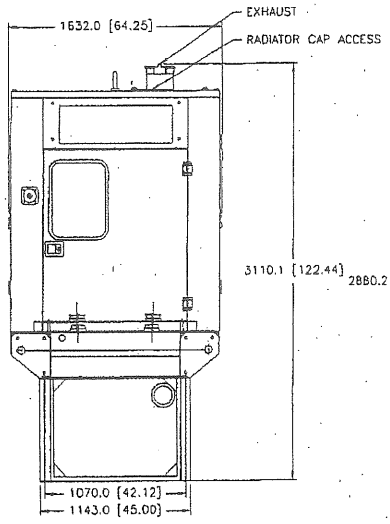
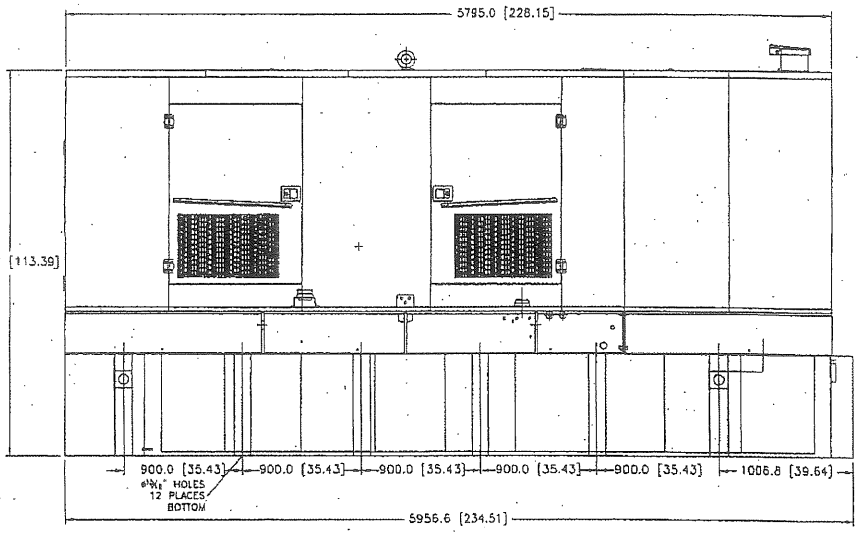


REAR VIEW



RIGHT SIDE VIEW

DIMENSIONS WITHOUT ARROWHEADS ARE LOCATED FROM PARALLEL ZERO PLANE.

REVISION HISTORY		
REV	BY	DATE
04		
03		
02		
01		
00		

MILTON CAT

POWER SYSTEMS DIVISION

B4 Marginal Way C15/500KW/860 Gal Tank
MILTON-CAT POWER SYSTEMS

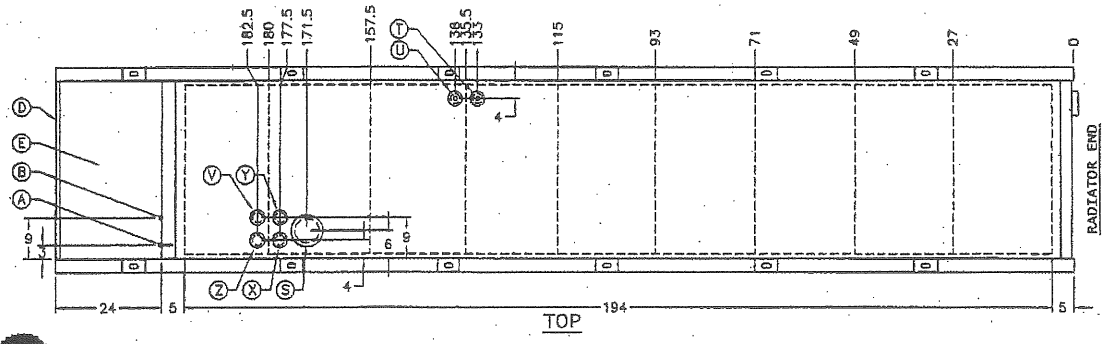
ALL DIMENSIONS IN INCHES	DRAWN BY: H. CHRISTENSEN
NOT TO SCALE	CHECKED: H. CHRISTENSEN
DATE: November 2007	APPROVED: H. CHRISTENSEN
DWG No. E20877	SHEET 1 OF 1

JOB #	TANK CAPACITY	GENSET MODEL	GENSET FOOTPRINT	TANK WEIGHT
13597	893 GAL	C15 SAE	44.86" X 228.35"	3175 LBS

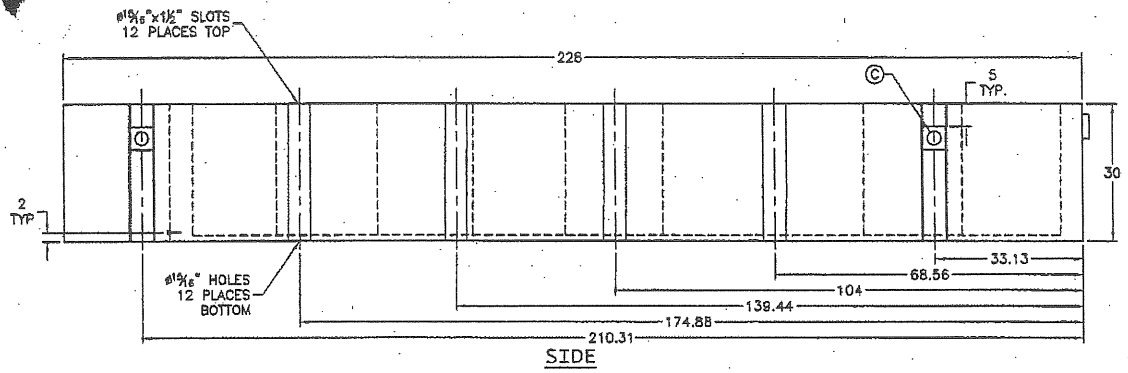
APPROVED BY: _____ DATE: _____

BILL OF MATERIAL

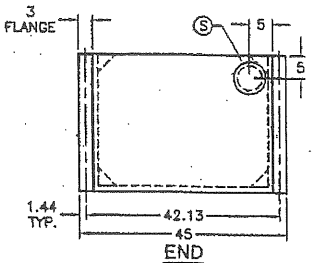
LETTER	PART #	DESCRIPTION	QTY
S	3165	FLANGE, 5", E-VENT	2
T	3650	FLANGE, 2", RETURN, W/ 1/2" DIP TUBE	1
U	3650	FLANGE, 2", SUPPLY, W/ 1/2" DIP TUBE	1
V	1000	FLANGE, 2", LOW LEVEL ALARM @ 50%	1
X	1003	FLANGE, 2", FUEL LEVEL GAUGE	1
Y	3152	FLANGE, 2", STANDARD VENT	1
Z	3005	FLANGE, 2", LOCKING FILL PORT	1
A	4306	FUEL IN BASIN ALARM	1
B	3502	FLANGE, 1/2", BASIN DRAIN	1
C	8410	FLUSH MOUNT LIFTING PLATE	4
D	8001	REMOVABLE END PLATE-1" BEND	1
E	4000	24" STAND, ELECTRICAL STUB UP	1
	DW-101	SECONDARY CONTAINMENT	1
BLACK		PAINT COLOR	



TOP



SIDE



END

THIS AUTOCAD DRAWING IS THE PROPERTY OF GLOBAL POWER COMPONENTS AND MAY NOT BE USED IN ANY WAY DETRIMENTAL TO THE INTERESTS OF G.P.C. ANY MANUAL CHANGES WILL VOID THIS DRAWING. SPECIFICATIONS MAY CHANGE WITHOUT NOTICE.

1-1

REVISIONS				REVISIONS			
REV	DATE:	CHANGE MADE	BY	REV	DATE:	CHANGE MADE	BY

SUB BASE TANK W/ RUPTURE BASIN & STUB UP

CUSTOMER/ID: MILTON CAT
JOB REF: 84 MARGINAL WAY - C15 - E20877
DRAWING REF: X
DWG #: 15-13597
DATE: 11/12/07
DRAWN BY: MJ

Underwriters Laboratories Inc. File No. pending

GLOBAL POWER COMPONENTS

103

Memorandum
Department of Planning and Development
Planning Division

To: Chair Patterson and Members of the Portland Planning Board

From: Richard Knowland, Senior Planner

Date: January 19, 2007

Re: 84 Marginal Way Approval Letter

As requested for the Board's review is the approval letter for the 84 Marginal Way project. Should you have any comments, additions or deletions, please let us know.

CITY OF PORTLAND, MAINE
PLANNING BOARD

Michael Patterson, Chair
Janice E. Tevanian, Vice Chair
Kevin Beal
Bill Hall
Lee Lowry III
Shalom Odokara
David Silk

January 19, 2007

Mr. Robert Metcalf
Mitchell and Associates
70 Center Street
Portland, ME 04101

RE: Bayside Medical Office Building; Capital, LLC. (Applicant); 84 Marginal Way
CBL#034A-B-001; #2006-0135

Dear Mr. Metcalf:

On January 9, 2007 the Portland Planning Board considered the conditional use (garage) and site plan application for an office building and parking garage, at 84 Marginal Way, proposed by Capital, LLC. On the basis of the application, plans, reports and other information submitted by the applicant, staff comments and recommendations contained in Planning Report #01-07, the conditional use and site plan regulations and other applicable regulations, and the testimony presented at the Planning Board hearing the Planning Board found the following:

1. The Planning Board voted (6-0, Hall absent) that the plan was in conformance with the B-7 conditional use (parking garage) standards of the land use code.

2. The Planning Board voted (6-0, Hall absent) that the plan was in conformance with the standards of a traffic movement permit, subject to the following condition of approval.

    i. The issuance of the traffic movement permit is granted with all of the standard conditions of approval for the same dictated by MDOT. In addition, the applicant for three (3) years after 80% occupancy of the building, shall monitor the left hand turn off of Preble Street into the parking garage, to ensure ongoing pedestrian and vehicular safety. The applicant shall be responsible for addressing through additional signage, signaling, lighting, etc. to address and mitigate the same.

3. The Planning Board voted (6-0, Hall absent) to waive Technical Standard III (3) which requires a 9 foot wide by 19 foot long parking space and a 24 foot aisle, for the parking garage layout as set forth by Tom Errico's e-mail (dated 1-9-07) to Richard Knowland.

4. The Planning Board voted (6-0, Hall absent) that the plan was in conformance with standards of the site plan standards of the land use code, subject to the following conditions of approval. Note that all of the conditions of approval (i to xii) shall be addressed prior to the issuance of a building permit except for the review of signage under condition ii.

i. That the Applicant shall meet the recommendations contained in Tom Errico's (Traffic Review Consultant) memo dated 1-5-07 including a contribution of $10,000 towards implementation of identified improvements for the Franklin Street Arterial and Marginal Way intersection and an additional $22,000 contribution to the proposed extension of Somerset Street extension between Preble/Elm Streets and Forest Avenue.

ii. That the Applicant shall submit for Planning Staff review and approval the design items summarized on page 4 of Carrie Marsh's (Urban Designer) memo dated 12-27-06.

iii. That a complete site lighting plan including the parking garage shall be submitted for Planning Staff review and approval. The lighting plan for the Preble Street underpass shall also be submitted for review and approval.

iv. That the site plan shall be revised reflecting the comments of Jeff Tarling (City Arborist).

v. That the Applicant shall apply for and receive City approval for a license permitting portions of the planter, ramp and awning to be located within a public right-of-way.

vi. That a revised circulation and parking plan of the parking garage clearly labeling the plan scale, dimensions of the parking aisles and parking spaces shall be submitted for Staff review and approval.

vii. That a revised plan shall be submitted to the Zoning Administrator for review and approval clearly delineating the property line along Marginal Way and Preble Street and that additional information be provided to confirm the building height.

viii. That public easements including the pedestrian easement shall be submitted for City staff review and approval.

ix. That the sidewalk shall be extended at the corner of Marginal Way and Preble Street to the street curb line.

x. The applicant shall meet with the City staff to revisit the screening of the parking garage (at the base of the office building on the fourth floor level) along Preble Street and Marginal Way to ensure its conformance with the B-3 Urban Design Guidelines.

xi. That the parking management plan submitted as Attachment G of Planning Report 01-07, (Memorandum dated May 31, 2006 from Bill Crenshaw, P.E. VHB, Inc., to Greg Shinberg, copy attached) shall be finalized and submitted for staff review and approval.

xii. The width and location of stairs/planters and other elements shall be finalized in conformance with the B-3 Urban Design Guidelines subject to review and approval by the City Urban Designer.

The approval is based on the submitted site plan and the findings related to site plan and conditional use review standard as contained in Planning Report #1-07. The approval includes a 66,000 sq. ft. office building and a parking garage with 4,600 sq. ft. of first floor retail space.

Please note the following provisions and requirements for all site plan approvals:

1. Where submission drawings are available in electronic form, the applicant shall submit any available electronic Autocad files (*.dwg), release 14 or greater, with seven (7) sets of the final plans.

2. A performance guarantee covering the site improvements as well as an inspection fee payment of 2.0% of the guarantee amount and 7 final sets of plans must be submitted to and approved by the Planning Division and Public Works prior to the release of the building permit. If you need to make any modifications to the approved site plan, you must submit a revised site plan for staff review and approval.

3. The site plan approval will be deemed to have expired unless work in the development has commenced within one (1) year of the approval or within a time period agreed upon in writing by the City and the applicant. Requests to extend approvals must be received before the expiration date.

4. A defect guarantee, consisting of 10% of the performance guarantee, must be posted before the performance guarantee will be released.

5. Prior to construction, a pre-construction meeting shall be held at the project site with the contractor, development review coordinator, Public Work's representative and owner to review the construction schedule and critical aspects of the site work. At that time, the site/building contractor shall provide three (3) copies of a detailed construction schedule to the attending City representatives. It shall be the contractor's responsibility to arrange a mutually agreeable time for the pre-construction meeting.

6. If work will occur within the public right-of-way such as utilities, curb, sidewalk and driveway construction, a street opening permit(s) is required for your site. Please contact Carol Merritt at 874-8300, ext. 8828. (Only excavators licensed by the City of Portland are eligible.)

The Development Review Coordinator must be notified five (5) working days prior to date required for final site inspection. The Development Review Coordinator can be reached at the Planning Division at 874-8632. Please make allowances for completion of site plan requirements determined to be incomplete or defective during the inspection. This is essential as all site plan requirements must be completed and approved by the Development Review Coordinator prior to issuance of a Certificate of Occupancy. Please schedule any property closing with these requirements in mind.

If there are any questions, please contact Richard Knowland at 874-8725.

Sincerely,

Michael Patterson, Chair
Portland Planning Board

cc: Lee D. Urban, Planning and Development Department Director
Alexander Jaegerman, Planning Division Director
Barbara Barhydt, Development Review Services Manager
Richard Knowland, Senior Planner
Development Review Coordinator
Marge Schmuckal, Zoning Administrator
Michael Bobinsky, Public Works Director
Jeanie Bourke, Inspections Division
Kathi Earley, Public Works
Bill Clark, Public Works
Jim Carmody, Transportation Manager
Jeff Tarling, City Arborist
Penny Littell, Associate Corporation Counsel
Captain Greg Cass, Fire Prevention
Assessor's Office
Approval Letter File
James Hanley, Capital LLC., 50 Portland Pier, Suite 300, Portland, ME 04101.

Attachment

Summary of Staff Memos referenced in 84 Marginal Way Conditions of Approval

Summary of Staff Memo on 84 Marginal Way Conditions of Approval

Tom Errico's Comments

Based upon discussions today, I support the applicant's plan to provide 8'-6" wide parking spaces on the first two floors of the garage, with the remaining floors providing parking stall widths equal or exceeding 8'-0". This approval is based on the premise that short-term or high-turnover parkers (customers of the medical office building) will utilize the larger size spaces and low turnover or employees will utilize the small size spaces. Based upon the above I support a waiver for parking space size and aisle width for the proposed project.

The following summarizes my final comments for the above referenced project. The City recognizes that the full implementation of the Marginal Way Master Plan will be conducted in phases and as such is supportive of the construction of a short-term or initial implementation program. In respect to the 84 Marginal Way project, a key element of the short-term implementation plan is the provision of two left-turn movements (one from a dedicated left-turn lane and one from a shared left/through lane) from Preble Street Extension onto eastbound Marginal Way. This short-term action allows for a roadway cross-section on Preble Street Extension that is consistent with the full-build Master Plan, but continues to require two Marginal Way eastbound through lanes, which is not consistent with the full-build Master Pan. The City wishes to systematically reduce the left-turn capacity from Preble Street Extension and will monitor conditions at the subject intersection during the implementation of area roadway improvements and the completion of development projects. As requested I have provided the following information as it relates to the projects compatibility with the conceptual plans developed for the Marginal Way Master Plan. Changes in pedestrian crossing distances at the Marginal Way/Preble Street intersection. CrosswalkExistingMaster Plan84 Marginal WayMarginal Way west of Preble100 feet65 feet80 feetMarginal Way east of Preble110 feet75 feet95 feetPreble Street Extension110 feet70 feet80 feetPreble Street90 feet70 feet90 feet Marginal Way west of Preble – The crossing distance does not meet the Master Plan distance due to the requirement for no modification on southerly Marginal Way curb line (in front of Gorham Savings Bank) and a larger radius on the 'AAA' corner. The radius provided is appropriate for large vehicle movements. Marginal Way east of Preble Street – The crossing distance does not meet the Master Plan distance due to the requirement for no modification on southerly Marginal Way curb line (in front of Wild Oats) and a larger radius on the applicant corner. The radius provided is appropriate for large vehicle movements. Preble Street Extension – The crossing distance does not meet the Master Plan distance due to the provision of larger radii on the corners. The radius provided is appropriate for large vehicle movements. Preble Street – No changes are proposed on the south side of Marginal Way. The proposed Master Plan concept was developed such that it will be compatible with all possible future modes of transportation, including light rail. The applicant has indicated that the proposed building location is consistent with the master plan and therefore can accommodate future rail opportunities. The applicant should clearly state that a future extension of the Narrow

Gauge Railroad can be accommodated. As part of development of the interim plan for Marginal Way, the applicant will be providing two travel lanes on Marginal Way in the eastbound direction. The applicant suggests carrying the two lanes from Preble Street towards Chestnut Street to a maximum length of 500 feet. The City would like to minimize the length of the two lanes and I would suggest that we work with the applicant and include a condition of approval that further refinement of the transition length be considered. To improve access opportunities in the Bayside area, I would suggest that the applicant participate in the funding of connecting Somerset Street between Preble Street and Elm Street. This action will minimize impacts to Marginal Way and help to offset left-turn capacity reductions from Preble Street onto Marginal Way. I would suggest that the applicant contribute $22,000.00 to the extension of Somerset Street extension between Preble/Elm Streets and Forest Avenue. The intersection of Franklin Arterial and Marginal Way is currently operating at poor levels of service and improvements have been identified for implementation. Developments in the area have contributed to this location and I would suggest that the applicant contribute $10,000.00 towards implementation of the identified improvements. A Travel Demand Management (TDM) Program shall be implemented that may comprise of the elements (e.g. rideshare program) noted in the traffic impact study. It is suggested that the details of the program be identified by the applicant and the program will subject to an annual review by the City. The Applicant shall be responsible for the modification of the existing traffic signal (equipment, phasing, and timings) at the Marginal Way/Preble Street intersection such that it is compatible with the proposed roadway improvements. Preliminary and Final design plans shall be submitted to the City for review and approval.

Carrie Marsh's Comments

The conceptual designs for the building which were submitted on December 22, 2006 were reviewed for compliance with the *B-3 Urban Design Guidelines*. The project substantially meets the requirements of these guidelines.

The issues that are still outstanding include the following, which are suggested for inclusion in a condition of approval for staff review:

1. Samples of all building materials shall be provided.
2. Specifications for doors, windows, awnings, grills and other details shall be provided.
3. Specifications of the signage shall be provided.
4. Specifications of the planting bed design including the retaining wall shall be provided.
5. The metal product for the parapet roof at Marginal and Preble shall be provided.

Jeff Tarling's Comment

That the site plan shall be revised for review and approval by the City Arborist reflecting replacement of the Cleveland Ornamental Pear by the Preble Street driveway with a more substantial tree (Armstrong Red Maple).

BY MARGINAL WAY
P.H.
JAN 9, 2007

building top

Greg S.

Judy Johnson

Bill Hall confined retail area with the sidewalk, ramp, rail

Kevin screening the bays

Shalom "a cake that is not balanced"

Janice likes the separation of the two.

David dumpster screening

additional signage and other improvements a look see

* 2 or 3 years down the road street markings, signage

Tim E. fairly standard condition
~~Randy~~ Alex has the condition of approval

Shalom openness of the parking garage

Lee agrees with Shalom

Steve J. supports the project ground floor retail must be retail

Revised January 9, 2007

MOTIONS FOR THE BOARD TO CONSIDER

A. On the basis of plans submitted by the Applicant, the information contained in Planning Report #01-07 relevant to standards for conditional use (parking garage) regulations, and the testimony presented at the Planning Board public hearing, the Planning Board finds:

1. The plan is in conformance with B-7 conditional use (parking garage) standards of the land use code. 6-0 (Bill gone)

B. On the basis of plans submitted by the applicant, the information contained in Planning Report #01-07 relevant to standards for site plan regulations, and the testimony presented at the Planning Board public hearing, the Planning Board finds:

1. Waivers

The Planning Board (waives/does not waive) Technical Standard, Section III(3) which requires a 9 foot wide by 19 foot long parking space and a 24 foot aisle, for the parking garage layout as shown on the submitted plan. set forth by T. Errico email to R.K 6-0 (Bill gone)

2. Site Plan

The plan is in conformance with the site plan standards of the land use code, subject to the following conditions of approval: (2) + (3) 6-0 (include + the motion above)

i. That the Applicant shall meet the recommendations contained in Tom Errico's (Traffic Review Consultant) memo dated 1-5-07 including a contribution of $10,000 towards implementation of identified improvements for the Franklin Street Arterial and Marginal Way intersection and an additional $22,000 contribution to the proposed extension of Somerset Street extension between Preble/Elm Streets and Forest Avenue.

ii. That the Applicant shall submit for Planning Staff review and approval the design items summarized on page 4 of Carrie Marsh's (Urban Designer) memo dated 12-27-06.

iii. That a complete site lighting plan including the parking garage shall be submitted for Planning Staff review and approval. The lighting plan for the Preble Street underpass shall also be submitted for review and approval.

iv. That the site plan shall be revised reflecting the comments of Jeff Tarling (City Arborist).

v. That the Applicant shall apply for and receive City approval for a license permitting portions of the planter, ramp and awning to be located within a public right-of-way.

vi. That a revised circulation and parking plan of the parking garage clearly labeling the plan scale, dimensions of the parking aisles and parking spaces shall be submitted for Staff review and approval.

vii. That a revised plan shall be submitted to the Zoning Administrator for review and approval clearly delineating the property line along Marginal Way and Preble Street and that additional information be provided to confirm the building height.

viii. That public easements including the pedestrian easement shall be submitted for City staff review and approval.

That the applicant shall submit update plans to the Planning Authority and the Zoning Administrator which demonstrate the project complies with the City's setback requirements

iv That the sidewalk shall be extended from the property line to the curbline

v. That the decorative metal screen at the base of the Arbutus be

vi That the parking garage plans be submitted for site review and approval

Mr Robert Metcalf
Mitchell and Associates
70 Center Street
Portland, Maine 04101

RE: Bayside Medical Office Building; 84 Marginal Way; #2006-0135; Capital, LLC (Applicant); CBL 034A-B-001

Dear Mr Metcalf

At a public hearing On January 10, 2007, the Planning Board voted on the following motions for an office building and parking ~~garage~~ garage proposed by Capital, LLC, in the vicinity of 84 Marginal Way

1. The Planning Board voted (6-0, Hall absent) that the plan was in conformance with the B-7 conditional use (parking garage) standards of the land use code.

2. The Planning Board voted (6-0, Hall absent) that the plan was in conformance with the standards of a traffic movement permit, subject to the following condition of approval (see back side of this page)

3. The Planning Board voted (6-0, Hall absent) to waive Technical Standard (III C3) which requires a 9 foot wide by 19 foot long parking space and a 24 foot aisle, for the parking garage layout as set forth by Tom Errico's email (dated 1-09-07) to Rick Knowlan

B. The issuance of the Traffic Mvt Permit is granted with all of the standard conditions of approval for the same dictated by MDOT and in addition, the applicant, ~~at the request of the City~~, shall for 3 years after occupancy monitor the left hand turn off of Preble into the parking garage +/- Marginal Way, to ensure the ongoing public safety (both the pedestrian + vehicular safety) and the applicant shall be responsible for addressing through additional signage, signaling, lighting etc. to address + mitigate the same

Memorandum
Department of Planning and Development
Planning Division

To: Chair Beal and Members of the Portland Planning Board

From: Richard Knowland, Senior Planner

Date: Prepared on: November 9, 2006
Prepared for: November 14, 2006

Re: Medical Office Building; Corner of Marginal Way and Preble Street; Vicinity of 84 Marginal Way

Capital, LLC. (Ted West) has requested a third workshop for a proposed office building and parking garage on the corner of Marginal Way and Preble Street. The project is subject to site plan and conditional use (parking garage) review. A traffic movement permit will be required. The first (August 8, 2006) and second workshop (September 26, 2006) memos are attached. Please refer to these memos for background information.

The focus of Tuesday's workshop will be traffic related issues. Architecture and remaining site plan issues will be discussed at a future workshop. The Applicant is particularly interested in discussing the proposed left turn on Preble Street since it is a critical element for their project.

Left Turn Lane into the Site

The primary traffic issue is the proposed left turn into the property from Preble Street. This provides a second access into the site and the parking garage. In order to accommodate a left turn into the site, a segregated lane on Preble Street will need to be created, the curb line along both sides of street will need to be adjusted as well as other improvements shown on Attachment A. An important feature of these improvements is a pedestrian crosswalk (with activated signals) north of the I-295 bridge overpass. A narrative of these improvements is provided on page 2 of the September 26th staff memo. Preble Street is an important pedestrian and bicycle connection to Back Cove and peninsula/off-peninsula circulation.

Since the last workshop, the Applicant has provided additional information on traffic related issues including further information in support of the Preble Street left turn.

The submitted information includes the following:

- An updated street improvement plan....See Attachment A.
- Responses to Tom Errico's comments....See Attachment B.
- Photos of a similar left turn in Danvers, MA....See Attachment C.
- Responses to Planning Board questions and comments from September 26th workshop....See Attachment E.

Staff has met with the Applicant several times since the last workshop. Based on the additional information submitted since the last workshop, staff believes the proposed Preble Street left turn can be appropriately integrated into the development of this site. Tom Errico, Traffic Review Consultant, will be attending Tuesday's workshop to discuss this and other traffic issues.

Preble Street/Marginal Way Intersection

The Board will note that the Preble Street/Marginal Way intersection has been modified. At the last workshop several Board members expressed concern there was only one Preble Street left turn onto Marginal Way. The existing intersection has two left turns. As part of the Marginal Way Improvement Plan, the number of left turns had been reduced from two to one. Upon further consideration, the plan has been modified to include a left turn and a combined left turn/straight lane. This retains the capacity for left turns while providing two straight through lanes. The revised intersection now has one left turn lane, a combined left turn/straight lane and a straight/right turn lane. As other improvements are made in Bayside such as the Somerset Street extension between Preble Street and Elm Street, the second left turn may become unnecessary. However the second left turn lane does provide an additional option for such turning movements which could be important during peak traffic hours.

Attachments:

A. Revised Street Improvement Plans
B. Gorrill Palmer Responses to Tom Errico Comments dated November 6, 2006
C. Photos of Similar Left Turn in Danvers, MA
D. Mitchell & Associates Letter dated October 11, 2006
E. Gorrill Palmer Responses to Planning Board Comments dated October 11, 2006
F. Memo of Tom Errico, Traffic Review Engineer
G. Traffic Report for AAA Building dated March, 2001

ATTACHMENT B-1

Gorrill-Palmer Consulting Engineers, Inc.
Traffic and Civil Engineering Services

PO Box 1237
15 Shaker Rd.
Gray, ME 04039

207-657-6910
FAX: 207-657-6912
E-Mail:mailbox@gorrillpalmer.com

November 6, 2006

Mr. Rick Knowland
City of Portland
389 Congress Street
Portland, ME 04101

RE: Additional Information
Responses to Tom Errico's Comments
84 Marginal Way

Dear Rick:

Our office is providing responses to Tom Errico's comments provided to our office on November 2 as they relate to 84 Marginal Way. Although these comments were put forward under the Bayside Village project, they are appropriate to 84 Marginal Way. For convenience of review, each comment is repeated in italics followed by our response.

Item 1: Lane widths on Preble Street southbound should not exceed 12 feet and the bicycle lane should be five feet. The curb on the west side of Preble Street will need to be relocated accordingly.

Response: The enclosed plans show the curbing and lane widths that conform to this comment. However, it is our opinion that lane alignment may be improved if the inside left turn lane from Preble Street Extension is kept at fourteen feet. Both options are provided for review.

Item 2: The plans should note that the improvement plan will include all necessary lane assignment plans and traffic signal modifications.

Response: The enclosed plans have been revised to show these notes.

Item 3: Pavement markings guiding the double left from Preble Street should be provided. Commentary on whether the turning area for this double left is different from current conditions.

Response: The enclosed plans provide markings for the double left movement. In response to other comments addressed in this letter, the island for the Marginal Way approach fronting 84 Marginal Way has been pulled away from the intersection by several feet, and its width reduced to four feet. This change provides additional turning area over the existing condition.

Item 4: The plans indicate that a minor curb adjustment is required on the south side of Marginal Way near Wild Oats. I would suggest that the curb not be moved at this time (it seems wasteful to move it now and adjust it later as implementation of the master plan improvements take place) and the island width be reduced to allow for appropriate roadway receiving width.

Response: The enclosed plans show the existing curbing location per this comment.

Item 5: The plan should depict the lanes on all approaches such that we can confirm acceptable lane alignment can be provided through the intersection.

Response: Lane locations for all approaches are shown on the enclosed plans.

Item 6: Radii at the Marginal Way/Preble Street intersection should be minimized as much as possible.

Response: The radii on both sides of the southbound Preble Street Extension have been adjusted, as shown on the enclosed plan.

Item 7: The left-turn entry into 84 Marginal Way off Preble Street may need to be modified to account for City maintenance requirements. Additionally, it is suggested that the 12-foot lane be reduced to 11-feet and a two foot concrete rumble strip be provided to separate left-turn movements into the site from northbound Preble Street traffic.

Response: The enclosed plans show the left turn lane at a total of twelve feet, with two feet designated for a rumble strip prior to the island at the 84 Marginal driveway.

Item 8: The painted transition area in advance of the left-turn lane into 84 Marginal Way should be a stamped material to be determined during the design process.

Response: The enclosed plan shows a stamped material at the transition area for 84 Marginal Way.

Gorrill-Palmer Consulting Engineers, Inc. appreciates the opportunity to respond to these comments and looks forward to your review of our responses. Should you have any questions or require any additional information, please feel free to contact me.

Sincerely,

Gorrill-Palmer Consulting Engineers, Inc.

Thomas L. Gorrill, P.E., PTOE
President

Copy: Tom Errico, Wilbur Smith Associates
Jim Carmody, City Traffic Engineer
Bob Metcalf, Mitchell and Associates
Greg Shinberg, Shinberg Consulting
Randy Dunton, MaineDOT Division 1

Enclosure

TLG/jjb/JN1361.01/KnowlandResponses11-06-06.doc

ATTACHMENT C-1

MITCHELL & ASSOCIATES
LANDSCAPE ARCHITECTS

October 31, 2006

Mr. Richard Knowland, Senior Planner
City of Portland
389 Congress Street
Portland, Maine 04101

RE: 84 Marginal Way

Dear Rick:

The attached photographs are of a similar left turn lane as that being proposed for entry to 84 Marginal Way from Preble Street. The location is on Endicott Street in Danvers, Massachusetts. Endicott Street intersects with Sylvan Street, a signalized intersection that has two (2) dedicated left turn movements and one (1) dedicated right turn movement. There is no through lane as this is a T. intersection.

Should you have any questions, please do not hesitate to call me.

Sincerely,
Mitchell & Associates

Robert B. Metcalf

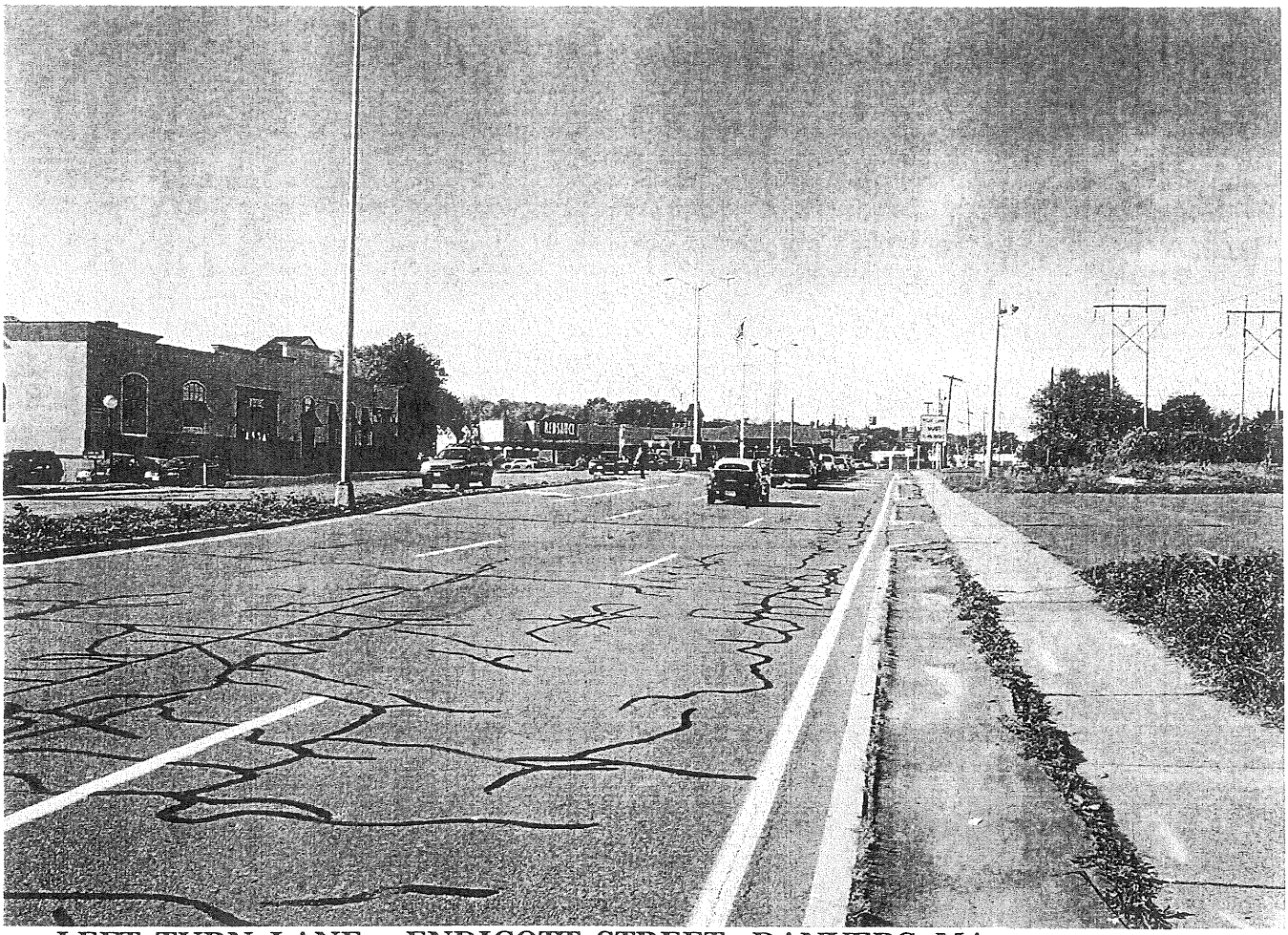
cc: Ted West
Greg Shinberg
Tom Gorrill

THE STAPLES SCHOOL
70 CENTER STREET
PORTLAND, MAINE 04101

Telephone (207) 774-4427
Fax (207) 874-2460
Website www.mitchellassociates.biz

1. LEFT TURN LANE - ENDICOTT STREET, DANVERS, MA

2. LEFT TURN LANE - ENDICOTT STREET, DANVERS, MA



3. LEFT TURN LANE - ENDICOTT STREET, DANVERS, MA

4. LEFT TURN LANE - ENDICOTT STREET, DANVERS, MA

5. INTERSECTION – (2) DEDICATED LEFT TURN – (1) DEDICATED RIGHT TURN

ATTACHMENT D

MITCHELL & ASSOCIATES
LANDSCAPE ARCHITECTS

October 11, 2006

Mr. Richard Knowland
and Planning Board Members
City of Portland
389 Congress Street
Portland, Maine 04101

RE: Capital, LLC
Mixed Office, Retail and Parking Garage Development
84 Marginal Way

Dear Rick and Board Members:

We have prepared a revised Site Layout Plan to show the required Marginal Way and Preble Street Improvements as if 84 Marginal Way were a stand alone project as requested by the Board. At this juncture in the process the applicant is requesting to be placed upon the next available workshop meeting to continue discussions with the board to review traffic and roadway improvements. The applicant is in the process of working on refinement of the architectural design for the building and a submission of that material will be submitted within the next several weeks. The majority of the documentation regarding traffic improvements has been completed by Gorrill-Palmer Consulting Engineers and will be submitted directly to you.

Enclosed is a revised Site Plan that corresponds to the roadway improvements defined in the Gorrill-Palmer Report.

Should you have any questions, please do not hesitate to call me.

Sincerely,
Mitchell & Associates

Robert B. Metcalf

Enclosure

cc: Ted West
Greg Shinberg
Tom Gorrill

THE STAPLES SCHOOL
70 CENTER STREET
PORTLAND, MAINE 04101

Telephone (207) 774-4427
Fax (207) 874-2460
Website www.mitchellassociates.biz

ATTACHMENT E-1

Gorrill-Palmer Consulting Engineers, Inc.
Traffic and Civil Engineering Services

PO Box 1237
15 Shaker Rd.
Gray, ME 04039

207-657-6910
FAX: 207-657-6912
E-Mail:mailbox@gorrillpalmer.com

October 10, 2006

Mr. Rick Knowland
City of Portland
389 Congress Street
Portland, ME 04101

RE: Additional Information
Responses to Planning Board Comments
84 Marginal Way

Dear Rick:

Based on the comments from the Planning Board, as well as information requested by Tom Errico, the Traffic Review Engineer for Portland, our office is providing additional information for 84 Marginal Way, as it relates to parking comments and questions from the Planning Board raised at the September 26th, 2006 workshop. For convenience of review, the request is discussed followed by our response.

Item 1: Will the sun be in drivers' eyes as they come out from under the bridge, making it difficult to see the left turn lane?

Response: Additional lighting will be provided under the bridge to minimize the contrast for drivers as they cross under the overpass. In addition, overhead lane use signage will be provided at the overpass to clarify lane use to motorists prior to the overpass.

Our office also completed a site visit at the underpass during the early morning and found that the sun is not in a driver's eyes, as Preble Street Extension runs in more of a southeast orientation and the sun is well to the left as a driver approaches. Even if the sun did align during a portion of the year, the medians will begin prior to the overpass so drivers will have a good view of them before passing under I-295. The addition of bollard-style lighting under the bridge will further improve visibility for drivers passing under the interstate as well.

Item 2: The proposed rumble strips will essentially disappear in winter.

Response: The rumble strips will be slightly raised by ½ inch to ¾ inch, as well as having approach markings and delineators to enhance visibility.

Item 3: The Planning Board is concerned about needing extra stacking space for left turn from Preble onto Marginal Way (cannot be added if left into 84 Marginal exists)

Response: Based on the design volumes, delays for left turns may become an issue in the future. In addition, given the volume of left turns, a dual-left turn movement appears to be the most appropriate. As the extension of Somerset Street is undertaken, and Somerset takes on a new

level of prominence, the left turn movement from Preble Street Extension may decline, as vehicles move across Bayside on a new route. If this is the case, the dual left movement can be re-evaluated. At any case, the design will allow for sufficient stacking with some reserve for this movement.

Item 4: Has the AAA study been looked at in relation to this project?

Response: Our office has obtained a copy of this study from the City, and we have reviewed it to determine its relevancy to this project. Based on that study, the demand existed for dual left turn movements from Preble Street Extension to Marginal Way, as has been discussed in our response to Item 3. As it is several years old, however, the data utilized for the current analysis is more up to date.

Item 5: Improvements on Preble should be made to both sides of the street (for protection and safety issues).

Response: The pedestrian improvement plan addresses crossings along the full width of the street, and will therefore address issues on both sides. The provision of a raised island and actuated lighting will result in a significant improvement in visibility and safety for the entire length of the crossing as compared to the current situation.

Item 6: How will this project's improvements to Marginal Way be implemented if it was constructed as a stand alone project, or if it is constructed with the other improvements planned in Marginal Way?

Response: Enclosed with this letter are two sets of concept plans for Marginal Way. The first set illustrates the improvements associated solely with 84 Marginal Way, while the second set provides those improvements required for both 84 Marginal Way and Bayside Village. Both sets indicate the improvements to be completed by 63 Marginal Way.

Item 7: Research should be done regarding this left turn configuration, check with other municipalities regarding maintenance, plowing, accidents, success, failures, changes, etc. (better to get local examples)

Response: Our office has conducted research on similar treatments. The most local one is along Route 111 in Biddeford fronting the Shops at Biddeford Crossing project, which is in the process of opening in the next few weeks. Another similar treatment is in front of the Liberty Tree Mall in Danvers, Massachusetts on Endicott Street at Sylvan Street. It is just north of the Peabody Town Line, west of Route 128, Exit 24. The third is on Route 1 in Bath at the Sagadahoc Bridge and State Street. Our office has furnished this information to Mr. Errico.

Item 8: A condition should be made for monitoring the left from Preble into the site. The Applicant should work out a monitoring timeframe (usually at one year) and plan for what to do if problems arise.

Response: It is the opinion of our office that the updated intersection design will maintain the needed left turn capacity, as it provides two lanes. The innermost lane taper has been revised to provide 200 feet of storage, twice the distance for the current configuration. In addition, if the innermost left turn lane were ever to exceed its storage, something that is not currently forecast to occur, vehicles could stack in the outer lane. Lastly, as Somerset Street is extended toward Forest Avenue, use of this roadway as a cross-connection street for Bayside should begin to reduce some of the turns to and from Marginal Way.

Item 9: The following possible change from Preble approaching Marginal Way, being investigated by Tom Errico, should be examined:

- *Left*
- *Through/Left*
- *Through/Right*

Response: As stated in our responses to previous items, it is the opinion of our office that this option is preferable, and is one that our office recommends.

Item 10: This project should contribute to improvements to Marginal Way at its intersection with Franklin Street Arterial. Although the configuration shown on the Master Plan sheets was not the configuration initially shown in the Master Plan, Tom Errico is interested in this proposal.

Response: Our office recommends that the Applicant pay a contribution toward this intersection, similar to Whole Foods, and other projects, so that funds may be utilized by the City to make the necessary improvements at this location.

Item 11: Vehicular circulation routes to and from the site vary from the Interstate. What are the circulation issues with these routes?

Response: Please refer to the trip distribution and assignment Figures enclosed with the traffic impact study for this project. Our office will provide enlargements of these diagrams on a board for the Planning Board's reference.

Item 12: Discussions should occur with Hannaford since we are creating an easier connection through their property.

Response: Our office conducted conversations with Doug Boyce of Hannaford, and discussed potential access points to the store for a crosswalk. Doug did not see value in the crosswalk being at the main entrance to the store as Bayside pedestrians are not likely to walk that entire distance. While there is some potential for pedestrians to use the walkway from Preble Street Extension that comes into the store front, the storefront location does not appear to be ideal, as the desire line takes pedestrians to the angled sidewalk at the back of the facility. Hannaford will be doing additional investigations into pedestrian access on their site.

Item 13: (Public comment) Can anything be done about sound absorption under the bridge?

Response: It is not typical practice to provide acoustic structures under overpasses unless some sensitive use is also located under the bridge. While sound is greater for traffic under the overpass itself, this sound tends to drop off significantly with any distance from the overpass.

Item 14: Appropriate signage should be utilized near left turn on Preble to ensure safe traffic flow for bicyclists and motorists.

Response: Appropriate signage will be provided, as previously discussed, on the overpass, to provide a clear designation of lane use. This is shown on the concept plans provided with this letter.

Item 15: Developer contributions for Somerset Street work should be provided.

Response: No additional response is required.

Item 16: Crossings at driveways should be as small as possible for pedestrian safety.

Response: The crossings are a balance between accommodating emergency equipment, garbage pickup, and maximizing pedestrian safety. The Preble Street Extension driveway has already been reduced in width from the original submittal to accommodate pedestrians more readily. In addition, the right turn only driveway on Marginal Way has a delta island which acts as a pedestrian refuge.

Gorrill-Palmer Consulting Engineers, Inc. appreciates the opportunity to respond to these comments and looks forward to your review of our responses. Should you have any questions or require any additional information, please feel free to contact me.

Sincerely,

Gorrill-Palmer Consulting Engineers, Inc.

Thomas L. Gorrill, P.E., PTOE
President

Copy: Tom Errico, Wilbur Smith Associates
Jim Carmody, City Traffic Engineer
Bob Metcalf, Mitchell and Associates
Greg Shinberg, Shinberg Consulting
Randy Dunton, MaineDOT Division 1

Enclosure

TLG/jjb/JN1361.01/KnowlandResponses10-10-06.doc

ATTACHMENT G

Traffic Impact Study
Bayside Site Development

Portland, Maine

March 2001

Prepared For:

Environmental Engineering & Remediation
222 St. John Street
Portland, Maine 04102

Prepared By:

Wilbur Smith Associates
Engineers•Economists•Planners
59 Middle Street
Portland, Maine 04101

ENGINEERS
PLANNERS
ECONOMISTS
Wilbur Smith Associates

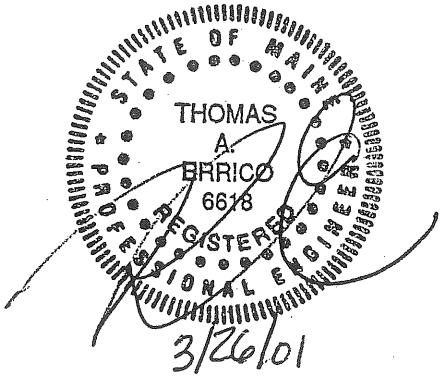


Table of Contents

SECTION 1 – INTRODUCTION 1

SECTION 2 – DATA COLLECTION 2

SECTION 3 – EXISTING/FUTURE TRAFFIC VOLUMES 2

SECTION 4 – SITE GENERATION TRAFFIC 4

SECTION 5 – BUILD TRAFFIC VOLUMES 4

SECTION 6 – INTERSECTION ANALYSIS 5

SECTION 7 – SAFETY ANALYSIS 7

SECTION 9 – PARKING/ SITE ACCESSS AND CIRCULATION 8

SECTION 10 – CONCLUSIONS/RECOMMEDATIONS 10

SECTION 1 – INTRODUCTION

Environmental Engineering & Remediation, Inc. (EER) retained Wilbur Smith Associates (WSA) to prepare a Traffic Impact Study for the proposed Bayside Site Development located on Marginal Way at the intersection of Preble Street (refer to Figure 1). As currently planned the project will consist of a 50,000 square feet office building to be constructed in the existing City of Portland's Department of Public Works Salt storage area. Access to the project will be provide via tow driveway's, one on Marginal Way west of Preble Street and one on Preble Street Extension.

The scope of this traffic study reflects input from the City of Portland Traffic Engineer.

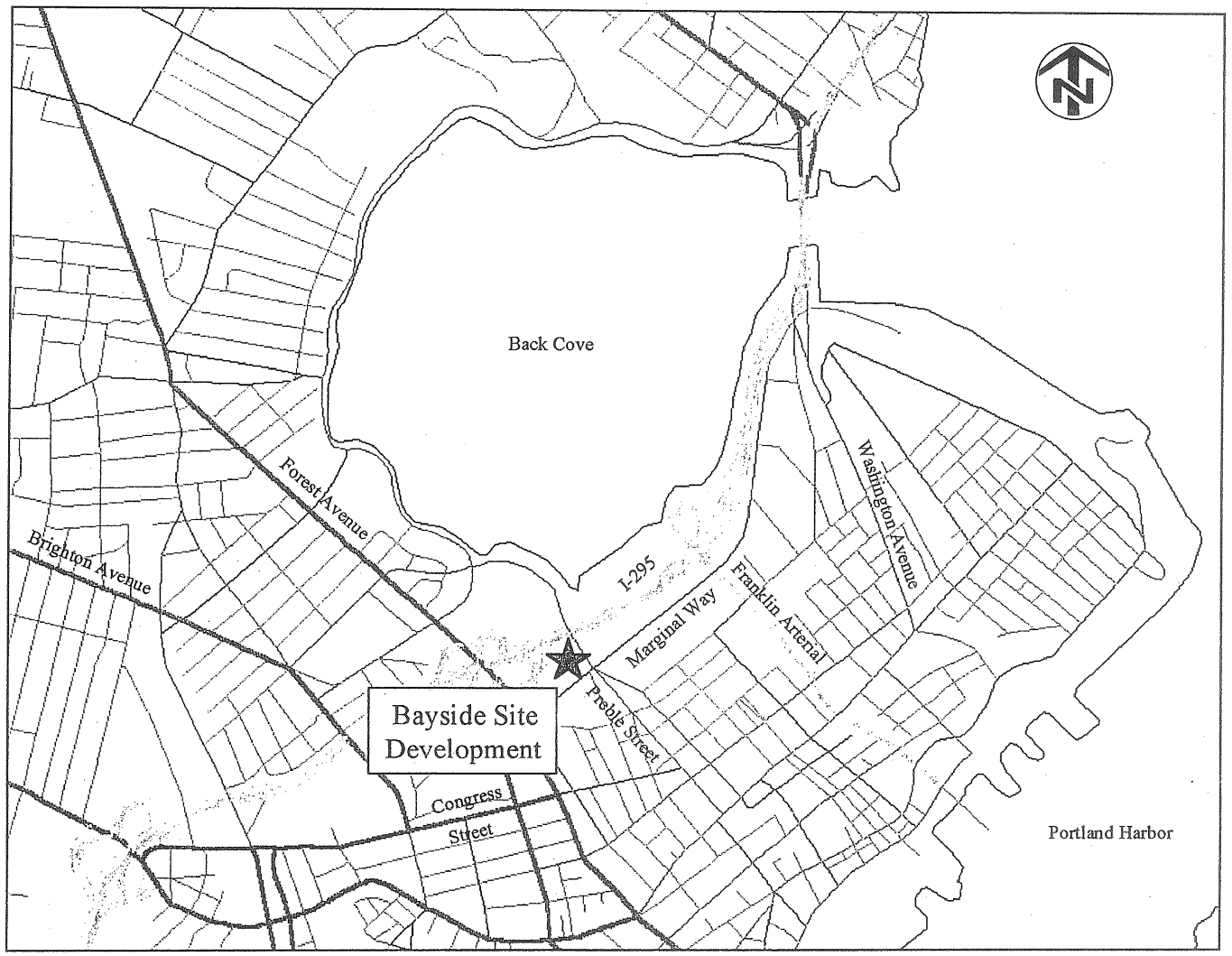
The purpose of this study is to evaluate the impact the proposed project has, on both safety and operations, on the transportation system in the vicinity of the project. Specifically the study will evaluate conditions at the Marginal Way/Preble Street and Preble Street Extension/Baxter Boulevard intersections.

The study includes the following:

- Estimate of traffic volumes in the study area for conditions without the project in 2001.
- Estimate of traffic generated from the site according to national trip generation data.
- Estimate of traffic volumes in the study area for conditions following build-out of the project in 2002.
- Evaluation of intersection operations both with and without the proposed project.
- Evaluation of accident data in the study area.
- Evaluation of access/egress, on-site parking, circulation and truck deliveries.

FIGURE 1 - SITE LOCATION MAP

Bayside Site Development
Portland, Maine



Wilbur Smith Associates
ENGINEERS PLANNERS ECONOMISTS

SECTION 2 – DATA COLLECTION

EER provided the following:

- Site Plan

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

- Accident data in the vicinity of the project for the 1997-1999 three-year period.

Jack Murphy provided the following:

- Manual turning movement count at the intersection of Preble Street Extension and Baxter Boulevard.

WSA performed the following:

- Manual turning movement counts at the intersection Marginal Way and Preble Street.
- Field Reconnaissance of the study area.

SECTION 3 – EXISTING/FUTURE TRAFFIC VOLUMES

The primary purpose of this study is to show what effect the proposed project will have on the local transportation system. In general, the critical time period for a given project is directly associated with peaking characteristics of both the project-related traffic and the area transportation system. For this study, traffic conditions during the Weekday AM and PM peak hours were evaluated.

Development of AM and PM peak hour traffic volumes was based upon traffic counts conducted by WSA at the Marginal Way/Preble Street intersection and by Jack Murphy, P.E. at t he Preble Street Extension/Baxter Boulevard intersection. A summary of the time and dates of the counts is presented as follows.

- Marginal Way/Preble Street – November 14, 2000 (7:00-9:00AM & 3:30-6:00PM)
- Preble Street Extension/Baxter Boulevard – November 14, 2000 (7:00-9:00AM & 3:30-6:00PM)

Design Hour Volume

The traffic pattern on any highway shows considerable variation in traffic volumes during different hours of the day and in hourly volumes throughout the year. It must be determined which of these hourly traffic volumes should be used for analysis and design. It would be wasteful to predicate the design on the (maximum) peak hour traffic of the year, yet the use of the average hourly traffic would result in an inadequate design. The hourly traffic volume used in design should not be exceeded very often or by very much. On the other hand, it should not be so high that traffic would rarely be great enough to make full use of the facility. Based upon the relationship between highest hourly volumes and daily traffic volumes, it has been concluded that the hourly traffic used in design should be the 30th Highest Hour Volume, or sometimes called Design Hour Volume.

For this study, the Design Hour Volumes were estimated from MDOT Weekly Group Mean Factors. Figure 2 presents the 2000 Design Hour traffic volumes within the study area.

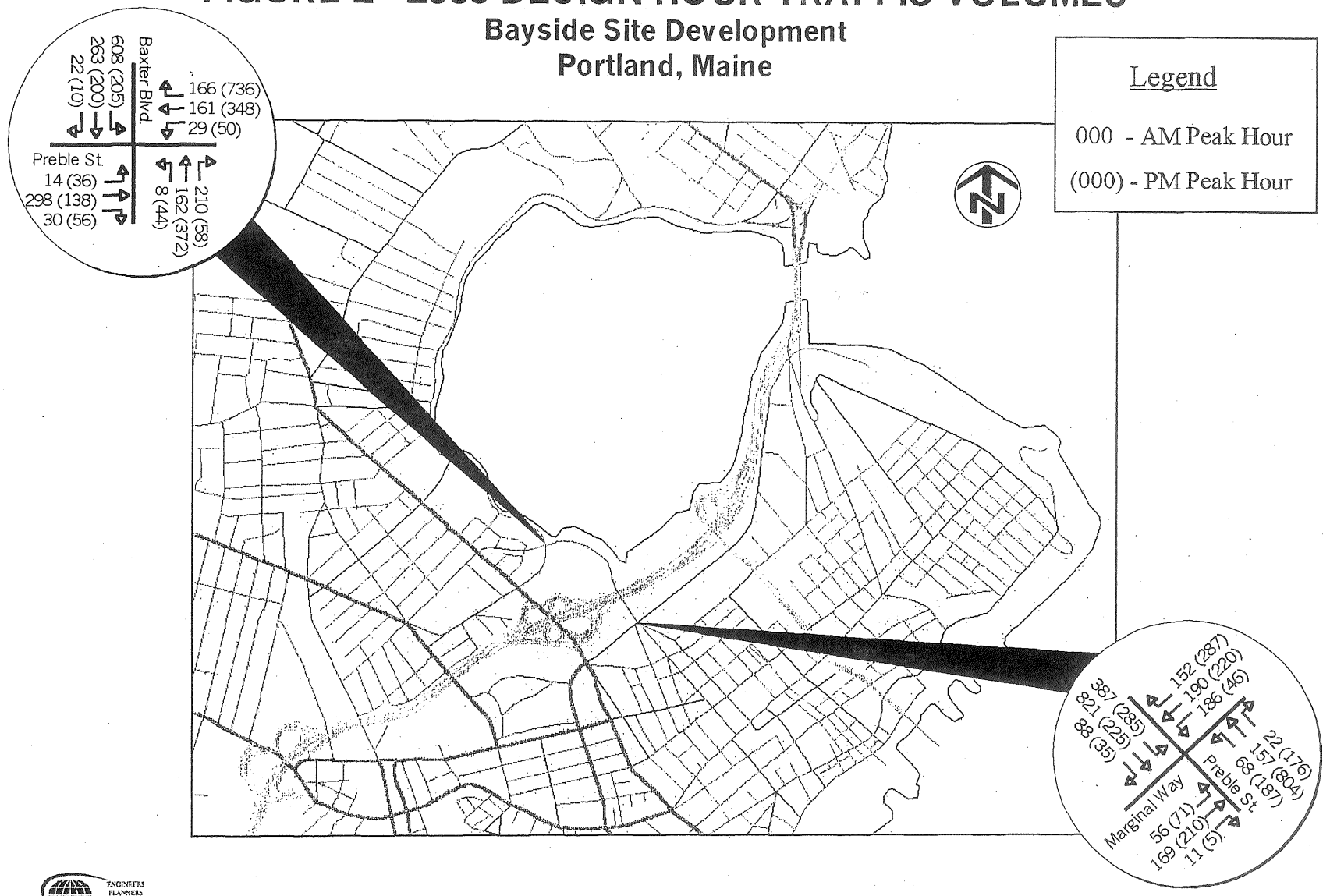
SECTION 4 – NO-BUILD TRAFFIC VOLUMES

No-Build traffic volumes (without the proposed development) were developed for the anticipated opening year of the project (2002). In order to estimate traffic volumes during the No-Build condition, it is important to incorporate traffic generated by other developments in the study area. This is important because conditions associated with nearby developments may generate traffic that impact roadways being studied. Based upon input from the City of Portland, several area projects were included in the No-Build condition. The following presents a list of the projects included.

- Wild Oats Supermarket

FIGURE 2 - 2000 DESIGN HOUR TRAFFIC VOLUMES

Bayside Site Development
Portland, Maine



Wilbur Smith Associates
ENGINEERS PLANNERS ECONOMISTS

To estimate future No-Build conditions, the 2000 Design Hour volumes were increased by a background growth factor of 2.0 percent per year (based upon historical data). Accordingly, the 2000 Design Hour volumes were increased by 2 percent and traffic expected from other approved developments were added. Figure 3 presents the 2002 No-Build traffic volumes (inclusive of the above developments) during both the Weekday AM and PM peak hours.

SECTION 4 – SITE GENERATION TRAFFIC

Traffic generated from the proposed development was based upon traffic generation rates contained in the publication Trip Generation, Institute of Transportation Engineers. Traffic generation was based upon Land Use Code 710 – General Office Building. The following table summarizes the expected traffic generated from the proposed 50,000 square foot office building during the AM and PM peak hours and on a weekday daily basis.

	Weekday		
	Enter	Exit	Total
AM Peak Hour	94	13	107
PM Peak Hour	23	112	135
Daily	390	390	780

Distribution of the site-generated traffic was based upon traffic volume distribution. Figure 4 presents the site generated traffic volumes during the AM and PM peak hours.

SECTION 5 – BUILD TRAFFIC VOLUMES

The Build Traffic Volumes within the study area were estimated for the year 2002. The Build Volumes were estimated by adding the site-generated traffic depicted on Figures 4 to the 2002 No-Build traffic volumes located on Figure 3. Figures 5 presents the 2002 Build Traffic Volumes during the AM and PM peak hours.

FIGURE 3 - 2002 NO-BUILD TRAFFIC VOLUMES

Bayside Site Development
Portland, Maine

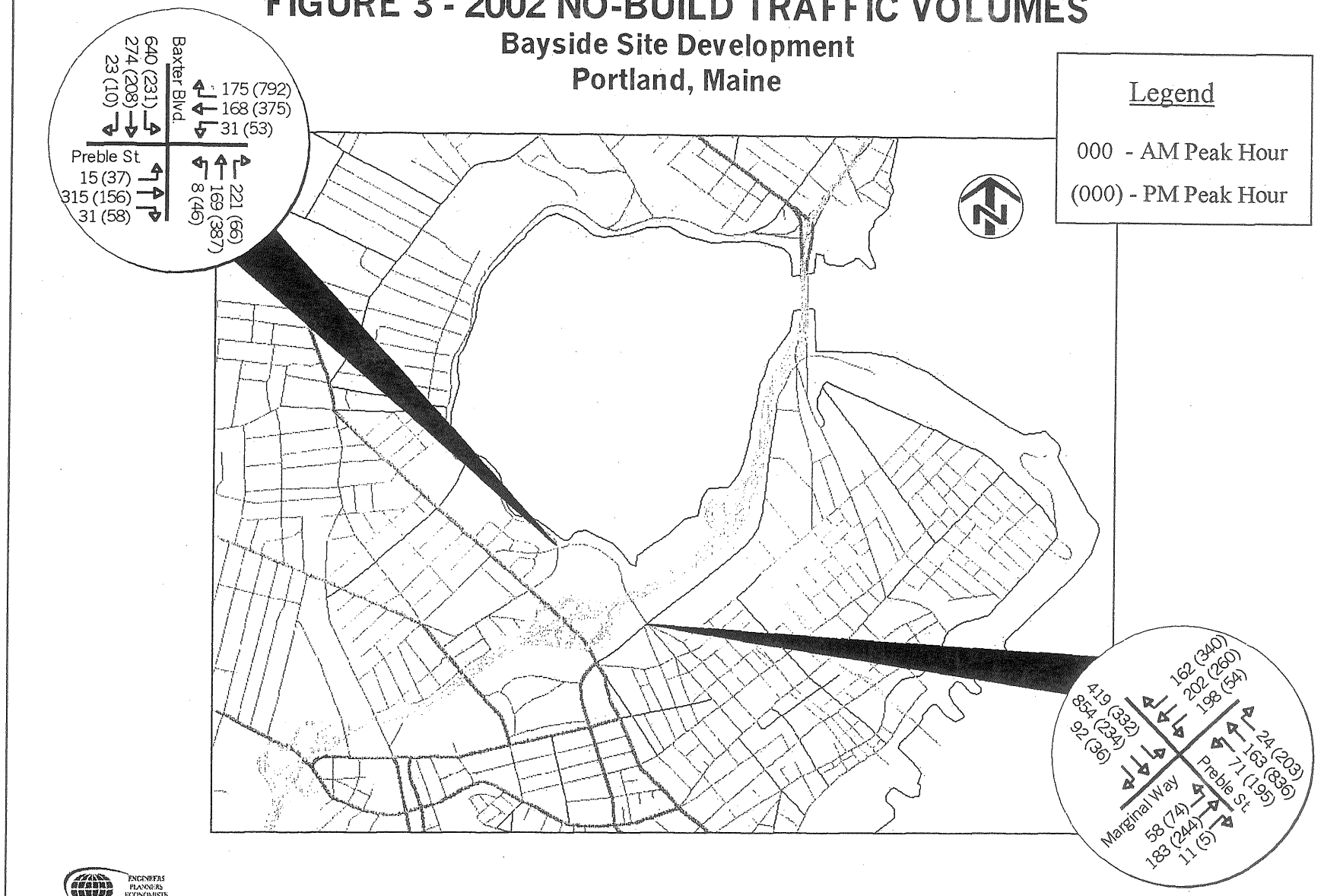


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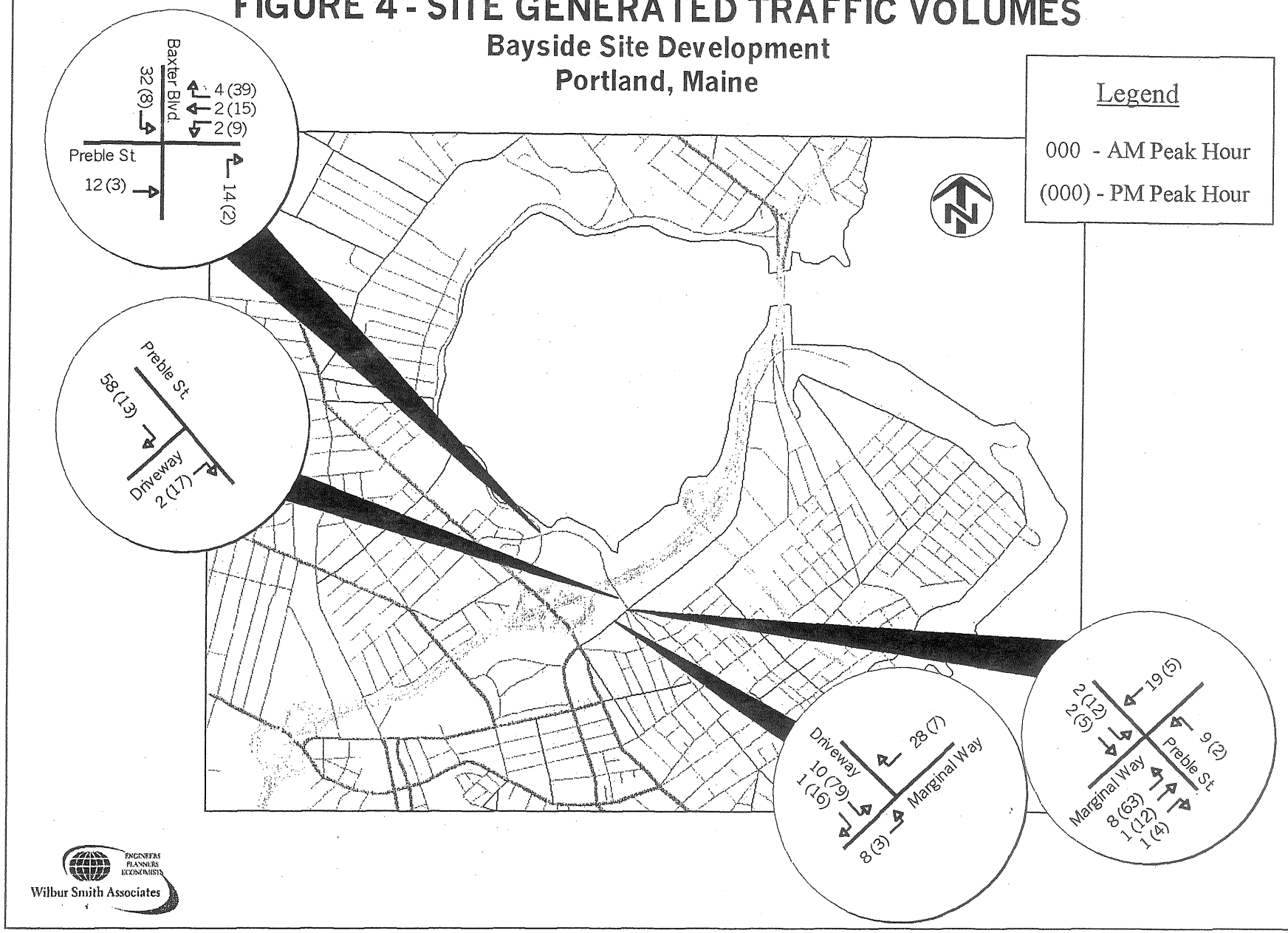
FIGURE 4 - SITE GENERATED TRAFFIC VOLUMES

Bayside Site Development
Portland, Maine



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ENGINEERS
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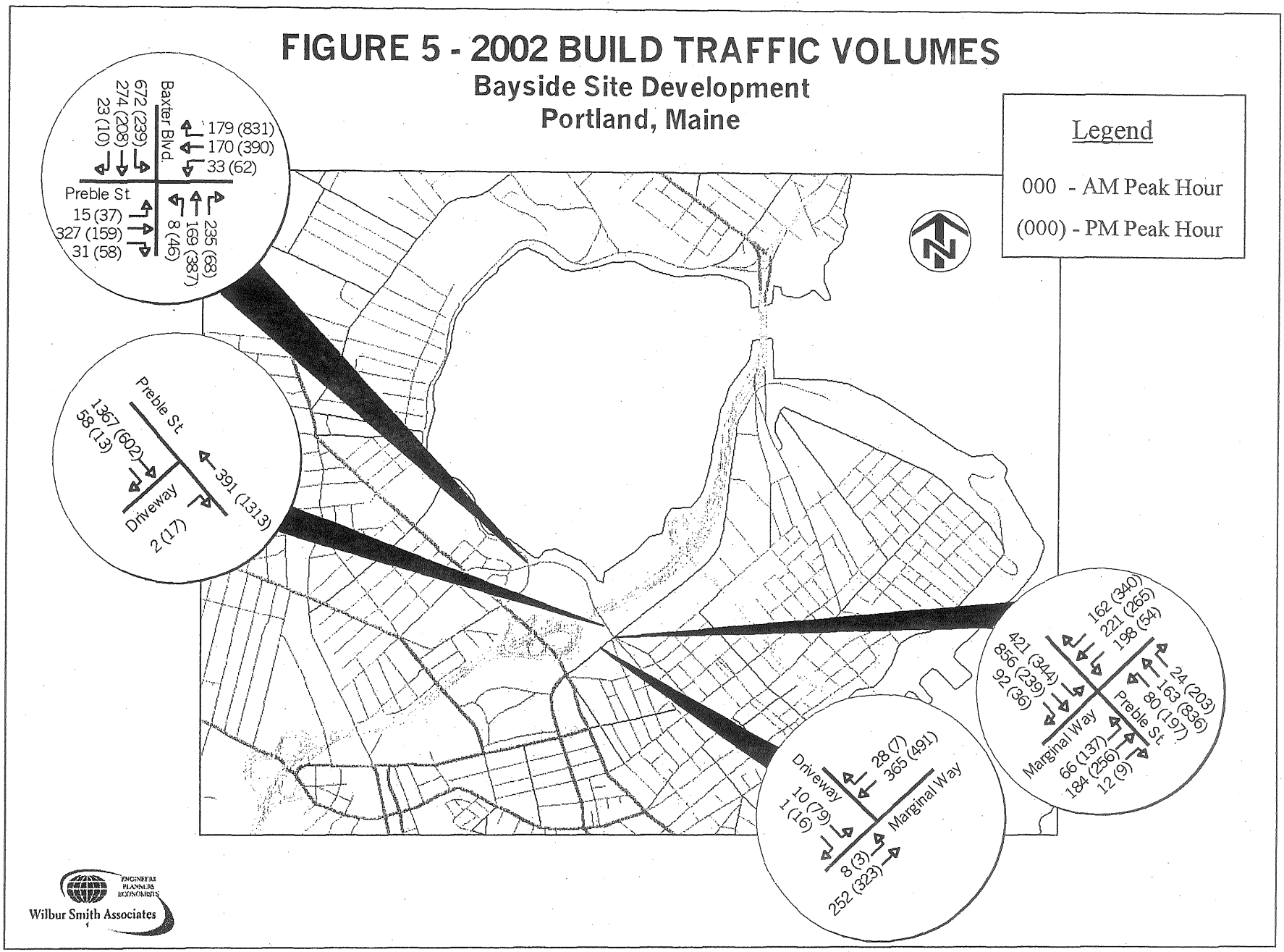
ECONOMISTS

FIGURE 5 - 2002 BUILD TRAFFIC VOLUMES

Bayside Site Development
Portland, Maine



Wilbur Smith Associates
ENGINEERS PLANNERS ECONOMISTS

SECTION 6 – INTERSECTION ANALYSIS

To evaluate the impact of traffic generated by the proposed development, capacity analysis was performed at the study intersections for the 2002 No-Build and Build conditions.

The standard used to evaluate traffic operating conditions of the transportation system is referred to as the Level of Service (LOS). This is a qualitative assessment of the quantitative effect of factors such as speed, volume of traffic, geometric features, traffic interruptions, delays, and freedom to maneuver. LOS analysis was based upon procedures detailed in the 2000 Highway Capacity Manual, Transportation Research Board.

Signalized intersection LOS is based on average stopped delay per vehicle. The following table summarizes LOS categories and their associated delay.

LOS Criteria for Signalized Intersections

Level of Service	Average Delay Per Vehicle (seconds)
A	≤10
B	> 10 and ≤20
C	> 20 and ≤35
D	> 35 and ≤55
E	> 55 and ≤80
F	> 80

The results of the unsignalized capacity analyses at the Marginal Way/Preble Street and Preble Street Extension/Baxter Boulevard intersections are presented in the following tables. The capacity analysis was based upon traffic signal phasing and timing as used in the approved Wild Oats Traffic Impact Study prepared by John L. Murphy, P.E.

Marginal Way/Preble Street
Level of Service Summary

	2002 No-Build LOS (Delay)		2002 Build Condition LOS (Delay)	
	AM	PM	AM	PM
Marginal Way EB LT	D (45.2)	E (64.7)	D (45.8)	F (180.3)
Marginal Way EB TH/RT	D (38.1)	D (40.4)	D (38.1)	D (40.7)
Marginal Way WB LT	D (45.6)	E (57.4)	D (45.6)	E (57.4)
Marginal Way WB TH/RT	C (33.2)	D (53.6)	C (33.4)	D (54.0)
Preble St. NB LT	D (47.5)	E (60.5)	D (50.0)	E (61.1)
Preble St. NB TH/RT	D (41.5)	F (122.8)	D (41.5)	F (122.8)
Preble St. SB LT	D (54.5)	E (69.5)	E (55.5)	E (75.6)
Preble St. SB TH/RT	D (42.2)	C (27.7)	D (42.5)	C (27.8)
Overall	**D (43.4)**	**E (79.7)**	**D (43.8)**	**F (85.4)**

Preble Street Extension/Baxter Boulevard
Level of Service Summary

	2002 No-Build LOS (Delay)		2002 Build Condition LOS (Delay)	
	AM	PM	AM	PM
Preble St. EB LT/TH/RT	D (39.1)	C (24.7)	D (39.5)	C (24.7)
Preble St. WB LT/TH	D (36.6)	C (26.6)	D (36.8)	C (27.1)
Preble St. WB RT	A (7.8)	B (10.8)	A (7.8)	B (11.2)
Baxter Blvd. NB LT/TH/RT	C (34.0)	C (27.7)	C (34.3)	C (27.8)
Baxter Blvd. SB LT	C (26.3)	B (17.4)	C (30.8)	B (17.7)
Baxter Blvd. SB TH/RT	A (7.0)	A (9.7)	A (7.0)	A (9.7)
Overall	**C (27.5)**	**C (21.3)**	**C (29.2)**	**C (21.3)**

Results of the capacity analysis indicate that acceptable operating conditions will exist at the Preble Street Extension/Baxter Boulevard intersection following build-out of the proposed project. At the Marginal Way/Preble Street intersection, unacceptable levels of service are estimated during the PM peak hour during both the no-build and build conditions. It should be noted that while the above table indicates overall intersection level of service will decline from 'E' to 'F', the increase in delay is projected to be minor (5.7 seconds per vehicle).

In an effort to mitigate intersection congestion, optimization of the traffic signal phasing was investigated. As noted in the following table, intersection operations are projected to

improve substantially, if the traffic signal timing is revised. As noted in the following table, intersection delay will be less than the pre-development condition.

Marginal Way/Preble Street
Level of Service Summary
With Traffic Signal Improvements

	2002 Build Condition LOS (Delay)
	PM
Marginal Way EB LT	F (123.5)
Marginal Way EB TH/RT	D (41.9)
Marginal Way WB LT	D (52.7)
Marginal Way WB TH/RT	E (72.0)
Preble St. NB LT	F (80.7)
Preble St. NB TH/RT	E (78.1)
Preble St. SB LT	F (102.7)
Preble St. SB TH/RT	C (23.6)
Overall	**E (73.4)**

SECTION 7 – SAFETY ANALYSIS

Accident data from the period 1997 – 1999 was obtained from MDOT for roadways and intersections in the vicinity of the project site. A summary of the data is presented in the following table.

LOCATION	1997-1999 ACCIDENTS	YEARLY AVERAGE	CRITICAL RATE FACTOR
Marginal Way/Preble Street	20	6.67	0.66
Preble Street/Baxter Boulevard	31	10.33	0.93
Preble Street between Marginal Way and Baxter Boulevard	8	2.67	0.27
Marginal Way between Forest and Preble	9	3.00	0.47

MDOT considers a Critical Rate Factor (CRF) of over 1.0 and 8 accidents over a three-year period as a general guideline to identify potential safety deficiencies. As noted in the above table, no study area locations meet this criterion.

SECTION 9 – SITE ACCESSS AND CIRCULATION

The following summarizes our comments relative to review of a site plan prepared by EER. Specifically, the assessment included an evaluation of sight distance, on-site circulation and access, and on-site parking supply.

Sight Distance

Driveway and intersecting road placement shall be such that an exiting vehicle has an unobstructed sight distance according to MDOT standards. Accordingly, sight distances from the existing driveways on Marginal Way and Preble Street Extension were reviewed and assessed according to standards contained in the publication Access Management Improving the Efficiency of Maine Arterials, MDOT. For roads with vehicular speeds of 35 MPH (posted speed limit) and driveways with low to medium traffic volumes, the minimum sight distance is 350 feet. The following table summarizes the field measured sight distances at the project driveways.

LOCATION	LEFT SIGHT DISTANCE (FEET)	RIGHT SIGHT DISTANCE (FEET)	MINIMUM STANDARD (FEET)
Site Drive @ Marginal Way	500+	500+	350
Site Drive @ Preble Street Extension	500+	Not Applicable	350

As noted in the above table, all driveways meet MDOT standards for sight distance. It should be note that two large trees obstruct sight distance when exiting the site drive on Marginal Way and looking westerly. Motorist should be able to pull out and avoid the trees. However, it is recommended that conditions be monitored and the trees be removed if problems develop.

Access and Circulation

In general we find the access to be acceptable with the following comments.

- The two access drives should be aligned such that they intersect Marginal Way and Preble Street Extension at an angle near 90 degrees.
- The City of Portland Traffic Engineer has expressed concern relative to vehicles exiting the Preble Street Extension driveway and performing an illegal left-turn. To help discourage this movement it is suggested that the island be extended approximately fifty feet.

On-Site Parking

A on-site parking demand analysis was conducted for the proposed 50,000 square foot office building to ascertain the adequacy of the proposed parking supply. A summary of the analysis is presented in the following table.

CURRENT PARKING SUPPLY	168 PARKING SPACES
City of Portland Parking Ordinance 1 space per 400 square feet	125 Parking Spaces
ITE Parking Generation 2.79 spaces per 1,000 square feet	140 Parking Spaces
Parking, ENO Foundation 3 spaces per 1,000 square feet	150 Parking Spaces

As noted above an adequate parking supply will be provided.

SECTION 10 – CONCLUSIONS/RECOMMEDATIONS

1. The proposed 50,000 square foot office development is expected to generate 107 vehicles (94 entering/13 exiting) during the AM peak hour. During the PM peak hour 135 vehicles (23 entering/112 exiting) will be generated. On a 24-hour basis 780 vehicles will be generated.

2. Results of the capacity analysis indicate that acceptable operating conditions will exist at the Preble Street Extension/Baxter Boulevard intersection following build-out of the proposed project. At the Marginal Way/Preble Street intersection, unacceptable levels of service are estimated during the PM peak hour during both the no-build and build conditions. It should be noted that while the analysis indicates overall intersection level of service will decline from 'E' to 'F', the increase in delay is projected to be minor (5.7 seconds per vehicle).

3. In an effort to mitigate congestion at the Marginal Way/Preble Street intersection, optimization of the traffic signal phasing is recommended. As noted in Section 6 intersection operations are projected to improve, if the traffic signal timing is revised, and intersection delay will be less than the pre-development condition.

4. Evaluation of accident data in the vicinity of the project was performed for the most recent 3-year period from the MDOT. Results indicate no roadways or intersections within the study area are High Accident Locations.

5. Sight distance was evaluated for driveways on both Marginal Way and Preble Street Extension. Results indicate all driveways meet MDOT standards for sight distance.

APPENDIX

CAPACITY ANALYSES

TURNING MOVEMENT DATA SHEETS

HCS2000: Signalized Intersections Release 4.1

Analyst: TAE
Agency: WSA
Date: 3/14/2001
Period: 2002 No-Build
Project ID:
E/W St: Marginal Way

Inter.: Marginal Way/Preble Street
Area Type: All other areas
Jurisd:
Year : AM Peak Hour

N/S St: Preble Street

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	0	1	2	0	1	2	0	1	2	0
LGConfig	L	TR		L	TR		L	TR		L	TR	
Volume	58	183	11	198	202	162	71	163	24	419	854	92
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
RTOR Vol			0			0			0			0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A				NB	Left	A			
Thru			A			Thru			A	
Right			A			Right			A	
Peds						Peds				
WB Left	A	A			SB	Left	A	A		
Thru		A	A			Thru		A	A	
Right		A	A			Right		A	A	
Peds						Peds				
NB Right					EB	Right				
SB Right					WB	Right				
Green	10.0	4.0	18.0				10.0	20.0	15.0	
Yellow	3.5	3.5	3.5				3.5	3.5	3.5	
All Red	1.0	1.0	1.0				1.0	1.0	1.0	

Cycle Length: 104.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	170	1770	0.35	0.10	45.2	D		
TR	608	3510	0.33	0.17	38.1	D	39.7	D
Westbound								
L	315	1770	0.68	0.18	45.6	D		
TR	842	3303	0.46	0.25	33.2	C	37.6	D
Northbound								
L	170	1770	0.52	0.10	47.5	D		
TR	500	3470	0.46	0.14	41.5	D	43.1	D
Southbound								
L	587	1770	0.93	0.33	54.5	D		
TR	1325	3488	0.93	0.38	42.2	D	46.0	D

Intersection Delay = 43.4 (sec/veh) Intersection LOS = D

HCS2000: Signalized Intersections Release 4.1

Analyst: TAE
Agency: WSA
Date: 3/14/2001
Period: 2002 No-Build
Project ID:
E/W St: Marginal Way

Inter.: Marginal Way/Preble Street
Area Type: All other areas
Jurisd:
Year : PM Peak Hour
N/S St: Preble Street

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	0	1	2	0	1	2	0	1	2	0
LGConfig	L	TR		L	TR		L	TR		L	TR	
Volume	74	244	5	54	260	340	195	836	203	332	234	36
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
RTOR Vol			0			0			0			0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	A				NB	Left	A			
	Thru		A				Thru			A	
	Right		A				Right			A	
	Peds						Peds				
WB	Left	A				SB	Left	A	A		
	Thru		A				Thru		A	A	
	Right		A				Right		A	A	
	Peds						Peds				
NB	Right					EB	Right				
SB	Right					WB	Right				
Green		10.0	30.0					22.0	2.0	40.0	
Yellow		3.5	3.5					3.5	3.5	3.5	
All Red		1.0	1.0					1.0	1.0	1.0	

Cycle Length: 126.5 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	140	1770	0.62	0.08	64.7	E		
TR	837	3528	0.35	0.24	40.4	D	45.9	D
Westbound								
L	140	1770	0.41	0.08	57.4	E		
TR	768	3238	0.83	0.24	53.6	D	53.9	D
Northbound								
L	308	1770	0.76	0.17	60.5	E		
TR	1086	3435	1.15	0.32	122.8	F	113.0	F
Southbound								
L	399	1770	0.89	0.23	69.5	E		
TR	1275	3468	0.23	0.37	27.7	C	50.7	D

Intersection Delay = 79.7 (sec/veh) Intersection LOS = E

HCS2000: Signalized Intersections Release 4.1

Analyst: TAE
Agency: WSA
Date: 3/14/2001
Period: 2002 Build
Project ID:
E/W St: Marginal Way

Inter.: Marginal Way/Preble Street
Area Type: All other areas
Jurisd:
Year : AM Peak Hour58

N/S St: Preble Street

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	0	1	2	0	1	2	0	1	2	0
LGConfig	L	TR		L	TR		L	TR		L	TR	
Volume	66	184	12	198	221	162	80	163	24	421	856	92
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
RTOR Vol			0			0			0			0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	A				NB	Left	A			
	Thru			A			Thru			A	
	Right			A			Right			A	
	Peds						Peds				
WB	Left	A	A			SB	Left	A	A		
	Thru		A	A			Thru		A	A	
	Right		A	A			Right		A	A	
	Peds						Peds				
NB	Right					EB	Right				
SB	Right					WB	Right				
Green		10.0	4.0	18.0				10.0	20.0	15.0	
Yellow		3.5	3.5	3.5				3.5	3.5	3.5	
All Red		1.0	1.0	1.0				1.0	1.0	1.0	

Cycle Length: 104.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	170	1770	0.41	0.10	45.8	D		
TR	607	3506	0.34	0.17	38.1	D	40.0	D
Westbound								
L	315	1770	0.68	0.18	45.6	D		
TR	845	3315	0.49	0.25	33.4	C	37.6	D
Northbound								
L	170	1770	0.58	0.10	50.0	D		
TR	500	3470	0.46	0.14	41.5	D	44.0	D
Southbound								
L	587	1770	0.93	0.33	55.5	E		
TR	1325	3488	0.93	0.38	42.5	D	46.5	D

Intersection Delay = 43.8 (sec/veh) Intersection LOS = D

HCS2000: Signalized Intersections Release 4.1

Analyst: TAE
Agency: WSA
Date: 3/14/2001
Period: 2002 Build
Project ID:
E/W St: Marginal Way

Inter.: Marginal Way/Preble Street
Area Type: All other areas
Jurisd:
Year : PM Peak Hour

N/S St: Preble Street

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	0	1	2	0	1	2	0	1	2	0
LGConfig	L	TR		L	TR		L	TR		L	TR	
Volume	137	256	9	54	265	340	197	836	203	344	239	36
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
RTOR Vol			0			0			0			0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	A				NB Left	A		
Thru		A			Thru		A	
Right		A			Right		A	
Peds					Peds			
WB Left	A				SB Left	A	A	
Thru		A			Thru		A	A
Right		A			Right		A	A
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	10.0	30.0				22.0	2.0	40.0
Yellow	3.5	3.5				3.5	3.5	3.5
All Red	1.0	1.0				1.0	1.0	1.0

Cycle Length: 126.5 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	140	1770	1.15	0.08	180.3	F		
TR	835	3520	0.37	0.24	40.7	D	88.2	F
Westbound								
L	140	1770	0.41	0.08	57.4	E		
TR	769	3241	0.84	0.24	54.0	D	54.3	D
Northbound								
L	308	1770	0.77	0.17	61.1	E		
TR	1086	3435	1.15	0.32	122.8	F	113.0	F
Southbound								
L	399	1770	0.93	0.23	75.6	E		
TR	1275	3469	0.23	0.37	27.8	C	54.4	D

Intersection Delay = 85.4 (sec/veh) Intersection LOS = F

HCS2000: Signalized Intersections Release 4.1

w/SIGNAL TIMING IMPROVEMENTS

Analyst: TAE
Agency: WSA
Date: 3/14/2001
Period: 2002 Build
Project ID:
E/W St: Marginal Way

Inter.: Marginal Way/Preble Street
Area Type: All other areas
Jurisd:
Year : PM Peak Hour

N/S St: Preble Street

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	0	1	2	0	1	2	0	1	2	0
LGConfig	L	TR		L	TR		L	TR		L	TR	
Volume	137	256	9	54	265	340	197	836	203	344	239	36
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
RTOR Vol			0			0			0			0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A				NB	Left	A			
Thru		A				Thru			A	
Right		A				Right			A	
Peds						Peds				
WB Left	A				SB	Left	A	A		
Thru		A				Thru		A	A	
Right		A				Right		A	A	
Peds						Peds				
NB Right					EB	Right				
SB Right					WB	Right				
Green	11.0	25.0					18.0	2.0	42.0	
Yellow	3.5	3.5					3.5	3.5	3.5	
All Red	1.0	1.0					1.0	1.0	1.0	

Cycle Length: 120.5

Secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	162	1770	0.99	0.09	123.5	F		
TR	730	3520	0.43	0.21	41.9	D	69.7	E
Westbound								
L	162	1770	0.35	0.09	52.7	D		
TR	672	3241	0.96	0.21	72.0	E	70.5	E
Northbound								
L	264	1770	0.90	0.15	80.7	F		
TR	1197	3435	1.05	0.35	78.1	E	78.5	E
Southbound								
L	360	1770	1.03	0.20	102.7	F		
TR	1396	3469	0.21	0.40	23.6	C	67.6	E

Intersection Delay = 73.4 (sec/veh) Intersection LOS = E

HCS2000: Signalized Intersections Release 4.1

Analyst: TAE
Agency: Portland
Date: 2/16/2001
Period: AM
Project ID:
E/W St: Preble

Inter.: Baxter/Preble
Area Type: All other areas
Jurisd:
Year : 2002 No-Build

N/S St: Baxter

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	0	0	2	1	0	2	0	1	1	0
LGConfig		LTR			LT	R		LTR		L	TR	
Volume	15	315	31	31	168	175	8	169	221	640	274	23
Lane Width		12.0			12.0	12.0		12.0		12.0	12.0	
RTOR Vol			15			100			80			2

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A				NB	Left	A			
Thru	A					Thru	A			
Right	A					Right	A			
Peds						Peds				
WB Left	A				SB	Left	A	A		
Thru	A					Thru	A	A		
Right	A					Right	A	A		
Peds						Peds				
NB Right					EB	Right				
SB Right					WB	Right		P		
Green	25.0						30.0	40.0		
Yellow	3.5						3.5	3.5		
All Red	1.5						1.5	1.5		

Cycle Length: 110.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
LTR	730	3214	0.59	0.23	39.1	D	39.1	D
Westbound								
LT	590	2594	0.40	0.23	36.6	D	28.7	C
R	934	1468	0.10	0.64	7.8	A		
Northbound								
LTR	857	3143	0.49	0.27	34.0	C	34.0	C
Southbound								
L	929	1770	0.82	0.68	26.3	C		
TR	1257	1843	0.28	0.68	7.0	A	20.2	C

Intersection Delay = 27.5 (sec/veh) Intersection LOS = C

HCS2000: Signalized Intersections Release 4.1

Analyst: TAE
Agency: Portland
Date: 2/16/2001
Period: PM
Project ID:
E/W St: Preble

Inter.: Baxter/Preble
Area Type: All other areas
Jurisd:
Year : 2002 No-Build

N/S St: Baxter

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	0	0	2	1	0	2	0	1	1	0
LGConfig		LTR			LT	R		LTR		L	TR	
Volume	37	156	58	53	375	792	46	387	66	231	208	10
Lane Width		12.0			12.0	12.0		12.0		12.0	12.0	
RTOR Vol			15			500			25			2

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A				NB	Left	A			
Thru	A					Thru	A			
Right	A					Right	A			
Peds						Peds				
WB Left	A				SB	Left	A	A		
Thru	A					Thru	A	A		
Right	A					Right	A	A		
Peds						Peds				
NB Right					EB	Right				
SB Right					WB	Right		P		
Green	30.0						30.0	20.0		
Yellow	3.5						3.5	3.5		
All Red	1.5						1.5	1.5		

Cycle Length: 95.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
LTR	884	2799	0.29	0.32	24.7	C	24.7	C
Westbound								
LT	983	3114	0.48	0.32	26.6	C	20.2	C
R	926	1599	0.35	0.58	10.8	B		
Northbound								
LTR	996	3155	0.56	0.32	27.7	C	27.7	C
Southbound								
L	666	1787	0.37	0.58	17.4	B		
TR	1083	1870	0.22	0.58	9.7	A	13.7	B

Intersection Delay = 21.3 (sec/veh) Intersection LOS = C

HCS2000: Signalized Intersections Release 4.1

Analyst: TAE
Agency: Portland
Date: 2/16/2001
Period: AM
Project ID:
E/W St: Preble

Inter.: Baxter/Preble
Area Type: All other areas
Jurisd:
Year : 2002 Build

N/S St: Baxter

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	0	0	2	1	0	2	0	1	1	0
LGConfig		LTR			LT	R		LTR		L	TR	
Volume	15	327	31	33	170	179	8	169	235	672	274	23
Lane Width		12.0			12.0	12.0		12.0		12.0	12.0	
RTOR Vol			15			100			80			2

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A				NB	Left	A			
Thru	A					Thru	A			
Right	A					Right	A			
Peds						Peds				
WB Left	A				SB	Left	A	A		
Thru	A					Thru	A	A		
Right	A					Right	A	A		
Peds						Peds				
NB Right					EB	Right				
SB Right					WB	Right		P		
Green	25.0						30.0	40.0		
Yellow	3.5						3.5	3.5		
All Red	1.5						1.5	1.5		

Cycle Length: 110.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
LTR	731	3217	0.61	0.23	39.5	D	39.5	D
Westbound								
LT	574	2526	0.42	0.23	36.8	D	28.7	C
R	934	1468	0.10	0.64	7.8	A		
Northbound								
LTR	854	3133	0.51	0.27	34.3	C	34.3	C
Southbound								
L	920	1770	0.87	0.68	30.8	C		
TR	1257	1843	0.28	0.68	7.0	A	23.5	C

Intersection Delay = 29.2 (sec/veh) Intersection LOS = C

HCS2000: Signalized Intersections Release 4.1

Analyst: TAE
Agency: Portland
Date: 2/16/2001
Period: PM
Project ID:
E/W St: Preble

Inter.: Baxter/Preble
Area Type: All other areas
Jurisd:
Year : 2002 Build

N/S St: Baxter

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	0	0	2	1	0	2	0	1	1	0
LGConfig		LTR			LT	R		LTR		L	TR	
Volume	37	159	58	62	390	831	46	387	68	239	208	10
Lane Width		12.0			12.0	12.0		12.0		12.0	12.0	
RTOR Vol			15			500			25			2

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	A				NB Left	A		
Thru	A				Thru	A		
Right	A				Right	A		
Peds					Peds			
WB Left	A				SB Left	A	A	
Thru	A				Thru	A	A	
Right	A				Right	A	A	
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right		P	
Green	30.0					30.0	20.0	
Yellow	3.5					3.5	3.5	
All Red	1.5					1.5	1.5	

Cycle Length: 95.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
LTR	880	2787	0.30	0.32	24.7	C	24.7	C
Westbound								
LT	969	3067	0.52	0.32	27.1	C	20.4	C
R	926	1599	0.40	0.58	11.2	B		
Northbound								
LTR	996	3153	0.56	0.32	27.8	C	27.8	C
Southbound								
L	665	1787	0.39	0.58	17.7	B		
TR	1083	1870	0.22	0.58	9.7	A	13.9	B

Intersection Delay = 21.3 (sec/veh) Intersection LOS = C

ACCIDENT DATA

JAN 19,2001 AT 10:44

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY INPUT

TYPE OF STUDY: NODES ONLY TYPE OF REQUEST: ACCIDENT I & II WITHOUT LINK DETAIL
STUDY PERIOD: FROM MONTH 01 YEAR 1997 TO MONTH 12 YEAR 1999

INPUT COMMENTS

REQUEST: INT OF MARGINAL WAY AND PREBLE ST
TOWN : PORTLAND

INPUT DATA

ROUTE	COUNTY	FIRST NODE	EXCLUDE FIRST	DISTANCE	SECOND NODE	LAST NODE	EXCLUDE LAST	DISTANCE
60477	05	08943	0	0.00	09419	09419	0	0.00

JAN 19,2001 AT 10:44

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY I

COUNTY TOWN#	LOW NODE	HIGH NODE	STREET NAME OR ROUTE #	U/R	TOTAL ACCTS	LINK LENGTH	INJURY ACCIDENTS K	A	B	C	PD	PERCENT INJURY	ANNUAL HM VEH-MILES	ANNUAL M ENT-VEHS	ACCIDENT-RATES LINK	NODE	CRITI RATE	CRF
05	P08943	POR,MARGINAL WAY,ELM,PR 9			20		0	0	4	6	10	50.0		7.564		0.88	1.33	0.00
05	A09419	POR,HANOVER ST,MARGINAL			0		0	0	0	0	0	0.0		0.000		0.00	0.00	0.00*
			NODE SUBTOTALS-		20		0	0	4	6	10	50.0		7.564		0.88	1.33	0.00

* - MEV IS ZERO FOR THIS NODE -

JAN 19,2001 AT 10:44

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY I

GRAND TOTALS-	20	0.00	0	0	4	6	10	50.0	0.00000	7.564	0.88	1.33	0.66

JAN 19,2001 AT 10:44

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY II - CHARACTERISTICS

	---A M---													H O U R O F D A Y						---P M---						
DAY OF WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	UNKNOWN	TOTAL	
SUNDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	S
MONDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	M
TUESDAY	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	6	T
WEDNESDAY	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	3	W
THURSDAY	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	3	T
FRIDAY	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	3	F
SATURDAY	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	3	S
UNKNOWN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	U
TOTAL	0	0	0	0	0	0	0	1	4	1	1	2	1	0	0	3	1	2	3	1	0	0	0	0	0	20	T

	YEAR			
	TOTAL	1997	1998	1999
JANUARY	2	2	0	0
FEBRUARY	2	1	0	1
MARCH	4	3	0	1
APRIL	3	2	1	0
MAY	1	0	0	1
JUNE	1	1	0	0
JULY	0	0	0	0
AUGUST	3	0	1	2
SEPTEMBER	2	1	1	0
OCTOBER	0	0	0	0
NOVEMBER	1	0	0	1
DECEMBER	1	1	0	0
UNKNOWN	0	0	0	0
TOTAL	20	11	3	6

TYPE OF UNIT

01-2 DOOR	8	10-BOBTAIL	0
02-4 DOOR	15	20-2ADT	1
03-CONVERTBLE	0	30-3ASU	0
04-STAT WGN	4	40-4ASU	0
05-VAN/CAMPER	3	21-2ASA	0
06-PICKUP TRK	4	22-2ATA	0
12-SCHOOL BUS	1	31-3ASA	0
13-MOTOR HOME	0	32-3ATA	0
14-MOTORCYCLE	0	33-3ATR	0
15-MOPED	0	42-4ATA	0
16-MOTOR BIKE	0	25-2AT1A2ATR	0
17-BICYCLE	1	35-3AT1A2ATR	0
18-SNOWMOBILE	0	36-3AT2A2ATR	0
19-PEDESTRIAN	1	50-OTHER	0
23-ATV	0	81-2AX CM BUS	0
99-UNK/OTH	0	82-3AX CM BUS	0
		98-FARM/TRAC	0
TOTAL	38		

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY II - CHARACTERISTICS

TYPE OF LOCATION

ACCIDENT TYPE	ST ROAD	CURV ROAD	**AT INTERSECTION** 3-LEG	4-LEG	5-LEG	DRIVE WAYS	BRIDGE	INTER CHANGE	UN KNOWN	TOTAL
OBJECT IN ROAD	0	0	0	0	0	0	0	0	0	0
REAR END/SIDESWIPE	0	0	0	4	7	0	0	0	0	11
HEAD-ON/SIDESWIPE	0	0	0	0	1	0	0	0	0	1
INTERSECTION MOVEMENT	0	0	0	3	2	0	0	0	0	5
PEDESTRIANS	0	0	0	0	1	0	0	0	0	1
TRAIN	0	0	0	0	0	0	0	0	0	0
RAN OFF ROAD	0	0	0	0	1	0	0	0	0	1
ANIMAL	0	0	0	0	0	0	0	0	0	0
DEER	0	0	0	0	0	0	0	0	0	0
MOOSE	0	0	0	0	0	0	0	0	0	0
BEAR	0	0	0	0	0	0	0	0	0	0
SLED/BIKE	0	0	0	0	1	0	0	0	0	1
OTHER	0	0	0	0	0	0	0	0	0	0
NON COLLISION	0	0	0	0	0	0	0	0	0	0
UNKNOWN	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	7	13	0	0	0	0	20

INJURY DATA

SEV CODE	INJURY ACCIDENTS	NUMBER OF INJURIES
K	0	0
A	0	0
B	4	4
C	6	6
PD	10	
TOTAL	20	10

FIXED OBJECT STRUCK

CONSTRUCTION BARRICADES	0
TRAFFIC SIGNAL	0
R/R CROSSING	0
LIGHT POLE	0
UTILITY POLE	0
SIGN POST	0
MAIL BOXES	0
OTHER POLES/POSTS	0
FIRE PLUG/PARK METER	0
TREE/SHRUBBERY	0
CRASH CUSHION	0
MEDIAN SAFETY BARRIER	0
BRIDGE PIERS	0
OTHER GUARDRAILS	0
FENCING NOT BARRIER	0
CULVERT HEADWALL	0
EMBANKMENT/DITCH	1
BUILDING WALL	0
ROCK OUTCROPPING/LEDGE	0
OTHER	0
UNKNOWN	0
TOTAL	1

TRAFFIC CONTROL DEVICES

TRAFFIC SIG STOP/GO	19
TRAFFIC SIG FLASHING	0
OVERHEAD FLASHERS	0
ALL WAY STOP	0
STOP SIGN/OTHER	0
YIELD SIGN	0
CURVE SIGN	0
OFFICER /SCHOOL PAT	0
SCHOOL BUS STOP ARM	0
SCHOOL ZONE SIGN	0
R/R CROSSING DEVICE	0
NO PASSING ZONE	0
NONE	1
OTHER	0
UNKNOWN	0
TOTAL	20

ROAD CHARACTER

LEVEL STRAIGHT	19
LEVEL CURVED	1
ON GRADE STRAIGHT	0
ON GRADE CURVED	0
TOP OF HILL STRAIGHT	0
TOP OF HILL CURVED	0
BOTTOM OF HILL STRAIGHT	0
BOTTOM OF HILL CURVED	0
UNKNOWN	0
TOTAL	20

JAN 19,2001 AT 10:44

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY II - CHARACTERISTICS

APPARENT CONTRIBUTING FACTOR	DR 1	DR 2	DR 3	DR 4	DR 5	OTHER	TOTAL
HUMAN FACTORS							
NO INPROPER DRIVING	14	5	0	0	0	0	19
FAIL TO YIELD R-WAY	0	1	0	0	0	0	1
ILLEGAL UNSAFE SPEED	0	0	0	0	0	0	0
FOLLOW TOO CLOSE	0	1	0	0	0	0	1
DISREGARD TRAF CONTROL	1	1	0	0	0	0	2
DRIVING LEFT OF CENTER	0	0	0	0	0	0	0
IMPROPER PASSING	0	0	0	0	0	0	0
IMPROPER LANE CHANGE	0	1	0	0	0	0	1
IMPROPER START/STOP	0	0	0	0	0	0	0
IMPROPER TURN	1	1	0	0	0	0	2
UNSAFE BACKING	0	1	0	0	0	0	1
NO PROPER SIGNAL	0	0	0	0	0	0	0
IMPEDING TRAFFIC	0	0	0	0	0	0	0
DRIVER INATTENTION	2	5	0	0	0	0	7
DRIVER INEXPERIENCE	0	0	0	0	0	0	0
PEDESTRIAN VIOLATION	0	1	0	0	0	0	1
PHYSICAL IMPAIRMENT	0	0	0	0	0	0	0
VISION OBSCURED GLASS	0	0	0	0	0	0	0
VISION OBSCURED LIGHT	0	0	0	0	0	0	0
VISION OBSCURED OTHER	0	0	0	0	0	0	0
OTHER HUMAN FACTOR	1	0	0	0	0	0	1
HIT & RUN	0	0	0	0	0	0	0
VEHICULAR FACTORS							
DEFECTIVE BRAKES	0	0	0	0	0	0	0
DEFECTIVE TIRE	0	0	0	0	0	0	0
DEFECTIVE LIGHTS	0	0	0	0	0	0	0
DEFECTIVE SUSPENSION	0	0	0	0	0	0	0
DEFECTIVE STEERING	0	0	0	0	0	0	0
OTHER VEHICLE DEFECT	0	0	0	0	0	0	0
UNKNOWN	1	1	0	0	0	0	2
TOTAL	20	18	0	0	0	0	38

APPARENT PHYSICAL CONDITION	DR 1	DR 2	DR 3	DR 4	DR 5	OTHER	TOTAL
NORMAL	19	17	0	0	0	0	36
UNDER THE INFLUENCE	0	0	0	0	0	0	0
DRINKING	0	0	0	0	0	0	0
USING DRUGS	0	0	0	0	0	0	0
ASLEEP	0	0	0	0	0	0	0
FATIGUED	0	0	0	0	0	0	0
ILL	0	0	0	0	0	0	0
HANDICAPPED	0	0	0	0	0	0	0
OTHER/UNKNOWN	1	1	0	0	0	0	2
TOTAL	20	18	0	0	0	0	38

AGE	TYPE OF UNIT: DRIVER	BIKE	SNOW SLED	PED	ATV	TOTAL
9-UNDER	0	0	0	0	0	0
10-14	0	0	0	0	0	0
15-19	1	0	0	0	0	1
20-24	6	0	0	0	0	6
25-29	3	0	0	1	0	4
30-39	6	1	0	0	0	7
40-49	10	0	0	0	0	10
50-59	6	0	0	0	0	6
60-69	1	0	0	0	0	1
70-79	3	0	0	0	0	3
80-OVER	0	0	0	0	0	0
UNKNOWN	0	0	0	0	0	0
TOTAL	36	1	0	1	0	38

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY II - CHARACTERISTICS

WEATHER	LIGHT CONDITION	ROAD SURFACE: DRY	WET	SNOW SAND	ICE SAND	MUD	DEBRIS	OIL	SNOW	ICE	OTHER	TOTAL
CLEAR	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	5	1	1	0	0	0	0	0	0	0	7
(9)	DUSK	1	0	0	0	0	0	0	0	0	0	1
	DARK-LIGHTS	1	0	0	0	0	0	0	0	0	0	1
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
RAIN	DAWN	0	0	0	0	0	0	0	0	1	0	1
	DAYLIGHT	0	1	0	0	0	0	0	0	0	0	1
(3)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	1	0	0	0	0	0	0	0	0	1
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
SNOW	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	0	0	1	0	0	0	1	0	0	2
(2)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
SLEET/HAIL	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	0	0	0	0	0	0	0	0	0	0
(0)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
FOG/SMOG	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	0	0	0	0	0	0	0	0	0	0
(0)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0

LIGHT	
DAWN	1
DAYLIGHT	14
DUSK	1
DARK-LIGHTS	4
DARK NO LIGHTS	0
DARK LIGHTS OFF	0
OTHER	0
UNKNOWN	0
TOTAL	20

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY II - CHARACTERISTICS

WEATHER	LIGHT CONDITION	ROAD SURFACE: DRY	WET	SNOW SAND	ICE SAND	MUD	DEBRIS	OIL	SNOW	ICE	OTHER	TOTAL
CROSS WINDS	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	0	0	0	0	0	0	0	0	0	0
(0)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
SAND/DUST	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	0	0	0	0	0	0	0	0	0	0
(0)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
CLOUDY	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	3	0	0	0	0	0	0	0	0	0	3
(4)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	1	0	0	0	0	0	0	0	0	1
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
OTHER	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	0	0	0	0	0	0	0	0	1	1
(2)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	1	1
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
ROAD SURFACE TOTALS		10	4	1	1	0	0	0	1	1	2	20

JAN 19,2001 AT 10:44

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY INPUT

TYPE OF STUDY: NODES ONLY TYPE OF REQUEST: ACCIDENT I & II WITHOUT LINK DETAIL

STUDY PERIOD: FROM MONTH 01 YEAR 1997 TO MONTH 12 YEAR 1999

INPUT COMMENTS

REQUEST: INT OF PREBLE ST EXT AND BAXTER BOULEVARD
TOWN : PORTLAND

INPUT DATA

ROUTE	COUNTY	FIRST NODE	EXCLUDE FIRST	DISTANCE	SECOND NODE	LAST NODE	EXCLUDE LAST	DISTANCE
0001X	05	08944	0	0.00				0.00

JAN 19,2001 AT 10:44

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY I

COUNTY TOWN#	LOW NODE	HIGH NODE	STREET NAME OR ROUTE #	U/R	TOTAL ACCTS	LINK LENGTH	INJURY ACCIDENTS K	A	B	C	PD	PERCENT INJURY	ANNUAL HM VEH-MILES	ANNUAL M ENT-VEHS	ACCIDENT-RATES LINK	NODE	CRITI RATE	CRF
05	08944	POR,PREBLE ST.EXT,BAXTE		9	31		0	0	4	7	20	35.5		8.564		1.21	1.30	0.00
			NODE SUBTOTALS-		31		0	0	4	7	20	35.5		8.564		1.21	1.30	0.00
			GRAND TOTALS-		31	0.00	0	0	4	7	20	35.5	0.00000	8.564	1.21		1.30	0.93

JAN 19,2001 AT 10:44

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY II - CHARACTERISTICS

	HOUR OF DAY																									
	---AM---												---PM---													
DAY OF WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	UNKNOWN	TOTAL	
SUNDAY	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	S
MONDAY	0	0	0	0	0	0	0	0	1	0	0	1	0	0	4	0	0	3	0	0	0	1	0	0	0	10	M
TUESDAY	0	0	0	0	0	0	2	0	1	0	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0	6	T
WEDNESDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	W
THURSDAY	0	0	0	0	0	0	0	0	0	0	0	0	3	0	2	0	0	0	0	0	0	0	0	0	0	5	T
FRIDAY	0	0	0	0	0	0	0	0	0	0	0	0	2	1	2	1	0	0	0	1	0	0	0	0	0	7	F
SATURDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	S
UNKNOWN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	U
TOTAL	0	0	0	0	0	0	2	0	2	0	2	1	6	1	8	2	1	4	0	1	0	1	0	0	0	31	T

	YEAR			
	TOTAL	1997	1998	1999
JANUARY	1	1	0	0
FEBRUARY	2	1	1	0
MARCH	4	2	1	1
APRIL	4	2	1	1
MAY	2	0	0	2
JUNE	2	0	1	1
JULY	1	0	1	0
AUGUST	3	0	2	1
SEPTEMBER	2	0	1	1
OCTOBER	1	0	1	0
NOVEMBER	5	4	1	0
DECEMBER	4	2	1	1
UNKNOWN	0	0	0	0
TOTAL	31	12	11	8

TYPE OF UNIT

01-2 DOOR	14	10-BOBTAIL	0
02-4 DOOR	28	20-2ADT	0
03-CONVERTBLE	0	30-3ASU	0
04-STAT WGN	2	40-4ASU	0
05-VAN/CAMPER	6	21-2ASA	0
06-PICKUP TRK	11	22-2ATA	0
12-SCHOOL BUS	0	31-3ASA	0
13-MOTOR HOME	0	32-3ATA	0
14-MOTORCYCLE	0	33-3ATR	0
15-MOPED	0	42-4ATA	0
16-MOTOR BIKE	0	25-2AT1A2ATR	0
17-BICYCLE	2	35-3AT1A2ATR	0
18-SNOWMOBILE	0	36-3AT2A2ATR	0
19-PEDESTRIAN	0	50-OTHER	0
23-ATV	0	81-2AX CM BUS	0
99-UNK/OTH	0	82-3AX CM BUS	0
		98-FARM/TRAC	0
TOTAL	63		

JAN 19,2001 AT 10:44

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY II - CHARACTERISTICS

TYPE OF LOCATION

ACCIDENT TYPE	ST ROAD	CURV ROAD	**AT INTERSECTION** 3-LEG	4-LEG	5-LEG	DRIVE WAYS	BRIDGE	INTER CHANGE	UN KNOWN	TOTAL
OBJECT IN ROAD	0	0	0	0	0	0	0	0	0	0
REAR END/SIDESWIPE	0	0	0	9	0	0	0	0	0	9
HEAD-ON/SIDESWIPE	0	0	0	2	0	0	0	0	0	2
INTERSECTION MOVEMENT	0	0	0	18	0	0	0	0	0	18
PEDESTRIANS	0	0	0	0	0	0	0	0	0	0
TRAIN	0	0	0	0	0	0	0	0	0	0
RAN OFF ROAD	0	0	0	1	0	0	0	0	0	1
ANIMAL	0	0	0	0	0	0	0	0	0	0
DEER	0	0	0	0	0	0	0	0	0	0
MOOSE	0	0	0	0	0	0	0	0	0	0
BEAR	0	0	0	0	0	0	0	0	0	0
SLED/BIKE	0	0	0	1	0	0	0	0	0	1
OTHER	0	0	0	0	0	0	0	0	0	0
NON COLLISION	0	0	0	0	0	0	0	0	0	0
UNKNOWN	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	31	0	0	0	0	0	31

INJURY DATA

SEV CODE	INJURY ACCIDENTS	NUMBER OF INJURIES
K	0	0
A	0	0
B	4	6
C	7	11
PD	20	
TOTAL	31	17

FIXED OBJECT STRUCK

CONSTRUCTION BARRICADES	0
TRAFFIC SIGNAL	0
R/R CROSSING	0
LIGHT POLE	0
UTILITY POLE	0
SIGN POST	0
MAIL BOXES	0
OTHER POLES/POSTS	0
FIRE PLUG/PARK METER	0
TREE/SHRUBBERY	0
CRASH CUSHION	0
MEDIAN SAFETY BARRIER	0
BRIDGE PIERS	0
OTHER GUARDRAILS	0
FENCING NOT BARRIER	0
CULVERT HEADWALL	0
EMBANKMENT/DITCH	1
BUILDING WALL	0
ROCK OUTCROPPING/LEDGE	0
OTHER	1
UNKNOWN	0
TOTAL	2

TRAFFIC CONTROL DEVICES

TRAFFIC SIG STOP/GO	28
TRAFFIC SIG FLASHING	0
OVERHEAD FLASHERS	0
ALL WAY STOP	0
STOP SIGN/OTHER	0
YIELD SIGN	3
CURVE SIGN	0
OFFICER /SCHOOL PAT	0
SCHOOL BUS STOP ARM	0
SCHOOL ZONE SIGN	0
R/R CROSSING DEVICE	0
NO PASSING ZONE	0
NONE	0
OTHER	0
UNKNOWN	0
TOTAL	31

ROAD CHARACTER

LEVEL STRAIGHT	29
LEVEL CURVED	2
ON GRADE STRAIGHT	0
ON GRADE CURVED	0
TOP OF HILL STRAIGHT	0
TOP OF HILL CURVED	0
BOTTOM OF HILL STRAIGHT	0
BOTTOM OF HILL CURVED	0
UNKNOWN	0
TOTAL	31

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY II - CHARACTERISTICS

APPARENT CONTRIBUTING FACTOR	DR 1	DR 2	DR 3	DR 4	DR 5	OTHER	TOTAL
HUMAN FACTORS							
NO INPROPER DRIVING	19	13	0	0	0	0	32
FAIL TO YIELD R-WAY	9	5	0	0	0	0	14
ILLEGAL UNSAFE SPEED	0	0	0	0	0	0	0
FOLLOW TOO CLOSE	0	3	0	0	0	0	3
DISREGARD TRAF CONTROL	1	3	0	0	0	0	4
DRIVING LEFT OF CENTER	0	0	0	0	0	0	0
IMPROPER PASSING	0	0	0	0	0	0	0
IMPROPER LANE CHANGE	0	1	0	0	0	0	1
IMPROPER START/STOP	0	0	0	0	0	0	0
IMPROPER TURN	0	0	0	0	0	0	0
UNSAFE BACKING	0	0	0	0	0	0	0
NO PROPER SIGNAL	0	0	0	0	0	0	0
IMPEDING TRAFFIC	0	0	0	0	0	0	0
DRIVER INATTENTION	2	5	1	0	0	0	8
DRIVER INEXPERIENCE	0	0	0	0	0	0	0
PEDESTRIAN VIOLATION	0	0	0	0	0	0	0
PHYSICAL IMPAIRMENT	0	0	0	0	0	0	0
VISION OBSCURED GLASS	0	0	0	0	0	0	0
VISION OBSCURED LIGHT	0	0	0	0	0	0	0
VISION OBSCURED OTHER	0	1	0	0	0	0	1
OTHER HUMAN FACTOR	0	0	0	0	0	0	0
HIT & RUN	0	0	0	0	0	0	0
VEHICULAR FACTORS							
DEFECTIVE BRAKES	0	0	0	0	0	0	0
DEFECTIVE TIRE	0	0	0	0	0	0	0
DEFECTIVE LIGHTS	0	0	0	0	0	0	0
DEFECTIVE SUSPENSION	0	0	0	0	0	0	0
DEFECTIVE STEERING	0	0	0	0	0	0	0
OTHER VEHICLE DEFECT	0	0	0	0	0	0	0
UNKNOWN	0	0	0	0	0	0	0
TOTAL	31	31	1	0	0	0	63

APPARENT PHYSICAL CONDITION	DR 1	DR 2	DR 3	DR 4	DR 5	OTHER	TOTAL
NORMAL	31	31	1	0	0	0	63
UNDER THE INFLUENCE	0	0	0	0	0	0	0
DRINKING	0	0	0	0	0	0	0
USING DRUGS	0	0	0	0	0	0	0
ASLEEP	0	0	0	0	0	0	0
FATIGUED	0	0	0	0	0	0	0
ILL	0	0	0	0	0	0	0
HANDICAPPED	0	0	0	0	0	0	0
OTHER/UNKNOWN	0	0	0	0	0	0	0
TOTAL	31	31	1	0	0	0	63

AGE	TYPE OF UNIT: DRIVER	BIKE	SNOW SLED	PED	ATV	TOTAL
9-UNDER	0	0	0	0	0	0
10-14	0	0	0	0	0	0
15-19	2	1	0	0	0	3
20-24	11	0	0	0	0	11
25-29	7	0	0	0	0	7
30-39	18	0	0	0	0	18
40-49	12	1	0	0	0	13
50-59	6	0	0	0	0	6
60-69	2	0	0	0	0	2
70-79	3	0	0	0	0	3
80-OVER	0	0	0	0	0	0
UNKNOWN	0	0	0	0	0	0
TOTAL	61	2	0	0	0	63

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY II - CHARACTERISTICS

ROAD SURFACE

WEATHER	LIGHT CONDITION	DRY	WET	SNOW SAND	ICE SAND	MUD	DEBRIS	OIL	SNOW	ICE	OTHER	TOTAL
CLEAR	DAWN	1	0	0	0	0	0	0	0	0	0	1
	DAYLIGHT	17	0	0	0	0	0	0	0	0	0	17
(22)	DUSK	2	0	0	0	0	0	0	0	0	0	2
	DARK-LIGHTS	1	1	0	0	0	0	0	0	0	0	2
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
RAIN	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	1	0	0	0	0	0	0	0	0	1
(2)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	1	0	0	0	0	0	0	0	0	1
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
SNOW	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	0	0	0	0	0	0	2	0	0	2
(2)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
SLEET/HAIL	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	0	0	0	0	0	0	0	0	0	0
(0)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
FOG/SMOG	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	0	0	0	0	0	0	0	0	0	0
(0)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0

LIGHT	
DAWN	1
DAYLIGHT	25
DUSK	2
DARK-LIGHTS	3
DARK NO LIGHTS	0
DARK LIGHTS OFF	0
OTHER	0
UNKNOWN	0
TOTAL	31

JAN 19,2001 AT 10:44

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY II - CHARACTERISTICS

WEATHER	LIGHT CONDITION	ROAD SURFACE: DRY	WET	SNOW SAND	ICE SAND	MUD	DEBRIS	OIL	SNOW	ICE	OTHER	TOTAL
CROSS WINDS	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	0	0	0	0	0	0	0	0	0	0
(0)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
SAND/DUST	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	0	0	0	0	0	0	0	0	0	0
(0)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
CLOUDY	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	5	0	0	0	0	0	0	0	0	0	5
(5)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
OTHER	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	0	0	0	0	0	0	0	0	0	0
(0)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
ROAD SURFACE TOTALS		26	3	0	0	0	0	0	2	0	0	31

JAN 19,2001 AT 10:44

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY INPUT

TYPE OF STUDY: LINKS ONLY TYPE OF REQUEST: ACCIDENT I & II WITH LINK DETAIL

STUDY PERIOD: FROM MONTH 01 YEAR 1997 TO MONTH 12 YEAR 1999

INPUT COMMENTS

REQUEST: PREBLE ST EXT BETWEEN MARGINAL WAY AND BAXTER BOULEVARD
TOWN : PORTLAND

INPUT DATA

ROUTE	COUNTY	FIRST NODE	EXCLUDE FIRST	DISTANCE	SECOND NODE	LAST NODE	EXCLUDE LAST	DISTANCE
60818	05	08943	1	0.00	08944	08944	1	0.00

JAN 19,2001 AT 10:44

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY I

COUNTY TOWN#	LOW NODE	HIGH NODE	STREET NAME OR ROUTE #	U/R	TOTAL ACCTS	LINK LENGTH	INJURY ACCIDENTS K	A	B	C	PD	PERCENT INJURY	ANNUAL HM VEH-MILES	ANNUAL M ENT-VEHS	ACCIDENT-RATES LINK	NODE	CRITI RATE	CRF
05170	08943	08944	PREBLE ST EXT	2	8	0.41	0	0	1	1	6	25.0	0.02912		91.58		335.64	0.00
			LINK SUBTOTALS-		8	0.41	0	0	1	1	6	25.0	0.02912		91.57		335.64	0.00
			GRAND TOTALS-		8	0.41	0	0	1	1	6	25.0	0.02912	8.564	91.57		335.64	0.27

JAN 19,2001 AT 10:44

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY II - CHARACTERISTICS

	---A M---												H O U R O F D A Y												
DAY OF WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	UNKNOWN	TOTAL	
SUNDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S
MONDAY	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	M
TUESDAY	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	2	T
WEDNESDAY	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	W
THURSDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	T
FRIDAY	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	3	F
SATURDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S
UNKNOWN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	U
TOTAL	0	0	0	0	0	0	0	1	0	0	0	3	0	0	1	0	0	0	1	0	0	2	0	0	0	8	T

	YEAR			
	TOTAL	1997	1998	1999
JANUARY	2	2	0	0
FEBRUARY	0	0	0	0
MARCH	2	1	1	0
APRIL	2	0	1	1
MAY	0	0	0	0
JUNE	0	0	0	0
JULY	0	0	0	0
AUGUST	0	0	0	0
SEPTEMBER	1	0	1	0
OCTOBER	1	0	1	0
NOVEMBER	0	0	0	0
DECEMBER	0	0	0	0
UNKNOWN	0	0	0	0
TOTAL	8	3	4	1

TYPE OF UNIT

01-2 DOOR	2	10-BOBTAIL	0
02-4 DOOR	8	20-2ADT	0
03-CONVERTBLE	0	30-3ASU	0
04-STAT WGN	2	40-4ASU	0
05-VAN/CAMPER	0	21-2ASA	0
06-PICKUP TRK	3	22-2ATA	0
12-SCHOOL BUS	0	31-3ASA	0
13-MOTOR HOME	0	32-3ATA	0
14-MOTORCYCLE	0	33-3ATR	0
15-MOPED	0	42-4ATA	0
16-MOTOR BIKE	0	25-2AT1A2ATR	0
17-BICYCLE	0	35-3AT1A2ATR	0
18-SNOWMOBILE	0	36-3AT2A2ATR	0
19-PEDESTRIAN	1	50-OTHER	0
23-ATV	0	81-2AX CM BUS	0
99-UNK/OTH	0	82-3AX CM BUS	0
		98-FARM/TRAC	0
TOTAL	16		

JAN 19,2001 AT 10:44

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY II - CHARACTERISTICS

TYPE OF LOCATION

ACCIDENT TYPE	ST ROAD	CURV ROAD	**AT INTERSECTION** 3-LEG	4-LEG	5-LEG	DRIVE WAYS	BRIDGE	INTER CHANGE	UN KNOWN	TOTAL
OBJECT IN ROAD	0	0	0	0	0	0	0	0	0	0
REAR END/SIDESWIPE	2	0	0	0	0	0	0	0	0	2
HEAD-ON/SIDESWIPE	0	1	0	0	0	0	0	0	0	1
INTERSECTION MOVEMENT	0	0	0	0	0	4	0	0	0	4
PEDESTRIANS	1	0	0	0	0	0	0	0	0	1
TRAIN	0	0	0	0	0	0	0	0	0	0
RAN OFF ROAD	0	0	0	0	0	0	0	0	0	0
ANIMAL	0	0	0	0	0	0	0	0	0	0
DEER	0	0	0	0	0	0	0	0	0	0
MOOSE	0	0	0	0	0	0	0	0	0	0
BEAR	0	0	0	0	0	0	0	0	0	0
SLED/BIKE	0	0	0	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0	0	0	0
NON COLLISION	0	0	0	0	0	0	0	0	0	0
UNKNOWN	0	0	0	0	0	0	0	0	0	0
TOTAL	3	1	0	0	0	4	0	0	0	8

INJURY DATA

SEV CODE	INJURY ACCIDENTS	NUMBER OF INJURIES
K	0	0
A	0	0
B	1	1
C	1	1
PD	6	
TOTAL	8	2

FIXED OBJECT STRUCK

CONSTRUCTION BARRICADES	0
TRAFFIC SIGNAL	0
R/R CROSSING	0
LIGHT POLE	0
UTILITY POLE	0
SIGN POST	0
MAIL BOXES	0
OTHER POLES/POSTS	0
FIRE PLUG/PARK METER	0
TREE/SHRUBBERY	0
CRASH CUSHION	0
MEDIAN SAFETY BARRIER	0
BRIDGE PIERS	0
OTHER GUARDRAILS	0
FENCING NOT BARRIER	0
CULVERT HEADWALL	0
EMBANKMENT/DITCH	0
BUILDING WALL	0
ROCK OUTCROPPING/LEDGE	0
OTHER	0
UNKNOWN	0
TOTAL	0

TRAFFIC CONTROL DEVICES

TRAFFIC SIG STOP/GO	0
TRAFFIC SIG FLASHING	0
OVERHEAD FLASHERS	0
ALL WAY STOP	0
STOP SIGN/OTHER	0
YIELD SIGN	0
CURVE SIGN	0
OFFICER /SCHOOL PAT	0
SCHOOL BUS STOP ARM	0
SCHOOL ZONE SIGN	0
R/R CROSSING DEVICE	0
NO PASSING ZONE	0
NONE	8
OTHER	0
UNKNOWN	0
TOTAL	8

ROAD CHARACTER

LEVEL STRAIGHT	6
LEVEL CURVED	1
ON GRADE STRAIGHT	1
ON GRADE CURVED	0
TOP OF HILL STRAIGHT	0
TOP OF HILL CURVED	0
BOTTOM OF HILL STRAIGHT	0
BOTTOM OF HILL CURVED	0
UNKNOWN	0
TOTAL	8

JAN 19,2001 AT 10:44

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY II - CHARACTERISTICS

APPARENT CONTRIBUTING FACTOR	DR 1	DR 2	DR 3	DR 4	DR 5	OTHER	TOTAL
HUMAN FACTORS							
NO INPROPER DRIVING	4	3	0	0	0	0	7
FAIL TO YIELD R-WAY	1	1	0	0	0	0	2
ILLEGAL UNSAFE SPEED	0	0	0	0	0	0	0
FOLLOW TOO CLOSE	0	0	0	0	0	0	0
DISREGARD TRAF CONTROL	0	0	0	0	0	0	0
DRIVING LEFT OF CENTER	0	0	0	0	0	0	0
IMPROPER PASSING	0	0	0	0	0	0	0
IMPROPER LANE CHANGE	1	0	0	0	0	0	1
IMPROPER START/STOP	0	0	0	0	0	0	0
IMPROPER TURN	0	0	0	0	0	0	0
UNSAFE BACKING	0	0	0	0	0	0	0
NO PROPER SIGNAL	1	0	0	0	0	0	1
IMPEDING TRAFFIC	0	0	0	0	0	0	0
DRIVER INATTENTION	0	2	0	0	0	0	2
DRIVER INEXPERIENCE	0	0	0	0	0	0	0
PEDESTRIAN VIOLATION	0	0	0	0	0	0	0
PHYSICAL IMPAIRMENT	0	0	0	0	0	0	0
VISION OBSCURED GLASS	0	0	0	0	0	0	0
VISION OBSCURED LIGHT	0	1	0	0	0	0	1
VISION OBSCURED OTHER	0	0	0	0	0	0	0
OTHER HUMAN FACTOR	1	1	0	0	0	0	2
HIT & RUN	0	0	0	0	0	0	0
VEHICULAR FACTORS							
DEFECTIVE BRAKES	0	0	0	0	0	0	0
DEFECTIVE TIRE	0	0	0	0	0	0	0
DEFECTIVE LIGHTS	0	0	0	0	0	0	0
DEFECTIVE SUSPENSION	0	0	0	0	0	0	0
DEFECTIVE STEERING	0	0	0	0	0	0	0
OTHER VEHICLE DEFECT	0	0	0	0	0	0	0
UNKNOWN	0	0	0	0	0	0	0
TOTAL	8	8	0	0	0	0	16

APPARENT PHYSICAL CONDITION	DR 1	DR 2	DR 3	DR 4	DR 5	OTHER	TOTAL
NORMAL	8	7	0	0	0	0	15
UNDER THE INFLUENCE	0	0	0	0	0	0	0
DRINKING	0	1	0	0	0	0	1
USING DRUGS	0	0	0	0	0	0	0
ASLEEP	0	0	0	0	0	0	0
FATIGUED	0	0	0	0	0	0	0
ILL	0	0	0	0	0	0	0
HANDICAPPED	0	0	0	0	0	0	0
OTHER/UNKNOWN	0	0	0	0	0	0	0
TOTAL	8	8	0	0	0	0	16

AGE	TYPE OF UNIT: DRIVER	BIKE	SNOW SLED	PED	ATV	TOTAL
9-UNDER	0	0	0	0	0	0
10-14	0	0	0	0	0	0
15-19	1	0	0	0	0	1
20-24	4	0	0	0	0	4
25-29	0	0	0	0	0	0
30-39	3	0	0	0	0	3
40-49	4	0	0	0	0	4
50-59	0	0	0	1	0	1
60-69	1	0	0	0	0	1
70-79	2	0	0	0	0	2
80-OVER	0	0	0	0	0	0
UNKNOWN	0	0	0	0	0	0
TOTAL	15	0	0	1	0	16

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY II - CHARACTERISTICS

WEATHER	LIGHT CONDITION	ROAD SURFACE: DRY	WET	SNOW SAND	ICE SAND	MUD	DEBRIS	OIL	SNOW	ICE	OTHER	TOTAL
CLEAR	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	3	0	0	0	0	0	0	0	0	0	3
(6)	DUSK	1	0	0	0	0	0	0	0	0	0	1
	DARK-LIGHTS	2	0	0	0	0	0	0	0	0	0	2
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
RAIN	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	0	0	0	0	0	0	0	1	0	1
(1)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
SNOW	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	0	0	0	0	0	0	0	0	0	0
(0)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
SLEET/HAIL	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	0	0	0	0	0	0	0	0	0	0
(0)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
FOG/SMOG	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	0	0	0	0	0	0	0	0	0	0
(0)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0

LIGHT	
DAWN	0
DAYLIGHT	5
DUSK	1
DARK-LIGHTS	2
DARK NO LIGHTS	0
DARK LIGHTS OFF	0
OTHER	0
UNKNOWN	0
TOTAL	8

JAN 19,2001 AT 10:44

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY II - CHARACTERISTICS

WEATHER	LIGHT CONDITION	ROAD SURFACE: DRY	WET	SNOW SAND	ICE SAND	MUD	DEBRIS	OIL	SNOW	ICE	OTHER	TOTAL
CROSS WINDS	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	0	0	0	0	0	0	0	0	0	0
(0)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
SAND/DUST	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	0	0	0	0	0	0	0	0	0	0
(0)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
CLOUDY	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	1	0	0	0	0	0	0	0	0	0	1
(1)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
OTHER	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	0	0	0	0	0	0	0	0	0	0
(0)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
ROAD SURFACE TOTALS		7	0	0	0	0	0	0	0	1	0	8

JAN 19,2001 AT 10:44

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY INPUT

TYPE OF STUDY: LINKS ONLY TYPE OF REQUEST: ACCIDENT I & II WITH LINK DETAIL

STUDY PERIOD: FROM MONTH 01 YEAR 1997 TO MONTH 12 YEAR 1999

INPUT COMMENTS

REQUEST: PREBLE ST EXT BETWEEN MARGINAL WAY AND BAXTER BOULEVARD
TOWN : PORTLAND

INPUT DATA

ROUTE	COUNTY	FIRST NODE	EXCLUDE FIRST	DISTANCE	SECOND NODE	LAST NODE	EXCLUDE LAST	DISTANCE
60818	05	08943	1	0.00	08944	08944	1	0.00

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

LINK DETAIL

TOWN#	STREET NAME OR ROUTE #	LOW NODE	HIGH NODE	DISTANCE	TOTAL ACCIDENTS	INJURY ACCIDENTS K	A	B	C	PD	ACCIDENT REPORT NUMBERS				
05170	PREBLE ST EXT	08943	08944	0.1	2	0	0	1	0	1	199833115	199815676			
				0.3	5	0	0	0	1	4	199701425	199703273	199714101	199809474	199914391
				0.4	1	0	0	0	0	1	199838091				
				TOTALS-	8	0	0	1	1	6					

JAN 19,2001 AT 10:44

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY INPUT

TYPE OF STUDY: NODES AND LINKS TYPE OF REQUEST: ACCIDENT I & II WITH LINK DETAIL

STUDY PERIOD: FROM MONTH 01 YEAR 1997 TO MONTH 12 YEAR 1999

INPUT COMMENTS

REQUEST: MARGINAL WAY BETWEEN FOREST AVE AND FRANKLIN ART.
TOWN : PORTLAND

INPUT DATA

ROUTE	COUNTY	FIRST NODE	EXCLUDE FIRST	DISTANCE	SECOND NODE	LAST NODE	EXCLUDE LAST	DISTANCE
60477	05	07254	1	0.00	09419	09420	1	0.00

JAN 19,2001 AT 10:44

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY I

COUNTY TOWN#	LOW NODE	HIGH NODE	STREET NAME OR ROUTE #	U/R	TOTAL ACCTS	LINK LENGTH	INJURY ACCIDENTS K	A	B	C	PD	PERCENT INJURY	ANNUAL HM VEH-MILES	ANNUAL M ENT-VEHS	ACCIDENT-RATES LINK	NODE	CRITI RATE	CRF
05	A09419	POR,HANOVER ST,MARGINAL			0		0	0	0	0	0	0.0		0.000		0.00	0.00	0.00*
05	P08943	POR,MARGINAL WAY,ELM,PR		9	20		0	0	4	6	10	50.0		7.564		0.88	1.33	0.00
		NODE SUBTOTALS-			20		0	0	4	6	10	50.0		7.564		0.88	1.33	0.00

* - MEV IS ZERO FOR THIS NODE -

JAN 19,2001 AT 10:44

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY I

COUNTY TOWN#	LOW NODE	HIGH NODE	STREET NAME OR ROUTE #	U/R	TOTAL ACCTS	LINK LENGTH	INJURY ACCIDENTS K	A	B	C	PD	PERCENT INJURY	ANNUAL HM VEH-MILES	ANNUAL M ENT-VEHS	ACCIDENT-RATES LINK	NODE	CRITI RATE	CRF
	07254	09419	MARGINAL WAY	2	3	0.16	0	0	0	1	2	33.3	0.00367		272.48		561.06	0.00
	08943	09419		2	1	0.01	0	0	0	0	1	0.0	0.00026		1282.05		997.07	1.29
	08943	09420		2	5	0.36	0	0	1	2	2	60.0	0.01180		141.24		426.85	0.00
			LINK SUBTOTALS-		9	0.53	0	0	1	3	5	44.4	0.01573		190.71		402.37	0.00
			GRAND TOTALS-		29	0.53	0	0	5	9	15	48.3	0.01573	7.564	614.53		669.61	0.92

JAN 19,2001 AT 10:44

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY II - CHARACTERISTICS

	---A M---											H O U R	O F	D A Y				---P M---							
DAY OF WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	UNKNOWN	TOTAL	
SUNDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	S
MONDAY	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	2	M
TUESDAY	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	7	T
WEDNESDAY	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	0	0	1	0	0	0	0	0	0	0	4	W
THURSDAY	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	1	1	0	0	0	0	0	0	0	0	5	T
FRIDAY	0	0	0	0	0	0	0	0	1	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	5	F
SATURDAY	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	0	1	0	0	0	0	0	0	5	S
UNKNOWN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	U
TOTAL	1	0	0	0	0	0	0	2	4	1	2	2	1	1	2	4	2	2	3	1	1	0	0	0	0	29	T

	YEAR			
	TOTAL	1997	1998	1999
JANUARY	3	2	1	0
FEBRUARY	2	1	0	1
MARCH	4	3	0	1
APRIL	3	2	1	0
MAY	1	0	0	1
JUNE	1	1	0	0
JULY	2	1	1	0
AUGUST	5	0	2	3
SEPTEMBER	4	1	2	1
OCTOBER	0	0	0	0
NOVEMBER	1	0	0	1
DECEMBER	3	3	0	0
UNKNOWN	0	0	0	0
TOTAL	29	14	7	8

TYPE OF UNIT			
01-2 DOOR	11	10-BOBTAIL	0
02-4 DOOR	20	20-2ADT	1
03-CONVERTBLE	0	30-3ASU	0
04-STAT WGN	5	40-4ASU	0
05-VAN/CAMPER	6	21-2ASA	0
06-PICKUP TRK	7	22-2ATA	0
12-SCHOOL BUS	1	31-3ASA	0
13-MOTOR HOME	0	32-3ATA	0
14-MOTORCYCLE	0	33-3ATR	0
15-MOPED	0	42-4ATA	0
16-MOTOR BIKE	0	25-2AT1A2ATR	0
17-BICYCLE	1	35-3AT1A2ATR	0
18-SNOWMOBILE	0	36-3AT2A2ATR	0
19-PEDESTRIAN	1	50-OTHER	0
23-ATV	0	81-2AX CM BUS	1
99-UNK/OTH	0	82-3AX CM BUS	0
		98-FARM/TRAC	0
TOTAL	54		

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY II - CHARACTERISTICS

TYPE OF LOCATION

ACCIDENT TYPE	ST ROAD	CURV ROAD	**AT INTERSECTION** 3-LEG	4-LEG	5-LEG	DRIVE WAYS	BRIDGE	INTER CHANGE	UN KNOWN	TOTAL
OBJECT IN ROAD	1	0	0	0	0	0	0	0	0	1
REAR END/SIDESWIPE	4	0	0	4	7	1	0	0	0	16
HEAD-ON/SIDESWIPE	1	0	0	0	1	1	0	0	0	3
INTERSECTION MOVEMENT	0	0	0	3	2	1	0	0	0	6
PEDESTRIANS	0	0	0	0	1	0	0	0	0	1
TRAIN	0	0	0	0	0	0	0	0	0	0
RAN OFF ROAD	0	0	0	0	1	0	0	0	0	1
ANIMAL	0	0	0	0	0	0	0	0	0	0
DEER	0	0	0	0	0	0	0	0	0	0
MOOSE	0	0	0	0	0	0	0	0	0	0
BEAR	0	0	0	0	0	0	0	0	0	0
SLED/BIKE	0	0	0	0	1	0	0	0	0	1
OTHER	0	0	0	0	0	0	0	0	0	0
NON COLLISION	0	0	0	0	0	0	0	0	0	0
UNKNOWN	0	0	0	0	0	0	0	0	0	0
TOTAL	6	0	0	7	13	3	0	0	0	29

INJURY DATA

SEV CODE	INJURY ACCIDENTS	NUMBER OF INJURIES
K	0	0
A	0	0
B	5	5
C	9	10
PD	15	
TOTAL	29	15

FIXED OBJECT STRUCK

CONSTRUCTION BARRICADES	0
TRAFFIC SIGNAL	0
R/R CROSSING	0
LIGHT POLE	0
UTILITY POLE	0
SIGN POST	0
MAIL BOXES	0
OTHER POLES/POSTS	0
FIRE PLUG/PARK METER	0
TREE/SHRUBBERY	0
CRASH CUSHION	0
MEDIAN SAFETY BARRIER	0
BRIDGE PIERS	0
OTHER GUARDRAILS	0
FENCING NOT BARRIER	0
CULVERT HEADWALL	0
EMBANKMENT/DITCH	1
BUILDING WALL	0
ROCK OUTCROPPING/LEDGE	0
OTHER	1
UNKNOWN	0
TOTAL	2

TRAFFIC CONTROL DEVICES

TRAFFIC SIG STOP/GO	19
TRAFFIC SIG FLASHING	0
OVERHEAD FLASHERS	0
ALL WAY STOP	0
STOP SIGN/OTHER	0
YIELD SIGN	0
CURVE SIGN	0
OFFICER /SCHOOL PAT	0
SCHOOL BUS STOP ARM	0
SCHOOL ZONE SIGN	0
R/R CROSSING DEVICE	0
NO PASSING ZONE	0
NONE	10
OTHER	0
UNKNOWN	0
TOTAL	29

ROAD CHARACTER

LEVEL STRAIGHT	27
LEVEL CURVED	2
ON GRADE STRAIGHT	0
ON GRADE CURVED	0
TOP OF HILL STRAIGHT	0
TOP OF HILL CURVED	0
BOTTOM OF HILL STRAIGHT	0
BOTTOM OF HILL CURVED	0
UNKNOWN	0
TOTAL	29

JAN 19,2001 AT 10:44

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY II - CHARACTERISTICS

APPARENT CONTRIBUTING FACTOR	DR 1	DR 2	DR 3	DR 4	DR 5	OTHER	TOTAL
HUMAN FACTORS							
NO INPROPER DRIVING	21	6	0	0	0	0	27
FAIL TO YIELD R-WAY	0	2	0	0	0	0	2
ILLEGAL UNSAFE SPEED	0	0	0	0	0	0	0
FOLLOW TOO CLOSE	1	2	0	0	0	0	3
DISREGARD TRAF CONTROL	1	1	0	0	0	0	2
DRIVING LEFT OF CENTER	0	0	0	0	0	0	0
IMPROPER PASSING	0	0	0	0	0	0	0
IMPROPER LANE CHANGE	0	1	0	0	0	0	1
IMPROPER START/STOP	1	0	0	0	0	0	1
IMPROPER TURN	1	2	0	0	0	0	3
UNSAFE BACKING	0	1	0	0	0	0	1
NO PROPER SIGNAL	0	0	0	0	0	0	0
IMPEDING TRAFFIC	0	0	0	0	0	0	0
DRIVER INATTENTION	2	8	0	0	0	0	10
DRIVER INEXPERIENCE	0	0	0	0	0	0	0
PEDESTRIAN VIOLATION	0	1	0	0	0	0	1
PHYSICAL IMPAIRMENT	0	0	0	0	0	0	0
VISION OBSCURED GLASS	0	0	0	0	0	0	0
VISION OBSCURED LIGHT	0	0	0	0	0	0	0
VISION OBSCURED OTHER	0	0	0	0	0	0	0
OTHER HUMAN FACTOR	1	0	0	0	0	0	1
HIT & RUN	0	0	0	0	0	0	0
VEHICULAR FACTORS							
DEFECTIVE BRAKES	0	0	0	0	0	0	0
DEFECTIVE TIRE	0	0	0	0	0	0	0
DEFECTIVE LIGHTS	0	0	0	0	0	0	0
DEFECTIVE SUSPENSION	0	0	0	0	0	0	0
DEFECTIVE STEERING	0	0	0	0	0	0	0
OTHER VEHICLE DEFECT	0	0	0	0	0	0	0
UNKNOWN	1	1	0	0	0	0	2
TOTAL	29	25	0	0	0	0	54

APPARENT PHYSICAL CONDITION	DR 1	DR 2	DR 3	DR 4	DR 5	OTHER	TOTAL
NORMAL	28	24	0	0	0	0	52
UNDER THE INFLUENCE	0	0	0	0	0	0	0
DRINKING	0	0	0	0	0	0	0
USING DRUGS	0	0	0	0	0	0	0
ASLEEP	0	0	0	0	0	0	0
FATIGUED	0	0	0	0	0	0	0
ILL	0	0	0	0	0	0	0
HANDICAPPED	0	0	0	0	0	0	0
OTHER/UNKNOWN	1	1	0	0	0	0	2
TOTAL	29	25	0	0	0	0	54

AGE	TYPE OF UNIT: DRIVER	BIKE	SNOW SLED	PED	ATV	TOTAL
9-UNDER	0	0	0	0	0	0
10-14	0	0	0	0	0	0
15-19	3	0	0	0	0	3
20-24	6	0	0	0	0	6
25-29	7	0	0	1	0	8
30-39	11	1	0	0	0	12
40-49	11	0	0	0	0	11
50-59	8	0	0	0	0	8
60-69	1	0	0	0	0	1
70-79	4	0	0	0	0	4
80-OVER	1	0	0	0	0	1
UNKNOWN	0	0	0	0	0	0
TOTAL	52	1	0	1	0	54

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY II - CHARACTERISTICS

WEATHER	LIGHT CONDITION	ROAD SURFACE: DRY	WET	SNOW SAND	ICE SAND	MUD	DEBRIS	OIL	SNOW	ICE	OTHER	TOTAL
CLEAR	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	9	1	1	0	0	0	0	0	0	0	11
(13)	DUSK	1	0	0	0	0	0	0	0	0	0	1
	DARK-LIGHTS	1	0	0	0	0	0	0	0	0	0	1
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
RAIN	DAWN	0	0	0	0	0	0	0	0	1	0	1
	DAYLIGHT	0	1	0	0	0	0	0	0	0	0	1
(5)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	3	0	0	0	0	0	0	0	0	3
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
SNOW	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	0	0	1	0	0	0	1	0	0	2
(2)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
SLEET/HAIL	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	1	0	0	0	0	0	0	0	0	1
(1)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
FOG/SMOG	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	0	0	0	0	0	0	0	0	0	0
(0)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0

LIGHT	
DAWN	1
DAYLIGHT	21
DUSK	1
DARK-LIGHTS	6
DARK NO LIGHTS	0
DARK LIGHTS OFF	0
OTHER	0
UNKNOWN	0
TOTAL	29

JAN 19,2001 AT 10:44

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY II - CHARACTERISTICS

WEATHER	LIGHT CONDITION	ROAD SURFACE: DRY	WET	SNOW SAND	ICE SAND	MUD	DEBRIS	OIL	SNOW	ICE	OTHER	TOTAL
CROSS WINDS	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	0	0	0	0	0	0	0	0	0	0
(0)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
SAND/DUST	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	0	0	0	0	0	0	0	0	0	0
(0)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
CLOUDY	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	5	0	0	0	0	0	0	0	0	0	5
(6)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	1	0	0	0	0	0	0	0	0	1
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
OTHER	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	0	0	0	0	0	0	0	0	1	1
(2)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	1	1
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
ROAD SURFACE TOTALS		16	7	1	1	0	0	0	1	1	2	29

JAN 19,2001 AT 10:44

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY INPUT

TYPE OF STUDY: NODES AND LINKS TYPE OF REQUEST: ACCIDENT I & II WITH LINK DETAIL

STUDY PERIOD: FROM MONTH 01 YEAR 1997 TO MONTH 12 YEAR 1999

INPUT COMMENTS

REQUEST: MARGINAL WAY BETWEEN FOREST AVE AND FRANKLIN ART.
TOWN : PORTLAND

INPUT DATA

ROUTE	COUNTY	FIRST NODE	EXCLUDE FIRST	DISTANCE	SECOND NODE	LAST NODE	EXCLUDE LAST	DISTANCE
60477	05	07254	1	0.00	09419	09420	1	0.00

JAN 19,2001 AT 10:44

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

LINK DETAIL

TOWN#	STREET NAME OR ROUTE #	LOW NODE	HIGH NODE	DISTANCE	TOTAL ACCIDENTS	INJURY ACCIDENTS K	A	B	C	PD	ACCIDENT REPORT NUMBERS		
	MARGINAL WAY	07254	09419	0.1	3	0	0	0	1	2	199725240	199825126	199833546
		08943	09419	0.1	1	0	0	0	0	1	199745215		
		08943	09420	0.1	3	0	0	1	1	1	199745455	199827542	199934028
				0.2	2	0	0	0	1	1	199805228	199932096	
				TOTALS-	9	0	0	1	3	5			

Portland, Me. 2000

Site Code : 22222222
N-S Veh : Franklin Art./I-295
E-W Veh : Marginal Way
Counter : JLM

PAGE: 1
FILE: mwam00

Primary Movements: Vehicles

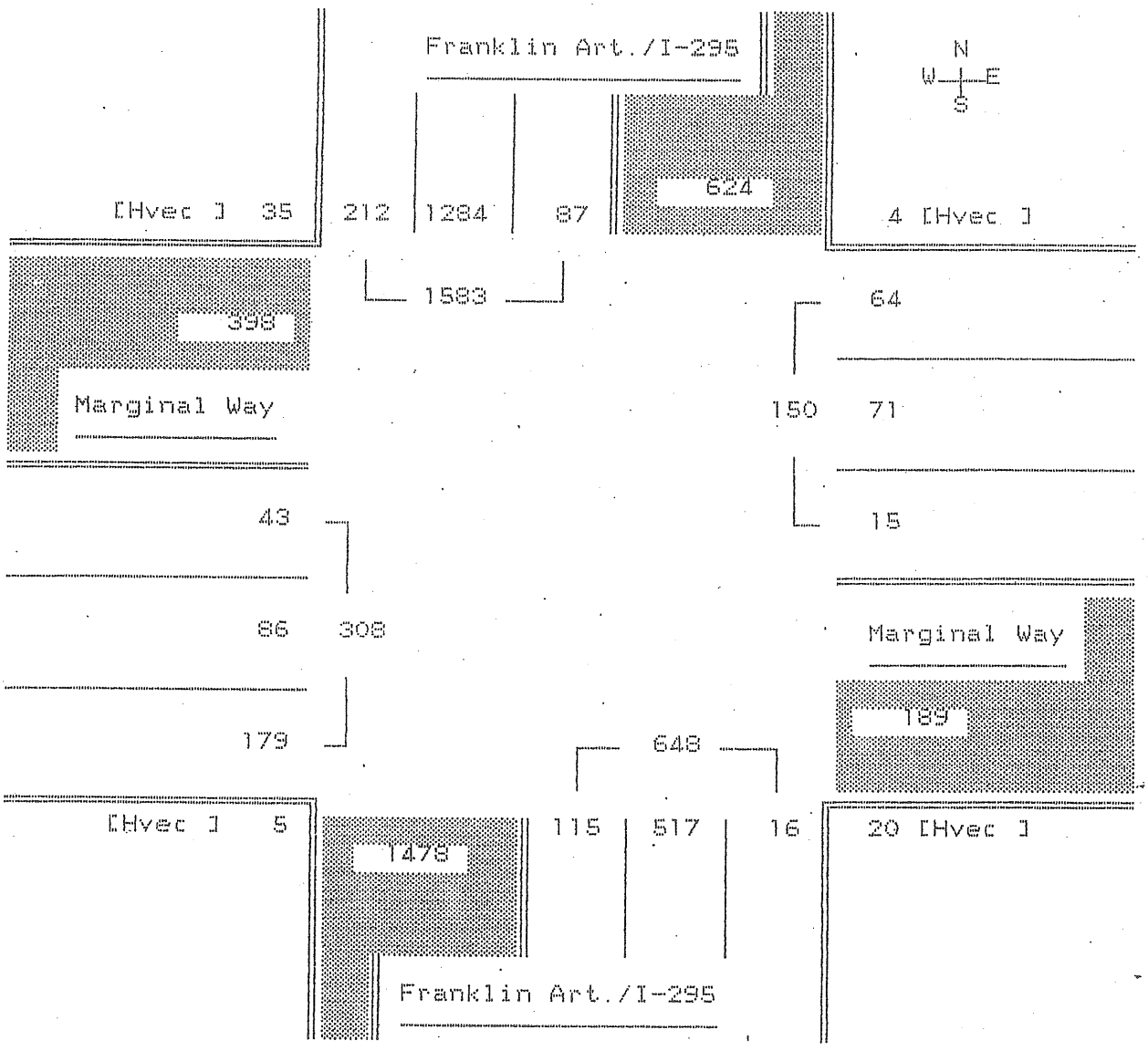
DATE: 11/15/00

PEAK PERIOD ANALYSIS FOR THE PERIOD: 7:00 AM - 9:00 AM

DIRECTION FROM	START PEAK HOUR	PEAK HR FACTOR	VOLUMES Hvec	Right	Thru	Left	Total	PERCENTS Hvec	Right	Thru	Left
North	7:30 AM	0.91	35	212	1284	87	1583	-	13	81	5
East	8:00 AM	0.78	3	62	72	19	153	-	41	47	12
South	7:30 AM	0.96	20	16	517	115	648	-	2	80	18
West	7:30 AM	0.86	5	179	86	43	308	-	58	28	14

Entire Intersection

North	7:30 AM	0.91	35	212	1284	87	1583	-	13	81	5
East		0.77	4	64	71	15	150	-	43	47	10
South		0.96	20	16	517	115	648	-	2	80	18
West		0.86	5	179	86	43	308	-	58	28	14



Portland, Me. 2000

Site Code : 22222222
N-S Veh : Franklin Art./I-295
E-W Veh : Marginal Way
Counter : JLN

PAGE: 1
FILE: fmwpm00

Primary Movements: Vehicles

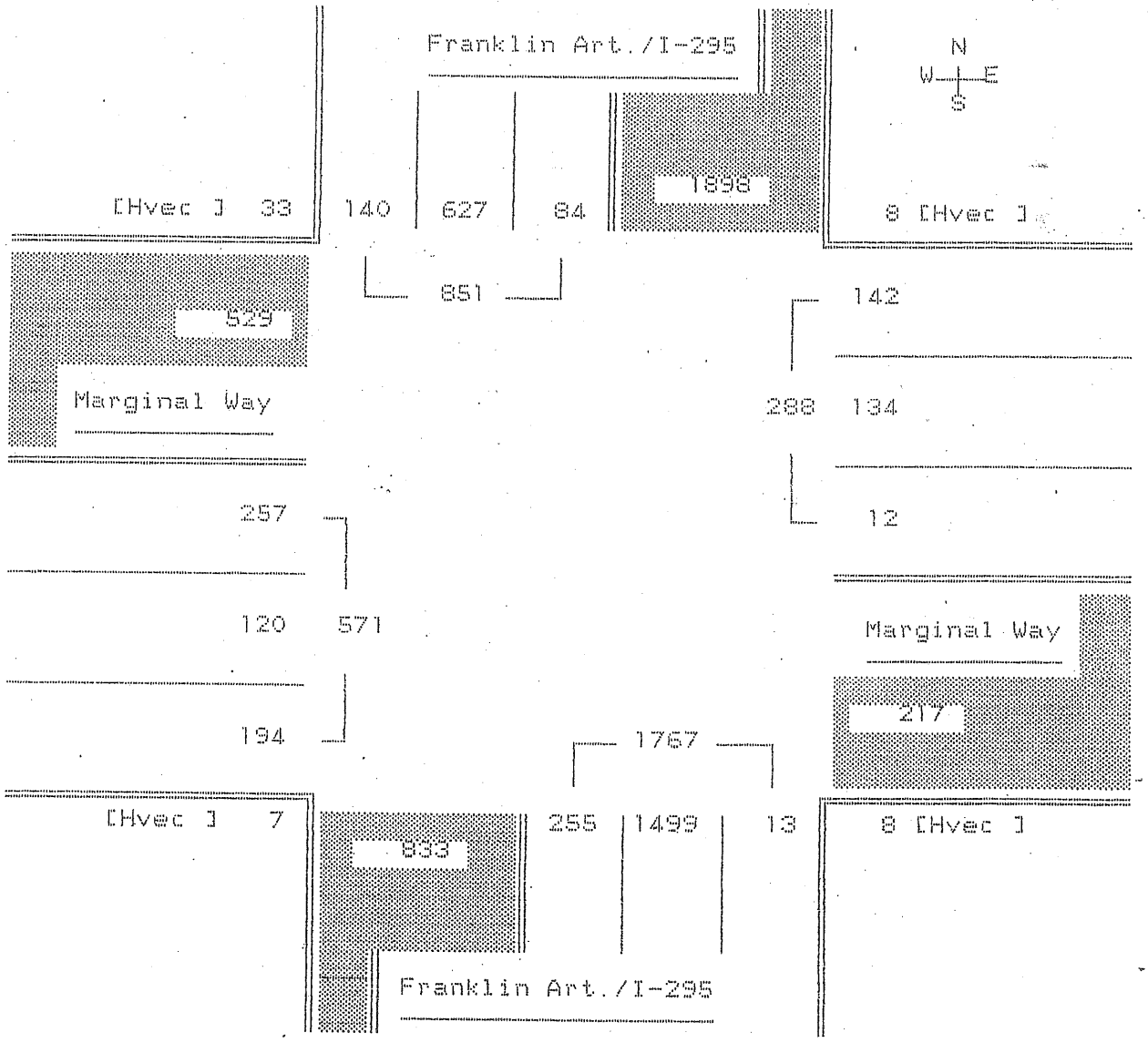
DATE: 11/14/00

PEAK PERIOD ANALYSIS FOR THE PERIOD: 3:00 PM - 6:00 PM

DIRECTION FROM	START PEAK HOUR	PEAK HR FACTOR	VOLUMES Hvec	Right	Thru	Left	Total	PERCENTS Hvec	Right	Thru	Left
North	4:30 PM	0.95	33	140	627	84	851	-	16	74	10
East	4:00 PM	0.89	11	153	136	18	307	-	50	44	6
South	4:30 PM	0.89	8	13	1499	255	1767	-	1	85	14
West	4:00 PM	0.88	4	187	132	268	587	-	32	22	46

Entire Intersection

North	4:30 PM	0.95	33	140	627	84	851	-	16	74	10
East		0.94	8	142	134	12	288	-	43	47	4
South		0.89	8	13	1499	255	1767	-	1	85	14
West		0.91	7	194	120	257	571	-	34	21	45

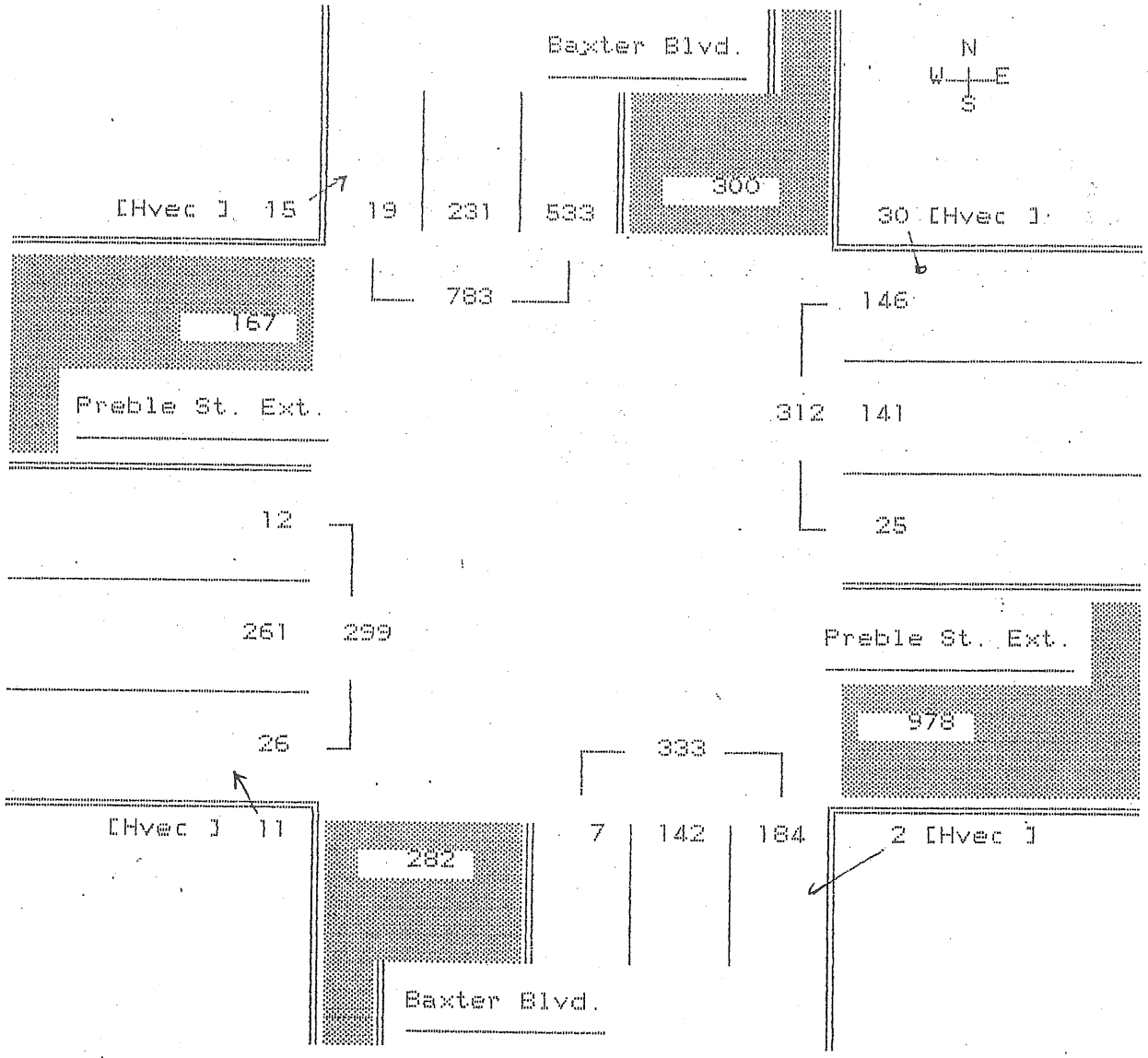


Site Code : 12345678
N-S Veh : Baxter Blvd.
E-W Veh : Preble St. Ext.
Counter : JLM

Primary Movements: Vehicles

PEAK PERIOD ANALYSIS FOR THE PERIOD: 7:00 AM - 9:00 AM

DIRECTION FROM	START PEAK HOUR	PEAK HR FACTOR	VOLUMES Hvec	Right	Thru	Left	Total	PERCENTS Hvec	Right	Thru	Left
North	7:45 AM	0.84	13	19	228	537	784	-	2	29	68
East	7:30 AM	0.84	30	146	141	25	312	-	47	45	8
South	7:15 AM	0.81	3	167	176	8	351	-	48	50	2
West	7:30 AM	0.81	11	26	261	12	299	-	9	87	4
Entire Intersection											
North	7:30 AM	0.84	15	19	231	533	783	-	2	30	68
East		0.84	30	146	141	25	312	-	47	45	8
South		0.76	2	184	142	7	333	-	55	43	2
West		0.81	11	26	261	12	299	-	9	87	4



Portland, Me. 2000

Site Code : 87651234
N-S Veh : Baxter Blvd.
E-W Veh : Preble St. Ext.
Counter : JLM

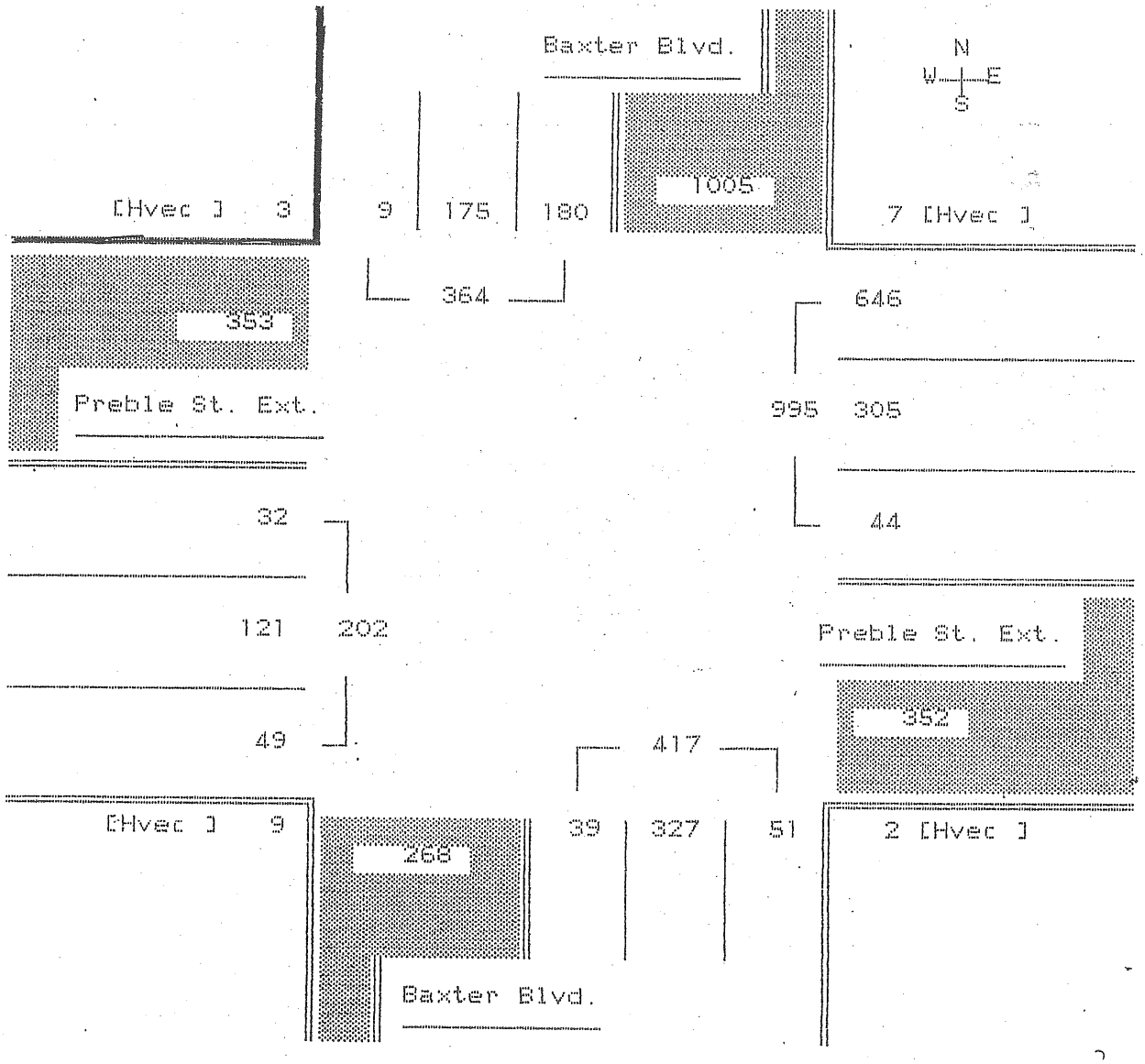
PAGE: 1
FILE: pbbpm00

Primary Movements: Vehicles

DATE: 11/13/00

PEAK PERIOD ANALYSIS FOR THE PERIOD: 3:30 PM - 6:00 PM

DIRECTION FROM	START PEAK HOUR	PEAK HR FACTOR	VOLUMES Hvec	Right	Thru	Left	Total	PERCENTS Hvec	Right	Thru	Left
North	3:30 PM	0.86	11	9	190	245	444	-	2	43	55
East	4:30 PM	0.90	7	646	305	44	995	-	65	31	4
South	4:45 PM	0.91	2	52	353	41	446	-	12	79	9
West	3:45 PM	0.91	12	52	150	39	241	-	22	62	16
Entire Intersection											
North	4:30 PM	0.93	3	9	175	180	364	-	2	48	49
East		0.90	7	646	305	44	995	-	65	31	4
South		0.85	2	51	327	39	417	-	12	78	9
West		0.92	9	49	121	32	202	-	24	60	16



Preble St./Marginal Way Office Developme

November 14, 2000

Counter: DB400 — 7:00-9:00 AM and 3:30-6:00 PM — File Name : PrebleMarginalOffice.n14

Counted By: Shirley Mooers/Jill Gorneau — Cars and Trucks — Site Code : 00000000

Weather: Raining — Start Date : 11/14/2000

Preble St./Marginal Way, Portland, Maine — Page No : 1

Groups Printed- Unshifted - Bank 1

	PREBLE STREET From North					MARGINAL WAY From East					PREBLE STREET From South					MARGINAL WAY From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
07:00 AM	5	58	41	0	104	19	25	27	0	71	2	11	9	0	22	1	29	7	0	37	234
07:15 AM	9	119	46	0	174	22	23	25	0	70	4	19	7	0	30	2	28	9	0	39	313
07:30 AM	19	164	79	0	262	39	39	37	0	115	2	22	16	0	40	2	33	16	0	51	468
07:45 AM	23	252	95	0	370	40	40	43	3	126	4	40	23	0	67	1	39	10	0	50	613
Total	56	593	261	0	910	120	127	132	3	382	12	92	55	0	159	6	129	42	0	177	1628
08:00 AM	23	162	91	0	276	21	43	40	0	104	5	36	11	0	52	3	40	11	0	54	486
08:15 AM	12	142	74	0	228	33	45	43	0	121	8	40	10	0	58	4	36	12	0	52	459
08:30 AM	15	124	67	0	206	32	34	16	0	82	4	33	11	0	48	1	41	12	0	54	390
08:45 AM	7	117	69	0	193	39	48	22	0	109	11	43	17	0	71	2	32	9	0	43	416
Total	57	545	301	0	903	125	170	121	0	416	28	152	49	0	229	10	149	44	0	203	1751
03:30 PM	8	46	53	1	108	78	55	12	0	145	5	76	26	0	107	1	45	27	0	73	433
03:45 PM	11	56	73	1	141	60	44	10	0	114	11	66	26	0	103	1	42	16	0	59	417
Total	19	102	126	2	249	138	99	22	0	259	16	142	52	0	210	2	87	43	0	132	850
04:00 PM	8	50	72	1	131	90	48	5	0	143	16	101	32	1	150	2	38	16	2	58	482
04:15 PM	16	42	62	1	121	78	59	11	0	148	19	107	33	3	162	6	39	6	0	51	482
04:30 PM	10	47	55	2	114	60	46	9	2	117	34	153	32	1	220	1	33	11	0	45	496
04:45 PM	11	58	59	1	129	69	47	13	1	130	30	170	40	3	243	0	57	14	0	71	573
Total	45	197	248	5	495	297	200	38	3	538	99	531	137	8	775	9	167	47	2	225	2033
05:00 PM	6	50	65	1	122	60	54	9	1	124	30	174	39	2	245	1	47	25	1	74	565
05:15 PM	4	42	71	0	117	63	46	9	1	119	43	208	53	4	308	2	47	12	0	61	605
05:30 PM	9	45	50	1	105	65	58	11	0	134	25	102	34	0	161	0	30	15	0	45	445
05:45 PM	8	39	50	1	98	59	26	7	1	93	20	102	29	1	152	0	38	6	1	45	388
Total	27	176	236	3	442	247	184	36	3	470	118	586	155	7	866	3	162	58	2	225	2003
Grand Total	204	1613	1172	10	2999	927	780	349	9	2065	273	1503	448	15	2239	30	694	234	4	962	8265
Apprch %	6.8	53.8	39.1	0.3		44.9	37.8	16.9	0.4		12.2	67.1	20.0	0.7		3.1	72.1	24.3	0.4		
Total %	2.5	19.5	14.2	0.1	36.3	11.2	9.4	4.2	0.1	25.0	3.3	18.2	5.4	0.2	27.1	0.4	8.4	2.8	0.0	11.6	

482
D. 73A

Site Code : 22222222
N-S Veh : Forest Ave
E-W Veh : Marginal Way/State St.
Counter : JLM

Primary Movements: Vehicles

DATE: 11/09/00

Time Begin	From North hvec	RT	THRU	LT	From East hvec	RT	THRU	LT	From South hvec	RT	THRU	LT	From West hvec	RT	THRU	LT	Vehicle Total	hvec Total
7:00 AM	9	142	121	21	1	50	12	2	2	10	189	0	0	0	0	0	547	12
7:15	15	154	144	26	0	61	16	1	1	11	220	0	0	0	0	0	633	16
7:30	12	186	187	25	0	72	19	4	3	12	298	1	0	0	0	0	804	15
7:45	13	197	210	19	0	71	23	5	0	10	340	0	0	0	0	0	875	13
HR TOTAL	49	679	662	91	1	254	70	12	6	43	1047	1	0	0	0	0	2859	56
8:00 AM	15	211	218	33	1	73	25	3	1	8	303	0	0	0	0	0	874	17
8:15	11	213	190	35	0	76	19	3	2	14	239	0	0	0	0	0	789	13
8:30	12	167	166	25	0	73	20	1	2	13	279	1	0	0	0	0	745	14
8:45	10	134	144	16	0	62	30	3	0	13	288	0	0	0	0	0	690	10
HR TOTAL	48	725	718	109	1	284	94	10	5	48	1109	1	0	0	0	0	3098	54
DAY TOTAL	97	1404	1380	200	2	538	164	22	11	91	2156	2	0	0	0	0	5957	110

PEAK PERIOD ANALYSIS FOR THE PERIOD: 7:00 AM - 9:00 AM

DIRECTION FROM	START PEAK HOUR	PEAK HR FACTOR	VOLUMES hvec	Right	Thru	Left	Total	PERCENTS hvec	Right	Thru	Left
North	7:30 AM	0.93	51	807	805	112	1724	-	47	47	6
East	7:30 AM	0.97	1	292	86	15	393	-	74	22	4
South	7:30 AM	0.88	6	44	1180	1	1225	-	4	96	0
West	7:30 AM	0.00	0	0	0	0	0	-	0	0	0

Entire Intersection

North	7:30 AM	0.93	51	807	805	112	1724	-	47	47	6
East		0.97	1	292	86	15	393	-	74	22	4
South		0.88	6	44	1180	1	1225	-	4	96	0
West		0.00	0	0	0	0	0	-	0	0	0

Site Code : 22222222
N-S Veh : Forest Ave
E-W Veh : Marginal Way/State St.
Counter : JLM

PAGE: 1
FILE: mwpm00

Primary Movements: Vehicles

DATE: 11/09/00

Time Begin	From North hvec	RT	THRU	LT	From East hvec	RT	THRU	LT	From South hvec	RT	THRU	LT	From West hvec	RT	THRU	LT	Vehicle Total	hvec Total
3:00 PM	9	172	112	20	1	60	22	3	6	10	304	0	0	0	0	0	703	16
3:15	5	174	100	19	0	69	36	2	5	11	320	0	0	0	0	0	731	10
3:30	5	186	110	25	0	66	39	4	3	12	358	0	0	0	0	0	800	8
3:45	3	197	110	29	0	73	33	5	4	11	340	0	0	0	0	0	798	7
HR TOTAL	22	729	432	93	1	268	130	14	18	44	1322	0	0	0	0	0	3032	41
4:00 PM	9	211	121	34	1	88	42	8	5	16	333	0	0	0	0	0	913	15
4:15	5	213	136	24	0	94	50	3	9	18	331	0	0	0	0	0	869	14
4:30	4	227	122	29	0	93	55	4	7	13	389	0	0	0	0	0	932	11
4:45	6	234	114	26	0	97	45	4	4	12	411	0	0	0	0	0	943	10
HR TOTAL	24	885	493	113	1	372	192	19	25	59	1524	0	0	0	0	0	3657	50
5:00 PM	2	234	113	22	1	101	60	5	3	11	431	0	0	0	0	0	977	6
5:15	7	265	115	22	0	98	34	3	5	17	445	0	0	0	0	0	999	12
5:30	3	233	111	19	0	86	42	5	4	12	420	0	0	0	0	0	928	7
5:45	4	202	103	12	1	61	38	3	2	9	325	0	0	0	0	0	753	7
HR TOTAL	16	934	442	75	2	346	174	16	14	49	1621	0	0	0	0	0	3657	32
DAY TOTAL	62	2548	1367	281	4	986	496	49	57	152	4467	0	0	0	0	0	10346	123

PEAK PERIOD ANALYSIS FOR THE PERIOD: 3:00 PM - 6:00 PM

DIRECTION FROM	START PEAK HOUR	PEAK HR FACTOR	VOLUMES hvec	Right	Thru	Left	Total	PERCENTS hvec	Right	Thru	Left
North	4:30 PM	0.95	19	960	464	99	1523	-	63	30	7
East	4:15 PM	0.92	1	385	210	16	611	-	63	34	3
South	4:45 PM	0.95	16	52	1707	0	1759	-	3	97	0
West	4:45 PM	0.00	0	0	0	0	0	-	0	0	0

Entire Intersection

North	4:30 PM	0.95	19	960	464	99	1523	-	63	30	7
East		0.90	1	389	194	16	599	-	65	32	3
South		0.94	19	53	1676	0	1729	-	3	97	0
West		0.00	0	0	0	0	0	-	0	0	0

Memorandum
Department of Planning and Development
Planning Division

To: Chair Beal and Members of the Portland Planning Board

From: Richard Knowland, Senior Planner

Date: Prepared on September 22, 2006 for September 26, 2006 Workshop

Re: Medical Office Building; Corner of Marginal Way and Preble Street; Vicinity of 84 Marginal Way

Capital, LLC (Ted West) has requested a second workshop for a proposed office building and parking garage on the corner of Marginal Way and Preble Street. The project is subject to site plan and conditional use (parking garage). A traffic movement permit will be required. The first staff workshop memo (August 8, 2006) is attached.

The focus of Tuesday's workshop will be traffic related issues. Architecture and remaining site plan issues will be discussed at a future workshop.

Since the August 8th workshop, the following material had been submitted.

- An updated site plan has been submitted. See Attachment AA. The revisions are summarized starting on Attachment BB-2.
- Additional supplemental information has been submitted. See Attachment BB.
- A traffic report has been submitted. See Attachment CC.

The Board should be aware that we are directing the medical office applicant and the student housing applicant to plan the roadway improvements jointly as well as separately. The intent is that if one of the proposals does not go forward, the second one will have an off-site improvement plan that will allow them to go proceed independently while addressing the required off-site improvements. If both projects go forward, the the two Applicants may end up sharing the cost of certain improvements but this is negotiated between them with no involvement by the City.

Vehicle Circulation

Vehicle access is proposed from Marginal Way and Preble Street. Since the last workshop, the Marginal Way driveway has been modified, restricting it to right-hand turns. The driveway connects into the parking garage. The City Traffic Review Engineer had previously expressed concerns regarding left hand turns from Marginal Way into the

ATTACHMENT BB-1

MITCHELL & ASSOCIATES
LANDSCAPE ARCHITECTS

September 13, 2006

Mr. Richard Knowland, Senior Planner
and Planning Board Members
City of Portland
389 Congress Street
Portland, ME 04101

RE: Capital, LLC
Mixed Office, retail and Parking Garage Development

Dear Rick and Board Members:

The following correspondence has been prepared to address review comments received from staff and the planning board members during the August 8, 2006 workshop session. The focus of the discussion revolved around traffic and the proposed Marginal Way Master Plan improvements. The board had requested that the next workshop session focus on the traffic and circulation issues, with that in mind we have focused our submission on responding to that request. We have revised our site plan to incorporate the proposed roadway improvements adjacent to the site and Gorrill-Palmer consulting Engineers have prepared a traffic report to address traffic and circulation. Once staff has had the opportunity to review this submission, we would appreciate the opportunity to respond to comments and meet with staff as necessary before the scheduled September 26, 2006.

Planning Staff

- A letter from MDOT to review the proposed activities in the state right of way shall be provided.

  A copy of the letter from MDOT is attached.

- An easement agreement between the applicant and the proposed student housing development shared access drive, including public access rights to the city shall be provided.

  The easement agreement is currently being prepared and will be submitted within the week.

THE STAPLES SCHOOL
70 CENTER STREET
PORTLAND, MAINE 04101

Telephone (207) 774-4427
Fax (207) 874-2460
Website www.mitchellassociates.biz

- Provide for safe pedestrian and bicycle access under the I 295 overpass.

  We will be developing design recommendations for creating a safe and friendly environment that will be presented to the planning board during the next workshop session.

Traffic Management Study

Gorrill-Palmer Consulting Engineers have prepared a traffic report that will be submitted under separate cover.

Architecture

We have not included response to staff comments at this time, as these issues will be discussed during a subsequent workshop meeting. Responses and plan revisions will be submitted after the workshop meeting and before the public hearing for staff review.

Neighborhood Meeting

The applicant held a neighborhood meeting at the Avesta Housing Office 307 Cumberland Avenue on August 23, 2006 from 7:15PM until 8:45 PM. Enclosed is a copy of the required neighborhood meeting documentation.

Site Plan

Because of the required Marginal Way and Preble Street improvements, the site plan has been revised to indicate the new curb line and roadway improvements. The following revisions have been made.

- A raised curbed concrete delta island has been provided at the Marginal Way entry drive between the proposed student housing development and this development. The entry as designed will restrict movement to right turn in and right turn out only.

- To accommodate for the lane widths and bike lane on Marginal Way the curb line was shifted to the west resulting in grading and accesses revisions. Access to the retail space will require the construction of a retaining wall with a handicap ramp and stair access parallel to the face of the building. A license agreement with the city will be required.

- Grading at the main entry on the corner of Marginal Way and Preble Street has been revised to provide at grade handicap access on Marginal Way and stair access on the Preble Street side. To accommodate the grade change raised curb planter beds encroach into the public right of way, a license agreement with the city will required.

- To accommodate for the left turn entry from Preble Street and the introduction of a bike lane, the emergency vehicle and patient drop off area has been reduced from three spaces to two. This was necessary to provide the 8-FT sidewalk and access to the building. Access to the building has been revised to address grading issues. A retaining wall and handicap ramp will be required. The location of the ramp is within the public right of way and will require a license agreement with the city.

- The entry drive configuration on Preble Street has been revised to accommodate traffic movement. The drive width has been reduced from 28 FT to 26 FT and the access drive into the garage has been reduced from 24 FT to 22 FT.

- To address the width reductions as identified above, the location of the dumpster has been revised to provide better access.

There were a number of other site-related issues and architecture concerns that we would like to address at a future workshop session with the planning board.

Sincerely,
Mitchell & Associates

Robert B. Metcalf

Enclosure

cc: Ted West
Greg Shinberg
Will Haskell
Tom Gorrill
Jeremiah Bartlett

BB-4

GP Gorrill-Palmer Consulting Engineers, Inc.
Traffic and Civil Engineering Services

PO Box 1237
15 Shaker Rd.
Gray, ME 04039

207-657-6910
FAX: 207-657-6912
E-Mail:mailbox@gorrillpalmer.com

September 5, 2006

Mr. Dave Sherlock, Region Engineer
P.O. Box 358
Scarborough, ME 04070-0358

COPY

Subject: Bayside Development
Marginal Way, Portland, Maine

Dear Dave,

Gorrill-Palmer Consulting Engineers Inc. and Mitchell & Associates, Inc. appreciated the opportunity to meet with you on August 22, 2006 to discuss the proposed grade alterations within the Interstate 295 right-of-way adjacent to the proposed Bayside Village Student Housing Development and the Medical Office Building & Parking Garage. We have prepared two cross-sections of the existing I-295 embankment. These cross-sections show the proposed ditch grading at the bottom of the embankment adjacent to the property line. In addition, each section shows a potential future 16 foot wide lane and shoulder expansion and the associated embankment grading in the vicinity of the Marginal Way projects. Each cross-section assumes that the future 16-foot wide lane will be constructed with a 6% superelevation (to be conservative). As shown, the lane and shoulder expansion can be accommodated while maintaining a 3H:1V embankment slope or flatter in addition to the proposed ditch grading we discussed.

The Marginal Way projects will be discussed at a Planning Board meeting on September 12, 2006. If possible, we would appreciate a written response from MaineDOT regarding this issue prior to that meeting so that we may distribute it to the Planning Board. We would also request notification of any additional conditions or requirements of MDOT in order to perform the necessary work. Please call me with any questions.

Sincerely,

Gorrill-Palmer Consulting Engineers, Inc.

William C. Haskell, PE, CPESC
Vice President Site Development

STATE OF MAINE
WILLIAM C. HASKELL
NO. 8518
REGISTERED PROFESSIONAL ENGINEER

Enclosure

cc: Bob Metcalf, Mitchell & Associates, Inc.

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BB-5

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
SOUTHERN REGION
P.O. BOX 358
SCARBOROUGH, MAINE
04070-0358

JOHN ELIAS BALDACCI
GOVERNOR

DAVID A. COLE
COMMISSIONER

September 8, 2006

Mr. Robert Metcalf
Mitchell & Associates
70 Center Street
Portland, ME 04101

Re: Bayside Village Development

Dear Bob:

We met in my office with Will Haskell of Gorrill-Palmer on August 22 and discussed your proposal to perform grading activities in the I-295 right of way for the referenced project. At that meeting I requested some additional information regarding the impacts of a future I-295 lane on your proposal.

We have since received and reviewed that information and now conclude that we have no objections to the work in our right of way as presently proposed. The work is shown on Sheet 3 titled "Grading, Drainage, and Utilities Plan" of plans titled "Bayside Village A Student Housing Complex" prepared by Mitchell & Associates dated July 22, 2006 and on a plan by Gorrill-Palmer titled "I-295 Sections", plan sheet A, dated August 25, 2006.

Please note that the State of Maine, by this action, does not give up any rights to use this land in the future.

Very Truly Yours,

David Sherlock, P.E.
Region Engineer

david.sherlock@maine.gov

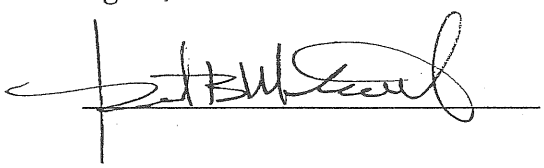
PRINTED ON RECYCLED PAPER

Neighborhood Meeting Certification

I, **Robert Metcalf, Agent, of Mitchell & Associates** hereby certify that a neighborhood meeting was held on **August 23, 2006** at **Avesta Housing, 307 Cumberland Avenue** at **7:15 PM**.

I also certify that on **August 14, 2006**, invitations were mailed to all addresses on the mailing list provided by the Planning Division, including property owners within 500 feet of the proposed development and the residents on the "interested parties" list.

Signed,



Sept 12, 2006 (date)

Attached to this certification are

1. Copy of the invitation sent
2. Sign-in sheet
3. Meeting minutes

NEIGHBORHOOD MEETING INVITATION

Capital, LLC
50 Portland Pier, Suite 400
Portland, Maine 04101

August 10, 2006

Dear Neighbor:

Please join us for a neighborhood meeting to discuss our plans for 84 Marginal Way, Medical Office and Parking Garage, located at 84 Marginal Way.

Meeting Location:	AVESTA Housing – 307 Cumberland Avenue
Meeting Date:	Wednesday, August 23, 2006
Meeting Time:	7:15PM – 8:45PM

The City code requires that property owners within 500 feet of the proposed development and residents on an "interested parties list" be invited to participate in a neighborhood meeting. A sign-in sheet will be circulated and minutes of the meeting will be taken. Both the sign-in sheet and minutes will be submitted to the Planning Board.

If you have any questions, please call Bob Metcalf at Mitchell & Associates, 774-4427.

Sincerely,
Ted West, Capital, LLC.

Note: Under Section 14-32(C) of the City Code of Ordinances, an applicant for a major development, subdivision of over five lots/units, or zone change is required to hold a neighborhood meeting at least seven days prior to the Planning Board public hearing on the proposal.

84 MARGINAL WAY – MEDICAL OFFICE/GARAGE

Neighborhood Meeting

Avesta Housing, 307 Cumberland Avenue

August 23, 2006

7:15 – 8:45 PM

Attendance Sheet

Name	Address	Phone
Betsy Melrose	Mitchell + Associates	774-4427
Steve Hirshon	168 Hanover	7734787
Mary-Anne Waxman	BNA	415 0769
Tom Tuft	BNA	
Ed Kellenyller	424 Cumberland Ave	775-3260
Greg Shinberg	Shinberg Consulting LLC	523 340
[illegible]	25 Preble St	773-6511
Alex Landis	30 Preble St	210.6012
Colette Bouchard	18 Hanover St.	773-6787
BOB ADAMS	231 STATE ST.	772-2565
BOB METCALF	MITCHELL & ASSOC.	774-4427

84 Marginal Way, Medical Office and Parking Garage
Neighborhood Meeting Minutes
Aug. 23, 2006 from 7:15-8:45 PM
Avesta Housing

Bob Metcalf – M&A

- Introduction to project

Greg Shinberg

- Three of seven Intermed facilities would combine at this site
- Administration is not moving to this site, only the administration staff who work with the doctors
- Medical waste will be removed from the site daily. It is preferred that the dumpster would not be at this site.

Comment: Marginal Way roadway plan looks different than Master Plan

A: (Bob)

- This is the Marginal Way Master Plan we were directed to use
- Traffic study is underway and is in the process of revision
- This presented plan only shows Marginal Way improvements, not those proposed for Preble Street Extension

A: (Greg)

- Want safe pedestrian and bicycle routes on Marginal Way and Preble Street
- Traffic movement is considered too, we want this to be a progressive project
- Sept. 26 site issues and traffic will be addressed at the Planning Board Workshop
- The new plans will show improvements to the Hannaford drive

Q: Do you have representation on the Bike/Pedestrian Committee

A: No

Comment: Steve Sharf can give Greg information (Portland Bike Advisory Committee)

Q: Has an overhead bike/pedestrian bridge been looked at for Marginal Way?

A: (Greg)

- A bridge would be cost prohibitive for this project.
- Preble Street left turn lane will eliminate some traffic at the intersection with Marginal Way
- 70% of vehicles come from the Franklin Arterial direction

- It is unlikely for us to have a left turn into the site from Marginal Way

Q: How many patients drive to the site?
A: (Greg)

- The programs haven't been defined for the building yet
- Staff, Doctors would equal about 160-180 people
- Retail and Patients would equal about 85-130 per hour
- 430 vehicle parking garage

Q: How many people would walk to the site?
A: Unknown

Q: How many patients are close to the site?
A: Unknown

Q: What are the square footages in the building?
A: (Greg)

- 67,000 SF Office
- 4,300 SF Retail (Pharmacy is a possibility plus others)
- 430 Parking Spaces (No spaces are required by zoning)
  - 75 Spaces – 63 Marginal Way
  - Office Space
  - 10 Spaces - Retail Space
  - Patients
- Slip Lane/Pull-Off space for patient drop off encouraged
- Bus Stop can't be located near Preble/Marginal intersection, it is too close

Concern: Pedestrian safety between building and Interstate
A: (Greg)

- Developer is concerned with liability of pedestrians behind building, might not be advisable to maintain this connection
- Change in use will improve safety
- Security cameras could be needed for true safety, even with adequate lighting
- People will cut through this direction anyway
- MDOT should create a safer environment by trimming plant material
- People will cut through garage in daytime, gates exist at night.

Comments:

- You can't stop people from walking route behind building
- Landscaping won't deter people from walking behind building, it just invites them
- Add bright lighting at pathway for safety
- Create an inhospitable environment for homeless
- This is a public safety issue and building issue for Intermed to have pedestrian access behind building
- Intermed is privileged to be on this site.
- MDOT will listen to need for maintenance of shrub and evergreen material
- Portland Trails might have recommendations for improving safety
- MDOT could plant larger evergreens to screen sound (limb them up to prevent homeless living there)
- Want people on sidewalks not cut through route
- Underpass area, want proactive not reactive plan
- Could artwork be added at underpass to improve aesthetics
- Snow falling off Interstate bridge should be addressed

A: (Greg)

- Lighting needs improvement under overpass
- It is noisy under there
- Want to work with MDOT to improve the area
- Trying to get MDOT facts to get work done

Comment: Crosswalk needed near Hannaford

A: (Greg) Traffic is too fast in this area

A: (Bob) Existing profile under bridge is 11' traffic lanes, 5 foot sidewalk and 9 foot paved esplanade

Comment: This underpass is a gateway to Byside, would like to have safer environment with narrower traffic lanes, wider bike lanes and lighted bollards

A: (Greg) We want to create a safe environment, but are limited as to what we can do in this area

Q: How is snow removal being handled?

A: Small machines will remove snow from roof and truck it away

Greg:

- Ted West is invested in the community and wants to look at how the whole community is coming together. He wants this area to be a model for other parts of the City

- Presentation boards are dated, but are in the process of being revised
- Architecture of Building
  - Very little brick
  - Masonry – ground face block (manufactured to look like granite) gives a solid look
  - Metal panels
  - Metal siding
  - Overhang similar to 63 marginal Way
  - Large windows to get views
  - City wants more height in this area
  - This building wouldn't have presence if it was shorter
  - It is a 4 sided building
  - We want this to be a forward thinking building
  - We want this to be a signature building
  - 70,000 vehicles a day drive by this site on I-295

Comments:

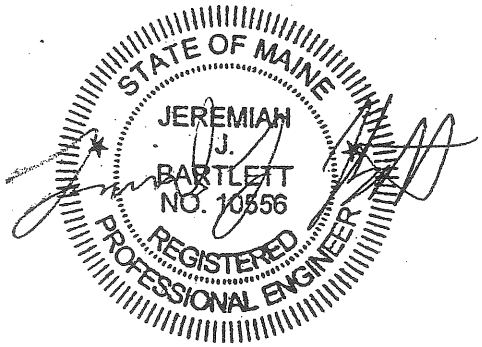
- Titanium would be a modern material to use
- The sheet metal front will date itself fast, look modern for a few decades and look ugly and stay looking ugly
- Ground floor composite masonry at elementary school could be good to use
- Brick/granite could be done in a modern way
- Masonry gives permanence and solid feel
- Would like to see a wider range of materials used (glass, metal, brick would be a nice combo), not just brick
- Copper
- Windows need more definition, AAA has a stark/empty look
- Windows should open
- Rear of building looks flat
- Entrance at corner would be nice as angled, not a 90 degree
- Entrance at corner could be rounded, historic examples in the area at Portland/Forest Ave and Boothby Square

A: (Greg)

- Material cost will not drive the process, he wants the material to please the most people
- Intermed will have functional doors at street intersection, unlike AAA building
- Intermed building windows will not be open able, due to maintenance/property issues and mechanical concerns
- Bicycle and motorcycle storage is being looked at

ATTACHMENT CC

Traffic Impact Study
Medical Office Building
Portland, Maine



9-11-06

Prepared for:

Capital, LLC
50 Portland Pier, Suite 400
Portland, Maine 04101

September 2006

Prepared by:

GP Gorrill-Palmer Consulting Engineers, Inc.

Traffic and Civil Engineering Services

PO Box 1237
15 Shaker Road
Gray, ME 04039

(207) 657-6910
Fax : (207) 657-6912
E-mail: mailbox@gorrillpalmer.com

Traffic Impact Study
84 Marginal Way
Medical Office Building
Portland, Maine
September 2006

Index

Section	*Description*	*Page*
	Executive Summary	1-2
I.	Existing and Proposed Site	3
II.	Background Traffic Conditions	3-5
III.	Trip Generation	5
IV.	Trip Distribution	5
V.	Trip Composition	6
VI.	Trip Assignment	6
VII.	2008 Post Development Traffic	6
VIII.	Study Area	6-7
IX.	Marginal Way Master Plan Improvements	7
X.	Capacity Analyses	7-14
XI.	Queue Analyses	14
XII.	Pedestrian and Transit Accommodations	14-15
XIII.	Transportation Demand Management	15
XIV.	Crash Data	15-17
XV.	Sight Line Analysis	17-18
XVI.	Conclusions	18-19

Appendix A
Site Location Diagram
Turning Movement Diagrams
Marginal Way Concept Plan

Appendix B
Capacity & Queue Analyses Results
Queue Analyses Tables

Appendix C
Trip Generation Calculations
Crash Data

Executive Summary

The following Executive Summary is prepared for the reader's convenience, but is not intended to be a substitute for reading the full report.

Gorrill-Palmer Consulting Engineers, Inc. was retained by Capital, LLC to examine the traffic impacts associated with a proposed 44,000 square-foot footprint multi-story medical office building along Marginal Way. Access to the site will be via a right-turn only driveway onto Marginal Way and a full enter with right-out only driveway on Preble Street Extension. The study location is shown in Figure 1 of Appendix A.

Based on the results of the study, our office finds the following:

1. The proposed development is forecast to generate a total of 165 and 266 trip ends for the weekday AM and PM peak hour, respectively. Therefore, this project requires a MaineDOT traffic movement permit. In this case, the City of Portland has been delegated full review authority for traffic permitting.

2. The level of service analyses were completed for Marginal Way from Forest Avenue to Franklin Street Arterial as well as the intersection of Preble Street Extension and Baxter Boulevard. At the request of the City, these analyses were based on the proposed Marginal Way Master Plan, which would result in the conversion of Marginal Way to a three-lane section. The implementation of the Marginal Way Master Plan will result in delay for some movements at the intersection of Preble Street Extension and Marginal Way. However, the driveway layout on Marginal Way should minimize the potential for conflicts, as no left turns will be permitted at this location. The construction of a shadowed left turn lane from Preble Street Extension to the site will provide adequate storage for that movement.

   A concept plan for Marginal Way has been prepared in accordance with the Master Plan and is enclosed with this report.

3. Gorrill-Palmer Consulting Engineers, Inc. obtained crash data from the MaineDOT to determine if any locations within the study area are considered High Crash Locations (HCL's). Based on this information, Marginal Way southwest of Hanover Street and Marginal Way at Forest Avenue are High Crash Locations. Our office recommends the placement of a no U turn sign at the end of the median along Marginal Way southwest of Hanover Street to address the primary crash pattern associated with this location. The intersection of Marginal Way at Forest Avenue may benefit from application of lane use markings.

4. The sight lines for the proposed driveways exceed MaineDOT requirements and, while having less sight distance than the City Portland ten-second stopping sight distance standard, are well in excess of the minimum stopping sight distance. Gorrill-Palmer Consulting Engineers, Inc. recommends that all plantings, which will be located within the right of way, not exceed three feet in height and be maintained at or below that height. Signage should not interfere with sight lines. In addition, we recommend that

during construction, when heavy equipment is entering and exiting into the site, that appropriate measures, such as signage and flag persons, be utilized in accordance with the Manual on Uniform Traffic Control Devices.

Based on these findings and recommended improvements, it is the opinion of Gorrill-Palmer Consulting Engineers, Inc. that the site driveways will operate acceptably with the recommended configuration and roadway improvements proposed in association with this project.

I. *Existing and Proposed Site*

The site is located on the northerly side of Marginal Way, east of Preble Street in Portland. The development site is approximately 1.37 acres in size and is a portion of a larger lot totaling 2.7 acres. The lot is shown as Block B, Lot 1 on Portland Assessor's Map 34A. The site is currently owned by the City of Portland and utilized for parking by the University of Southern Maine under a lease agreement.

Proposed for the site is a 44,000 square-foot footprint multi-story medical office building with associated on-site parking. The proposed structure has approximately 65,000 square-feet of medical office space and approximately 5,200 square-feet of retail space along Marginal Way. Access to the site will be a right-turn only driveway on Marginal Way and a full enter with right-out only driveway on Preble Street Extension.

II. *Background Traffic Conditions*

Gorrill-Palmer Consulting Engineers, Inc. based the study on the following information:

- A site plan provided by Mitchell & Associates dated July 18, 2006.
- Crash information for 2003-2005 provided by the Maine Department of Transportation.
- Turning movement counts collected by Gorrill-Palmer Consulting Engineers, Inc. on August 1, 2005 from 3:00 PM to 6:00 PM and on August 2, 2005 from 7:00 AM to 9:00 AM at the following locations:
  - Marginal Way at Preble Street/Preble Street Extension
  - Marginal Way at Hanover Street
- Turning movement counts collected by Gorrill-Palmer Consulting Engineers, Inc. on August 16, 2006 from 7:00 AM to 9:00 AM and from 3:00 PM to 6:00 PM at the following locations:
  - Marginal Way at Chestnut Street
  - Marginal Way at Franklin Arterial
  - Marginal Way at Forest Avenue
- Turning movement counts collected by Gorrill-Palmer Consulting Engineers, Inc. on August 21, 2006 from 7:00 AM to 9:00 AM and from 3:00 PM to 6:00 PM at the following locations:
  - Preble Street Extension at Baxter Boulevard

The raw turning movement volumes are depicted on Figures 2 and 3 in Appendix A.

Predevelopment Traffic Volumes

Seasonal Adjustment

MaineDOT utilizes highway classifications of I, II, or III for state and local roadways. Type I roadways are defined as urban roadways, or those roads that typically see commuter traffic and experience little fluctuation from week to week throughout the year. Type II roadways, or arterial roadways are those that see a combination of commuter and recreational traffic and therefore experience moderate fluctuations during the year. Type III roadways, or recreational roadways are typically used for recreational purposes and experience significant seasonal fluctuation.

As volumes were collected in the summer, an increase in the volumes was not required.

Annual Growth

The proposed development is anticipated to be completed by 2008. The raw volumes were increased by one percent per year in the study area to reflect estimated yearly traffic increases in the area. This rate was based on the Portland Peninsula study, as well as historic counts completed by MaineDOT.

The 2008 Adjusted Volumes are depicted on Figure 4 of Appendix A.

Other Development

Approved projects that are not yet opened as well as projects for which applications have been filed are required to be included in the predevelopment volumes for this project. Gorrill-Palmer Consulting Engineers Inc. has contacted the City of Portland and reviewed our project files to determine whether there are any other projects whose traffic should be included as background traffic in the study for this project. Based on this information the following projects were identified to be included as background development:

- Ocean Gateway
- Waterview Apartments
- Medical Office Building
- Chestnut Street Extension
- Somerset Market Place
- Pearl Place
- Redevelopment of the former Jordan's Meats/Westin Hotel
- Office building/bank at the intersection of Marginal Way and Hanover Street
- Bayside Village – A Student Housing Project
- Trip Reduction – Closing of Park and Ride and related existing uses

The resulting trip assignment for "other development" is depicted on Figure 5 of Appendix A with Figure 6 depicting the forecast trip reduction through the study area as a result of closing the existing park and ride adjacent to the site due to construction of Bayside Village.

Other development traffic and anticipated trip reduction volumes were applied to the 2008 Adjusted Volumes to result in the 2008 Predevelopment condition, which is shown on Figure 7 of Appendix A.

III. *Trip Generation*

Gorrill-Palmer Consulting Engineers, Inc. used the Institute of Transportation Engineers (ITE) publication *Trip Generation,* 7th Edition to forecast the potential trip generation for the site.

The forecast trip generation for the medical office building is based on Land Use Code (LUC) 720 – Medical Office Building. The forecast trip generation for the retail portion of the development is based on LUC 814 – Specialty Retail. The site is forecast to generate the following trips:

Trip Generation Summary
For Permitting Purposes

Land Use	Weekday	AM peak hour (adjacent street)	PM peak hour (adjacent street)	Saturday peak hour
LUC 720	2,348	161	242	236*
LUC 814	230	4	14	34
Total	**2,578**	**165**	**256**	**270**

*Assumes all offices operational on Saturday

IV. *Trip Distribution*

Gorrill-Palmer Consulting Engineers, Inc. based the trip distribution on information contained in the ITE publication *Trip Generation,* 7th Edition. The trip distribution is summarized in the following table:

Trip Distribution

Land Use	AM Peak Hour		PM Peak Hour	
	Enter	Exit	Enter	Exit
LUC 720 – Medical Office	80%	20%	25%	75%
LUC 814 – Specialty Retail	60%	40%	45%	55%

V. *Trip Composition*

Trip composition for the retail portion of the development is based on Land Use Code 820, Shopping Center for a development size range from 50,000 to 100,000 s.f. and is as follows:

AM Peak Hour:	35% Primary, 40% Pass-by, 25% Diverted
PM Peak Hour:	35% Primary, 40% Pass-by, 25% Diverted

For purposes of this study, the primary and diverted trips have been combined. It is assumed that 100% of the trips associated with the medical office building will be primary in nature.

Trip Composition for Proposed Site

Trip Type	AM Peak Hour			PM Peak Hour		
	Enter	Exit	Total	Enter	Exit	Total
Primary	131	32	163	65	185	250
Pass-by	1	1	2	3	3	6
Total	132	33	165	68	188	256

VI. *Trip Assignment*

The trip assignment percentages have been determined based on existing traffic patterns. The trip assignment for the proposed development is shown on Figures 8 and 9 of Appendix A.

VII. *2008 Postdevelopment Traffic*

The forecast trip assignment shown on Figures 8 and 9 were applied to the 2008 Predevelopment volumes (Figure 7) to result in the forecast 2008 Postdevelopment volumes upon completion of the proposed development.

VIII. *Study Area*

The study area for the project includes the following:

- Proposed site driveway and Marginal Way
- Marginal Way and Hanover Street
- Marginal Way and Preble Street
- Marginal Way and Franklin Arterial
- Marginal Way and Chestnut Street
- Marginal Way and Forest Avenue
- Preble Street Extension and Baxter Boulevard

The analyses were completed with the existing conditions for Marginal Way (four to five-lane section) as well as with the three-lane design (one through lane in each direction and a center two-way left turn lane) as described in the following section.

IX. *Marginal Way Master Plan Improvements*

It is Gorrill-Palmer's understanding that the City of Portland is considering the conversion of Marginal Way from a four lane section to a three lane section with center two-way left turn lane as part of a Master Plan. Based on projected roadway volumes as well as conversations with the City, Gorrill-Palmer utilized the following intersection improvements for our analysis:

- Forest Avenue/Marginal Way

  Marginal Way southbound

  - 300' right turn lane
  - dedicated left turn lane and single thru lane

- Preble Street/Marginal Way

  Marginal Way northbound

  - single thru lane and dedicated right turn lane

  Marginal Way southbound

  - single thru lane and dedicated 200' right turn lane

  Preble Street eastbound

  - 160' left turn lane
  - single thru lane and combined thru/right lane

- Franklin Arterial/Marginal Way

  Marginal Way northbound

  - dedicated left turn lane
  - 135' right turn lane

  Marginal Way southbound

  - 250' dedicated left turn lane
  - 100' dedicated right turn lane

  Franklin Arterial westbound

  - 350' left turn lane

A concept plan for the Marginal Way Master Plan as well as the left turn lane concept into the site from Preble Street Extension has been prepared and is enclosed in Appendix A.

X. *Capacity Analyses*

The following capacity analyses were performed using Synchro/SimTraffic 6 Traffic Software with results reported according to the Highway Capacity Manual (HCM) specifications for the signalized intersections. Analyses for the unsignalized intersections on the proposed three-lane sections on Marginal Way were completed utilizing the Highway Capacity Software, which allows for analysis of three-lane sections that consist of two through lanes and a center two-way left turn lane. Levels of service rankings are similar to the academic ranking system where an 'A' represents little control delay and an 'F' represents significant delay. A level of service 'D' or above is desired at a signalized intersection. At an unsignalized intersection, if the level of service falls below a 'D', an evaluation should be made to determine if a traffic signal is warranted.

As discussed in Section VIII, our office completed analyses along Marginal Way for both existing conditions as well as the proposed three-lane section associated with the Marginal Way Master Plan.

The following tables summarize the relationship between control delay and level of service:

Level of Service Criteria for Signalized Intersections

Level of Service	Control Delay per Vehicle (sec)
A	Up to 10.0
B	10.1 to 20.0
C	20.1 to 35.0
D	35.1 to 55.0
E	55.1 to 80.0
F	Greater than 80.0

Level of Service Criteria for Unsignalized Intersections

Level of Service	Control Delay per Vehicle (sec)
A	Up to 10.0
B	10.1 to 15.0
C	15.1 to 25.0
D	25.1 to 35.0
E	35.1 to 50.0
F	Greater than 50.0

Gorrill-Palmer Consulting Engineers, Inc. completed capacity analyses for the intersections listed in Section VIII. The analyses were based on Figure 7 for the predevelopment scenarios and Figure 10 for the post development scenarios. The results of the capacity analyses are summarized as follows. The detailed analyses are included in Appendix B. "Existing" refers to the current geometry and lane use of all the intersections within the study area, while "Proposed" refers to the three-lane section on Marginal Way as part of the Master Plan as well as improvements to the Franklin Arterial/Marginal Way intersection which were proposed as part of Somerset Market Place. There are no improvements proposed for the Preble Street Extension/Baxter Boulevard intersection; therefore only one table summarizing the capacity results.

LOS Results for Proposed Site Driveway and Marginal Way: Existing (Current)

Approach/Movement	2007 AM Peak Hour Postdevelopment		2007 PM Peak Hour Postdevelopment	
	Delay	LOS	Delay	LOS
Marginal NB – T	<1	A	<1	A
Marginal SB – TR	<1	A	<1	A
Site EB – R	11	B	13	B

LOS Results for Proposed Site Driveway and Marginal Way: Proposed (Master Plan)

Approach/Movement	2008 AM Peak Hour Postdevelopment		2008 PM Peak Hour Postdevelopment	
	Delay	LOS	Delay	LOS
Marginal NB – TR	<1	A	<1	A
Marginal SB – TR	<1	A	<1	A
Site EB – R	13	B	21	C

LOS Results for Proposed Site Driveway and Preble Street: Existing (Current)

Approach/Movement	2007 AM Peak Hour Postdevelopment		2007 PM Peak Hour Postdevelopment	
	Delay	LOS	Delay	LOS
Preble EB – L	8	A	12	B
Preble EB – T	<1	A	<1	A
Preble WB – TR	<1	A	<1	A
Site Drive SB – R	10	A	12	B

LOS Results for Proposed Site Driveway and Preble Street: Proposed (Master Plan)

Approach/Movement	2007 AM Peak Hour Postdevelopment		2007 PM Peak Hour Postdevelopment	
	Delay	LOS	Delay	LOS
Preble EB – L	8	A	12	B
Preble EB – T	<1	A	<1	A
Preble WB – TR	<1	A	<1	A
Site Drive SB – R	10	A	12	B

Based on the above tables, the proposed site driveways are anticipated to operate at acceptable levels of services for either condition (existing vs. proposed geometry).

LOS Results for Chestnut Street and Marginal Way: Existing (Current)

Approach/Movement	2008 AM Peak Hour				2008 PM Peak Hour			
	Predevelopment		Postdevelopment		Predevelopment		Postdevelopment	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Marginal NB – LTR	1	A	1	A	3	A	3	A
Marginal SB – LTR	1	A	1	A	1	A	1	A
Bayside EB – LTR	11	B	12	B	18	C	18	C
Chestnut WB – L	38	E	41	E	63	F	66	F
Chestnut WB – TR	18	C	19	C	24	C	25	D

LOS Results for Chestnut Street and Marginal Way: Proposed (Master Plan)

Approach/Movement	2008 AM Peak Hour				2008 PM Peak Hour			
	Predevelopment		Postdevelopment		Predevelopment		Postdevelopment	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Marginal NB – L	9	A	9	A	10	A	10	A
Marginal NB – TR	<1	A	<1	A	<1	A	<1	A
Marginal SB – L	9	A	9	A	10	A	10	A
Marginal SB – TR	<1	A	<1	A	<1	A	<1	A
Bayside EB – LTR	15	B	16	C	17	C	18	C
Chestnut WB – L	26	D	28	D	35	D	37	E
Chestnut WB – TR	13	B	14	B	18	C	18	C

The left turn exiting Chestnut Street, just north of the proposed Marginal Way site entrance, is anticipated to operate with delay, but the left turn volumes from the street are very low, far under the threshold for a traffic signal. With the three-lane section, delays for side street movements are actually lower, as they can utilize the third lane as a refuge.

LOS Results for Hanover Street and Marginal Way: Existing (Current)

Approach/Movement	2007 AM Peak Hour				2007 PM Peak Hour			
	Predevelopment		Postdevelopment		Predevelopment		Postdevelopment	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Marginal NB – TR	<1	A	<1	A	<1	A	<1	A
Marginal SB – LT	3	A	3	A	2	A	2	A
Hanover WB - LR	12	B	13	B	18	C	19	C

LOS Results for Hanover Street and Marginal Way: Proposed (Master Plan)

Approach/Movement	2008 AM Peak Hour				2008 PM Peak Hour			
	Predevelopment		Postdevelopment		Predevelopment		Postdevelopment	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Marginal NB – TR	<1	A	<1	A	<1	A	<1	A
Marginal SB – L	8	A	8	A	8	A	8	A
Marginal SB – T	<1	A	<1	A	<1	A	<1	A
Hanover WB - LR	12	B	12	B	21	C	23	C

Operations at Hanover Street are anticipated to occur at an acceptable level of service for all conditions. Field visits indicate that the majority of drivers on Marginal Way stop at the stop bar there, and as a result, the street operates acceptably. This situation is expected to continue with the conversion of Marginal Way to a three lane section.

LOS Results for Marginal Way and Preble Street: Existing (Current)

Approach/Movement	2008 AM Peak Hour				2008 PM Peak Hour			
	Predevelopment		Postdevelopment		Predevelopment		Postdevelopment	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Marginal NB – L	50	D	51	D	49	D	52	D
Marginal NB – TR	38	D	38	D	36	D	40	D
Marginal SB – L	47	D	47	D	48	D	54	D
Marginal SB – T	29	C	31	C	39	D	42	D
Marginal SB - R	27	C	29	C	39	D	39	D
Preble EB – L	44	D	43	D	46	D	48	D
Preble EB – TR	20	C	20	C	25	C	26	C
Preble WB – L	48	D	48	D	48	D	48	D
Preble WB – TR	23	C	23	C	32	C	33	C
Overall Performance	**31**	**C**	**32**	**C**	**37**	**D**	**39**	**D**

LOS Results for Marginal Way and Preble Street: Proposed (Master Plan)

Approach/Movement	2008 AM Peak Hour				2008 PM Peak Hour			
	Predevelopment		Postdevelopment		Predevelopment		Postdevelopment	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Marginal NB – L	26	C	26	C	37	D	75	E
Marginal NB – T	33	C	32	C	40	D	40	D
Marginal NB – R	27	C	27	C	30	C	31	C
Marginal SB – L	32	C	35	D	31	C	43	D
Marginal SB – T	33	C	35	D	47	D	67	E
Marginal SB – R	27	C	27	C	33	C	33	C
Preble EB – L	53	D	53	D	52	D	52	D
Preble EB – TR	17	B	17	B	23	C	24	C
Preble WB – L	44	D	43	D	48	D	49	D
Preble WB – TR	25	C	25	C	64	E	79	E
Overall Performance	**30**	**C**	**31**	**C**	**46**	**D**	**54**	**D**

Delay for the intersection of Preble Street and Marginal Way is forecast to increase when Marginal Way is reduced in width during the PM peak hour. In particular, with reducing the number of left turn lanes from eastbound Preble Street from two to one lane as a result of the Master Plan, additional green time is needed to serve the left turn volume. This reallocated green time results in increased delay for several movements during the PM peak hour of the postdevelopment condition. Several intersection timing scenarios have been evaluated; however, the outcome is that several movements will operate with delay.

LOS Results for Marginal Way and Franklin Arterial: Existing (Current)

Approach/Movement	2008 AM Peak Hour				2008 PM Peak Hour			
	Predevelopment		Postdevelopment		Predevelopment		Postdevelopment	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Marginal NB – LT	27	C	28	C	84	F	89	F
Marginal NB – R	22	C	23	C	24	C	24	C
Marginal SB – LT	23	C	24	C	25	C	25	C
Marginal SB – R	21	C	22	C	22	C	22	C
I-295 Ramps EB – L	25	C	26	C	62	E	62	E
I-295 Ramps EB – T	16	B	18	B	36	D	37	D
I-295 Ramps EB – R	10	A	11	B	27	C	27	C
Franklin WB – L	49	D	40	D	59	E	63	E
Franklin WB – TR	13	B	13	B	138	F	138	F
Overall Performance	**18**	**B**	**19**	**B**	**82**	**F**	**83**	**F**

LOS Results for Marginal Way and Franklin Arterial: Proposed (Master Plan)

Approach/Movement	2008 AM Peak Hour				2008 PM Peak Hour			
	Predevelopment		Postdevelopment		Predevelopment		Postdevelopment	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Marginal NB – L	21	C	21	C	65	E	68	E
Marginal NB – T	22	C	22	C	25	C	25	C
Marginal NB – R	21	C	21	C	26	C	26	C
Marginal SB – L	27	C	27	C	38	D	38	D
Marginal SB – T	29	C	29	C	40	D	40	D
Marginal SB – R	27	C	27	C	37	D	37	D
I-295 Ramps EB – L	28	C	24	C	61	E	60	E
I-295 Ramps EB – T	19	B	23	C	26	C	26	C
I-295 Ramps EB – R	12	B	13	B	20	B	21	C
Franklin WB – L	64	E	45	D	47	D	50	D
Franklin WB – TR	15	B	19	B	64	E	65	E
Overall Performance	**21**	**C**	**23**	**C**	**47**	**D**	**48**	**D**

Delay for the intersection of Franklin Arterial and Marginal Way is forecast to decrease with the proposed roadway improvements during the PM peak hour. Lane movements which are currently forecast to operate at a level of service "F" are improved to operate at a level of service "E" or better. Providing a dedicated left turn lane for northbound Marginal Way reduces the demand for green time for this movement, allowing the surplus green time to be allocated to Franklin Arterial.

LOS Results for Marginal Way and Forest Avenue: Existing (Current)

Approach/Movement	2008 AM Peak Hour				2008 PM Peak Hour			
	Predevelopment		Postdevelopment		Predevelopment		Postdevelopment	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Marginal SB – LT	38	D	38	D	40	D	44	D
Marginal SB – R	<1	A	<1	A	1	A	1	A
Forest EB – L	36	D	37	D	46	D	47	D
Forest EB – T	20	C	20	C	20	C	20	C
Forest EB – R	2	A	2	A	2	A	2	A
Forest WB – TR	4	A	4	A	8	A	8	A
Overall Performance	**10**	**B**	**11**	**B**	**11**	**B**	**12**	**B**

LOS Results for Marginal Way and Forest Avenue: Proposed (Master Plan)

Approach/Movement	2008 AM Peak Hour				2008 PM Peak Hour			
	Predevelopment		Postdevelopment		Predevelopment		Postdevelopment	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Marginal SB – L	29	C	29	C	28	C	27	C
Marginal SB – T	40	D	41	D	47	D	53	D
Marginal SB – R	<1	A	<1	A	1	A	1	A
Forest EB – L	40	D	43	D	49	D	52	D
Forest EB – T	21	C	22	C	25	C	25	C
Forest EB – R	2	A	2	A	2	A	2	A
Forest WB – TR	5	A	5	A	14	B	16	B
Overall Performance	**11**	**B**	**12**	**B**	**15**	**B**	**16**	**B**

The Forest Avenue/Marginal Way intersection is forecast to operate at acceptable levels of service for the AM and PM peak hours for either condition (existing vs. proposed geometry) for both the pre and post development conditions.

LOS Results for Preble Street Extension and Baxter Boulevard

Approach/Movement	2008 AM Peak Hour				2008 PM Peak Hour			
	Predevelopment		Postdevelopment		Predevelopment		Postdevelopment	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Baxter NB – LT	19	B	21	C	21	C	21	C
Baxter NB – R	18	B	19	B	15	B	15	B
Baxter SB – L	12	B	14	B	14	B	16	B
Baxter SB – TR	4	A	4	A	6	A	6	A
Preble EB – LTR	19	B	20	B	14	B	14	B
Preble WB – LT	19	B	19	B	17	B	17	B
Preble WB – R	18	B	18	B	20	B	21	C
Overall Performance	**15**	**B**	**15**	**B**	**17**	**B**	**17**	**B**

The Preble Street Extension/Baxter Boulevard intersection is forecast to operate at acceptable levels of service for the AM and PM peak hours for either condition (existing vs. proposed geometry) for both the pre and post development conditions.

X. *Queue Analyses*

Gorrill-Palmer Consulting Engineers, Inc. has evaluated the queue lengths at the proposed site driveways on Marginal Way and Preble Street. This evaluation was based on the HCM analyses. Based on the analyses, queues are not anticipated to exceed two cars in length for any movement.

Gorrill-Palmer Consulting Engineers, Inc. anticipate that with the reduction of Marginal Way to one lane, traffic will queue at times past the site driveway. Timing could be adjusted at the intersection of Preble Street and Marginal Way to minimize this queuing, but that would have a detrimental affect on operations for Preble Street. In addition, the proposed driveway on Marginal Way is proposed as a right-in/right-out only driveway, where queuing will not block sight distance for exiting vehicles.

Although the analysis does show queuing on Marginal Way past the intersection with Hanover Street, it should be noted that the painted stop bar located on the eastbound approach of Marginal Way at the entrance to Hanover Street was observed by the majority of drivers during a red light event on Marginal Way at Preble Street. The painted stop bar on Marginal Way at the entrance to Hanover Street provides an acceptable gap for vehicles to enter and exit to and from Hanover Street. It is anticipated that this condition will continue in the future with geometry associated with the Marginal Way Master Plan.

The queue analyses are provided on the printouts in Appendix B of this report.

XI. *Pedestrian and Transit Accommodations*

Pedestrian Accommodations

As part of the proposed site plan for this project, a new, eight-foot wide sidewalk will be built along the site frontage on Marginal Way. This width will accommodate significant pedestrian traffic. In addition, the curbing changes proposed as part of the Marginal Way Master Plan will result in pedestrians crossing fewer lanes of traffic, thus creating an environment more suitable for pedestrians, particularly in an urban setting.

It should also be noted that the striping and curbing enhancements proposed in association with the Marginal Way Master plan will retain/provide bicycle lanes, thus allowing bicyclists their own space on the roadway.

Transit Accommodations

Route 8 on the Portland Metro system currently runs along the site frontage, and provides connections to the main Metro station (and thus, other bus routes) and the Ocean

Gateway/ferry service on the eastern waterfront. A bus stop pullout is proposed along Marginal Way as part of the adjacent Bayside Village development.

XII. *Transportation Demand Management*

In an effort to reduce peak hour demands to the site and minimize the use of single-occupant vehicles, our office recommends consideration be given to implementing a transportation demand management (TDM) program. This program could include but not be limited to the following:

Promotion of Public Transportation

The cost or a portion of the cost of monthly bus passes could be subsidized by the facility as an incentive for employees to utilize the local public transportation network. As noted above, one of the METRO bus routes passes by the site on Marginal Way.

Ridesharing Program

Ridesharing programs encourage commuters to ride in vehicles with other commuters rather than drive alone. The facility could provide ride-matching services through postings in public areas. Reserved parking spaces for vehicles that are used for van or carpooling could be provided.

Provision of Bicycle Amenities

Enclosed and secure bicycle facilities could be provided for employees interested in bicycling to and from work.

XIII. *Crash Data*

In order to evaluate whether a location has a crash problem, MaineDOT uses two criteria to define High Crash Locations (HCL). Both criteria must be met in order to be classified as an HCL.

1. A critical rate factor of 1.00 or more for a three-year period. (A Critical Rate Factor {CRF} compares the actual accident rate to the rate for similar intersections in the State. A CRF of less than 1.00 indicates a rate less than average) and:
2. A minimum of 8 crashes over a three-year period.

Our office reviewed the MaineDOT crash records for the last three years in the study area (2003-2005). The following table summarizes the crash data provided by MaineDOT for the locations that satisfy either Criteria 1, 2 or both:

MDOT Crash Data for 2003-2005: Intersections

Node	Intersection	# of Collisions	CRF	HCL?
07254	State Street/Forest Avenue/Marginal Way	28	1.01	Yes
P08943	Marginal Way/Preble Street/Elm Street	23	0.48	No
09420	Marginal Way/Franklin Arterial	30	0.80	No
08944	Preble Street Ext/Baxter Boulevard	19	0.70	No
09457	Preble Street/Cumberland Ave	10	0.54	No

MDOT Crash Data for 2003-2005: Road Segments

Nodes	Street	From	To	# of Collisions	CRF	HCL?
07254-09419	Marginal Way	Forest Ave	Hanover St.	9	2.32	Yes
08943-09420	Marginal Way	Preble St.	Franklin Art.	12	0.69	No
08943-08944	Preble St. Ext	Marginal Way	Baxter Blvd	9	0.36	No

Based on the published history, there are two High Crash Locations within the study area, the roadway link of Marginal Way from Forest Avenue to Hanover Street and the intersection of Forest Avenue and Marginal Way.

Gorrill-Palmer Consulting Engineers, Inc. requested collision reports from MaineDOT for these locations for the 2003-2005 study period and prepared collision diagrams to determine if any apparent collision patterns exist and to provide recommendations for mitigating identified pattern(s).

Marginal Way/State Street at Forest Avenue

This intersection had a total of twenty-seven collisions during the three-year study period with a CRF of 1.01. Based on the collision diagram there appears to be two prevalent crash patterns, involving a total of ten collisions. The first pattern includes a total of seven collisions where a southbound vehicle on Forest Avenue in the right most lane attempts an illegal left turn onto Marginal Way across the raised median and across two lanes of southbound traffic, thus being struck by through traffic in the adjacent lane. The second patter involves three collisions where a southbound vehicle on Forest Avenue in the left most through lane attempts an illegal right turn onto State Street Extension across the raised island and across an adjacent through lane, thus being struck by a vehicle in the adjacent through lane. Forest Avenue southbound consists of a dedicated left turn lane and two through lanes which are separated by a raised median, which extends beyond the off-ramp for Exit 6A for I-295 northbound. Motorists entering Forest Avenue from this off-ramp are restricted from making a turn onto Marginal Way by the existing median and would require the motorist to reverse direction by utilizing the loop created by High Street, State Street and Forest Avenue. Based on this review, it would appear that the two collisions patterns are caused by the motorist and not attributable to roadway geometry. One potential mitigation measure would be to maintain lane delineation markings at this intersection to convey lane usage to motorists.

Marginal Way from Forest Avenue to Hanover Street

Nine collisions occurred along this section of Marginal Way during the years 2003-2005. One included a vehicle turning into a driveway, two included vehicles turning out of driveways, and one included a vehicle backing at the light. Five collisions were northbound vehicles in the right lane attempting U-turns past the raised median and colliding with vehicles in the northbound left-lane. It is recommended that a "NO U-TURN" sign be installed at the end of the raised median along Marginal Way to mitigate this crash pattern.

XIV. *Sight Line Analysis*

The Maine Department of Transportation (MaineDOT) and the City of Portland have guidelines for sight distances at roadways. The sight line standards for MaineDOT and the City of Portland are as follows:

Sight Distance Requirements

Speed (mph)	MaineDOT (ft)	City of Portland (ft)
25	200	367
30	250	440
35	305	513
40	360	587
45	425	660
50	495	773

Gorrill-Palmer Consulting Engineers, Inc. has evaluated the available sight lines at the proposed site driveway on Marginal Way and Preble Street Extension in accordance with MaineDOT and City of Portland standards.

The MaineDOT standards are as follows:

Roadway observation point:	10 feet off major street travelway
Height of eye at roadway:	3 ½ feet above ground
Height of approaching vehicle:	4 ¼ feet above road surface

The posted speed limit on Marginal Way and Preble Street Extension is 35 mph. Based on a site review, the sight distance looking left from the right-in/right-out driveway on Marginal Way exceeds 1,000 feet. The sight distance looking left when exiting onto Preble Street Extension was estimated to be approximately 500 feet, which is slightly less (13') than the City of Portland recommended sight distance for a posted speed of 35 mph. It should be noted that the Marginal Way/Preble Street traffic signal is approximately 275 feet from the Preble Street driveway. Therefore, the available sight distances are acceptable.

Gorrill-Palmer Consulting Engineers, Inc. recommends that all plantings, which will be located within the right of way, not exceed three feet in height and be maintained at or below that height. Signage should not interfere with sight lines. In addition, we recommend that during construction, when heavy equipment is entering and exiting into the site, that appropriate measures, such as signage and flag persons, be utilized in accordance with the Manual on Uniform Traffic Control Devices.

XVI. *Conclusions*

Gorrill-Palmer Consulting Engineers, Inc. has examined the impact of the traffic associated with the 84 Marginal Way and reached the following conclusions:

1. The proposed development is forecast to generate a total of 165 and 266 trip ends for the weekday AM and PM peak hour, respectively. Therefore, this project requires a MaineDOT traffic movement permit. In this case, the City of Portland has been delegated full review authority for traffic permitting.

2. The level of service analyses were completed for Marginal Way from Forest Avenue to Franklin Street Arterial as well as the intersection of Preble Street Extension and Baxter Boulevard. At the request of the City, these analyses were based on the proposed Marginal Way Master Plan, which would result in the conversion of Marginal Way to a three-lane section. The implementation of the Marginal Way Master Plan will result in delay for some movements at the intersection of Preble Street Extension and Marginal Way. However, the driveway layout on Marginal Way should minimize the potential for conflicts, as no left turns will be permitted at this location. The construction of a shadowed left turn lane from Preble Street Extension to the site will provide adequate storage for that movement.

   A concept plan for Marginal Way has been prepared in accordance with the Master Plan and is enclosed with this report.

3. Gorrill-Palmer Consulting Engineers, Inc. obtained crash data from the MaineDOT to determine if any locations within the study area are considered High Crash Locations (HCL's). Based on this information, Marginal Way southwest of Hanover Street and Marginal Way at Forest Avenue are High Crash Locations. Our office recommends the placement of a no U turn sign at the end of the median along Marginal Way southwest of Hanover Street to address the primary crash pattern associated with this location. The intersection of Marginal Way at Forest Avenue may benefit from application of lane use markings.

4. The sight lines for the proposed driveways exceed MaineDOT requirements and, while having less sight distance than the City Portland ten-second stopping sight distance standard, are well in excess of the minimum stopping sight distance. Gorrill-Palmer Consulting Engineers, Inc. recommends that all plantings, which will be located within the right of way, not exceed three feet in height and be maintained at or below that

height. Signage should not interfere with sight lines. In addition, we recommend that during construction, when heavy equipment is entering and exiting into the site, that appropriate measures, such as signage and flag persons, be utilized in accordance with the Manual on Uniform Traffic Control Devices.

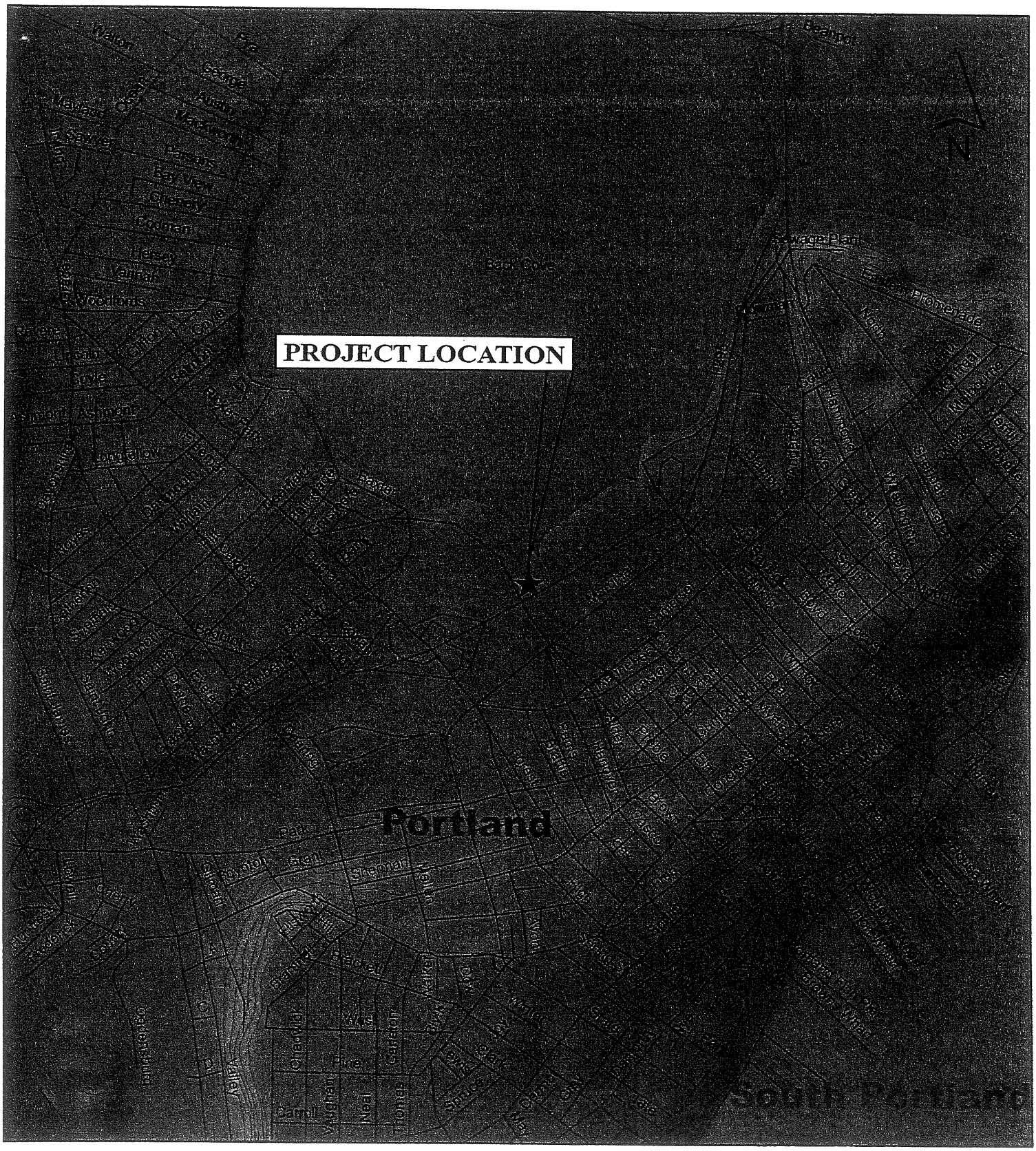
Based on these findings and recommended improvements, it is the opinion of Gorrill-Palmer Consulting Engineers, Inc. that the site driveways will operate acceptably with the recommended configuration and roadway improvements proposed in association with this project.

Appendix A

Site Location Diagram
Turning Movement Diagrams
Marginal Way Concept Plan

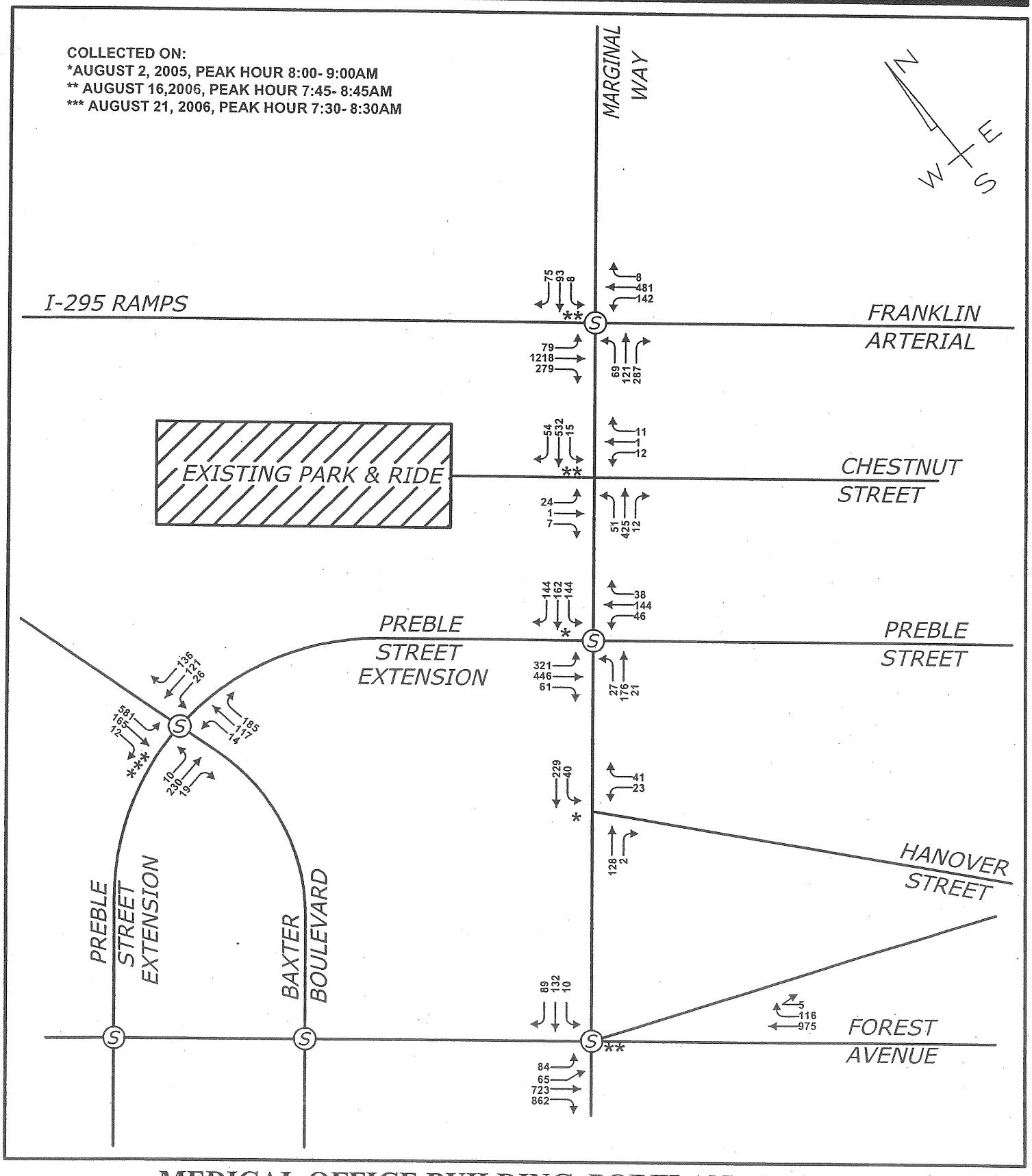
Location Map

Figure No. 1



Raw Volumes - AM Peak Hour

Figure No. 2



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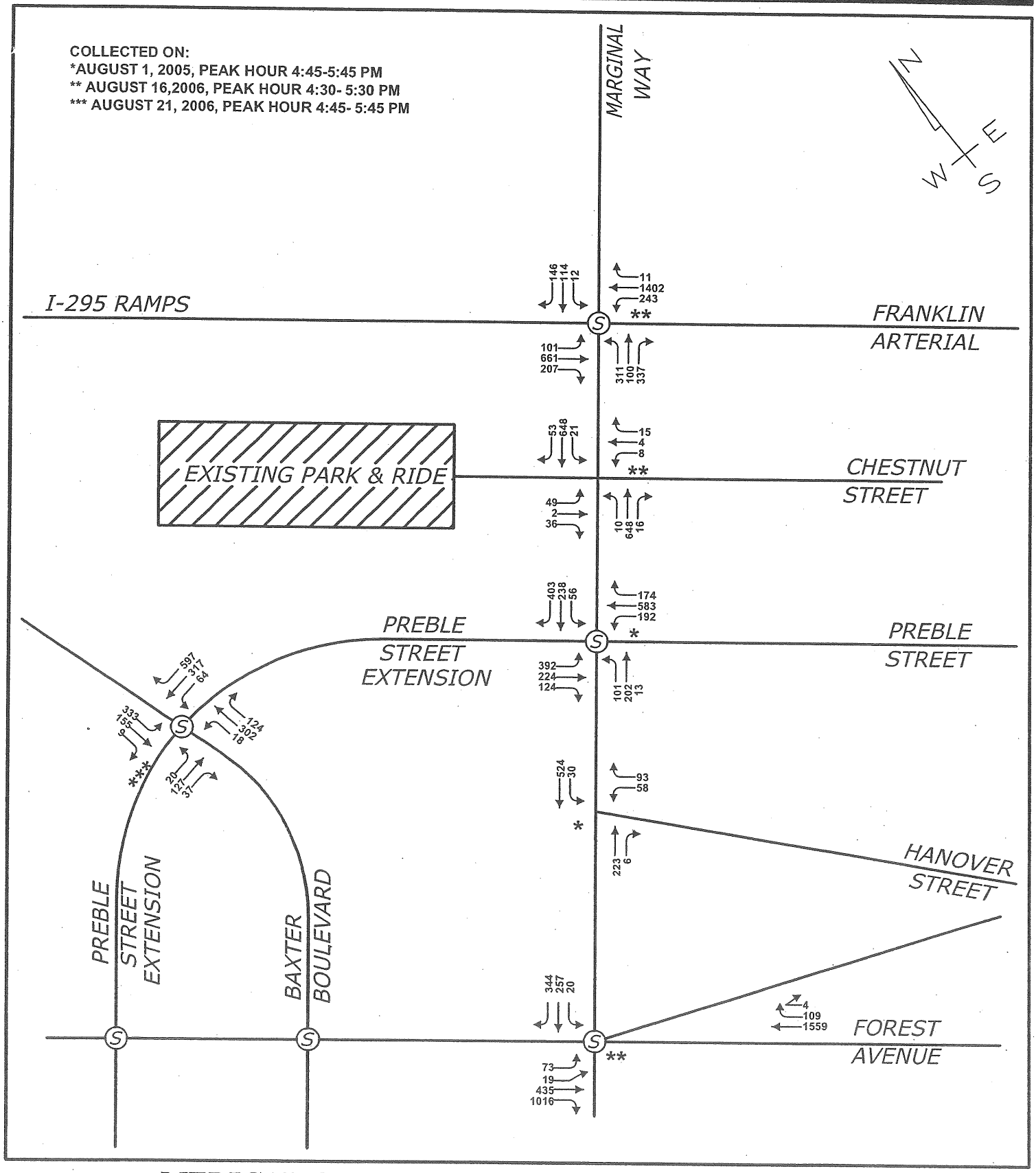
Raw Volume- PM Peak Hour

Figure No. 3



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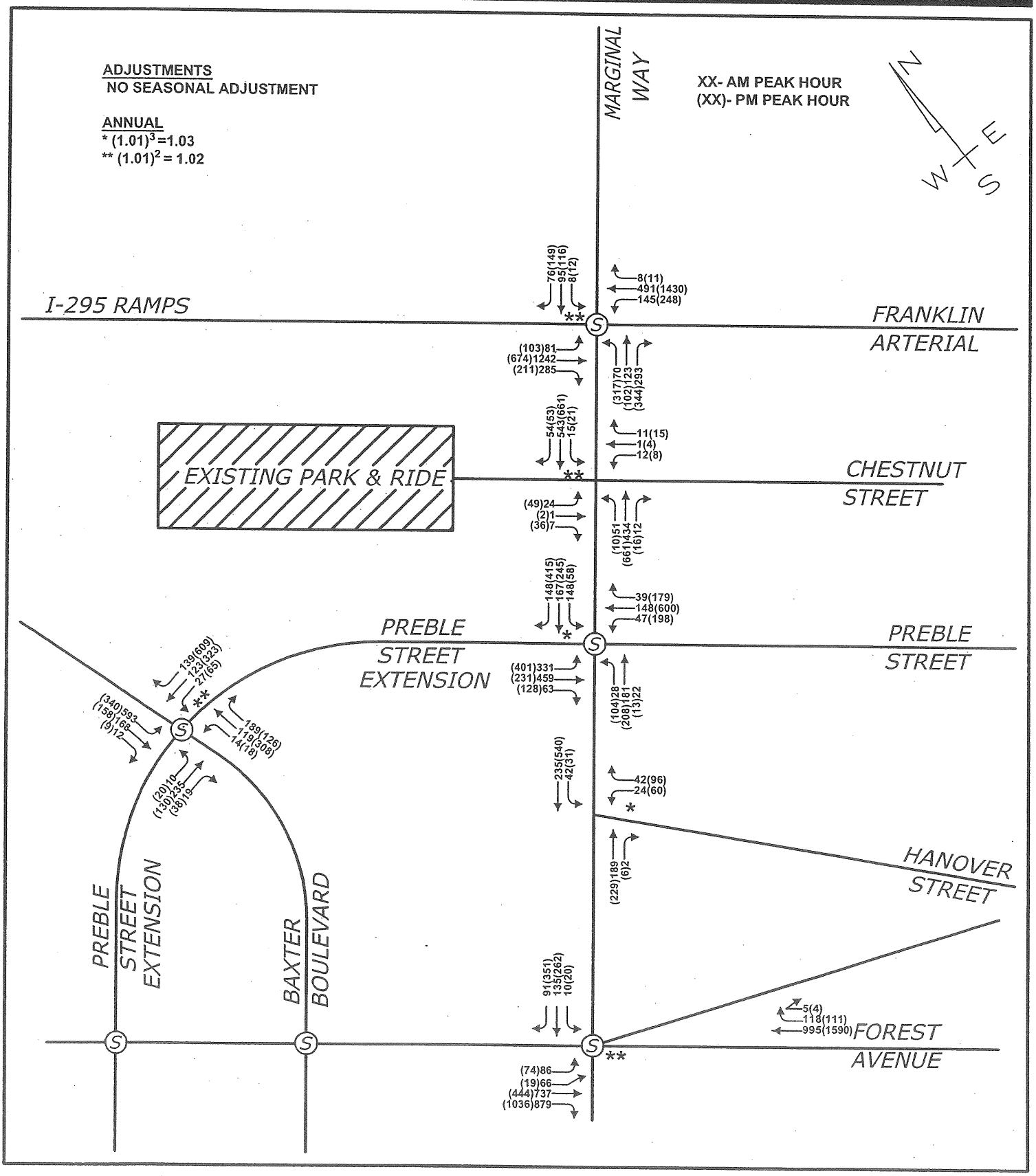
2008 Adjusted Volumes

Figure No. 4



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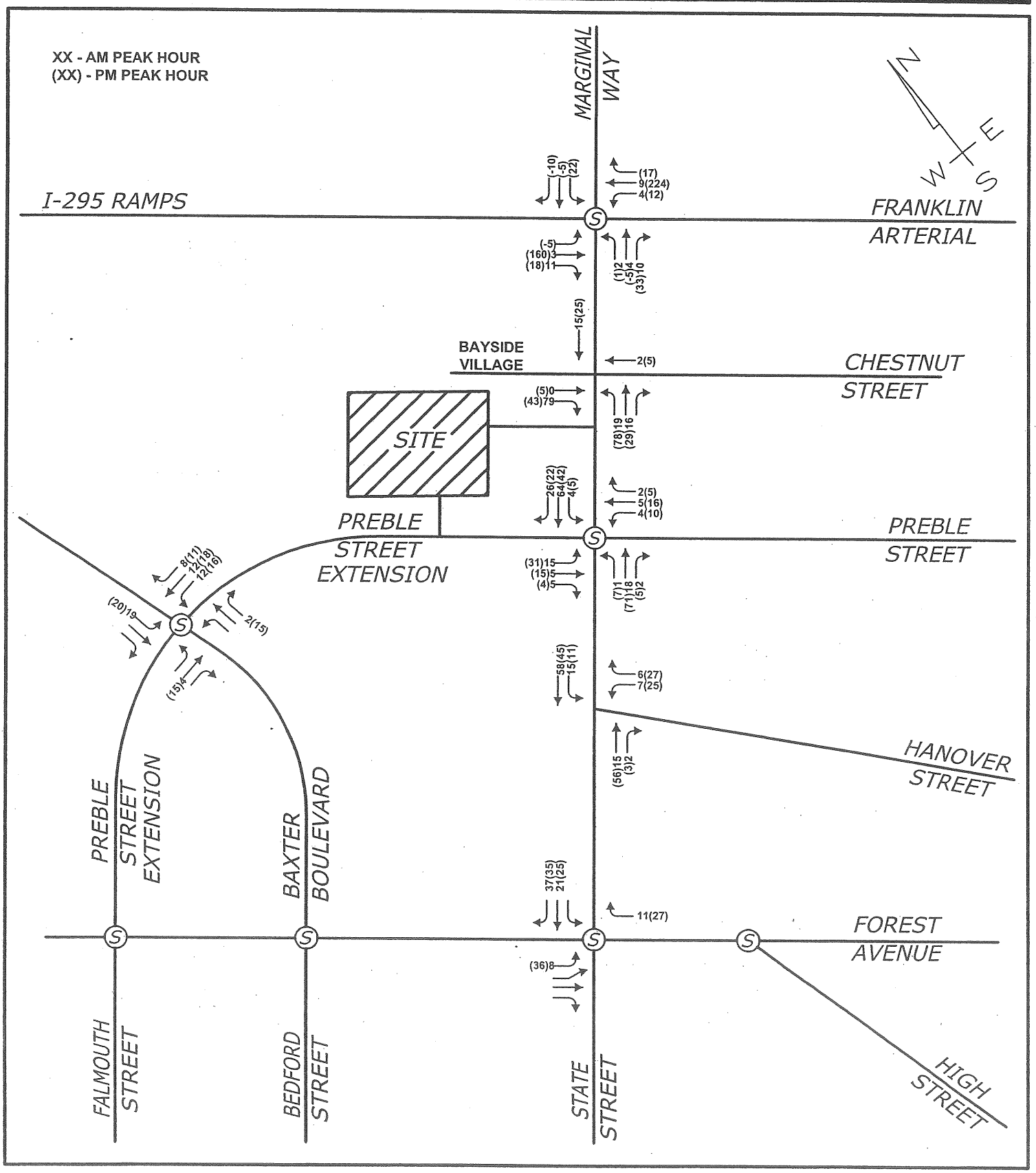
Other Development

Figure No. 5



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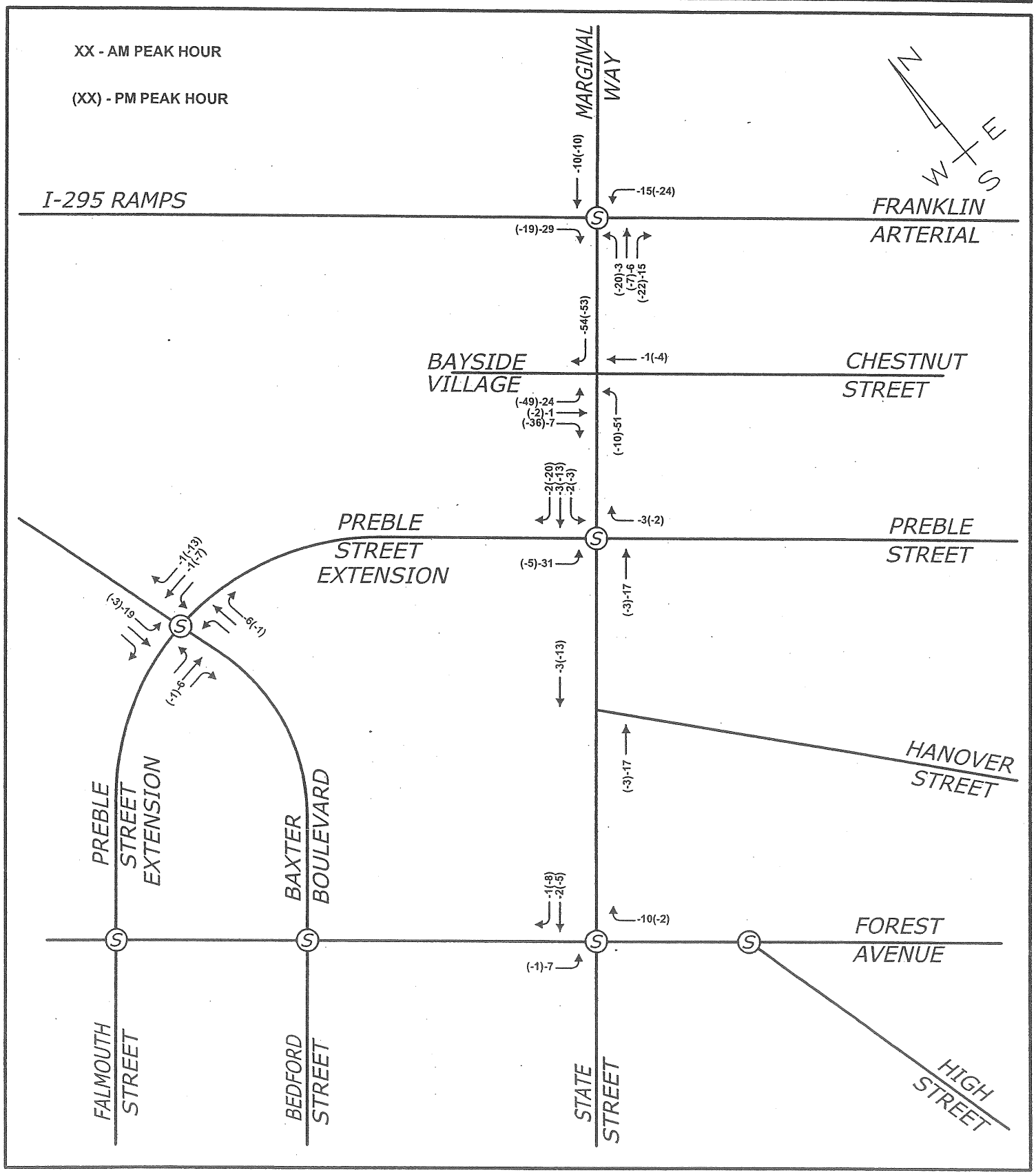
Trip Reduction - Closing of Park & Ride

Figure No. 6



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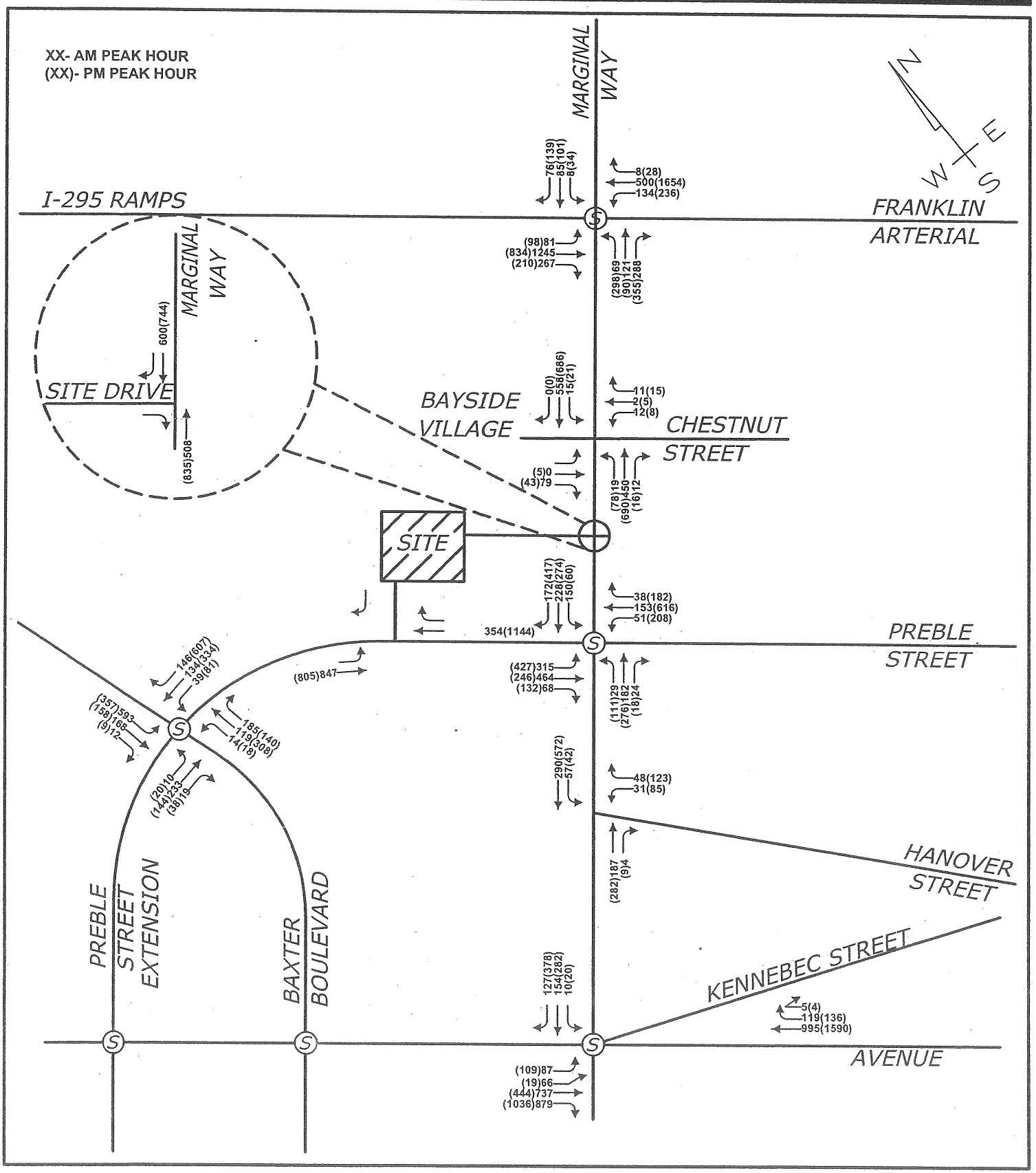
2008 Predevelopment Volumes

Figure No. 7



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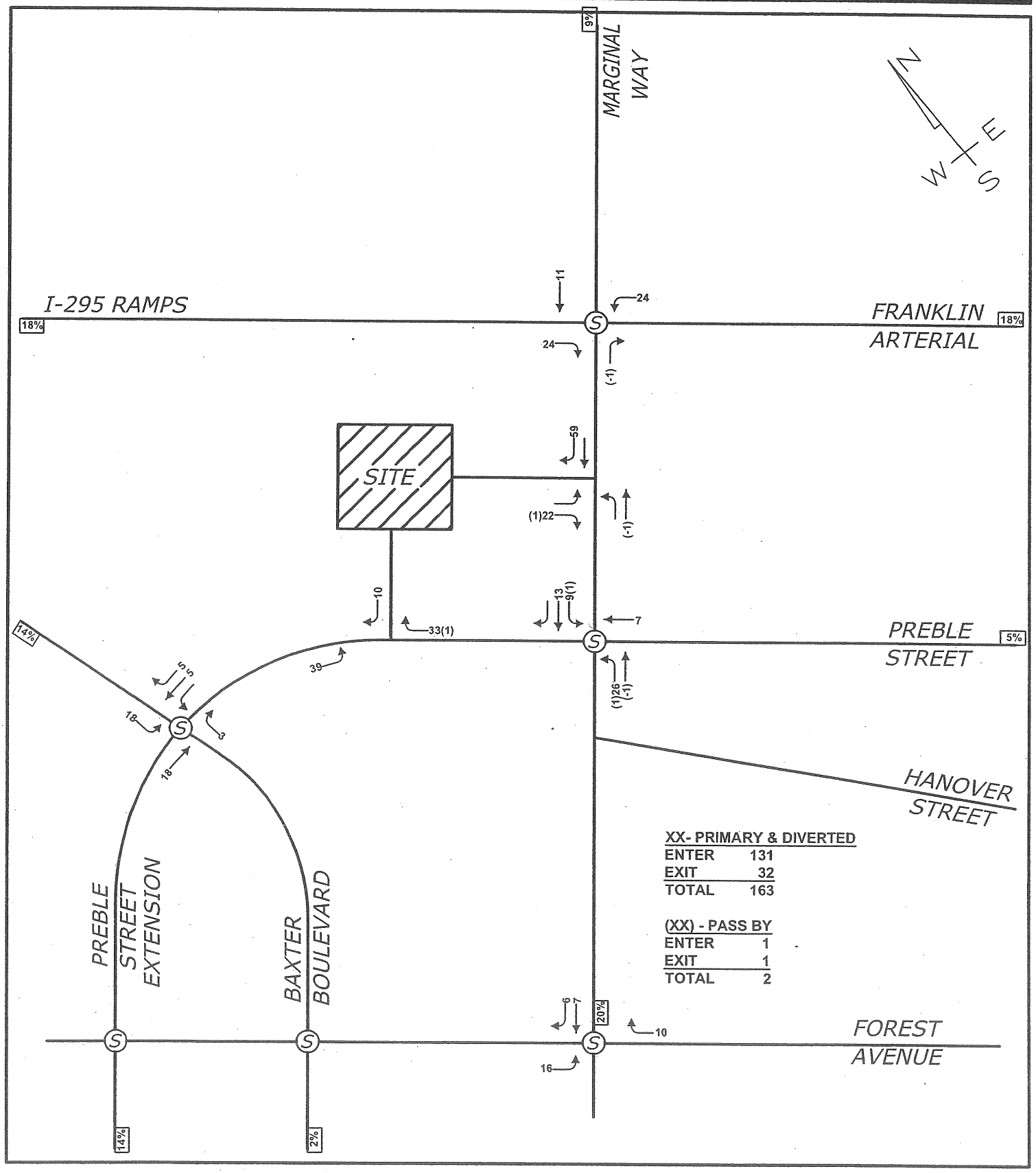
AM Trip Assignment

Figure No. 8



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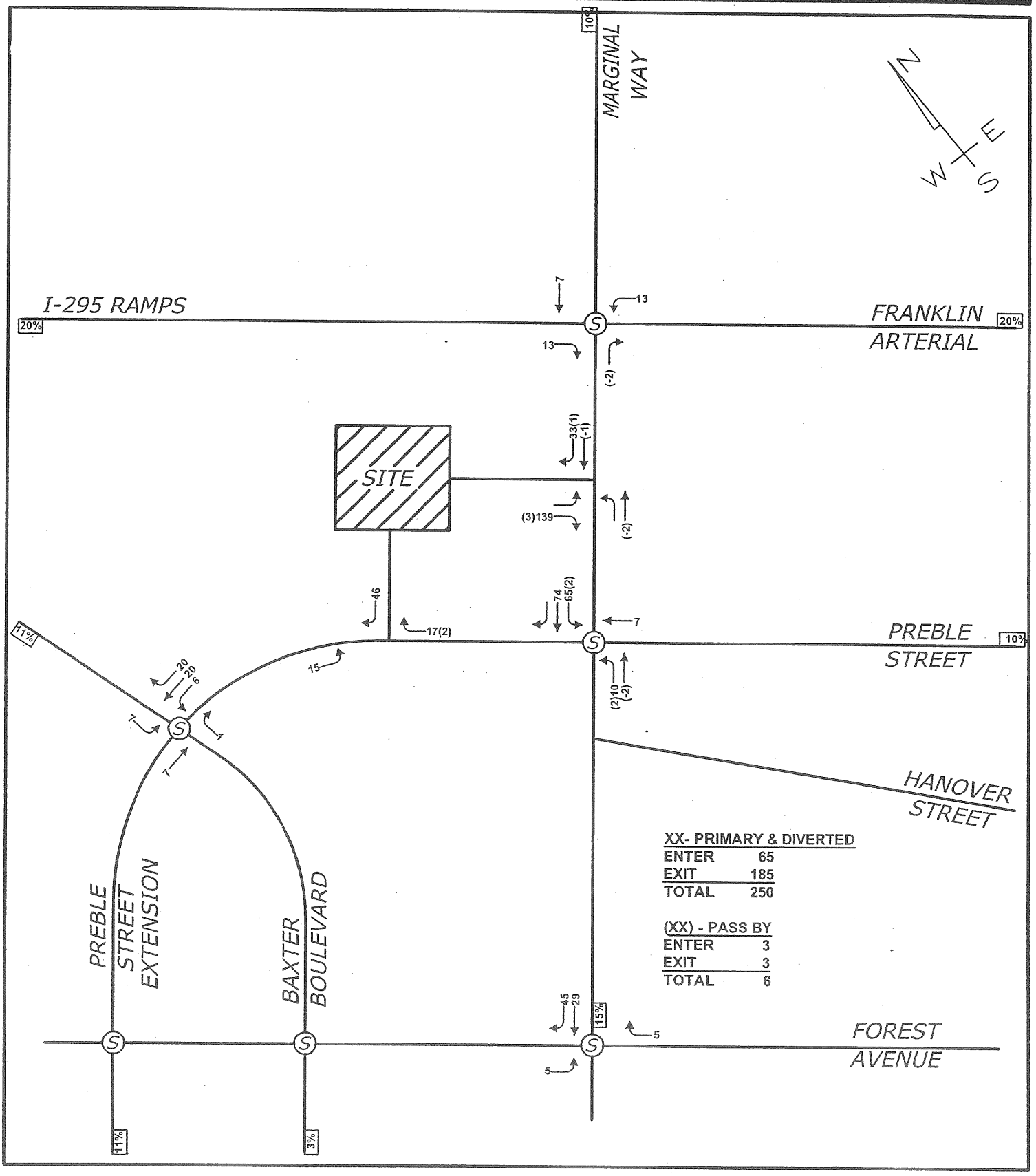
PM Trip Assignment

Figure No. 9



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overpass to the Hannaford Supermarket entry drive in order to fully understand the context of the contemplated changes.

The Preble Street driveway is connected into the parking garage. Exiting the site is limited to a right turn only.

Pedestrian Circulation

The site plan indicates a new public sidewalk will be constructed along the entire street frontage (Marginal Way and Preble Street) of the site.

As discussed during the Bayside Village review, a walkway is proposed behind the parking garage as a short cut to Preble Street for residents walking to Hannaford Supermarket and USM. For the public hearing, a pedestrian easement should be submitted by the Applicant for review and approval to formalize the walking route. (This easement is also incorporated within the subdivision plat for this parcel).

Pedestrian entrances into the building are shown on site plan Sheet #2. The main entry lobby (two doors) is located on the corner of Marginal Way and Preble Street. Doors are shown for the retail spaces along Marginal Way. The plan should clarify which entrances are open for public use during normal business hours.

Save Marginal Way

As discussed in the vehicle circulation section of this memo, the Preble Street sidewalk under the I-295 bridge is proposed to be reduced on both sides of the street (from 15 feet to 8-10 feet) to accommodate a left hand turn into the site from Preble Street. The sidewalk is a critical connection to the Back Cove Trail. A detailed plan needs to be submitted showing existing and proposed conditions and how the Applicant proposes to mitigate the impact of the sidewalk reduction such as lighting and pedestrian amenities under the I-295 bridge.

A 5- foot sidewalk is shown along the easterly side of the Marginal Way driveway which can be used by pedestrians entering/exiting the westerly side of the Bayside Village building. This sidewalk continues as part of the short cut to Preble Street discussed above. On the other side of the driveway there is a short sidewalk that takes a pedestrian to the parking garage.

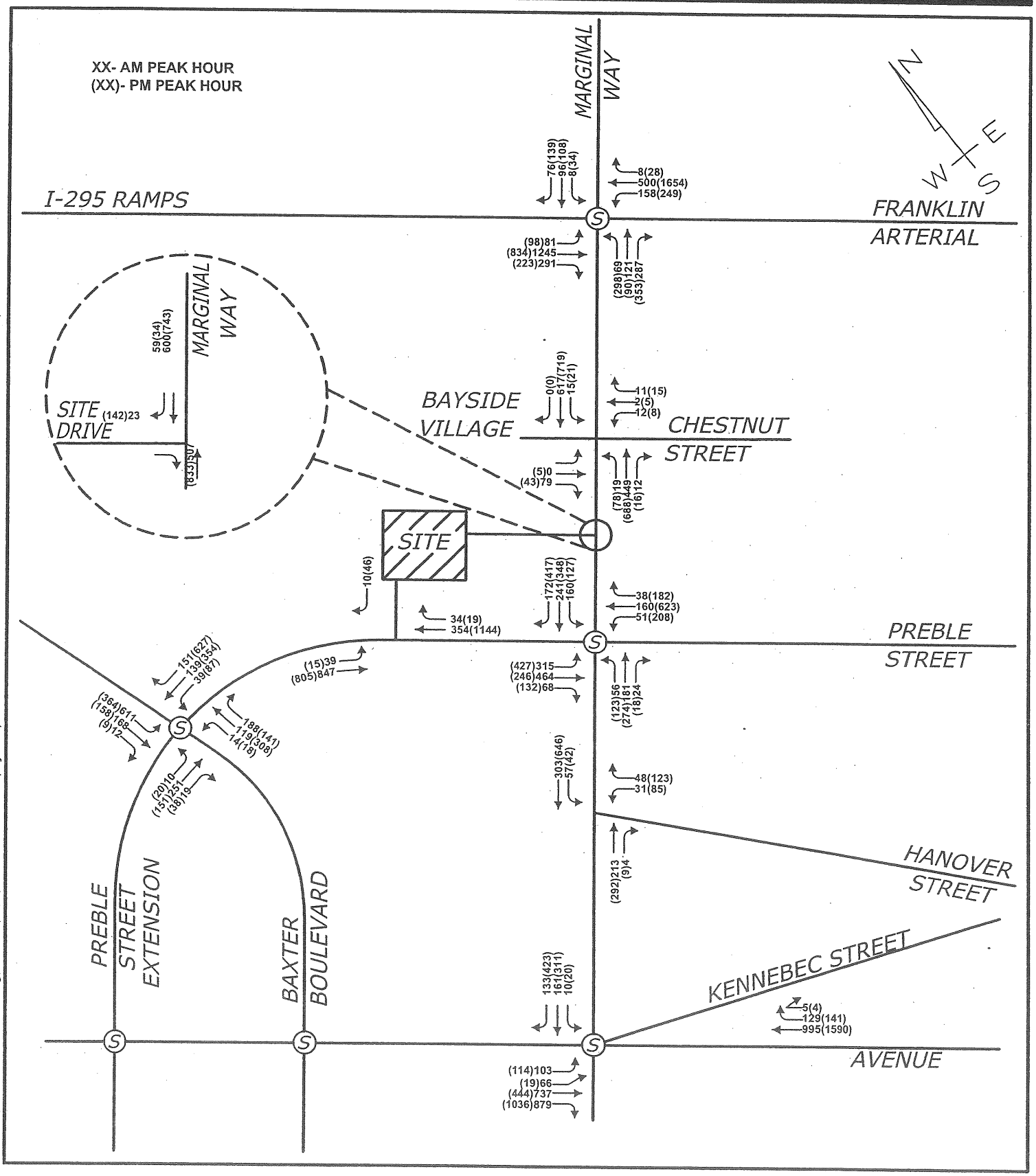
Parking

The submission indicates there will be 434 parking spaces in the four-story parking garage. Although the B-7 zone does not require off-street parking, the Planning Board under site plan review (for buildings 50,000 sq, ft or greater) determines the appropriate number of parking spaces for such developments. A parking demand analysis needs to be submitted by the Applicant.

The parking garage has been designed to accommodate the tenants of the office and retail uses as well as certain off-site uses. The first three floors of the garage have been

2008 Postdevelopment Volumes

Figure No. 10



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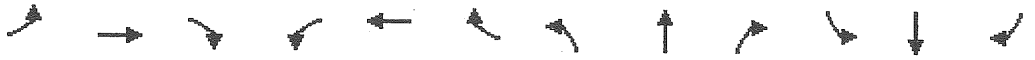
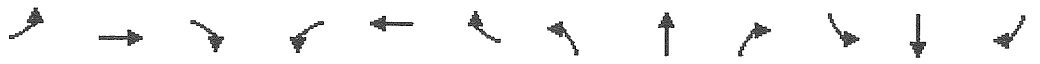


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0		4.0	4.0	4.0	4.0	
Lane Util. Factor		0.95			0.95	1.00		1.00	1.00	1.00	1.00	
Frt		0.99			1.00	0.85		1.00	0.85	1.00	0.99	
Flt Protected		1.00			0.99	1.00		0.99	1.00	0.95	1.00	
Satd. Flow (prot)		3345			3155	1524		1876	1583	1787	1847	
Flt Permitted		0.94			0.82	1.00		0.95	1.00	0.49	1.00	
Satd. Flow (perm)		3148			2619	1524		1787	1583	914	1847	
Volume (vph)	10	233	19	39	134	146	14	119	185	593	168	12
Peak-hour factor, PHF	0.88	0.88	0.88	0.82	0.82	0.82	0.93	0.93	0.93	0.79	0.79	0.79
Adj. Flow (vph)	11	265	22	48	163	178	15	128	199	751	213	15
RTOR Reduction (vph)	0	9	0	0	0	141	0	0	159	0	4	0
Lane Group Flow (vph)	0	289	0	0	211	37	0	143	40	751	224	0
Heavy Vehicles (%)	0%	6%	16%	0%	17%	6%	7%	0%	2%	1%	2%	0%
Turn Type	Perm			Perm		Perm	Perm		Perm	pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)		10.3			10.3	10.3		9.8	9.8	34.0	34.0	
Effective Green, g (s)		11.3			11.3	11.3		10.8	10.8	35.0	35.0	
Actuated g/C Ratio		0.21			0.21	0.21		0.20	0.20	0.64	0.64	
Clearance Time (s)		5.0			5.0	5.0		5.0	5.0	5.0	5.0	
Vehicle Extension (s)		3.0			3.0	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		655			545	317		355	315	914	1191	
v/s Ratio Prot										c0.31	0.12	
v/s Ratio Perm		c0.09			0.08	0.02		0.08	0.02	c0.22		
v/c Ratio		0.44			0.39	0.12		0.40	0.13	0.82	0.19	
Uniform Delay, d1		18.7			18.5	17.5		18.9	17.9	6.3	3.9	
Progression Factor		1.00			1.00	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.5			0.5	0.2		0.8	0.2	6.0	0.1	
Delay (s)		19.2			19.0	17.6		19.7	18.1	12.3	4.0	
Level of Service		B			B	B		B	B	B	A	
Approach Delay (s)		19.2			18.4			18.7			10.4	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	14.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	54.3	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95			1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.98	1.00		1.00	1.00
Satd. Flow (prot)	1703	3539	1583	1736	3370			1805	1553		1646	1380
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.84	1.00		0.97	1.00
Satd. Flow (perm)	1703	3539	1583	1736	3370			1553	1553		1600	1380
Volume (vph)	81	1245	267	134	500	8	69	121	288	8	85	76
Peak-hour factor, PHF	0.94	0.94	0.94	0.85	0.85	0.85	0.97	0.97	0.97	0.88	0.88	0.88
Adj. Flow (vph)	86	1324	284	158	588	9	71	125	297	9	97	86
RTOR Reduction (vph)	0	0	89	0	1	0	0	0	228	0	0	68
Lane Group Flow (vph)	86	1324	195	158	596	0	0	196	69	0	106	18
Heavy Vehicles (%)	6%	2%	2%	4%	7%	0%	4%	3%	4%	25%	14%	17%
Turn Type	Prot		Perm	Prot			pm+pt		Perm	Perm		Perm
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases			2				8		8	4		4
Actuated Green, G (s)	10.6	32.0	32.0	6.6	28.0			13.1	13.1		13.1	13.1
Effective Green, g (s)	11.6	33.0	33.0	7.6	29.0			14.1	14.1		14.1	14.1
Actuated g/C Ratio	0.17	0.49	0.49	0.11	0.43			0.21	0.21		0.21	0.21
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0			5.0	5.0		5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	296	1751	783	198	1465			328	328		338	292
v/s Ratio Prot	0.05	c0.37		c0.09	0.18							
v/s Ratio Perm			0.12					c0.13	0.04		0.07	0.01
v/c Ratio	0.29	0.76	0.25	0.80	0.41			0.60	0.21		0.31	0.06
Uniform Delay, d1	24.0	13.6	9.7	28.8	12.9			23.7	21.7		22.2	21.0
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	0.5	1.9	0.2	19.7	0.2			2.9	0.3		0.5	0.1
Delay (s)	24.5	15.5	9.9	48.5	13.1			26.7	22.0		22.7	21.1
Level of Service	C	B	A	D	B			C	C		C	C
Approach Delay (s)		15.0			20.5			23.9			22.0	
Approach LOS		B			C			C			C	

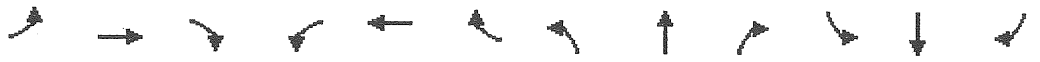
Intersection Summary				
HCM Average Control Delay	18.2	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.72			
Actuated Cycle Length (s)	66.7	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	68.7%	ICU Level of Service	C	
Analysis Period (min)	15			

c Critical Lane Group

Movement	SEL2	SEL	SET	SER	NWT	NWR	NWR2	SWL	SWT	SWR
Lane Configurations										
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0				4.0	4.0
Lane Util. Factor		1.00	0.95	1.00	0.95				0.95	1.00
Frt		1.00	1.00	0.85	0.98				1.00	0.85
Flt Protected		0.95	1.00	1.00	1.00				1.00	1.00
Satd. Flow (prot)		1651	3505	1568	3417				3418	1455
Flt Permitted		0.95	1.00	1.00	1.00				1.00	1.00
Satd. Flow (perm)		1651	3505	1568	3417				3418	1455
Volume (vph)	87	66	737	879	995	119	5	10	154	127
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.87	0.87	0.87	0.81	0.81	0.81
Adj. Flow (vph)	94	71	792	945	1144	137	6	12	190	157
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	165	792	945	1287	0	0	0	202	157
Heavy Vehicles (%)	5%	15%	3%	3%	4%	3%	0%	10%	5%	11%
Turn Type	Prot	Prot		Free				Perm		Free
Protected Phases	3	3	2 3		1 2				4	
Permitted Phases				Free				4	4	Free
Actuated Green, G (s)		15.0	32.0	79.8	43.0				7.8	79.8
Effective Green, g (s)		15.0	32.0	79.8	45.0				7.8	79.8
Actuated g/C Ratio		0.19	0.40	1.00	0.56				0.10	1.00
Clearance Time (s)		4.0							4.0	
Vehicle Extension (s)		3.0							3.0	
Lane Grp Cap (vph)		310	1406	1568	1927				334	1455
v/s Ratio Prot		0.10	0.23		c0.38					
v/s Ratio Perm				c0.60					0.06	0.11
v/c Ratio		0.53	0.56	0.60	0.67				0.60	0.11
Uniform Delay, d1		29.2	18.5	0.0	12.2				34.5	0.0
Progression Factor		1.00	1.00	1.00	0.21				1.00	1.00
Incremental Delay, d2		6.4	1.6	1.7	1.5				3.1	0.1
Delay (s)		35.6	20.1	1.7	4.0				37.6	0.1
Level of Service		D	C	A	A				D	A
Approach Delay (s)			12.3		4.0				21.2	
Approach LOS			B		A				C	

Intersection Summary			
HCM Average Control Delay	10.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	79.8	Sum of lost time (s)	4.0
Intersection Capacity Utilization	54.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	12	12	12	13	12	12	16	11	11	15
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.97	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.98		1.00	0.97		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3319	3352		1656	3248		1736	3340		1694	3355	1708
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3319	3352		1656	3248		1736	3340		1694	3355	1708
Volume (vph)	315	464	68	51	153	38	29	182	24	150	228	172
Peak-hour factor, PHF	0.87	0.87	0.87	0.85	0.85	0.85	0.80	0.80	0.80	0.85	0.85	0.85
Adj. Flow (vph)	362	533	78	60	180	45	36	228	30	176	268	202
RTOR Reduction (vph)	0	8	0	0	16	0	0	9	0	0	0	145
Lane Group Flow (vph)	362	603	0	60	209	0	36	249	0	176	268	57
Heavy Vehicles (%)	2%	2%	3%	9%	7%	11%	4%	7%	0%	3%	4%	4%
Turn Type	Prot			Prot			Prot			Prot		Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												8
Actuated Green, G (s)	15.1	43.1		6.5	34.5		3.9	16.7		14.5	27.3	27.3
Effective Green, g (s)	16.1	44.1		7.5	35.5		4.9	17.7		15.5	28.3	28.3
Actuated g/C Ratio	0.16	0.44		0.07	0.35		0.05	0.18		0.15	0.28	0.28
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	530	1467		123	1144		84	586		260	942	480
v/s Ratio Prot	c0.11	c0.18		0.04	0.06		0.02	c0.07		c0.10	0.08	
v/s Ratio Perm												0.03
v/c Ratio	0.68	0.41		0.49	0.18		0.43	0.42		0.68	0.28	0.12
Uniform Delay, d1	39.9	19.4		44.8	22.6		46.6	37.0		40.3	28.3	27.0
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	3.6	0.9		3.0	0.4		3.5	0.5		6.8	0.2	0.1
Delay (s)	43.6	20.3		47.8	23.0		50.1	37.5		47.1	28.5	27.1
Level of Service	D	C		D	C		D	D		D	C	C
Approach Delay (s)		29.0			28.2			39.1			33.1	
Approach LOS		C			C			D			C	

Intersection Summary			
HCM Average Control Delay	31.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	100.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	45.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	31	48	187	4	57	290
Peak Hour Factor	0.72	0.72	0.76	0.76	0.84	0.84
Hourly flow rate (vph)	43	67	246	5	68	345
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)			759			114
pX, platoon unblocked	0.94					
vC, conflicting volume	557	85			251	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	467	85			251	
tC, single (s)	7.4	7.1			4.4	
tC, 2 stage (s)						
tF (s)	3.8	3.4			2.4	
p0 queue free %	89	93			94	
cM capacity (veh/h)	408	926			1222	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	110	98	98	54	183	230
Volume Left	43	0	0	0	68	0
Volume Right	67	0	0	5	0	0
cSH	618	1700	1700	1700	1222	1700
Volume to Capacity	0.18	0.06	0.06	0.03	0.06	0.14
Queue Length 95th (ft)	16	0	0	0	4	0
Control Delay (s)	12.1	0.0	0.0	0.0	3.3	0.0
Lane LOS	B				A	
Approach Delay (s)	12.1	0.0			1.5	
Approach LOS	B					

Intersection Summary			
Average Delay	2.5		
Intersection Capacity Utilization	28.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	0	79	12	2	11	19	450	12	15	558	0
Peak Hour Factor	0.73	0.73	0.73	0.50	0.50	0.50	0.85	0.85	0.85	0.87	0.87	0.87
Hourly flow rate (vph)	0	0	108	24	4	22	22	529	14	17	641	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)								745			899	
pX, platoon unblocked												
vC, conflicting volume	1009	1264	321	1045	1257	272	641			544		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1009	1264	321	1045	1257	272	641			544		
tC, single (s)	7.5	6.5	6.9	7.8	8.5	6.9	4.1			4.5		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.7	5.0	3.3	2.2			2.4		
p0 queue free %	100	100	84	82	95	97	98			98		
cM capacity (veh/h)	178	164	681	133	75	732	939			906		

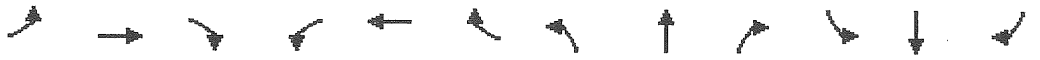
Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	108	24	26	287	279	338	321
Volume Left	0	24	0	22	0	17	0
Volume Right	108	0	22	0	14	0	0
cSH	681	133	312	939	1700	906	1700
Volume to Capacity	0.16	0.18	0.08	0.02	0.16	0.02	0.19
Queue Length 95th (ft)	14	16	7	2	0	1	0
Control Delay (s)	11.3	37.8	17.6	0.9	0.0	0.7	0.0
Lane LOS	B	E	C	A		A	
Approach Delay (s)	11.3	27.3		0.5		0.3	
Approach LOS	B	D					

Intersection Summary			
Average Delay	2.2		
Intersection Capacity Utilization	40.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0		4.0	4.0	4.0	4.0	
Lane Util. Factor		0.95			0.95	1.00		1.00	1.00	1.00	1.00	
Frt		0.99			1.00	0.85		1.00	0.85	1.00	0.99	
Flt Protected		1.00			0.99	1.00		0.99	1.00	0.95	1.00	
Satd. Flow (prot)		3349			3153	1524		1876	1583	1787	1847	
Flt Permitted		0.94			0.82	1.00		0.95	1.00	0.49	1.00	
Satd. Flow (perm)		3154			2614	1524		1787	1583	916	1847	
Volume (vph)	10	251	19	39	139	151	14	119	188	611	168	12
Peak-hour factor, PHF	0.88	0.88	0.88	0.82	0.82	0.82	0.93	0.93	0.93	0.79	0.79	0.79
Adj. Flow (vph)	11	285	22	48	170	184	15	128	202	773	213	15
RTOR Reduction (vph)	0	8	0	0	0	145	0	0	148	0	4	0
Lane Group Flow (vph)	0	310	0	0	218	39	0	143	54	773	224	0
Heavy Vehicles (%)	0%	6%	16%	0%	17%	6%	7%	0%	2%	1%	2%	0%
Turn Type	Perm			Perm		Perm	Perm		Perm	pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)		10.7			10.7	10.7		9.9	9.9	34.7	34.7	
Effective Green, g (s)		11.7			11.7	11.7		10.9	10.9	35.7	35.7	
Actuated g/C Ratio		0.21			0.21	0.21		0.20	0.20	0.64	0.64	
Clearance Time (s)		5.0			5.0	5.0		5.0	5.0	5.0	5.0	
Vehicle Extension (s)		3.0			3.0	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		666			552	322		352	311	917	1190	
v/s Ratio Prot										c0.32	0.12	
v/s Ratio Perm		c0.10			0.08	0.03		0.08	0.03	c0.23		
v/c Ratio		0.47			0.39	0.12		0.41	0.17	0.84	0.19	
Uniform Delay, d1		19.1			18.8	17.7		19.4	18.5	6.5	4.0	
Progression Factor		1.00			1.00	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.5			0.5	0.2		0.8	0.3	7.1	0.1	
Delay (s)		19.6			19.3	17.9		20.2	18.8	13.7	4.1	
Level of Service		B			B	B		C	B	B	A	
Approach Delay (s)		19.6			18.6			19.4			11.5	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	15.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	55.4	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95			1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.98	1.00		1.00	1.00
Satd. Flow (prot)	1703	3539	1583	1736	3370			1805	1553		1648	1380
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.84	1.00		0.97	1.00
Satd. Flow (perm)	1703	3539	1583	1736	3370			1545	1553		1607	1380
Volume (vph)	81	1245	291	158	500	8	69	121	287	8	96	76
Peak-hour factor, PHF	0.94	0.94	0.94	0.85	0.85	0.85	0.97	0.97	0.97	0.88	0.88	0.88
Adj. Flow (vph)	86	1324	310	186	588	9	71	125	296	9	109	86
RTOR Reduction (vph)	0	0	102	0	1	0	0	0	228	0	0	68
Lane Group Flow (vph)	86	1324	208	186	596	0	0	196	68	0	118	18
Heavy Vehicles (%)	6%	2%	2%	4%	7%	0%	4%	3%	4%	25%	14%	17%
Turn Type	Prot		Perm	Prot			pm+pt		Perm	Perm		Perm
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases			2				8		8	4		4
Actuated Green, G (s)	10.9	31.7	31.7	9.0	29.8			13.6	13.6		13.6	13.6
Effective Green, g (s)	11.9	32.7	32.7	10.0	30.8			14.6	14.6		14.6	14.6
Actuated g/C Ratio	0.17	0.47	0.47	0.14	0.44			0.21	0.21		0.21	0.21
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0			5.0	5.0		5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	292	1670	747	251	1498			325	327		339	291
v/s Ratio Prot	0.05	c0.37		c0.11	0.18							
v/s Ratio Perm			0.13					c0.13	0.04		0.07	0.01
v/c Ratio	0.29	0.79	0.28	0.74	0.40			0.60	0.21		0.35	0.06
Uniform Delay, d1	25.0	15.4	11.1	28.4	13.0			24.7	22.6		23.3	21.9
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	0.6	2.7	0.2	11.2	0.2			3.1	0.3		0.6	0.1
Delay (s)	25.6	18.1	11.3	39.6	13.2			27.9	22.9		23.9	22.0
Level of Service	C	B	B	D	B			C	C		C	C
Approach Delay (s)		17.3			19.4			24.9			23.1	
Approach LOS		B			B			C			C	

Intersection Summary				
HCM Average Control Delay	19.3	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.74			
Actuated Cycle Length (s)	69.3	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	70.0%	ICU Level of Service	C	
Analysis Period (min)	15			

c Critical Lane Group

Movement	SEL2	SEL	SET	SER	NWT	NWR	NWR2	SWL	SWT	SWR
Lane Configurations										
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0				4.0	4.0
Lane Util. Factor		1.00	0.95	1.00	0.95				0.95	1.00
Frt		1.00	1.00	0.85	0.98				1.00	0.85
Flt Protected		0.95	1.00	1.00	1.00				1.00	1.00
Satd. Flow (prot)		1657	3505	1568	3414				3419	1455
Flt Permitted		0.95	1.00	1.00	1.00				1.00	1.00
Satd. Flow (perm)		1657	3505	1568	3414				3419	1455
Volume (vph)	103	66	737	879	995	129	5	10	161	133
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.87	0.87	0.87	0.81	0.81	0.81
Adj. Flow (vph)	111	71	792	945	1144	148	6	12	199	164
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	182	792	945	1298	0	0	0	211	164
Heavy Vehicles (%)	5%	15%	3%	3%	4%	3%	0%	10%	5%	11%
Turn Type	Prot	Prot		Free				Perm		Free
Protected Phases	3	3	2 3		1 2				4	
Permitted Phases				Free				4	4	Free
Actuated Green, G (s)		15.0	32.0	79.9	43.0				7.9	79.9
Effective Green, g (s)		15.0	32.0	79.9	45.0				7.9	79.9
Actuated g/C Ratio		0.19	0.40	1.00	0.56				0.10	1.00
Clearance Time (s)		4.0							4.0	
Vehicle Extension (s)		3.0							3.0	
Lane Grp Cap (vph)		311	1404	1568	1923				338	1455
v/s Ratio Prot		0.11	0.23		c0.38					
v/s Ratio Perm				c0.60					0.06	0.11
v/c Ratio		0.59	0.56	0.60	0.67				0.62	0.11
Uniform Delay, d1		29.6	18.5	0.0	12.3				34.6	0.0
Progression Factor		1.00	1.00	1.00	0.21				1.00	1.00
Incremental Delay, d2		7.8	1.6	1.7	1.5				3.6	0.2
Delay (s)		37.4	20.2	1.7	4.1				38.1	0.2
Level of Service		D	C	A	A				D	A
Approach Delay (s)			12.7		4.1				21.5	
Approach LOS			B		A				C	

Intersection Summary			
HCM Average Control Delay	10.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	79.9	Sum of lost time (s)	4.0
Intersection Capacity Utilization	55.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	12	12	12	13	12	12	16	11	11	15
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.97	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.98		1.00	0.97		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3319	3352		1656	3253		1736	3340		1694	3355	1708
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3319	3352		1656	3253		1736	3340		1694	3355	1708
Volume (vph)	315	464	68	51	160	38	56	181	24	160	241	172
Peak-hour factor, PHF	0.87	0.87	0.87	0.85	0.85	0.85	0.80	0.80	0.80	0.85	0.85	0.85
Adj. Flow (vph)	362	533	78	60	188	45	70	226	30	188	284	202
RTOR Reduction (vph)	0	8	0	0	16	0	0	10	0	0	0	150
Lane Group Flow (vph)	362	603	0	60	217	0	70	246	0	188	284	52
Heavy Vehicles (%)	2%	2%	3%	9%	7%	11%	4%	7%	0%	3%	4%	4%
Turn Type	Prot			Prot			Prot			Prot		Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												8
Actuated Green, G (s)	15.1	43.1		6.5	34.5		6.1	15.7		15.0	24.6	24.6
Effective Green, g (s)	16.1	44.1		7.5	35.5		7.1	16.7		16.0	25.6	25.6
Actuated g/C Ratio	0.16	0.44		0.07	0.35		0.07	0.17		0.16	0.26	0.26
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	533	1474		124	1151		123	556		270	856	436
v/s Ratio Prot	c0.11	c0.18		0.04	0.07		0.04	c0.07		c0.11	0.08	
v/s Ratio Perm												0.03
v/c Ratio	0.68	0.41		0.48	0.19		0.57	0.44		0.70	0.33	0.12
Uniform Delay, d1	39.7	19.2		44.5	22.4		45.1	37.6		39.9	30.4	28.7
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	3.4	0.8		3.0	0.4		5.9	0.6		7.6	0.2	0.1
Delay (s)	43.1	20.0		47.5	22.8		51.0	38.2		47.4	30.6	28.8
Level of Service	D	C		D	C		D	D		D	C	C
Approach Delay (s)		28.6			27.9			40.9			34.8	
Approach LOS		C			C			D			C	

Intersection Summary			
HCM Average Control Delay	32.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	100.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	46.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	31	48	213	4	57	303
Peak Hour Factor	0.72	0.72	0.76	0.76	0.84	0.84
Hourly flow rate (vph)	43	67	280	5	68	361
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)			759			114
pX, platoon unblocked	0.94					
vC, conflicting volume	599	96			286	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	502	96			286	
tC, single (s)	7.4	7.1			4.4	
tC, 2 stage (s)						
tF (s)	3.8	3.4			2.4	
p0 queue free %	89	93			94	
cM capacity (veh/h)	383	910			1184	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	110	112	112	61	188	240
Volume Left	43	0	0	0	68	0
Volume Right	67	0	0	5	0	0
cSH	591	1700	1700	1700	1184	1700
Volume to Capacity	0.19	0.07	0.07	0.04	0.06	0.14
Queue Length 95th (ft)	17	0	0	0	5	0
Control Delay (s)	12.5	0.0	0.0	0.0	3.3	0.0
Lane LOS	B				A	
Approach Delay (s)	12.5	0.0			1.4	
Approach LOS	B					

Intersection Summary			
Average Delay	2.4		
Intersection Capacity Utilization	28.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	0	79	12	2	11	19	449	12	15	617	0
Peak Hour Factor	0.73	0.73	0.73	0.50	0.50	0.50	0.85	0.85	0.85	0.87	0.87	0.87
Hourly flow rate (vph)	0	0	108	24	4	22	22	528	14	17	709	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)								745			899	
pX, platoon unblocked												
vC, conflicting volume	1077	1331	355	1077	1324	271	709			542		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1077	1331	355	1077	1324	271	709			542		
tC, single (s)	7.5	6.5	6.9	7.8	8.5	6.9	4.1			4.5		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.7	5.0	3.3	2.2			2.4		
p0 queue free %	100	100	83	81	94	97	97			98		
cM capacity (veh/h)	158	149	648	125	66	733	886			907		

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	108	24	26	286	278	372	355
Volume Left	0	24	0	22	0	17	0
Volume Right	108	0	22	0	14	0	0
cSH	648	125	287	886	1700	907	1700
Volume to Capacity	0.17	0.19	0.09	0.03	0.16	0.02	0.21
Queue Length 95th (ft)	15	17	7	2	0	1	0
Control Delay (s)	11.7	40.7	18.8	1.0	0.0	0.6	0.0
Lane LOS	B	E	C	A		A	
Approach Delay (s)	11.7	29.3		0.5		0.3	
Approach LOS	B	D					

Intersection Summary			
Average Delay	2.2		
Intersection Capacity Utilization	41.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	0	23	0	507	600	59
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	25	0	551	652	64
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)				349	1295	
pX, platoon unblocked	0.97					
vC, conflicting volume	960	358	716			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	924	358	716			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	96	100			
cM capacity (veh/h)	263	644	894			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	25	276	276	435	282
Volume Left	0	0	0	0	0
Volume Right	25	0	0	0	64
cSH	644	1700	1700	1700	1700
Volume to Capacity	0.04	0.16	0.16	0.26	0.17
Queue Length 95th (ft)	3	0	0	0	0
Control Delay (s)	10.8	0.0	0.0	0.0	0.0
Lane LOS	B				
Approach Delay (s)	10.8	0.0		0.0	
Approach LOS	B				

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	28.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	39	847	354	34	0	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	42	921	385	37	0	11
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)			338			
pX, platoon unblocked	1.00				1.00	1.00
vC, conflicting volume	422				948	211
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	417				945	205
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	96				100	99
cM capacity (veh/h)	1150				253	805

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	42	460	460	257	165	11
Volume Left	42	0	0	0	0	0
Volume Right	0	0	0	0	37	11
cSH	1150	1700	1700	1700	1700	805
Volume to Capacity	0.04	0.27	0.27	0.15	0.10	0.01
Queue Length 95th (ft)	3	0	0	0	0	1
Control Delay (s)	8.3	0.0	0.0	0.0	0.0	9.5
Lane LOS	A					A
Approach Delay (s)	0.4			0.0		9.5
Approach LOS						A

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	26.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0		4.0	4.0	4.0	4.0	
Lane Util. Factor		0.95			0.95	1.00		1.00	1.00	1.00	1.00	
Frt		0.97			1.00	0.85		1.00	0.85	1.00	0.99	
Flt Protected		1.00			0.99	1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)		3422			3491	1583		1895	1615	1805	1885	
Flt Permitted		0.88			0.83	1.00		0.98	1.00	0.28	1.00	
Satd. Flow (perm)		3036			2919	1583		1856	1615	535	1885	
Volume (vph)	20	144	38	81	334	607	18	308	140	357	158	9
Peak-hour factor, PHF	0.75	0.75	0.75	0.85	0.85	0.85	0.94	0.94	0.94	0.86	0.86	0.86
Adj. Flow (vph)	27	192	51	95	393	714	19	328	149	415	184	10
RTOR Reduction (vph)	0	34	0	0	0	398	0	0	108	0	3	0
Lane Group Flow (vph)	0	236	0	0	488	316	0	347	41	415	191	0
Heavy Vehicles (%)	0%	2%	3%	0%	3%	2%	0%	0%	0%	0%	0%	0%
Turn Type	Perm			Perm		Perm	Perm		Perm	pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)		15.1			15.1	15.1		13.9	13.9	28.6	28.6	
Effective Green, g (s)		16.1			16.1	16.1		14.9	14.9	29.6	29.6	
Actuated g/C Ratio		0.30			0.30	0.30		0.28	0.28	0.55	0.55	
Clearance Time (s)		5.0			5.0	5.0		5.0	5.0	5.0	5.0	
Vehicle Extension (s)		3.0			3.0	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		910			875	475		515	448	548	1039	
v/s Ratio Prot										c0.15	0.10	
v/s Ratio Perm		0.08			0.17	c0.20		0.19	0.03	c0.27		
v/c Ratio		0.26			0.56	0.66		0.67	0.09	0.76	0.18	
Uniform Delay, d1		14.3			15.8	16.4		17.2	14.4	8.3	6.0	
Progression Factor		1.00			1.00	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.2			0.8	3.5		3.5	0.1	5.9	0.1	
Delay (s)		14.4			16.6	19.9		20.7	14.5	14.3	6.1	
Level of Service		B			B	B		C	B	B	A	
Approach Delay (s)		14.4			18.6			18.8			11.7	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	16.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	53.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	70.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95			1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.96	1.00		0.99	1.00
Satd. Flow (prot)	1752	3539	1583	1770	3566			1787	1583		1787	1599
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.64	1.00		0.69	1.00
Satd. Flow (perm)	1752	3539	1583	1770	3566			1193	1583		1241	1599
Volume (vph)	98	834	210	236	1654	28	298	90	355	34	101	139
Peak-hour factor, PHF	0.89	0.89	0.89	0.90	0.90	0.90	0.85	0.85	0.85	0.90	0.90	0.90
Adj. Flow (vph)	110	937	236	262	1838	31	351	106	418	38	112	154
RTOR Reduction (vph)	0	0	89	0	1	0	0	0	262	0	0	96
Lane Group Flow (vph)	110	937	147	262	1868	0	0	457	156	0	150	58
Heavy Vehicles (%)	3%	2%	2%	2%	1%	0%	1%	7%	2%	8%	4%	1%
Turn Type	Prot		Perm	Prot			pm+pt		Perm	Perm		Perm
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases			2				8		8	4		4
Actuated Green, G (s)	8.8	36.1	36.1	18.7	46.0			40.0	40.0		40.0	40.0
Effective Green, g (s)	9.8	37.1	37.1	19.7	47.0			41.0	41.0		41.0	41.0
Actuated g/C Ratio	0.09	0.34	0.34	0.18	0.43			0.37	0.37		0.37	0.37
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0			5.0	5.0		5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	156	1196	535	318	1526			445	591		463	597
v/s Ratio Prot	0.06	c0.26		0.15	c0.52							
v/s Ratio Perm			0.09					c0.38	0.10		0.12	0.04
v/c Ratio	0.71	0.78	0.27	0.82	1.22			1.03	0.26		0.32	0.10
Uniform Delay, d1	48.6	32.7	26.5	43.4	31.4			34.4	23.9		24.5	22.4
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	13.5	3.4	0.3	15.7	106.9			49.7	0.2		0.4	0.1
Delay (s)	62.1	36.2	26.8	59.1	138.3			84.1	24.2		24.9	22.4
Level of Service	E	D	C	E	F			F	C		C	C
Approach Delay (s)		36.7			128.6			55.5			23.7	
Approach LOS		D			F			E			C	

Intersection Summary			
HCM Average Control Delay	82.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	109.8	Sum of lost time (s)	8.0
Intersection Capacity Utilization	89.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL2	SEL	SET	SER	NWT	NWR	NWR2	SWL	SWT	SWR
Lane Configurations										
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0				4.0	4.0
Lane Util. Factor		1.00	0.95	1.00	0.95				0.95	1.00
Frt		1.00	1.00	0.85	0.99				1.00	0.85
Flt Protected		0.95	1.00	1.00	1.00				1.00	1.00
Satd. Flow (prot)		1723	3505	1615	3494				3553	1583
Flt Permitted		0.95	1.00	1.00	1.00				1.00	1.00
Satd. Flow (perm)		1723	3505	1615	3494				3553	1583
Volume (vph)	109	19	444	1036	1590	136	4	20	282	378
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.97	0.97	0.97	0.83	0.83	0.83
Adj. Flow (vph)	114	20	462	1079	1639	140	4	24	340	455
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	134	462	1079	1783	0	0	0	364	455
Heavy Vehicles (%)	1%	26%	3%	0%	2%	3%	0%	5%	1%	2%
Turn Type	Prot	Prot		Free				Perm		Free
Protected Phases	3	3	2 3		1 2				4	
Permitted Phases				Free				4	4	Free
Actuated Green, G (s)		10.0	28.0	79.8	45.0				10.8	79.8
Effective Green, g (s)		10.0	28.0	79.8	47.0				10.8	79.8
Actuated g/C Ratio		0.13	0.35	1.00	0.59				0.14	1.00
Clearance Time (s)		4.0							4.0	
Vehicle Extension (s)		3.0							3.0	
Lane Grp Cap (vph)		216	1230	1615	2058				481	1583
v/s Ratio Prot		0.08	0.13		c0.51					
v/s Ratio Perm				c0.67					0.10	0.29
v/c Ratio		0.62	0.38	0.67	0.87				0.76	0.29
Uniform Delay, d1		33.1	19.4	0.0	13.8				33.2	0.0
Progression Factor		1.00	1.00	1.00	0.48				1.00	1.00
Incremental Delay, d2		12.7	0.9	2.2	1.5				6.7	0.5
Delay (s)		45.8	20.2	2.2	8.1				39.9	0.5
Level of Service		D	C	A	A				D	A
Approach Delay (s)			10.7		8.1				18.0	
Approach LOS			B		A				B	

Intersection Summary			
HCM Average Control Delay	11.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	79.8	Sum of lost time (s)	4.0
Intersection Capacity Utilization	73.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	12	12	12	13	12	12	16	11	11	15
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.97	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.95		1.00	0.97		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3351	3286		1752	3452		1770	3511		1678	3355	1759
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3351	3286		1752	3452		1770	3511		1678	3355	1759
Volume (vph)	427	246	132	208	616	182	111	276	18	60	274	417
Peak-hour factor, PHF	0.92	0.92	0.92	0.86	0.86	0.86	0.91	0.91	0.91	0.86	0.86	0.86
Adj. Flow (vph)	464	267	143	242	716	212	122	303	20	70	319	485
RTOR Reduction (vph)	0	51	0	0	21	0	0	4	0	0	0	342
Lane Group Flow (vph)	464	359	0	242	907	0	122	319	0	70	319	143
Heavy Vehicles (%)	1%	1%	0%	3%	1%	1%	2%	2%	0%	4%	4%	1%
Turn Type	Prot			Prot			Prot			Prot		Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												8
Actuated Green, G (s)	17.9	36.6		18.7	37.4		11.0	20.9		8.0	17.9	17.9
Effective Green, g (s)	18.9	37.6		19.7	38.4		12.0	21.9		9.0	18.9	18.9
Actuated g/C Ratio	0.18	0.36		0.19	0.37		0.12	0.21		0.09	0.18	0.18
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	608	1186		331	1272		204	738		145	609	319
v/s Ratio Prot	c0.14	0.11		0.14	c0.26		c0.07	c0.09		0.04	c0.10	
v/s Ratio Perm												0.08
v/c Ratio	0.76	0.30		0.73	0.71		0.60	0.43		0.48	0.52	0.45
Uniform Delay, d1	40.5	23.9		39.8	28.2		43.8	35.7		45.4	38.6	38.0
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	5.7	0.7		8.1	3.4		4.7	0.4		2.5	0.8	1.0
Delay (s)	46.2	24.5		47.8	31.6		48.5	36.2		47.9	39.4	39.0
Level of Service	D	C		D	C		D	D		D	D	D
Approach Delay (s)		36.0			35.0			39.5			39.9	
Approach LOS		D			C			D			D	

Intersection Summary			
HCM Average Control Delay	37.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	104.2	Sum of lost time (s)	16.0
Intersection Capacity Utilization	64.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	85	123	282	9	42	572
Peak Hour Factor	0.77	0.77	0.84	0.84	0.95	0.95
Hourly flow rate (vph)	110	160	336	11	44	602
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)			758			114
pX, platoon unblocked	0.92					
vC, conflicting volume	731	117			346	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	621	117			346	
tC, single (s)	7.0	7.1			4.4	
tC, 2 stage (s)						
tF (s)	3.6	3.4			2.3	
p0 queue free %	69	82			96	
cM capacity (veh/h)	351	894			1134	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	270	134	134	78	245	401
Volume Left	110	0	0	0	44	0
Volume Right	160	0	0	11	0	0
cSH	548	1700	1700	1700	1134	1700
Volume to Capacity	0.49	0.08	0.08	0.05	0.04	0.24
Queue Length 95th (ft)	68	0	0	0	3	0
Control Delay (s)	17.8	0.0	0.0	0.0	1.8	0.0
Lane LOS	C				A	
Approach Delay (s)	17.8	0.0			0.7	
Approach LOS	C					

Intersection Summary			
Average Delay	4.2		
Intersection Capacity Utilization	44.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	5	43	8	5	15	78	690	16	21	686	0
Peak Hour Factor	0.79	0.79	0.79	0.60	0.60	0.60	0.92	0.92	0.92	0.88	0.88	0.88
Hourly flow rate (vph)	0	6	54	13	8	25	85	750	17	24	780	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)								745			899	
pX, platoon unblocked	0.97	0.97		0.97	0.97	0.97				0.97		
vC, conflicting volume	1401	1764	390	1423	1756	384	780			767		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1385	1758	390	1408	1749	340	780			734		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.3		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.3		
p0 queue free %	100	91	91	82	89	96	90			97		
cM capacity (veh/h)	79	73	615	75	74	644	847			794		

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	61	13	33	460	392	414	390
Volume Left	0	13	0	85	0	24	0
Volume Right	54	0	25	0	17	0	0
cSH	346	75	220	847	1700	794	1700
Volume to Capacity	0.18	0.18	0.15	0.10	0.23	0.03	0.23
Queue Length 95th (ft)	16	15	13	8	0	2	0
Control Delay (s)	17.6	62.8	24.3	2.8	0.0	0.9	0.0
Lane LOS	C	F	C	A		A	
Approach Delay (s)	17.6	35.3		1.5		0.5	
Approach LOS	C	E					

Intersection Summary			
Average Delay	2.5		
Intersection Capacity Utilization	58.1%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0		4.0	4.0	4.0	4.0	
Lane Util. Factor		0.95			0.95	1.00		1.00	1.00	1.00	1.00	
Frt		0.97			1.00	0.85		1.00	0.85	1.00	0.99	
Flt Protected		1.00			0.99	1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)		3426			3491	1583		1895	1615	1805	1885	
Flt Permitted		0.88			0.82	1.00		0.98	1.00	0.28	1.00	
Satd. Flow (perm)		3036			2899	1583		1856	1615	527	1885	
Volume (vph)	20	151	38	87	354	627	18	308	141	364	158	9
Peak-hour factor, PHF	0.75	0.75	0.75	0.85	0.85	0.85	0.94	0.94	0.94	0.86	0.86	0.86
Adj. Flow (vph)	27	201	51	102	416	738	19	328	150	423	184	10
RTOR Reduction (vph)	0	33	0	0	0	395	0	0	109	0	3	0
Lane Group Flow (vph)	0	246	0	0	518	343	0	347	41	423	191	0
Heavy Vehicles (%)	0%	2%	3%	0%	3%	2%	0%	0%	0%	0%	0%	0%
Turn Type	Perm			Perm		Perm	Perm		Perm	pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)		15.6			15.6	15.6		13.9	13.9	28.7	28.7	
Effective Green, g (s)		16.6			16.6	16.6		14.9	14.9	29.7	29.7	
Actuated g/C Ratio		0.31			0.31	0.31		0.27	0.27	0.55	0.55	
Clearance Time (s)		5.0			5.0	5.0		5.0	5.0	5.0	5.0	
Vehicle Extension (s)		3.0			3.0	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		928			886	484		509	443	542	1031	
v/s Ratio Prot										c0.16	0.10	
v/s Ratio Perm		0.08			0.18	c0.22		0.19	0.03	c0.27		
v/c Ratio		0.27			0.58	0.71		0.68	0.09	0.78	0.19	
Uniform Delay, d1		14.2			15.9	16.7		17.6	14.7	8.6	6.2	
Progression Factor		1.00			1.00	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.2			1.0	4.7		3.7	0.1	7.2	0.1	
Delay (s)		14.4			16.9	21.4		21.3	14.8	15.8	6.3	
Level of Service		B			B	C		C	B	B	A	
Approach Delay (s)		14.4			19.6			19.3			12.8	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	17.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	54.3	Sum of lost time (s)	8.0
Intersection Capacity Utilization	72.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95			1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.96	1.00		0.99	1.00
Satd. Flow (prot)	1752	3539	1583	1770	3566			1787	1583		1789	1599
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.63	1.00		0.69	1.00
Satd. Flow (perm)	1752	3539	1583	1770	3566			1173	1583		1250	1599
Volume (vph)	98	834	223	249	1654	28	298	90	353	34	108	139
Peak-hour factor, PHF	0.89	0.89	0.89	0.90	0.90	0.90	0.85	0.85	0.85	0.90	0.90	0.90
Adj. Flow (vph)	110	937	251	277	1838	31	351	106	415	38	120	154
RTOR Reduction (vph)	0	0	96	0	1	0	0	0	260	0	0	96
Lane Group Flow (vph)	110	937	155	277	1868	0	0	457	155	0	158	58
Heavy Vehicles (%)	3%	2%	2%	2%	1%	0%	1%	7%	2%	8%	4%	1%
Turn Type	Prot		Perm	Prot			pm+pt		Perm	Perm		Perm
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases			2				8		8	4		4
Actuated Green, G (s)	8.8	35.7	35.7	19.1	46.0			40.0	40.0		40.0	40.0
Effective Green, g (s)	9.8	36.7	36.7	20.1	47.0			41.0	41.0		41.0	41.0
Actuated g/C Ratio	0.09	0.33	0.33	0.18	0.43			0.37	0.37		0.37	0.37
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0			5.0	5.0		5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	156	1183	529	324	1526			438	591		467	597
v/s Ratio Prot	0.06	c0.26		0.16	c0.52							
v/s Ratio Perm			0.10					c0.39	0.10		0.13	0.04
v/c Ratio	0.71	0.79	0.29	0.85	1.22			1.04	0.26		0.34	0.10
Uniform Delay, d1	48.6	33.1	27.0	43.4	31.4			34.4	23.9		24.7	22.4
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	13.5	3.7	0.3	19.2	106.9			54.8	0.2		0.4	0.1
Delay (s)	62.1	36.8	27.3	62.7	138.3			89.2	24.1		25.1	22.4
Level of Service	E	D	C	E	F			F	C		C	C
Approach Delay (s)		37.1			128.5			58.2			23.8	
Approach LOS		D			F			E			C	

Intersection Summary			
HCM Average Control Delay	82.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	109.8	Sum of lost time (s)	8.0
Intersection Capacity Utilization	89.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL2	SEL	SET	SER	NWT	NWR	NWR2	SWL	SWT	SWR
Lane Configurations										
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0				4.0	4.0
Lane Util. Factor		1.00	0.95	1.00	0.95				0.95	1.00
Frt		1.00	1.00	0.85	0.99				1.00	0.85
Flt Protected		0.95	1.00	1.00	1.00				1.00	1.00
Satd. Flow (prot)		1726	3505	1615	3492				3555	1583
Flt Permitted		0.95	1.00	1.00	1.00				1.00	1.00
Satd. Flow (perm)		1726	3505	1615	3492				3555	1583
Volume (vph)	114	19	444	1036	1590	141	4	20	311	423
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.97	0.97	0.97	0.83	0.83	0.83
Adj. Flow (vph)	119	20	462	1079	1639	145	4	24	375	510
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	139	462	1079	1788	0	0	0	399	510
Heavy Vehicles (%)	1%	26%	3%	0%	2%	3%	0%	5%	1%	2%
Turn Type	Prot	Prot		Free				Perm		Free
Protected Phases	3	3	2 3		1 2				4	
Permitted Phases				Free				4	4	Free
Actuated Green, G (s)		10.0	28.0	80.0	45.0				11.0	80.0
Effective Green, g (s)		10.0	28.0	80.0	47.0				11.0	80.0
Actuated g/C Ratio		0.12	0.35	1.00	0.59				0.14	1.00
Clearance Time (s)		4.0							4.0	
Vehicle Extension (s)		3.0							3.0	
Lane Grp Cap (vph)		216	1227	1615	2052				489	1583
v/s Ratio Prot		0.08	0.13		c0.51					
v/s Ratio Perm				c0.67					0.11	0.32
v/c Ratio		0.64	0.38	0.67	0.87				0.82	0.32
Uniform Delay, d1		33.3	19.5	0.0	13.9				33.5	0.0
Progression Factor		1.00	1.00	1.00	0.48				1.00	1.00
Incremental Delay, d2		13.8	0.9	2.2	1.5				10.1	0.5
Delay (s)		47.2	20.3	2.2	8.2				43.6	0.5
Level of Service		D	C	A	A				D	A
Approach Delay (s)			10.9		8.2				19.5	
Approach LOS			B		A				B	

Intersection Summary			
HCM Average Control Delay	11.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	4.0
Intersection Capacity Utilization	75.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

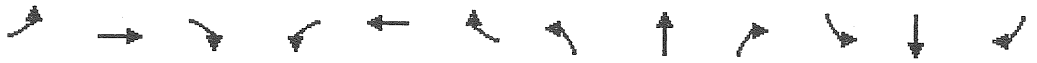
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	12	12	12	13	12	12	16	11	11	15
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.97	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.95		1.00	0.97		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3351	3286		1752	3453		1770	3510		1678	3355	1759
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3351	3286		1752	3453		1770	3510		1678	3355	1759
Volume (vph)	427	246	132	208	623	182	123	274	18	127	348	417
Peak-hour factor, PHF	0.92	0.92	0.92	0.86	0.86	0.86	0.91	0.91	0.91	0.86	0.86	0.86
Adj. Flow (vph)	464	267	143	242	724	212	135	301	20	148	405	485
RTOR Reduction (vph)	0	52	0	0	21	0	0	4	0	0	0	331
Lane Group Flow (vph)	464	358	0	242	915	0	135	317	0	148	405	154
Heavy Vehicles (%)	1%	1%	0%	3%	1%	1%	2%	2%	0%	4%	4%	1%
Turn Type	Prot			Prot			Prot			Prot		Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												8
Actuated Green, G (s)	18.0	36.3		19.1	37.4		11.5	18.3		12.5	19.3	19.3
Effective Green, g (s)	19.0	37.3		20.1	38.4		12.5	19.3		13.5	20.3	20.3
Actuated g/C Ratio	0.18	0.35		0.19	0.36		0.12	0.18		0.13	0.19	0.19
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	600	1154		332	1249		208	638		213	641	336
v/s Ratio Prot	c0.14	0.11		0.14	c0.26		0.08	0.09		c0.09	c0.12	
v/s Ratio Perm												0.09
v/c Ratio	0.77	0.31		0.73	0.73		0.65	0.50		0.69	0.63	0.46
Uniform Delay, d1	41.5	25.1		40.5	29.4		44.8	39.1		44.4	39.5	38.1
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	6.2	0.7		7.8	3.8		6.8	0.6		9.4	2.0	1.0
Delay (s)	47.7	25.8		48.3	33.3		51.6	39.7		53.8	41.5	39.1
Level of Service	D	C		D	C		D	D		D	D	D
Approach Delay (s)		37.4			36.3			43.2			42.1	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	39.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	106.2	Sum of lost time (s)	8.0
Intersection Capacity Utilization	65.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	85	123	292	9	42	646
Peak Hour Factor	0.77	0.77	0.84	0.84	0.95	0.95
Hourly flow rate (vph)	110	160	348	11	44	680
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)			758			114
pX, platoon unblocked	0.89					
vC, conflicting volume	781	121			358	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	638	121			358	
tC, single (s)	7.0	7.1			4.4	
tC, 2 stage (s)						
tF (s)	3.6	3.4			2.3	
p0 queue free %	67	82			96	
cM capacity (veh/h)	332	888			1122	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	270	139	139	80	271	453
Volume Left	110	0	0	0	44	0
Volume Right	160	0	0	11	0	0
cSH	528	1700	1700	1700	1122	1700
Volume to Capacity	0.51	0.08	0.08	0.05	0.04	0.27
Queue Length 95th (ft)	72	0	0	0	3	0
Control Delay (s)	18.8	0.0	0.0	0.0	1.7	0.0
Lane LOS	C				A	
Approach Delay (s)	18.8	0.0			0.6	
Approach LOS	C					

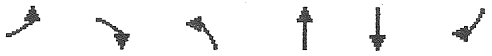
Intersection Summary			
Average Delay	4.1		
Intersection Capacity Utilization	47.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	5	43	8	5	15	78	688	16	21	719	0
Peak Hour Factor	0.79	0.79	0.79	0.60	0.60	0.60	0.92	0.92	0.92	0.88	0.88	0.88
Hourly flow rate (vph)	0	6	54	13	8	25	85	748	17	24	817	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)								745			899	
pX, platoon unblocked	0.97	0.97		0.97	0.97	0.97				0.97		
vC, conflicting volume	1437	1800	409	1440	1791	383	817			765		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1420	1793	409	1423	1784	333	817			727		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.3		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.3		
p0 queue free %	100	91	91	82	88	96	90			97		
cM capacity (veh/h)	74	69	598	72	70	649	820			796		

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	61	13	33	459	391	432	409
Volume Left	0	13	0	85	0	24	0
Volume Right	54	0	25	0	17	0	0
cSH	332	72	211	820	1700	796	1700
Volume to Capacity	0.18	0.18	0.16	0.10	0.23	0.03	0.24
Queue Length 95th (ft)	16	16	14	9	0	2	0
Control Delay (s)	18.3	65.6	25.3	2.9	0.0	0.9	0.0
Lane LOS	C	F	D	A		A	
Approach Delay (s)	18.3	36.8		1.6		0.5	
Approach LOS	C	E					

Intersection Summary				
Average Delay	2.5			
Intersection Capacity Utilization	58.9%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	0	142	0	833	743	34
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	154	0	905	808	37
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)				349	1295	
pX, platoon unblocked	0.93					
vC, conflicting volume	1279	422	845			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1228	422	845			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	74	100			
cM capacity (veh/h)	162	586	801			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	154	453	453	538	306
Volume Left	0	0	0	0	0
Volume Right	154	0	0	0	37
cSH	586	1700	1700	1700	1700
Volume to Capacity	0.26	0.27	0.27	0.32	0.18
Queue Length 95th (ft)	26	0	0	0	0
Control Delay (s)	13.3	0.0	0.0	0.0	0.0
Lane LOS	B				
Approach Delay (s)	13.3	0.0		0.0	
Approach LOS	B				

Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	37.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	15	805	1144	19	0	46
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	16	875	1243	21	0	50
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)			328			
pX, platoon unblocked	0.79				0.79	0.79
vC, conflicting volume	1264				1724	632
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1073				1652	276
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	97				100	91
cM capacity (veh/h)	522				70	577

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	16	438	438	829	435	50
Volume Left	16	0	0	0	0	0
Volume Right	0	0	0	0	21	50
cSH	522	1700	1700	1700	1700	577
Volume to Capacity	0.03	0.26	0.26	0.49	0.26	0.09
Queue Length 95th (ft)	2	0	0	0	0	7
Control Delay (s)	12.1	0.0	0.0	0.0	0.0	11.8
Lane LOS	B					B
Approach Delay (s)	0.2			0.0		11.8
Approach LOS						B

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	42.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0		4.0	4.0	4.0	4.0	
Lane Util. Factor		0.95			0.95	1.00		1.00	1.00	1.00	1.00	
Frt		0.99			1.00	0.85		1.00	0.85	1.00	0.99	
Flt Protected		1.00			0.99	1.00		0.99	1.00	0.95	1.00	
Satd. Flow (prot)		3345			3154	1524		1876	1583	1787	1847	
Flt Permitted		0.94			0.82	1.00		0.95	1.00	0.49	1.00	
Satd. Flow (perm)		3148			2621	1524		1787	1583	914	1847	
Volume (vph)	10	233	19	39	135	146	14	119	185	593	168	12
Peak-hour factor, PHF	0.88	0.88	0.88	0.82	0.82	0.82	0.93	0.93	0.93	0.79	0.79	0.79
Adj. Flow (vph)	11	265	22	48	165	178	15	128	199	751	213	15
RTOR Reduction (vph)	0	9	0	0	0	141	0	0	159	0	4	0
Lane Group Flow (vph)	0	289	0	0	213	37	0	143	40	751	224	0
Heavy Vehicles (%)	0%	6%	16%	0%	17%	6%	7%	0%	2%	1%	2%	0%
Turn Type	Perm			Perm		Perm	Perm		Perm	pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)		10.3			10.3	10.3		9.8	9.8	34.0	34.0	
Effective Green, g (s)		11.3			11.3	11.3		10.8	10.8	35.0	35.0	
Actuated g/C Ratio		0.21			0.21	0.21		0.20	0.20	0.64	0.64	
Clearance Time (s)		5.0			5.0	5.0		5.0	5.0	5.0	5.0	
Vehicle Extension (s)		3.0			3.0	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		655			545	317		355	315	914	1191	
v/s Ratio Prot										c0.31	0.12	
v/s Ratio Perm		c0.09			0.08	0.02		0.08	0.02	c0.22		
v/c Ratio		0.44			0.39	0.12		0.40	0.13	0.82	0.19	
Uniform Delay, d1		18.7			18.5	17.5		18.9	17.9	6.3	3.9	
Progression Factor		1.00			1.00	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.5			0.5	0.2		0.8	0.2	6.0	0.1	
Delay (s)		19.2			19.0	17.6		19.7	18.1	12.3	4.0	
Level of Service		B			B	B		B	B	B	A	
Approach Delay (s)		19.2			18.4			18.7			10.4	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	14.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	54.3	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1703	3539	1583	1736	3370		1736	1845	1553	1444	1667	1380
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.50	1.00	1.00	0.68	1.00	1.00
Satd. Flow (perm)	1703	3539	1583	1736	3370		916	1845	1553	1029	1667	1380
Volume (vph)	81	1245	267	134	500	8	69	121	288	8	85	76
Peak-hour factor, PHF	0.94	0.94	0.94	0.85	0.85	0.85	0.97	0.97	0.97	0.88	0.88	0.88
Adj. Flow (vph)	86	1324	284	158	588	9	71	125	297	9	97	86
RTOR Reduction (vph)	0	0	93	0	1	0	0	0	215	0	0	74
Lane Group Flow (vph)	86	1324	191	158	596	0	71	125	82	9	97	12
Heavy Vehicles (%)	6%	2%	2%	4%	7%	0%	4%	3%	4%	25%	14%	17%
Turn Type	Prot		Perm	Prot			pm+pt		Perm	Perm		Perm
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases			2				8		8	4		4
Actuated Green, G (s)	10.2	33.0	33.0	6.6	29.4		17.4	17.4	17.4	9.4	9.4	9.4
Effective Green, g (s)	11.2	34.0	34.0	7.6	30.4		18.4	18.4	18.4	10.4	10.4	10.4
Actuated g/C Ratio	0.16	0.47	0.47	0.11	0.42		0.26	0.26	0.26	0.14	0.14	0.14
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	265	1671	748	183	1423		280	472	397	149	241	199
v/s Ratio Prot	0.05	c0.37		c0.09	0.18		0.01	c0.07			c0.06	
v/s Ratio Perm			0.12				0.05		0.05	0.01		0.01
v/c Ratio	0.32	0.79	0.25	0.86	0.42		0.25	0.26	0.21	0.06	0.40	0.06
Uniform Delay, d1	27.0	16.0	11.4	31.7	14.6		20.9	21.4	21.1	26.6	28.0	26.6
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.7	2.7	0.2	31.8	0.2		0.5	0.3	0.3	0.2	1.1	0.1
Delay (s)	27.8	18.7	11.6	63.5	14.8		21.4	21.7	21.3	26.8	29.1	26.7
Level of Service	C	B	B	E	B		C	C	C	C	C	C
Approach Delay (s)		18.0			25.0			21.4			27.9	
Approach LOS		B			C			C			C	

Intersection Summary			
HCM Average Control Delay	20.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	72.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	65.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL2	SEL	SET	SER	NWT	NWR	NWR2	SWL	SWT	SWR
Lane Configurations										
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0			4.0	4.0	4.0
Lane Util. Factor		1.00	0.95	1.00	0.95			1.00	1.00	1.00
Frt		1.00	1.00	0.85	0.98			1.00	1.00	0.85
Flt Protected		0.95	1.00	1.00	1.00			0.95	1.00	1.00
Satd. Flow (prot)		1651	3505	1568	3417			1641	1810	1455
Flt Permitted		0.95	1.00	1.00	1.00			0.95	1.00	1.00
Satd. Flow (perm)		1651	3505	1568	3417			1641	1810	1455
Volume (vph)	87	66	737	879	995	119	5	10	154	127
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.87	0.87	0.87	0.81	0.81	0.81
Adj. Flow (vph)	94	71	792	945	1144	137	6	12	190	157
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	165	792	945	1287	0	0	12	190	157
Heavy Vehicles (%)	5%	15%	3%	3%	4%	3%	0%	10%	5%	11%
Turn Type	Prot	Prot		Free				Perm		Free
Protected Phases	3	3	2 3		1 2				4	
Permitted Phases				Free				4	4	Free
Actuated Green, G (s)		13.0	30.0	78.7	40.0			11.7	11.7	78.7
Effective Green, g (s)		13.0	30.0	78.7	42.0			11.7	11.7	78.7
Actuated g/C Ratio		0.17	0.38	1.00	0.53			0.15	0.15	1.00
Clearance Time (s)		4.0						4.0	4.0	
Vehicle Extension (s)		3.0						3.0	3.0	
Lane Grp Cap (vph)		273	1336	1568	1824			244	269	1455
v/s Ratio Prot		0.10	0.23		c0.38				0.10	
v/s Ratio Perm				c0.60				0.01		0.11
v/c Ratio		0.60	0.59	0.60	0.71			0.05	0.71	0.11
Uniform Delay, d1		30.5	19.5	0.0	13.7			28.7	31.9	0.0
Progression Factor		1.00	1.00	1.00	0.21			1.00	1.00	1.00
Incremental Delay, d2		9.6	1.9	1.7	1.7			0.1	8.2	0.1
Delay (s)		40.0	21.4	1.7	4.6			28.8	40.0	0.1
Level of Service		D	C	A	A			C	D	A
Approach Delay (s)			13.2		4.6				22.2	
Approach LOS			B		A				C	

Intersection Summary			
HCM Average Control Delay	11.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	78.7	Sum of lost time (s)	4.0
Intersection Capacity Utilization	58.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	12	12	12	13	12	12	16	11	11	15
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1711	3352		1656	3248		1736	1776	1830	1694	1766	1708
Flt Permitted	0.95	1.00		0.95	1.00		0.42	1.00	1.00	0.41	1.00	1.00
Satd. Flow (perm)	1711	3352		1656	3248		765	1776	1830	723	1766	1708
Volume (vph)	315	464	68	51	153	38	29	182	24	150	228	172
Peak-hour factor, PHF	0.87	0.87	0.87	0.85	0.85	0.85	0.80	0.80	0.80	0.85	0.85	0.85
Adj. Flow (vph)	362	533	78	60	180	45	36	228	30	176	268	202
RTOR Reduction (vph)	0	10	0	0	21	0	0	0	23	0	0	151
Lane Group Flow (vph)	362	601	0	60	204	0	36	228	7	176	268	51
Heavy Vehicles (%)	2%	2%	3%	9%	7%	11%	4%	7%	0%	3%	4%	4%
Turn Type	Prot			Prot			pm+pt		Perm	pm+pt		Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases							4		4	8		8
Actuated Green, G (s)	21.0	41.4		6.0	26.4		22.7	20.4	20.4	26.1	22.1	22.1
Effective Green, g (s)	22.0	42.4		7.0	27.4		24.7	21.4	21.4	28.1	23.1	23.1
Actuated g/C Ratio	0.24	0.46		0.08	0.30		0.27	0.23	0.23	0.31	0.25	0.25
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	410	1548		126	969		241	414	427	274	444	430
v/s Ratio Prot	c0.21	c0.18		0.04	0.06		0.01	0.13		c0.03	0.15	
v/s Ratio Perm							0.03		0.00	c0.16		0.03
v/c Ratio	0.88	0.39		0.48	0.21		0.15	0.55	0.02	0.64	0.60	0.12
Uniform Delay, d1	33.7	16.2		40.6	24.1		25.3	31.0	27.1	27.4	30.3	26.5
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	19.5	0.7		2.8	0.5		0.3	1.6	0.0	5.1	2.3	0.1
Delay (s)	53.2	16.9		43.5	24.6		25.6	32.6	27.1	32.4	32.6	26.6
Level of Service	D	B		D	C		C	C	C	C	C	C
Approach Delay (s)		30.4			28.6			31.1			30.7	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	30.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	91.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	54.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	PDO
Agency/Co.	Gorrill-Palmer Consulting Eng.
Date Performed	09-07-06
Analysis Time Period	AM Peak Hour

Site Information

Intersection	Hanover St. & Marginal Way
Jurisdiction	Portland
Analysis Year	Predevelopment
Project ID	JN136101_Hanover_AM Pre_Master

East/West Street: *Hanover Street* | North/South Street: *Marginal Way*

Intersection Orientation: *North-South* | Study Period (hrs): *1.00*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	0	187	4	57	290	0
Peak-Hour Factor, PHF	1.00	0.76	0.76	0.84	0.84	1.00
Hourly Flow Rate, HFR	0	246	5	67	345	0
Percent Heavy Vehicles	0	--	--	15	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	2	0	1	1	0
Configuration		T	TR	L	T	
Upstream Signal		1			1	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	31	0	48	0	0	0
Peak-Hour Factor, PHF	0.72	1.00	0.72	1.00	1.00	1.00
Hourly Flow Rate, HFR	43	0	66	0	0	0
Percent Heavy Vehicles	30	0	12	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	0
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		L		LR				
v (vph)		67		109				
C (m) (vph)		1222		649				
v/c		0.05		0.17				
95% queue length		0.17		0.60				
Control Delay		8.1		11.7				
LOS		A		B				
Approach Delay	--	--	11.7					
Approach LOS	--	--	B					

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*PDO*
Agency/Co.	*Gorrill-Palmer Consulting Eng.*
Date Performed	*09-07-06*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Bayside Village & Marginal Way*
Jurisdiction	*Portland*
Analysis Year	*Predevelopment*
Project ID	*JN136101_Chestnut Street_AM Pre_Master*

East/West Street: *Chestnut St./Bayside Village* | North/South Street: *Marginal Way*

Intersection Orientation: *North-South* | Study Period (hrs): *1.00*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	*19*	*450*	*12*	*15*	*558*	*0*
Peak-Hour Factor, PHF	*0.85*	*0.85*	*0.85*	*0.87*	*0.87*	*0.87*
Hourly Flow Rate, HFR	*22*	*529*	*14*	*17*	*641*	*0*
Percent Heavy Vehicles	*2*	--	--	*20*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*1*	*1*	*0*	*1*	*1*	*0*
Configuration	*L*		*TR*	*L*		*TR*
Upstream Signal		*1*			*1*	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	*12*	*2*	*11*	*0*	*0*	*79*
Peak-Hour Factor, PHF	*0.50*	*0.50*	*0.50*	*0.73*	*0.73*	*0.73*
Hourly Flow Rate, HFR	*24*	*4*	*22*	*0*	*0*	*108*
Percent Heavy Vehicles	*17*	*100*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*1*	*1*	*0*	*0*	*1*	*0*
Configuration	*L*		*TR*		*LTR*	

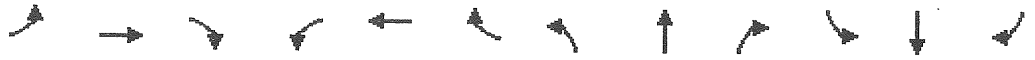
Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*L*	*L*	*L*		*TR*		*LTR*	
v (vph)	*22*	*17*	*24*		*26*		*108*	
C (m) (vph)	*943*	*946*	*200*		*456*		*478*	
v/c	*0.02*	*0.02*	*0.12*		*0.06*		*0.23*	
95% queue length	*0.07*	*0.05*	*0.41*		*0.18*		*0.87*	
Control Delay	*8.9*	*8.9*	*25.5*		*13.4*		*14.7*	
LOS	*A*	*A*	*D*		*B*		*B*	
Approach Delay	--	--	*19.2*			*14.7*		
Approach LOS	--	--	*C*			*B*		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0		4.0	4.0	4.0	4.0	
Lane Util. Factor		0.95			0.95	1.00		1.00	1.00	1.00	1.00	
Frt		0.99			1.00	0.85		1.00	0.85	1.00	0.99	
Flt Protected		1.00			0.99	1.00		0.99	1.00	0.95	1.00	
Satd. Flow (prot)		3349			3153	1524		1876	1583	1787	1847	
Flt Permitted		0.94			0.82	1.00		0.95	1.00	0.49	1.00	
Satd. Flow (perm)		3154			2614	1524		1787	1583	916	1847	
Volume (vph)	10	251	19	39	139	151	14	119	188	611	168	12
Peak-hour factor, PHF	0.88	0.88	0.88	0.82	0.82	0.82	0.93	0.93	0.93	0.79	0.79	0.79
Adj. Flow (vph)	11	285	22	48	170	184	15	128	202	773	213	15
RTOR Reduction (vph)	0	8	0	0	0	145	0	0	148	0	4	0
Lane Group Flow (vph)	0	310	0	0	218	39	0	143	54	773	224	0
Heavy Vehicles (%)	0%	6%	16%	0%	17%	6%	7%	0%	2%	1%	2%	0%
Turn Type	Perm			Perm		Perm	Perm		Perm	pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)		10.7			10.7	10.7		9.9	9.9	34.7	34.7	
Effective Green, g (s)		11.7			11.7	11.7		10.9	10.9	35.7	35.7	
Actuated g/C Ratio		0.21			0.21	0.21		0.20	0.20	0.64	0.64	
Clearance Time (s)		5.0			5.0	5.0		5.0	5.0	5.0	5.0	
Vehicle Extension (s)		3.0			3.0	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		666			552	322		352	311	917	1190	
v/s Ratio Prot										c0.32	0.12	
v/s Ratio Perm		c0.10			0.08	0.03		0.08	0.03	c0.23		
v/c Ratio		0.47			0.39	0.12		0.41	0.17	0.84	0.19	
Uniform Delay, d1		19.1			18.8	17.7		19.4	18.5	6.5	4.0	
Progression Factor		1.00			1.00	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.5			0.5	0.2		0.8	0.3	7.1	0.1	
Delay (s)		19.6			19.3	17.9		20.2	18.8	13.7	4.1	
Level of Service		B			B	B		C	B	B	A	
Approach Delay (s)		19.6			18.6			19.4			11.5	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	15.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	55.4	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1703	3539	1583	1736	3370		1736	1845	1553	1444	1667	1380
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.50	1.00	1.00	0.68	1.00	1.00
Satd. Flow (perm)	1703	3539	1583	1736	3370		918	1845	1553	1029	1667	1380
Volume (vph)	81	1245	291	158	500	8	69	121	287	8	96	76
Peak-hour factor, PHF	0.94	0.94	0.94	0.85	0.85	0.85	0.97	0.97	0.97	0.88	0.88	0.88
Adj. Flow (vph)	86	1324	310	186	588	9	71	125	296	9	109	86
RTOR Reduction (vph)	0	0	109	0	1	0	0	0	214	0	0	73
Lane Group Flow (vph)	86	1324	201	186	596	0	71	125	82	9	109	13
Heavy Vehicles (%)	6%	2%	2%	4%	7%	0%	4%	3%	4%	25%	14%	17%
Turn Type	Prot		Perm	Prot			pm+pt		Perm	Perm		Perm
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases			2				8		8	4		4
Actuated Green, G (s)	14.9	30.8	30.8	9.0	24.9		17.9	17.9	17.9	9.9	9.9	9.9
Effective Green, g (s)	15.9	31.8	31.8	10.0	25.9		18.9	18.9	18.9	10.9	10.9	10.9
Actuated g/C Ratio	0.22	0.44	0.44	0.14	0.36		0.26	0.26	0.26	0.15	0.15	0.15
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	372	1548	692	239	1201		284	480	404	154	250	207
v/s Ratio Prot	0.05	c0.37		c0.11	0.18		0.01	c0.07			c0.07	
v/s Ratio Perm			0.13				0.05		0.05	0.01		0.01
v/c Ratio	0.23	0.86	0.29	0.78	0.50		0.25	0.26	0.20	0.06	0.44	0.06
Uniform Delay, d1	23.4	18.4	13.2	30.3	18.3		20.9	21.4	21.0	26.5	28.1	26.5
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3	4.9	0.2	14.7	0.3		0.5	0.3	0.2	0.2	1.2	0.1
Delay (s)	23.7	23.2	13.4	45.0	18.6		21.3	21.6	21.3	26.7	29.3	26.6
Level of Service	C	C	B	D	B		C	C	C	C	C	C
Approach Delay (s)		21.5			24.9			21.4			28.1	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	22.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	72.7	Sum of lost time (s)	16.0
Intersection Capacity Utilization	65.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL2	SEL	SET	SER	NWT	NWR	NWR2	SWL	SWT	SWR
Lane Configurations										
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0			4.0	4.0	4.0
Lane Util. Factor		1.00	0.95	1.00	0.95			1.00	1.00	1.00
Frt		1.00	1.00	0.85	0.98			1.00	1.00	0.85
Flt Protected		0.95	1.00	1.00	1.00			0.95	1.00	1.00
Satd. Flow (prot)		1657	3505	1568	3414			1641	1810	1455
Flt Permitted		0.95	1.00	1.00	1.00			0.95	1.00	1.00
Satd. Flow (perm)		1657	3505	1568	3414			1641	1810	1455
Volume (vph)	103	66	737	879	995	129	5	10	161	133
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.87	0.87	0.87	0.81	0.81	0.81
Adj. Flow (vph)	111	71	792	945	1144	148	6	12	199	164
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	182	792	945	1298	0	0	12	199	164
Heavy Vehicles (%)	5%	15%	3%	3%	4%	3%	0%	10%	5%	11%
Turn Type	Prot	Prot		Free				Perm		Free
Protected Phases	3	3	2 3		1 2				4	
Permitted Phases				Free				4	4	Free
Actuated Green, G (s)		13.0	30.0	78.9	40.0			11.9	11.9	78.9
Effective Green, g (s)		13.0	30.0	78.9	42.0			11.9	11.9	78.9
Actuated g/C Ratio		0.16	0.38	1.00	0.53			0.15	0.15	1.00
Clearance Time (s)		4.0						4.0	4.0	
Vehicle Extension (s)		3.0						3.0	3.0	
Lane Grp Cap (vph)		273	1333	1568	1817			248	273	1455
v/s Ratio Prot		0.11	0.23		c0.38				0.11	
v/s Ratio Perm				c0.60				0.01		0.11
v/c Ratio		0.67	0.59	0.60	0.71			0.05	0.73	0.11
Uniform Delay, d1		30.9	19.6	0.0	13.9			28.7	32.0	0.0
Progression Factor		1.00	1.00	1.00	0.21			1.00	1.00	1.00
Incremental Delay, d2		12.2	2.0	1.7	1.8			0.1	9.4	0.2
Delay (s)		43.1	21.5	1.7	4.7			28.7	41.3	0.2
Level of Service		D	C	A	A			C	D	A
Approach Delay (s)			13.8		4.7				22.9	
Approach LOS			B		A				C	

Intersection Summary			
HCM Average Control Delay	11.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	78.9	Sum of lost time (s)	4.0
Intersection Capacity Utilization	59.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	12	12	12	13	12	12	16	11	11	15
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1711	3352		1656	3253		1736	1776	1830	1694	1766	1708
Flt Permitted	0.95	1.00		0.95	1.00		0.36	1.00	1.00	0.42	1.00	1.00
Satd. Flow (perm)	1711	3352		1656	3253		662	1776	1830	753	1766	1708
Volume (vph)	315	464	68	51	160	38	56	181	24	160	241	172
Peak-hour factor, PHF	0.87	0.87	0.87	0.85	0.85	0.85	0.80	0.80	0.80	0.85	0.85	0.85
Adj. Flow (vph)	362	533	78	60	188	45	70	226	30	188	284	202
RTOR Reduction (vph)	0	10	0	0	20	0	0	0	23	0	0	153
Lane Group Flow (vph)	362	601	0	60	213	0	70	226	7	188	284	49
Heavy Vehicles (%)	2%	2%	3%	9%	7%	11%	4%	7%	0%	3%	4%	4%
Turn Type	Prot			Prot			pm+pt		Perm	pm+pt		Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases							4		4	8		8
Actuated Green, G (s)	21.0	41.4		6.0	26.4		23.4	20.3	20.3	25.2	21.2	21.2
Effective Green, g (s)	22.0	42.4		7.0	27.4		25.4	21.3	21.3	27.2	22.2	22.2
Actuated g/C Ratio	0.24	0.46		0.08	0.30		0.28	0.23	0.23	0.30	0.24	0.24
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	410	1550		126	972		231	413	425	275	428	413
v/s Ratio Prot	c0.21	c0.18		0.04	0.07		0.01	0.13		c0.04	0.16	
v/s Ratio Perm							0.07		0.00	c0.17		0.03
v/c Ratio	0.88	0.39		0.48	0.22		0.30	0.55	0.02	0.68	0.66	0.12
Uniform Delay, d1	33.6	16.1		40.6	24.1		25.4	31.0	27.1	28.4	31.4	27.1
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	19.5	0.7		2.8	0.5		0.7	1.5	0.0	6.9	3.9	0.1
Delay (s)	53.1	16.9		43.4	24.6		26.1	32.4	27.1	35.2	35.2	27.2
Level of Service	D	B		D	C		C	C	C	D	D	C
Approach Delay (s)		30.4			28.5			30.6			32.8	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	30.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	91.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	PDO
Agency/Co.	Gorrill-Palmer Consulting Eng.
Date Performed	09-07-06
Analysis Time Period	AM Peak Hour

Site Information

Intersection	Site Drive & Marginal Way
Jurisdiction	Portland
Analysis Year	Postdevelopment
Project ID	JN136101_Marginal Site Drive_AM Post_Master

East/West Street: Site Drive | North/South Street: Marginal Way

Intersection Orientation: North-South | Study Period (hrs): 1.00

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	0	507	0	0	600	59
Peak-Hour Factor, PHF	0.92	0.92	0.90	0.90	0.92	0.92
Hourly Flow Rate, HFR	0	551	0	0	652	64
Percent Heavy Vehicles	0	--	--	1	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	1	1	0	1	1	0
Configuration	L		TR	L		TR
Upstream Signal		1			1	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0	0	0	0	0	23
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.92	0.90	0.92
Hourly Flow Rate, HFR	0	0	0	0	0	24
Percent Heavy Vehicles	1	1	1	0	1	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	1
Configuration						R

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L	L						R
v (vph)	0	0						24
C (m) (vph)	894	1031						452
v/c	0.00	0.00						0.05
95% queue length	0.00	0.00						0.17
Control Delay	9.0	8.5						13.4
LOS	A	A						B
Approach Delay	--	--				13.4		
Approach LOS	--	--				B		

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Version 4.1

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	PDO
Agency/Co.	Gorrill-Palmer Consulting Eng.
Date Performed	09-07-06
Analysis Time Period	AM Peak Hour

Site Information

Intersection	Hanover St. & Marginal Way
Jurisdiction	Portland
Analysis Year	Postdevelopment
Project ID	JN136101_Hanover_AM Post_Master

East/West Street: Hanover Street | North/South Street: Marginal Way

Intersection Orientation: North-South | Study Period (hrs): 1.00

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	0	213	4	57	303	0
Peak-Hour Factor, PHF	1.00	0.76	0.76	0.84	0.84	1.00
Hourly Flow Rate, HFR	0	280	5	67	360	0
Percent Heavy Vehicles	0	--	--	15	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	2	0	1	1	0
Configuration		T	TR	L	T	
Upstream Signal		1			1	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	31	0	48	0	0	0
Peak-Hour Factor, PHF	0.72	1.00	0.72	1.00	1.00	1.00
Hourly Flow Rate, HFR	43	0	66	0	0	0
Percent Heavy Vehicles	30	0	12	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	0
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		L		LR				
v (vph)		67		109				
C (m) (vph)		1185		634				
v/c		0.06		0.17				
95% queue length		0.18		0.62				
Control Delay		8.2		11.9				
LOS		A		B				
Approach Delay	--	--	11.9					
Approach LOS	--	--	B					

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	PDO
Agency/Co.	Gorrill-Palmer Consulting Eng.
Date Performed	9-7-06
Analysis Time Period	AM Peak Hour

Site Information

Intersection	Bayside Village & Marginal Way
Jurisdiction	Portland
Analysis Year	Postdevelopment
Project ID	JN136101_Chestnut St_AM Post_Master

East/West Street: Chestnut St./Bayside Village | North/South Street: Marginal Way

Intersection Orientation: North-South | Study Period (hrs): 1.00

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	19	449	12	15	617	0
Peak-Hour Factor, PHF	0.85	0.85	0.85	0.87	0.87	0.87
Hourly Flow Rate, HFR	22	528	14	17	709	0
Percent Heavy Vehicles	2	--	--	20	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	1	1	0	1	1	0
Configuration	L		TR	L		TR
Upstream Signal		1			1	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	12	2	11	0	0	79
Peak-Hour Factor, PHF	0.50	0.50	0.50	0.73	0.73	0.73
Hourly Flow Rate, HFR	24	4	22	0	0	108
Percent Heavy Vehicles	17	100	0	0	0	0
Percent Grade (%)	0			0		
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	1	1	0	0	1	0
Configuration	L		TR		LTR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L	L	L		TR		LTR	
v (vph)	22	17	24		26		108	
C (m) (vph)	890	947	180		446		438	
v/c	0.02	0.02	0.13		0.06		0.25	
95% queue length	0.08	0.05	0.46		0.19		0.98	
Control Delay	9.1	8.9	28.1		13.6		15.9	
LOS	A	A	D		B		C	
Approach Delay	--	--	20.5			15.9		
Approach LOS	--	--	C			C		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	39	847	354	34	0	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	42	921	385	37	0	11
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)			338			
pX, platoon unblocked	1.00				1.00	1.00
vC, conflicting volume	422				948	211
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	417				945	206
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	96				100	99
cM capacity (veh/h)	1149				253	805

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	42	460	460	257	165	11
Volume Left	42	0	0	0	0	0
Volume Right	0	0	0	0	37	11
cSH	1149	1700	1700	1700	1700	805
Volume to Capacity	0.04	0.27	0.27	0.15	0.10	0.01
Queue Length 95th (ft)	3	0	0	0	0	1
Control Delay (s)	8.3	0.0	0.0	0.0	0.0	9.5
Lane LOS	A					A
Approach Delay (s)	0.4			0.0		9.5
Approach LOS						A

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	26.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0		4.0	4.0	4.0	4.0	
Lane Util. Factor		0.95			0.95	1.00		1.00	1.00	1.00	1.00	
Frt		0.97			1.00	0.85		1.00	0.85	1.00	0.99	
Flt Protected		1.00			0.99	1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)		3422			3491	1583		1895	1615	1805	1885	
Flt Permitted		0.88			0.83	1.00		0.98	1.00	0.28	1.00	
Satd. Flow (perm)		3036			2919	1583		1856	1615	535	1885	
Volume (vph)	20	144	38	81	334	607	18	308	140	357	158	9
Peak-hour factor, PHF	0.75	0.75	0.75	0.85	0.85	0.85	0.94	0.94	0.94	0.86	0.86	0.86
Adj. Flow (vph)	27	192	51	95	393	714	19	328	149	415	184	10
RTOR Reduction (vph)	0	34	0	0	0	398	0	0	108	0	3	0
Lane Group Flow (vph)	0	236	0	0	488	316	0	347	41	415	191	0
Heavy Vehicles (%)	0%	2%	3%	0%	3%	2%	0%	0%	0%	0%	0%	0%
Turn Type	Perm			Perm		Perm	Perm		Perm	pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)		15.1			15.1	15.1		13.9	13.9	28.6	28.6	
Effective Green, g (s)		16.1			16.1	16.1		14.9	14.9	29.6	29.6	
Actuated g/C Ratio		0.30			0.30	0.30		0.28	0.28	0.55	0.55	
Clearance Time (s)		5.0			5.0	5.0		5.0	5.0	5.0	5.0	
Vehicle Extension (s)		3.0			3.0	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		910			875	475		515	448	548	1039	
v/s Ratio Prot										c0.15	0.10	
v/s Ratio Perm		0.08			0.17	c0.20		0.19	0.03	c0.27		
v/c Ratio		0.26			0.56	0.66		0.67	0.09	0.76	0.18	
Uniform Delay, d1		14.3			15.8	16.4		17.2	14.4	8.3	6.0	
Progression Factor		1.00			1.00	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.2			0.8	3.5		3.5	0.1	5.9	0.1	
Delay (s)		14.4			16.6	19.9		20.7	14.5	14.3	6.1	
Level of Service		B			B	B		C	B	B	A	
Approach Delay (s)		14.4			18.6			18.8			11.7	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	16.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	53.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	70.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1752	3539	1583	1770	3566		1787	1776	1583	1671	1827	1599
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.45	1.00	1.00	0.69	1.00	1.00
Satd. Flow (perm)	1752	3539	1583	1770	3566		848	1776	1583	1211	1827	1599
Volume (vph)	98	834	210	236	1654	28	298	90	355	34	101	139
Peak-hour factor, PHF	0.89	0.89	0.89	0.90	0.90	0.90	0.85	0.85	0.85	0.90	0.90	0.90
Adj. Flow (vph)	110	937	236	262	1838	31	351	106	418	38	112	154
RTOR Reduction (vph)	0	0	94	0	1	0	0	0	294	0	0	134
Lane Group Flow (vph)	110	937	142	262	1868	0	351	106	124	38	112	20
Heavy Vehicles (%)	3%	2%	2%	2%	1%	0%	1%	7%	2%	8%	4%	1%
Turn Type	Prot		Perm	Prot			pm+pt		Perm	Perm		Perm
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases			2				8		8	4		4
Actuated Green, G (s)	7.0	35.9	35.9	17.1	46.0		27.1	27.1	27.1	11.1	11.1	11.1
Effective Green, g (s)	8.0	36.9	36.9	18.1	47.0		28.1	28.1	28.1	12.1	12.1	12.1
Actuated g/C Ratio	0.08	0.39	0.39	0.19	0.49		0.30	0.30	0.30	0.13	0.13	0.13
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	147	1373	614	337	1762		369	525	468	154	232	203
v/s Ratio Prot	0.06	c0.26		0.15	c0.52		c0.12	0.06			0.06	
v/s Ratio Perm			0.09				c0.16		0.08	0.03		0.01
v/c Ratio	0.75	0.68	0.23	0.78	1.06		0.95	0.20	0.26	0.25	0.48	0.10
Uniform Delay, d1	42.6	24.2	19.6	36.6	24.0		31.2	25.1	25.6	37.4	38.6	36.7
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	18.6	1.4	0.2	10.8	39.4		34.2	0.2	0.3	0.8	1.6	0.2
Delay (s)	61.2	25.6	19.8	47.3	63.5		65.4	25.3	25.9	38.2	40.2	36.9
Level of Service	E	C	B	D	E		E	C	C	D	D	D
Approach Delay (s)		27.6			61.5			41.7			38.3	
Approach LOS		C			E			D			D	

Intersection Summary			
HCM Average Control Delay	46.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	95.1	Sum of lost time (s)	8.0
Intersection Capacity Utilization	85.2%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL2	SEL	SET	SER	NWT	NWR	NWR2	SWL	SWT	SWR
Lane Configurations										
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0			4.0	4.0	4.0
Lane Util. Factor		1.00	0.95	1.00	0.95			1.00	1.00	1.00
Frt		1.00	1.00	0.85	0.99			1.00	1.00	0.85
Flt Protected		0.95	1.00	1.00	1.00			0.95	1.00	1.00
Satd. Flow (prot)		1723	3505	1615	3494			1719	1881	1583
Flt Permitted		0.95	1.00	1.00	1.00			0.95	1.00	1.00
Satd. Flow (perm)		1723	3505	1615	3494			1719	1881	1583
Volume (vph)	109	19	444	1036	1590	136	4	20	282	378
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.97	0.97	0.97	0.83	0.83	0.83
Adj. Flow (vph)	114	20	462	1079	1639	140	4	24	340	455
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	134	462	1079	1783	0	0	24	340	455
Heavy Vehicles (%)	1%	26%	3%	0%	2%	3%	0%	5%	1%	2%
Turn Type	Prot	Prot		Free				Perm		Free
Protected Phases	3	3	2 3		1 2				4	
Permitted Phases				Free				4	4	Free
Actuated Green, G (s)		11.0	28.0	88.0	44.0			19.0	19.0	88.0
Effective Green, g (s)		11.0	28.0	88.0	46.0			19.0	19.0	88.0
Actuated g/C Ratio		0.12	0.32	1.00	0.52			0.22	0.22	1.00
Clearance Time (s)		4.0						4.0	4.0	
Vehicle Extension (s)		3.0						3.0	3.0	
Lane Grp Cap (vph)		215	1115	1615	1826			371	406	1583
v/s Ratio Prot		0.08	0.13		c0.51				c0.18	
v/s Ratio Perm				c0.67				0.01		0.29
v/c Ratio		0.62	0.41	0.67	0.98			0.06	0.84	0.29
Uniform Delay, d1		36.5	23.6	0.0	20.5			27.4	33.0	0.0
Progression Factor		1.00	1.00	1.00	0.55			1.00	1.00	1.00
Incremental Delay, d2		12.9	1.1	2.2	2.9			0.1	14.0	0.5
Delay (s)		49.4	24.7	2.2	14.2			27.5	47.0	0.5
Level of Service		D	C	A	B			C	D	A
Approach Delay (s)			12.2		14.2				20.6	
Approach LOS			B		B				C	

Intersection Summary			
HCM Average Control Delay	14.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	88.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	80.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	12	12	12	13	12	12	16	11	11	15
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.95		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1728	3286		1752	3452		1770	1863	1830	1678	1766	1759
Flt Permitted	0.95	1.00		0.95	1.00		0.25	1.00	1.00	0.31	1.00	1.00
Satd. Flow (perm)	1728	3286		1752	3452		458	1863	1830	547	1766	1759
Volume (vph)	427	246	132	208	616	182	111	276	18	60	274	417
Peak-hour factor, PHF	0.92	0.92	0.92	0.86	0.86	0.86	0.91	0.91	0.91	0.86	0.86	0.86
Adj. Flow (vph)	464	267	143	242	716	212	122	303	20	70	319	485
RTOR Reduction (vph)	0	61	0	0	24	0	0	0	15	0	0	373
Lane Group Flow (vph)	464	349	0	242	904	0	122	303	5	70	319	112
Heavy Vehicles (%)	1%	1%	0%	3%	1%	1%	2%	2%	0%	4%	4%	1%
Turn Type	Prot			Prot			pm+pt		Perm	pm+pt		Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases							4		4	8		8
Actuated Green, G (s)	30.4	38.5		18.6	26.7		28.0	24.0	24.0	26.2	23.1	23.1
Effective Green, g (s)	31.4	39.5		19.6	27.7		30.0	25.0	25.0	28.2	24.1	24.1
Actuated g/C Ratio	0.30	0.38		0.19	0.27		0.29	0.24	0.24	0.27	0.23	0.23
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	521	1246		330	918		195	447	439	193	408	407
v/s Ratio Prot	c0.27	0.11		0.14	c0.26		c0.03	0.16		0.01	c0.18	
v/s Ratio Perm							0.15		0.00	0.08		0.06
v/c Ratio	0.89	0.28		0.73	0.98		0.63	0.68	0.01	0.36	0.78	0.28
Uniform Delay, d1	34.8	22.5		39.8	38.0		30.5	35.9	30.2	29.6	37.6	32.9
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	17.2	0.6		8.2	26.2		6.1	4.1	0.0	1.2	9.4	0.4
Delay (s)	51.9	23.0		48.0	64.2		36.6	40.0	30.2	30.7	47.0	33.3
Level of Service	D	C		D	E		D	D	C	C	D	C
Approach Delay (s)		38.4			60.9			38.6			38.1	
Approach LOS		D			E			D			D	

Intersection Summary			
HCM Average Control Delay	46.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	104.2	Sum of lost time (s)	16.0
Intersection Capacity Utilization	80.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	PDO
Agency/Co.	Gorrill-Palmer Consulting Eng.
Date Performed	09-07-06
Analysis Time Period	PM Peak Hour

Site Information

Intersection	Hanover St. & Marginal Way
Jurisdiction	Portland
Analysis Year	Predevelopment
Project ID	JN136101_Hanover_PM Pre_Master

East/West Street: *Hanover Street* | North/South Street: *Marginal Way*

Intersection Orientation: *North-South* | Study Period (hrs): *1.00*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	0	282	9	42	572	0
Peak-Hour Factor, PHF	1.00	0.84	0.84	0.95	0.95	1.00
Hourly Flow Rate, HFR	0	335	10	44	602	0
Percent Heavy Vehicles	0	--	--	13	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	2	0	1	1	0
Configuration		T	TR	L	T	
Upstream Signal		1			1	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	85	0	123	0	0	0
Peak-Hour Factor, PHF	0.77	1.00	0.77	1.00	1.00	1.00
Hourly Flow Rate, HFR	110	0	159	0	0	0
Percent Heavy Vehicles	12	0	8	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	0
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		L		LR				
v (vph)		44		269				
C (m) (vph)		1135		500				
v/c		0.04		0.54				
95% queue length		0.12		3.39				
Control Delay		8.3		20.5				
LOS		A		C				
Approach Delay	--	--	20.5					
Approach LOS	--	--	C					

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	PDO
Agency/Co.	Gorrill-Palmer Consulting Eng.
Date Performed	09-07-06
Analysis Time Period	PM Peak Hour

Site Information

Intersection	Bayside Village & Marginal Way
Jurisdiction	Portland
Analysis Year	Predevelopment
Project ID	JN136101_Chestnut Street_PM Pre_Master

East/West Street: *Chestnut St./Bayside Village* | North/South Street: *Marginal Way*

Intersection Orientation: *North-South* | Study Period (hrs): *1.00*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	78	690	16	21	686	0
Peak-Hour Factor, PHF	0.92	0.92	0.92	0.88	0.88	0.88
Hourly Flow Rate, HFR	84	749	17	23	779	0
Percent Heavy Vehicles	0	--	--	10	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	1	1	0	1	1	0
Configuration	L		TR	L		TR
Upstream Signal		1			1	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	8	5	15	0	5	43
Peak-Hour Factor, PHF	0.60	0.60	0.60	0.79	0.79	0.79
Hourly Flow Rate, HFR	13	8	24	0	6	54
Percent Heavy Vehicles	0	0	0	2	0	0
Percent Grade (%)	0			0		
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	1	1	0	0	1	0
Configuration	L		TR		LTR	

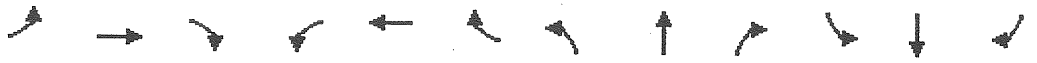
Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L	L	L		TR		LTR	
v (vph)	84	23	13		32		60	
C (m) (vph)	847	813	134		306		357	
v/c	0.10	0.03	0.10		0.10		0.17	
95% queue length	0.33	0.09	0.32		0.35		0.60	
Control Delay	9.7	9.6	34.7		18.1		17.1	
LOS	A	A	D		C		C	
Approach Delay	--	--	22.9			17.1		
Approach LOS	--	--	C			C		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0		4.0	4.0	4.0	4.0	
Lane Util. Factor		0.95			0.95	1.00		1.00	1.00	1.00	1.00	
Frt		0.97			1.00	0.85		1.00	0.85	1.00	0.99	
Flt Protected		1.00			0.99	1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)		3426			3491	1583		1895	1615	1805	1885	
Flt Permitted		0.88			0.82	1.00		0.98	1.00	0.28	1.00	
Satd. Flow (perm)		3036			2899	1583		1856	1615	527	1885	
Volume (vph)	20	151	38	87	354	627	18	308	141	364	158	9
Peak-hour factor, PHF	0.75	0.75	0.75	0.85	0.85	0.85	0.94	0.94	0.94	0.86	0.86	0.86
Adj. Flow (vph)	27	201	51	102	416	738	19	328	150	423	184	10
RTOR Reduction (vph)	0	33	0	0	0	395	0	0	109	0	3	0
Lane Group Flow (vph)	0	246	0	0	518	343	0	347	41	423	191	0
Heavy Vehicles (%)	0%	2%	3%	0%	3%	2%	0%	0%	0%	0%	0%	0%
Turn Type	Perm			Perm		Perm	Perm		Perm	pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)		15.6			15.6	15.6		13.9	13.9	28.7	28.7	
Effective Green, g (s)		16.6			16.6	16.6		14.9	14.9	29.7	29.7	
Actuated g/C Ratio		0.31			0.31	0.31		0.27	0.27	0.55	0.55	
Clearance Time (s)		5.0			5.0	5.0		5.0	5.0	5.0	5.0	
Vehicle Extension (s)		3.0			3.0	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		928			886	484		509	443	542	1031	
v/s Ratio Prot										c0.16	0.10	
v/s Ratio Perm		0.08			0.18	c0.22		0.19	0.03	c0.27		
v/c Ratio		0.27			0.58	0.71		0.68	0.09	0.78	0.19	
Uniform Delay, d1		14.2			15.9	16.7		17.6	14.7	8.6	6.2	
Progression Factor		1.00			1.00	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.2			1.0	4.7		3.7	0.1	7.2	0.1	
Delay (s)		14.4			16.9	21.4		21.3	14.8	15.8	6.3	
Level of Service		B			B	C		C	B	B	A	
Approach Delay (s)		14.4			19.6			19.3			12.8	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	17.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	54.3	Sum of lost time (s)	8.0
Intersection Capacity Utilization	72.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1752	3539	1583	1770	3566		1787	1776	1583	1671	1827	1599
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.43	1.00	1.00	0.69	1.00	1.00
Satd. Flow (perm)	1752	3539	1583	1770	3566		816	1776	1583	1211	1827	1599
Volume (vph)	98	834	223	249	1654	28	298	90	353	34	108	139
Peak-hour factor, PHF	0.89	0.89	0.89	0.90	0.90	0.90	0.85	0.85	0.85	0.90	0.90	0.90
Adj. Flow (vph)	110	937	251	277	1838	31	351	106	415	38	120	154
RTOR Reduction (vph)	0	0	101	0	1	0	0	0	292	0	0	134
Lane Group Flow (vph)	110	937	150	277	1868	0	351	106	123	38	120	20
Heavy Vehicles (%)	3%	2%	2%	2%	1%	0%	1%	7%	2%	8%	4%	1%
Turn Type	Prot		Perm	Prot			pm+pt		Perm	Perm		Perm
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases			2				8		8	4		4
Actuated Green, G (s)	7.1	35.6	35.6	17.5	46.0		27.4	27.4	27.4	11.4	11.4	11.4
Effective Green, g (s)	8.1	36.6	36.6	18.5	47.0		28.4	28.4	28.4	12.4	12.4	12.4
Actuated g/C Ratio	0.08	0.38	0.38	0.19	0.49		0.30	0.30	0.30	0.13	0.13	0.13
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	149	1356	607	343	1755		365	528	471	157	237	208
v/s Ratio Prot	0.06	c0.26		0.16	c0.52		c0.12	0.06			0.07	
v/s Ratio Perm			0.09				c0.17		0.08	0.03		0.01
v/c Ratio	0.74	0.69	0.25	0.81	1.06		0.96	0.20	0.26	0.24	0.51	0.10
Uniform Delay, d1	42.7	24.7	20.1	36.8	24.2		31.4	25.1	25.6	37.3	38.7	36.6
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	17.3	1.5	0.2	13.0	41.0		36.9	0.2	0.3	0.8	1.7	0.2
Delay (s)	60.0	26.2	20.3	49.8	65.2		68.2	25.3	25.9	38.1	40.4	36.8
Level of Service	E	C	C	D	E		E	C	C	D	D	D
Approach Delay (s)		27.9			63.2			42.8			38.4	
Approach LOS		C			E			D			D	

Intersection Summary			
HCM Average Control Delay	47.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	95.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	85.2%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	12	12	12	13	12	12	16	11	11	15
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.95		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1728	3286		1752	3453		1770	1863	1830	1678	1766	1759
Flt Permitted	0.95	1.00		0.95	1.00		0.15	1.00	1.00	0.31	1.00	1.00
Satd. Flow (perm)	1728	3286		1752	3453		285	1863	1830	544	1766	1759
Volume (vph)	427	246	132	208	623	182	123	274	18	127	348	417
Peak-hour factor, PHF	0.92	0.92	0.92	0.86	0.86	0.86	0.91	0.91	0.91	0.86	0.86	0.86
Adj. Flow (vph)	464	267	143	242	724	212	135	301	20	148	405	485
RTOR Reduction (vph)	0	62	0	0	25	0	0	0	15	0	0	349
Lane Group Flow (vph)	464	348	0	242	911	0	135	301	5	148	405	136
Heavy Vehicles (%)	1%	1%	0%	3%	1%	1%	2%	2%	0%	4%	4%	1%
Turn Type	Prot			Prot			pm+pt		Perm	pm+pt		Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases							4		4	8		8
Actuated Green, G (s)	31.3	38.4		19.1	26.2		29.1	25.1	25.1	29.1	25.1	25.1
Effective Green, g (s)	32.3	39.4		20.1	27.2		31.1	26.1	26.1	31.1	26.1	26.1
Actuated g/C Ratio	0.30	0.37		0.19	0.26		0.29	0.24	0.24	0.29	0.24	0.24
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	524	1215		330	881		153	456	448	212	432	431
v/s Ratio Prot	c0.27	0.11		0.14	c0.26		c0.04	0.16		0.03	c0.23	
v/s Ratio Perm							0.22		0.00	0.17		0.08
v/c Ratio	0.89	0.29		0.73	1.03		0.88	0.66	0.01	0.70	0.94	0.32
Uniform Delay, d1	35.4	23.7		40.7	39.7		34.1	36.3	30.5	33.5	39.5	32.9
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	16.3	0.6		8.2	39.6		40.4	3.6	0.0	9.6	27.9	0.4
Delay (s)	51.7	24.3		48.9	79.3		74.5	39.8	30.5	43.1	67.3	33.4
Level of Service	D	C		D	E		E	D	C	D	E	C
Approach Delay (s)		38.8			73.0			49.7			48.0	
Approach LOS		D			E			D			D	

Intersection Summary			
HCM Average Control Delay	54.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	106.6	Sum of lost time (s)	16.0
Intersection Capacity Utilization	85.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	PDO
Agency/Co.	Gorrill-Palmer Consulting Eng.
Date Performed	09-07-06
Analysis Time Period	PM Peak Hour

Site Information

Intersection	Site Drive & Marginal Way
Jurisdiction	Portland
Analysis Year	Postdevelopment
Project ID	JN136101_Marginal Site Drive_PM Post_Master

East/West Street: *Site Drive* | North/South Street: *Marginal Way*
Intersection Orientation: *North-South* | Study Period (hrs): *1.00*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	0	833	0	0	743	34
Peak-Hour Factor, PHF	0.92	0.92	0.90	0.90	0.92	0.92
Hourly Flow Rate, HFR	0	905	0	0	807	36
Percent Heavy Vehicles	0	--	--	1	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	1	1	0	1	1	0
Configuration	L		TR	L		TR
Upstream Signal		1			1	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0	0	0	0	0	142
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.92	0.90	0.92
Hourly Flow Rate, HFR	0	0	0	0	0	154
Percent Heavy Vehicles	1	1	1	0	1	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	1
Configuration						R

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L	L						R
v (vph)	0	0						154
C (m) (vph)	802	756						376
v/c	0.00	0.00						0.41
95% queue length	0.00	0.00						2.04
Control Delay	9.5	9.8						21.2
LOS	A	A						C
Approach Delay	--	--				21.2		
Approach LOS	--	--				C		

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Version 4.1

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	PDO
Agency/Co.	Gorrill-Palmer Consulting Eng.
Date Performed	09-07-06
Analysis Time Period	PM Peak Hour

Site Information

Intersection	Hanover St. & Marginal Way
Jurisdiction	Portland
Analysis Year	Postdevelopment
Project ID	JN136101_Hanover_PM Post_Master

East/West Street: *Hanover Street* | North/South Street: *Marginal Way*

Intersection Orientation: *North-South* | Study Period (hrs): *1.00*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	0	292	9	42	646	0
Peak-Hour Factor, PHF	1.00	0.84	0.84	0.95	0.95	1.00
Hourly Flow Rate, HFR	0	347	10	44	680	0
Percent Heavy Vehicles	0	--	--	13	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	2	0	1	1	0
Configuration		T	TR	L	T	
Upstream Signal		1			1	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	85	0	123	0	0	0
Peak-Hour Factor, PHF	0.77	1.00	0.77	1.00	1.00	1.00
Hourly Flow Rate, HFR	110	0	159	0	0	0
Percent Heavy Vehicles	12	0	8	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	0
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		L		LR				
v (vph)		44		269				
C (m) (vph)		1123		470				
v/c		0.04		0.57				
95% queue length		0.12		3.87				
Control Delay		8.3		22.8				
LOS		A		C				
Approach Delay	--	--	22.8					
Approach LOS	--	--	C					

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	PDO
Agency/Co.	Gorrill-Palmer Consulting Eng.
Date Performed	09-07-06
Analysis Time Period	PM Peak Hour

Site Information

Intersection	Bayside Village & Marginal Way
Jurisdiction	Portland
Analysis Year	Postdevelopment
Project ID	JN136101_Chestnut Street_PM Post_Master

East/West Street: Chestnut St./Bayside Village | North/South Street: Marginal Way

Intersection Orientation: North-South | Study Period (hrs): 1.00

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	78	688	16	21	719	0
Peak-Hour Factor, PHF	0.92	0.92	0.92	0.88	0.88	0.88
Hourly Flow Rate, HFR	84	747	17	23	817	0
Percent Heavy Vehicles	0	--	--	10	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	1	1	0	1	1	0
Configuration	L		TR	L		TR
Upstream Signal		1			1	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	8	5	15	0	5	43
Peak-Hour Factor, PHF	0.60	0.60	0.60	0.79	0.79	0.79
Hourly Flow Rate, HFR	13	8	24	0	6	54
Percent Heavy Vehicles	0	0	0	2	0	0
Percent Grade (%)	0			0		
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	1	1	0	0	1	0
Configuration	L		TR		LTR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L	L	L		TR		LTR	
v (vph)	84	23	13		32		60	
C (m) (vph)	820	814	126		302		342	
v/c	0.10	0.03	0.10		0.11		0.18	
95% queue length	0.34	0.09	0.34		0.35		0.64	
Control Delay	9.9	9.6	36.9		18.3		17.8	
LOS	A	A	E		C		C	
Approach Delay	--	--	23.7			17.8		
Approach LOS	--	--	C			C		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	15	805	1144	19	0	46
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	16	875	1243	21	0	50
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)			338			
pX, platoon unblocked	0.77				0.77	0.77
vC, conflicting volume	1264				1724	632
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1047				1643	229
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	97				100	92
cM capacity (veh/h)	519				69	602

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	16	438	438	829	435	50
Volume Left	16	0	0	0	0	0
Volume Right	0	0	0	0	21	50
cSH	519	1700	1700	1700	1700	602
Volume to Capacity	0.03	0.26	0.26	0.49	0.26	0.08
Queue Length 95th (ft)	2	0	0	0	0	7
Control Delay (s)	12.2	0.0	0.0	0.0	0.0	11.5
Lane LOS	B					B
Approach Delay (s)	0.2			0.0		11.5
Approach LOS						B

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	42.2%	ICU Level of Service	A
Analysis Period (min)	15		

Appendix C

Trip Generation Calculations

Crash Data

JN: 1361.01
Project Description: Capital, LLC
Project Location: Marginal Way, Portland, Maine
Date: 7/18/2006

Gorrill-Palmer Consulting Engineers, Inc.
P.O. Box 1237
15 Shaker Road
Gray, Maine 04039

Specialty Retail Center
Land Use Code (LUC) 814

Gross Floor Area (ft^2): 5,200

Average Rate

Time Period	ITE Trip Rate	Trip Ends	Number of Studies	Directional Split * IN	Directional Split * OUT	Directional Distribution IN	Directional Distribution OUT	R^2
Weekday	T = 44.32 (X)	230	4	50%	50%	115	115	---
Peak Hour of Adjacent Street Traffic 7-9 AM**	---	---	---	---	---	---	---	---
Peak Hour of Adjacent Street Traffic 4-6 PM	T = 2.71 (X)	14	5	45%	55%	6	8	---
AM Peak Hour of Generator	T = 6.84 (X)	36	4	50%	50%	18	18	---
PM Peak Hour of Generator	T = 5.02 (X)	26	3	55%	45%	14	12	---
Saturday	T = 42.04 (X)	219	3	50%	50%	110	109	---
Saturday Peak Hour of Gen.***	---	---	---	---	---	---	---	---
AM Peak of Adjacent Street 7-9 AM***	T = 0.275 (PM Peak Hour)	4		60%	40%	2	2	
Saturday Peak Hour***	T = 1.325 (PM Peak Hour)	34		50%	50%	17	17	

**Based on ratio of AM/PM traffic for LUC 820, Shopping Center
***Saturday Peak Hour comes from a ratio of PM to Saturday trip rates from LUC 820 - Shopping Center

* Percentages rounded to nearest 5%

Fitted Curve Equation

Time Period	ITE Trip Rate	Trip Ends	Number of Studies	Directional Split * IN	Directional Split * OUT	Directional Distribution IN	Directional Distribution OUT	R^2
Weekday	T = 42.78 (X) + 37.66	260	260	50%	50%	130	130	0.69
Peak Hour of Adjacent Street Traffic 7-9 AM	---	---	---	---	---	---	---	---
Peak Hour of Adjacent Street Traffic 4-6 PM	T = 2.40 (X) + 21.48	34	34	45%	55%	15	19	0.98
AM Peak Hour of Generator	T = 4.91 (X) + 115.59	141	141	50%	50%	71	70	0.90
PM Peak Hour of Generator	---	---	---	---	---	---	---	---
Saturday	---	---	---	---	---	---	---	---
Saturday Peak Hour of Gen.	---	---	---	---	---	---	---	---
AM Peak of Adjacent Street 7-9 AM***	T = 0.275 (PM Peak Hour)	9		60%	40%	5	4	
Saturday Peak Hour***	T = 1.325 (PM Peak Hour)	45		50%	50%	23	22	

* Percentages rounded to nearest 5%
(---) Not Given

**Based on ratio of AM/PM traffic for LUC 820, Shopping Center
***Saturday Peak Hour comes from a ratio of PM to Saturday trip rates from LUC 820 - Shopping Center

JN: 1361.01
Project Description: Capital, LLC
Project Location: Marginal Way, Portland, Maine
Date: 7/18/2006

Gorrill-Palmer Consulting Engineers, Inc.
P.O. Box 1237
15 Shaker Road
Gray, Maine 04039

Medical/Dental Office Building
Land Use Code (LUC) 720

Gross Floor Area (ft^2): 65,000

Fitted Curve:

Time Period	ITE Trip Rate	Trip Ends	Directional Split* IN	Directional Split* OUT	Directional Distribution IN	Directional Distribution OUT	Sample Size
Weekday	T = 40.89 (X) -214.97	2443	50%	50%	1222	1221	10
AM Peak Adjacent Street	Not given	-	80%	20%	-	-	21
PM Peak Adjacent Street	Ln (T) = 0.93 Ln (X) + 1.47	211	25%	75%	53	158	41
AM Peak of Generator	T = 3.49 (X) + 5.25	232	65%	35%	151	81	16
PM Peak of Generator	T = 4.43 (X) + 0.48	288	40%	60%	115	173	21
Saturday	Not given	-	50%	50%	-	-	5
Saturday Peak of Generator	Not given	-	60%	40%	-	-	3

* Percentages rounded to nearest 5%

Average Rate:

Time Period	ITE Trip Rate	Trip Ends	Directional Split* IN	Directional Split* OUT	Directional Distribution IN	Directional Distribution OUT	Sample Size
Weekday	T = 36.13 (X)	2348	50%	50%	1174	1174	10
AM Peak Adjacent Street	T = 2.48 (X)	161	80%	20%	129	32	21
PM Peak Adjacent Street	T = 3.72 (X)	242	25%	75%	61	181	41
AM Peak of Generator	T = 3.62 (X)	235	65%	35%	153	82	16
PM Peak of Generator	T = 4.45 (X)	289	40%	60%	116	173	21
Saturday	T = 8.96 (X)	582	50%	50%	291	291	5
Saturday Peak of Generator	T = 3.63 (X)	236	60%	40%	142	94	3

* Percentages rounded to nearest 5%

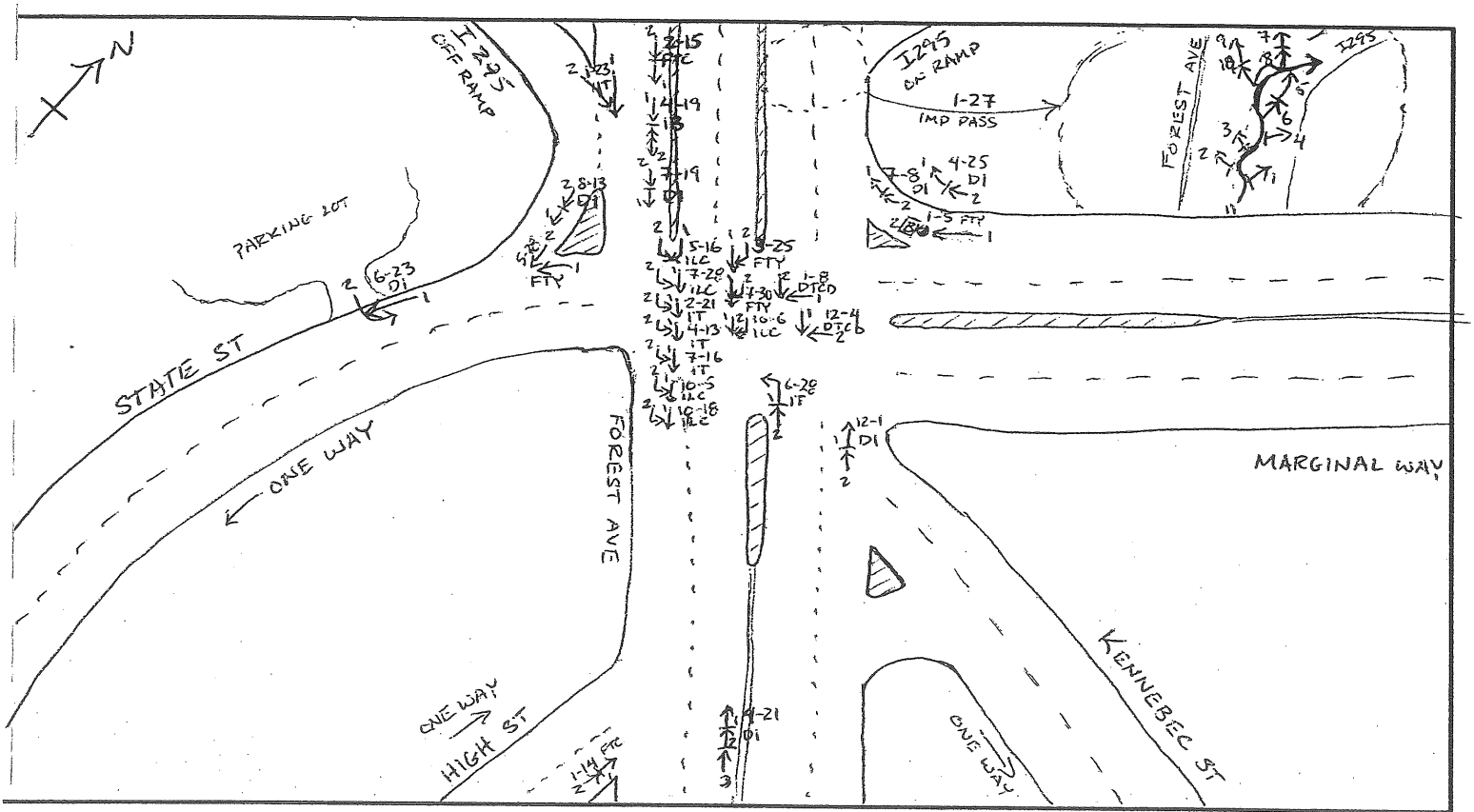
COLLISION DIAGRAM

SHEET 1 OF 2

LOCATION STATE ST & FOREST AVE & MARGINAL WAY

TOWN PORTLAND, MAINE NODE NO(S) 07254

YEARS REVIEWED 2003-2005 DATE PREPARED 8-15-06



CRITICAL RATE FACTOR 1.01 EQUIV. PROP. DAMAGE ACC/YEAR 27 ACC/MEV

LIGHT
1. DAWN (MORNING) 2. DAYLIGHT 3. DUSK (EVENING)
4. DARK (ST. LIGHTS ON) 5. DARK (NO ST. LIGHTS) 6. DARK (ST. LIGHTS OFF)
7. OTHER

ROAD SURFACE
1. DRY 2. WET 3. SNOW/SLUSH-SANDED
4. ICE/PACKED SNOW-SANDED 5. MUDDY 6. DEBRIS
7. OILY 8. SNOW/SLUSH-NOT SANDED 9. ICE/PKD. SNOW-NOT SANDED
10. OTHER

APPARENT CONTRIBUTING FACTORS - HUMAN
1. NO IMPROPER ACTION 2. FAIL TO YLD. RIGHT OF WAY 3. ILLEGAL UNSAFE SPEED
4. FOLLOW TOO CLOSE 5. DISREGARD TRAFFIC CONTROL DEVICE
6. DRIVING LEFT OF CENTER - NO PASSING 7. IMPROPER PASS-OVERTAKING
8. IMP. UNSAFE LANE CHANGE 9. IMP. PARKING START/STOP 10. IMPROPER TURN
11. UNSAFE BACKING 12. NO SIGNAL OR IMP. SIGNAL 13. IMPEDING TRAFFIC
14. DRIVER INATTENTION - DISTRACTION 15. DRIVER INEXPERIENCE
15. PEDEST. VIOLATION ERROR 17. PHYSICAL IMPAIRMENT 18. VISION OBSCURED -
WINDSHIELD GLASS 19. VISION OBSCURED - SUN/HEADLIGHTS
20. OTHER VISION OBSCUREMENT 30. OTHER HUMAN VIOLATION FACTOR
21. HIT AND RUN 31. UNKNOWN

VEHICULAR
41. DEFECTIVE BRAKES 42. DEFECTIVE TIRE/FAILURE 43. DEFECTIVE LIGHTS
44. DEFECTIVE SUSPENSION 45. DEFECTIVE STEERING 50. OTHER VEHICLE DEFECT
52. FACTOR 51. UNKNOWN

SYMBOLS

ANGLE	→	PEDESTRIAN	→P	FATAL ACCIDENT	●
BACKING	←→	REAR END	→→		
FIXED OBJECT	→□	SIDE SWIPE	⇉	VEHICLE (MOVING)	→
HEAD ON	→←	TURNING MOVE	↰	BICYCLE	---B
OVERTURN	→○	CHANGE LANE	⇉	ANIMAL	---A
PARKED VEHICLE	□	OUT OF CONTROL	↝	SLED	---S

WEATHER
C = CLEAR F = FOG R = RAIN
SL = SLEET S = SNOW CL = CLOUDY
XW = CROSS WINDS

INJURIES
K = FATAL B = NON-INCAPACITATING
A = INCAPACITATING C = POSSIBLE INJURY

REPORT NO.	DATE	TIME	INJURIES K	A	B	C	LIGHT	ROAD SURFACE	ACF	OTHER
03072	01-23-03	15:41					2	1	10	5
06226	02-15-03	12:43					2	1	4	
19240	04-21-03	16:51				1	2	1	14	
20080	05-16-03	14:35					2	1	8	
20552	05-28-03	21:08					4	2	2	14
21857	06-28-03	12:12					2	1	10	14
26412	07-28-03	09:11				1	2	1	8	
04761	01-14-04	15:50					2	4	30	

COLLISION DIAGRAM

SHEET 2 OF 2

LOCATION STATE ST & FOREST AVE & MARGINAL WAY

TOWN PORTLAND, MAINE NODE NO(S) 07254

YEARS REVIEWED 2003-2005 DATE PREPARED 8-15-06

REPORT NO.	DATE	TIME	INJURIES K	A	B	C	LIGHT	ROAD SURFACE	ACF	OTHER
10384	01-27-04	12:57				6	2	1	7	
08070	02-21-04	21:10					4	3	10	
10127	03-25-04	16:12					2	2	2	
11657	04-13-04	09:30					2	2	5	10
14071	04-19-04	21:52					4	1	11	14
25703	07-08-04	11:53					2	2	15	
29054	08-13-04	13:09					2	1	14	
11604	01-05-05	15:54	1				2	1	20; 2	BIKE IN CROSSWALK
04501	01-08-05	02:13					2	8	5	
15094	04-25-05	16:32				1	2	1	14	4
19792	06-23-05	09:40					2	1	14	
23124	07-16-05	19:42					3	1	10	8
23147	07-19-05	12:30					2	1	14	
23213	07-30-05	08:17				1	2	1	2	10
40429	10-05-05	12:30					2	1	8	
40431	10-06-05	17:57					3	1	8	
39777	10-18-05	20:15					4	2	8	20
40063	12-01-05	10:32					2	1	14	
40089	12-04-05	01:35					4	1	5	31

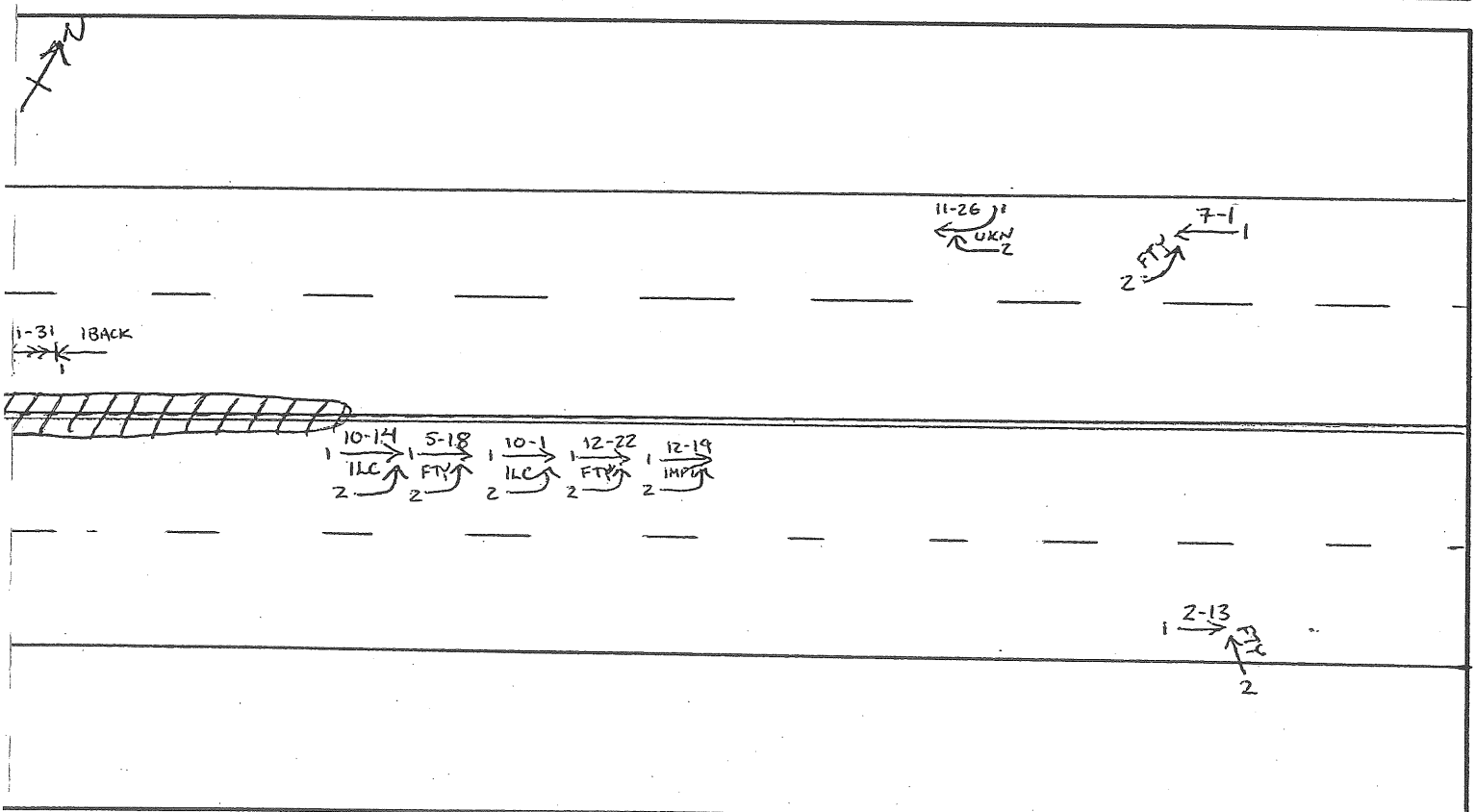
I:\Projects\2006\06-067\Engineering\Crash Data\[Portland Collision Diagram.xls]Sheet1

COLLISION DIAGRAM

LOCATION MARGINAL WAY FROM FOREST AVE TO HANOVER ST

TOWN PORTLAND, MAINE NODE NO(S) 07254-09419

YEARS REVIEWED 2003-2005 DATE PREPARED 8-15-06



CRITICAL RATE FACTOR 2.32 EQUIV. PROP. DAMAGE ACC/YEAR 9 ACC/MEV

LIGHT
1. DAWN (MORNING) 2. DAYLIGHT 3. DUSK (EVENING)
4. DARK (ST. LIGHTS ON) 5. DARK (NO ST. LIGHTS) 6. DARK (ST. LIGHTS OFF)
7. OTHER

ROAD SURFACE
1. DRY 2. WET 3. SNOW/SLUSH-SANDED
4. ICE/PACKED SNOW-SANDED 5. MUDDY 6. DEBRIS
7. OILY 8. SNOW/SLUSH-NOT SANDED 9. ICE/PKD. SNOW-NOT SANDED
10. OTHER

APPARENT CONTRIBUTING FACTORS - HUMAN
1. NO IMPROPER ACTION 2. FAIL TO YLD. RIGHT OF WAY 3. ILLEGAL UNSAFE SPEED
4. FOLLOW TOO CLOSE 5. DISREGARD TRAFFIC CONTROL DEVICE
6. DRIVING LEFT OF CENTER - NO PASSING 7. IMPROPER PASS-OVERTAKING
8. IMP. UNSAFE LANE CHANGE 9. IMP. PARKING START/STOP 10. IMPROPER TURN
11. UNSAFE BACKING 12. NO SIGNAL OR IMP. SIGNAL 13. IMPEDING TRAFFIC
14. DRIVER INATTENTION - DISTRACTION 15. DRIVER INEXPERIENCE
15. PEDEST. VIOLATION ERROR 17. PHYSICAL IMPAIRMENT 18. VISION OBSCURED -
19. WINDSHIELD GLASS 19. VISION OBSCURED - SUN/HEADLIGHTS
20. OTHER VISION OBSCUREMENT 30. OTHER HUMAN VIOLATION FACTOR
21. HIT AND RUN 31. UNKNOWN

VEHICULAR
41. DEFECTIVE BRAKES 42. DEFECTIVE TIRE/FAILURE 43. DEFECTIVE LIGHTS
44. DEFECTIVE SUSPENSION 45. DEFECTIVE STEERING 50. OTHER VEHICLE DEFECT
OTHER FACTOR 51. UNKNOWN

SYMBOLS

ANGLE	PEDESTRIAN (P)	FATAL ACCIDENT	●
BACKING	REAR END		
FIXED OBJECT	SIDE SWIPE	VEHICLE (MOVING)	→
HEAD ON	TURNING MOVE	BICYCLE	--- B
OVERTURN	CHANGE LANE	ANIMAL	--- A
PARKED VEHICLE	OUT OF CONTROL	SLED	--- S

WEATHER
C = CLEAR F = FOG R = RAIN
SL = SLEET S = SNOW CL = CLOUDY
XW = CROSS WINDS

INJURIES
K = FATAL B = NON-INCAPACITATING
A = INCAPACITATING C = POSSIBLE INJURY

REPORT NO.	DATE	TIME	INJURIES K	A	B	C	LIGHT	ROAD SURFACE	ACF	OTHER
05907	02-13-03	12:30					2	1	2; 14	EXITING DRIVE
22043	07-01-03	17:59					2	1	2	ENTERING DRIVE
34535	10-14-03	19:51					4	1	8; 14	U-TURN
14987	05-18-04	16:50				1	2	1	2	LANE CHANGE
31306	10-01-04	08:30					2	1	8	
40624	12-22-04	14:00					2	1	2	U-TURN
08051	01-31-05	08:45					2	1	14; 11	BACKING AT STOP LIGHT
40027	11-26-05	10:15					2	1	51	

COLLISION DIAGRAM

SHEET 2 OF 2

LOCATION MARGINAL WAY FROM FOREST AVE TO HANOVER ST

TOWN PORTLAND, MAINE NODE NO(S) 07254-09419

YEARS REVIEWED 2003-2005 DATE PREPARED 8-15-06

REPORT NO.	DATE	TIME	INJURIES K	A	B	C	LIGHT	ROAD SURFACE	ACF	OTHER
40243	12-19-05	17:15	—	—	—	—	4	1	10	U-TURN

JUL 20,2006 AT 07:50

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY INPUT

TYPE OF STUDY: NODES AND LINKS TYPE OF REQUEST: ACCIDENT I & II WITH LINK DETAIL
STUDY PERIOD: FROM MONTH 01 YEAR 2003 TO MONTH 12 YEAR 2005

INPUT COMMENTS

REQUEST: MARGINAL WAY / FOREST AVE AREA
TOWN: PORTLAND

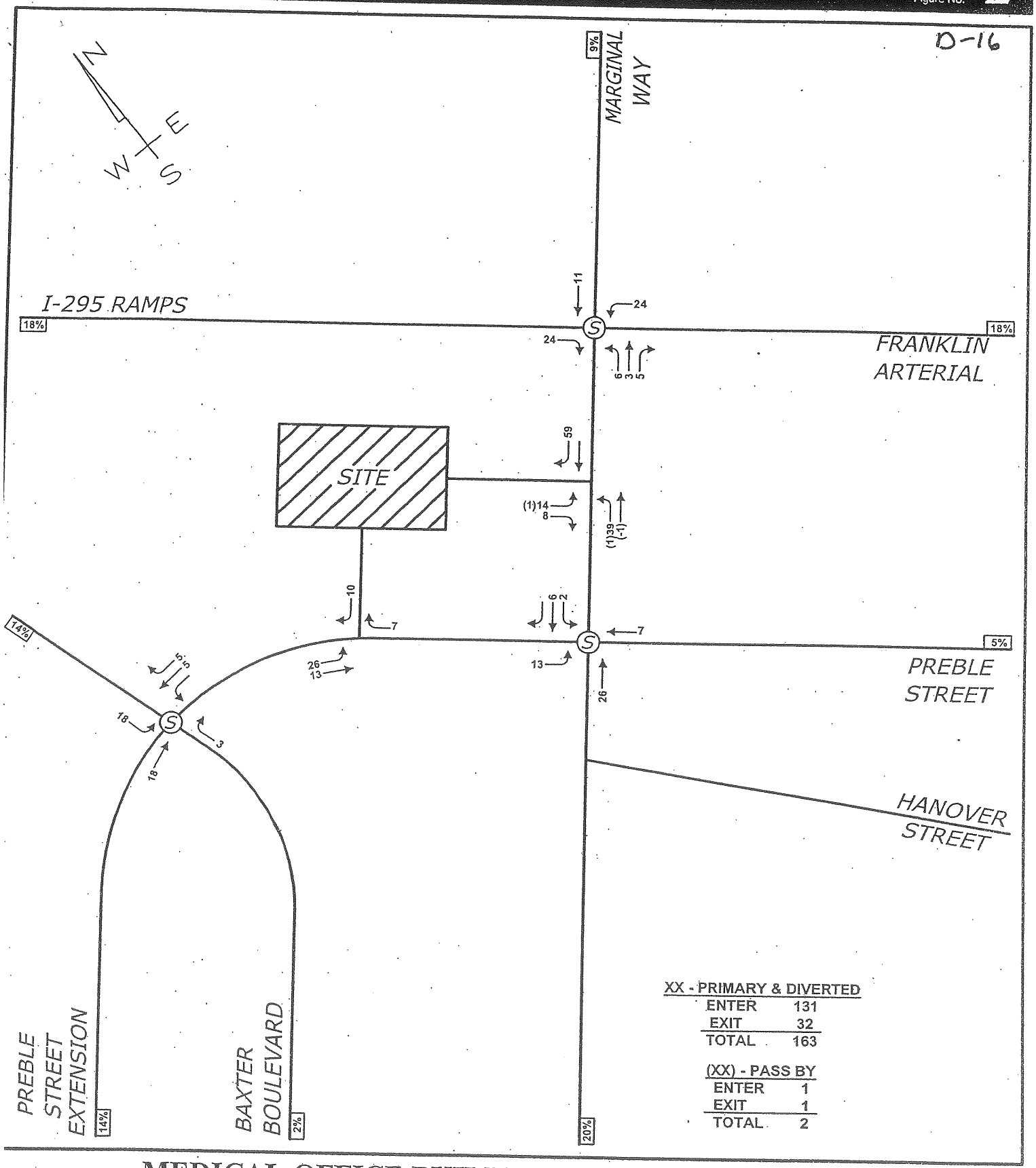
INPUT DATA

ROUTE	COUNTY	FIRST NODE	EXCLUDE FIRST	DISTANCE	SECOND NODE	LAST NODE	EXCLUDE LAST	DISTANCE
60477	05	07254	0	0.00	09419	09420	0	0.00
60818		08944	0	0.00	08943	08943	1	0.00
60597		08943	1	0.00	09423	09457	0	0.00

AM Trip Assignment

Figure No. 2

D-16



XX - PRIMARY & DIVERTED	
ENTER	131
EXIT	32
TOTAL	163

(XX) - PASS BY	
ENTER	1
EXIT	1
TOTAL	2

MEDICAL OFFICE BUILDING, PORTLAND, MAINE

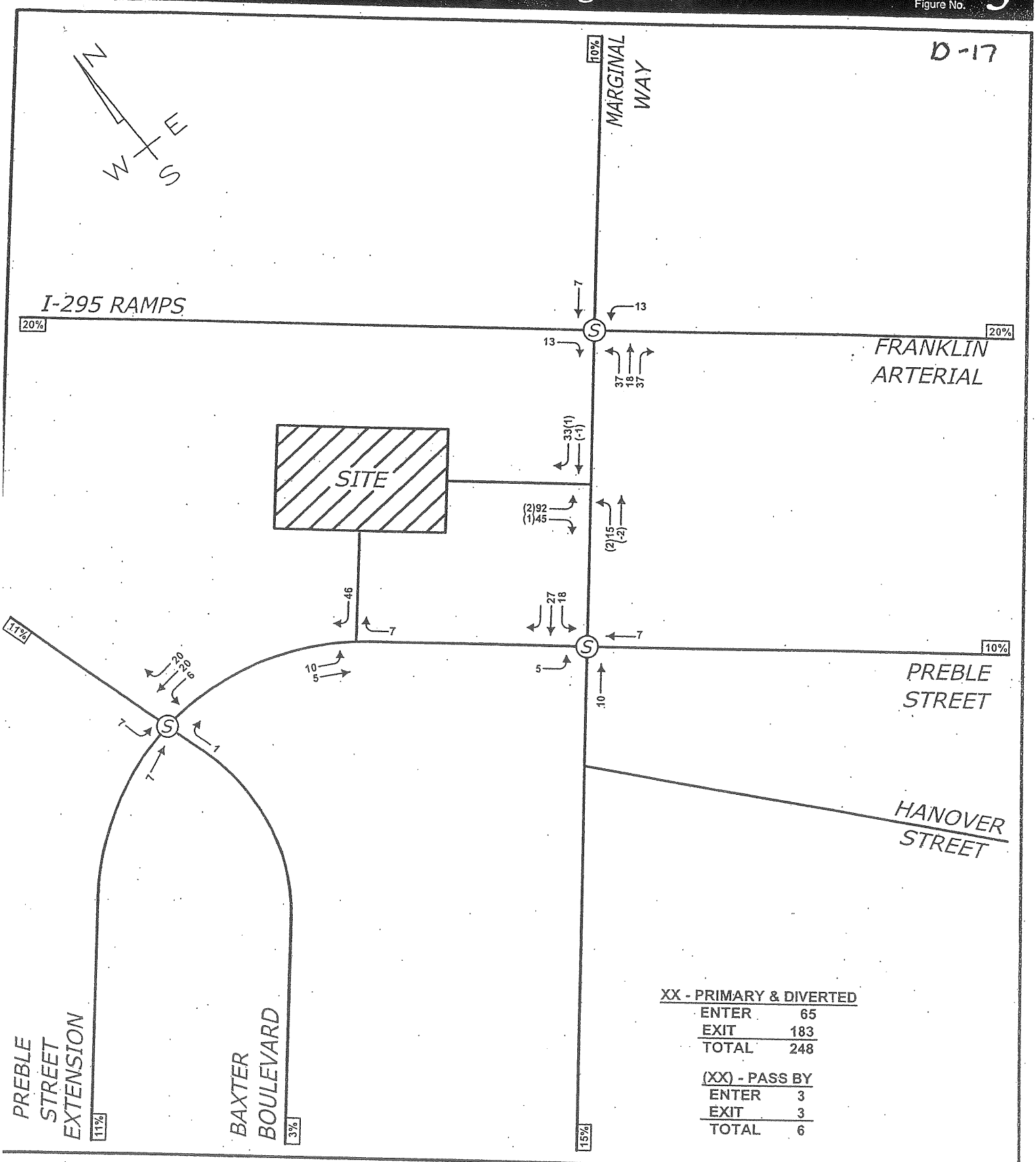
Gorrill–Palmer Consulting Engineers, Inc.
Traffic and Civil Engineering Services
Box 1237
shaker Road
y, ME 04039
207-657-6910
Fax: 207-657-6912
mailbox@gorrillpalmer.com
www.gorrillpalmer.com

Design: PDO
Draft: ZRJ
Checked: JJB

Date: JULY 2006
File Name: 1361-01_TRAF.dwg

PM Trip Assignment

Figure No. 3



MEDICAL OFFICE BUILDING, PORTLAND, MAINE

Gorrill–Palmer Consulting Engineers, Inc.
Traffic and Civil Engineering Services
ox 1237
aker Road
, ME 04039
207-657-6910
Fax: 207-657-6912
mailbox@gorrillpalmer.com
www.gorrillpalmer.com

Design: PDO
Draft: ZRJ
Checked: JJB

Date: JULY 2006
File Name: 1361-01_TRAF.dwg

ATTACHMENT E-1

Transportation
Land Development
Environmental
Services

VHB Vanasse Hangen Brustlin, Inc.

101 Walnut Street
P. O. Box 9151
Watertown, MA 02471-9151
617 924 1770
FAX 617 924 2286

Memorandum

To: Mr. Greg Shinberg
Shinberg Consulting, LLC
477 Congress Street, 5th Floor
Portland, Maine 04101

Date: May 31, 2006

Project No.: 51746

From: Bill Cranshaw, P.E.

Re: Marginal Way Garage -
Parking Plan

REGIONAL ACCESS AND WAYFINDING

Vehicle entrances and exits are provided at Preble Street and at Marginal Way. Signs at each driveway will identify that they are for access to parking for the building.

A wayfinding signage plan will be developed with the City. The key locations are as follows:

1. The Exit 7 ramps (Franklin) at Marginal Way, directing drivers to turn right onto Marginal Way.
2. On the median at the Preble Street driveway, directing drivers to the driveway.
3. At the Preble Street/Marginal Way intersection, directing drivers to the site driveways.

GENERAL PARKING GARAGE OPERATIONS

The garage will have unrestricted access during InterMed's normal business hours. Visitors will be able to enter and exit without use of tickets, cards, validations, etc.

At night and on weekends and holidays, garage access will be controlled by a card-activated roll-gate. Anyone leaving the garage will be able to exit without using a key-card, but those entering the garage after hours will need to use a key-card.

PARKING SPACE ASSIGNMENT

The assignment of parking spaces is shown on the accompanying graphics. The parking is allocated as follows:

Patient Pick-up and Drop-off

There are three locations provided for patient pick-up and drop-off. — along Marginal Way, along Preble Street, and on the ground floor of the garage. All three are located adjacent to building entrances and elevator lobbies.

Patient Parking

Patient parking is provided on the ground floor and second level of the garage. Almost all patient parking spaces are full size (some smaller spaces may be required on corners and end spaces to facilitate support structures). The spaces will be signed and restricted for patient parking. No overnight parking will be allowed in these spaces.

Retail Customers

A row of spaces on the ground level is provided for retail customers. The spaces will be signed for short-term use by these customers. The retail spaces are isolated from the patient parking spaces. No overnight parking will be allowed in these spaces.

InterMed Staff Parking

The parking for InterMed staff is located on the second and third floors. The parking will be signed for the exclusive use of InterMed staff. As with patient spaces, almost all of the InterMed staff parking spaces are full size. Only vehicles with InterMed parking decals will be allowed to park in these spaces overnight or on weekends.

Additional parking on the third floor will be used by 5th floor tenants. Most of this parking will be on the ramp leading to the fourth floor. The InterMed staff parking on the third floor will all be on the flat floor sections of the garage.

5th Floor Tenant Parking

The tenant employee spaces will be on the third floor and will be signed for their exclusive use. The spaces would be 8.5' wide, rather than 9' wide. This width is appropriate for low-turnover employee parking. Only vehicles with tenant parking decals will be allowed to park in these spaces overnight or on weekends. Patients of the 5th Floor tenants will use the patient parking on the ground level and second floor.

63 Marginal Way Tenants and Realty Resources Parking

The fourth level of the garage would be used by 63 Marginal Way tenants during business days and by Realty Resources' apartment residents overnight and on weekends. The spaces would be 8.5' wide, rather than the standard 9' wide.

PARKING MANAGEMENT

Parking Permits

- All of the employees will be issued parking decals for their vehicles. Different decals will be issued for each company (InterMed, 5th floor tenant, 63 Marginal Way, Realty Resources).

- Key-cards and parking decals will be issued by the building management office. Key-cards and parking decals will be re-issued annually. During the year it will be possible to make changes such as deactivating key-cards after an employee leaves, or reissuing parking decals for employees who get new cars. There will be no charge to the employee. Tenants will be asked to provide a list of those employees for whom they wish to provide key-cards and decals for after-hours garage access.

- Tenant employees will be able to park at any time in the designated spaces. All tenant employees who need to enter the garage outside of normal business hours will be provided with key-cards. Those who stay late on weekdays will not need a key-card as the roll-gate will automatically raise for exiting vehicles.

- The 63 Marginal Way tenants will have parking privileges during weekdays. They will not be allowed to park at night or on weekends. They will be allowed to park only on the fourth floor.

- Realty Resources' apartment residents will be allowed to park a limited number of cars on the fourth level only between 7:00PM and 7:00AM, and on weekends. Only those residents will be allowed to park in the garage. They will be allowed to park only on the fourth floor.

Enforcement

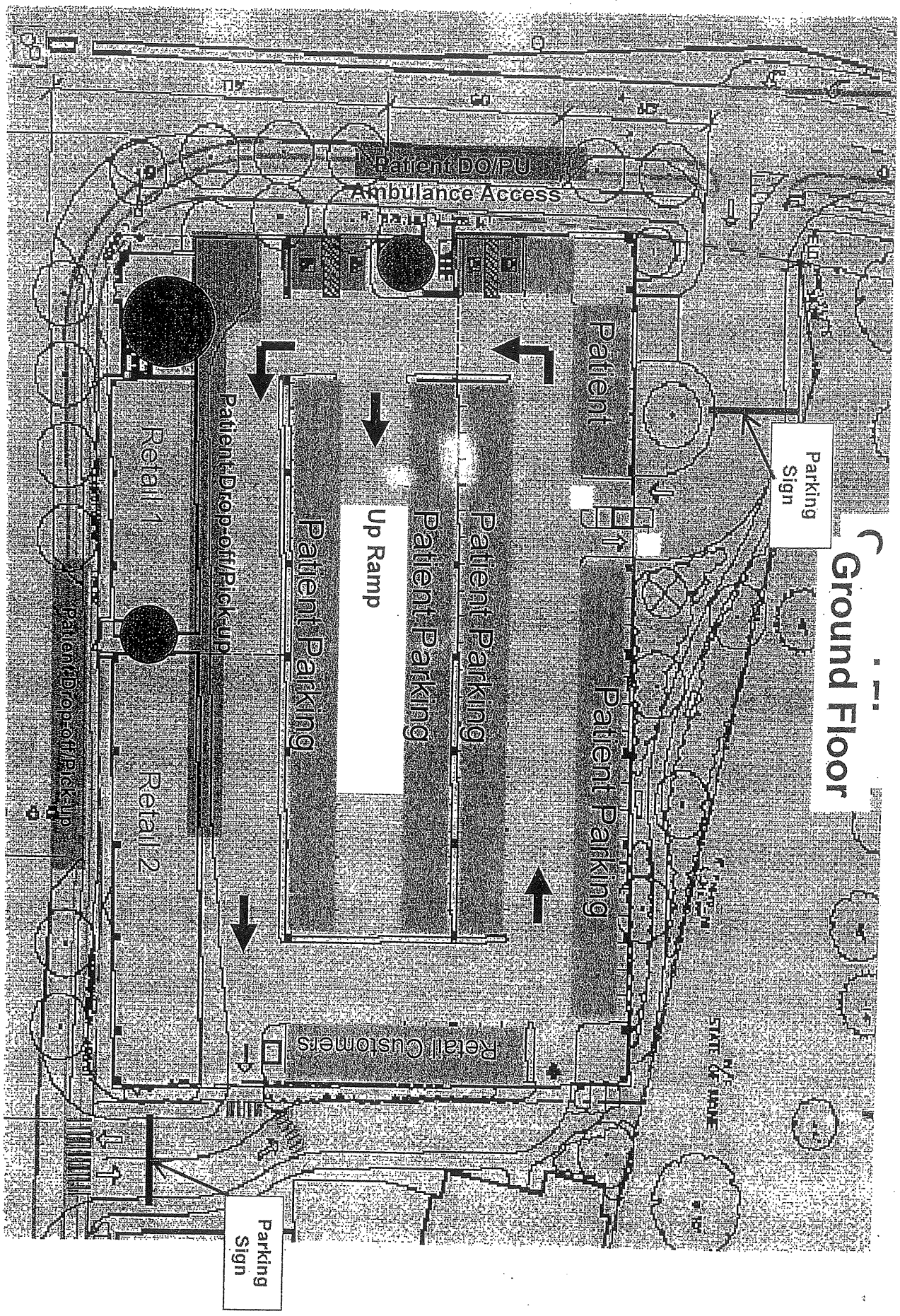
- Each night vehicles remaining overnight will be checked and unauthorized vehicles will be immobilized or towed. The building management office will be notified if there is an occasion when an employee's car that does not have a valid parking decal will be parked overnight.
    - No cars will be allowed to park overnight in the patient or retail customer spaces.
    - Only vehicles with InterMed parking decals will be allowed to park in the InterMed staff spaces overnight or on weekends.
    - Only vehicles with tenant parking decals will be allowed to park in the 5th floor tenant staff spaces overnight or on weekends.
    - The only vehicles allowed to park overnight or on weekends on the fourth floor will be those with one of the apartment resident decals. If other apartment residents park in the garage, even on the fourth floor, they will be towed.
    - It is not anticipated that the fourth floor parking will be fully utilized by AAA employees during the day and if some of the overnight apartment resident parkers overstay the 7:00AM departure time, there should be no operational problems. However, spot checks will be made of the fourth floor spaces and if an apartment resident parker's car is parked during the day, then the permit holder will first be issued a written warning and fine, and if there is a second offense during the year the permit will be revoked. The spot checks will be intensified at the beginning of the academic year to coincide with new residents moving into the residential complex.

Security Monitoring

If daytime security monitoring is desired, it can be provided by contracted security patrols, presumably the same company that would provide the overnight parking permit checks.

The evening and weekend security monitoring needs are related principally to the presence of the Realty Resources apartment residents. As such it is recommended that video monitoring of the vehicle entrances, pedestrian entrances, elevators, and all floors of the garage be provided by the Realty Resources management office.

PREBLE STREET EXT.



MARGINAL WAY

E-4

Second Floor
Patient Parking
InterMed Staff Parking
InterMed Staff Parking
Patient Parking
Up Ramp
Patient
Patient
Patient Parking
Patient Parking
Patient Parking

Third Floor
InterMed Staff Parking
InterMed Staff Parking
5th Floor Tenant Parking
InterMed Staff Parking
5th Floor Tenant Parking
InterMed Staff Parking
InterMed Staff Parking
Up Ramp
InterMed
5th Fl Tenant

Fourth Floor

63 / Realty

63 / Realty

63 Marginal Way / Realty Resources Parking

63 Marginal Way / Realty Resources Parking

63 Marginal Way / Realty Resources Parking

63 Marginal Way / Realty Resources Parking

63 Marginal Way / Realty Resources Parking

ATTACHMENT F-1

PUBLIC UTILITIES

84 Marginal Way will be served by existing services located in Marginal Way. The following utilities are available:

Water

- An existing 8-inch water main in Preble Street Extension will provide service for fire suppression. A sprinkler room with Siamese Connections is adjacent to Preble Street Extension. An 8-inch water connection will be brought across Marginal Way from an existing 8-inch water main where it will split into a 6-inch fire service and 4-inch domestic water service. A fire hydrant will be located on the adjacent Bayside Village – A Student Housing Complex site. See attached letter from the Portland Water District.

Sanitary Sewer

- There is an existing 36-inch sanitary sewer service within Marginal Way. An 8-inch sanitary line will connect to an existing manhole. Letter and map from the Public Works Department to be submitted under separate cover.

Storm Drain

- There is an existing 30-inch storm drain service within Marginal Way. Roof drain and parking garage stormwater will be directed to an existing manhole in Marginal Way. Drainage from the Marginal Way drive will be directed to a proposed catchbasin near the street. Drainage from the Preble Street Drive will be directed to a proposed catchbasin near the street. Road reconfigurations for the Marginal Way Master Plan will necessitate the installation of two catchbasins. Road reconfiguration for a turn lane on Preble Street Extension will necessitate the installation of one new catchbasin. See attached letter and map from the Public Works Department.

Natural Gas

- A 6-inch low pressure natural gas service is located in Marginal Way. A 4-inch gas line will connect to the existing gas service. See attached letter from Northern Utilities.

Electric

- The three phase electrical service will be brought underground from across Marginal Way. Two new utility poles will be located opposite the Marginal Way access drive to

the site and these two lines will connect to an electrical manhole proposed between the water and sanitary sewer lines within Marginal Way. Service will be brought underground to a pad mounted transformer on Capital, LLC property adjacent to the parking garage. See attached e-mail from CMP.

Telephone and Cable

- Telephone and Cable service will be brought underground from across Marginal Way. See attached letters from Verizon and Time Warner Cable of Maine.

F-3

CUSTOMER SERVICE
OFFICE HOURS
8:30 A.M. - 4:30 P.M.

Portland Water District

FROM SEBAGO LAKE TO CASCO BAY

May 9, 2006

Betsy Melrose
Mitchell & Associates
70 Center St.
Portland, Me. 04101

Re: 120 Marginal Way-Portland-Bayside Village

Betsy:

This letter is to confirm there should be an adequate supply of clean and healthful water to serve the needs of the proposed commercial and student housing at 120 Marginal Way in Portland. Checking District records, I find there is a 8"DI water main on the south side of the Marginal Way as well as a water hydrant located opposite the property.

The current data from the nearest hydrant indicates there should be adequate capacity of water to serve the needs of your proposed project.

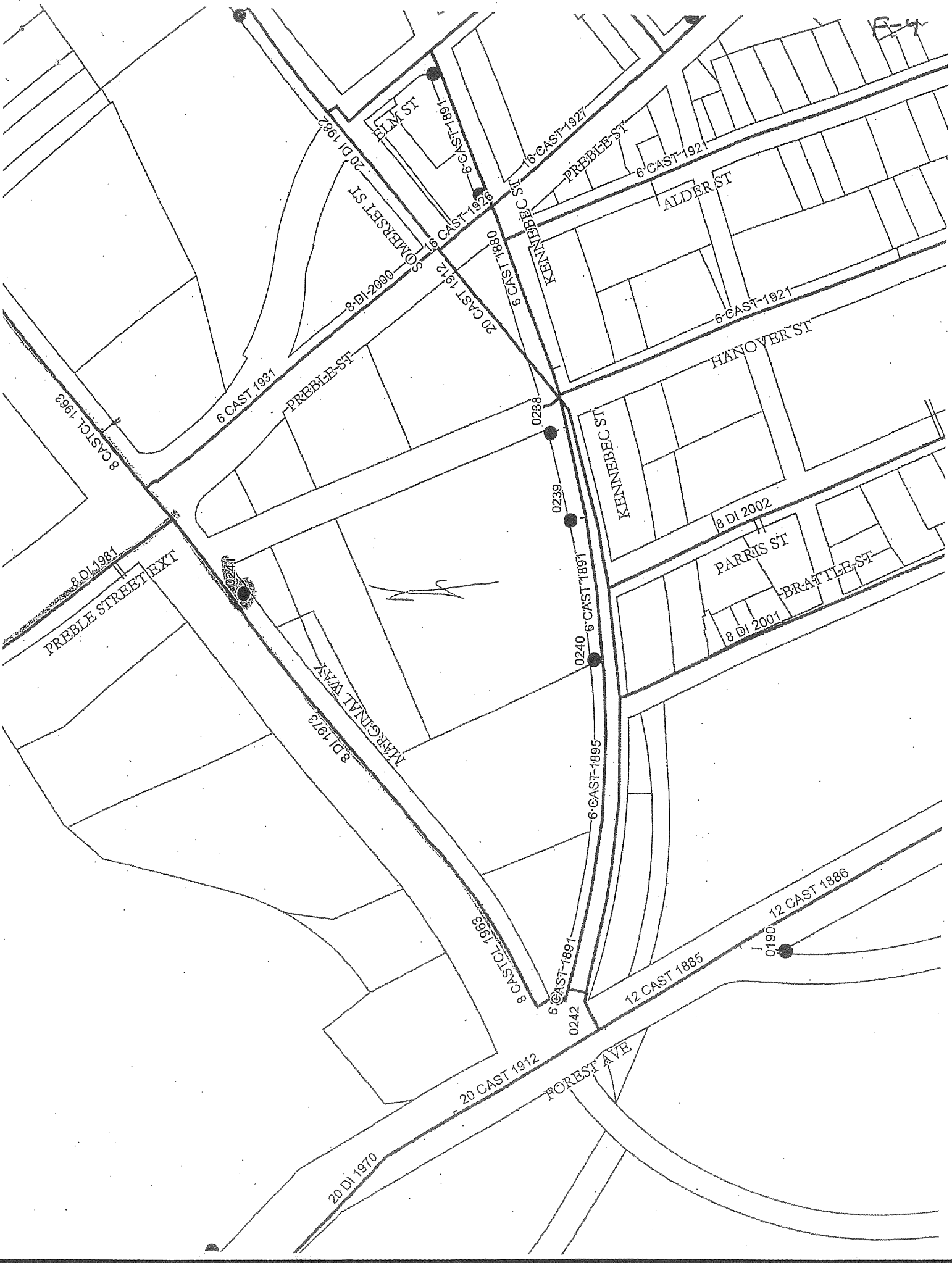
Hydrant Location: Marginal Way @Hanover St.
Hydrant # 241
Static pressure = 107 PSI
Residual pressure = 93 PSI
Flow = 2459 GPM
Last Tested = 7/2/2003

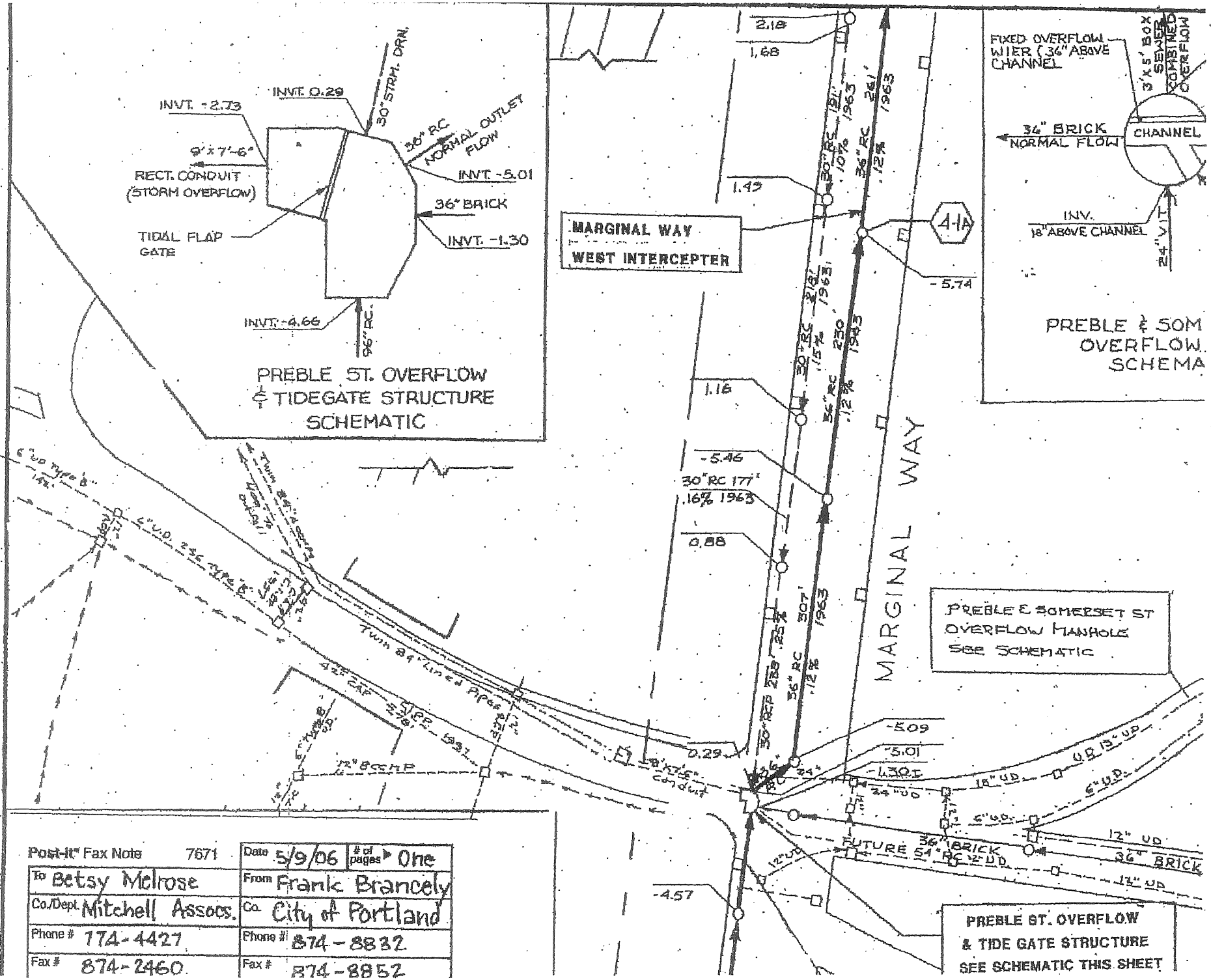
If the District can be of further assistance in this matter, please let us know.

Sincerely,
Portland Water District

Jim Pandiscio

Jim Pandiscio
Means Coordinator
jpandiscio@pwd.org


E-4
ELM ST
6 CAST 1881
16 CAST 1927
PREBLE ST
6 CAST 1921
ALDER ST
KENNEBEC ST
16 CAST 1926
20 DI 1982
SOMERSET ST
8 DI 2000
20 CAST 1912
6 CAST 1880
6 CAST 1921
HANOVER ST
8 CAST CL 1963
6 CAST 1931
PREBLE ST
0238
KENNEBEC ST
0239
8 DI 2002
PARRIS ST
BRATTLE ST
8 DI 1981
PREBLE STREET EXT
0241
6 CAST 1891
8 DI 2001
0240
MARGINAL WAY
8 DI 1973
6 CAST 1895
8 CAST CL 1963
6 CAST 1891
12 CAST 1886
0190
0242
12 CAST 1885
20 CAST 1912
FOREST AVE
20 DI 1970



Post-it® Fax Note 7671	Date 5/9/06	# of pages ▶ One
To Betsy Melrose	From Frank Brancely	
Co./Dept. Mitchell Assocs.	Co. City of Portland	
Phone # 774-4427	Phone # 874-8832	
Fax # 874-2460	Fax # 874-8852	

F-6

Northern Utilities
Natural Gas
A NiSource Company

June 19, 2006

Mitchell Associates
Betsy Melrose

RE: 84 Marginal Way, Portland, ME

Northern Utilities confirms the availability of natural gas service for the location indicated above.

This letter assumes all necessary municipal permits will be approved.

This letter does not constitute a commitment or contract to deliver natural gas to the above address. An application and/or contract must be signed before any work can begin.

I hope this "letter of natural gas availability" meets your needs. Please contact me at (800) 552-3047 ext. #5377, if further assistance is needed.

Sincerely,

Pat Dyer
Commercial Sales

F-7

BMelrose

From: Cough, Jamie [James.Cough@cmpco.com]
Sent: Tuesday, July 11, 2006 9:35 AM
To: BMelrose
Subject: Marginal Way Project

Betsy:

CMP confirms that we have the ability to serve the two proposed customers from our Marginal Way primary service. The plans, as proposed currently, include two pad mounted transformers supplying secondary voltages of 480v or less (as per our standards). I will work with you on the details of the primary feed runs and the transformer locations.

If you have any questions, please contact me.

Regards,

Jamie

Jamie Cough
Energy Services Advisor
Central Maine Power Company
162 Canco Road
Portland, ME 04103
207-842-2367 office
207-458-0382 cell
207-626-4082 fax

F-8

verizon

Sue Sarrette
Engineering, Flr 2
5 Davis Farm Road
Portland, ME 04103

Tel: (207) 797-1842
Fax: (207) 797-1098

June 28, 2006

84 Marginal Way
Capital, LLC
50 Portland Pier, Suite 400
Portland, Maine 04101

RE: *Adequate Facilities – 84 Marginal Way , Portland, ME*

Dear Ms. Melrose:

In accordance with your recent request, please be advised that I have reviewed the facility records for your proposed project referenced above.

Verizon has adequate facilities to provide for present and future service requirements utilizing the very latest in telecommunications technology. Please note that the availability of telecommunications facilities within the site is dependant upon the developer coordinating with Verizon engineering and installing recommended structures (i.e. conduit, etc) if the project is to be served with underground utilities.

If you have any questions, do not hesitate to call. You can reach me at (207) 797-1842.

Sincerely,

Sue Sarrette
Verizon Engineer

F-9

TIME WARNER CABLE of Maine

July 20, 2006

Betsy Melrose
Mitchell & Associates
70 Center St.
Portland, Maine 04101

RE: 84 Marginal Way
Letter of Ability to Serve

Dear Ms. Melrose,

Time Warner Cable of Maine does have facilities in the area of 84 Marginal Way Portland, Me. Time Warner will be able to service this new facility. If there are any questions please contact me at (207)-253-2325.

Sincerely,

Colin A. Chase
MDU Construction Coordinator
Time Warner Cable
(207)-253-2325

ATTACHMENT G-1

STATE OF MAINE
WILLIAM C. HASKELL
No. 8578
REGISTERED PROFESSIONAL ENGINEER

STORMWATER MANAGEMENT REPORT

I. Introduction

Gorrill-Palmer Consulting Engineers, Inc in has been retained by Mitchell & Associates, Inc. to assist with preparation of civil design plans and water resource narratives for a proposed development site located at an existing parking lot site on the corner of Marginal Way and Preble Street Extension in Portland. The developer is Capital, LLC, of Portland Maine. The Maine Department of Environmental Protection (MDEP) was contacted regarding the proposed project to determine if the development would require review or any permits by that agency. Based on discussions with Linda Kokemuller of the MDEP office in Portland, as the existing site was paved before 1997 and the proposed project does results in less than 1 acre of new impervious surface, no MDEP permits or reviews relating to the Site Location of Development Act (Site Law) Permit or Stormwater Permit are required. As the proposed development will result in more than 1 acre of disturbed area, a Stormwater Permit-By-Rule and accompanying Maine Construction General Permit (MCGP) is required and it will be filed with MDEP. The following narrative contains the stormwater analysis and management plan which is appropriate for the site.

II. Development Description

The project site consists of approximately 1.37 acres of land located between Interstate 295 and Marginal Way. The project site is a portion of the existing parking lot site (2.70 acres) is currently owned by the City of Portland. The site is currently developed as a parking lot used as a storage yard for vehicles during the wintertime. Most of the existing site is currently developed, with several smaller landscaped areas along the eastern and southern perimeter of the parking lot. The adjacent portion of the property, 1.33 acres in size, is also under consideration for commercial development by another developer as an apartment housing complex with covered parking and will also include some retail space on the ground floor mixture of retail space, medical and business offices, and a parking garage. The design and details of the adjacent development are provided as a separate application.

The proposed development will consist of a multistory structure with a mixture of retail space, medical and business offices, and a parking garage. Stormwater runoff from the building roof will be collected internally via roof drains and directed to a storm drain system that connects to the municipal storm drain system located in Marginal Way. The project also proposes adjusting the current drainage path of the adjacent portion of the I-295 Right-of-Way so that it will be conveyed to an existing culvert inlet located along the existing sidewalk along Preble Street Extension on the southern part of the site. That drainage currently flows down slope in the right-of-way and onto the parking lot.

Topography on the site consists of relatively flat slopes that gently slope eastward; <1% - 2% over much of the site. The site drains to onsite catch basins and to adjacent catch basins located in Marginal Way and Preble Street Extension. The stormwater collection system drains to Portland's Back Cove (Casco Bay/Atlantic Ocean)

Abutting land uses include:

- Northwest - MDOT Right of Way associated with Interstate 295
- Northeast - Existing Parking Lot proposed for Development and Existing Building and Skate Park (area proposed for future relocation of the Miss Portland Diner)
- Southwest - Preble Street Extension and Commercial Businesses
- Southeast - Marginal Way and Commercial Businesses

The existing parcel is characterized as follows;

Existing Parcel Parameters	
Parcel Area	1.37 Acres
Existing Impervious Area	1.02 acres
Existing Pervious Area	0.35 acres
Proposed Impervious Area	1.24 acres
Proposed Pervious Area	0.13 acres
Increase in Impervious Area	0.22 acres
Notes: 1. Includes areas on the parcel only. Does not include tributary offsite areas.	

III. Surface Water and Downstream Waterbodies

The project site is tributary to the municipal storm drainage collection system which outlets into Back Cove (Casco Bay/Atlantic Ocean). Back Cove is not considered a waterbody most at risk from development.

IV. General Topography

Topography on the site consists of relatively flat slopes that gently slope eastward; <1% - 2% over much of the site. The site drains to onsite catch basins and to adjacent collection basins located within Marginal Way Preble Street Extension. The stormwater collection system drains to Portland's Back Cove (Casco Bay/Atlantic Ocean)

V. Flooding

The 100-year flood elevation is elevation 10 feet (NGVD 29). No part of the subject lot is below the 100-year flood elevation. The Finished Floor Elevation (FFE) of the retail space and the entry for the student housing is at elevation 12.00 feet, or 2 feet above the 100-year flood elevation.

VI. Natural Drainage Ways

The project as currently proposed does not include alterations of any natural drainage ways.

VII. Alterations to Land Cover

Alterations to land cover include the redevelopment of a portion of the existing parking lot into a 4-story apartment building with covered parking on the ground level. The proposed development will increase the amount of impervious surfaces on the site, but will decrease the amount of uncovered pavement as the proposed parking will be underneath the building.

VIII. Water Quantity Control

A stormwater model showing pre- and post-development conditions was prepared for this project to estimate the increase in the post-development peak flows. Due to the proximity of the project to Back

Cove, no detention is planned for the project as the stormwater runoff will discharge quickly to the municipal storm drainage system and pass on to Back Cove.

VIII.1 Pre-development Conditions

As indicated in Section II of this report the pre-development impervious area is about 1.02 acres. Stormwater flows from a portion of I-295 down the embankment slope and across the existing parking areas to enter the closed drainage system which drains to Back Cove. The site was delineated into 5 subcatchments (2-1 through 2-5) to assess the stormwater impacts from development. Detailed stormwater calculations are included in Attachment C. Watershed maps are included in Attachment B. The following table summarizes the pre-development stormwater peak flows for 2, 10, and 25-year rainfall events.

Pre-development Peak Flows

Subcatchment/ POI	Composite CN	T_c (min)*	Peak Flow (cfs)		
			2-year	10-year	25-year
2-1	92	5	1.1	1.8	2.2
2-2	90	5	3.1	5.5	6.6
2-3	88	5	1.5	2.7	3.3
2-4	93	5	1.1	1.8	2.1
2-5	93	5	0.8	1.3	1.6
POI #1	-	-	4.3	6.1	6.6
POI #2	-	-	1.1	1.8	2.1
POI #3	-	-	1.5	2.7	3.3

* Time-of-concentration paths are shown on the watershed maps. The times calculated using TR-55 Methodology resulted in T_c's of less than 5 minutes. A minimum T_c value of 5 minutes was applied to all subcatchments when the calculated T_c was less than 5 minutes.

VIII.2 Post-development Condition

As indicated in Section II, the post-development impervious surface for the total development is anticipated to increase from 1.02 acres to 1.24 acres. Also, an additional Point of Interest (POI #4) was created to represent the runoff from subcatchment 2-1 flowing toward and entering the catch basin that carries runoff from the access driveway and connects to the storm drain system proposed for the abutting development. A post-development stormwater map is included in Attachment B. The following table summarizes the post-development stormwater peak flows for 2, 10, and 25-year rainfall events.

Post-Development Peak Flows					
Subcatchment/ POI	Composite CN	T_c (min)*	Peak Flow (cfs)		
			2-year	10-year	25-year
2-1	85	5	0.2	0.4	0.5
2-2	98	5	3.0	4.8	5.6
2-3	87	5	2.8	5.2	6.4
2-4	94	5	1.0	1.7	2.0
2-5	94	5	0.9	1.4	1.7
POI #1	-	-	3.8	6.1	7.2
POI #2	-	-	1.0	1.7	2.0
POI #3	-	-	2.8	5.2	6.4
POI #4	-	-	0.2	0.4	0.5

* Time-of-concentration paths are shown on the watershed maps. The times calculated using TR-55 Methodology resulted in T_c's of less than 5 minutes. A minimum T_c value of 5 minutes was applied to all subcatchments when the calculated T_c was less than 5 minutes.

Comparison of Pre- & Post-Development Flows						
Peak Flow Comparison (cfs)						
	2-yr Pre	2-yr Post	10-yr Pre	10-yr Post	25-yr Pre	25-yr Post
POI #1	4.3	3.8	6.1	6.1	6.6	7.2
POI #2	1.1	1.0	1.8	1.7	2.1	2.0
POI #3	1.5	2.8	2.7	5.2	3.3	6.4
POI #4	-	0.2	-	0.4	-	0.5

From the result shown, POI #2 maintains flows from pre-development to post-development. POI #1 & #3 show slight increase in the post-development peak flows. Runoff from POI #4 will be directed to the neighboring storm drain system which will be capable of carry stormwater through the site and back to the municipal drainage system in Marginal Way. Due to the proximity of the project to Back Cove, no detention is planned for the project as the stormwater runoff will discharge quickly to the municipal storm drainage system and pass to the cove

Design of the internal storm drainage pipe system, which accepts runoff from the roof drain collection system, was based on flows computed using the Rational Method and Hydraflow Storm Sewers Software and the 25-year design storm for the Portland area. Copies of the pipe sizing calculations are included in Attachment D.

IX. Stormwater Quality

As this project will result in the redevelopment of an existing parking lot that will become covered and that the stormwater will be collected via roof drains and be carried directly into the municipal stormwater collection system, stormwater treatment is not proposed.

X. Stormwater System

Stormwater will be directed into the municipal stormwater collection system located in Marginal Way and Preble Street Extension via existing and relocated structures in Marginal Way

XI. Stormwater Management

The onsite stormwater facility will be maintained by the owner, or their assigned, heirs after construction is completed. The contract documents will require the contractor to designate a person responsible for maintenance of the sedimentation control features during construction as required by the Erosion Control Report. Long-term operation/maintenance planned for the stormwater management facilities is presented below.

The Owner may contract with such professionals as may be necessary in order to comply with this provision and may rely on the advice of such professionals in carrying out its duty hereunder, provided, that the following operation and maintenance procedures are hereby established as a minimum for compliance with this section:

1. Maintenance of catch basins and drainage manholes (cleaning any sediment buildup and removing debris as necessary).

XII. Conclusion

Though there will be a net increase in impervious area, stormwater detention and treatment are not provided on the project for the following reasons:

- Detention has not been provided due to the close proximity of the project to the storm drain outfall into Back Cove. Stormwater will pass through the municipal drainage system to Back Cove early on during the discharge period.
- Treatment has not been provided as the amount of uncovered impervious pavement is significantly decreasing in the post-development design as the existing parking lot is being replaced by building roof and deck surfaces. Most of the stormwater that falls on the site will be collected by the building roof drains and will be conveyed to the municipal storm drainage system located in Marginal way.

XIII. Attachments

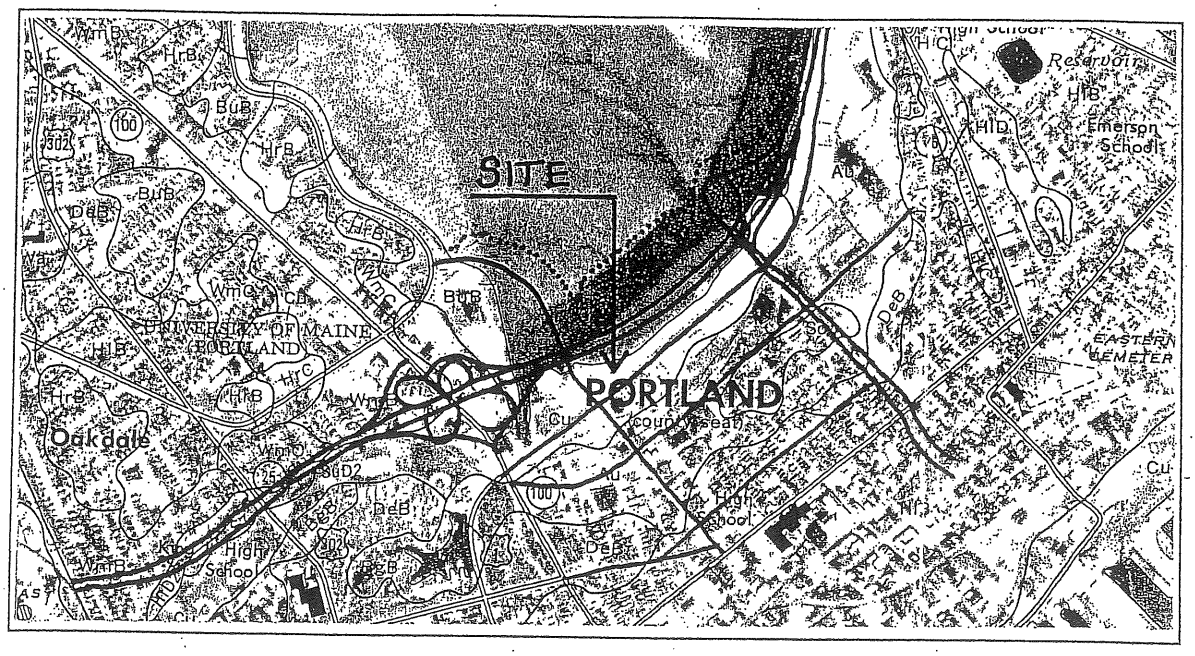
Attached to this section are the following items:

Attachment A – Location Map
Attachment B – Watershed Maps
Attachment C – HydroCAD Calculations
Attachment D – Pipe Sizing Calculations (Hydroflow Storm Sewers Software)

ATTACHMENT H-1

EXISTING SOIL CONDITIONS

The site for this proposed development consists of bituminous paved parking and planted berms to screen the parking. The Cumberland County Medium Intensity Soil Survey indicates that the soil conditions are Cut and Fill Land, see the description below.



CUMBERLAND COUNTY MEDIUM INTENSITY SOIL SURVEY
August 1974
1:20 000

Cut and Fill Land

Cut and fill land (Cu) consists of excavated soil material and bedrock at highway, airport, and building sites that have been redistributed in adjacent areas to depths of from 2 to 15 feet. The material consists of sandy, clayey, silty, cobbly, and gravelly sediment separately or in various combinations.

Because of the variability of the material of cut and fill land at any one location, onsite investigation is needed to determine the suitability of this land type for a particular use. Capability unit, unclassified; woodland group, needs onsite investigation; wildlife group, needs onsite investigation.

S.W.COLE ENGINEERING, INC. • Geotechnical Engineering • Field & Lab Testing • Scientific & Environmental Consulting

06-0124

May 17, 2006

Capital, LLC.
Attn: Greg Shinberg
477 Congress Street, 5th Floor
Portland ME 04101

Subject: Explorations and Geotechnical Services
Proposed Office Building and Parking Garage
Preble Street and Marginal Way
Portland, Maine

Dear Mr. Shinberg:

In accordance with our Agreement dated February 6, 2006, and our subsequent Agreement Addendum No. 1 dated April 12, 2006, we have made a subsurface investigation at the above referenced project. We received written authorization to proceed with our original scope of work on March 21, 2006 and Addendum No. 1 on April 17, 2006. This report summarizes our findings and recommendations and its contents are subject to the limitations set forth in Attachment A.

1.0 INTRODUCTION

1.1 Scope of Work

The purpose of the investigation was to explore the subsurface conditions at the site in order to provide geotechnical recommendations relative to foundations and earthwork associated with the proposed construction. The investigation has included the making of six test boring explorations, geotechnical laboratory soils testing and a geotechnical evaluation of the findings relative to the proposed construction.

1.2 Proposed Construction

Based on the information provided by CWS Architects (project architect), we understand development plans call for construction of a 9-story office building and a multi-level parking garage structure at the corner of Marginal Way and Preble Street. The building will have plan dimensions of 250 by 180 feet at a finished floor at an elevation of about 10 feet (project datum). We understand that the first four levels of the building will

consist of parking garage decks. The ground floor will have a retail area on the southerly side of the structure adjacent to Marginal Way, occupying a plan area of about 200 by 30 feet. This retail area will have parking areas on the overlying floors. An entrance atrium will be situated in the southern corner of the building to access two elevators. A 9-story office tower with plan dimensions of about 105 by 120 feet will be located at the southerly quarter of the structure. The tower will have office space on the fifth through eighth floors and will have a penthouse on the ninth floor. Proposed grades as well as structural loading information have not been provided at this time.

2.0 EXPLORATION AND TESTING

2.1 Exploration

Three test borings (B-1 through B-3) were conducted in areas selected by S. W. COLE ENGINEERING, INC. in early April and pursuant to your request, three additional borings (B-4 through B-6) were added in areas selected by the Becker Structural Engineering. The test borings were made at the site by Great Works Test Boring, Inc. of Rollinsford, New Hampshire working under subcontract to S. W. COLE ENGINEERING, INC. The exploration locations were established in the field based on taped measurement from existing site features. Logs of the explorations are attached as Sheets 2 through 22. A key to the notes and symbols used on the logs is attached as Sheet 23. The elevations shown on the logs were estimated based upon topographic information shown on Sheet 1.

In addition to the six test borings, eight test pits (TP-1 through TP-8) were performed at the site at locations selected and established by Greg Shinberg (Capital LLC Agent). S. W. COLE ENGINEERING, INC. was on-site to observe, screen and log the test pits. We also coordinated analytical testing of two samples obtained at the test pits. We understand that Capital LLC has engaged an environmental consultant to evaluate the test pits and to provide environmental recommendations. The preliminary results for this work were provided to you on May 2, 2006. A separate letter report for this work will be provided to you on May 17, 2006.

2.2 Testing

In-situ strength test results are noted on the logs. Geotechnical laboratory testing was performed on selected soil samples recovered from the test borings. Moisture content, strength and Atterberg Limit test results are noted on the log sheets. The results of three

grain size analyses are illustrated on Sheets 24 through 26. The results of a two one-dimensional consolidation tests from test boring B-3 are illustrated on Sheets 27 and 28.

3.0 SITE AND SUBSURFACE CONDITIONS

3.1 Site Conditions

The site is located at the northeasterly corner of the intersection of Marginal Way and Preble Street and is bounded by I-295 to the north and a parking lot to the east. The site is relatively flat and level existing at an elevation of about 10 feet (project datum). The site is currently open pavement and is used as a public parking lot. A raised landscape berm separates the parking lot from Marginal Way and Preble Street. The berm is about 4 to 5 feet high in the highest areas.

3.2 Subsurface Conditions

Below a surficial layer of bituminous pavement and base gravel, the explorations generally encountered miscellaneous fills. The fill soils overly a thick deposit of compressible glaciomarine clay overlying loose to medium-dense glacial outwash sands overlying a dense to very dense glacial till overlying bedrock at depths varying from about 117 to 139 feet below the ground surface. The principal strata encountered are summarized below. Refer to the attached logs for a more detailed description of the subsurface conditions encountered at the test boring locations.

Upper Fills: The surficial fills were found to range from about 2 to 9 feet in thickness and generally consisted of dark-gray, medium-dense to loose silty sand with gravel with some cobbles, bricks and some pieces of wood. Based on laboratory testing of several soil samples, it appears that the surficial fill soils have a pH of about 6.5 to 7.0.

Lower Fills: The lower fills were found to extend to depths of about 12 to 16 feet below the ground surface. The lower fills were generally black in color and loose to medium-dense and varied greatly in composition. Generally, the uncontrolled fills consisted of gravel and silt with bricks, cobbles, wood, ash, glass and organics. Several samples of the uncontrolled fill were observed to have a petroleum-like odor. Based on laboratory testing of several soil samples, it appears that the lower fills have a pH of about 6.3 to 7.2.

Glaciomarine Clay: The glaciomarine stratum generally consists of a soft relic bay-mud layer with organics and seashells overlying a relatively stiff layer of brown silty clay overlying a softer layer of gray silty clay. The relic bay-mud is relatively thin ranging in thickness from about 1 to 5 feet, where encountered. The stiff brown clay is also relatively thin ranging in thickness from about 5 to 8 feet at the test borings. The softer gray clay begins at depths ranging from about 19 to 25 feet below the ground surface and ranges in thickness from about 60 to 80 feet at the borings.

Glacial Outwash: The glacial outwash stratum found at Borings B-4, B-5 and B-6, generally consists of loose to medium dense to dense silty fine to medium sand and a trace of gravel. The outwash sands were encountered at depths ranging from about 85 to 92 feet and are interpreted to range from 5 to 7 feet in thickness. The glacial outwash was not encountered at every boring location.

Glacial Till: The glacial till stratum ranges from medium-dense gray gravelly silty sand to very dense gray silt and sand with some gravel. The glacial till stratum was generally encountered at depths ranging from about 85 to 100 feet at the explorations. Frequent cobbles and boulders were encountered below a depth of about 100 feet and the glacial till is generally dense to very dense below depths of ranging from about 90 to 120 feet.

Rock: Depths to practical refusal of the drilling equipment varied from about 125 to 139 feet at the explorations; deepest at Boring B-6. Cobbles and boulders were evident in the glacial till above the bedrock. Attempts were made to obtain rock cores at Borings B-1, B-2 and B-4. Reasonable rock recovery was obtained at Boring B-1, but limited rock recovery was obtained at Borings B-2 and B-4. The rock recovered was visually classified as gray sulfidic schist of very poor quality (highly fractured). At each of the borings, either a rock core barrel was used to obtain rock core or a roller-cone bit was advanced into the rock. A rock core barrel or roller-bit was advanced into probable bedrock varying from 4 to 7.5 feet at the explorations.

3.3 Groundwater

Based on moisture conditions of the test boring samples and observations made during drilling, groundwater appeared to be at a depth of about 6 to 7 feet below the ground surface at the time of drilling. Actual long-term groundwater levels have not been determined. Groundwater levels will fluctuate seasonally and in response to

precipitation, variations in subsurface conditions, construction activities, nearby tidal fluctuates and other factors.

3.4 Seismic and Frost Conditions

According to the 2003 International Building Codes, we interpret the subsurface conditions to correspond to a seismic soil Site Class 'E'. The design freezing index for the Portland area is approximately 1,250 Fahrenheit-Degree-Days, which corresponds to a frost penetration depth on the order of 4.5 feet.

4.0 EVALUATION AND RECOMMENDATIONS

4.1 General Findings

Based on the findings at the exploration locations, it is our opinion that the proposed construction appears feasible from a geotechnical standpoint. Due to the presence of uncontrolled fills and deep compressible glaciomarine clays beneath the site, the proposed structure will require pile-supported foundations. Because the site is underlain by uncontrolled fills, we recommend that floor slabs for proposed retail and office space also be structurally supported. We anticipate that the first floor level of the parking garage will be a concrete slab-on-grade with an elevation at about existing grade. Although proposed grades are not known at this time, we recommend new surface loads, including fills, be kept to a minimum.

Excavation work below a depth of about 5 to 6 feet will likely encounter groundwater seepage that will cause softening of subgrades and destabilize excavations. Controlling groundwater to a depth of at least 1 foot below subgrades will help to stabilize subgrades.

4.2 Settlement Analysis

We have made an analysis of post-construction consolidation of the underlying compressible glaciomarine soils. Our analysis has been based on the soil profiles encountered at the borings and laboratory testing on soil samples recovered from boring B-3. Our field and laboratory testing indicates that the glaciomarine soils beneath the site are slightly overconsolidated becoming normally consolidated with depth. At this time, we have not been provided with actual building loads and have based our settlement calculations on estimated building loads based on our experience with similar structures.

We estimate that long-term consolidation of the compressible glaciomarine soils could result in at least 6 to 12 inches of total post-construction settlement beneath a typical shallow spread footing supported column. Between interior and exterior columns, differential settlements between columns could approach one-half to two-thirds of the total post-construction settlement. These total and differential settlements are not within tolerable limits for the proposed structure. Thus, on shallow spread footings are not feasible.

4.3 Pile Foundations

Considering the subsurface findings, concrete-filled steel pipe or precast-prestressed reinforced concrete piles driven to a resistance compatible with the required capacity in the dense to very dense glacial till stratum, or steel H-piles driven to practical refusal in the very dense glacial till or on bedrock appear suitable for foundation support of the proposed building and parking garage. Considering our understanding of the proposed construction, we offer the following table of pile sections and allowable axial compressive capacities.

RECOMMENDED PILE CAPACITIES			
Pile Type	Section	Estimated Allowable Axial Compressive Capacity (kips)	
Concrete-filled Steel Pipe Pile, 0.3" min wall thickness, 1" flat plate at tip	10 ¾" diameter 12 ¾" diameter	80 100	
Precast-Prestressed, Solid Core, Reinforced Concrete Pile (f'c = 5000 psi)	10" square 12" square	80 100	
Steel H-Pile with cast driving tips, 50-ksi steel, driven to practical refusal	HP 12 x 53 HP 12 x 74 HP 14 x 89 HP 14 x 117	1/16" CORROSION 180 280 340 480	1/8" CORROSION 100 200 250 380

S.W.COLE ENGINEERING, INC.

NOTES:

1) A reduction in pile capacity will need to be considered, due to soil downdrag, if surficial loads, such as new fills, are placed on the site.
2) The above capacities are estimates only. Actual capacities will need to be assessed by the pile contractor through a test pile and load testing program.
3) The estimated capacities shown above for concrete-filled steel pipe pile are based on capacities achieved at a nearby site driven into the sands or just into the glacial till. A pile capacity of at least 100 kips was required for that project. We would expect capacities of both the pipe pile and the solid core concrete piles to be nearly the same, using similar dimensional piles. We expect, however, that higher capacities of both pipe pile and solid core concrete piles could be achieved by driving these piles deeper into the glacial till stratum.

Considering the depths to dense glacial till encountered at the test borings and a pile cap depth of at-least 4.5 feet below finished grade, we estimate pile lengths may range from 95 to 120 feet for steel pipe and prestressed concrete piles. H-piles should be driven into the very dense glacial till stratum, or to bedrock, or until practical refusal surface is encountered, which may result in pile lengths generally ranging from about 100 to 120 feet, or longer, particularly in the area of B-6. Because subsurface conditions vary across the site, the actual tip elevations and lengths of driven piling will also vary with location. Steel H-piles would be particularly variable due the presence of large boulders and cobbles within the glacial till that may result in practical pile refusal. For any pile option, it is likely that some piles may encounter cobbles and/or boulders at depth and could be damaged during driving, thus the project should account for a loss of piles and/or capacity reduction, due to damage. To assess the variability of depth to bearing strata and to better refine estimates for pile lengths, we recommend that the contractor coordinate several test piles to be driven at different locations at the site.

We understand that prestressed ICP concrete piles may be considered for foundations support. We anticipate that ICP piles would have allowable axial compressive capacities similar to concrete filled steel pipe piles or precast-prestressed reinforced concrete piles. However, since this pile type is new to the Portland area, we recommend that further evaluation of this pile type by the contractor to include a test pile and load test program to evaluate drivability and allowable capacities.

Uplift capacity of the piles will be affected by the pile spacing, pile type, splices and actual depths required to achieve capacity. S. W. COLE ENGINEERING, INC. can

assist the design team to help estimate uplift capacities of the piles after a proposed pile type has been selected and again after the test piles have been driven.

Grade beams, pile caps and foundations exposed to freezing temperatures should extend at least 4.5 feet from finished grade. Piles should be spaced a minimum center-to-center distance of at least 3 pile diameters, but no less than 30 inches. Piles in groups should be driven from the interior outward to help preclude excessively hard driving conditions of the interior piles due to soil densification.

We recommend that lateral loads be resisted by passive earth pressures acting on the grade beams and pile caps. Passive lateral resistance acting on grade beams and pile caps backfilled with compacted Structural Fill should consider a total unit weight of granular backfill (γ_t) of 125 pcf, an angle of internal friction of 30 degrees with an ultimate passive lateral earth pressure coefficient (K_p) of 3.0. Additional resistance to lateral loads can be mobilized along the pile shafts and by battered piles, if needed. S. W. COLE ENGINEERING, INC. can assist with lateral pile capacities, as deemed necessary by the structural engineer.

Pile load tests are required to be performed on projects having piles with design capacities over 40 tons (80 kips). For piles with a capacity over 40 tons, we recommend the contractor coordinate a test pile program including monitoring of several piles with a Pile Driving Analyzer (PDA) to determine pile and driving equipment compatibility as well as to define the "set" criteria and allowable capacity. The test pile program should include PDA monitoring of the test piles during re-strikes in order to assess pile capacity and driving resistance after pore water pressures have relaxed. The pile driving contractor should submit a WEAP analysis and information relative to pile driving equipment prior to beginning driving. S. W. COLE ENGINEERING, INC. should be on-site during pile driving to document the pile driving.

4.4 Subgrade Preparation

Site preparation should begin with construction of an erosion control system to protect drainage ways and areas outside the construction limits. The soils that will be exposed will be subject to erosion. As much existing pavement and vegetation as possible should remain adjacent to the construction site to lessen the potential for erosion.

In general, subgrades will consist of loose to medium dense fill. Groundwater may be encountered, particularly in deeper excavations, such as foundations, elevator pits or site utilities. We recommend that pile cap and grade beam subgrades be overexcavated by about 12 inches and replaced with a layer of compacted crushed stone. The crushed stone will help to provide a stable working mat and a drainage media for dewatering. Pipe trench bottoms should also be overexcavated at least 12 inches and replaced with a layer of crushed stone overlying a non-woven geotextile fabric such as Mirafi 160N. Utility structures such as manholes, vaults and catch basins should be overexcavated at least 24 inches and replaced with a layer of crushed stone overlying a non-woven geotextile fabric. We recommend that excavation to subgrades be completed with a smooth-edged bucket to lessen disturbance of subgrade soils.

We understand that Capital, LLC has engaged others to provide environmental consulting for this project. Material handling and subgrade preparation will need to take into account the environmental recommendations provided by Capital LLC's environmental consultant.

4.5 Excavation Work

Excavation work will encounter uncontrolled miscellaneous fills. The on-site fill soils are not suitable for reuse below slabs or backfill against foundations, but it may be possible to reuse the sandy on-site upper fill for trench backfill below paved areas provided they are screened of miscellaneous debris and are at a moisture content which is consistent with the required compaction.

Groundwater and wet soil conditions will likely be encountered in the foundation excavations deeper than about 5 feet below existing grades. In our opinion, ditching with sump and pump dewatering techniques should be adequate to control groundwater in shallow foundation excavations. It should be anticipated, however, that heavy rains and/or higher than normal tides will affect groundwater levels and may require significant sumping and pumping or other means of dewatering. We recommend a 12-inch layer of crushed stone be placed over foundation subgrades to act as a drainage media from which to sump and pump. Deeper excavation, such as for utilities, will likely require trench box or braced sheetpile shoring for groundwater cutoff and excavation stability. In any case, excavations must be properly shored and/or sloped in accordance with OSHA trenching regulations to prevent sloughing and caving of the sidewalls during construction.

4.6 Concrete Slabs

4.6.1 Retail and Office Area Slabs

We recommend that all concrete slab floors in areas other than for parking be structurally supported. These slabs should be underlain by at least 12 inches of compacted Structural Fill or crushed stone. We have assumed these slabs will be in heated areas. The Structural Fill or crushed stone below the slabs should be hydraulically connected to foundation underdrains.

We recommend that a vapor retarder be placed directly below concrete slabs in enclosed spaces. The vapor barrier should have a permeance that is less than the floor covering being applied on the slab and should be installed according to the manufacturer's recommended methods including taping all joints and wall connections. Flooring suppliers should be consulted relative to acceptable vapor barrier systems for use with their products. The vapor barrier must have sufficient durability to withstand direct contact with the subslab fill and construction activity. A subslab venting system may also be needed beneath floor slabs as deemed necessary by Capital LLCs environmental consultant. Sub-slab backfill materials should be selected in accordance with the requirements of the venting system, if needed.

4.6.2 Parking Garage and Exterior Slabs

Protection against frost action below concrete pavements is particularly critical in situations with limited overhead clearance, such as in parking garages. We anticipate that concrete slabs-on-grade will be utilized for the first floor parking level. The proposed on-grade concrete slabs will be underlain by frost-susceptible fill soils and would be exposed to freezing temperatures. Given these conditions; we recommend the following options:

- Option 1 – Full Depth Non-Frost Susceptible Soils. We recommend the exposed slabs be underlain with clean non-frost susceptible material extending at least 4.5 feet below the slab surfaces consisting of 12 inches of compacted MDOT 703.06 Type A (crushed gravel) overlying compacted Structural Fill placed on woven geotextile separation fabric, such as Mirafi 500X, overlying densified subgrade soils.

- Option 2 – Insulation. We recommend the exposed slabs be underlain with 12 inches of compacted MDOT 703.06 Type A (crushed gravel) overlying 2 inches of rigid, extruded, closed-cell, polystyrene insulation overlying at least 12 inches of compacted structural fill placed on woven geotextile separation fabric, such as Mirafi 500X, overlying densified subgrade. Heavy equipment should not operate on the insulation once placed. It may be necessary to place a HPDE membrane liner below the insulation should subgrade soil contain petroleum substances.

Concrete on-grade floors in unheated areas may be designed using a subgrade reaction modulus of 150 pci provided that these slabs are underlain by prepared subgrades.

Additionally, utilities sensitive to freezing should be isolated from on-grade concrete slabs and should be buried below the design frost depth or insulated for protection against frost damage.

It should be anticipated that some settlement may occur, over time, beneath the first level parking level slabs due to the loose nature of the existing underlying fills. Design should accommodate some settlement. If some settlement is not acceptable, these slabs will also need to be structurally supported. We have assumed the first level parking slab will be constructed at or within about 12 inches of existing grades.

We recommend that control joints be installed within slabs to accommodate shrinkage in the concrete as it cures. In general, control joints are usually installed at 10 to 15 foot spacing; however, the actual spacing of control joints should be determined by the structural engineer. We recommend that all slabs be wet-cured for a period of at least 7 days after casting as a measure to reduce the potential for curling of the concrete and excessive drying/shrinkage. We further recommend that consideration be given to using a curing paper or curing compound after the wet-cure period to improve the quality of the completed floor.

4.7 Foundation Drainage

We recommend that a perimeter foundation drain system as well as several interior sub-slab drains be provided for the structure. An underdrain should also be provided for any elevator pit areas. The foundation drains should be placed at least 4.5 feet from freezing temperatures and should consist of 4-inch diameter rigid underdrain pipe having perforations of ¼ to ½ inches. We recommend that at least 6 inches of crushed stone

bedding be provided around the foundation drains and that the stone be wrapped with a geotextile filter fabric having an apparent opening size of at least 70. The foundation drainage system must have a positive gravity outlet.

Exterior foundation backfill should be sealed with a surficial layer of clayey or loamy soil in areas that are not to be paved or occupied by entrance slabs to reduce direct surface water infiltration into the backfill. Roof drains should be routed in separate non-perforated pipes, also placed below the frost depth. Utilities in non-heated areas, extending through slabs or asphalt paving into underlying soils, should have a gasket at grade to prevent surface water from entering the underlying fills and to allow some differential movement.

4.8 Entrances, Sidewalks and Exterior Slabs

Entrance approaches, sidewalks and exterior slabs should be designed to reduce the effects of differential frost action between doorways and entrances. We recommend that excavations beneath the entire width of entrances, sidewalks, and exterior slabs continue to at least 4.5 feet below finish grade. These areas should be backfilled with compacted non-frost susceptible granular fill meeting the Structural Fill gradation to limit abrupt heave or differential movement. We recommend the structural fill be underlain by non-woven geotextile fabric. The zone of non-frost susceptible material adjacent to exterior foundations and below entrance slabs and sidewalks should transition up to any adjacent pavement subbase or loam at a 3H:1V slope or flatter.

4.9 Backfill and Compaction Requirements

As previously mentioned, the on-site fills are not suitable for reuse below pavements, slabs or adjacent to foundations. The sandy portions of the on-site upper fills may be suitable for reuse as compacted trench backfill below paved areas. Compacted granular fill below entrances, sidewalks, on-grade slabs (parking areas) and as backfill against all foundations (interior and exterior) should be clean granular material meeting the gradation for Structural Fill:

Structural Fill	
Sieve Size	Percent Finer by Weight
4 inch	100
3 inch	90 to 100
¼ inch	25 to 90
No. 40	0 to 30
No. 200	0 to 5

Fill should be placed in horizontal lifts and be compacted. Lift thickness should be such that desired density is achieved throughout the lift thickness with 3 to 5 passes of the compaction equipment. Foundation backfill and fills placed beneath soil-supported slabs, paved areas and walkways should be compacted to at least 95 percent of its maximum dry density as determined by the Modified Proctor (ASTM-D1557). Backfill below pile-supported foundations should be compacted crushed stone. Because of the loose nature of the existing fills, it will be necessary to densify subgrades below grade beams and provide compacted structural fill or crushed stone bedding.

4.10 Asphalt Pavement

We anticipate that asphalt pavement will be needed in certain areas; generally outside the building footprint, such as entrance areas. Proposed traffic loading information was not made available to us at the time of this report; thus, we have provided the following proposed pavement sections based on our experience with similar facilities and certain geotechnical assumptions. We offer the following new pavement sections for consideration:

FLEXIBLE (ASPHALT) PAVEMENTS			
Pavement Layer	Standard Duty	Heavy Duty	Maine DOT Standard Specification
Wearing Course	1 ¼"	1 ¼"	9.5mm Hot Mix Asphalt or MDOT Grade C
Binder Course	1 ¾"	2 ¾"	19.0mm Hot Mix Asphalt or MDOT Grade B
Crushed Base	6"	6"	703.06 Base Aggregate Type A - Crushed Gravel
Granular Subbase	12"	15"	703.06 Subbase Aggregate Type D - Gravel

We have assumed that some paved areas will have only passenger vehicle loading (standard duty) while other areas will have delivery truck traffic (heavy duty). All pavement sections need to be placed on properly prepared densified subgrades. All pavement subgrades should be densified by a vibratory roller compactor. Any areas that are soft, wet and yielding should be assessed for the need for over-excavation and replacement with structural fill and/or underlain by geotextile filter fabric. Granular base and subbase material(s) should be compacted to at least 95 percent of their maximum dry densities as determined by ASTM D-1557 at a moisture content at or near optimum moisture. Bituminous pavement should be compacted to 92 to 97 percent of its theoretical maximum density (TMD) as determined by ASTM D-2041.

Since the native soils are frost susceptible, some frost heaving and distress of pavements must be anticipated unless all frost susceptible soils are removed to a depth of at least 4.5 feet below the pavement surface and backfilled with non-frost susceptible Structural Fill.

4.11 Weather Considerations

Subgrades, foundations and floor slabs must be protected from freezing conditions. Fill soils and concrete must not be placed on frozen soil and once placed, the soil beneath the structure must be protected from freezing. Further, the existing uncontrolled fill is moisture sensitive and as such subgrades will be susceptible to disturbance during wet conditions. Consequently, site work and construction activities should take appropriate measures to protect exposed subgrades, particularly when wet. This may require the use of temporary haul roads and staging areas to preclude subgrade damage due to construction traffic. Geotextile fabric may also be needed below haul roads and/or proposed slabs to help stabilize subgrades.

4.12 Construction Observation and Testing

We recommend that S. W. COLE ENGINEERING, INC. be retained to provide consultation and testing services for the piling, excavation and foundation phases of construction. This is to observe compliance with the design recommendations, drawings and specifications and to allow design changes in the event that subsurface conditions are found to differ from those anticipated prior to the start of construction. S. W. COLE ENGINEERING, INC. is available to provide vibration monitoring, pile installation monitoring, and testing of soils, concrete, steel, masonry, fireproofing and asphalt.

S.W.COLE ENGINEERING, INC.

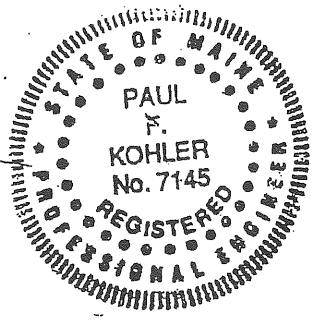
06-0124
May 17, 2006

5.0 CLOSURE

We request the opportunity to review the sitework and foundation design drawings to confirm that our recommendations have been appropriately interpreted and implemented. It has been a pleasure to be of assistance to you with this phase of your project. We look forward to working with you as the design progresses and during the construction phase.

Sincerely,

S. W. COLE ENGINEERING, INC.



Paul F Kohler, P. E.
Senior Geotechnical Engineer

c: Paul Becker – Becker Structural
c: Guy Labreque – CWS Architects

PFK:tjb/pfb
P:\2006\06-0124 S - Capital LLC-Shinberg - Portland - 84 Marginal Way 9-story Structure - PFK\Reports and Letters\06-0124 Report.doc

Attachment A
Limitations

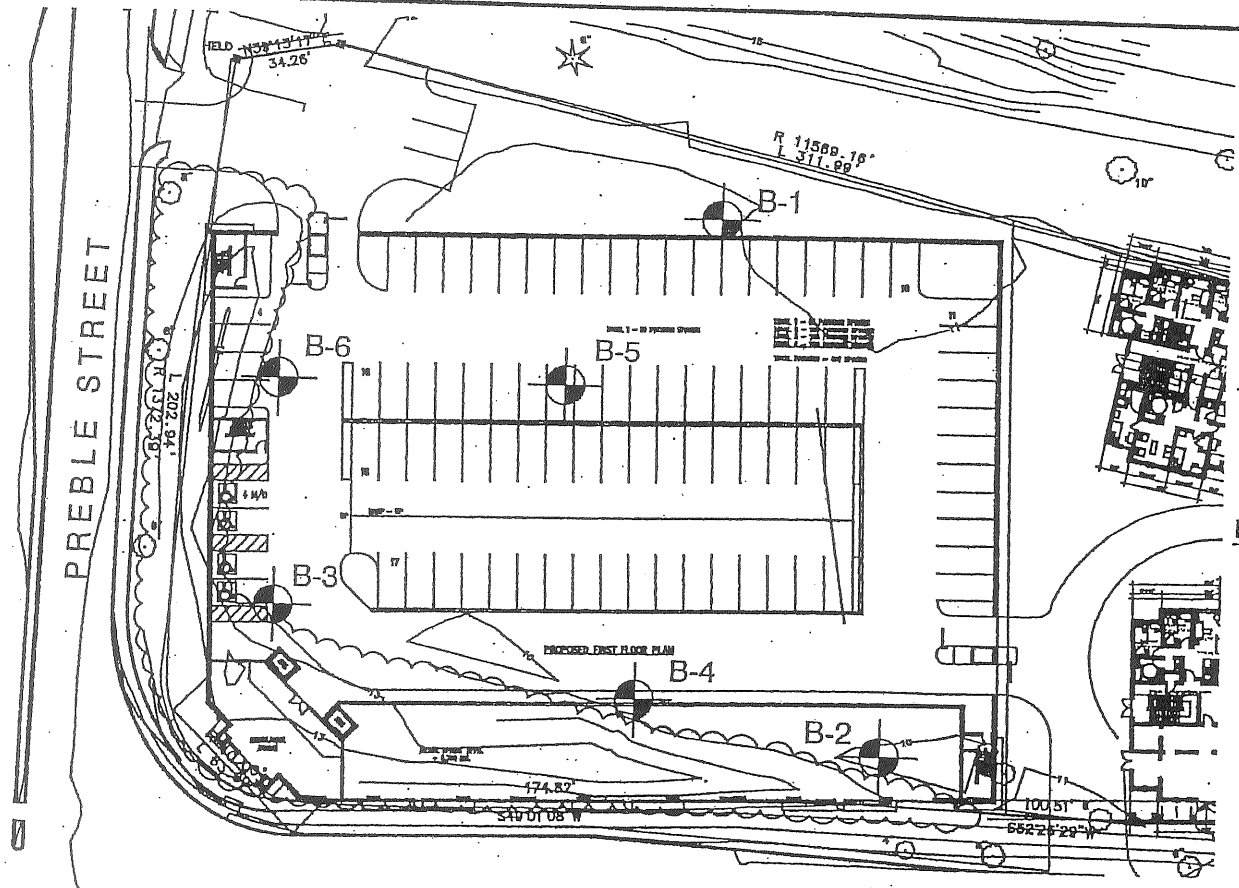
This report has been prepared for the exclusive use of Capital LLC for specific application to the proposed office building and parking garage structure at the northeasterly corner of the intersection of Preble Street and Marginal Way in Portland, Maine. S. W. COLE ENGINEERING, INC. has endeavored to conduct the work in accordance with generally accepted soil and foundation engineering practices. No other warranty, expressed or implied, is made.

The soil profiles described in the report are intended to convey general trends in subsurface conditions. The boundaries between strata are approximate and are based upon interpretation of exploration data and samples.

The analyses performed during this investigation and recommendations presented in this report are based in part upon the data obtained from subsurface explorations made at the site. Variations in subsurface conditions may occur between explorations and may not become evident until construction. If variations in subsurface conditions become evident after submission of this report, it will be necessary to evaluate their nature and to review the recommendations of this report.

Observations have been made during exploration work to assess site groundwater levels. Fluctuations in water levels will occur due to variations in rainfall, temperature, and other factors.

Recommendations contained in this report are based substantially upon information provided by others regarding the proposed project. In the event that any changes are made in the design, nature, or location of the proposed project, S. W. COLE ENGINEERING, INC. should review such changes as they relate to analyses associated with this report. Recommendations contained in this report shall not be considered valid unless the changes are reviewed by S. W. COLE ENGINEERING, INC.



LEGEND

APPROXIMATE BORING LOCATION

NOTES:

1. EXPLORATION LOCATION PLAN WAS PREPARED FROM A 1"=30' SCALE PLAN OF THE SITE ENTITLED "BOUNDARY AND TOPOGRAPHIC SURVEY", PREPARED BY OWEN HASKELL, INC., DATED 01/03/06.
2. THE LOCATIONS OF BORINGS HAVE BEEN DETERMINED IN THE FIELD BY TAPED MEASUREMENTS FROM EXISTING SITE FEATURES.

S.W.COLE ENGINEERING, INC.

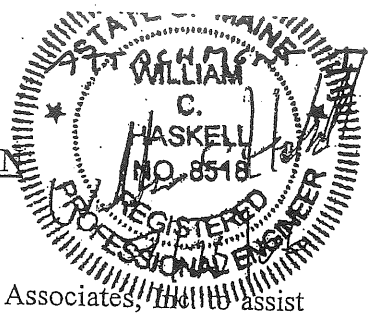
CAPITAL, LLC

EXPLORATION LOCATION PLAN

PROPOSED OFFICE AND PARKING GARAGE STRUCTURE
84 MARGINAL WAY
PORTLAND, MAINE

Job No.	06-0124	Scale	1"=60'
Date :	05/16/06	Sheet	1

H-18



EROSION AND SEDIMENTATION CONTROL PLAN

I. Introduction

Gorrill-Palmer Consulting Engineers, Inc in has been retained by Mitchell & Associates, Inc. to assist with preparation of civil design plans and water resource narratives for a proposed development site located at an existing parking lot site on the corner of Marginal Way and Preble Street Extension in Portland. The developer is Capital, LLC, of Portland Maine. The Maine Department of Environmental Protection (MDEP) was contacted regarding the proposed project to determine if the development would require review or any permits by that agency. Based on discussions with Linda Kokemuller of the MDEP office in Portland, as the existing site was paved before 1997 and the proposed project does results in less than 1 acre of new impervious surface, no MDEP permits or reviews relating to the Site Location of Development Act (Site Law) Permit or Stormwater Permit are required. As the proposed development will result in more than 1 acre of disturbed area, a Stormwater Permit-By-Rule and accompanying Maine Construction General Permit (MCGP) is required and it will be filed with MDEP. The following narrative contains the erosion and sedimentation control plan which is appropriate for the site.

II. Narrative

II.1 Existing Conditions

The project site consists of approximately 1.37 acres of land located between Interstate 295 and Marginal Way. The project site is a portion of the existing parking lot site (2.70 acres) is currently owned by the City of Portland. The site is currently developed as a parking lot used as a storage yard for vehicles during the wintertime. Most of the existing site is currently developed, with several smaller landscaped areas along the eastern and southern perimeter of the parking lot. The adjacent portion of the property, 1.33 acres in size, is also under consideration for commercial development by another developer as an apartment housing complex with covered parking and will also include some retail space on the ground floor mixture of retail space, medical and business offices, and a parking garage. The design and details of the adjacent development are provided as a separate application.

The proposed development will consist of a multistory structure with a mixture of retail space, medical and business offices, and a parking garage. Stormwater runoff from the building roof will be collected internally via roof drains and directed to a storm drain system that connects to the municipal storm drain system located in Marginal Way. The project also proposes adjusting the current drainage path of the adjacent portion of the I-295 Right-of-Way so that it will be conveyed to an existing culvert inlet located along the existing sidewalk along Preble Street Extension on the southern part of the site. That drainage currently flows down slope in the right-of-way and onto the parking lot.

Topography on the site consists of relatively flat slopes that gently slope eastward; <1% - 2% over much of the site. The site drains to onsite catch basins and to adjacent catch basins located in Marginal Way and Preble Street Extension. The stormwater collection system drains to Portland's Back Cove (Casco Bay/Atlantic Ocean)

Abutting land uses include:

- Northwest - MDOT Right of Way associated with Interstate 295
- Northeast - Existing Parking Lot proposed for Development and Existing Building and Skate Park (area proposed for future relocation of the Miss Portland Diner)
- Southwest - Preble Street Extension and Commercial Businesses
- Southeast - Marginal Way and Commercial Businesses

The existing parcel is characterized as follows;

Existing Parcel Parameters	
Parcel Area	1.37 Acres
Existing Impervious Area	1.02 acres
Existing Pervious Area	0.35 acres
Proposed Impervious Area	1.24 acres
Proposed Pervious Area	0.13 acres
Increase in Impervious Area	0.22 acres
Notes: 1. Includes areas on the parcel only. Does not include tributary offsite areas.	

II.2 Existing Erosion Problems

Gorrill-Palmer Consulting Engineers, Inc. is not aware of any existing erosion problems on site.

II.3 Critical Areas

Gorrill-Palmer Consulting Engineers, Inc. is not aware of any existing erosion problems on site.

II.4 Protected Natural Resources

As the existing site is developed as a parking area, no protected natural resources are located onsite.

II.5 Erosion Control Measures and Site Stabilization

The primary emphasis of the erosion/sedimentation control plan to be implemented for the infrastructure construction is as follows:

- Development of a careful construction sequence.
- Rapid revegetation of denuded areas to minimize the period of soil exposure.
- Rapid stabilization of drainage paths to avoid rill and gully erosion.
- The use of on-site measures to capture sediment (silt fence, check dams, etc.).

The following temporary and permanent erosion and sediment control devices will be implemented as part of the site development. These devices shall be installed as indicated on the plans or as described within this report. For further reference, see the Maine Erosion and Sediment Control Handbook for Construction: Best Management Practices.

A. Temporary Erosion Control Measures

The following measures are planned as temporary erosion/sedimentation control measures during construction:

1. Utilize the existing entrance onto Preble Street Extension. If access shall be required at the proposed entrance onto Marginal Way at the northerly property line

with the abutting property, a stabilized construction entrance shall be installed and maintained during construction to prevent off-tracking of dirt and debris.

2. Siltation fence or wood waste compost berms shall be installed downstream of any disturbed areas to trap runoff borne sediments until adequate catch (90% or greater) has occurred. The silt fence and/or the wood waste compost berms shall be installed per the details provided in this package and inspected immediately after each rainfall and at least daily during prolonged rainfall. Repairs shall be made if there are any signs of erosion or sedimentation below the fence or berm line. If there are signs of undercutting at the center or the edges, or impounding of large volumes of water behind fence or berm, the barrier shall be replaced with a stone check dam. Wood waste compost berms are not to be used adjacent to wetland areas that are to be left undisturbed.

3. Straw or hay mulch including hydroseeding is intended to provide cover for denuded or seeded areas until revegetation is established. Mulch placed between April 15th and September 15th on slopes of less then 15 percent shall be anchored by applying water; mulch placed on slopes of equal to or steeper than 15 percent shall be covered by a fabric netting and anchored with staples in accordance with manufacturer's recommendation. Mulch placed between September 15th and April 15th on slopes equal to or steeper than 8 percent shall be covered with a fabric netting and anchored with staples in accordance with the manufacturer's recommendations. Slopes steeper than 3:1 and the drainage swale located in the I-295 Right-of-Way that are to be revegetated shall receive Curlex blankets by American Excelsior or Engineer approved equivalent. Mulch application rates are provided in Attachment A of this section. Mulch shall not be placed over snow.

4. Temporary stockpiles of stumps, grubbings, or common excavation will be protected as follows:

   a) Temporary stockpiles shall not be located within 100 feet of any wetlands that are to be left undisturbed and any slopes exceeding 15%.

   b) Stockpiles shall be stabilized within 7 days by either temporarily seeding the stockpile with a hydroseed method containing an emulsified mulch tackifier or by covering the stockpile with mulch.

   c) Stockpiles shall be surrounded by silt fence or wood-waste compost berms at the time of formation.

5. All denuded areas within 100 feet of an undisturbed wetland that have been rough graded and are not located within a roadway subbase area shall receive mulch or erosion control mesh fabric within 7 days of initial soil disturbance. All areas within 50 feet of undisturbed wetland area shall be mulched prior to any predicted rain event regardless of the 7-day window. In other areas, the time period may be extended to 14 days. All disturbed areas located within 100 feet of a protected natural resource must be protected with a double row of sediment barriers.

6. For work conducted between September 15th and April 15th of any calendar year, all denuded areas will be covered with hay mulch applied at twice the normal

application rate and anchored with fabric netting. The time period for applying mulch as noted in Paragraph II.5.A.5 shall be limited to 7 days for all areas.

7. Marginal Way and Preble Street Extension shall be swept to control off-tracking of mud, debris, and dust as necessary.

8. During grubbing operations stone check dams will be installed at any evident concentrated flow discharge points.

9. Silt fencing with a maximum stake spacing of 6 feet should be used, unless the fence is supported by wire fence reinforcement of minimum 14 gauge and with a maximum mesh spacing of 6 inches, in which case stakes may be spaced a maximum of 10 feet apart. The bottom of the fence should be anchored.

10. Wood waste compost/bark berms may be used in lieu of siltation fencing. Berms shall be removed and spread into a layer not to exceed 3" thick once upstream areas are completed and a 90% catch of vegetation is attained. Wood waste erosion tubes may also be used for perimeter sediment control or check dams, or to reduce slope lengths. These tubes may be created by filling Filtrexx mesh tubes or approved equivalent with wood waste material and staking the tube to the ground where the control is necessary.

11. Inlet Protection measures shall be implemented for all catch basins located with the disturbed construction area. Measures shall be maintained regularly and shall not cause flooding in public right-of-ways.

12. Water shall be furnished and applied in accordance with MDOT specifications – Section 637 – Dust Control.

13. Loam and seed is intended to serve as the primary permanent revegetative measure for all denuded areas not provided with other erosion control measures such as riprap. Application rates are provided in Attachment A of this section. Seeding shall not occur over snow.

B. Permanent Erosion Control Measures

The following permanent erosion control measures have been designed as part of the Erosion and Sedimentation Control Plan:

1. All areas disturbed during construction but not subject to other restoration (building, paving, riprap, etc.) shall be loamed, limed, fertilized, mulched, and seeded. Fabric netting anchored with staples shall be placed over the mulch in areas as noted in Paragraph II.5.A.3. All disturbed areas within 100 feet of an undisturbed wetland area shall be mulched prior to any predicted rain event regardless of the 7-day window. Native topsoil shall be stockpiled and reused for final restoration if deemed to be of sufficient quality.

III. Implementation Schedule

The following construction sequence shall be required to insure that the effectiveness of the erosion and sedimentation control measures is optimized:

Note: For all grading activities, the contractor shall exercise extreme caution not to overexpose the site by limiting the disturbed area.

1. Install perimeter siltation fence and/or wood waste berms prior to grubbing respective areas.
2. Clear and grub area as necessary for construction.
3. Remove existing pavement within work limits.
4. During grubbing operations, install stone check dams at any evident concentrated flow discharge points.
5. Commence earthwork operations for proposed driveways and building foundation.
6. Continue grading to subgrade as necessary.
7. Commence installation of underground utilities.
8. Complete remaining earthwork operations.
9. Install subbase and base course gravels for driveways.
10. Complete installation of utility appurtenances.
11. Install surface course gravels for the driveways.
12. Loam, lime, fertilize, seed, and mulch remaining disturbed areas.
13. Remove accumulated sediment from ahead of any sediment barriers as necessary.
14. Once the site is stabilized and a 90% catch of vegetation has been obtained, remove all temporary erosion control measures.
15. Touch up loam and seed.

Note: All denuded areas not subject to final paving, riprap, or gravel shall be revegetated.

Prior to construction of the project, the contractor shall submit to the owner a schedule for the completion of the work, which will satisfy the following criteria:

1. The above construction sequence shall generally be completed in the specified order; however, several separate items may be constructed simultaneously. Work must also be scheduled or phased to prevent the extent of the exposed areas as specified below. The intent of the above sequence is to provide for sufficient erosion and sedimentation control and to have structural measures such as silt fence and construction entrance in place before large areas of land are denuded.

2. The work shall be conducted in sections which will:

   a) Limit the amount of exposed area to those areas in which work is expected to be undertaken during the proceeding 30 days.

   b) Revegetate disturbed areas as rapidly as possible. All areas shall be permanently stabilized within 7 days of final grading or before a storm event, or temporarily stabilized within 7 days of initial disturbance of soil for areas within 100 feet of an undisturbed wetland area and within 14 days for all other areas. Areas within 100 feet of an undisturbed wetland shall be mulched prior to any predicted rain event regardless of the 7-day window.

IV. Erosion and Sedimentation Control Plan

The Erosion and Sedimentation Control Plans are included in the plan set.

V. Details and Specifications

The Erosion and Sedimentation details and specifications are included in the plan set.

VI. Winter Stabilization Plan

If a summer/fall construction schedule is not possible and construction is necessary between September 15th and April 15th of any calendar year, the contractor shall submit a schedule, which will satisfy the following criteria:

1. The extent of exposed area shall be limited to those areas in which work is expected to be undertaken during the proceeding 15 days and can be mulched in the event of a predicted snow event.

2. All disturbed areas shall be covered with mulch within 7 days of final grading. Mulch shall not be placed over snow.

3. Once final grade has been established, the contractor may choose to dormant seed the disturbed areas prior to placement of mulch and placement of staple-anchored fabric netting.

   a. If dormant seeding is used for the site, all disturbed areas shall receive 6" of loam and seed at an application rate of 5 lbs. per 1000 s.f. Seeding shall not occur over snow.

      All areas seeded during the winter months shall be inspected in the spring for adequate catch. All areas insufficiently vegetated (less than 80% catch) shall be revegetated by replacing loam, seed, and mulch as necessary to achieve 80% catch.

   b. If dormant seeding is not used for the site, all disturbed areas shall be revegetated in the spring.

4. The area of denuded non-stabilized construction area shall be limited to the minimum area practicable. An area shall be considered denuded until the subbase gravel is installed or the areas of future loam and seed have been loamed, seeded, and mulched at a rate twice that specified in the seeding plan (e.g. 115 lbs. per 1,000 s.f. x 2 = 230 lbs. per 1,000 s.f.).

5. The above schedule shall be subject to the approval of the Owner.

The Contractor shall install any added measures that may be necessary to control erosion and sedimentation from the site dependent upon the actual site and weather conditions.

The Contractor shall note that no areas within 100 feet of an undisturbed wetland shall remain denuded for longer than 7 days before being temporarily stabilized. All other areas shall be stabilized within 14 days. For construction between September 15th and April 15th of any calendar year, all areas shall be temporarily stabilized within 7 days.

VII. Inspection and Maintenance

The following inspection and maintenance standards shall be required to insure the effectiveness of the erosion and sedimentation control measures are optimized during construction.

For further reference, see the Maine Department of Environmental Protection Chapter 500 Stormwater Management Rules and the Maine Construction General Permit (MCGP) requirements.

1. Inspect disturbed and impervious areas, erosion control measures, materials storage areas exposed to precipitation and locations where vehicles enter or exit the site. Inspection should occur at least once a week as well as before and after a storm event, and prior to completing permanent stabilization measures.

2. Maintain all erosion and stormwater control measures until areas are permanently stabilized. If maintenance, modification, and/or installation of additional best management practices (BMPs) are necessary, implementation must be completed within 7 calendar days and prior to any storm event.

VIII. Housekeeping

The following standards shall be required. For further reference, see the Maine Department of Environmental Protection Chapter 500 Stormwater Management Rules.

1. Spill prevention controls must be utilized to prevent pollutants from being discharged from materials onsite.

2. During construction, liquid petroleum products and other hazardous materials with the potential to contaminate groundwater may not be stored or handled in areas of the site draining to an infiltration area or adjacent to the stormwater catch basins and drain manholes.

3. Action must be taken to ensure activities do not result in noticeable erosion of soils or fugitive dust emissions during or after construction.

4. Litter, construction debris, and chemicals exposed to stormwater must be prevented from becoming a pollutant source.

5. Water collected as a result of trench dewatering must be spread through natural wooded buffers or removed to areas that are specifically designed to collect the maximum amount of sediment possible, like a cofferdam sedimentation basin. Avoid allowing the water to flow over disturbed areas of the site.

6. Identify and prevent contamination by non-stormwater discharges.

7. Additional requirements may be applied on a site-specific basis.

IX. Conclusion

The Applicant has provided temporary and permanent erosion control measures and has specified a sequence of construction as measures to minimize erosion and sedimentation for proposed development. The Erosion and Sedimentation Control Plan and Erosion and Sedimentation Control Details and Notes are included in the plan set.

Attachments

Attachment A – Temporary & Permanent Seeding Rate Plans

SEEDING PLAN

Project: 84 Marginal Way

Site Location: 84 Marginal Way, Portland, Maine

☐ Permanent Seeding ☒ Temporary Seeding

1. Instruction on preparation of soil: Prepare a good seed bed for planting method used.
2. Apply lime as follows: _____# / acres, OR 138 # /M Sq. Ft.
3. Fertilize with _____ pounds of _____ N-P-K/ac. OR 18.4 pounds of 10-20-20 N-P-K/M Sq. Ft.
4. Method of applying lime and fertilizer: Spread and work into the soil before seeding.
5. Seed with the following mixture:

   100% Annual Ryegrass (normal seeding), or

   100% Winter Rye (winter seeding)
6. Mulching instructions: Apply at the rate of _____per acre, OR 115 pounds per M. Sq. Ft.

	Amount	Unit # Tons. Etc.
7. TOTAL LIME	138	#/1000 sq. ft.
8. TOTAL FERTILIZER	18.4	#/1000 sq. ft.
9. TOTAL SEED	1.03	#/1000 sq. ft.
10. TOTAL MULCH	115	#/1000 sq. ft.
11. TOTAL other materials, seeds, etc.		
12. REMARKS		

Spring seeding is recommended, however, late summer (prior to September 1) seeding can be made. Permanent seeding should be made prior to August 5 or as a dormant seeding after the first killing frost and before the first snowfall. If seeding cannot be done within these seeding dates, temporary seeding and mulching shall be used to protect the site. Permanent seeding shall be delayed until the next recommended seeding period.

SEEDING PLAN

Project: 84 Marginal Way

Site Location: 84 Marginal Way, Portland, Maine

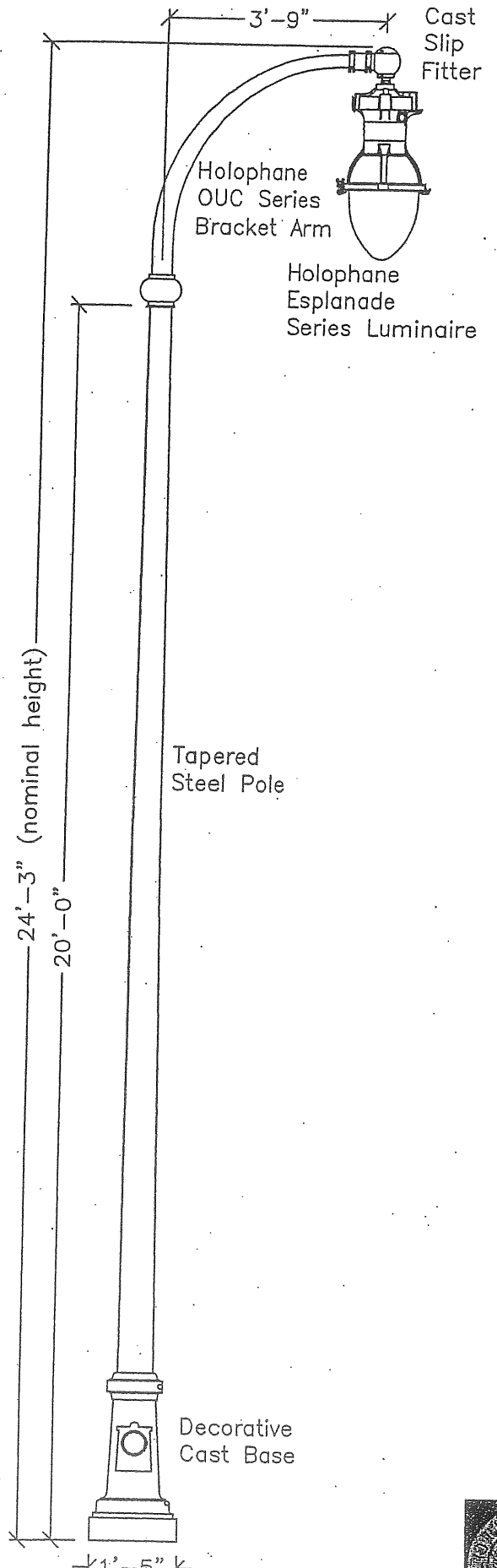
☒ Permanent Seeding ☐ Temporary Seeding

13. Instruction on preparation of soil: Prepare a good seed bed for planting method used.
14. Apply lime as follows: _____# / acres, OR 138 # /M Sq. Ft.
15. Fertilize with _____ pounds of _____ N-P-K/ac. OR 18.4 pounds of 10-20-20 N-P-K/M Sq. Ft.
16. Method of applying lime and fertilizer: Spread and work into the soil before seeding.
17. Seed with the following mixture:
    - 33% Kentucky Bluegrass
    - 34% Chewings Fescue
    - 33% Perennial Ryegrass
18. Mulching instructions: Apply at the rate of _____per acre, OR 115 pounds per M. Sq. Ft.

	Amount	Unit # Tons. Etc.
19. TOTAL LIME	138	#/1000 sq. ft.
20. TOTAL FERTILIZER	18.4	#/1000 sq. ft.
21. TOTAL SEED	1.03	#/1000 sq. ft.
22. TOTAL MULCH	115	#/1000 sq. ft.
23. TOTAL other materials, seeds, etc.		
24. REMARKS		

Spring seeding is recommended, however, late summer (prior to September 1) seeding can be made. Permanent seeding should be made prior to August 5 or as a dormant seeding after the first killing frost and before the first snowfall. If seeding cannot be done within these seeding dates, temporary seeding and mulching shall be used to protect the site. Permanent seeding shall be delayed until the next recommended seeding period.

ATTACHMENT J-1



LUMINAIRE

Holophane Lighting model ESU175MH12A4-PR

Cast Aluminum housing with stainless steel hardware. Dropped refractor shall be thermal resistent borosilicate glass. Internal reflector and prismatic diffuser shall provide an IES Type III distribution pattern according to the manufacturer's photometric test # 47384. Luminaire shall include an integral ballast with modular wiring connectors and multi-voltage taps (factory wired for 120VAC). Provide an internal receptacle type photocell control.

LAMP

Holophane Lighting model S-M175/U 64471

Vertical mounted, 175 watt mogul base clear metal halide lamp.

BRACKET ARM

Holophane Lighting model OUC

6063-T6 aluminum crossarm with a post-top fitting for a 3-$\frac{1}{2}$" by 8" tenon.

SLIP FITTER

Holophane Lighting model BHLF200-SCA/AS (Boston Harbor Series)

2-$\frac{3}{8}$" O.D. with swivel cast fitter.

LIGHTING POLE

Tapered steel pole shaft rated for a 90 mph wind load with a 1.3 gust factor. Pole shall be pre-galvanized.

Provide four hot-dipped galvanized steel L-type anchor bolts.

DECORATIVE POLE BASE

Holophane model Cambridge Series clamshell cast aluminum base. Hardware shall be stainless steel.

APPLICATION

Street/sidewalk lighting for two-way streets with parking on both sides.

Suggested layout guidelines:

90-110 feet on center (one side only)

or

175-225 feet on center (staggered pattern both sides).

FINISHES

Luminaire, bracket arm, slip fitter and lighting

Residential Areas:
Tiger Drylac 49/72830 RAL 7016 SM GL Tribo
Mixed Use Commercial Areas
Tiger Drylac Old Navy Silver Y003J

City of Portland, Maine

Street & Sidewalk Lighting
BAYSIDE DISTRICT
Large Scale Lighting Pole

J-2

KIM LIGHTING

WD14

14″ Wall Director®

revision 4/1/02 • wd14.pdf

Type:
Job:
Catalog number:

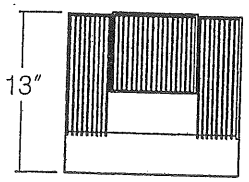
/ / /
Fixture | Electrical Module | Finish | Options
See page 2 — See pages 3-4

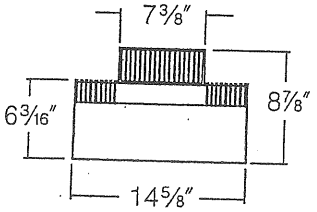
Approvals:

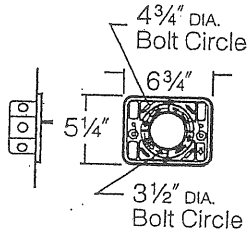
Date:
Page: 1 of 4

Specifications

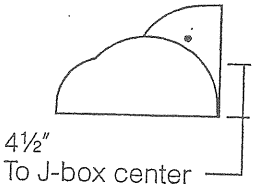
Maximum Fixture Weight (150HPS) = 26 lb







Mounting Plate
Attaches directly to any standard 4″ J-box (by others)



Reflector Housing: One piece die-cast aluminum with integral cooling fins. Rotates against ballast housing to provide 10° of adjustment with degree markers cast into housing. At 0° adjustment, lens is totally concealed from view above horizontal with fixture aimed downward.

Ballast Housing: One piece die-cast aluminum with integral cooling fins. Fastens to mounting plate with keyhole slots freeing both hands for securing and wiring. One stainless steel socket-head screw on each side of housing frees the reflector housing to rotate for aiming. Tightening the screws locks the two housings together with sealing provided by a silicone gasket. For visual aiming, adjustment may be accomplished with the fixture on.

Lens Frame: One piece die-cast aluminum with integral hinges and stainless steel pins. Two stainless steel quarter-turn fasteners secure lens frame to reflector housing with sealing provided by a one piece extruded and vulcanized silicone gasket. Lens is clear flat ³⁄₁₆″ thick tempered glass sealed to lens frame with a silicone gasket and retainer clips. For UP models, lens is mounted flush with frame for water run off, and is silicone sealed.

Type II, III, and IV Reflector Module: Specular Alzak® optical segments are rigidly mounted to an aluminum module which attaches to the housing by a no-tool quick-disconnecting hinge and fastener. All sockets are porcelain medium base rated 4KV. All modules are factory prewired with a quick-disconnect plug for mating to the ballast. Available in three light distributions, all interchangeable within the same housing.

Wall Grazer Reflector Module: Specular Alzak® optical segment is rigidly formed into a self-contained module which attaches to the housing by a no-tool quick-disconnecting hinge and fastener. Black louver vanes run parallel to the lamp arc for controlling the hot spot directly behind the fixture, and spill light into the atmosphere. All sockets are porcelain medium base rated 4KV. All modules are factory prewired with a quick-disconnect plug for mating to the ballast.

Spot Reflector Module: Specular Alzak® optical spun parabola is rigidly mounted to a self-contained module which attaches to the housing by a no-tool quick-disconnecting hinge and fastener. Black internal louvers are provided to control the beam and prevent hot spots directly behind the fixture and spill light into the atmosphere. All sockets are porcelain medium base rated 4KV. All modules are factory prewired with a quick-disconnect plug for mating to the ballast.

Electrical Components: High power factor ballasts are rigidly mounted inside the housing and are factory prewired with a quick-disconnect plug for mating to the socket. Starting temperatures are –40°F for HPS lamp modes and –20°F for MH lamp modes.

Mounting Plate: Mounting plate attaches directly to any standard 4″ Junction Box. All mounting plates are die-cast aluminum with reinforced ribs. Two studs are provided in each plate with flange nuts to allow fixture mounting by keyhole slots. Sealant must be applied (by others) between mounting plate and mounting surface to insure a dry Junction Box.

Finish: Super TGIC thermoset polyester powder coat paint, 2.5 mil nominal thickness, applied over a chromate conversion coating; 2500 hour salt spray test endurance rating. Standard colors are Black, Dark Bronze, Light Gray, Platinum Silver, or White. Custom colors are available and subject to additional charges, minimum quantities and longer lead times. Consult representative.

Certification: UL Listed to U.S. and Canadian safety standards for wet locations. Fixture manufacturer shall employ a quality program that is certified to meet the ISO 9001 standard.

CAUTION: Fixtures must be grounded in accordance with local codes or the National Electrical Code. Failure to do so may result in serious personal injury.

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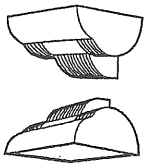
KIM LIGHTING

WD14
14″ Wall Director®

revision 4/1/02 • wd14.pdf

Type:

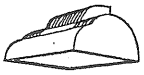
Job:



Standard Features

Fixture

Cat. No. designates **WD14** fixture, Up (U) or Down (D) configuration, and light distribution (2, 3, 4, G or S).

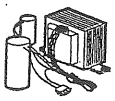


WD Fixture

Light Distribution:	Type II	Type III	Type IV	Wall Grazer	Spot
Cat. No.: (Up 14″)	☐ **WD14U2**	☐ **WD14U3**	☐ **WD14U4**	☐ **WD14UG**	☐ **WD14US**
Cat. No.: (Down 14″)	☐ **WD14D2**	☐ **WD14D3**	☐ **WD14D4**	☐ **WD14DG**	☐ **WD14DS**

Electrical Module

HPS = High Pressure Sodium
MH = Metal Halide



Lamp Watts	Lamp Type	Line Volts
150	**HPS**	**120**

Cat. Nos. for Electrical Modules available:

	☐ **70HPS120** ☐ **70HPS208** ☐ **70HPS240** ☐ **70HPS277** ☐ **70HPS347**	☐ **100HPS120** ☐ **100HPS208** ☐ **100HPS240** ☐ **100HPS277** ☐ **100HPS347**	☐ **150HPS120** ☐ **150HPS208** ☐ **150HPS240** ☐ **150HPS277** ☐ **150HPS347**
Lamp	ED-17, Clear	ED-17, Clear	ED-17, Clear
Socket	Medium Base	Medium Base	Medium Base
ANSI Ballast Type	S-62	S-54	S-55

	☐ **70MH120** ☐ **70MH208** ☐ **70MH240** ☐ **70MH277** ☐ **70MH347**	☐ **100MH120** ☐ **100MH208** ☐ **100MH240** ☐ **100MH277** ☐ **100MH347**	☐ **150MH120** ☐ **150MH208** ☐ **150MH240** ☐ **150MH277** ☐ **150MH347**	☐ **175MH120** ☐ **175MH208** ☐ **175MH240** ☐ **175MH277** ☐ **175MH347**
Lamp	ED-17, Clear	ED-17, Clear	ED-17, Clear	ED-17, Clear
Socket	Medium Base	Medium Base	Medium Base	Medium Base
ANSI Ballast Type	M-98	M-90	M-102	M-57

Finish

Super TGIC powder coat paint over a chromate conversion coating.

Color:	Black	Dark Bronze	Light Gray	Platinum Silver	White	[1]Custom Colors
Cat. No.:	☐ **BL-P**	☐ **DB-P**	☐ **LG-P**	☐ **PS-P**	☐ **WH-P**	☐ **CC-P**

[1]Custom colors subject to additional charges, minimum quantities and extended lead times. Consult representative. Custom color description: _____

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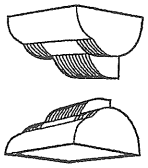
KIM LIGHTING

WD14
14" Wall Director®

revision 4/1/02 • wd14.pdf

Type:

Job:

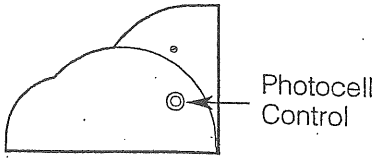


Optional Features

Photocell Control
Cat. No. **(see right)**
☐ **No Option**

Factory installed inside housing with fully gasketed sensor on side wall.

Cat. No.	Line Volts:	Cat. No.	Line Volts:
☐ **A-30**	120V	☐ **A-33**	277V
☐ **A-31**	208V	☐ **A-35**	347V
☐ **A-32**	240V		



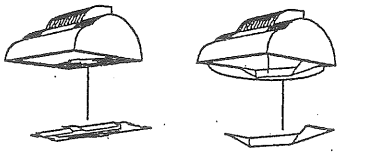
Houseside Shield
Cat. No. **(see right)**
☐ **No Option**

Combination louver shield and black end-panel for reflector. Factory installed to reflector module. Reduces light toward wall by the amounts shown.

CAUTION: Do not use the Houseside Shield option with the Wall Grazer as it will interfere with the light distribution.

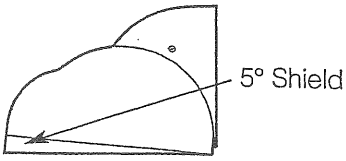
Approximate Light Reduction Toward Wall	Type II	Type III	Type IV
	-43%	-74%	-77%

Cat. No.
☐ **HS** for flat lens
☐ **HSC** for fixtures with optional convex glass lens.



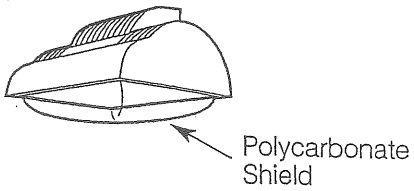
5° Shield
Cat. No. ☐ **5DS14**
☐ **No Option**

Aluminum shield field-attached to lens frame. Maintains a horizontal cutoff fixture edge when the luminaire is tilted 5°. Finished to match the fixture.



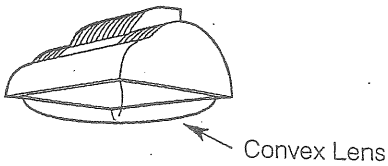
Polycarbonate Shield
Cat. No. ☐ **LS**
☐ **No Option**

For DOWN fixture models only. Fully gasketed one piece vacuum formed clear UV stabilized polycarbonate shield replaces standard tempered glass lens.



Convex Glass Lens
Cat. No. ☐ **CGL**
☐ **No Option**

Tempered convex glass lens replaces standard flat lens.



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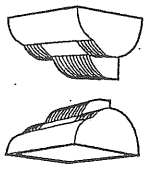
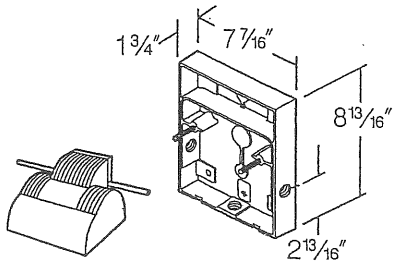
Type:

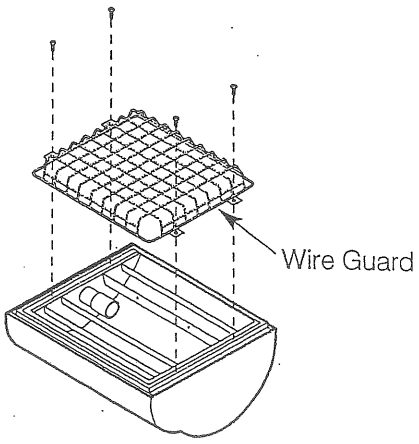
Job:



Optional Features

Fusing Cat. No. (see right) ☐ No Option	Line Volts: 120V 208V 240V 277V 347V Cat. No.: ☐ SF ☐ DF ☐ DF ☐ SF ☐ SF
Quartz Standby Cat. No. ☐ QS ☐ No Option	Integral electronic device energizes a T-4 mini-can socket during initial lamp start-up or after a power interruption. De-energizes prior to H.I.D. lamp reaching full brightness. T-4 halogen lamp by others; 100 watt maximum.
Surface Conduit Mount Cat. No. ☐ SCM14U ☐ SCM14D ☐ No Option	Cast aluminum Junction Box and fixture mount for attachment (by others) to existing walls, beams or columns. SCM14 has one ¾" conduit tap in each side and bottom only. Must be securely mounted to wall surface. Finished to match the fixture. **SCM14U** for UP fixtures only. **SCM14D** for DOWN fixtures only.
Wire Guard Cat. No. ☐ WG ☐ No Option	11 ga. (.12" dia.) BB Wire, 12⅜" x 10¼" x 1½" deep. Finish is super TGIC thermoset polyester powder coat paint, over zinc plated wireform. **NOTE:** Only available with flat lens applications.





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J-6

KIM LIGHTING

STS

175W Small Structural™

revision 04/01/04 • sts.pdf

Type:
Job:
Catalog number:

Mtg.	Fixture	Electrical Module	Finish	Options	Structural Options
	See page 2	See page 3		See pages 4 - 6	See pages 7 - 9

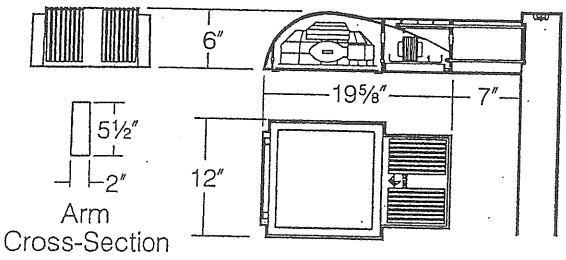
Select pole from Kim Pole Catalog. If pole is provided by others indicate O.D. for arm fitting.

Approvals:

Date:

Specifications

70 to 175 watt
Medium Base Lamps



Arm
Cross-Section

Housing: One-piece die-cast, low copper (< 0.6% Cu) aluminum with integral cooling fins on top surfaces above the optical chamber and electrical compartment. A solid barrier wall separates the optical and electrical compartments, with gasketed wire penetrations. A double-thick wall with gussets is provided on the support arm mounting end. All hardware is stainless steel.

Lens Frame: One-piece die-cast, low copper (< 0.6% Cu) aluminum with a 1″ minimum thickness around the gasket flange for rigidity. Integral hinges with stainless steel pins provide no-tool mounting and removal from the housing. Two stainless steel thumb-latches are recessed into the front corners, concealed from normal view. Lens frame seals against the housing by a one-piece extruded silicone gasket with vulcanized end closure. Clear 3⁄16″ thick tempered flat glass is retained in the frame by eight clips with full silicone gasketing around the perimeter.

Reflector Module: Specular Alzak® optical segments are rigidly mounted in a die-cast, low copper (< 0.6% Cu) aluminum frame which attaches to the housing as a one piece module with captive stainless steel screws. Reflector module is field-rotatable in 90° increments. All sockets are 4KV medium base. All sockets are factory prewired with a quick-disconnect plug for the ballast module, with wires passing through a silicone gasket in the housing barrier wall. Four light distributions are available and interchangeable within the same housing size.

Electrical Module: All electrical components are UL and CSA recognized, mounted on a single plate and factory prewired with quick-disconnect plugs. Electrical module attaches to the housing with no-tool hinges and latches, accessible by opening the lens frame. All ballasts are high power factor with starting temperatures of -40°F for HPS and -20°F for MH lamp modes.

Support Arm: One-piece extruded aluminum with internal bolt guides. Luminaire-to-pole attachment is by internal draw bolts, and includes a pole reinforcing plate with wire strain relief. For mounting to round poles, arm is circular cut for precise mating to the pole diameter.

Finish: Super TGIC thermoset polyester powder coat paint, 2.5 mil nominal thickness, applied over a Titanated Zirconium conversion coating; 2500 hour salt spray test endurance rating. Standard colors are Black, Dark Bronze, Light Gray, Platinum Silver, or White. Custom colors are available and subject to additional charges, minimum quantities and longer lead times. Consult representative.

CAUTION: Fixtures must be grounded in accordance with national, state and/or local electrical codes. Failure to do so may result in serious injury.

Listings and Ratings		
UL cUL 1598	G Vibration[1]	25C Ambient
IP66 Rated	CE	ISO 9001:2000
Co (Full) Cut Off[2] (Flat Glass Lens Only)		

[1]5K Cycle Tested
[2]Dark Sky Legislation Compliant

HUBBELL®
Hubbell Lighting, Inc.

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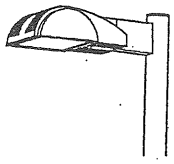
STS

175W Small Structural™

revision 04/01/04 • sts.pdf

Type:

Job:

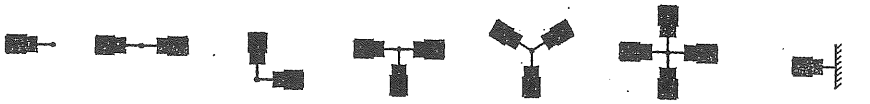


Standard Features

Mounting

3SY is available for round poles only.

Plan View:



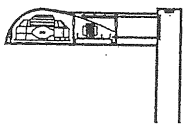
EPA:	1.1	2.2	1.5	2.6	2.6	2.7	-
Cat. No.:	☐ 1SA	☐ 2SB	☐ 2SL	☐ 3ST	☐ 3SY	☐ 4SC	☐ 1SW

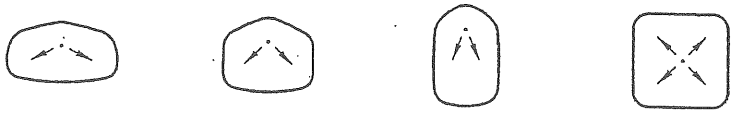
Fixture

Cat. No. designates **STS** fixture and light distribution.

See the Kim Site/Roadway Optical Systems Catalog for detailed information on reflector design and application.

Horizontal Lamp





Flat Lens

Light Distribution:	Type II Full Cutoff	Type III Full Cutoff	Type IV Forward Throw Full Cutoff	Type V Square Full Cutoff
Cat. No.:	☐ STS2	☐ STS3	☐ STS4	☐ STS5

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STS
175W Small Structural™

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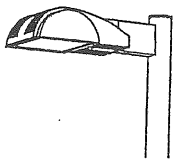
Type:

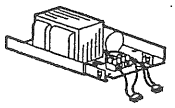
Job:



Standard Features

Electrical Module

HPS = High Pressure Sodium
MH = Metal Halide
PMH = Pulse Start Metal Halide



Lamp Watts	Lamp Type	Line Volts
150	HPS	120

Cat. Nos. for Electrical Modules available:

	☐ 70HPS120 ☐ 70HPS208 ☐ 70HPS240 ☐ 70HPS277 ☐ 70HPS347 ☐ 70HPS480[1]	☐ 100HPS120 ☐ 100HPS208 ☐ 100HPS240 ☐ 100HPS277 ☐ 100HPS347 ☐ 100HPS480[1]	☐ 150HPS120 ☐ 150HPS208 ☐ 150HPS240 ☐ 150HPS277 ☐ 150HPS347 ☐ 150HPS480[1]
Lamp	ED-17, Clear	ED-17, Clear	ED-17, Clear
Socket	Medium Base	Medium Base	Medium Base
ANSI Ballast Type	S-62	S-54	S-55

	☐ 70PMH120 ☐ 70PMH208 ☐ 70PMH240 ☐ 70PMH277 ☐ 70PMH347 ☐ 70PMH480[1]	☐ 100PMH120 ☐ 100PMH208 ☐ 100PMH240 ☐ 100PMH277 ☐ 100PMH347 ☐ 100PMH480[1]	☐ 150PMH120 ☐ 150PMH208 ☐ 150PMH240 ☐ 150PMH277 ☐ 150PMH347 ☐ 150PMH480[1]	☐ 175MH120 ☐ 175MH208 ☐ 175MH240 ☐ 175MH277 ☐ 175MH347 ☐ 175MH480[1]
Lamp	ED-17, Clear	ED-17, Clear	ED-17, Clear	ED-17, Clear
Socket	Medium Base	Medium Base	Medium Base	Medium Base
ANSI Ballast Type	M-98	M-90	M-102	M-57

[1]480 volt with medium base sockets may require approval of local building code authority.

Finish

Super TGIC powder coat paint over a Titanated Zirconium conversion coating.

Color:	Black	Dark Bronze	Light Gray	Platinum Silver	White	Custom Colors[2]
Cat. No.:	☐ BL-P	☐ DB-P	☐ LG-P	☐ PS-P	☐ WH-P	☐ CC-P

[2]Custom colors subject to additional charges, minimum quantities and extended lead times. Consult representative. Custom color description: _____

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ATTACHMENT K-1

TD Banknorth

TD Banknorth, N.A.
One Portland Square
P.O. Box 9540
Portland, ME 04112-9540
T: 207 761-8500
Toll Free: 800 462-3666
TDBanknorth.com

July 10, 2006

City of Portland
Department of Planning & Development
389 Congress Street
Portland , Maine 04101

Re: Marginal Way and Preble Street, Portland, Maine
AKA Intermed Project

To Whom It May Concern:

TD Banknorth, N.A. considers Capital LLC to have the financial capability to successfully finance and complete the proposed 65,000 square foot Intermed Project, with the 400 space parking lot located at Marginal Way and Preble Street. This conclusion is based on a financial review of the borrower. It should be noted that this letter does not represent a financing commitment. A financial commitment will be subject to, among other items, a review of the final plans and leases for the proposed project.

If I may be of further assistance please do not hesitate to call me at (207) 761-8577.

Sincerely,

Benjamin C. Geci
Senior Vice President
Commercial Lending
TD Banknorth, N.A.

TECHNICAL CAPABILITY

The following firms and individuals have provided technical information contained in this application.

Mitchell & Associates
70 Center Street
Portland, Maine 04101
Telephone: (207) 774-4427
Contact: Robert B. Metcalf

Landscape Architects

Gorrill-Palmer Consulting Engineers, Inc.
P.O. Box 1237
Gray, Maine 04039
Telephone: (207) 657-6910
Contact for Traffic: Thomas L. Gorrill
Contact for Civil: William Haskell

Traffic Engineers and Civil Engineers

CWS Architects
434 Cumberland Avenue
Portland, Maine 04101
Telephone: (207) 774-4441
Contact: Ben Walter

Architects

Owen Haskell, Inc.
16 Casco Street
Portland, Maine 04101
Telephone: (207) 774-0424
Contact: John Swan

Land Surveyors

K-3

SHINBERG CONSULTING, LLC

477 Congress Street, 5th Floor
Portland, Maine 04101-3427
207 523 3410 Office
207 773 8597 Fax
207 653 7510 Cell
gls@gwi.net

To: Rick Knowland, Senior Planner, City of Portland & Chair Beal and the City of Portland Planning Board
From: Greg Shinberg
Re: 84 Marginal Way, Capital, LLC Technical Capability
Date: July 24, 2006

Capital, LLC a company owned by Mr. Theodore West of Portland, Maine has hired Shinberg Consulting to act as the Authorized Agent and Project Manger for the planning and construction of the project located at the corner of Marginal Way and Preble Street.

Mr. West owns several properties in the Bayside area including the AAA Building that he developed five years ago. Bayside Ventures, LLC, another venture owned by Mr. West is currently under construction at 63 Marginal Way and is scheduled to be completed before the end of December 2006.

Greg Shinberg, Owner of Shinberg Consulting is the Project Manager for Bayside Ventures and has completed other projects in Portland acting as the PM including 280 Fore Street (the Baker, Newman and Noyes Building) and 959 Congress Street (the old Key Bank Building).

ATTACHMENT L-1

MARGINALWAY.CON.DMK
10.06.05

PURCHASE AND SALE AGREEMENT

THIS AGREEMENT for the purchase and sale of real estate made as of the 10 day of November, 2005 by and between the **CITY OF PORTLAND**, a body politic and corporate (hereinafter referred to as **"CITY"**), and **CAMPOBELLO ISLAND, LLC**, a Maine limited liability company with a mailing address 50 Portland Pier, Suite 400, Portland ME 04101 (hereinafter referred to as **"BUYER"**). The Effective Date of this Agreement shall be deemed to be the date first set forth above in this Agreement, provided that if no date is filled in or if either of the signatures of the parties are dated later than the above, the Effective Date shall be the last date of the signature of the last to sign of **BUYER** or **CITY**. The parties agree to upon request confirm to the other party the Effective Date of this Agreement.

WITNESSETH:

WHEREAS, CITY is the owner of certain land located at Marginal Way, Portland, Maine, which property is also described on City of Portland Tax Assessors Maps effective April 1, 2004 as a portion of Map 34A, Block B, Lot 1 and which is more particularly described in Attachment A attached hereto and incorporated herein by reference, together with all fixtures and improvements situated thereon and appurtenances thereto (hereinafter referred to as **"the Property"**).

WHEREAS, the **CITY** sought proposals for the sale and development of the Property pursuant to Request for Proposals numbered 1205 as amended, and **BUYER** timely submitted a responsive proposal; and

WHEREAS, BUYER desires to acquire the **Property** from **CITY**, and **CITY** desires to sell same to **BUYER** on such terms as are set out herein;

NOW, THEREFORE, in consideration of the foregoing and for other good and valuable consideration, the parties intend to be legally bound as follows:

1. SALE.

CITY agrees to sell the **Property** to **BUYER**, and **BUYER** agrees to purchase the **Property** in accordance with the provisions hereof.

2. CONSIDERATION.

The purchase price for the **Property** shall be ONE MILLION SIXTY SEVEN THOUSAND SEVEN HUNDRED THIRTY DOLLARS ($1,067,730.00), which amount shall be paid at the closing described in Paragraph 7 hereof.

3. TITLE.

(a) **CITY** shall convey its interest in the **Property** to **BUYER** by a good and sufficient quitclaim deed without covenant (the "Deed"). The Deed shall convey insurable title to the **Property** and free of encumbrances except (i) zoning, environmental and subdivision laws, rules, regulations and restrictions and other land use matters; and (ii) any "Defects of Title" (as defined below) accepted or waived by **BUYER** pursuant to Section 3(b). **BUYER** acknowledges that: the deed of conveyance shall contain a restriction in perpetuity that, in the event that the property or any portion thereof shall be exempt from real and personal property taxes then a yearly payment by the then-owner of the exempt portion shall be made in lieu of taxes equivalent to the property taxes that would otherwise be paid on the exempt portion of the real and personal property situated on **Property**, which restriction shall also confirm that **BUYER** and its successors and assigns shall possess and be vested with all rights and privileges as to abatement and appeal of valuations, rates and the like as are accorded owners of real and personal property in Maine. Upon the written direction of **BUYER**, the **CITY** shall convey its interest in the **Property** in two separate such Deeds; one of such Deeds shall convey the portion of the **Property** that **BUYER** intends to use for the student housing project to an entity designated by **BUYER** in such written direction and the other of such Deeds shall convey the portion of the **Property** that **BUYER** intends to use for the office building and parking structure to a different entity designated by **BUYER** in such written direction. The portion of the purchase price allocated to the student housing portion of the **Property** shall be $667,730 and the portion allocated to the office building/parking structure portion of the **Property** shall be $400,000. All references in this Agreement to "Deed" shall be deemed to include all of such Deeds executed and delivered by the **CITY** unless the context requires otherwise. For purposes of this Agreement, insurable title means title which an insurance company with a rating of B+ or better by Standard & Poor's (or other comparable rating by another rating organization) licensed to do business in Maine is willing to insure upon payment of a premium at customary and filed rates on a standard ALTA Form B Policy (rev. October 17, 1992) with no exceptions listed on Schedule B, Part I thereof, except for the standard exceptions and Defects of Title pursuant to paragraph 3(b) below, with no indemnification or legal opinion to be required from Buyer to issue such policy, and with the creditor's rights exception deleted.

(b) On or before the date that is **thirty (30) days after the Effective Date**, **BUYER** shall notify **CITY** of any defects in title that would make **CITY** unable to give title to the **Property** as herein stipulated (any of which is called herein a "Defect of Title"). **BUYER** shall be deemed to have waived any objection to any Defect of Title that existed as of the Effective Date if **BUYER** fails to notify **CITY** of such Defect of Title on or before the end of such 30-day period. With respect to the existence of any Defect of Title that does not exist on the Effective Date but which arises prior to the Closing Date, **BUYER** shall notify **CITY** of any such Defect of Title on or prior to the Closing Date as defined in Paragraph 7 hereof. **CITY** shall have, at its option, a period of not more than sixty (60) days after receipt of notice(s) of such defect within which to remedy or cure any such Defect of Title and **CITY** agrees to use good faith efforts to cure such Defect of Title. If the Closing Date shall fall within the said 60-day period, it shall be extended to the date that is the date that is ten (10) business days after the expiration of such 60-day period or after the date such Defect of Title is cured to **BUYER's** reasonable satisfaction (but in no event shall the Closing Date be earlier than is otherwise provided herein). **BUYER** shall have ten (10) business days after receipt of notification by **CITY** that the Defect of Title has been cured to advise **CITY** whether it is satisfied with the title defect cure. If such Defects of Title are not corrected or remedied within such 60-day period, then **BUYER** shall elect by written notice to the **CITY** on or before the Closing Date, as the same may be extended, either (i) to accept title to the **Property** subject to the uncured Defects of Title without reduction of the purchase price and without any right to damages and without any other liability on the part of **CITY**, or (ii) to terminate this Agreement, whereupon the Deposit shall be returned to **BUYER** and all obligations of the parties hereunder shall cease and neither party shall have any claim against the other by reason of this Agreement, except with respect to any provision hereof that expressly survives the termination of this Agreement. For purposes of this subsection (b), **CITY** may elect to cure or remedy any Defect of Title by providing **BUYER** with a binding commitment from a title insurance company licensed to do business in Maine committing to issue an endorsement to **BUYER's** owner's title insurance policy providing affirmative coverage for such Defect of Title at no additional premium to **BUYER** beyond any premium required for such title policy without such endorsement; and **BUYER** agrees to accept such affirmative coverage as a cure or remedy for such Defect of Title provided that the form and content of such affirmative coverage is satisfactory to **BUYER** and its advisors in their reasonable discretion.

4. POSSESSION.

Full possession of the **Property**, free of all tenancies and occupancies, will be given at the transfer of title.

5. RISK OF LOSS.

The risk of loss or damage to the **Property** by fire or otherwise, until transfer of title hereunder, is assumed by **CITY**. The **Property** is to be delivered in substantially the same condition as of the date of this Agreement, subject to the right of **CITY** to remove any personal property on the **Property**.

6. INSPECTION OF PREMISES; RIGHT TO TERMINATE.

BUYER and its agents, employees and independent contractors may, at their option and at their sole risk and expense, during the period of time from the Effective Date through the Closing Date upon at least two (2) business days prior written notice to **CITY** as to each inspection or survey, examine the **Property** and prepare surveys, mechanical, structural, environmental or physical reports of the **Property**. **BUYER** may make information obtained from such inspections or surveys available to its consultants, attorneys and lenders for purposes of completing and/or furthering its development plans for the **Property**. **BUYER** shall not otherwise make such surveys and reports public or otherwise disclose to third parties unless otherwise required by law or determined necessary by **BUYER** in connection with **BUYER's** plans to develop the **Property**. Copies of such surveys and reports shall be promptly given to the **CITY** if this Agreement is terminated for any reason. **BUYER** shall not cause any unrepaired damage to the **Property** and shall not unreasonably interfere with **CITY**'s business or the business of any of the tenants of **CITY**. Any damage caused by inspection shall be repaired within two (2) business days. Testing shall be done in locations as reasonably agreed by **CITY** or its tenants. Access to any space that is under lease shall only be permitted to the extent that **CITY** has a right of access pursuant to the terms of any of the leases. All such inspections shall be done by qualified inspectors chosen and paid for by **BUYER**. **BUYER** agrees to hold **CITY** harmless and indemnify **CITY** from any loss or liability resulting from the entrance by **BUYER** or its agents upon the **Property** for the purposes set forth herein or for any other purpose and this agreement to so indemnify and hold **CITY** harmless shall survive the Closing hereunder, or if the Closing does not occur, the termination of this Agreement.

At any time on or prior to the date that is sixty (60) days after the Effective Date, **BUYER** shall have the right to terminate this Agreement if **BUYER** determines, in its sole discretion, that it is not satisfied with any of its inspections, by giving written notice to **CITY** on or before the end of such 60-day period, together with a copy of the written results of all such inspections, if any. Subject to the qualification set forth in the last sentence of this subsection, if **BUYER** timely gives notice of such dissatisfaction, then this Agreement shall terminate, the Deposit shall be returned to **BUYER** and all obligations of the parties hereunder shall cease and neither party shall have any claim against the other by reason of this Agreement, except with respect to any provision hereof that expressly survives the termination of this Agreement. If **BUYER** fails to give such written notice on or before the end of such 60-day period, **BUYER** shall be deemed to have waived its right to terminate this Agreement pursuant to this Section.

7. CLOSING.

The closing shall be held at Portland City Hall at a time and date mutually agreeable to the parties within thirty (30) days of the satisfaction or waiver of all conditions to closing described in Section 8 of this Agreement (**"Closing Date"**), unless extended as provided herein; but in no event shall the Closing Date be any later than the date that is twelve (12) months from the Effective Date hereof (i.e., the first anniversary of the Effective Date), unless the delay or extension is due to **CITY's** right to extend the closing date set forth elsewhere in this Agreement. All conditions to close hereunder shall be considered conditions of both parties.

At the closing, **CITY** and **BUYER** shall execute and deliver all customary documentation necessary to close this transaction and other documents specifically set forth below, the form and content of which shall be mutually satisfactory to each party, including without limit, execution and delivery to **BUYER**, a "Seller's Affidavit" regarding mechanics liens and persons in possession in the customary form and reasonable evidence of Seller's authority to convey the **Property**.

8. **COVENANTS OF THE CITY.**

The City shall:

(a) Within sixty (60) days of the Effective Date, amend the rights of the University of Southern Maine or others to use the **Property** for parking or for any other purpose such that the City may terminate those rights on thirty (30) days prior written notice to the holders of such rights.

9. **CONDITIONS TO CLOSING.**

CITY and **BUYER's** obligation to close hereunder are conditioned upon the satisfaction of either the set conditions in Paragraph 9(a) below related to the student housing or the set of conditions in Paragraph 9(b) below related to the office building and parking structure. **BUYER** and the **CITY** shall be obligated to close following the issuance of a building permit for either the development described in 9(a) or 9(b), and delivery to the City of evidence of a loan commitment or other financial commitment for the project for which the building permit has been issued, and for the development which has not received its building permit as of the closing, **BUYER** must be diligently pursuing in the reasonable opinion of the **CITY** the satisfaction of the conditions described herein:

(a) **Conditions regarding Student Housing.**

(i) **BUYER** shall obtain necessary federal and State approvals and City Planning Board approval for the construction of one or more buildings for student housing that are a minimum of four (4) stories and accommodates a minimum of four hundred (400) beds in a minimum of one hundred (100) units;

(ii) **BUYER** shall apply for and obtain a building permit to construct the student housing building(s), provided, however, that the payment of the fee for the permit must be paid by the Closing and any required letter of credit may be provided at or after the Closing.

(iii) All structures shall be consistent with the new vision for Bayside a study dated April 2000 on file in the Department of Planning & Development at Portland City Hall; and

(iv) **BUYER** or the entity formed by **BUYER** to construct the student housing shall have obtained parking rights, to the extent surplus spaces are available in the parking structure to be constructed by **BUYER** or its successor, equal to at least one parking

space to be leased at that location per unit of student housing. Any other parking required for the student housing shall be leased from other sources in such proximity to the student housing that satisfies the requirements of the City Planning Board approvals. **BUYER** and the City understand and acknowledge that it is not the responsibility of the **CITY** to provide such parking. **BUYER** and **CITY** further acknowledge that approval of the Agreement does not constitute a determination of sufficiency of the parking plan presented by **BUYER** as of the date of this Agreement, and does not modify in any way the parking requirements that may be placed upon the housing development by the Planning Board. **BUYER** agrees to conduct an after the fact parking study and comply with its recommendations.

(v)The student housing shall include first floor retail as shown in the plan attached hereto as Exhibit B.

(vi) **BUYER** shall submit for review and concept approval to the Community Development Committee of the City Council (hereinafter CDC) the design and specifications of the housing development, including but not limited to the type of materials used, the type of programmatic lay-out of the housing structure as well as fenestration and external building materials. Review by the CDC shall in no way substitute for any land use, site plan, historic preservation or other review otherwise required by **CITY** ordinance. The concept plan approved by the CDC shall be the plan **BUYER** presents to the regulatory boards reviewing the project. Material alterations in the plan shall be reviewed by the CDC prior to closing.

(b) <u>Conditions regarding Office Building and Parking Structure</u>.

(i) **BUYER** shall obtain necessary federal and State approvals and City Planning Board approval for the construction of a parking structure that accommodates a minimum of 450 automobiles and an office building with a minimum of 60,000 square feet and a portion of the first floor area to be designed for retail tenants as shown on conceptual site plan attached hereto as Exhibit ;

(ii) **BUYER** shall apply for and obtain a building permit to construct the office building and parking structure, provided, however, that the payment of the fee for the permit must be paid by the Closing and any required letter of credit may be provided at or after the Closing.

(iii)All structures shall be consistent with the new vision for Bayside a study dated April 2000 on file in the Department of Planning & Development at Portland City Hall; and

(iv)**BUYER** shall submit for review and concept approval to the Community Development Committee of the City Council (hereinafter CDC) the design and specifications of garage and the office building, including but not limited to the type of materials used, the type of programmatic lay-out (including the location of stair and elevator towers) of the garage structure as well as fenestration and external

building materials. Review by the CDC shall in no way substitute for any land use, site plan, historic preservation or other review otherwise required by **CITY** ordinance. The concept plan approved by the CDC shall be the plan **BUYER** presents to the regulatory boards reviewing the project. Material alterations in the plan shall be reviewed by the CDC prior to closing.

(v) Prior to Closing, City and **Buyer** or **Buyer's** designee shall have entered into, and obtain all approvals required regarding, a Tax Increment Financing/Credit Enhancement arrangement and agreement regarding the parking structure portion of the project on terms that are satisfactory to Buyer (or its designee) and City.

(vi) **BUYER** shall provide functional pedestrian access from Marginal Way to the office building.

(c) Condition Regarding the Housing Structure, Office Building and Parking Structure

At a minimum, **BUYER** shall provide a bus shelter on the Property in coordination with the Portland METRO to facilitate bus service at the site. **BUYER** shall also encourage multimodal transit at the Property site if available.

10. **CONDITIONS SURVIVING CLOSING.**

(a) If a building permit for the student housing was not issued in advance of the Closing Date, then **BUYER** shall substantially commence construction by initiating foundation and /or pile driving of the student housing structure by the date which is six months following the Closing Date, subject to extension for force majeure events. The six month deadline in the preceding sentence may be extended by consent of the City Manager for up to an additional six (6) months upon request of the **BUYER** or its successors, and the City Manager shall not unreasonably withhold such consent and shall take into account the construction period for the student housing and the **BUYER's** requirement that the student housing be scheduled for completion during the month of July to permit it to be ready for occupancy at the start of an academic year;

(b) If a building permit was not issued for the office building and parking structure in advance of the Closing Date, **BUYER** shall substantially commence construction by initiating foundation and/or pile driving of the office building or the parking structure by the date which is six months after the Closing Date, subject to extension for force majeure events. The six month deadline in the preceding sentence may be extended for up to an additional six (6) months by consent of the City Manager upon request of the **BUYER** or its successors, and the City Manager shall not unreasonably withhold such consent;

(c) If **BUYER** or its designee fails to satisfy the conditions of 10(a) the City or its designee shall have the right, but not the obligation, as its sole and exclusive remedy to repurchase the student housing portion of the **Property** from **BUYER** or **BUYER's** designee for a purchase price equal to that allocated to this portion of the **Property** as provided above; if Buyer's designee for the office building/parking

structure portion of the Property agrees to satisfy such conditions in a manner reasonably acceptable to the City, the City shall assign its repurchase rights above to such Buyer designee.

(d) If **BUYER** or its designee fails to satisfy the conditions of 10(b) the City or its designee shall have the right, but not the obligation, as its sole and exclusive remedy to repurchase the office building/parking structure portion of the **Property** from **BUYER** of **BUYER's** successor for a purchase price equal to that allocated to this portion of the **Property** above; if the **BUYER**'s designee for the student housing portion of the Property agrees to satisfy such conditions in a manner reasonably acceptable to the City, the City shall assign its repurchase rights above to such Buyer designee.

(e) **BUYER** shall obtain approval from the Maine Department of Transportation and **CITY** in the design and development of the site to accommodate a potential rail line and platform near the **Property**;

(f) Each structure for which **BUYER** obtains a building permit shall be substantially completed and **BUYER** shall obtain a temporary or permanent Certificate of Occupancy for all or a portion of the structure within eighteen (18) months of issuance of such building permit, subject to extension for delays caused by the City or force majeure events. In the event that the **BUYER** fails to obtain a temporary or permanent certificate of occupancy for such structure within the time provided in the preceding sentence, then the then-owner of the portion of the **Property** on which is located such structure shall pay to the **CITY** as liquidated damages an amount equal to Ten Thousand Dollars ($10,000) per week or fraction thereof that the certificate of occupancy is not issued following the completion of the time provided in the preceding sentence, subject to a maximum amount of liquidated damages of Two Hundred and Fifty Thousand Dollars ($250,000) per structure. For purposes of the foregoing, all of the student housing shall be considered a single structure and the office building and parking structure, taken together, shall constitute a single structure. Such liquidated damages shall be the City's sole and exclusive remedy for such delay.

(g) The obligations shall be secured with a declaration of covenants, conditions and restrictions which shall be recorded in the Cumberland County Registry of Deeds simultaneously with the recordation of the deed to the **BUYER**. The declaration of covenants, conditions and restrictions shall be released by **CITY** with respect to the office building/parking structure parcel and/or the student housing parcel upon satisfactory completion of **BUYER's** obligations under Paragraph 9 with respect to such parcel(s). The time for obtaining the Certificate of Occupancy can be extended with the consent of the City Manager, which consent shall not unreasonably be withheld, if additional time is needed due to circumstances beyond the control of **BUYER**;

(h)For all post-closing conditions in subparagraphs (a) through (g) above, the time period for satisfaction of the condition may be extended by the **CITY** with the consent of the City Manager, which consent shall not be unreasonably withheld, conditioned or

delayed, if additional time is needed due to circumstances beyond the control of **BUYER** and which extensions will be granted with respect to the deadlines in subparagraph (f) above for payment of liquidated damages for so long as substantial construction work is in progress.

11. DEFAULT.

(a) If **BUYER** fails to perform its obligation to close as set forth in this Agreement, and such failure is not due to **CITY**'s default hereunder, **CITY** shall as its sole and exclusive remedy, in lieu of all other legal and equitable remedies, be entitled to retain the Deposit as liquidated damages as a result of such failure to perform and this Agreement shall be deemed terminated. **BUYER** and **CITY** acknowledge that **CITY**'s damages because of **BUYER**'s failure to perform are difficult to ascertain and agree that the amount of the Deposit represents a reasonable estimate of the amount of **CITY**'s damages as a result thereof. **BUYER** and **CITY** also acknowledge that **CITY**'s damages because of **BUYER**'s failure to perform timely other obligations of **BUYER** under this Agreement are difficult to ascertain and agree that the amount of the liquidated damages specified therefor in this Agreement represents a reasonable estimate of the amount of **CITY**'s damages as a result thereof.

(b) If **CITY** fails to perform its obligations as set forth in this Agreement, and such failure is not due to **BUYER**'s default hereunder, **BUYER** may either (i) elect as its sole remedy to receive the Deposit together with expenses incurred by **BUYER** in obtaining the reports referred to in paragraph 6(a) hereinabove, and incurred in satisfying the conditions in paragraph 9 above. or (ii) to enforce this Agreement through legal action, including without limitation, an action seeking as its remedy specific performance of this Agreement. In the event that **BUYER** elects the remedy provided in (i) above, then the reports shall become the property of **CITY** and this Agreement shall be deemed terminated and all obligations of the parties hereunder shall cease and neither party shall have any claim against the other by reason of this Agreement, except with respect to any provision hereof that expressly survives the termination of this Agreement. In the event that **BUYER** elects the remedy provided in (ii) above, BUYER shall be entitled to recover its reasonable attorneys' fees from CITY in the event that BUYER substantially succeeds in such legal action.

12. BINDING EFFECT; DEFINITION OF FORCE MAJEURE.

(a) This Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective heirs, administrators, successors and assigns. **BUYER**'s rights under the Agreement are not assignable (except to a wholly owned or commonly controlled subsidiary or to one or more affiliates of Realty Resources Chartered and/or Atlantic National Trust) without the prior written consent of **CITY**, which consent shall not be unreasonably withheld. Any purported assignment in violation of this provision shall, at **CITY**'s option, be null and void and shall confer no rights on the purported assignee and may, at **CITY**'s option, be treated as a default by **BUYER** hereunder.

(b) References to "force majeure event" as used in this Agreement shall include any delay caused by or resulting from act of God including without limitation unusually severe weather or natural disasters, war, terrorism, civil commotion, fire or other casualty, labor difficulties, shortages of energy, labor, materials or equipment, delays caused by either party to the other, or other causes beyond a party's reasonable control. The occurrence of a force majeure event shall extend the time for performance by the period of any delay resulting from a force majeure event, provided, however, that if **BUYER** reasonably determines that a force majeure event would result in the student housing portion of the Project being available later than August 1 of a particular year, then the time for performance regarding the student housing portion of the Project shall be extended to the next date which would result in the student housing portion of the Project being available on August 1 of the following calendar year. The provisions regarding "force majeure" shall apply only to situations which this Agreement explicitly makes subject to force majeure events and not to other situations contemplated by this Agreement without making them explicitly so subject.

13. **ENTIRE AGREEMENT.**

This Agreement represents the entire and complete Agreement and understanding between the parties and supersedes any prior Agreement or understanding, written or oral, between the parties with respect to the acquisition or exchange of the **Property**.

14. **HEADINGS AND CAPTIONS.**

The headings and captions appearing herein are for the convenience of reference only and shall not in any way affect the substantive provisions hereof.

15. **GOVERNING LAW.**

This Agreement shall be governed by and construed and enforced in accordance with the laws of the State of Maine.

16. **NOTICE.**

Any notice required or permitted under this Agreement shall be deemed sufficient if in writing and if sent: (i) by first class mail, postage prepaid, registered or certified, return receipt requested; (ii) by hand delivery; or (iii) by FedEx, or similar reputable overnight express mail service to:

FOR THE **CITY**: City of Portland
ATTN: CITY MANAGER
389 Congress Street
Portland, ME 04101

With a copy to: Lee Urban, Director of Planning and Development
AND Corporate Counsel

FOR THE **BUYER:** Campobello Island, LLC

With copies to: Tom S. Hanson, Esq.
Bernstein, Shur, Sawyer & Nelson
100 Middle Street
P.O. Box 9729
Portland, ME 04104-5029

AND John S. Kaminski
Drummond Woodsum & MacMahon
245 Commercial Street
P.O. Box 9781
Portland, ME 04104

17. **DEPOSIT.**

BUYER has paid to **CITY** the sum of FIFTY THOUSAND Dollars ($50,000.00) as an earnest money deposit ("Deposit") on the **Property**. This amount shall be credited toward the final purchase price.

18. **ACCEPTANCE OF DEED.**

The acceptance of the Deed by **BUYER** at the Closing shall be deemed to be the full performance and discharge of every agreement, obligation and representation made on the part of **CITY**, except as expressly set forth herein or in such Deed. No provisions, agreements or representations herein shall survive the Closing except as specifically stated herein. The **Property** is being sold and will be conveyed "as is" without any representation or warranties as to habitability, merchantability, fitness, condition or otherwise. Neither party is relying upon any statements or representations not embodied in this Agreement. **BUYER** has retained or shall retain the necessary professionals to determine the presence of hazardous substances, hazardous waste, asbestos, oil and petroleum waste, lead paint, urea formaldehyde foam insulation or other liability causing substances on the **Property**. If **CITY** has given or shall give to **BUYER** any environmental survey or assessment or any other report concerning the **Property**, **BUYER** agrees that it accepts and shall accept the same at **BUYER**'s sole risk and that **CITY** has not made and shall not have made any representation or warranty to **BUYER** that any such survey, assessment or report is true and correct; and **BUYER** agrees that **CITY** shall have no liability or responsibility whatsoever to **BUYER** with respect thereto. **BUYER** represents and agrees that it has been given the opportunity under this Agreement to conduct a full inspection of the **Property**. The acceptance of the Deed by **BUYER** shall constitute a reaffirmation of **BUYER** at the time of such acceptance of the foregoing acknowledgments and agreements of **BUYER**, which acknowledgments and agreements by **BUYER** shall survive the Closing hereunder or if the Closing does not occur, the termination of this Agreement. The execution and delivery of the Deed by the **CITY** shall be deemed to be the full performance and discharge of every agreement, obligation and representation made on the part of the **BUYER**, except as set forth in the Deed,

Deed by the **CITY** shall be deemed to be the full performance and discharge of every agreement, obligation and representation made on the part of the **BUYER**, except as set forth in the Deed, this paragraph and in the declaration of covenants and restrictions to be recorded contemporaneously with the Deed.

IN WITNESS WHEREOF, the parties have hereunto caused this Agreement to be executed by their respective duly authorized officers as of the day and year first above written.

CITY OF PORTLAND

WITNESS

By: _____
Joseph E. Gray, Jr.
Its City Manager

Date: 11/16/05

CAMPOBELLO ISLAND, LLC

By: Southern Maine Student Housing, LLC
Its Manager

WITNESS

By: _____

Printed name: Joseph M. Cloutier

Its: Manager

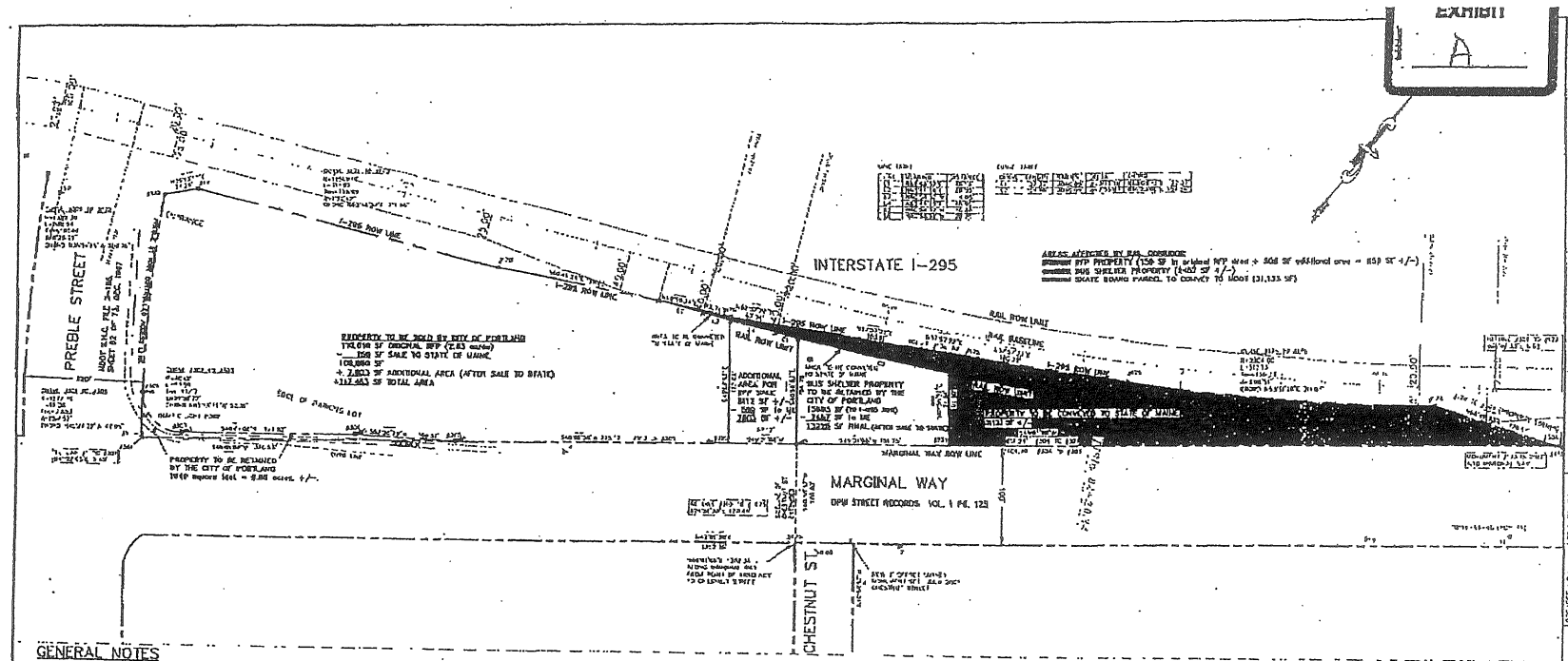
Date: November 14, 2005

AND

WITNESS

By: _____
Theodore West, Manager

4-13



GENERAL NOTES

1 BASIS OF BEARINGS
Portland Zone 2 Grid Bearing as the Bearing Basis for this survey in accordance w/ County Registry of Deeds Book 8067 page 246 Dated November 8, 1949
Subject to reservations & rights for Park and Recreation Purposes, and for the support of any Pole wires retained by the Portland Electric Company and Each Railroad Track (see below)

Portland Terminal Company to the City of Portland
Cumberland County Registry of Deeds Book 3381 Page 316
Dated May 6, 1915
Release of rights every right, a Book 1187 Page 446

Grant Railroad Deed to the City of Portland
Cumberland County Registry of Deeds Book 3351 Page 315
Dated May 3, 1915
Release of rights every right a Book 1187 Page 446

2 MDOT CONSTRUCTION ACCESS LINE ALONG PREBLE STREET EXTENSION
Maine Department of Transportation Right of Way Map S.H.C. File No. 3.165 Sheet 82 of 93 showing both sides of Preble Street Extension Ramps. Map was labeled as "Controlled Access Limit Line" on a plan presentation on November 23, 2004 between engineers of MDOT and Maine Clerk of Portland DPW Engineering that the MDOT record drawing had a notation dated August 8, 2001 stating that it was revised to the City property at Preble Street and the RAR Railway land crossing the street now realized to more than 30 years and that they are allowed by the State Engineer railroad access approval

3 PREBLE STREET EXTENT
The part of Preble Street also known as Preble Street Extension on the MDOT plans, and retained by reason was MDOT corridor highway survey monumentation found on the ground as shown on the Exh. Parcel B and surveyed by the Contractor at the Marginal Way Survey base line to 2004, but was retracted from the survey boundary retained that existed at the area and plan references 2 and 4.

4 MARGINAL WAY STREET LINES
The East of Marginal Way was retraced by holding the Preble Street East offset monument on the southerly side of Marginal Way at the point of curvature westerly at Preble Street, and a bolt on the on street on the "Exit Street Exit" survey plan by the City of Portland dated March 23, 1999 and plan references 2 through 5

5 RAILROAD I-295
MDOT Interstate 1-295 improvements were layed along the Easterly of I-295, contemplated and 100' Right of Way Plans are used here for the use of I-295 See plan reference 1

6 Monumentation shown thereon were found except as concerned for the City of Portland Control at northerly corner of Exit - Street and Marginal Way were held based on DPW or Monument 2325

7 Surveys was conducted by locating found stations, existing street distribution poles and meters and curve control was only used to be indicated directly on independent plans

8 PARCEL AREAS
Property to be sold by RFP between Preble Street and the 122.00 foot long property line to be established is 108,880 square feet, 2.52 acres, if 240 of less.

The easterly to be sold by RFP is retained between 122.00 and 104.10 foot long property line to be established is 7,803 square feet, 0.18 acres, more or less

Property to be retained by the City of Portland along the northerly line of Marginal Way and easterly line of Preble Street is 1,960 square feet 0.05 acres, more or less.

Property to be retained by the City of Portland along and easterly of the 104.10 foot line to be taken shall, including the existing bus stop building, is 14,998 square feet, 0.38 acres, more or less

Property to be sold to the State of Maine (for Exit Line Ramp Work) along and easterly of the 91.83 and 72.96 foot lines is 38,313 square feet, 0.77 acres, more or less

Property to be sold to and State of Maine (for Exit Line Ramp) along interstate I-295 160 S. along said "...S 21 E 569 SF along said (4 & parcel 03) = 24327 SF along curve (3) = 2,116 SF. 0.07 acres more or less

Total area of site is 163362 square feet, 3.83 acres, more or less

10 MDOT Right of Way Map (For Exit 35) was translated to the City Engineering Coordinate datasets based on holding Public #174 and #11 (+) were common to both CAD datasets and were in agreement in regards of distance of 0.07' over 2163.23' and with a 0°00'18" [illegible] angle

PLAN REFERENCES

1 Maine Department of Transportation, Maine State Highway Commission, Right of Way Map, State Highway 1295, Federal Aid Project No. I-780-1 (30), Dated December 1964, Sheet No. 82 & 84 of 93, Sht. File No. I-165
Portland DPW Engineering Archive Plan 833/C

2 "Use of Weight Way"
Portland DPW Engineering Archive Plan "C1/".

3 "Marginal Way Layout Avenue to Franklin Street" City of Portland Maine Department of Public Works" Portland DPW Engineering Archive Plan 589/"

4 "Standard Boundary Survey Exit Sheet ..." City of Portland Public Works Dept."
Dated March 23, 1999 by Wilbur A. Cook, Jr. P.L.S
Portland DPW Engineering Archive Plan 811/P

5 "Survey Plan of Proposed Extension of Chestnut Street - Extended Street to Marginal Way"
Portland Public Works Department
Dated July 26, 2001 by W. Lee A. Cook Jr. P.L.S
Portland DPW Engineering Archive Plan 802/P 3

6 "Land Title Survey of Chestnut Street Exit Area for City of Portland"
Sampo Associates, PA
Dated August 01, 2005, Revised August 19, 2005 by Donald Bouley, P.L.S
Portland DPW Engineering Archive Plan 882/01

7 "Maximum Boundary Survey - City of Portland Parks and Public Works"
Troy T. McDevitt Land Surveyors
Dated January 1987; Revised April 1992 by Troy T. McDonald, P.L.S
Portland DPW Engineering Archive Plan 1735/D

8 "As-Built Marginal Way Regrade Site Development - Portland Maine Intermodal Plan and Construction Details"
LLS Incorporated Engineering & Surveying, Inc. 272 St. John Street, Portland, ME 04102
Dated January 8, 2001, Revised November 21, 2001 record drawings by Steven J Bridgewell PE

9 Maine Department of Transportation Right of Way Map Plan 15.13.26
Portland Rail Passenger Rail Service (Amtrak) Station 7 of 6, Exit Brown
Sheet Numbers - Iowa & 4th street sets
Dated November 2003, Engineering by HNTB

LEGEND
- ⊙ Concrete Bound w/ highway Monument Found
- ⊙ Rebar to be set, ONE PER LOT CORNER
- Property Line Angle Point
- Survey Control Station
- Traffic light Pole/Light Pole
- Utility Pole
- Street/Sign
- Manhole
- Catch Basin
- Street Line/Property Line
- Portion Book 38 Page 84 Parcel Number 2

NOTE
PROPERTY CORNERS FOUND MAY 2004, SET AS OF AUGUST 29 2005

GRAPHIC SCALE
1 inch = 50 ft

No.	Revisions	By
1)	March 13, 2005 Add New Portland Drive and Amend A, B, and C.	
2)	August 4, 2005 Remove Other Notes, Add Proposed Rail Corridor, Adjust Angle To add to RFP Parcel.	
3)	August 18, 2005 Add Bearings & distances and revise above for note to Steve	
4)	August 29, 2005 Revise areas and notes.	

PROJECT NO: ACCEPTED BY:
DATE: DRAWN BY:
SCALE: CHECKED BY:

CITY OF PORTLAND, MAINE
DEPARTMENT OF PUBLIC WORKS
ENGINEERING SECTION

BOUNDARY SURVEY OF PROPERTY ALONG MARGINAL WAY AND PREBLE STREET

PREPARED BY PORTLAND DPW ENGINEERING SECTION

DATE APPROVED: --- CITY ENGINEER

SHEET 1 OF 1

Memorandum
Department of Planning and Development
Planning Division

To: Chair Beal and Members of the Portland Planning Board

From: Richard Knowland, Senior Planner

Date: Prepared on August 4, 2006 for August 8, 2006 Workshop

Re: Medical Office Building; Corner of Marginal Way and Preble Street; Vicinity of 84 Marginal Way

Capital, LLC (Ted West) requests workshop review for a proposed office building and parking garage on the corner of Marginal Way and Preble Street. The project is subject to site plan and conditional use (parking garage). A traffic movement permit will be required. Site plans, building elevations and background information are shown on Attachments A, B and C.

The site is located on the Marginal Way City owned parking lot, commonly known as the "USM parking lot". The City is in the process of dividing the property into five (5) parcels for redevelopment. A subdivision plan will be presented at the Board's August 8th workshop and a public hearing is scheduled for September 26, 2006. The subdivision plan includes the following lots: an office building (corner of Marginal Way and Preble Street), Bayside Village student housing, a parcel for Miss Portland Diner, a small access lane and a parcel conveyed to Maine DOT on the easterly end of this site.

Project Summary

Zoning:	B-7
Land Area:	1.49 acres
Proposed Uses:	Parking Garage... Floors 1 to 4 Retail....Floor 1 Office...Floors 5 to 8

Building Footprint: 43,916 sq. ft.
Building Floor Area: 240,459 sq. ft.
Office Floor Area: 64,795 sq. ft
Parking Garage Floor Area: 175,664 sq. ft.
Retail Floor Area: 5,172 sq. ft.

Parking Spaces: 434 spaces

Building Height: 8 floors (105 feet)

Site Development and Façade Design Considerations

The proposed building program demonstrates an efficient and dense use of building space on the site. The site has about 515 feet of combined street frontage along Marginal Way and Preble Street with about 85% of the street frontage occupied by a building wall close to the right-of-way line. (The site plan should note the specific front yard setbacks so that zoning compliance can be determined in terms of the required maximum street setback). The stacking of an office building on top of a parking structure maximizes the amount of density on this site, which is consistent with the goals of A New Vision for Bayside and the new B-7 Zoning. The vertical nature of the development provides the opportunity to support the urban character of Bayside.

The parcel is located in Zone A (Gateway Urban Height District) of the Bayside Height Overlay Zone, which allows a maximum building height of 125 feet although as a conditional use, a building may be as high as 165 feet. The minimum height is four (4) floors. The proposal is well above the minimum height (8 floors) and just below the maximum height (105 feet).

The site is located in a highly visible gateway with exposure from Preble Street, Marginal Way and I-295. Like the adjacent housing proposal, the development of the site will form a visible impression of Bayside and peninsula from I-295.

The first floor of the building along Marginal Way is defined by retail space. The main pedestrian entrance is on the corner of Marginal Way and Preble Street. The corner is further emphasized by raising the roofline one story above the primary height of the building by integrating the elevator core into a tower element. Along the first floor of Preble Street retail is not planned so openings suggestive of windows are proposed.

Façade Materials

The exterior façade is composed primarily of metal and concrete materials. The first story and parking levels of the building will have a pre-cast concrete finish except that an aluminum storefront entry system will define the window openings along the first floor of the retail space. The tower sections (main entry and elevator cores) are clad in "smooth finished metal siding system". The office walls above the parking garage are finished in a "horizontally oriented maxi-ribbed siding system". The top floor façade includes a "vertically oriented mini-ribbed metal siding system".

Basic façade material issues include the following:

- Material samples and specifications need to be submitted
- What is the expected life span of this material? (In the case of high quality masonry material, such as brick, the life span is in excess of 100 years.)

- What is the long term track record of this material in a winter climate and salt air environment?

Façade Design Issues

There has been much discussion recently about the great potential for contemporary building design in Bayside. As discussed in the recent student housing staff review memo, "Bayside is indeed an area in which contemporary architecture can and should be encouraged. The vast number of vacant or underutilized properties particularly near Marginal Way provide an opportunity to reinforce the Bayside gateway with high quality contemporary architecture. The recently approved Pearl Place housing development by Avesta is the first contemporary design proposed in Bayside".

A review of the submitted building design plans indicates the basic building features (exclusive of facade materials) is a traditional building design. If the façade was clad in brick, it would not be dissimilar to other brick buildings recently built in Bayside or other areas of the peninsula. We will await information from the Applicant on the track record and durability of the proposed building materials but it is critical they be as durable as possible in this highly visible gateway site. Replacing a roof for a residential building maybe a 20 to 40 year proposition. If the life cycle of the proposed façade material is in that range, this is particularly problematic for an 8 story building.

An alternative to a traditional design approach would be a truly contemporary building such as 490 Congress Street project and the Pearl Place development. Bayside as discussed above is an appropriate location for such designs. The current proposal appears to be a traditional building. If the Applicant wishes to use alternative façade materials (and the materials are durable) perhaps a better approach would be to consider a contemporary design.

The development will not be a background building. The building is 105 feet high and next to I-295. The building because of its height and location will not fade away in the context of the built environment. Whatever the façade design, it is critical that façade materials be durable and long lasting. The project is located in the B-7 zone, which includes standard 30 under site plan review as follows:

(30) Bayside Mixed Use Urban District Zone (B-7 Zone) Design Standards: All major and minor development reviewed under the provisions of the Bayside B-7 Zone shall be designed to support the development of this urban neighborhood as a dense, mixed-use, pedestrian friendly neighborhood in accordance with the standards contained in the Bayside (B-7) Design Standards, promulgated by the Planning Board, and contained in the Planning and Development Design Manual.

The B-7 design standards are still under development. The Purchase and Sale Agreement between the City and Capital, LLC stipulates that the design of the building be consistent with A New Vision For Bayside, and that the façade materials shall be approved by the Community Development Committee. At this point, we recommend that the broad

language of Standard 30, plus a recommendation to the CDC would guide the Board's review of the façade design.

We propose that the architectural review be the major focus of the second workshop on this project. Carrie Marsh will be available for review and comments and will continue to work with the applicant in the meantime to encourage refinement of the architectural treatment.

Traffic Report

This project qualifies for a traffic movement permit. The project is forecast to generate 165 trip ends in the A.M. peak hour and 256 trip ends in the P.M. peak hour. The Applicant is in the process of scheduling a scoping meeting. Once the scoping meeting had been held, a traffic report will be prepared and submitted for review. A traffic report is critical in addressing the vehicle circulation issues discussed below. See Attachment D.

Vehicle Circulation

Vehicle access is proposed from Marginal Way and Preble Street. The Marginal Way driveway as shown on the plan allows full ingress and egress into the site. The driveway connects into the parking garage. The City Traffic Review Engineer has previously expressed concerns regarding left hand turns from Marginal Way into the site given its proximity to the Wild Oats driveway and the Marginal Way/Preble Street intersection. A left hand turn into the site from Marginal Way is not acceptable given the present situation on Marginal Way. A left hand turning movement exiting the site may be acceptable but a traffic report needs to be submitted for this issue to be reviewed.

The Bayside Village housing development has an easement to use the Marginal Way driveway for service and maintenance functions. The driveway will also be used by the Fire Dept to gain potential access to both buildings. The driveway is not connected into the Bayside Village parking garage.

The Preble Street driveway will require a segregated left hand turn lane on Preble Street to accommodate such turns into the site. An existing island will be extended from the Marginal Way intersection to avoid conflicts with turning movements from the AAA driveway, which is across the street from the proposed driveway. In order to create a left hand turn into the site, the curb line along both sides of the Preble Street will be adjusted. This results in a reduction in the width of the sidewalks under the I-295 bridge on each side of the street from 15 feet to about 8 to 10 feet. The easterly sidewalk is a critical connection to the Back Cove Trail. In order to mitigate this width reduction, it is recommended the Applicant be responsible for preparing an improvement plan including bollard and overhead lighting and other pedestrian amenities to improve the present dark and gloomy pedestrian environment under the bridge. As of the writing of this report, we have not received a detailed plan indicating the Preble Street changes including existing conditions and proposed conditions. The plan should include Preble Street north of the

overpass to the Hannaford Supermarket entry drive in order to fully understand the context of the contemplated changes.

The Preble Street driveway is connected into the parking garage. Exiting the site is limited to a right turn only.

Pedestrian Circulation

The site plan indicates a new public sidewalk will be constructed along the entire street frontage (Marginal Way and Preble Street) of the site.

As discussed during the Bayside Village review, a walkway is proposed behind the parking garage as a short cut to Preble Street for residents walking to Hannaford Supermarket and USM. For the public hearing, a pedestrian easement should be submitted by the Applicant for review and approval to formalize the walking route. (This easement is also incorporated within the subdivision plat for this parcel).

Pedestrian entrances into the building are shown on site plan Sheet #2. The main entry lobby (two doors) is located on the corner of Marginal Way and Preble Street. Doors are shown for the retail spaces along Marginal Way. The plan should clarify which entrances are open for public use during normal business hours.

As discussed in the vehicle circulation section of this memo, the Preble Street sidewalk under the I-295 bridge is proposed to be reduced on both sides of the street (from 15 feet to 8-10 feet) to accommodate a left hand turn into the site from Preble Street. The sidewalk is a critical connection to the Back Cove Trail. A detailed plan needs to be submitted showing existing and proposed conditions and how the Applicant proposes to mitigate the impact of the sidewalk reduction such as lighting and pedestrian amenities under the I-295 bridge.

A 5- foot sidewalk is shown along the easterly side of the Marginal Way driveway which can be used by pedestrians entering/exiting the westerly side of the Bayside Village building. This sidewalk continues as part of the short cut to Preble Street discussed above. On the other side of the driveway there is a short sidewalk that takes a pedestrian to the parking garage.

Parking

The submission indicates there will be 434 parking spaces in the four-story parking garage. Although the B-7 zone does not require off-street parking, the Planning Board under site plan review (for buildings 50,000 sq, ft or greater) determines the appropriate number of parking spaces for such developments. A parking demand analysis needs to be submitted by the Applicant.

The parking garage has been designed to accommodate the tenants of the office and retail uses as well as certain off-site uses. The first three floors of the garage have been

reserved for the tenants of the building (340 spaces). The 4th floor of the garage has been reserved (96 spaces) during the daytime for tenants of the 63 Marginal Way office building with spaces available for night time use by the Bayside Village tenants. [Note: A temporary parking lot for the 63 Marginal Way tenants on the Bayside Railyard property is on the Board's Tuesday workshop. When the parking garage is built, the parking will be relocated into the garage and the use of the temporary parking lot will be terminated.]

A parking management plan has been submitted outlining how the parking spaces will be managed given the varied users. See Attachment E.

Utilities

Water, sewer, storm water, power and other utility services are accommodated by existing services in Marginal Way.

Infrastructure

The site plan incorporates the recommendations of the Marginal Way Street Concept Design. These improvements include a sidewalk, esplanade, street lighting and on-street parking.

Stormwater Management

The amount of impervious surface proposed on the site is increasing from 1.02 acres to 1.24 acres. Detention is not necessary given the site's proximity to Back Cove since the stormwater goal is to move water to Back Cove as quickly as possible. Catch basins on the site will convey stormwater to the Marginal Way storm drain, which flows via Preble Street into Back Cove.

The submission state's "as the project will result in the redevelopment of an existing parking lot that will become covered and that the stormwater will be collected via roof drains and be carried directly into the municipal stormwater collection system, stormwater treatment is not proposed". Staff is recommending that stormwater treatment be provided for that section of the parking garage that is not covered.

Lighting

The plan indicates the Bayside street light fixture (24 feet high) will be used along Marginal Way (2) and Preble Street (2).

On site lighting includes 4 fixtures along the Marginal Way driveway and 6 fixtures behind the parking garage for the walkway. The submitted catalog information indicates the fixtures have cut-off features. The mounting height of the fixtures needs to be submitted as well as a photometric plan.

Lighting information for the parking garage needs to be submitted including fixtures within the garage and exterior fixtures on top of the garage. It is critical that appropriate lighting fixtures be planned so that they are non-glaring and the source of the light is not visible given the site's location.

Landscaping

Six street trees are proposed (New Harmony Elm) along Marginal Way and Preble Street. A variety of understory plantings along the face of the building are shown on the plan. The understory plantings within the street right of way will require a license from the City.

Five Flowering Crab trees will be planted along the easterly side of the Marginal Way driveway. Behind the building in the vicinity of the walkway plant material includes 7 decidous trees, 1 evergreen and a variety of understory plantings.

Attachments:

A. Site Plan

B. Building Elevations

C. Background Information

D. Traffic Movement Permit Application

E. Parking Garage Management Plan

F. Public Utilities

G. Stormwater Management Report

H. Soil Conditions

I. Erosion and Sedimentation Control Plan

J. Lighting

K. Financial and Technical Capability

L. Purchase and Sale Agreement

ATTACHMENT C-1

MITCHELL & ASSOCIATES
LANDSCAPE ARCHITECTS

July 25, 2006

Mr. Alexander Jaegerman,
Director of the Portland Planning Division
and Planning Board Members
City of Portland
389 Congress Street
Portland, Maine 04101

RE: Capital, LLC
Mixed Office, Retail and Parking Garage Development

Dear Alex and Board Members:

On behalf of Capital, LLC, we are pleased to submit this Site Plan Application for a proposed office and retail project located on Marginal Way in Portland. This submission has been prepared in compliance with requirements of the City of Portland Zoning, Site Plan Ordinance.

The Site

The subject parcel is a portion of the city owned property located on the northeast corner of Marginal Way and Preble Street. The entire parcel is 117,464 SF or 2.70 acres, formally used as a parking lot for the University of Southern Maine. The city currently uses the property for recycling containers and MDEP has an air quality monitoring station. The parcel for Capital, LLC will be 64,795 S.F. or 1.49 acres. The property is bound by Marginal Way to the south, Preble Street Extension to the west, I-295 to the north and Southern Maine Student Housing, LLC development to the east. The soils are characterized as cut and fill according to the Cumberland County Soil Conservation Service manual. The property is located within the city's new B-7A Mixed Development District that allows mixed commercial and residential use.

THE STAPLES SCHOOL
70 CENTER STREET
PORTLAND, MAINE 04101

Telephone (207) 774-4427
Fax (207) 874-2460
Website www.mitchellassociates.biz

Project Description

The gross square footage of the proposed eight-story building is 240,459 square feet with a 43,916 square foot building footprint. There is a four-story parking structure for 434 spaces with a gross floor area of 175,664 square feet. The ground floor level along Marginal Way will have 5,172 square feet of retail space. A four story office tower above the parking garage will have a gross floor area of 64,795 square feet. The primary use will be medical office use.

The primary pedestrian entry will be on the corner of Marginal Way and Preble Street Extension. Entry points to the garage occur on Marginal Way and Preble Street Extension. Access to the elevator core at the main entry will be provided on each parking deck level. There will be two egress stair towers, one on Marginal Way and one on Preble Street Extension. A second elevator will be located on the Preble Street Extension side to provide tenant, emergency service and delivery access, separate from the public access. Access to the retail uses will be on Marginal Way. In addition to public sidewalk, a pedestrian walkway is proposed on the north side of the property that will connect to the student housing development. This sidewalk is to provide pedestrian access between Marginal Way for the general public and students to access the sidewalk on Preble Street Extension.

Utilities

Water service to the site will be provided from an existing 8-inch main located on the east side of Marginal Way. Sanitary sewer service will be connected to the existing 36-inch sewer main located on the north side of Marginal Way. Underground electric, telephone and cable T.V. will be extended from existing above ground services located along the east side of Marginal Way. Natural gas will be provided from an existing 6-inch natural gas line located in Marginal Way.

Stormwater Management

Stormwater runoff will be collected through a series of internal catch basins and roof drains connected to the city storm drain system in Marginal Way. Refer to the attached stormwater management report for a detailed narrative and calculations.

Part of the of planning process for both of the projects being proposed on the city parcel has included lengthy discussions with the city Community Development Committee and City Council where there was significant input to the projects. In addition, both project applicants met with the Bayside Neighborhood Association to discuss the projects and obtain their input, which has been taken into consideration in developing the plan.

Submission

This submission includes the following information:

1. Cover letter, dated July 25, 2006
2. Site Plan Application & Checklist
3. Application Fee: $4,200.00
4. Booklet of required exhibits
5. Nine sets of plans (24" x 36")
6. One set of plans (11"x17")

We trust that the Planning Board will consider this a complete application for a workshop meeting. If you desire any additional information, please do not hesitate to contact us. We look forward to our meeting with the Board at its earliest convenience.

Sincerely,
Mitchell & Associates

Robert B. Metcalf

Enclosures

cc: Ted West
Greg Shinberg
Tom Gorrill
Will Haskell
Guy Labrecque

C-4

City of Portland Site Plan Application

If you or the property owner owe real estate taxes, personal property taxes or user charges on any property within the City of Portland, payment arrangements must be made before permit applications can be received by the Inspections Dept.

Address of Construction: 84 Marginal Way		**Zone:** B-7
Total Square Footage of Proposed Structure: 240,459 SF	**Square Footage of Lot:** 59,577 SF (1.37 Acres)	
Tax Assessor's Chart, Block & Lot Chart# 34A Block# B Lot# 1 Chart# 442 Block# A Lot# 1	**Property owner, mailing address:** City of Portland c/o Jack Lufkin 389 Congress Street Portland, Maine 04101	**Telephone:** 207.874.8945
Consultant/Agent, mailing address, phone & contact person: Robert Metcalf, Agent Mitchell & Associates 70 Center Street Portland, Maine 04101 Tel. 207.774.4427 Fax. 207.874.2460	**Applicant name, mailing address, telephone #/Fax#/Pager#:** Capital, LLC 50 Portland Pier, Suite 400 Portland, Maine 04101 Tel. 207.828.1080 Fax. 207.828.1048	**Project name:** 84 Marginal Way

Fee For Service Deposit (all applications) __X__ **($200.00)**

Proposed Development (check all that apply)

__X__ New Building ____ Building Addition ____ Change of Use ____ Residential __X__ Office __X__ Retail
____ Manufacturing ____ Warehouse/Distribution ____ Parking lot
____ Subdivision ($500.00) + amount of lots ____ $25.00 per lot $____ + major site plan fee if applicable
____ Site Location of Development ($3,000.00)
(except for residential projects which shall be $200 per lot_____)
__X__ Traffic Movement ($1,000.00) ____ Stormwater Quality ($250.00)
____ Section 14-403 Review ($400.00 + 25.00 per lot)
____ Other_____

Major Development (more than 10,000 Sq. ft.)

__ Under 50,000 sq. ft. ($500.00)
__ 50,000 - 100,000 sq. ft. ($1,000.00)
__ Parking Lots over 100 spaces ($1,000.00)
__ 100,000 - 200,000 sq. ft. ($2,000.00)
__X__ 200,000 - 300,000 sq. ft. ($3,000.00)
__ Over 300,000 sq. ft. ($5,000.00)
__ After-the-fact Review ($1,000.00 + applicable application fee)

Minor Site Plan Review

__ Less than 10,000 sq. ft. ($400.00)
__ After-the-fact Review ($1,000.00 + applicable application fee)

Plan Amendments

__ Planning Staff Review ($250.00)
__ Planning Board Review ($500.00)

- Please see next page -

C-5

Who billing will be sent to: (Company, Contact Person, Address, Phone #)
Capital, LLC
Attn: Greg Shinberg
50 Portland Pier, Suite 400
Portland, Maine 04101
Tel. 207.828.1080
Fax. 207.828.1048

Submittals shall include (9) separate **folded** packets of the following:
a. copy of application
b. cover letter stating the nature of the project
c. site plan containing the information found in the attached sample plans check list
d. 1 set of 11 x 17 plans

Amendment to Plans: **Amendment applications should include 6 separate packets of the above (a, b, and c)**

ALL PLANS MUST BE FOLDED NEATLY AND IN PACKET FORM

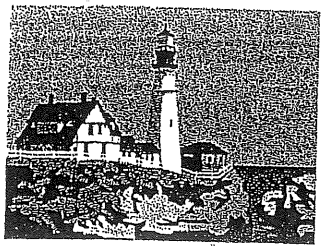
Section 14-522 of the Zoning Ordinance outlines the process which is available on our web site: **portlandmaine.gov**

I hereby certify that I am the Owner of record of the named property, or that the owner of record authorizes the proposed work and that I have been authorized by the owner to make this application as his/her authorized agent. I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in this application is issued, I certify that the Code Official's authorized representative shall have the authority to enter all areas covered by this permit at any reasonable hour to enforce the provisions of the codes applicable to this permit.

Signature of applicant: (Robert B. Metcalf, Agent)	**Date:** July 25, 2006

This application is for site review ONLY, a building Permit application and associated fees will be required prior to construction.

C-6



CAPITAL LLC

50 Portland Pier, Suite 400, Portland, ME 04101
Phone: (800) 347-1080 ▪ (207) 828-1080 ▪ Fax: (207) 828-1048

July 11, 2006

To: City of Portland Planning Department

This letter authorizes Robert B. Metcalf and/or John D. Mitchell of Mitchell & Associates to act as agents on behalf of Capital LLC in the submission of any and all application materials and public meeting that relate to our proposed development at 84 Marginal Way in Portland.

Sincerely,

Theodore V. West
Manager

PORTLAND, MAINE ↑N

PROJECT DESCRIPTION

The City of Portland is currently the owner of the subject parcel which will be developed by two separate entities. Campobello Island, LLC has a purchase and sale agreement with the City of Portland for 2.70 acres located between Interstate 295 and Marginal Way adjacent to Preble Street Extension. Campobello Island, LLC is comprised of two development entities – Capital, LLC and Southern Maine Student Housing, LLC. Capital, LLC is proposing a mixed retail and office building development to include an attached parking structure. Southern Maine Student Housing is proposing a mixed retail and student housing development. The site has been rezoned from B-5 Urban Commercial Mixed-use Zone to B-7A Mixed DevelopmentDistrict Zone. This application is for the Capital, LLC portion of the project with Southern Maine Student Housing submitting as a separate application.

The total site area under the purchase and sale agreement is 117,464 S.F. or 2.70 acres, with the proposed Capital, LLC portion being 64,795 S.F. or 1.49 acres. The site is currently a parking lot which also houses a Maine Department of Environmental Protection air quality station and portable recycling containers. The Maine DEP has a one month notice agreement with the City of Portland to remove their structure from the site. The portable recycling containers will be relocated by the City of Portland.

The proposed Capital, LLC office development consist of four levels of structured parking with 434 parking spaces, 5,172 S.F. of retail space at ground level along Marginal Way and four levels of office space, totaling 64,795 S.F., above the parking structure. The main pedestrian entry is on the corner of Marginal Way and Preble Street extension. Vehicle access to the garage will occur at two locations, one on Marginal Way, between the office development and student housing development. The second will be from Preble Street Extension. There will be a pedestrian link along the northerly side of the project, connecting the student housing development to Preble Street Extension. An eight (8) foot sidewalk is proposed along Marginal Way and Preble Street Extension. The sidewalk will follow the curb line adjacent to proposed on-street short term parking and then along the face of the building closer to the corner of Marginal Way and Preble Street Extension. Due to Flood Zone Regulations, the building is two (2) feet above the average grade along Marginal Way and Preble Street Extension. The change in elevation requires the use of ramps and stairs to access the retail uses and the main entry.

The majority of the Marginal Way façade is set back four feet from the property line. There is a projection in the building at the mid-point for a stair tower that provides for a visual break in the façade. The main entry is stepped at the corner to provide articulation to the building reinforcing the entry location. The set back along the Preble Street Extension varies due to the angle of the property line in relation to the Marginal Way property line.

84 Marginal Way Narrative

The building at 84 Marginal Way will be a mixed use structure. The first four levels will be a parking garage structure yielding approximately 434 parking spaces. Retail tenant spaces will be provided along the Marginal Way side of the building and set within the garage. Setting upon the upper garage level will be an additional 4 stories of office space. Each garage level is approximately 43,916 square feet. At the ground level approximately 5,172 square feet will be retail space. Each of the upper office levels will be approximately 16,484 square feet.

The garage portion of the building will consist of a mix of precast concrete, brick masonry and aluminum storefront assemblies. The upper office structure will consist of a conventional steel framed structure. The exterior will be clad in metal paneling of two different rib configurations. One panel type will have a large rib spacing while the second panel type will have a smaller rid spacing. The roof structures will be internally drained utilizing a slightly pitched flat roof structure and an EPDM roofing membrane.

All exterior window units are proposed to be fixed aluminum storefront units with clear, high efficiency low-e glazing. Openings within the parking structure will remain unobstructed allowing free air circulation.

Circulation into and out off the garage will take place along Preble Street. An additional garage exit will be provided at the northeast end of the building onto Marginal Way.

PROJECT DATA

Applicant	Capital, LLC 50 Portland Pier, Suite 400 Portland, Maine 04101 Manager: Ted West
Owner	City of Portland 389 Congress Street Portland, Maine 04101
Zoning	B-7 Mixed Development District Zone
Tax Map	Portion of Chart 34A, Block B, Lot 1 Portion of Chart 442, Block A, Lot 1
Land Area	Entire Site: 117,464 SF (2.70 Acres) 84 Marginal Way: 59,577 SF (1.37 Acres) Bayside Village: 57,887 SF (1.33 Acres)
Existing Land Use	Parking Lot and Maine Department of Environmental Protection Air Quality Station
Proposed Land Use	64,795 SF Medical Office Space 5,172 SF Retail Space 434 Parking Spaces
Water	8 in. main available in Marginal Way
Sanitary Sewer	36 in. main available in Marginal Way
Storm Drainage	30 in. main available in Marginal Way

Low Pressure Gas	6 in. gas available in Marginal Way
Electric, Telephone & Cable TV	Overhead services available across Marginal Way

PROPERTY ABUTTERS

Map 34 Block D

Lot 1-7

87 Marginal Way, LLC
P.O. Box 7525
Portland, Maine 04112
B. 19878 P. 014
Location: 87 Marginal Way

Map 34 Block K

Lot 2 - 3

Ross Y. Furman Jr.
P.O. Box 2
Portland, Maine 04112
B. 13028 P. 030
Location: 71 Marginal Way

Map 34A Block A

Lot 2-4

Atlantic Bayside Square, LLC
340 Fore Street
Portland, Maine 04101
B. 16893 P. 297
Location: 54 Marginal Way

Map 34A Block C

Lot 2

Hannaford Brothers Co.
P.O. Box 1000
Portland, Maine 04104
Location: Preble Street

Map 442 Block A

Lot 1

City of Portland
389 Congress Street
Portland, Maine 04101
Location: 106-196 Marginal Way

Under Purchase and Sale Agreement With
Southern Maine Student Housing, LLC
247 Merchants Plaza
Rockport, Maine 04856

Map 443 Block A

Lot 1

City of Portland
389 Congress Street
Portland, Maine 04101
Location: 1000 Preble Street

NON-JURISDICTION

The 84 Marginal Way project will not require application to Maine DEP for either Site Location of Development or Stormwater Permits. Please see attached response from Linda Kokemuller, SMRO Licensing Coordinator at the Maine DEP.

Bob Metcalf

From: Kokemuller, Linda K [Linda.K.Kokemuller@maine.gov]
Sent: Thursday, July 06, 2006 12:17 PM
To: Bob Metcalf
Subject: RE: Southern Maine Student Housing LLC Marginal Way Portland

Hi Bob,

Based on the information below and our telephone conversation last week, it does not appear that either a Site Location of Development permit or a Stormwater permit would be needed for these two projects.

Let me know if I can be of any further assistance.

Linda

Linda Kokemuller
SMRO Licensing Coordinator
Division of Land Resource Regulation
Bureau of Land and Water Quality
207-822-6329 Fax: 207-822-6303
linda.k.kokemuller@maine.gov

From: Bob Metcalf [mailto:bmetcalf@mitchellassociates.biz]
Sent: Thursday, June 29, 2006 10:32 AM
To: Kokemuller, Linda K
Subject: Southern Maine Student Housing LLC Marginal Way Portland

Good morning Linda,

I am following up on our discussion of yesterday afternoon concerning the requirement for a stormwater permit for the proposed development by Southern Maine Student Housing for a 100 unit student housing project on Marginal Way and the subsequent project for the proposed Office building that is being developed by Capital LLC. As discussed the parcel is a city owned property that has served as parking most recently for USM and currently as an open parking lot with city recycling drop off. This parcel has been paved for over twenty years. The total parcel is 2.7 acres that is being divided into two lots for each of the projects, presently 2.12 acres of the property is impervious.

The student housing lot will be 1.09 acres or 57,887 SF of which 47,436 SF is impervious. The net increase in impervious with the proposed building program is 5,103 SF.

The office project lot will be 1.37 acres or 59,577 SF of which 44,837 SF is impervious. The net increase in impervious with the proposed building program is 5,157 SF.

As a requirement of our submission to the city we need to provide evidence that the project does not require DEP approval. To expedite the process, your response to this email should satisfy this requirement. Should you have any questions regarding the above documented information, please do not hesitate to contact me.

Sincerely,
Mitchell & Associates

Bob Metcalf

Inbox protected with Spam Blocker Utility.
Click here to get the ad-free version.

EASEMENTS

The City of Portland is preparing a subdivision plan that will include an easement to permit pedestrian access, emergency vehicle access, and for public utility extension within a twenty foot wide easement that includes a portion of the travel way between the student housing development and the proposed office building development.

Capital, LLC is requesting an access and utility easement from Southern Maine Student Housing, LLC along the shared property line. This easement is currently under negotiation.

SOLID WASTE

The office uses will be maintained by a cleaning service that will be removing solid waste. An enclosed dumpster area for solid waste and recycling for retail uses has been provided with access from the Preble Street Extension entrance. Disposal will be by contract with a private hauler on a schedule to be determined.

WAIVER REQUEST

The applicant is requesting a temporary waiver of the letter to serve from the City of Portland for the letter to serve for sanitary waste disposal; city engineering has requested additional information relative to the proposed medical office use. We are in the process of obtaining this documentation.

The applicant is requesting a dimensional waiver of the parking standard for stall depth. Parking spaces in the proposed garage are 9 feet by 18 feet with a 24 foot travel aisle. These dimensions are standard for parking garages. The request is to reduce the depth from the required 19 feet to 18 feet.

PROJECT SCHEDULE

The estimated construction schedule for 84 Marginal Way is listed below. Construction to begin in the fall of 2006.

ACTIVITY	DURATION		
• Demolition (Site)	October 2006		
• Erosion Control Measures	October 2006		
• Site Preparation	October 2006	-	November 2006
• Piles	November 2006	-	January 2007
• Utilities and Storm Drainage	November 2006	-	December 2006
• Structure	December 2006	-	January 2008
• Curbing and Street Restoration	September 2007	-	November 2007
• Final Grading	October 2007	-	November 2007
• Paving (Binder)	July 2007	-	July 2007
• Final Paving	October 2007	-	November 2007
• Planting & Seeding	October 2007	-	November 2007

ATTACHMENT D-1

Gorrill-Palmer Consulting Engineers, Inc.
Traffic and Civil Engineering Services

PO Box 1237
15 Shaker Rd.
Gray, ME 04039

207-657-6910
FAX: 207-657-6912
E-Mail:mailbox@gorrillpalmer.com

July 25, 2006

Mr. Rick Knowland, City Planner
Portland Planning Department
389 Congress Street
Portland, Maine 04101

RE: Scoping Meeting Request
Proposed Office Building /Marginal Way - Portland

Dear Rick:

Gorrill-Palmer Consulting Engineers, Inc. has been retained by Capital, LLC to prepare a scoping meeting application for a 65,000 square-feet of medical office space and approximately 5,200 square-feet of retail space along Marginal Way. This project is forecast to generate 165 AM peak hour trip ends and 256 PM peak hour trip ends.

As the City of Portland has delegated review authority for traffic permits typically issued by the Maine Department of Transportation, this application is being filed with the City of Portland, a copy is also being submitted to the MaineDOT Regional Office in Scarborough for their records.

We have attached the following information in support of this application:

- Three copies of sections 1-6.
- Signed application form
- Notice of intent to file (notices have been sent to abutters and the local paper)
- Notification list

Please contact our office with any questions regarding this application. We look forward to meeting with you to discuss this application.

Sincerely,

Gorrill-Palmer Consulting Engineers, Inc.

Thomas L. Gorrill, P.E., PTOE
President

C: Randall Dunton, MDOT Region 1
Tom Erico
Bob Metcalf

TLG/pdo/JN1361/Knowland Scope_07-25-06.doc

Traffic Permit Application
Request for Scoping Meeting
Proposed Medical Office Building
Portland, Maine

Prepared for:

Capital, LLC
50 Portland Pier, Suite 400
Portland, Maine 04101

July 2006

Prepared by:

Gorrill-Palmer Consulting Engineers, Inc.
Traffic and Civil Engineering Services
PO Box 1237
15 Shaker Road
Gray, ME 04039
(207) 657-6910
Fax: (207) 657-6912
E-mail: mailbox@gorrillpalmer.com

D-3

Department of Transportation
Traffic Engineering Division
16 State House Station
Augusta, Maine 04333
Telephone: 207-287-3775

FOR MDOT USE 12/99
ID#_____

Total Fees:_____
Date Received: _____

****

PERMIT APPLICATION – TRAFFIC
TRAFFIC MOVEMENT PERMIT, 23 M.R.S.A. §704-A

Please type or print:

This application is for (check all that apply): Traffic 100-200 PCE's ☐
Traffic 200 + PCE's ☒

Name of Applicant: **Campobello Island, LLC**

Address: **50 Portland Pier, Suite 400; Portland, Maine 04101** Telephone: **(207)**

Name of local contact or agent: **Thomas Gorrill - Gorrill-Palmer Consulting Engineers, Inc.**

Address: **PO Box 1237 Gray, ME 04039** Telephone: **(207) 657-6910**

Name and type of development: **Proposed 65,000 s.f. medical office building and 5,200 s.f. of retail use.**

Location of development including road, street, or nearest route number: **The site is located at the corner of Preble Street and Marginal Way**

City/~~Town/Plantation~~: **Portland** County: **Cumberland** Tax Map: **34A** Lot: **1, Block B**

Do you want a consolidated review with DEP pursuant to 23 M.R.S.A. § 704-A (7)? **No**

Was this development started prior to obtaining a traffic permit? **No**

Is the project located in an area designated as a growth area (as defined in M.R.S.A. title 30-A, chapter 187)?
Yes_____ No **X**

Is this project located within a compact area of an urban compact municipality? Yes **X** No_____

Is this development or any portion of the site currently subject to state or municipal enforcement action?
No

Existing DEP or MDOT permit number (if applicable): _____

Name(s) DOT staff person(s) contacted concerning this application: _____

Name(s) of DOT staff person(s) present at the scoping meeting for 200+ applicants: _____

7/99

CERTIFICATION

This person responsible for preparing this application and/or attaching pertinent site and traffic information hereto, by signing below, certifies that the applicant for traffic approval is complete and accurate to the best of his/her knowledge.

Signature: _____ Re/Cert/Lic No.: _____

Name (print): Thomas L. Gorrill Engineer: Maine PE # 4614

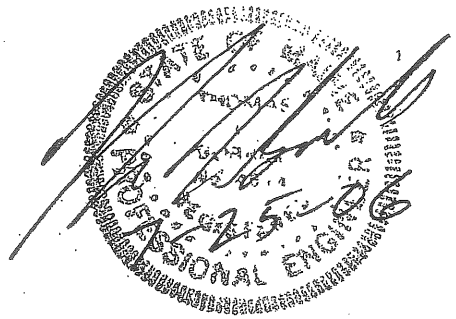
Date: 7-25-06 Other: _____

If the signature below is not the applicant's signature, attach letter of agent authorization signed by applicant.

"I certify under penalty of law that I have personally examined the information submitted in this document and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the information is true, accurate, and complete. I authorize the Department to enter the property that is the subject of this application, at reasonable hours, including buildings, structures or conveyances on the property, to determine the accuracy of any information provided herein. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

_____ 7/19/06

Signature of applicant Date



D-5

Form C 7/97

NOTICE OF INTENT TO FILE

Please take notice that

Campobello Island, LLC
50 Portland Pier, Suite 400
Portland, Maine 04101

is intending to file a Traffic Permit application with the City of Portland pursuant to the provisions of 23 M.R.S.A. §704 – A on or about July 25, 2006
(anticipated filing date)

This application is for

A proposed 65,000 s.f. medical office building with approximately 5,200 s.f. of retail space. The project is forecast to generate 165 trip ends in the AM peak hour and 256 trip ends in the PM peak hour. The project is expected to be completed by 2008.

(Summary of project: specifying trip generation at peak hour for the proposed development and the year the project is proposed to be completed and occupied)

at the following location:

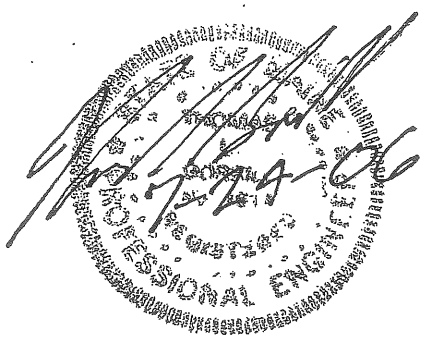
At the northeast quadrant of Marginal Way and Preble Street, Tax Map 34A, Block B Lot 1.

(Project Location)

A request for a public hearing must be received by the Municipality, in writing no later than 20 days after the application is found by the department to be complete and is accepted for processing. Public comment on the application will be accepted throughout the processing of the application.

The application will be filed for public inspection at the City of Portland Planning Department office in Portland during normal working hours. A copy of the application may also be seen at the Department of Transportation Regional Office in Scarborough, Maine

Written public comments may be sent to the following address: Attention City Planner, City of Portland, Planning Department, 389 Congress Street, Portland, ME 04101-3503.



PROPERTY ABUTTERS
of
Capital, LLC

Map 34 Block D

Lot 1-7

87 Marginal Way, LLC
P.O. Box 7525
Portland, Maine 04112
B. 19878 P. 014
Location: 87 Marginal Way

Map 34A Block A

Lot 2 & 4

Atlantic Bayside Square, LLC
340 Fore Street
Portland, Maine 04101
Location: 54 Marginal Way

Map 34 Block K

Lot 2 & 3

Ross Y. Furman, JR.
P.O. Box 2
Portland, Maine 04112
Location: 71 Marginal Way

Map 442 Block A

Lot 1

City of Portland
389 Congress Street
Portland, Maine 04101
Location: 136-196 Marginal Way

Provided By: Mitchell and Associates
Updated By: PDO, GPCEI
Checked By: JJB, GPCEI

TRAFFIC MOVEMENT SCOPING MEETING CHECKLIST

Scoping Meeting ☐ 100-200 Trips ☒ 200 Trips
☒ New ☐ Modification

Date: _____

Attendance: _____

_____

_____

_____

Scoping Meeting Location: _____

Name of Project: Medical Office Building

Address: 120 Marginal Way; Portland, Maine

Applicant: Capital, LLC

Address: 50 Portland Pier, Suite 400; Portland, Maine 04101

Applicant's Traffic Engineer: Gorrill-Palmer Consulting Engineers, Inc

Address: 15 Shaker Road Gray, ME 04039

MDOT Traffic Engineer Reviewing: _____

SECTION 1. Site and Traffic Information

1A. Site Plan

Size of development parcel (acres): 1.37 acres

Size of development to be left non vegetated (acres): 1.19 acres

1B. Existing and Proposed Site Uses

Type of Development: Proposed 65,000 s.f. medical office building and 5,200 s.f. of retail space

Square Footage of building by usage: _____

_____

Special units of usage: N/A

_____

1C. Site and Vicinity Boundaries

__X__ Boundary or title survey signed and sealed professional land Surveyor

__X__ Vicinity map scale 1 inch equals no more than 1000 ft (1:10,000 metric)

1D. Proposed uses in vicinity of proposed development.

__X__ Uses that may increase traffic in vicinity: Ocean Gateway, Waterview Apartments, Medical Office Building, Chestnut Street Extension, Somerset Market Place, Pearl Place, The Longfellow at Ocean Gateway, , Bayside Village

1E. Trip Generation

Summary tables for each land use code.

	Total Daily	AM Peak	PM Peak	Saturday Peak
LUC 720	2,348	161	242	236
LUC 814	230	4	14	34
Total	2,578	165	256	270

Trip rates obtained from other Sources: _____

Number of locations where driveway counts taken: _____

Dates and time periods when driveway counts taken: _____

Location where driveway counts were taken: _____

_____

1F. Trip Distribution:

__X__ Stick diagram for each major intersection on either side of the development driveway(s).

Basis for using above listed percentages:

__X__ ITE trip generation handbook
__X__ Existing traffic patterns of adjacent street
_____ Gravity model
_____ Actual survey done and where: _____
_____ Other explain: _____

Comments: _____

_____

_____

1G. Trip Assignment

Stick diagram for each major intersection on either side of the development driveway(s).

	AM Peak Hour	PM Peak Hour
Percent primary trips:	35%	35%
Percent passer-by trips:	35%	35%
Percent Diverted trips:	25%	25%

Comments: 100% primary for medical office building

SECTION 2. Traffic Crashes (accidents)

MaineDOT crash records for study area year: 2002-2004

Number of high crash locations: 1

Collision diagrams: _____

Mitigation provided for each high crash location: _____

Other Traffic problems: _____

SECTION 3. Development entrances and exits

3A. Entrance and exit locations

X Distance to nearest intersecting road or town line (to the nearest hundredth of a mile.)

X Number, width and surface of each proposed entrance/exit.

3B. Plan view of each intersection created

Names of intersecting roads: Site Drive at Marginal Way; Site Drive at Preble Street Extension

Posted speed limit: Marginal Way – 35 mph; Preble Street Ext. – 35 mph

Entrance/Exit Sight distance:

Street	Looking Left	Looking Right
Marginal Way	> 1,000'	> 1,000'
Preble Street Ext.	500'	N/A

Usage and location of all driveways and roads located across from the development site. AAA building site drive.

3C. **Entrance/exit design**

_____ Driveway spacing and corner clearance (Access Management – Improving the Efficiency of Maine Arterials.

_X_ Adequate sight distance for vehicles exiting development

_____ Entrance grade see fact sheet.

_X_ Entrance/exit width less than 42 feet 912.8 meters)

_____ Separation islands (see fact sheet)

_____ Drainage study 50 year storm for culverts and to connect to MDOT system.

_____ Study to be submitted to Division Engineer.

SECTION 4. Title, right, or interest

_X_ Title, right or interest in project site

_X_ Title, right or interest in entrance/exits

_____ Title, right or interest in drainage easements affecting MDOT

SECTION 5. Public or Private rights of way

_X_ Location and width of proposed streets, easements, and other public or private rights of way

_____ No signs, structures, or pavement connected to the entrance.

SECTION 6. Schedule

Project to be started in 2006 with completion by September 2007

_____ **FURTHER STUDY ITEMS** **$ 500.00 additional fee**

_____ **SECTION 7 FULL TRAFFIC STUDY** **$1,500.00 additional fee due with Section 7** (and sections 1-6)

Build Out Year (Phase 1) : _____

Build Out Year Full Occupancy : _____

FS 1. Time Period(s) for Traffic Engineering Analysis.

_____ AM Weekday Peak Hour of Adjacent Street

_____ Noontime Weekday Peak Hour of Adjacent Street

_____ PM Weekday Peak Hour of Adjacent Street

_____ Noontime Saturday Peak Hour of Adjacent Street

_____ Other (explain): _____

_____

FS 2. Background Annual Traffic Growth Rate:

_____ Type of counts taken: _____Peak Hour

_____AADT

_____ Base counts less than 2 years old? _____

FS 3. Study area to include the following intersections: _____

_____

_____

_____

Additional intersection if one hour volumes from development are
25 vehicles in left turn only lane
35 vehicles in through, right turn lane, or combined through and right turn
35 vehicles (multiplying the left turn volume by 1.5), in a combined left turn and through lane, or a combined left turn, through and right turn lane

FS 4. Intersection Capacity Analysis:

_____ Isolated

_____ Interconnected, intersection _____

_____

Software package Isolated _____

Software package Interconnected _____

FS 5. Analyze or evaluate the following:

_____ Left turn lane warrant
_____ Right Turn lane warrant
_____ Traffic signal warrant
_____ Sight distance evaluation
_____ Truck Climbing Lane
_____ Truck/RV Turning radii Evaluation
_____ Investigation of HCL (high crash location)

FS 6. Other Development Traffic to be included in Study:

_____
_____
_____
_____

FS 7. List Location and date of Completion of Other Projects and Traffic Engineer:

_____
_____
_____
_____

Section 1
Site and Traffic Information

1.A. Site Description and Site Plan

The site is located on the northerly side of Marginal Way, east of Preble Street in Portland. The development site is approximately 1.37 acres in size and is a portion of a larger lot totaling 2.7 acres. The lot is shown as Block B, Lot 1 on Portland Assessor's Map 34A. The site is currently utilized by the City of Portland as a winter parking facility and is approximately 75% impervious. A site location map is included in Attachment 1B.

1.B. Existing and Proposed Site Uses

The site is currently utilized by the City of Portland as a winter parking lot and a recycling facility with roll-off containers.

Proposed for the site is a 44,000 square-foot footprint multi-story medical office building with associated on-site parking. The proposed structure has approximately 65,000 square-feet of medical office space and approximately 5,200 square-feet of retail space along Marginal Way. Access to the site will be via a full movement driveway onto Marginal Way and a full enter with right-out only driveway from Preble Street Extension.

1.C. Site and Vicinity Boundaries

A site location map showing the development area is included in Attachment 1B. The site is bounded to the north by I-295, to the east by businesses and Franklin Arterial, to the south by Marginal Way, and to the west by Preble Street and the AAA building.

1.D. Proposed uses in the Vicinity of the Proposed Development

Approved projects that are not yet opened as well as projects for which applications have been filed are required to be included in the predevelopment volumes for this project. Gorrill-Palmer Consulting Engineers Inc. reviewed our files as well as contacted the City of Portland to determine whether there are any other projects whose traffic should be included as background traffic in the study for this project. Based on this information it was determined that the following projects should be included:

- *Ocean Gateway*
- *Waterview Apartments*
- *Medical Office Building*
- *Chestnut Street Extension*
- *Somerset Market Place*
- *Pearl Place*
- *The Longfellow at Ocean Gateway*

➢ *Bayside Village, A Student Housing Complex*

1.E. Trip Generation

Gorrill-Palmer Consulting Engineers, Inc. used the Institute of Transportation Engineers (ITE) publication *Trip Generation,* 7th Edition to forecast the potential trip generation for the site.

The forecast trip generation for the medical office building is based on Land Use Code (LUC) 720 – Medical Office Building. The forecast trip generation for the retail portion of the development is based on LUC 814 – Specialty Retail. The site is forecast to generate the following trips:

Trip Generation Summary
For Permitting Purposes

Land Use	Weekday	AM peak hour (adjacent street)	PM peak hour (adjacent street)	Saturday peak hour
LUC 720	2,348	161	242	236*
LUC 814	230	4	14	34
Total	2,578	165	256	270

* Assumes all offices operational on Saturday

1.F. Trip Distribution

Gorrill-Palmer Consulting Engineers, Inc. based the trip distribution on information contained in the ITE publication *Trip Generation.* The trip distribution based on the peak hour of adjacent street traffic for the site is summarized in the table below.

1.G. Trip Composition and Assignment

Trip composition for the retail portion of the development is based on Land Use Code 820, Shopping Center for a development size range from 50,000 to 100,000 s.f. and is as follows:

AM Peak Hour:	35% Primary, 40% Pass-by, 25% Diverted
PM Peak Hour:	35% Primary, 40% Pass-by, 25% Diverted
Saturday Peak Hour:	40% Primary, 25% Pass-by, 35% Diverted

It is assumed that 100% of the trips associated with the medical office building will be primary in nature.

Trip Distribution Table: Trip Ends

	AM Peak Hour			PM Peak Hour		
	Enter	Exit	Total	Enter	Exit	Total
Primary	130	32	162	63	183	246
Pass-by	1	1	2	3	3	6
Diverted	1	0	1	2	2	4
Total	132	33	165	68	188	256

The trip assignment percentages have been determined based on existing traffic patterns. The resulting trip assignment is shown in Attachment 1C.

1.H. Attachments

Attachment 1A – Site Survey, Proposed Site Plan
Attachment 1B – Site Location Map
Attachment 1C –Trip Distribution and Trip Assignment
Attachment 1D—Trip Generation Calculations

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY I

COUNTY TOWN#	LOW NODE	HIGH NODE	STREET NAME OR ROUTE #	U/R	TOTAL ACCTS	LINK LENGTH	INJURY ACCIDENTS K	A	B	C	PD	PERCENT INJURY	ANNUAL HM VEH-MILES	ANNUAL M ENT-VEHS	ACCIDENT-RATES LINK	NODE	CRITI RATE	CRF
05	07254	POR,STATE,FOREST,MARGIN		9	28		1	0	0	5	22	21.4		9.013		1.04	1.03	1.01 ←
05	A09419	POR,HANOVER ST,MARGINAL			0		0	0	0	0	0	0.0		0.000		0.00	0.00	0.00*
05	P08943	POR,MARGINAL WAY,ELM,PR		9	23		0	0	3	7	13	43.5		16.918		0.45	0.93	0.00 0.48
05	09420	POR,FRANKLIN ART,MARGIN		9	30		0	1	0	8	21	30.0		12.744		0.78	0.97	0.00 0.80
05	08944	POR,PREBLE ST.EXT,BAXTE		9	19		0	0	0	5	14	26.3		8.630		0.73	1.04	0.00 0.70
05	09423	POR,PREBLE ST,SOMERSET		2	0		0	0	0	0	0	0.0		1.715		0.00	0.54	0.00
05	09430	POR,PREBLE,ALDER KENNEB		2	9		0	0	2	3	4	55.6		2.373		1.26	0.50	2.52 ←
05	09436	POR,PREBLE,LANCASTER ST		2	9		0	0	1	1	7	22.2		2.269		1.32	0.50	2.64 ←
05	09442	POR,OXFORD,PREBLE ST.		9	5		0	0	1	1	3	40.0		2.996		0.56	1.29	0.00
05	09463	POR,PORTLAND,PREBLE ST.		2	2		0	0	0	1	1	50.0		3.438		0.19	0.45	0.00
05	09457	POR,CUMBERLAND AVE,PREB		9	10		0	0	2	1	7	30.0		5.341		0.62	1.14	0.00 0.54
		NODE SUBTOTALS-			135		1	1	9	32	92	31.8		65.437		0.69	0.72	0.00

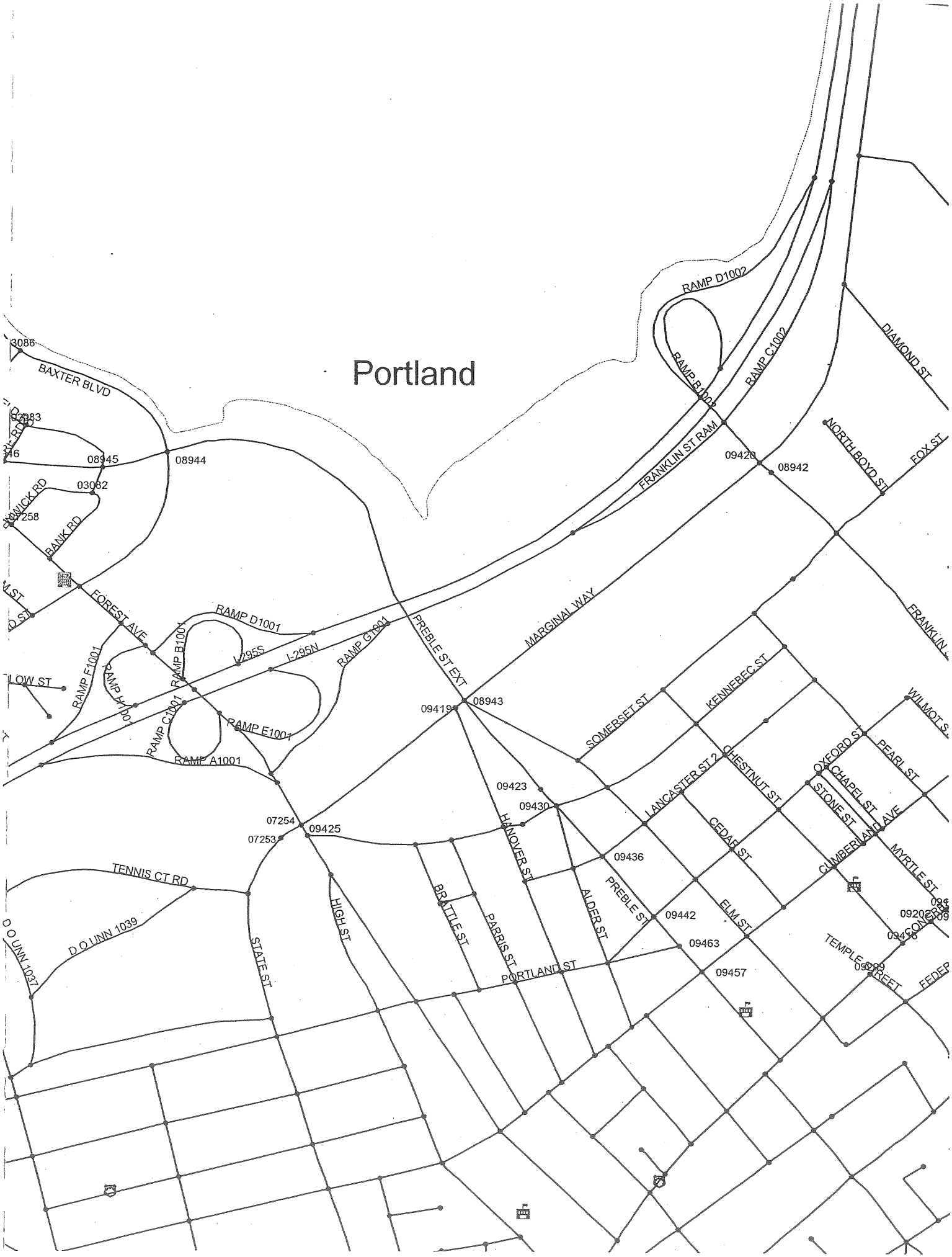
* - MEV IS ZERO FOR THIS NODE -

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY I

COUNTY TOWN#	LOW NODE	HIGH NODE	STREET NAME OR ROUTE #	U/R	TOTAL ACCTS	LINK LENGTH	INJURY ACCIDENTS K	A	B	C	PD	PERCENT INJURY	ANNUAL HM VEH-MILES	ANNUAL M ENT-VEHS	ACCIDENT-RATES LINK	NODE	CRITI RATE	CRF	
05170	07254	09419	MARGINAL WAY	2	9	0.16	0	0	0	1	8	11.1	0.00230		1304.35		561.48	2.32	
	08943	09419		2	0	0.01	0	0	0	0	0	0.0	0.00026		0.00		853.99	0.00	
	08943	09420		2	12	0.36	0	0	0	4	8	33.3	0.01665		240.24		349.89	0.00	0.69
	08943	08944	PREBLE ST EXT	2	9	0.41	0	0	0	1	8	11.1	0.02411		124.43		344.68	0.00	0.36
	08943	09423	PREBLE ST	2	1	0.11	0	0	0	0	1	0.0	0.00189		176.37		622.14	0.00	
	09423	09430		2	0	0.01	0	0	0	0	0	0.0	0.00017		0.00		892.94	0.00	
	09430	09436		2	1	0.07	0	0	0	0	1	0.0	0.00137		243.31		675.63	0.00	
	09436	09442		2	1	0.08	0	0	0	0	1	0.0	0.00162		205.76		647.36	0.00	
	09442	09463		2	1	0.04	0	0	0	0	1	0.0	0.00088		378.79		752.86	0.00	
	09457	09463		2	1	0.03	0	0	0	0	1	0.0	0.00103		323.62		725.18	0.00	
			LINK SUBTOTALS-		35	1.28	0	0	0	6	29	17.1	0.05028		232.03		298.67	0.00	
			GRAND TOTALS-		170	1.28	1	1	9	38	121	28.8	0.05028	65.437	1127.02		463.24	2.43	


Portland
BAXTER BLVD
BANK RD
FOREST AVE
RAMP D1001
RAMP B1001
RAMP F1001
RAMP A1001
RAMP C1001
RAMP E1001
I-295S
I-295N
RAMP G1001
PREBLE ST EXT
MARGINAL WAY
RAMP D1002
RAMP B1002
RAMP C1002
FRANKLIN ST RAM
DIAMOND ST
NORTH BOYD ST
FOX ST
FRANKLIN
KENNEBEC ST
SOMERSET ST
WILMOT S
OXFORD ST
PEARL ST
CHAPEL ST
CHESTNUT ST
LANCASTER ST 2
STONE ST
CUMBERLAND AVE
MYRTLE ST
CEDAR ST
ELM ST
ALDER ST
PREBLE ST
HANOVER ST
BRATTLE ST
PARRIS ST
HIGH ST
STATE ST
PORTLAND ST
TENNIS CT RD
D O UNN 1039
D O UNN 1037
TEMPLE ST
CONGRESS
FEDERAL
08943
09419
09423
09430
09425
07254
07253
09436
09442
09463
09457
08944
08945
08942
09420
03082
07258
03083
3086

Rick Knowland - 84 Marginal Way

From: "Thomas Errico" <terrico@wilbursmith.com>
To: <RWK@portlandmaine.gov>
Date: 09/22/2006 2:14 PM
Subject: 84 Marginal Way
CC: <JPC@portlandmaine.gov>

Rick –

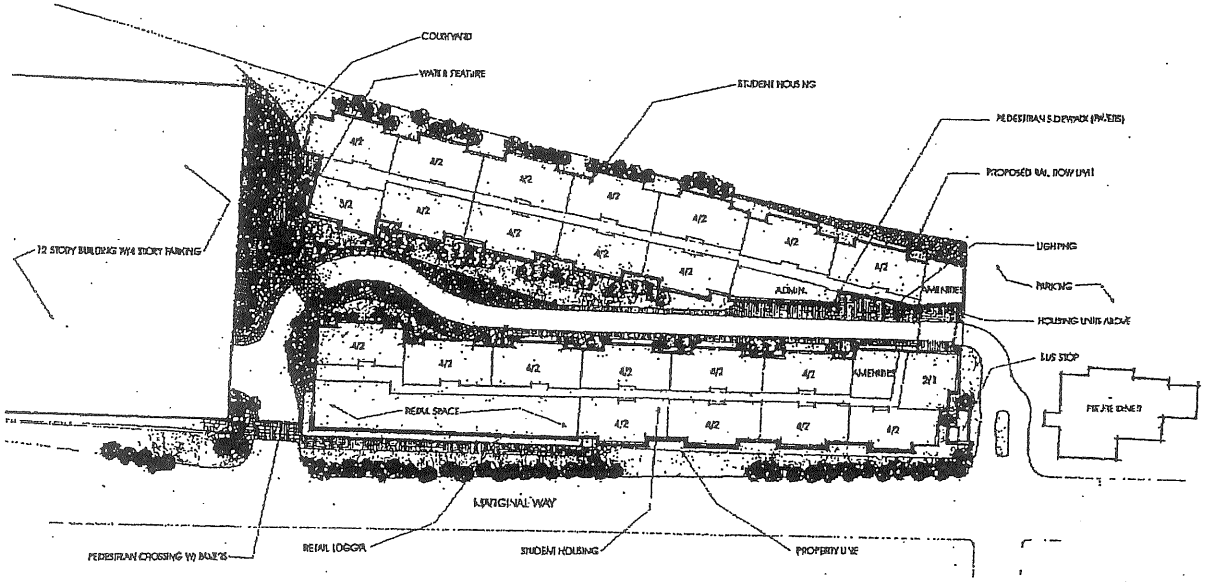
My initial comments for the above project are based upon a review of the September 2006 traffic impact study prepared by Gorrill-Palmer Consulting Engineers, Inc. Other comments can be expected.

1. The applicant is implementing improvements to the curb line abutting their property such that it is consistent with the Marginal Way Pedestrian and Bicycle Master Plan. I continue to coordinate with the applicant on an approved plan. I would note that I would expect the applicant to implement the entire plan at the Marginal Way/ Preble Street intersection. It is my opinion that this level of improvement offsets the need to require a financial contribution, although the details of their improvement plan needs to be refined and agreed upon before I will formally make this condition.
2. I continue to review the proposed left-turn entry design at the site driveway on Preble Street Extension. I would like to review a similar design that has been in operation for some time, such that I can ensure that the design will function safely. The applicant should provide a list of similar locations (in full operation) in the area for review. The applicant should provide details on how vehicle queuing will be accommodated on Preble Street Extension with the proposed left-turn design. It is likely that I will require a condition that the layout be monitored and that the applicant will be responsible for future modifications if any problems are identified.
3. I am supportive of the proposed crosswalk design on Preble Street Extension. I will continue to work with the applicant in refining the design.
4. The applicant will be asked to make a financial contribution towards the implementation of the Somerset Street Extension.
5. The analyses at the Marginal Way/Preble Street intersection needs to be revised to be consistent with the Marginal Way Pedestrian and Bicycle Master Plan. Additionally, the applicant should evaluate traffic conditions assuming the southbound Preble Street approach consists of a left lane, a shared left/through, and a shared through/right.
6. The Marginal Way/Franklin Arterial intersection was evaluated assuming the Marginal Way approaches have been widened to provide three approach lanes. It is unclear whether the applicant is recommending these improvements as part of their project.
7. The applicant should provide a summary of intersection queuing for all study intersections.

If you have any questions, please contact me.

Thomas A. Errico, P.E.
Senior Transportation Engineer
Wilbur Smith Associates
59 Middle Street
Portland, Maine 04101
(207) 871-1785 Phone

EXHIBIT
B



PROJECT INFORMATION	
TOTAL NUMBER OF UNITS: 106	
FIRST LEVEL :	87 BEDS
SECOND LEVEL	318 BEDS
TOTAL NUMBER OF BEDS:	405 BEDS
ADMIN./PUBLIC SPACES:	3,800 SQ. FT.
RETAIL:	3,600 SQ. FT.

SITE PLAN

PORTLAND STUDENT HOUSING

Portland, Maine
SEPTEMBER 1, 2005

NILES BOLTON ASSOCIATES

ARCHITECTURE
LANDSCAPE ARCHITECTURE
INTERIOR DESIGN
PLANNING

7-14

MITCHELL & ASSOCIATES
LANDSCAPE ARCHITECTS

October 31, 2006

Mr. Richard Knowland, Senior Planner
City of Portland
389 Congress Street
Portland, Maine 04101

RE: 84 Marginal Way

Dear Rick:

The attached photographs are of a similar left turn lane as that being proposed for entry to 84 Marginal Way from Preble Street. The location is on Endicott Street in Danvers, Massachusetts. Endicott Street intersects with Sylvan Street, a signalized intersection that has two (2) dedicated left turn movements and one (1) dedicated right turn movement. There is no through lane as this is a T. intersection.

Should you have any questions, please do not hesitate to call me.

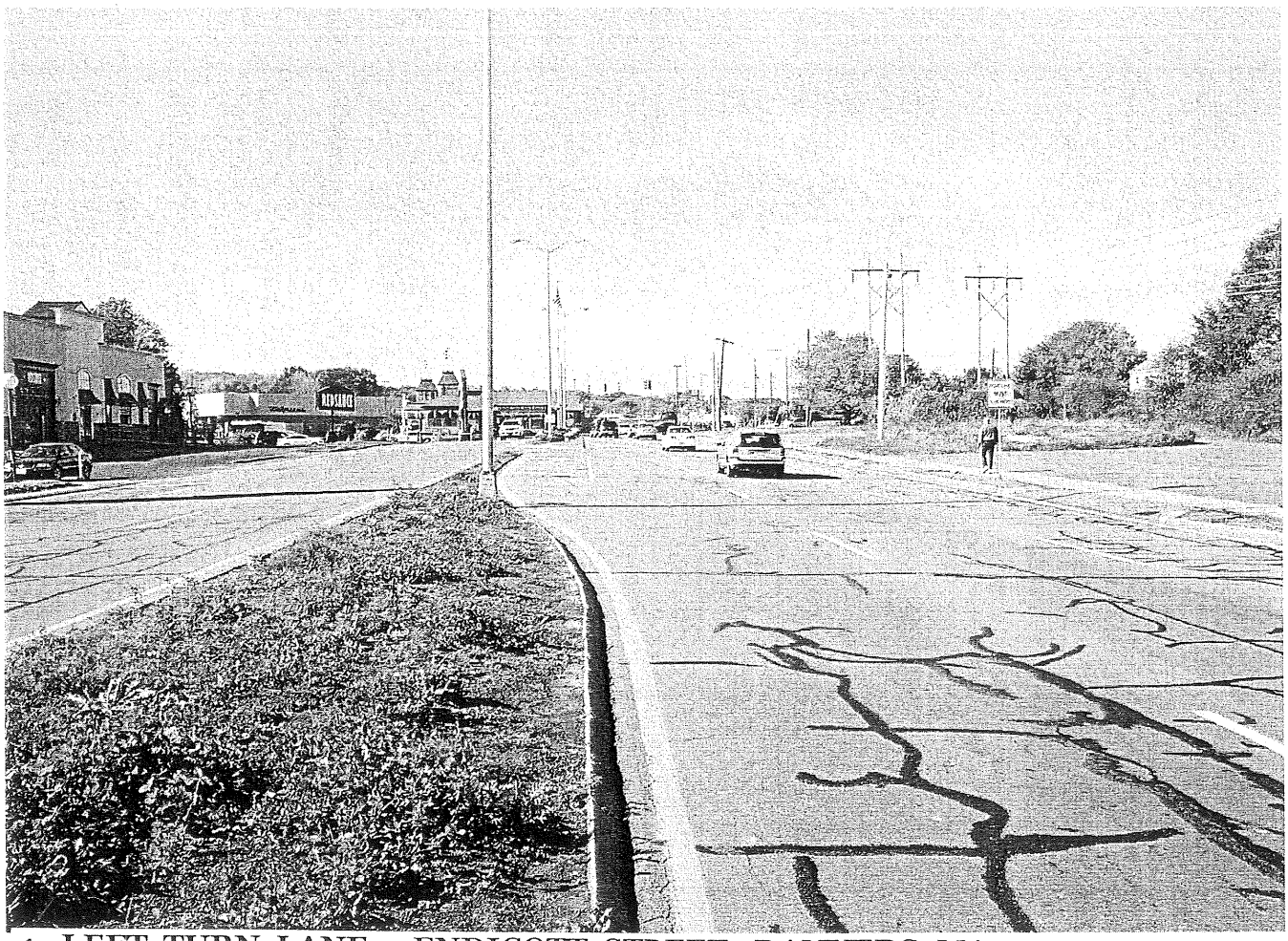
Sincerely,
Mitchell & Associates

Robert B. Metcalf

cc: Ted West
Greg Shinberg
Tom Gorrill

THE STAPLES SCHOOL
70 CENTER STREET
PORTLAND, MAINE 04101

Telephone (207) 774-4427
Fax (207) 874-2460
Website www.mitchellassociates.biz



1. LEFT TURN LANE - ENDICOTT STREET, DANVERS, MA

2. LEFT TURN LANE - ENDICOTT STREET, DANVERS, MA

3. LEFT TURN LANE - ENDICOTT STREET, DANVERS, MA

4. LEFT TURN LANE - ENDICOTT STREET, DANVERS, MA

5. INTERSECTION – (2) DEDICATED LEFT TURN – (1) DEDICATED RIGHT TURN

CITY OF PORTLAND, MAINE
PLANNING BOARD

Michael Patterson, Chair
Janice E. Tevanian, Vice Chair
Kevin Beal
Bill Hall
Lee Lowry III
Shalom Odokara
David Silk

January 19, 2007

Mr. Robert Metcalf
Mitchell and Associates
70 Center Street
Portland, ME 04101

RE: Bayside Medical Office Building; Capital, LLC. (Applicant); 84 Marginal Way
CBL#034A-B-001; #2006-0135

Dear Mr. Metcalf:

On January 9, 2007 the Portland Planning Board considered the conditional use (garage) and site plan application for an office building and parking garage, at 84 Marginal Way, proposed by Capital, LLC. On the basis of the application, plans, reports and other information submitted by the applicant, staff comments and recommendations contained in Planning Report #01-07, the conditional use and site plan regulations and other applicable regulations, and the testimony presented at the Planning Board hearing the Planning Board found the following:

1. The Planning Board voted (6-0, Hall absent) that the plan was in conformance with the B-7 conditional use (parking garage) standards of the land use code.

2. The Planning Board voted (6-0, Hall absent) that the plan was in conformance with the standards of a traffic movement permit, subject to the following condition of approval.

    i. The issuance of the traffic movement permit is granted with all of the standard conditions of approval for the same dictated by MDOT. In addition, the applicant for three (3) years after 80% occupancy of the building, shall monitor the left hand turn off of Preble Street into the parking garage, to ensure ongoing pedestrian and vehicular safety. The applicant shall be responsible for addressing and making any changes through additional signage, signaling, lighting, or other improvements, etc. to address and mitigate any concerns as identified by the City Traffic Engineer.

3. The Planning Board voted (6-0, Hall absent) to waive Technical Standard III (3) which requires a 9 foot wide by 19 foot long parking space and a 24 foot aisle, for the parking garage layout as set forth by Tom Errico's e-mail (dated 1-9-07) to Richard Knowland.

4. The Planning Board voted (6-0, Hall absent) that the plan was in conformance with standards of the site plan standards of the land use code, subject to the following conditions of approval. Note that all of the conditions of approval (i to xii) shall be addressed prior to the issuance of a building permit except for the review of signage under condition ii.

i. That the Applicant shall meet the recommendations contained in Tom Errico's (Traffic Review Consultant) memo dated 1-5-07 including a contribution of $10,000 towards implementation of identified improvements for the Franklin Street Arterial and Marginal Way intersection and an additional $22,000 contribution to the proposed extension of Somerset Street extension between Preble/Elm Streets and Forest Avenue.

ii. That the Applicant shall submit for Planning Staff review and approval the design items summarized on page 4 of Carrie Marsh's (Urban Designer) memo dated 12-27-06.

iii. That a complete site lighting plan including the parking garage shall be submitted for Planning Staff review and approval. The lighting plan for the Preble Street underpass shall also be submitted for review and approval.

iv. That the site plan shall be revised reflecting the comments of Jeff Tarling (City Arborist).

v. That the Applicant shall apply for and receive City approval for a license permitting portions of the planter, ramp and awning to be located within a public right-of-way.

vi. That a revised circulation and parking plan of the parking garage clearly labeling the plan scale, dimensions of the parking aisles and parking spaces shall be submitted for Staff review and approval.

vii. That a revised plan shall be submitted to the Zoning Administrator for review and approval clearly delineating the property line along Marginal Way and Preble Street and that additional information be provided to confirm the building height.

viii. That public easements including the pedestrian easement shall be submitted for City staff review and approval.

ix. That the sidewalk shall be extended at the corner of Marginal Way and Preble Street to the street curb line.

x. The applicant shall meet with the City staff to revisit the screening of the parking garage (at the base of the office building on the fourth floor level) along Preble Street and Marginal Way to ensure its conformance with the B-3 Urban Design Guidelines.

xi. That the parking management plan submitted as Attachment G of Planning Report 01-07, (Memorandum dated May 31, 2006 from Bill Crenshaw, P.E. VHB, Inc., to Greg Shinberg, copy attached) shall be finalized and submitted for staff review and approval.

xii. The width and location of stairs/planters and other elements shall be finalized in conformance with the B-3 Urban Design Guidelines subject to review and approval by the City Urban Designer.

The approval is based on the submitted site plan and the findings related to site plan and conditional use review standard as contained in Planning Report #1-07. The approval includes a 66,000 sq. ft. office building and a parking garage with 4,600 sq. ft. of first floor retail space.

Please note the following provisions and requirements for all site plan approvals:

1. Where submission drawings are available in electronic form, the applicant shall submit any available electronic Autocad files (*.dwg), release 14 or greater, with seven (7) sets of the final plans.

2. A performance guarantee covering the site improvements as well as an inspection fee payment of 2.0% of the guarantee amount and 7 final sets of plans must be submitted to and approved by the Planning Division and Public Works prior to the release of the building permit. If you need to make any modifications to the approved site plan, you must submit a revised site plan for staff review and approval.

3. The site plan approval will be deemed to have expired unless work in the development has commenced within one (1) year of the approval or within a time period agreed upon in writing by the City and the applicant. Requests to extend approvals must be received before the expiration date.

4. A defect guarantee, consisting of 10% of the performance guarantee, must be posted before the performance guarantee will be released.

5. Prior to construction, a pre-construction meeting shall be held at the project site with the contractor, development review coordinator, Public Work's representative and owner to review the construction schedule and critical aspects of the site work. At that time, the site/building contractor shall provide three (3) copies of a detailed construction schedule to the attending City representatives. It shall be the contractor's responsibility to arrange a mutually agreeable time for the pre-construction meeting.

6. If work will occur within the public right-of-way such as utilities, curb, sidewalk and driveway construction, a street opening permit(s) is required for your site. Please contact Carol Merritt at 874-8300, ext. 8828. (Only excavators licensed by the City of Portland are eligible.)

The Development Review Coordinator must be notified five (5) working days prior to date required for final site inspection. The Development Review Coordinator can be reached at the Planning Division at 874-8632. Please make allowances for completion of site plan requirements determined to be incomplete or defective during the inspection. This is essential as all site plan requirements must be completed and approved by the Development Review Coordinator prior to issuance of a Certificate of Occupancy. Please schedule any property closing with these requirements in mind.

If there are any questions, please contact Richard Knowland at 874-8725.

Sincerely,

Michael Patterson, Chair
Portland Planning Board

cc: Lee D. Urban, Planning and Development Department Director
Alexander Jaegerman, Planning Division Director
Barbara Barhydt, Development Review Services Manager
Richard Knowland, Senior Planner
Development Review Coordinator
Marge Schmuckal, Zoning Administrator
Michael Bobinsky, Public Works Director
Jeanie Bourke, Inspections Division
Kathi Earley, Public Works
Bill Clark, Public Works
Jim Carmody, Transportation Manager
Jeff Tarling, City Arborist
Penny Littell, Associate Corporation Counsel
Captain Greg Cass, Fire Prevention
Assessor's Office
Approval Letter File
James Hanley, Capital LLC., 50 Portland Pier, Suite 300, Portland, ME 04101.

Attachment

Summary of Staff Memos referenced in 84 Marginal Way Conditions of Approval

Tom Errico's Comments

Based upon discussions today, I support the applicant's plan to provide 8'-6" wide parking spaces on the first two floors of the garage, with the remaining floors providing parking stall widths equal or exceeding 8'-0". This approval is based on the premise that short-term or high-turnover parkers (customers of the medical office building) will utilize the larger size spaces and low turnover or employees will utilize the small size spaces. Based upon the above I support a waiver for parking space size and aisle width for the proposed project.

The following summarizes my final comments for the above referenced project. The City recognizes that the full implementation of the Marginal Way Master Plan will be conducted in phases and as such is supportive of the construction of a short-term or initial implementation program. In respect to the 84 Marginal Way project, a key element of the short-term implementation plan is the provision of two left-turn movements (one from a dedicated left-turn lane and one from a shared left/through lane) from Preble Street Extension onto eastbound Marginal Way. This short-term action allows for a roadway cross-section on Preble Street Extension that is consistent with the full-build Master Plan, but continues to require two Marginal Way eastbound through lanes, which is not consistent with the full-build Master Pan. The City wishes to systematically reduce the left-turn capacity from Preble Street Extension and will monitor conditions at the subject intersection during the implementation of area roadway improvements and the completion of development projects. As requested I have provided the following information as it relates to the projects compatibility with the conceptual plans developed for the Marginal Way Master Plan. Changes in pedestrian crossing distances at the Marginal Way/Preble Street intersection. CrosswalkExistingMaster Plan84 Marginal WayMarginal Way west of Preble100 feet65 feet80 feetMarginal Way east of Preble110 feet75 feet95 feetPreble Street Extension110 feet70 feet80 feetPreble Street90 feet70 feet90 feet Marginal Way west of Preble – The crossing distance does not meet the Master Plan distance due to the requirement for no modification on southerly Marginal Way curb line (in front of Gorham Savings Bank) and a larger radius on the 'AAA' corner. The radius provided is appropriate for large vehicle movements. Marginal Way east of Preble Street – The crossing distance does not meet the Master Plan distance due to the requirement for no modification on southerly Marginal Way curb line (in front of Wild Oats) and a larger radius on the applicant corner. The radius provided is appropriate for large vehicle movements. Preble Street Extension – The crossing distance does not meet the Master Plan distance due to the provision of larger radii on the corners. The radius provided is appropriate for large vehicle movements. Preble Street – No changes are proposed on the south side of Marginal Way. The proposed Master Plan concept was developed such that it will be compatible with all possible future modes of transportation, including light rail. The applicant has indicated that the proposed building location is consistent with the master plan and therefore can accommodate future rail opportunities. The applicant should clearly state that a future extension of the Narrow Gauge Railroad can be accommodated. As part of development of the interim plan for

Marginal Way, the applicant will be providing two travel lanes on Marginal Way in the eastbound direction. The applicant suggests carrying the two lanes from Preble Street towards Chestnut Street to a maximum length of 500 feet. The City would like to minimize the length of the two lanes and I would suggest that we work with the applicant and include a condition of approval that further refinement of the transition length be considered. To improve access opportunities in the Bayside area, I would suggest that the applicant participate in the funding of connecting Somerset Street between Preble Street and Elm Street. This action will minimize impacts to Marginal Way and help to offset left-turn capacity reductions from Preble Street onto Marginal Way. I would suggest that the applicant contribute $22,000.00 to the extension of Somerset Street extension between Preble/Elm Streets and Forest Avenue. The intersection of Franklin Arterial and Marginal Way is currently operating at poor levels of service and improvements have been identified for implementation. Developments in the area have contributed to this location and I would suggest that the applicant contribute $10,000.00 towards implementation of the identified improvements. A Travel Demand Management (TDM) Program shall be implemented that may comprise of the elements (e.g. rideshare program) noted in the traffic impact study. It is suggested that the details of the program be identified by the applicant and the program will subject to an annual review by the City. The Applicant shall be responsible for the modification of the existing traffic signal (equipment, phasing, and timings) at the Marginal Way/Preble Street intersection such that it is compatible with the proposed roadway improvements. Preliminary and Final design plans shall be submitted to the City for review and approval.

Carrie Marsh's Comments

The conceptual designs for the building which were submitted on December 22, 2006 were reviewed for compliance with the *B-3 Urban Design Guidelines*. The project substantially meets the requirements of these guidelines.

The issues that are still outstanding include the following, which are suggested for

inclusion in a condition of approval for staff review:

1. Samples of all building materials shall be provided.
2. Specifications for doors, windows, awnings, grills and other details shall be provided.
3. Specifications of the signage shall be provided.
4. Specifications of the planting bed design including the retaining wall shall be provided.
5. The metal product for the parapet roof at Marginal and Preble shall be provided.

Jeff Tarling's Comment

That the site plan shall be revised for review and approval by the City Arborist reflecting replacement of the Cleveland Ornamental Pear by the Preble Street driveway with a more substantial tree (Armstrong Red Maple).

PLANNING REPORT #1-07

84 MARGINAL WAY OFFICE BUILDING

VICINITY OF 84 MARGINAL WAY

CAPITAL, LLC., APPLICANT.

Submitted to:
Portland Planning Board
Portland, Maine
January 9, 2007

Submitted by:
Richard Knowland, Senior Planner

I. Introduction

A public hearing has been scheduled to consider a proposal by Capital, LLC., (Ted West) for a proposed office building and parking garage in the vicinity of 84 Marginal Way on the corner of Marginal Way and Preble Street. The project is subject to Site Plan (including the Downtown Urban Design Guidelines) and Conditional Use (parking garage) review. A Traffic Movement Permit will be also be required. Site plans, building elevations and background information are shown on Attachments A, B and C.

121 notices were sent to area property owners.

II. Project Summary

Zoning:	B-7
Land Area:	1.37 acres
Proposed Uses:	Parking Garage... floors 1 to 4
	Retail....floor 1
	Office...floors 5 to 9
Building Footprint:	44,773 sq. ft.
Building Floor Area:	261,200 sq. ft.
Office Floor Area:	66,000 sq. ft
Parking Garage Floor Area:	175,664 sq. ft.
Retail Floor Area:	4,600 sq. ft.
Parking Spaces:	459 spaces
Building Height:	115 feet (9 floors)
Lot Coverage:	75%

Vicinity Uses

North of the site is I-295, Back Cove and the Hannaford shopping center; to the east the proposed student housing development and the proposed Miss Portland Diner; to the south commercial development along Marginal Way including Gorham Savings Bank, Wild Oats, Green Grocer; to the west AAA building and other commercial uses along Marginal Way.

Site Development and Façade Design Considerations

The proposed building program demonstrates an efficient and dense use of development space on the site. The site has about 515 feet of combined street frontage along Marginal Way and Preble Street with over 80% of the frontage occupied by a building wall. The stacking of an office building on top of a parking structure maximizes the amount of density on this site, which is consistent with the goals of A New Vision for Bayside and the new B-7 Zoning. The vertical nature of the development provides the opportunity to support the urban character of Bayside.

The parcel is located in Zone A (Gateway Urban Height District) of the Bayside Height Overlay Zone, which allows a maximum building height of 125 feet although as a conditional use, a building may be as high as 165 feet. The minimum height is four (4) floors. The proposal is well above the minimum height (9 floors) and just below the maximum height (120 feet).

The site is located in a highly visible gateway with exposure from Preble Street, Marginal Way and I-295. Like the adjacent housing proposal, the development of the site will form a visible impression of Bayside and peninsula from I-295.

The first floor of the building along Marginal Way is defined by retail space. The main pedestrian entrance is on the corner of Marginal Way and Preble Street.

A revised building façade plan was presented at the December 12th workshop. The plan represents a significant improvement over the initial August submission in terms of design direction and choice of materials. The design has more of a contemporary treatment with extensive use of glass (tinted glass and spandrel glass), aluminum curtain wall or storefront and use of brick to highlight certain elements of the façade. The site is in a highly visible gateway location so that the design and height of the building (120 feet) provides an opportunity to help shape and diversify the gateway experience. Since the last workshop, the project architect has updated the plan and clarified some of the façade details.

Design review comments evaluating the project under the Downtown Urban Design Guidelines are shown on Attachment S.

III. Staff Review

The submitted plan and related documents have been reviewed by City staff for conformance with the applicable review standards of the site plan and conditional use (B-7 structured parking) ordinance.

A. Conditional Use Review

See 14296 (d) (1) Structure Parking Standards

Proposed parking structure must meet one of three (3) standards (a, b or c) in this section.

a. The first floor of any parking structure shall contain one or more permitted uses (not conditional uses) found in sec. 14-295 along all primary street frontages (excluding frontage dedicated to entrances, lobbies and stair towers. Such first floor space shall be provided with a minimum of nine (9) foot floor to ceiling clearance height and a minimum twenty-five (25) foot depth (measured from the exterior building wall); or

The proposal has retail along a portion of the Marginal Way frontage but not along the Preble Street frontage.

b. Parking garage setback at least thirty-five (35) feet from the street.

Not applicable.

c. The parking structures shall be designed with a façade (to a height of the first two floors) that enhances the pedestrian experience as described in the City of Portland B-7 Bayside Design Standards (Downtown Urban Design Guidelines).

The proposed parking has been designed with a façade that enhances the pedestrian experience. See Attachment S for review memo from Carrie Marsh, Urban Designer.

Sec. 14-474 (c) (2)

a. There are unique or distinctive characteristics or effects associated with proposed conditional use.

There are no known unique or distinctive impacts associated with this use. See review comments in site plan review section of this report.

b. There will be an adverse impact upon health, safety or welfare of the public or the surrounding area.

There are no known adverse impacts on health, safety or welfare associated with this use. See review comments in site plan review section of this report.

c. Such impact differs substantially from the impact, which would normally occur from such a use in that zone.

The impacts of this use are similar impacts that one would expect from other parking garages in this zone. See review comments in site plan review section of this report.

III. SITE PLAN REVIEW

1. Traffic

Traffic Report

A traffic impact report was prepared for this development. See Attachment D. Supplemental traffic information is shown on Attachment E. This project qualifies for a traffic movement permit. The project is forecast to generate 165 trip ends in the a.m. peak hour and 256 trip end in the p.m. peak hour. A traffic scoping meeting was held in accordance with the traffic movement permit process.

Comments from Tom Errico, Traffic Review Consultant, are shown on Attachment F.

Vehicle Circulation

Vehicle access is proposed from Marginal Way and Preble Street. Both driveways connect into the parking garage.

Marginal Way Driveway… The Marginal Way driveway has a delta island in the middle of the driveway restricting turning movements to right-hand turns only. Left hand turns were deemed unacceptable given the potential of conflicting turning movements with the Wild Oats driveway and its proximity to the Marginal Way/Preble Street intersection.

Aside from providing access into the parking garage, the Marginal Way driveway has other functions. The Bayside Village housing development has an easement to use the Marginal Way driveway for service and maintenance functions. The driveway will also be used by the Fire Dept. to gain emergency access to both buildings. The driveway is not connected into the Bayside Village parking garage.

Preble Street Driveway and Left Turn Accommodations…The Preble Street driveway is connected into the parking garage. The Preble Street driveway requires a segregated left hand turn lane on Preble Street to accommodate such turns into the site. Exiting the site is limited to right turns only. The updated plan shows the entire length of Preble Street from Marginal Way to the Hannaford driveway which provides a context for the proposed improvements. An existing island will be extended from the Marginal Way intersection to avoid conflict with turning movements from the AAA driveway, which is across the street from the proposed driveway. In order for the left-hand turn to function, traffic needs to be appropriately channeled into a left-hand lane.

Starting at a distance of about 600 feet from the project driveway (northerly) a series of traffic channelization improvements are proposed on Preble Street. This includes striping, a 125 foot-long raised island, a 350 foot-long (1 foot wide) rumble strip and then a traffic island by the project driveway. A series of signs are proposed north of the I-295 overpass indicating thru-traffic, a crosswalk and a turn for the medical office building.

The island north of the I-295 overpass features a crosswalk with a pedestrian activated flasher/sign. This addresses a long-standing concern of pedestrians crossing the street to go to Hannaford or USM. The location of the crosswalk was selected by the City's Crosswalk Committee and is adjacent to a well-worn path that takes pedestrians to the Hannaford property. The crosswalk will have pedestrian activated flasher/signs. Crossing Preble Street appears to be a regular pedestrian movement despite the challenge of crossing four (40 lanes of traffic. The crosswalk and signal provides the opportunity for a much safer passage for pedestrians.

The improvements proposed along Preble Street require an adjustment in the curb line reducing the existing sidewalk width to about 8 to 10 feet wide. This sidewalk is a critical connection to Back Cove. To help mitigate this impact the Applicant has agreed to install bollard and overhead lighting to improve the present dark and gloomy pedestrian environment under the bridge.

The student housing developer and the 84 Marginal Way developer will be jointly and separately responsible for the crosswalk, pedestrian light and bollard lighting discussed above.

The left hand turn on Preble Street into the site generated a number of questions during the review process. Staff believes the Applicant has provided sufficient documentation that the left hand turn can be appropriately and safely integrated into Preble Street and site development program. This documentation includes revisions made to the plan, submitting supplemental information and providing examples from other communities where similar left hand turns have been implemented.

Marginal Way Master Plan

The proposed development and related off-site improvements have been designed to be compatible with the Marginal Way Master Plan. The Applicant will be responsible for a variety of improvements to help implement the plan. These improvements include installing a new curb line and sidewalk along the project frontage, reconfiguring an island in Marginal Way (east of the Marginal Way/Preble Street intersection), restriping travel lanes on Marginal Way and Preble Street (including bike lanes) in the vicinity of the site; and adjusting the curb line along a portion of the AAA street frontage. Tom Errico, Traffic Review Consultant, is also recommending that the Applicant contribute $22,000 to the

Somerset Street extension extension between Preble/Elm Street and Forest Avenue and $10,000 toward implementation of identified improvements at the Franklin Arterial and Marginal Way intersection.

As the final implementation of the Marginal Way plan will likely take place in phases it is important that development projects be designed and constructed in accordance with the master plan. For example at the Marginal Way/Preble Street intersection, two of the corners will be completed as part of the project (Marginal Way frontage and AAA frontage). The Wild Oats and Gorham Savings Bank frontage will need to be implemented later. Interim measures will need to be employed in certain cases as a transition to the full implementation of the master plan.

During the workshop process there was concern expressed that the site plan (which followed the Marginal Way plan recommendation) eliminated the existing double left hand turn on Preble Street Extension heading eastbound to Marginal Way. To address this issue, the plan was revised providing one left turn and a shared straight/left turn lane. To accomplish this dual left turn, an extra travel lane needs to be continued in front of the Wild Oats. The Marginal Way master plan called for one lane in this section of Marginal Way. An additional left hand turn lane on Marginal Way will increase the pedestrian travel distance at this intersection an additional 11 feet. This intersection represents a critical pedestrian linkage between the peninsula and off-peninsula neighborhoods including a connection to the Back Cove trail from peninsula neighborhoods and the new Bayside Trail.

With other circulation improvements being planned in Bayside including the extension of Somerset Street between Preble Street and Elm Street, this will hopefully reduce traffic pressure on the left turn turning movement as other circulation routes come on line. We view the second lane in front of Wild Oats as an interim measure until other Bayside circulation improvements are completed and traffic patterns can be fully evaluated. It may be possible that the second lane can be eliminated in the future if supported by a subsequent monitoring data.

Pedestrian Circulation

The site plan indicates new public sidewalks will be constructed along the entire street frontage (Marginal Way and Preble Street) of the site. The sidewalk is eight (8) feet wide and constructed of brick.

As discussed during the Bayside Village review, a walkway is proposed behind the parking garage as a short cut to Preble Street for residents walking to Hannaford Supermarket and USM. This easement is also incorporated within the Marginal Way subdivision plat for this parcel.

Pedestrian entrances into the building are shown on the site plan. A main entry lobby is located on the corner of Marginal Way and Preble Street with two sets of doors. Doors are shown for the retail spaces along Marginal Way. A note on the plan indicates that these doors shall be open to the public during normal business hours.
We are recommending that the sidewalk at the corner of Marginal Way and Preble Street be widened eliminating the esplanade in the vicinity of the building entrance. This is a prominent building at a prominent location with a significant entrance. More room should be provided for pedestrians near the corner. The Applicant is in the process of reviewing this comment. Grading issues on the Marginal Way side of the corner may preclude the sidewalk extension.

Grading issues have posed challenges in providing pedestrian access from the public sidewalk to the retail spaces along Marginal Way. To address this concern, a raised walkway with a planter has been proposed between the public sidewalk and the building edge along Marginal Way. It is not an arcade as discussed at the workshop. The walkway varies in width but is primarily six (6) feet wide with some areas reduced to five (5) feet because of building columns. Pedestrian access near the Preble Street/Marginal Way corner is at-grade while a ramp is provided on the far easterly end of the retail frontage. In addition two sets of steps are proposed from the public sidewalk to the internal sidewalk. A ten foot wide set of steps is proposed at a midpoint along the retail frontage. This does not line-up with any doorway because it is not known exactly where the future retail users will want the doorways. The second set of steps is six (6) feet wide and is located between the 10 foot wide steps and the easterly ramp.

As discussed in the vehicle circulation section of this memo, the Preble Street sidewalk under the I-295 bridge is proposed to be reduced on both sides of the street (from 15 feet to 8-10 feet) to accommodate a left hand turn into the site from Preble Street. The sidewalk is a critical connection to the Back Cove Trail. This change is being mitigated by the proposed pedestrian crosswalk/pedestrian light on Preble Street north of the I-295 overpass as well as pedestrian lighting under the bridge.

A five (5) foot sidewalk is shown along the easterly side of the Marginal Way driveway which can be used by pedestrians entering/exiting the westerly side of the Bayside Village building. This sidewalk continues as part of the short cut to Preble Street discussed above. On the other side of the driveway there is a short sidewalk that takes a pedestrian to the parking garage.

In Mr. Errico's review memo, he summarizes the four (4) pedestrian walking distances at the Marginal Way/Preble Street intersection under existing conditions, Marginal Way Master Plan and with the 84 Marginal Way development. The proposed office street improvements will reduce the walking distance at three (3) crosswalks. As the Marginal Way Master Plan is

implemented on the southerly side of Marginal way (Wild Oats and Gorham Savings Bank) the walking distance will be reduced further.

Parking

The submission indicates there will be 459 parking spaces in the four-story parking garage. Although the B-7 zone does not require off-street parking, the Planning Board under site plan review (for buildings 50,000 sq, ft or greater) determines the appropriate number of parking spaces for such developments. A parking demand analysis needs to be submitted by the Applicant.

3. Health or Safety Problems

There are no known health or safety problems associated with this use or building. The student housing building at its closest is about 35 feet from the edge of the parking garage. There is a common driveway between the two buildings which also functions as an emergency access for the Fire Department. The next nearest building is the AAA building (130 feet) and the Wild Oats building (120 feet).

4. Bulk, location, height of proposed building

The proposed development does not result in any substantial diminution in the value or utility to neighboring structures. The existing site is a parking lot. The only structure on the City owned Marginal Way parking lot is a bus shelter. Surface parking is not a favored use in the new B-7 zoning.

5. Sewers, water and solid waste

The Portland Water District indicates there should be an adequate supply of clean and healthful water to serve the needs of the proposed development. See Attachment I. There is an existing eight (8) inch water main on the south side of Marginal Way.

Sanitary needs for the site will be accommodated by an existing 36 inch sewer pipe in Marginal Way. Public Works indicates there is sufficient capacity in this pipe to meet the needs of this development as well as adequate capacity to treat the waste at the Portland Water District, sewage treatment facilities located off Marginal Way.

An existing 30 inch storm drain within Marginal Way will serve the site.

Dan Goyette, Engineering Review Consultant, has reviewed and approved the site plan. See Atttachment J.

The submitted stormwater management plan indicates the 1.37 acre site has an existing impervious area of 1.02 acres. See Attachment K. The Applicant

proposes to increase the impervious area by .22 acre. No detention is proposed on the site since stormwater will discharge quickly to the municipal storm drain and pass into Back Cove.

A Downstream Defender will be installed to address water quality concerns.

Solid waste will be stored in a dumpster near the Preble Street parking garage entrance. A private contractor will dispose of the waste.

6/7. Landscaping

The existing site includes a buffer strip of landscaping and street trees that screen the existing parking lot. This landscaping will be removed to accommodate the development. Four (4) street trees are proposed along Marginal Way and two (2) street trees are proposed along Preble Street. These trees include New Harmony Elms and Nigra Taxus. The number of street trees particularly along Preble Street is limited by the proposed patient-drop-off parking areas along the street frontage of the property. Jeff Tarling City Arborist, has reviewed and approved the plan provided that a more substantial tree (Armstrong Red Maple) is planted by the Preble Street driveway replacing a Cleveland Ornamental Pear.

Along Marginal Way a series of planters (retaining wall) are proposed along the building edge. The planters will have a perennial bed with a total of seven (7) Profusion Flowering Crabs. On the Preble Street side, four (4) Maygar Ginkos are proposed along with some other understory plantings.

On the easterly side (student housing) of the parking garage, four (4) Zumi Calocarpa Flowering Crabs are proposed.

On the northerly side (I-295) of the parking garage plantings include four (4) Cornellian Cherry's and three (30 Turkish Filberts. This area features a walkway that serves as a shortcut between Marginal Way and Preble Street. A lawn will be planted to cover non-impervious surfaces. A planting area will be established between the dumpster enclosure and the parking garage entrance.

Significant existing landscaping (6 inch or greater) within the I-295 corridor (adjacent to the site) has been identified on the plan.

A dumpster pad is proposed by the Preble Street driveway. The dumpster will be enclosed by a solid wood fence and gate.

8. Soil/Drainage

Five (5) catch basins are proposed within the parking garage. Stormwater will enter a water quality unit before being discharged into the City storm drain in Marginal Way.

The site is relatively flat but adjacent to the property is the I-295 berm. Stormwater from the highway drains onto the site. In order to better control this runoff, the Applicant is proposing some regrading within the I-295 right-of-way. Regrading and stormwater control within the I-295 corridor was also proposed for the student housing project. MDOT has reviewed the regrading plan and finds it acceptable.

The grading will move stormwater to an existing inlet near Preble Street. A note on the plan states "existing field inlet to be maintained. Rip rap inlet apron shall be constructed."

With the re-alignment of the curb line along Marginal Way and Preble Street, five (5) catch basins are proposed within the right-of-way.

An erosion and sedimentation control plan has been submitted. See Attachment M.

Dan Goyette, Engineering Review Consultant, has reviewed and approved the site plan. See Attachment J.

9. Exterior Lighting

Attachment N includes previously submitted lighting information. The Applicant indicates (Attachment C-3) "a complete lighting plan has not been prepared for this submission. We are requesting as a condition of approval that the lighting plan be reviewed by staff. The on-street public r-o-w lighting will be the "Bayside" fixture."

Two (2) Bayside street light fixtures/poles each are proposed along the Marginal Way and Preble Street frontage of the property.

Five (5) light poles are shown on the plan covering the rear walkway and Preble Street entrance into the parking garage. Catalog cut information was not submitted on this fixture so it is not clear whether it has a cut-off fixture.

Information on the interior and exterior parking garage light fixtures has not been submitted. Catalog cut and photometric information needs to be submitted.

10. Fire

Captain Cass of the Fire Department has reviewed the proposed layout and circulation of the site plan and finds it acceptable. The driveway between the student housing site and the project site serves as a common access for emergency vehicles. A new fire hydrant is proposed near the Marginal Way entrance. On the easterly side of the parking garage a section of the driveway has been widened to accommodate the needs of fire equipment.

11. Infrastructure

The proposed development is designed to be consistent with off-premises infrastructure existing or planned by the City. The Applicant has designed the street frontage of the project to be compatible with the Marginal Way Street Design Plan including street improvements such as curb alignment, streetlights (Bayside street light) and a crosswalk.

12. Natural Resources

The proposal is located in an urban infill site which was previously redeveloped. There are no known surviving significant natural resources on this site including Groundwater, surface water, wetlands, unusual natural resources or wildlife habitat. The site is on fill land created by the construction of I-295.

13. Signs

The submitted building elevations indicates the location of signage for the major tenant (Intermed). The type and size of the sign is not indicated on the plans. Signage for the retail spaces is not indicated. We are recommending a condition of approval that the Applicant submit a comprehensive sign plan for planning staff review and approval.

14. Downtown Urban Design Guidelines

Carrie Marsh, Urban Designer, has reviewed the plan for compliance with the Downtown Urban Design Guidelines. Her memo is shown as Attachment S. The memo concludes that the project substantially meets the requirements of the guidelines with the following elements incorporated as a condition of approval.

1. Samples of al building materials shall be provided.

2. Specifications for doors, windows, awnings, grills and other details shall be provided.

3. Specifications of the signage shall be provided.

4. Specifications of the planting bed design including the retaining wall shall be provided.

5. The metal product of parapet wall shall be provided.

IV. REQUEST TO MODIFY TECHNICAL DESIGN GUIDELINES AND STANDARDS

The Applicant is requesting that the parking space dimensional requirements under the Technical Design Standards and Guidelines be modified for the parking garage. The Applicant has provided additional information on the requested waiver which staff is in the process of reviewing. Staff will have a specific recommendation for Tuesday's meeting.

V. MOTIONS FOR THE BOARD TO CONSIDER

On the basis of plans and materials submitted by the Applicant and on the basis of information contained in Planning Report #1-07, the Board finds:

A. The plan is in conformance with the Site Plan Ordinance of the Land Use Code including Traffic Movement Permit.

Potential Conditions of Approval:

i. That the Applicant shall meet the recommendations contained in Tom Errico's (Traffic Review Consultant) memo dated 1-5-07 including a contribution of $10,000 towards implementation of identified improvements for the Franklin Arterial and Marginal intersection and an additional $22,000 contribution to the proposed extension of Somerset Street extension between Preble/Elm Streets and Forest Avenue.

ii. That the Applicant shall submit for Planning Staff review and approval the design items summarized on page 4 of Carrie Marsh's (Urban Designer) memo dated 12-27-06.

iii. That a complete site lighting plan including the parking garage shall be submitted for Planning Staff review and approval. The lighting plan for the Preble Street underpass shall also be submitted for review and approval.

iv. That the site plan shall be revised reflecting the comments of Jeff Tarling (City Arborist).

v. That the Applicant apply for and receive City approval for a license permitting portions of the planter, ramp and awning to be located within a public right-of-way.

vi. That a revised circulation and parking plan of the parking garage clearly labeling the plan scale, dimensions of the parking aisles and parking spaces shall be submitted for Staff review and approval.

vii. That a revised plan shall be submitted to the Zoning Administrator clearly delineating the property line along Marginal Way and Preble Street.

viii. That a note shall be added to the site plan referencing an agreement between the City and the Applicant for public use of the parking garage for certain hours as provided for in the agreement.

ix. That public easements including the pedestrian easement shall be submitted for City staff review and approval.

B. That the plan is in conformance with the B-7 Conditional Use Standards for structured parking of the Land Use Code.

C. The Planning Board [finds or does not find] that extraordinary conditions exist or that undue hardship may result from strict compliance with these regulations so that substantial justice may be done and the public interest secured, therefore the Planning Board [does or does not] modify the parking size and parking aisle standards of Technical and Design Standards and Guidelines for this development as shown on the submitted plan.

Attachments

A. Site Plan
B. Building Elevations
C. Background Information
D. Traffic Impact Study
E. Supplemental Traffic Related Information
F. Memo from Tom Errico, Traffic Review Consultant
G. Parking Management Plan
H. AAA Traffic Impact Study
I. Public Utility Service Information
J. Memo from Dan Goyette, Engineering Review Consultant
K. Stormwater Management Report
L. Soils Report
M. Erosion and Sedimentation Control
O. Lighting
P. Financial and Technical Capacity

Q. Property Purchase and Sale Agreement
R. Neighborhood Meeting Information
S. Memo from Carrie Marsh, Urban Designer

- That a complete site lighting plan including the parking garage shall be submitted for Planning Staff review and approval. The lighting plan for the Preble Street underpass shall also be submitted for review and approval.

  The lighting plan with photometrics is currently being be prepared and will be available for review before the scheduled public hearing on March 27, 2007. The bollard lighting for the underpass will be coordinated with the planning staff to select a suitable bollard style fixture.

- iv. That the site plan shall be revised reflecting the comments of Jeff Tarling (City Arborist).

  The revised planting plan submitted for the initial site plan approval had been revised to address Mr. Tarlings' comment. An Armstrong Maple was substituted for the smaller ornamental pear that was on the south west corner of the parking structure on Preble Street.

- v. The Applicant shall apply for and receive City approval for a license permitting portions of the planter, ramp, and awning to be located within the public right-of-way.

  The applicant has prepared the legal description and exhibit for required improvements below grade, at grade and above grade and will be submitting the request to City for the license.

- vi. That a revised circulation and parking plan of the parking garage clearly labeling the plan scale, dimensions of the parking aisles and parking spaces shall be submitted for Staff review and approval.

  The revised parking garage plan was submitted with the Amended Site Plan application.

- vii. That a revised plan shall be submitted to the Zoning Administrator for review and approval clearly delineating the property line along Marginal Way and Preble Street and that additional information be provided to confirm the building height.

  The submitted Amended Site Plan addressed the question regarding the location of the building façade in relationship to the right-of-way/property line. The line weight assigned to the property line on the drawings was revised to clearly delineate the location of the building in relationship to the property line. Regarding the building height, we have reviewed the height issue with Marge Schmuckal as part of the submission for the Amended Site Plan.

- viii. That public easements including the pedestrian easement shall be submitted for City staff review and approval.

  Documentation for the public and pedestrian easement shall be provided to the City staff for review.

- ix. That the sidewalk shall be extended at the corner of Marginal Way and Preble Street to the street curb line.

  The revised site plan submitted as part of the amended Site Plan indicated the expanded area of brick sidewalk to address this condition. At your request, we have provided the attached cross section through the expanded sidewalk along Marginal Way.

- x. The applicant shall meet with the City staff to revisit the screening of the parking garage (at the base of the office building on the fourth floor level) along Preble Street and Marginal Way to ensure its conformance with the B-3 Urban Design Guidelines.

  The applicant met with Carrie Marsh and staff to review this design issue and this has also been reviewed with the Planning Board during the recent workshop session.

- xi. The parking management plan submitted as Attachment G of the Planning Report 01-07, (Memorandum dated May 31, 2006 from Bill Cranshaw, P.E. VHB, Inc., to Greg Shinberg; copy attached) shall be finalized and submitted for staff review and approval.

  The revised parking management plan, updated by Gorrill-Palmer Consulting Engineers, Inc. was submitted with the Amended Site Plan application.

- xii. The width and location of the stairs/planters and other elements shall be finalized in conformance with the B-3 Urban Design Guidelines subject to review and approval by the City Urban Designer.

  The amended site plan has revised stair locations and width to address staff comment. There are two stair ways, 20 feet wide and one pedestrian access at grade that is also 20 feet wide.

Engineers Review Comments

The applicant shall obtain updated letters of service from Portland Public Works for sewer capacity and from the Portland Water District.

We have obtained updated letters from both utilities and have attached them to this submission.

Enclosed for your review are the following documents:

- Open Space calculation exhibit
- Side walk cross section at Marginal Way
- Updated Sewer Capacity letter, City of Portland
- Updated Water Service letter, Portland Water District

The responses and attachments address your comments as well as the original conditions of approval. Should you have any questions, please do not hesitate to call me. We look forward to meeting with you and the Planning Board for the public hearing on March 27, 2007.

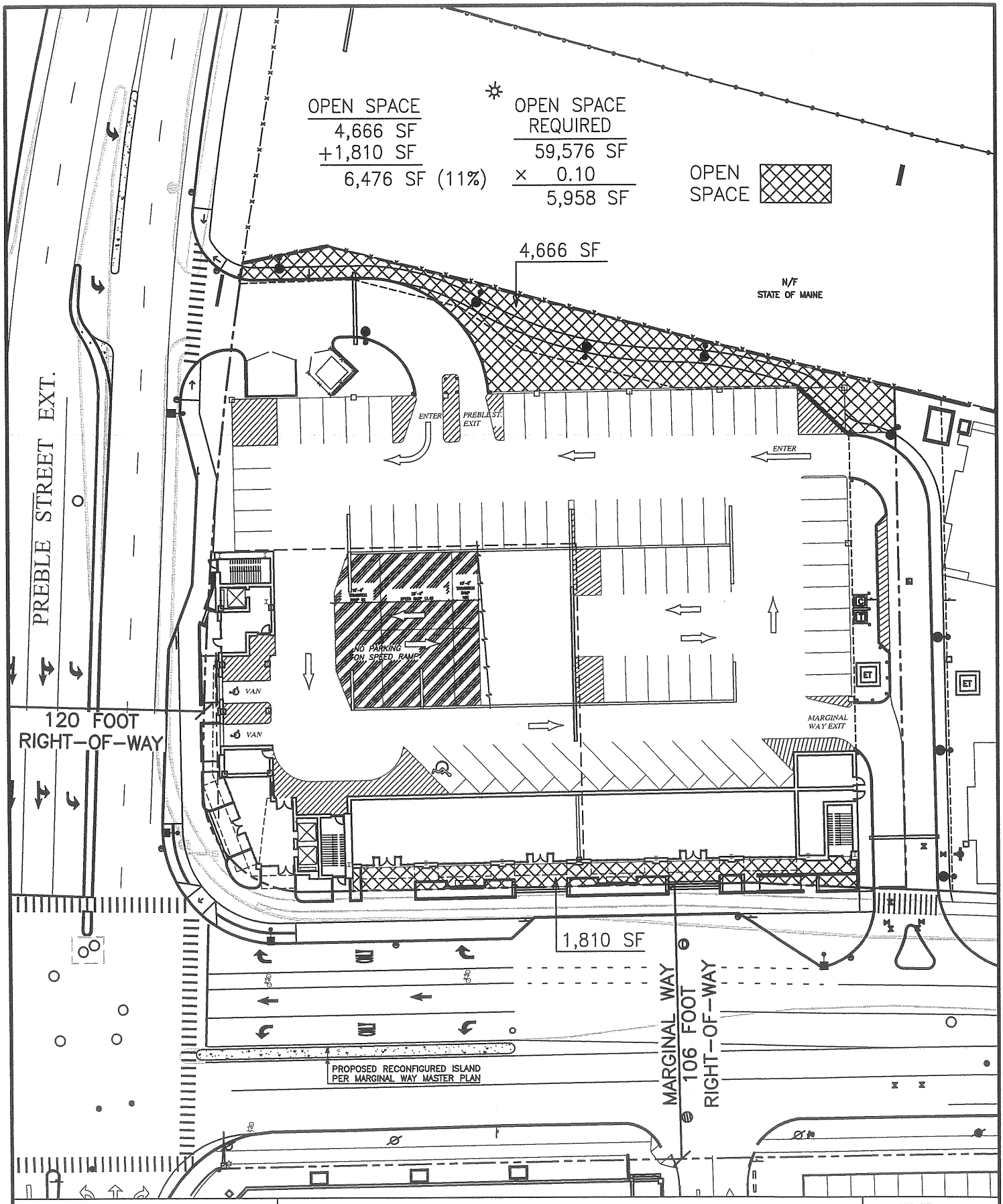
Sincerely,
Mitchell & Associates

RCB METCALF

Robert B. Metcalf

Enclosure

Cc Matt Young
Jim Hanley
Greg Shinberg
Judy Johnson



Mitchell & Associates
Landscape Architects
70 Center Street
Portland, Maine 04101
(207) 774-4427

Title: OPEN SPACE EXHIBIT
BUILDING HEIGHT CALCULATION

Date: MARCH 5, 2007

Scale: 1"=50'

Project: 84 MARGINAL WAY

A

SECTION LOCATION: ATRIUM ENTRANCE THROUGH MARGINAL WAY

Mitchell & Associates
Landscape Architects
70 Center Street
Portland, Maine 04101
(207) 774-4427

Title: SECTION LOCATION:
ATRIUM ENTRANCE THROUGH MARGINAL WAY

Date: MARCH 6, 2007

Scale: 1/8"=1'-0"

Project: 84 MARGINAL WAY

1

PORTLAND MAINE

Strengthening a Remarkable City, Building a Community for Life • *www.portlandmaine.gov*

Public Works Department
Michael J. Bobinsky, Director

20 February 2007

Ms. Betsy Melrose,
Mitchell & Associates,
70 Center Street,
Portland, Maine 04101

RE: The Capacity to Handle Wastewater Flows, from 82, 90, 92, 94, 96, 98, 100 Marginal Way, Site of a Proposed Retail, Parking Garage, and Medical Office Building.

Dear Ms. Melrose:

This letter is in response to an Amended Site Plan Review; it supercedes the earlier letter of July 28, 2006. The existing thirty-six inch diameter reinforced concrete sanitary sewer pipe, known as the "Marginal Way West Interceptor," that fronts this site, has **adequate capacity to transport**, while The Portland Water District sewage treatment facilities, located off Marginal Way, have **adequate capacity to treat** the anticipated increased wastewater flows of **12,026 GPD**, from your proposed building.

Anticipated Wastewater Flows from the Proposed Development:	
5,200 Sq. Feet of Proposed Retail Space@ 0.1 GPD/Sq. Foot	= 520 GPD
506 Parking Spaces @ 1 GPD/Parking Space	= 506 GPD
50 Medical Office Staff @ 80 GPD/Staff	= 4,000 GPD
800 Proposed Patients @ 5 GPD/Patient	= 4,000 GPD
200 Office Employees @ 15 GPD/ Employee	= 3,000 GPD
Total Proposed Increase in Wastewater Flows for this Project	= 12,026 GPD

The City combined sewer overflow (C.S.O.) abatement consent agreement (with the U.S.E.P.A., and with the Maine D.E.P.) requires C.S.O. abatement, as well as storm water mitigation, in order to offset any increase in sanitary flows, from all projects. If the City can be of further assistance, please call 874-8832.

Sincerely,
CITY OF PORTLAND

Frank Brancely

Frank J Brancely, B.A., M.A.
Senior Engineering Technician

FJB

cc: Alexander Q. Jaegerman, Director, Planning Division, Department of Planning, and Urban Development, City of Portland
Barbara Barhydt, Development Review Services Manager, Department of Planning, and Urban Development, City of Portland
Rick Knowland, Senior Planner, Department of Planning, and Urban Development, City of Portland
Dan Goyette, Project Engineer, Woodard and Curran, Incorporated
Michael Farmer, P.E., Project Engineer, City of Portland
Bradley A. Roland, P.E., Environmental Projects Engineer, City of Portland
Stephen K. Harris, Assistant Engineer, City of Portland
Jane Ward, Administrative Assistant, City of Portland
Desk file

O:\Engshare\FJB\Capacity Letters\Marginal Way 82, 90, 92, 94, 96, 98 & 100
C:\Frank's\Capacity Letters\Marginal Way 82, 90, 92, 94, 96, 98 & 100

Customer Service
Office Hours
8:30 A.M. - 4:30 P.M.

Portland Water District

From Sebago Lake To Casco Bay

February 28, 2007

Mitchell & Associates, Inc.
70 Center Street
Portland, ME 04101

Attn: Betsy Melrose
Re: 84 Marginal Way, Portland
Ability to serve with PWD water

Dear Ms. Melrose:

This letter is to confirm there should be an adequate supply of clean and healthful water to serve the needs of the proposed parking garage and commercial use located at 84 Marginal Way in Portland. According to District records, we find there is an 8-inch diameter ductile iron water main on the south side of Marginal Way as well as a water hydrant located opposite the property.

The current data from the nearest hydrant indicates there should be adequate capacity of water to serve the needs of your proposed project.

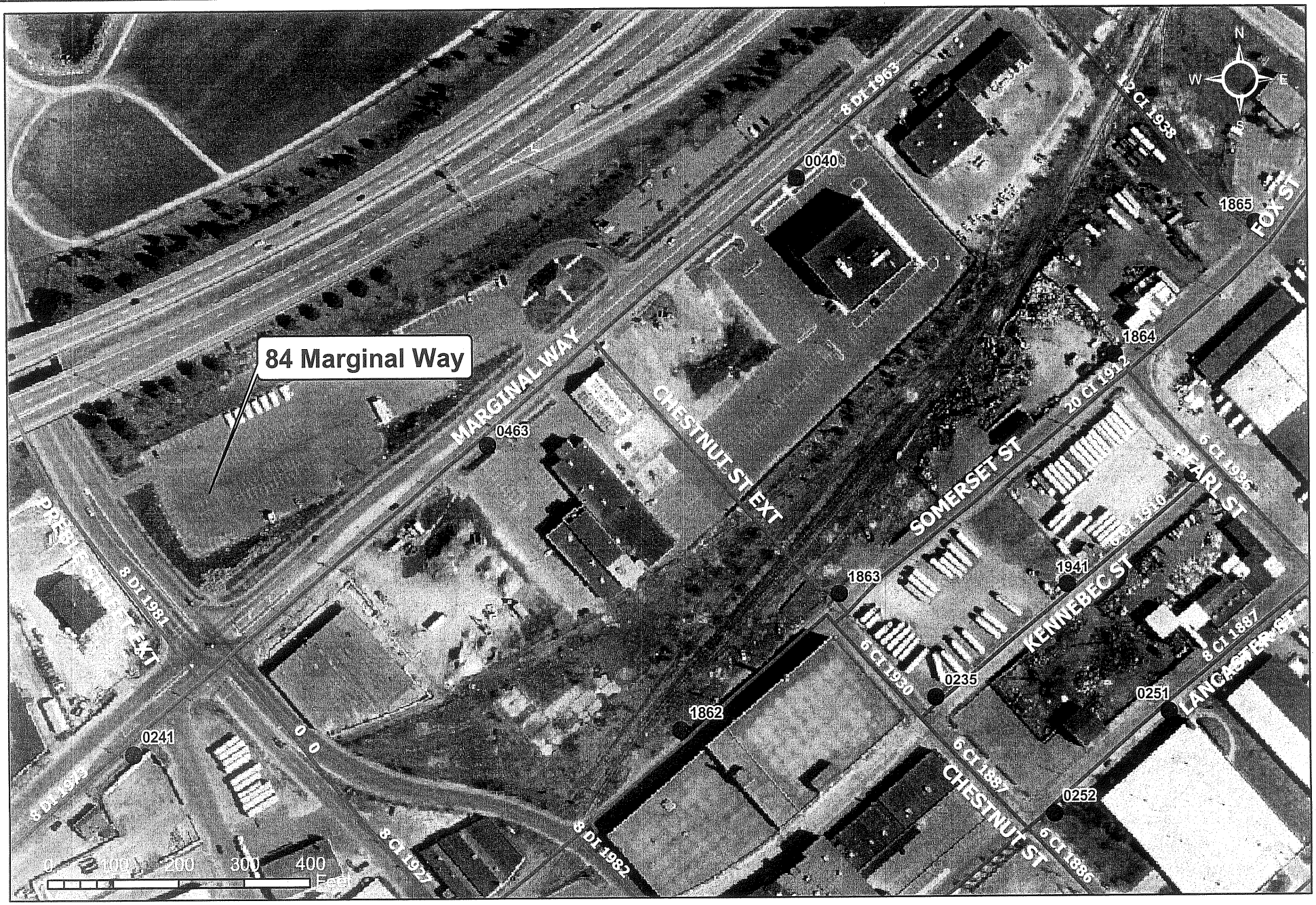
Hydrant Location:	Marginal Way - 500' northeast of Preble Street
Hydrant Number:	0463
Static Pressure:	108 PSI
Flow:	2459 GPM
Last Tested:	7/2/2003

We recommend that you notify your mechanical engineer of these results so that they can design your system to best fit the available pressure. If the District can be of further assistance in this matter, please let us know.

Sincerely,
Portland Water District

Rico Spugnardi, P.E.
Business Development Engineer
rspugnardi@pwd.org

PO - Adequacy - 84 Marginal Way - Mitchell & Associates



PORTLAND WATER DISTRICT **225 Douglass Street** **Portland, ME 04104**	Drawn By: NMM Date: 2/28/07	Scale: As Noted	**84 Marginal Way** **Portland**	This map is suitable for preliminary study and analysis pending review of additional information. The data shown are only as accurate as the original data source(s) from which they were developed; resulting inconsistencies and data "mis-matching" may be evident.	Prepared for: Mitchell & Associates Sheet No. 1 of 1

84 Marginal Way, Medical Office and Parking Garage
Neighborhood Meeting Minutes
Aug. 23, 2006 from 7:15-8:45 PM
Avesta Housing

Bob Metcalf – M&A

- Introduction to project

Greg Shinberg

- Three of seven Intermed facilities would combine at this site
- Administration is not moving to this site, only the administration staff who work with the doctors
- Medical waste will be removed from the site daily. It is preferred that the dumpster would not be at this site.

Comment: Marginal Way roadway plan looks different than Master Plan

A: (Bob)

- This is the Marginal Way Master Plan we were directed to use
- Traffic study is underway and is in the process of revision
- This presented plan only shows Marginal Way improvements, not those proposed for Preble Street Extension

A: (Greg)

- Want safe pedestrian and bicycle routes on Marginal Way and Preble Street
- Traffic movement is considered too, we want this to be a progressive project
- Sept. 26 site issues and traffic will be addressed at the Planning Board Workshop
- The new plans will show improvements to the Hannaford drive

Q: Do you have representation on the Bike/Pedestrian Committee

A: No

Comment: Steve Sharf can give Greg information (Portland Bike Advisory Committee)

Q: Has an overhead bike/pedestrian bridge been looked at for Marginal Way?

A: (Greg)

- A bridge would be cost prohibitive for this project.
- Preble Street left turn lane will eliminate some traffic at the intersection with Marginal Way
- 70% of vehicles come from the Franklin Arterial direction

- It is unlikely for us to have a left turn into the site from Marginal Way

Q: How many patients drive to the site?
A: (Greg)

- The programs haven't been defined for the building yet
- Staff, Doctors would equal about 160-180 people
- Retail and Patients would equal about 85-130 per hour
- 430 vehicle parking garage

Q: How many people would walk to the site?
A: Unknown

Q: How many patients are close to the site?
A: Unknown

Q: What are the square footages in the building?
A: (Greg)

- 67,000 SF Office
- 4,300 SF Retail (Pharmacy is a possibility plus others)
- 430 Parking Spaces (No spaces are required by zoning)
  - 75 Spaces – 63 Marginal Way
  - Office Space
  - 10 Spaces - Retail Space
  - Patients
- Slip Lane/Pull-Off space for patient drop off encouraged
- Bus Stop can't be located near Preble/Marginal intersection, it is too close

Concern: Pedestrian safety between building and Interstate
A: (Greg)

- Developer is concerned with liability of pedestrians behind building, might not be advisable to maintain this connection
- Change in use will improve safety
- Security cameras could be needed for true safety, even with adequate lighting
- People will cut through this direction anyway
- MDOT should create a safer environment by trimming plant material
- People will cut through garage in daytime, gates exist at night.

Comments:

- You can't stop people from walking route behind building
- Landscaping won't deter people from walking behind building, it just invites them
- Add bright lighting at pathway for safety
- Create an inhospitable environment for homeless
- This is a public safety issue and building issue for Intermed to have pedestrian access behind building
- Intermed is privileged to be on this site.
- MDOT will listen to need for maintenance of shrub and evergreen material
- Portland Trails might have recommendations for improving safety
- MDOT could plant larger evergreens to screen sound (limb them up to prevent homeless living there)
- Want people on sidewalks not cut through route
- Underpass area, want proactive not reactive plan
- Could artwork be added at underpass to improve aesthetics
- Snow falling off Interstate bridge should be addressed

A: (Greg)

- Lighting needs improvement under overpass
- It is noisy under there
- Want to work with MDOT to improve the area
- Trying to get MDOT facts to get work done

Comment: Crosswalk needed near Hannaford

A: (Greg) Traffic is too fast in this area

A: (Bob) Existing profile under bridge is 11' traffic lanes, 5 foot sidewalk and 9 foot paved esplanade

Comment: This underpass is a gateway to Byside, would like to have safer environment with narrower traffic lanes, wider bike lanes and lighted bollards

A: (Greg) We want to create a safe environment, but are limited as to what we can do in this area

Q: How is snow removal being handled?

A: Small machines will remove snow from roof and truck it away

Greg:

- Ted West is invested in the community and wants to look at how the whole community is coming together. He wants this area to be a model for other parts of the City

- Presentation boards are dated, but are in the process of being revised
- Architecture of Building
  - Very little brick
  - Masonry – ground face block (manufactured to look like granite) gives a solid look
  - Metal panels
  - Metal siding
  - Overhang similar to 63 marginal Way
  - Large windows to get views
  - City wants more height in this area
  - This building wouldn't have presence if it was shorter
  - It is a 4 sided building
  - We want this to be a forward thinking building
  - We want this to be a signature building
  - 70,000 vehicles a day drive by this site on I-295

Comments:

- Titanium would be a modern material to use
- The sheet metal front will date itself fast, look modern for a few decades and look ugly and stay looking ugly
- Ground floor composite masonry at elementary school could be good to use
- Brick/granite could be done in a modern way
- Masonry gives permanence and solid feel
- Would like to see a wider range of materials used (glass, metal, brick would be a nice combo), not just brick
- Copper
- Windows need more definition, AAA has a stark/empty look
- Windows should open
- Rear of building looks flat
- Entrance at corner would be nice as angled, not a 90 degree
- Entrance at corner could be rounded, historic examples in the area at Portland/Forest Ave and Boothby Square

A: (Greg)

- Material cost will not drive the process, he wants the material to please the most people
- Intermed will have functional doors at street intersection, unlike AAA building
- Intermed building windows will not be open able, due to maintenance/property issues and mechanical concerns
- Bicycle and motorcycle storage is being looked at

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
SOUTHERN REGION
P.O. BOX 358
SCARBOROUGH, MAINE
04070-0358

JOHN ELIAS BALDACCI
GOVERNOR

DAVID A. COLE
COMMISSIONER

September 8, 2006

Mr. Robert Metcalf
Mitchell & Associates
70 Center Street
Portland, ME 04101

Re: Bayside Village Development

Dear Bob:

We met in my office with Will Haskell of Gorrill-Palmer on August 22 and discussed your proposal to perform grading activities in the I-295 right of way for the referenced project. At that meeting I requested some additional information regarding the impacts of a future I-295 lane on your proposal.

We have since received and reviewed that information and now conclude that we have no objections to the work in our right of way as presently proposed. The work is shown on Sheet 3 titled "Grading, Drainage, and Utilities Plan" of plans titled "Bayside Village A Student Housing Complex" prepared by Mitchell & Associates dated July 22, 2006 and on a plan by Gorrill-Palmer titled "I-295 Sections", plan sheet A, dated August 25, 2006.

Please note that the State of Maine, by this action, does not give up any rights to use this land in the future.

Very Truly Yours,

David Sherlock, P.E.
Region Engineer

david.sherlock@maine.gov

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THE MAINE DEPARTMENT OF TRANSPORTATION IS AN AFFIRMATIVE ACTION - EQUAL OPPORTUNITY EMPLOYER

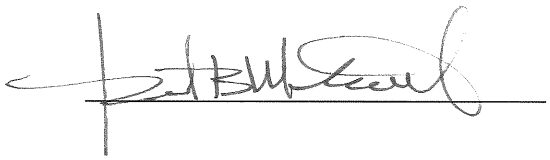
PHONE: (207) 885-7000
TDD: (207) 287-3392
FAX: (207) 883-3806

Neighborhood Meeting Certification

I, **Robert Metcalf, Agent, of Mitchell & Associates** hereby certify that a neighborhood meeting was held on **August 23, 2006** at **Avesta Housing, 307 Cumberland Avenue** at **7:15 PM**.

I also certify that on **August 14, 2006**, invitations were mailed to all addresses on the mailing list provided by the Planning Division, including property owners within 500 feet of the proposed development and the residents on the "interested parties" list.

Signed,



Sept 12, 2006 (date)

Attached to this certification are

1. Copy of the invitation sent
2. Sign-in sheet
3. Meeting minutes

NEIGHBORHOOD MEETING INVITATION

Capital, LLC
50 Portland Pier, Suite 400
Portland, Maine 04101

August 10, 2006

Dear Neighbor:

Please join us for a neighborhood meeting to discuss our plans for **84 Marginal Way, Medical Office and Parking Garage,** located at **84 Marginal Way.**

Meeting Location:	AVESTA Housing – 307 Cumberland Avenue
Meeting Date:	Wednesday, August 23, 2006
Meeting Time:	7:15PM – 8:45PM

The City code requires that property owners within 500 feet of the proposed development and residents on an "interested parties list" be invited to participate in a neighborhood meeting. A sign-in sheet will be circulated and minutes of the meeting will be taken. Both the sign-in sheet and minutes will be submitted to the Planning Board.

If you have any questions, please call Bob Metcalf at Mitchell & Associates, 774-4427.

Sincerely,
Ted West, Capital, LLC.

Note: Under Section 14-32(C) of the City Code of Ordinances, an applicant for a major development, subdivision of over five lots/units, or zone change is required to hold a neighborhood meeting at least seven days prior to the Planning Board public hearing on the proposal.

84 MARGINAL WAY – MEDICAL OFFICE/GARAGE

Neighborhood Meeting

Avesta Housing, 307 Cumberland Avenue

August 23, 2006

7:15 – 8:45 PM

Attendance Sheet

Name	Address	Phone
Betsy Melrose	Mitchell + Associates	774-4427
Steve Hirshon	168 Hanover	7734787
Dan - Anne Waxman	BNA	415 0769
Tom Tratt	BNA	
Ed - Colkemyer	424 Cumberland Ave	775-3260
Greg Shuiberg	Shuiberg Consulting LLC	523 34[illegible]
Jim McCall	25 Pine St	773-6517
Alex Landis	30 Florida St	210.6012
Colette Bouchard	18 Hanover St.	773-6787
HOBB ADAMS	231 STATE ST.	772.2565
BOB METCALF	MITCHELL & ASSOC.	774-4427

Gorrill-Palmer Consulting Engineers, Inc.
Traffic and Civil Engineering Services

PO Box 1237
15 Shaker Rd.
Gray, ME 04039

207-657-6910
FAX: 207-657-6912
E-Mail:mailbox@gorrillpalmer.com

October 10, 2006

Mr. Rick Knowland
City of Portland
389 Congress Street
Portland, ME 04101

RE: Additional Information
Responses to Planning Board Comments
84 Marginal Way

Dear Rick:

Based on the comments from the Planning Board, as well as information requested by Tom Errico, the Traffic Review Engineer for Portland, our office is providing additional information for 84 Marginal Way, as it relates to parking comments and questions from the Planning Board raised at the September 26th, 2006 workshop. For convenience of review, the request is discussed followed by our response.

Item 1: *Will the sun be in drivers' eyes as they come out from under the bridge, making it difficult to see the left turn lane?*

Response: Additional lighting will be provided under the bridge to minimize the contrast for drivers as they cross under the overpass. In addition, overhead lane use signage will be provided at the overpass to clarify lane use to motorists prior to the overpass.

Our office also completed a site visit at the underpass during the early morning and found that the sun is not in a driver's eyes, as Preble Street Extension runs in more of a southeast orientation and the sun is well to the left as a driver approaches. Even if the sun did align during a portion of the year, the medians will begin prior to the overpass so drivers will have a good view of them before passing under I-295. The addition of bollard-style lighting under the bridge will further improve visibility for drivers passing under the interstate as well.

Item 2: *The proposed rumble strips will essentially disappear in winter.*

Response: The rumble strips will be slightly raised by ½ inch to ¾ inch, as well as having approach markings and delineators to enhance visibility.

Item 3: *The Planning Board is concerned about needing extra stacking space for left turn from Preble onto Marginal Way (cannot be added if left into 84 Marginal exists)*

Response: Based on the design volumes, delays for left turns may become an issue in the future. In addition, given the volume of left turns, a dual-left turn movement appears to be the most appropriate. As the extension of Somerset Street is undertaken, and Somerset takes on a new

level of prominence, the left turn movement from Preble Street Extension may decline, as vehicles move across Bayside on a new route. If this is the case, the dual left movement can be re-evaluated. At any case, the design will allow for sufficient stacking with some reserve for this movement.

Item 4: Has the AAA study been looked at in relation to this project?

Response: Our office has obtained a copy of this study from the City, and we have reviewed it to determine its relevancy to this project. Based on that study, the demand existed for dual left turn movements from Preble Street Extension to Marginal Way, as has been discussed in our response to Item 3. As it is several years old, however, the data utilized for the current analysis is more up to date.

Item 5: Improvements on Preble should be made to both sides of the street (for protection and safety issues).

Response: The pedestrian improvement plan addresses crossings along the full width of the street, and will therefore address issues on both sides. The provision of a raised island and actuated lighting will result in a significant improvement in visibility and safety for the entire length of the crossing as compared to the current situation.

Item 6: How will this project's improvements to Marginal Way be implemented if it was constructed as a stand alone project, or if it is constructed with the other improvements planned in Marginal Way?

Response: Enclosed with this letter are two sets of concept plans for Marginal Way. The first set illustrates the improvements associated solely with 84 Marginal Way, while the second set provides those improvements required for both 84 Marginal Way and Bayside Village. Both sets indicate the improvements to be completed by 63 Marginal Way.

Item 7: Research should be done regarding this left turn configuration, check with other municipalities regarding maintenance, plowing, accidents, success, failures, changes, etc. (better to get local examples)

Response: Our office has conducted research on similar treatments. The most local one is along Route 111 in Biddeford fronting the Shops at Biddeford Crossing project, which is in the process of opening in the next few weeks. Another similar treatment is in front of the Liberty Tree Mall in Danvers, Massachusetts on Endicott Street at Sylvan Street. It is just north of the Peabody Town Line, west of Route 128, Exit 24. The third is on Route 1 in Bath at the Sagadahoc Bridge and State Street. Our office has furnished this information to Mr. Errico.

Item 8: A condition should be made for monitoring the left from Preble into the site. The Applicant should work out a monitoring timeframe (usually at one year) and plan for what to do if problems arise.

Response: It is the opinion of our office that the updated intersection design will maintain the needed left turn capacity, as it provides two lanes. The innermost lane taper has been revised to provide 200 feet of storage, twice the distance for the current configuration. In addition, if the innermost left turn lane were ever to exceed its storage, something that is not currently forecast to occur, vehicles could stack in the outer lane. Lastly, as Somerset Street is extended toward Forest Avenue, use of this roadway as a cross-connection street for Bayside should begin to reduce some of the turns to and from Marginal Way.

Item 9: *The following possible change from Preble approaching Marginal Way, being investigated by Tom Errico, should be examined:*

- *Left*
- *Through/Left*
- *Through/Right*

Response: As stated in our responses to previous items, it is the opinion of our office that this option is preferable, and is one that our office recommends.

Item 10: *This project should contribute to improvements to Marginal Way at its intersection with Franklin Street Arterial. Although the configuration shown on the Master Plan sheets was not the configuration initially shown in the Master Plan, Tom Errico is interested in this proposal.*

Response: Our office recommends that the Applicant pay a contribution toward this intersection, similar to Whole Foods, and other projects, so that funds may be utilized by the City to make the necessary improvements at this location.

Item 11: *Vehicular circulation routes to and from the site vary from the Interstate. What are the circulation issues with these routes?*

Response: Please refer to the trip distribution and assignment Figures enclosed with the traffic impact study for this project. Our office will provide enlargements of these diagrams on a board for the Planning Board's reference.

Item 12: *Discussions should occur with Hannaford since we are creating an easier connection through their property.*

Response: Our office conducted conversations with Doug Boyce of Hannaford, and discussed potential access points to the store for a crosswalk. Doug did not see value in the crosswalk being at the main entrance to the store as Bayside pedestrians are not likely to walk that entire distance. While there is some potential for pedestrians to use the walkway from Preble Street Extension that comes into the store front, the storefront location does not appear to be ideal, as the desire line takes pedestrians to the angled sidewalk at the back of the facility. Hannaford will be doing additional investigations into pedestrian access on their site.

Item 13: *(Public comment) Can anything be done about sound absorption under the bridge?*

Response: It is not typical practice to provide acoustic structures under overpasses unless some sensitive use is also located under the bridge. While sound is greater for traffic under the overpass itself, this sound tends to drop off significantly with any distance from the overpass.

Item 14: *Appropriate signage should be utilized near left turn on Preble to ensure safe traffic flow for bicyclists and motorists.*

Response: Appropriate signage will be provided, as previously discussed, on the overpass, to provide a clear designation of lane use. This is shown on the concept plans provided with this letter.

Item 15: *Developer contributions for Somerset Street work should be provided.*

Response: No additional response is required.

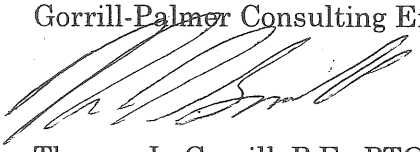
Item 16: *Crossings at driveways should be as small as possible for pedestrian safety.*

Response: The crossings are a balance between accommodating emergency equipment, garbage pickup, and maximizing pedestrian safety. The Preble Street Extension driveway has already been reduced in width from the original submittal to accommodate pedestrians more readily. In addition, the right turn only driveway on Marginal Way has a delta island which acts as a pedestrian refuge.

Gorrill-Palmer Consulting Engineers, Inc. appreciates the opportunity to respond to these comments and looks forward to your review of our responses. Should you have any questions or require any additional information, please feel free to contact me.

Sincerely,

Gorrill-Palmer Consulting Engineers, Inc.



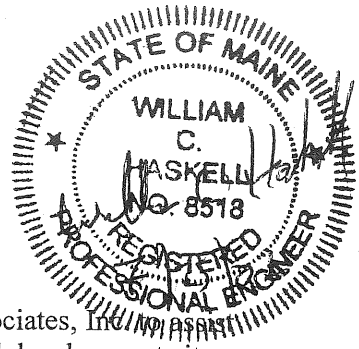
Thomas L. Gorrill, P.E., PTOE
President

Copy: Tom Errico, Wilbur Smith Associates
Jim Carmody, City Traffic Engineer
Bob Metcalf, Mitchell and Associates
Greg Shinberg, Shinberg Consulting
Randy Dunton, MaineDOT Division 1

Enclosure

TLG/jjb/JN1361.01/KnowlandResponses10-10-06.doc

STORMWATER MANAGEMENT REPORT



I. Introduction

Gorrill-Palmer Consulting Engineers, Inc in has been retained by Mitchell & Associates, Inc. to assist with preparation of civil design plans and water resource narratives for a proposed development site located at an existing parking lot site on the corner of Marginal Way and Preble Street Extension in Portland. The developer is Capital, LLC, of Portland Maine. The Maine Department of Environmental Protection (MDEP) was contacted regarding the proposed project to determine if the development would require review or any permits by that agency. Based on discussions with Linda Kokemuller of the MDEP office in Portland, as the existing site was paved before 1997 and the proposed project does results in less than 1 acre of new impervious surface, no MDEP permits or reviews relating to the Site Location of Development Act (Site Law) Permit or Stormwater Permit are required. As the proposed development will result in more than 1 acre of disturbed area, a Stormwater Permit-By-Rule and accompanying Maine Construction General Permit (MCGP) is required and it will be filed with MDEP. The following narrative contains the stormwater analysis and management plan which is appropriate for the site.

II. Development Description

The project site consists of approximately 1.37 acres of land located between Interstate 295 and Marginal Way. The project site is a portion of the existing parking lot site (2.70 acres) is currently owned by the City of Portland. The site is currently developed as a parking lot used as a storage yard for vehicles during the wintertime. Most of the existing site is currently developed, with several smaller landscaped areas along the eastern and southern perimeter of the parking lot. The adjacent portion of the property, 1.33 acres in size, is also under consideration for commercial development by another developer as an apartment housing complex with covered parking and will also include some retail space on the ground floor mixture of retail space, medical and business offices, and a parking garage. The design and details of the adjacent development are provided as a separate application.

The proposed development will consist of a multistory structure with a mixture of retail space, medical and business offices, and a parking garage. Stormwater runoff from the building roof will be collected internally via roof drains and directed to a storm drain system that connects to the municipal storm drain system located in Marginal Way. The project also proposes adjusting the current drainage path of the adjacent portion of the I-295 Right-of-Way so that it will be conveyed to an existing culvert inlet located along the existing sidewalk along Preble Street Extension on the southern part of the site. That drainage currently flows down slope in the right-of-way and onto the parking lot.

Topography on the site consists of relatively flat slopes that gently slope eastward; <1% - 2% over much of the site. The site drains to onsite catch basins and to adjacent catch basins located in Marginal Way and Preble Street Extension. The stormwater collection system drains to Portland's Back Cove (Casco Bay/Atlantic Ocean)

Abutting land uses include:

- Northwest - MDOT Right of Way associated with Interstate 295
- Northeast - Existing Parking Lot proposed for Development and Existing Building and Skate Park (area proposed for future relocation of the Miss Portland Diner)
- Southwest - Preble Street Extension and Commercial Businesses
- Southeast - Marginal Way and Commercial Businesses

The existing parcel is characterized as follows;

Existing Parcel Parameters	
Parcel Area	1.37 Acres
Existing Impervious Area	1.02 acres
Existing Pervious Area	0.35 acres
Proposed Impervious Area	1.24 acres
Proposed Pervious Area	0.13 acres
Increase in Impervious Area	0.22 acres
Notes: 1. Includes areas on the parcel only. Does not include tributary offsite areas.	

III. Surface Water and Downstream Waterbodies

The project site is tributary to the municipal storm drainage collection system which outlets into Back Cove (Casco Bay/Atlantic Ocean). Back Cove is not considered a waterbody most at risk from development.

IV. General Topography

Topography on the site consists of relatively flat slopes that gently slope eastward; <1% - 2% over much of the site. The site drains to onsite catch basins and to adjacent collection basins located within Marginal Way Preble Street Extension. The stormwater collection system drains to Portland's Back Cove (Casco Bay/Atlantic Ocean)

V. Flooding

The 100-year flood elevation is elevation 10 feet (NGVD 29). No part of the subject lot is below the 100-year flood elevation. The Finished Floor Elevation (FFE) of the retail space and the entry for the student housing is at elevation 12.00 feet, or 2 feet above the 100-year flood elevation.

VI. Natural Drainage Ways

The project as currently proposed does not include alterations of any natural drainage ways.

VII. Alterations to Land Cover

Alterations to land cover include the redevelopment of a portion of the existing parking lot into a 4-story apartment building with covered parking on the ground level. The proposed development will increase the amount of impervious surfaces on the site, but will decrease the amount of uncovered pavement as the proposed parking will be underneath the building.

VIII. Water Quantity Control

A stormwater model showing pre- and post-development conditions was prepared for this project to estimate the increase in the post-development peak flows. Due to the proximity of the project to Back

Cove, no detention is planned for the project as the stormwater runoff will discharge quickly to the municipal storm drainage system and pass on to Back Cove.

VIII.1 Pre-development Conditions

As indicated in Section II of this report the pre-development impervious area is about 1.02 acres. Stormwater flows from a portion of I-295 down the embankment slope and across the existing parking areas to enter the closed drainage system which drains to Back Cove. The site was delineated into 5 subcatchments (2-1 through 2-5) to assess the stormwater impacts from development. Detailed stormwater calculations are included in Attachment C. Watershed maps are included in Attachment B. The following table summarizes the pre-development stormwater peak flows for 2, 10, and 25-year rainfall events.

Pre-development Peak Flows					
Subcatchment/ POI	Composite CN	T_c (min)*	Peak Flow (cfs)		
			2-year	10-year	25-year
2-1	92	5	1.1	1.8	2.2
2-2	90	5	3.1	5.5	6.6
2-3	88	5	1.5	2.7	3.3
2-4	93	5	1.1	1.8	2.1
2-5	93	5	0.8	1.3	1.6
POI #1	-	-	4.3	6.1	6.6
POI #2	-	-	1.1	1.8	2.1
POI #3	-	-	1.5	2.7	3.3

* Time-of-concentration paths are shown on the watershed maps. The times calculated using TR-55 Methodology resulted in T_c's of less than 5 minutes. A minimum T_c value of 5 minutes was applied to all subcatchments when the calculated T_c was less than 5 minutes.

VIII.2 Post-development Condition

As indicated in Section II, the post-development impervious surface for the total development is anticipated to increase from 1.02 acres to 1.24 acres. Also, an additional Point of Interest (POI #4) was created to represent the runoff from subcatchment 2-1 flowing toward and entering the catch basin that carries runoff from the access driveway and connects to the storm drain system proposed for the abutting development. A post-development stormwater map is included in Attachment B. The following table summarizes the post-development stormwater peak flows for 2, 10, and 25-year rainfall events.

Post-Development Peak Flows					
Subcatchment/ POI	Composite CN	T_c (min)*	Peak Flow (cfs)		
			2-year	10-year	25-year
2-1	85	5	0.2	0.4	0.5
2-2	98	5	3.0	4.8	5.6
2-3	87	5	2.8	5.2	6.4
2-4	94	5	1.0	1.7	2.0
2-5	94	5	0.9	1.4	1.7
POI #1	-	-	3.8	6.1	7.2
POI #2	-	-	1.0	1.7	2.0
POI #3	-	-	2.8	5.2	6.4
POI #4	-	-	0.2	0.4	0.5

* Time-of-concentration paths are shown on the watershed maps. The times calculated using TR-55 Methodology resulted in T_c's of less than 5 minutes. A minimum T_c value of 5 minutes was applied to all subcatchments when the calculated T_c was less than 5 minutes.

Comparison of Pre- & Post-Development Flows						
Peak Flow Comparison (cfs)						
	2-yr Pre	2-yr Post	10-yr Pre	10-yr Post	25-yr Pre	25-yr Post
POI #1	4.3	3.8	6.1	6.1	6.6	7.2
POI #2	1.1	1.0	1.8	1.7	2.1	2.0
POI #3	1.5	2.8	2.7	5.2	3.3	6.4
POI #4	-	0.2	-	0.4	-	0.5

From the result shown, POI #2 maintains flows from pre-development to post-development. POI #1 & #3 show slight increase in the post-development peak flows. Runoff from POI #4 will be directed to the neighboring storm drain system which will be capable of carry stormwater through the site and back to the municipal drainage system in Marginal Way. Due to the proximity of the project to Back Cove, no detention is planned for the project as the stormwater runoff will discharge quickly to the municipal storm drainage system and pass to the cove

Design of the internal storm drainage pipe system, which accepts runoff from the roof drain collection system, was based on flows computed using the Rational Method and Hydraflow Storm Sewers Software and the 25-year design storm for the Portland area. Copies of the pipe sizing calculations are included in Attachment D.

IX. Stormwater Quality

As this project will result in the redevelopment of an existing parking lot that will become covered and that the stormwater will be collected via roof drains and be carried directly into the municipal stormwater collection system, stormwater treatment is not proposed.

X. Stormwater System

Stormwater will be directed into the municipal stormwater collection system located in Marginal Way and Preble Street Extension via existing and relocated structures in Marginal Way

XI. Stormwater Management

The onsite stormwater facility will be maintained by the owner, or their assigned, heirs after construction is completed. The contract documents will require the contractor to designate a person responsible for maintenance of the sedimentation control features during construction as required by the Erosion Control Report. Long-term operation/maintenance planned for the stormwater management facilities is presented below.

The Owner may contract with such professionals as may be necessary in order to comply with this provision and may rely on the advice of such professionals in carrying out its duty hereunder, provided, that the following operation and maintenance procedures are hereby established as a minimum for compliance with this section:

1. Maintenance of catch basins and drainage manholes (cleaning any sediment buildup and removing debris as necessary).

XII. Conclusion

Though there will be a net increase in impervious area, stormwater detention and treatment are not provided on the project for the following reasons:

- Detention has not been provided due to the close proximity of the project to the storm drain outfall into Back Cove. Stormwater will pass through the municipal drainage system to Back Cove early on during the discharge period.
- Treatment has not been provided as the amount of uncovered impervious pavement is significantly decreasing in the post-development design as the existing parking lot is being replaced by building roof and deck surfaces. Most of the stormwater that falls on the site will be collected by the building roof drains and will be conveyed to the municipal storm drainage system located in Marginal way.

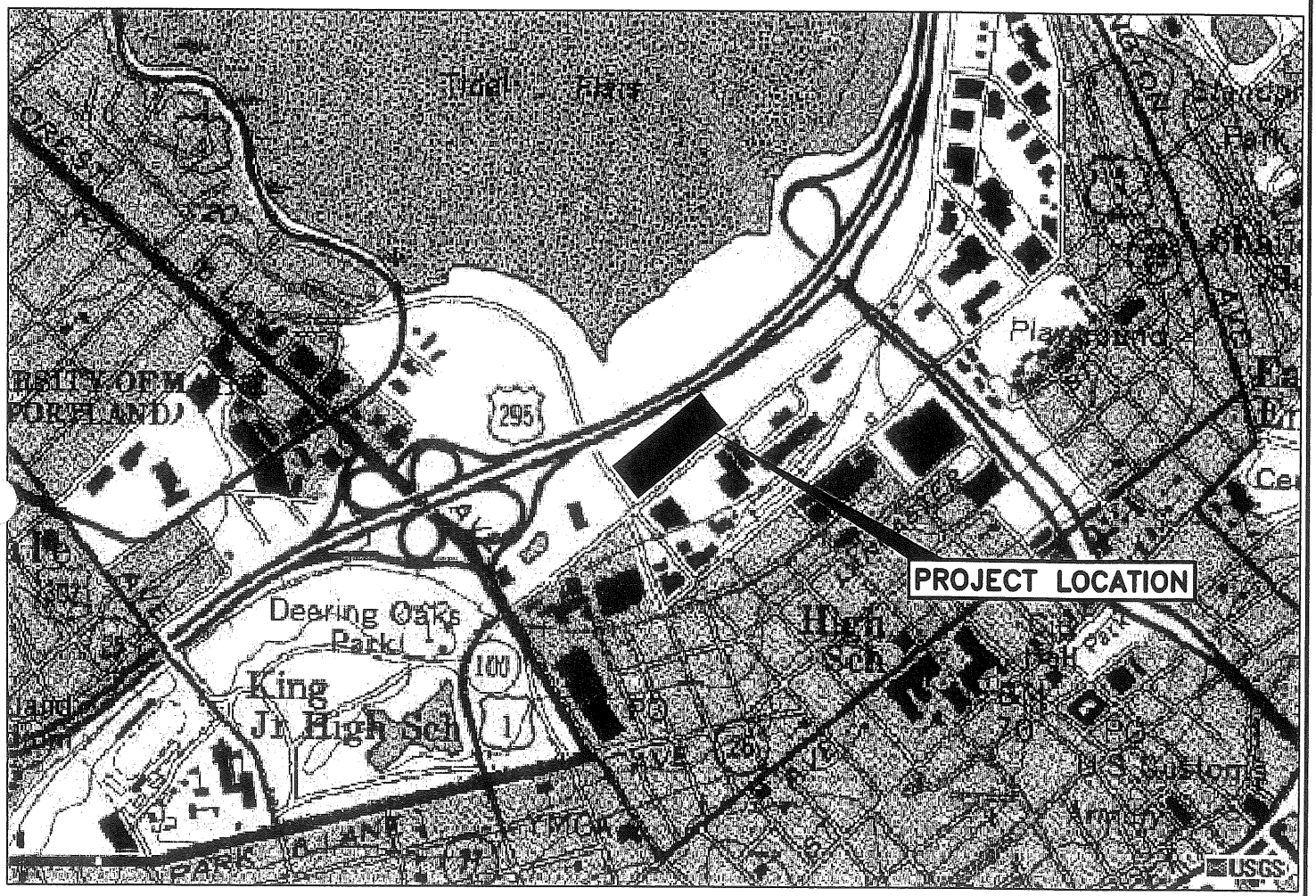
XIII. Attachments

Attached to this section are the following items:

Attachment A – Location Map
Attachment B – Watershed Maps
Attachment C – HydroCAD Calculations
Attachment D – Pipe Sizing Calculations (Hydroflow Storm Sewers Software)

Attachment A

Location Map



U.S.G.S. Location Map

84 Marginal Way - Portland, Maine

U.S.G.S. Portland West, Maine-7.5 Minute Series (Topographic)

Design: CAP	Date: JULY 06
Draft: GJL	Job No.: 1410
Checked: WCH	Scale: None
File Name: 1410_LOCMAP.DWG	

Gorrill-Palmer Consulting Engineers, Inc.

Traffic and Civil Engineering Services

PO Box 1237
15 Shaker Road
Gray, ME 04039

207-657-6910
FAX: 207-657-6912
E-Mail: mailbox@gorrillpalmer.com

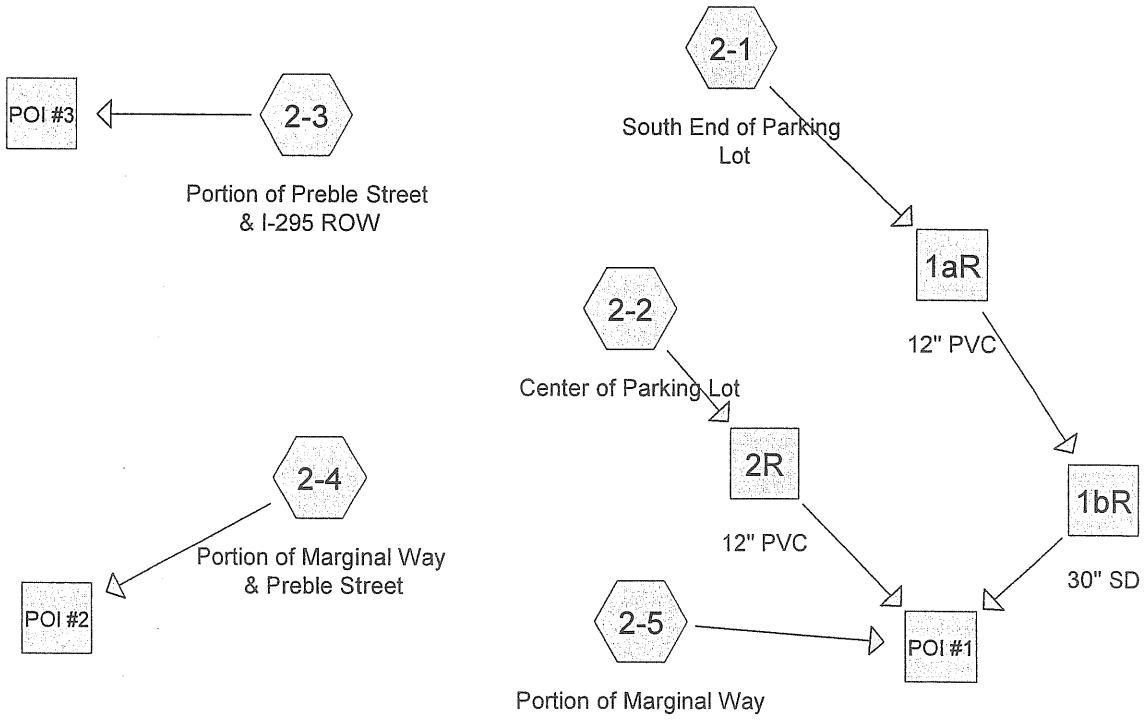
Figure 1

Attachment B

Watershed Maps

Attachment C

HydroCAD Calculations



Subcat Reach Pond Link

Drainage Diagram for 84 Marginal Way Pre Development
Prepared by Gorrill-Palmer Consulting Engineers, Inc. 7/24/2006
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Area Listing (all nodes)

Area (acres)	CN	Description (subcats)
1.139	78	Meadow, non-grazed, HSG D (2-1,2-2,2-3,2-4,2-5)
1.967	98	Paved parking & roofs (2-1,2-2,2-3,2-4,2-5)
3.105		

Time span=0.00-24.00 hrs, dt=0.03 hrs, 801 points
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 2-1: South End of Parking Lot Runoff Area=18,360 sf Runoff Depth>2.16"
Tc=5.0 min CN=92 Runoff=1.08 cfs 0.076 af

Subcatchment 2-2: Center of Parking Lot Runoff Area=56,737 sf Runoff Depth>1.98"
Tc=5.0 min CN=90 Runoff=3.09 cfs 0.215 af

Subcatchment 2-3: Portion of Preble Street & I-295 ROW Runoff Area=29,839 sf Runoff Depth>1.82"
Tc=5.0 min CN=88 Runoff=1.50 cfs 0.104 af

Subcatchment 2-4: Portion of Marginal Way & Preble Street Runoff Area=17,575 sf Runoff Depth>2.25"
Tc=5.0 min CN=93 Runoff=1.07 cfs 0.076 af

Subcatchment 2-5: Portion of Marginal Way Runoff Area=12,752 sf Runoff Depth>2.25"
Tc=5.0 min CN=93 Runoff=0.77 cfs 0.055 af

Reach 1aR: 12" PVC Avg. Depth=0.34' Max Vel=4.48 fps Inflow=1.08 cfs 0.076 af
D=12.0" n=0.011 L=105.0' S=0.0101 '/' Capacity=4.23 cfs Outflow=1.06 cfs 0.076 af

Reach 1bR: 30" SD Avg. Depth=0.85' Max Vel=0.63 fps Inflow=1.06 cfs 0.076 af
D=30.0" n=0.011 L=170.0' S=0.0001 '/' Capacity=3.72 cfs Outflow=0.91 cfs 0.076 af

Reach 2R: 12" PVC Avg. Depth=0.69' Max Vel=5.28 fps Inflow=3.09 cfs 0.215 af
D=12.0" n=0.011 L=140.0' S=0.0078 '/' Capacity=3.72 cfs Outflow=3.04 cfs 0.215 af

Reach POI #1: Inflow=4.31 cfs 0.346 af
Outflow=4.31 cfs 0.346 af

Reach POI #2: Inflow=1.07 cfs 0.076 af
Outflow=1.07 cfs 0.076 af

Reach POI #3: Inflow=1.50 cfs 0.104 af
Outflow=1.50 cfs 0.104 af

Total Runoff Area = 3.105 ac Runoff Volume = 0.525 af Average Runoff Depth = 2.03"
36.67% Pervious Area = 1.139 ac 63.33% Impervious Area = 1.967 ac

Subcatchment 2-1: South End of Parking Lot

Runoff = 1.08 cfs @ 12.07 hrs, Volume= 0.076 af, Depth> 2.16"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-24.00 hrs, dt= 0.03 hrs
Type III 24-hr 2 year Rainfall=3.00"

Area (sf)	CN	Description
13,135	98	Paved parking & roofs
5,225	78	Meadow, non-grazed, HSG D
18,360	92	Weighted Average
5,225		Pervious Area
13,135		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, Direct Entry**

Subcatchment 2-2: Center of Parking Lot

Runoff = 3.09 cfs @ 12.07 hrs, Volume= 0.215 af, Depth> 1.98"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-24.00 hrs, dt= 0.03 hrs
Type III 24-hr 2 year Rainfall=3.00"

Area (sf)	CN	Description
34,836	98	Paved parking & roofs
21,901	78	Meadow, non-grazed, HSG D
56,737	90	Weighted Average
21,901		Pervious Area
34,836		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 2-3: Portion of Preble Street & I-295 ROW

Runoff = 1.50 cfs @ 12.07 hrs, Volume= 0.104 af, Depth> 1.82"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-24.00 hrs, dt= 0.03 hrs
Type III 24-hr 2 year Rainfall=3.00"

Area (sf)	CN	Description
15,019	98	Paved parking & roofs
14,820	78	Meadow, non-grazed, HSG D
29,839	88	Weighted Average
14,820		Pervious Area
15,019		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, Direct Entry**

Subcatchment 2-4: Portion of Marginal Way & Preble Street

Runoff = 1.07 cfs @ 12.07 hrs, Volume= 0.076 af, Depth> 2.25"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-24.00 hrs, dt= 0.03 hrs
Type III 24-hr 2 year Rainfall=3.00"

Area (sf)	CN	Description
12,992	98	Paved parking & roofs
4,583	78	Meadow, non-grazed, HSG D
17,575	93	Weighted Average
4,583		Pervious Area
12,992		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, Direct Entry**

Subcatchment 2-5: Portion of Marginal Way

Runoff = 0.77 cfs @ 12.07 hrs, Volume= 0.055 af, Depth> 2.25"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-24.00 hrs, dt= 0.03 hrs
Type III 24-hr 2 year Rainfall=3.00"

Area (sf)	CN	Description
9,684	98	Paved parking & roofs
3,068	78	Meadow, non-grazed, HSG D
12,752	93	Weighted Average
3,068		Pervious Area
9,684		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, Direct Entry**

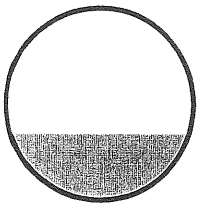
Reach 1aR: 12" PVC

Inflow Area = 0.421 ac, Inflow Depth > 2.16" for 2 year event
Inflow = 1.08 cfs @ 12.07 hrs, Volume= 0.076 af
Outflow = 1.06 cfs @ 12.09 hrs, Volume= 0.076 af, Atten= 2%, Lag= 0.8 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.03 hrs
Max. Velocity= 4.48 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 1.50 fps, Avg. Travel Time= 1.2 min

Peak Storage= 25 cf @ 12.08 hrs, Average Depth at Peak Storage= 0.34'
Bank-Full Depth= 1.00', Capacity at Bank-Full= 4.23 cfs

12.0" Diameter Pipe, n= 0.011
Length= 105.0' Slope= 0.0101 '/'
Inlet Invert= 5.59', Outlet Invert= 4.53'



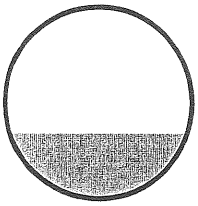
Reach 1bR: 30" SD

Inflow Area = 0.421 ac, Inflow Depth > 2.16" for 2 year event
Inflow = 1.06 cfs @ 12.09 hrs, Volume= 0.076 af
Outflow = 0.91 cfs @ 12.21 hrs, Volume= 0.076 af, Atten= 14%, Lag= 7.3 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.03 hrs
Max. Velocity= 0.63 fps, Min. Travel Time= 4.5 min
Avg. Velocity = 0.22 fps, Avg. Travel Time= 13.0 min

Peak Storage= 250 cf @ 12.13 hrs, Average Depth at Peak Storage= 0.85'
Bank-Full Depth= 2.50', Capacity at Bank-Full= 3.72 cfs

30.0" Diameter Pipe, n= 0.011
Length= 170.0' Slope= 0.0001 '/'
Inlet Invert= 0.41', Outlet Invert= 0.40'



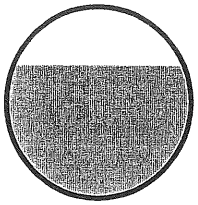
Reach 2R: 12" PVC

Inflow Area = 1.303 ac, Inflow Depth > 1.98" for 2 year event
Inflow = 3.09 cfs @ 12.07 hrs, Volume= 0.215 af
Outflow = 3.04 cfs @ 12.09 hrs, Volume= 0.215 af, Atten= 2%, Lag= 0.9 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.03 hrs
Max. Velocity= 5.28 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 1.91 fps, Avg. Travel Time= 1.2 min

Peak Storage= 82 cf @ 12.08 hrs, Average Depth at Peak Storage= 0.69'
Bank-Full Depth= 1.00', Capacity at Bank-Full= 3.72 cfs

12.0" Diameter Pipe, n= 0.011
Length= 140.0' Slope= 0.0078 '/'
Inlet Invert= 5.64', Outlet Invert= 4.55'



Reach POI #1:

Inflow Area = 2.017 ac, Inflow Depth > 2.06" for 2 year event
Inflow = 4.31 cfs @ 12.09 hrs, Volume= 0.346 af
Outflow = 4.31 cfs @ 12.09 hrs, Volume= 0.346 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.03 hrs

Reach POI #2:

Inflow Area = 0.403 ac, Inflow Depth > 2.25" for 2 year event
Inflow = 1.07 cfs @ 12.07 hrs, Volume= 0.076 af
Outflow = 1.07 cfs @ 12.07 hrs, Volume= 0.076 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.03 hrs

Reach POI #3:

Inflow Area = 0.685 ac, Inflow Depth > 1.82" for 2 year event
Inflow = 1.50 cfs @ 12.07 hrs, Volume= 0.104 af
Outflow = 1.50 cfs @ 12.07 hrs, Volume= 0.104 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.03 hrs

Time span=0.00-24.00 hrs, dt=0.03 hrs, 801 points
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 2-1: South End of Parking Lot Runoff Area=18,360 sf Runoff Depth>3.79"
Tc=5.0 min CN=92 Runoff=1.84 cfs 0.133 af

Subcatchment 2-2: Center of Parking Lot Runoff Area=56,737 sf Runoff Depth>3.59"
Tc=5.0 min CN=90 Runoff=5.46 cfs 0.389 af

Subcatchment 2-3: Portion of Preble Street & I-295 ROW Runoff Area=29,839 sf Runoff Depth>3.38"
Tc=5.0 min CN=88 Runoff=2.74 cfs 0.193 af

Subcatchment 2-4: Portion of Marginal Way & Preble Street Runoff Area=17,575 sf Runoff Depth>3.90"
Tc=5.0 min CN=93 Runoff=1.79 cfs 0.131 af

Subcatchment 2-5: Portion of Marginal Way Runoff Area=12,752 sf Runoff Depth>3.90"
Tc=5.0 min CN=93 Runoff=1.30 cfs 0.095 af

Reach 1aR: 12" PVC Avg. Depth=0.46' Max Vel=5.18 fps Inflow=1.84 cfs 0.133 af
D=12.0" n=0.011 L=105.0' S=0.0101 '/' Capacity=4.23 cfs Outflow=1.81 cfs 0.133 af

Reach 1bR: 30" SD Avg. Depth=1.15' Max Vel=0.73 fps Inflow=1.81 cfs 0.133 af
D=30.0" n=0.011 L=170.0' S=0.0001 '/' Capacity=3.72 cfs Outflow=1.61 cfs 0.133 af

Reach 2R: 12" PVC Avg. Depth=1.00' Max Vel=5.37 fps Inflow=5.46 cfs 0.389 af
D=12.0" n=0.011 L=140.0' S=0.0078 '/' Capacity=3.72 cfs Outflow=3.72 cfs 0.389 af

Reach POI #1: Inflow=6.08 cfs 0.617 af
Outflow=6.08 cfs 0.617 af

Reach POI #2: Inflow=1.79 cfs 0.131 af
Outflow=1.79 cfs 0.131 af

Reach POI #3: Inflow=2.74 cfs 0.193 af
Outflow=2.74 cfs 0.193 af

Total Runoff Area = 3.105 ac Runoff Volume = 0.942 af Average Runoff Depth = 3.64"
36.67% Pervious Area = 1.139 ac 63.33% Impervious Area = 1.967 ac

Time span=0.00-24.00 hrs, dt=0.03 hrs, 801 points
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 2-1: South End of Parking Lot Runoff Area=18,360 sf Runoff Depth>4.58"
Tc=5.0 min CN=92 Runoff=2.20 cfs 0.161 af

Subcatchment 2-2: Center of Parking Lot Runoff Area=56,737 sf Runoff Depth>4.36"
Tc=5.0 min CN=90 Runoff=6.57 cfs 0.473 af

Subcatchment 2-3: Portion of Preble Street & I-295 ROW Runoff Area=29,839 sf Runoff Depth>4.14"
Tc=5.0 min CN=88 Runoff=3.33 cfs 0.236 af

Subcatchment 2-4: Portion of Marginal Way & Preble Street Runoff Area=17,575 sf Runoff Depth>4.69"
Tc=5.0 min CN=93 Runoff=2.13 cfs 0.158 af

Subcatchment 2-5: Portion of Marginal Way Runoff Area=12,752 sf Runoff Depth>4.69"
Tc=5.0 min CN=93 Runoff=1.55 cfs 0.114 af

Reach 1aR: 12" PVC Avg. Depth=0.51' Max Vel=5.41 fps Inflow=2.20 cfs 0.161 af
D=12.0" n=0.011 L=105.0' S=0.0101 '/' Capacity=4.23 cfs Outflow=2.17 cfs 0.161 af

Reach 1bR: 30" SD Avg. Depth=1.28' Max Vel=0.77 fps Inflow=2.17 cfs 0.161 af
D=30.0" n=0.011 L=170.0' S=0.0001 '/' Capacity=3.72 cfs Outflow=1.93 cfs 0.160 af

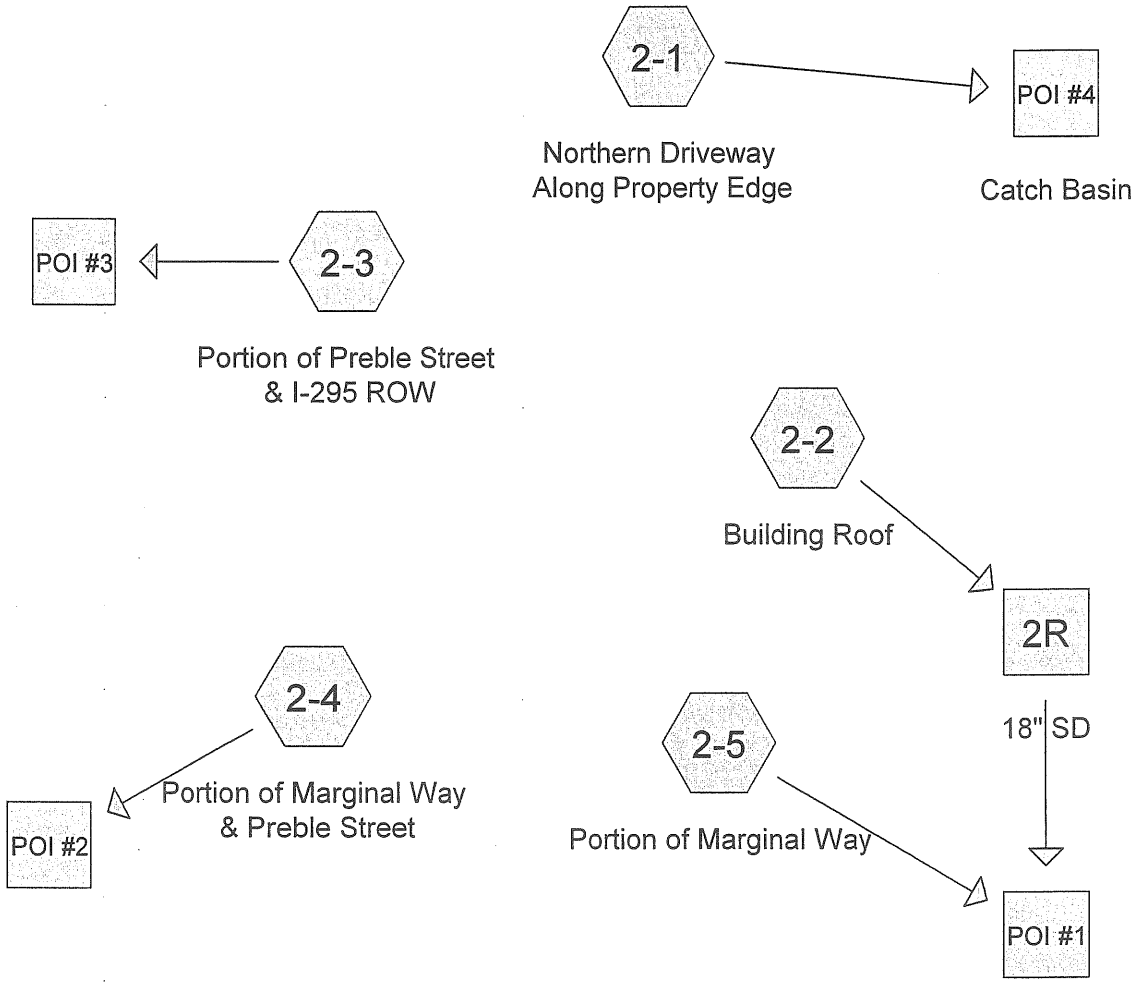
Reach 2R: 12" PVC Avg. Depth=1.00' Max Vel=5.39 fps Inflow=6.57 cfs 0.473 af
D=12.0" n=0.011 L=140.0' S=0.0078 '/' Capacity=3.72 cfs Outflow=3.72 cfs 0.473 af

Reach POI #1: Inflow=6.59 cfs 0.747 af
Outflow=6.59 cfs 0.747 af

Reach POI #2: Inflow=2.13 cfs 0.158 af
Outflow=2.13 cfs 0.158 af

Reach POI #3: Inflow=3.33 cfs 0.236 af
Outflow=3.33 cfs 0.236 af

Total Runoff Area = 3.105 ac Runoff Volume = 1.142 af Average Runoff Depth = 4.41"
36.67% Pervious Area = 1.139 ac 63.33% Impervious Area = 1.967 ac



Subcat Reach Pond Link

Drainage Diagram for 84 Marginal Way Post Development
Prepared by Gorrill-Palmer Consulting Engineers, Inc. 7/24/2006
HydroCAD® 8.00 s/n 001265 © 2006 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcats)
0.944	78	Meadow, non-grazed, HSG D (2-1,2-3,2-4,2-5)
2.171	98	Paved parking & roofs (2-1,2-2,2-3,2-4,2-5)
3.115		

Time span=1.00-20.00 hrs, dt=0.03 hrs, 634 points
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 2-1: Northern Driveway Along Property Edge Runoff Area=4,259 sf Runoff Depth>1.48"
Tc=5.0 min CN=85 Runoff=0.19 cfs 0.012 af

Subcatchment 2-2: Building Roof Runoff Area=43,967 sf Runoff Depth>2.64"
Tc=5.0 min CN=98 Runoff=3.02 cfs 0.222 af

Subcatchment 2-3: Portion of Preble Street & I-295 ROW Runoff Area=58,010 sf Runoff Depth>1.62"
Tc=5.0 min CN=87 Runoff=2.80 cfs 0.180 af

Subcatchment 2-4: Portion of Marginal Way & Preble Street Runoff Area=15,942 sf Runoff Depth>2.22"
Tc=5.0 min CN=94 Runoff=1.00 cfs 0.068 af

Subcatchment 2-5: Portion of Marginal Way Runoff Area=13,531 sf Runoff Depth>2.22"
Tc=5.0 min CN=94 Runoff=0.85 cfs 0.058 af

Reach 2R: 18" SD Avg. Depth=0.60' Max Vel=4.52 fps Inflow=3.02 cfs 0.222 af
D=18.0" n=0.011 L=83.0' S=0.0051 '/' Capacity=8.83 cfs Outflow=2.98 cfs 0.222 af

Reach POI #1: Inflow=3.83 cfs 0.279 af
Outflow=3.83 cfs 0.279 af

Reach POI #2: Inflow=1.00 cfs 0.068 af
Outflow=1.00 cfs 0.068 af

Reach POI #3: Inflow=2.80 cfs 0.180 af
Outflow=2.80 cfs 0.180 af

Reach POI #4: Catch Basin Inflow=0.19 cfs 0.012 af
Outflow=0.19 cfs 0.012 af

Total Runoff Area = 3.115 ac Runoff Volume = 0.539 af Average Runoff Depth = 2.08"
30.30% Pervious Area = 0.944 ac 69.70% Impervious Area = 2.171 ac

Subcatchment 2-1: Northern Driveway Along Property Edge

Runoff = 0.19 cfs @ 12.08 hrs, Volume= 0.012 af, Depth> 1.48"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 1.00-19.99 hrs, dt= 0.03 hrs
Type III 24-hr 2 year Rainfall=3.00"

Area (sf)	CN	Description
1,438	98	Paved parking & roofs
2,821	78	Meadow, non-grazed, HSG D
4,259	85	Weighted Average
2,821		Pervious Area
1,438		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, Direct Entry**

Subcatchment 2-2: Building Roof

Runoff = 3.02 cfs @ 12.07 hrs, Volume= 0.222 af, Depth> 2.64"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 1.00-19.99 hrs, dt= 0.03 hrs
Type III 24-hr 2 year Rainfall=3.00"

Area (sf)	CN	Description
43,967	98	Paved parking & roofs
43,967		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, Direct Entry**

Subcatchment 2-3: Portion of Preble Street & I-295 ROW

Runoff = 2.80 cfs @ 12.08 hrs, Volume= 0.180 af, Depth> 1.62"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 1.00-19.99 hrs, dt= 0.03 hrs
Type III 24-hr 2 year Rainfall=3.00"

Area (sf)	CN	Description
25,626	98	Paved parking & roofs
32,384	78	Meadow, non-grazed, HSG D
58,010	87	Weighted Average
32,384		Pervious Area
25,626		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, Direct Entry**

Subcatchment 2-4: Portion of Marginal Way & Preble Street

Runoff = 1.00 cfs @ 12.07 hrs, Volume= 0.068 af, Depth> 2.22"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 1.00-19.99 hrs, dt= 0.03 hrs
Type III 24-hr 2 year Rainfall=3.00"

Area (sf)	CN	Description
12,539	98	Paved parking & roofs
3,403	78	Meadow, non-grazed, HSG D
15,942	94	Weighted Average
3,403		Pervious Area
12,539		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, Direct Entry**

Subcatchment 2-5: Portion of Marginal Way

Runoff = 0.85 cfs @ 12.07 hrs, Volume= 0.058 af, Depth> 2.22"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 1.00-19.99 hrs, dt= 0.03 hrs
Type III 24-hr 2 year Rainfall=3.00"

Area (sf)	CN	Description
11,020	98	Paved parking & roofs
2,511	78	Meadow, non-grazed, HSG D
13,531	94	Weighted Average
2,511		Pervious Area
11,020		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, Direct Entry**

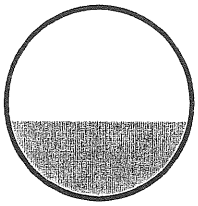
Reach 2R: 18" SD

Inflow Area = 1.009 ac, Inflow Depth > 2.64" for 2 year event
Inflow = 3.02 cfs @ 12.07 hrs, Volume= 0.222 af
Outflow = 2.98 cfs @ 12.08 hrs, Volume= 0.222 af, Atten= 1%, Lag= 0.5 min

Routing by Stor-Ind+Trans method, Time Span= 1.00-19.99 hrs, dt= 0.03 hrs
Max. Velocity= 4.52 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 1.56 fps, Avg. Travel Time= 0.9 min

Peak Storage= 55 cf @ 12.08 hrs, Average Depth at Peak Storage= 0.60'
Bank-Full Depth= 1.50', Capacity at Bank-Full= 8.83 cfs

18.0" Diameter Pipe, n= 0.011
Length= 83.0' Slope= 0.0051 '/'
Inlet Invert= 5.20', Outlet Invert= 4.78'



Reach POI #1:

Inflow Area = 1.320 ac, Inflow Depth > 2.54" for 2 year event
Inflow = 3.83 cfs @ 12.08 hrs, Volume= 0.279 af
Outflow = 3.83 cfs @ 12.08 hrs, Volume= 0.279 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 1.00-19.99 hrs, dt= 0.03 hrs

Reach POI #2:

Inflow Area = 0.366 ac, Inflow Depth > 2.22" for 2 year event
Inflow = 1.00 cfs @ 12.07 hrs, Volume= 0.068 af
Outflow = 1.00 cfs @ 12.07 hrs, Volume= 0.068 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 1.00-19.99 hrs, dt= 0.03 hrs

Reach POI #3:

Inflow Area = 1.332 ac, Inflow Depth > 1.62" for 2 year event
Inflow = 2.80 cfs @ 12.08 hrs, Volume= 0.180 af
Outflow = 2.80 cfs @ 12.08 hrs, Volume= 0.180 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 1.00-19.99 hrs, dt= 0.03 hrs

Reach POI #4: Catch Basin

Inflow Area = 0.098 ac, Inflow Depth > 1.48" for 2 year event
Inflow = 0.19 cfs @ 12.08 hrs, Volume= 0.012 af
Outflow = 0.19 cfs @ 12.08 hrs, Volume= 0.012 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 1.00-19.99 hrs, dt= 0.03 hrs

Time span=1.00-20.00 hrs, dt=0.03 hrs, 634 points
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 2-1: Northern Driveway Along Property Edge Runoff Area=4,259 sf Runoff Depth>2.90"
Tc=5.0 min CN=85 Runoff=0.36 cfs 0.024 af

Subcatchment 2-2: Building Roof Runoff Area=43,967 sf Runoff Depth>4.26"
Tc=5.0 min CN=98 Runoff=4.78 cfs 0.358 af

Subcatchment 2-3: Portion of Preble Street & I-295 ROW Runoff Area=58,010 sf Runoff Depth>3.09"
Tc=5.0 min CN=87 Runoff=5.21 cfs 0.343 af

Subcatchment 2-4: Portion of Marginal Way & Preble Street Runoff Area=15,942 sf Runoff Depth>3.81"
Tc=5.0 min CN=94 Runoff=1.66 cfs 0.116 af

Subcatchment 2-5: Portion of Marginal Way Runoff Area=13,531 sf Runoff Depth>3.81"
Tc=5.0 min CN=94 Runoff=1.41 cfs 0.099 af

Reach 2R: 18" SD Avg. Depth=0.79' Max Vel=5.09 fps Inflow=4.78 cfs 0.358 af
D=18.0" n=0.011 L=83.0' S=0.0051 '/' Capacity=8.83 cfs Outflow=4.72 cfs 0.358 af

Reach POI #1: Inflow=6.12 cfs 0.457 af
Outflow=6.12 cfs 0.457 af

Reach POI #2: Inflow=1.66 cfs 0.116 af
Outflow=1.66 cfs 0.116 af

Reach POI #3: Inflow=5.21 cfs 0.343 af
Outflow=5.21 cfs 0.343 af

Reach POI #4: Catch Basin Inflow=0.36 cfs 0.024 af
Outflow=0.36 cfs 0.024 af

Total Runoff Area = 3.115 ac Runoff Volume = 0.940 af Average Runoff Depth = 3.62"
30.30% Pervious Area = 0.944 ac 69.70% Impervious Area = 2.171 ac

Time span=1.00-20.00 hrs, dt=0.03 hrs, 634 points
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 2-1: Northern Driveway Along Property Edge Runoff Area=4,259 sf Runoff Depth>3.61"
Tc=5.0 min CN=85 Runoff=0.45 cfs 0.029 af

Subcatchment 2-2: Building Roof Runoff Area=43,967 sf Runoff Depth>5.02"
Tc=5.0 min CN=98 Runoff=5.60 cfs 0.422 af

Subcatchment 2-3: Portion of Preble Street & I-295 ROW Runoff Area=58,010 sf Runoff Depth>3.81"
Tc=5.0 min CN=87 Runoff=6.35 cfs 0.423 af

Subcatchment 2-4: Portion of Marginal Way & Preble Street Runoff Area=15,942 sf Runoff Depth>4.56"
Tc=5.0 min CN=94 Runoff=1.96 cfs 0.139 af

Subcatchment 2-5: Portion of Marginal Way Runoff Area=13,531 sf Runoff Depth>4.56"
Tc=5.0 min CN=94 Runoff=1.66 cfs 0.118 af

Reach 2R: 18" SD Avg. Depth=0.87' Max Vel=5.29 fps Inflow=5.60 cfs 0.422 af
D=18.0" n=0.011 L=83.0' S=0.0051 '/' Capacity=8.83 cfs Outflow=5.54 cfs 0.422 af

Reach POI #1: Inflow=7.20 cfs 0.540 af
Outflow=7.20 cfs 0.540 af

Reach POI #2: Inflow=1.96 cfs 0.139 af
Outflow=1.96 cfs 0.139 af

Reach POI #3: Inflow=6.35 cfs 0.423 af
Outflow=6.35 cfs 0.423 af

Reach POI #4: Catch Basin Inflow=0.45 cfs 0.029 af
Outflow=0.45 cfs 0.029 af

Total Runoff Area = 3.115 ac Runoff Volume = 1.132 af Average Runoff Depth = 4.36"
30.30% Pervious Area = 0.944 ac 69.70% Impervious Area = 2.171 ac

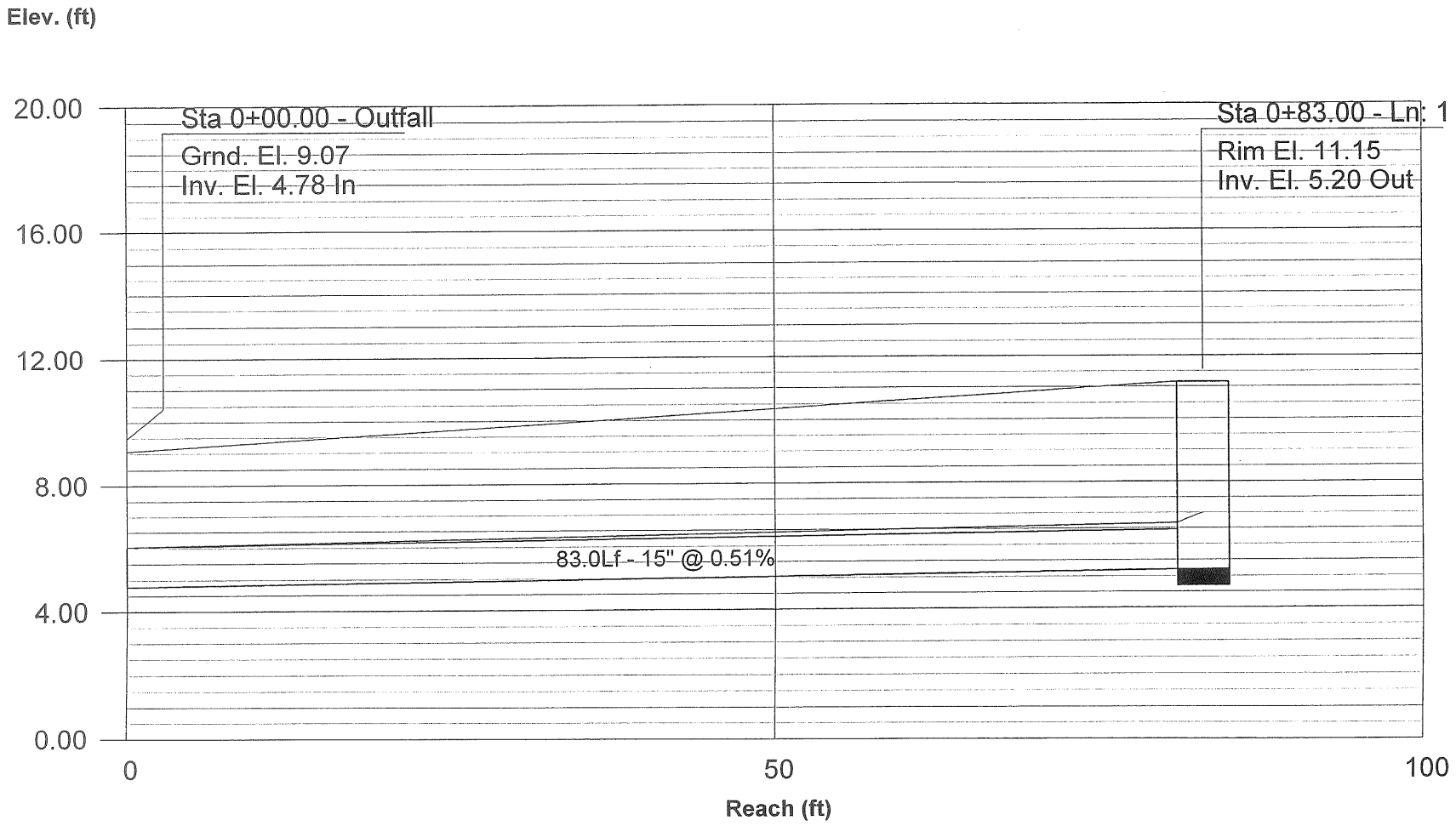
Attachment D

Pipe Sizing Calculations –

Normal Flow

Storm Sewer Profile

Proj. file: sizing.stm



Line No.	Line ID	Flow Rate	Line Size (Rise x Span)	Line Type	Invert Elev. Down	Invert Elev. Up	Line Slope	HGL Down	HGL Up	Minor Loss	HGL Junct	Dn Str Line No.
		(cfs)	(in)		(ft)	(ft)	(%)	(ft)	(ft)	(ft)	(ft)	
1	15 INCH SD	5.63	15	Cir	4.78	5.20	0.51	6.03	6.66*	0.33	6.99	Outfall

Notes: *Surcharged (HGL above crown).

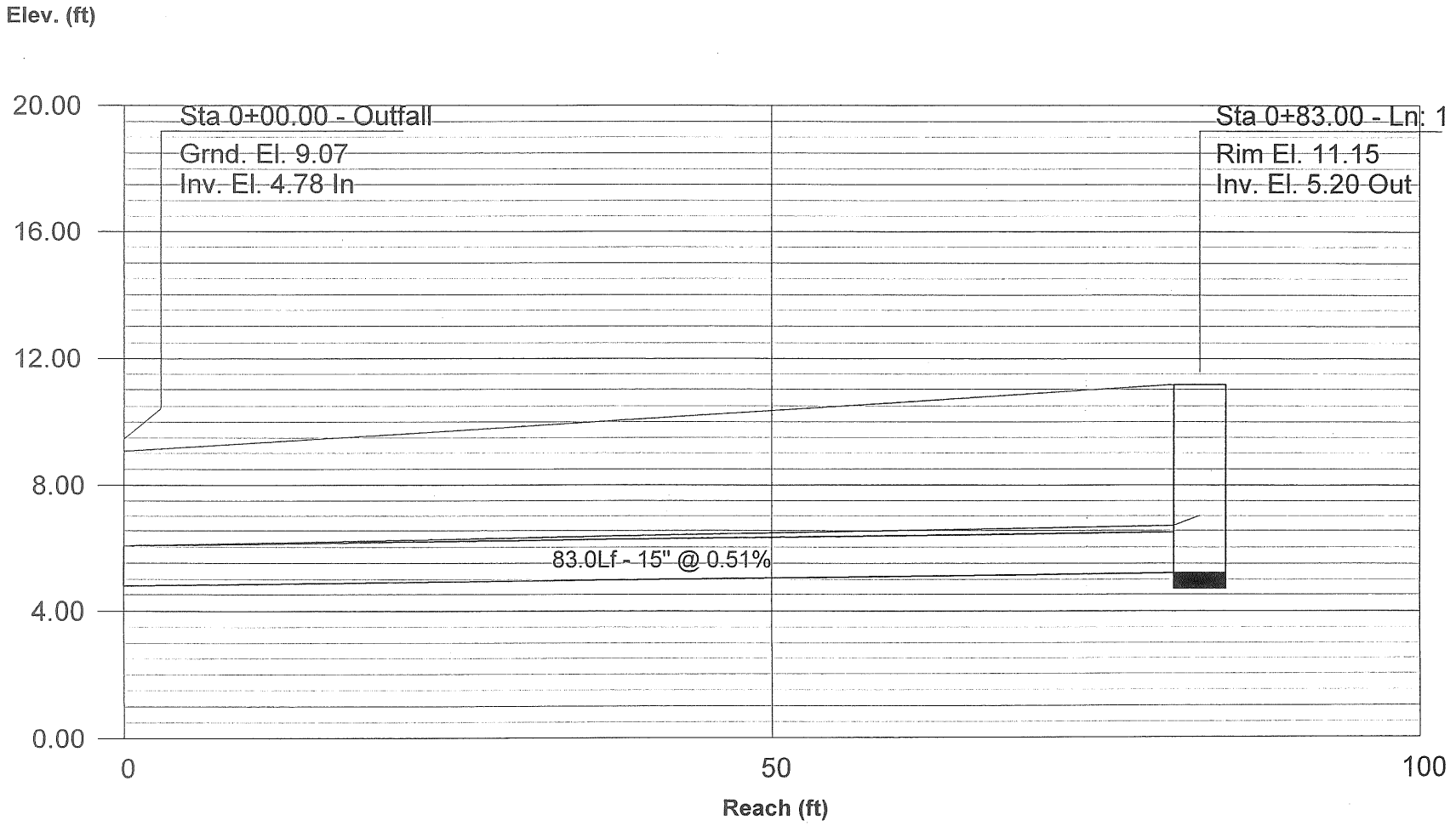
Attachment D

Pipe Sizing Calculations –

Crown Flow

Stor Sewer Profile

Proj. file: I Sizing.stm



Line No.	Line ID	Flow Rate	Line Size (Rise x Span)	Line Type	Invert Elev. Down	Invert Elev. Up	Line Slope	HGL Down	HGL Up	Minor Loss	HGL Junct	Dn Str Line No.
		(cfs)	(in)		(ft)	(ft)	(%)	(ft)	(ft)	(ft)	(ft)	
1	15 INCH SD	5.63	15	Cir	4.78	5.20	0.51	6.03	6.66*	0.33	6.99	Outfall

Notes: *Surcharged (HGL above crown).

MITCHELL & ASSOCIATES
LANDSCAPE ARCHITECTS

October 11, 2006

Mr. Richard Knowland
and Planning Board Members
City of Portland
389 Congress Street
Portland, Maine 04101

RE: Capital, LLC
Mixed Office, Retail and Parking Garage Development
84 Marginal Way

Dear Rick and Board Members:

We have prepared a revised Site Layout Plan to show the required Marginal Way and Preble Street Improvements as if 84 Marginal Way were a stand alone project as requested by the Board. At this juncture in the process the applicant is requesting to be placed upon the next available workshop meeting to continue discussions with the board to review traffic and roadway improvements. The applicant is in the process of working on refinement of the architectural design for the building and a submission of that material will be submitted within the next several weeks. The majority of the documentation regarding traffic improvements has been completed by Gorrill-Palmer Consulting Engineers and will be submitted directly to you.

Enclosed is a revised Site Plan that corresponds to the roadway improvements defined in the Gorrill-Palmer Report.

Should you have any questions, please do not hesitate to call me.

Sincerely,
Mitchell & Associates

Robert B. Metcalf

Enclosure

cc: Ted West
Greg Shinberg
Tom Gorrill

THE STAPLES SCHOOL
70 CENTER STREET
PORTLAND, MAINE 04101

Telephone (207) 774-4427
Fax (207) 874-2460
Website www.mitchellassociates.biz

MITCHELL & ASSOCIATES
LANDSCAPE ARCHITECTS

October 31, 2006

Mr. Richard Knowland, Senior Planner
City of Portland
389 Congress Street
Portland, Maine 04101

RE: 84 Marginal Way

Dear Rick:

The attached photographs are of a similar left turn lane as that being proposed for entry to 84 Marginal Way from Preble Street. The location is on Endicott Street in Danvers, Massachusetts. Endicott Street intersects with Sylvan Street, a signalized intersection that has two (2) dedicated left turn movements and one (1) dedicated right turn movement. There is no through lane as this is a T. intersection.

Should you have any questions, please do not hesitate to call me.

Sincerely,
Mitchell & Associates

BOB METCALF

Robert B. Metcalf

cc: Ted West
Greg Shinberg
Tom Gorrill

THE STAPLES SCHOOL
70 CENTER STREET
PORTLAND, MAINE 04101

Telephone (207) 774-4427
Fax (207) 874-2460
Website www.mitchellassociates.biz

1. LEFT TURN LANE - ENDICOTT STREET, DANVERS, MA

2. LEFT TURN LANE - ENDICOTT STREET, DANVERS, MA

3. LEFT TURN LANE - ENDICOTT STREET, DANVERS, MA

4. LEFT TURN LANE - ENDICOTT STREET, DANVERS, MA

5. INTERSECTION – (2) DEDICATED LEFT TURN – (1) DEDICATED RIGHT TURN

MAR 30 REC'D

Atlantic Bayside Trust, LLC
50 Portland Pier, Suite 400
Portland, ME 04101

March 29, 2007

Penny Littell, Esq.
Staff Attorney
Office of Corporation Counsel
Portland City Hall
389 Congress Street
Portland, ME 04101

RE: Planning Board Approval – 84 Marginal Way

Dear Penny:

I am writing to inform the Planning Board that Capital LLC has changed its name to Atlantic Bayside Trust, LLC. This is a legal name change only; there is no change in ownership or legal corporate existence.

The name Capital LLC was a shelf corporation we obtained from Bernstein Shur when we were in the development stage of this project. Now that we are moving forward with full Planning Board approval, we have chosen a name that is more fitting for the project.

As you requested, we have asked TD Banknorth to provide a financial capability letter in the new name of the company.

For the sake of clarity, we request that the planning board approval reflect the name "Atlantic Bayside Trust, LLC (fka Capital LLC)." We believe this will avoid confusion over the long run.

Please contact me at 207 828-1080 if you have any questions or concerns.

Regards,

James M. Hanley, Esq.

Enc.

cc: Rick Knowland

TD Banknorth, N.A.
One Portland Square
P.O. Box 9540
Portland, ME 04112-9540
T: 207 761-8500
Toll Free: 800 462-3666
TDBanknorth.com

March 28, 2007

City of Portland
Department of Planning & Development
389 Congress Street
Portland , Maine 04101

Re: 84 Marginal Way, Portland, Maine
AKA Intermed Project

To Whom It May Concern:

TD Banknorth, N.A. considers Atlantic Bayside Trust, LLC to have the financial capability to successfully finance and complete the ten story parking garage and office building located at 84 Marginal Way and Preble Street. This conclusion is based on a financial review of the borrower, the plans and the leases for the proposed project.

If I may be of further assistance please do not hesitate to call me at (207) 761-8577.

Sincerely,

Benjamin C. Geci
Senior Vice President
Commercial Lending
TD Banknorth, N.A.

ATLANTIC BAYSIDE TRUST, LLC
50 PORTLAND PIER, SUITE 400
PORTLAND, ME 04101

March 27, 2007

Maine Secretary of State
Corporate Examining Section
101 State House Station
Augusta, Maine 04333-0101

Re: Capital LLC / Atlantic Bayside Trust, LLC

Dear Examiner:

I have enclosed an Article of Amendment for Capital LLC to change the name to Atlantic Bayside Trust. To this end, I have obtained written authorization from the Bureau of Financial Regulation to use the name Trust in the name Atlantic Bayside Trust.

I have enclosed notice of intent to use an assumed name. I am filing this form because I intend to use the following legal name "Atlantic Bayside Trust, LLC (f/k/a Capital LLC)" to avoid any confusion that Atlantic Bayside Trust is the successor in interest to Capital LLC.

Finally, I have enclosed a filing fee of $175.00 to cover both filings, duplicate copies, and enclosed a self addressed envelop for return service.

If you have any questions or concerns with this filing, please contact me at 828-1080. Thank you for your assistance in this matter.

Very truly yours,

James M. Hanley, Esq.

Enc.

PORT: 521204.1

Filing Fee for an Assumed Name $125.00
Filing Fee for a Fictitious Name $40.00

LIMITED LIABILITY COMPANY

STATE OF MAINE

STATEMENT OF INTENTION TO DO BUSINESS UNDER AN ASSUMED OR FICTITIOUS NAME

Deputy Secretary of State

A True Copy When Attested By Signature

Deputy Secretary of State

Atlantic Bayside Trust, LLC
(Real Name of Limited Liability Company)

Pursuant to 31 MRSA §605-A, the undersigned limited liability company executes and delivers the following Statement of Intention to do Business Under an Assumed or Fictitious Name:

FIRST: ("X" one box only.) ☒ assumed name (§605-A.1) ☐ fictitious name (§605-A.2)

The limited liability company intends to transact business under the assumed or fictitious name of

Capital LLC.

Note: A **fictitious name** is a name adopted by a **foreign limited liability company** authorized to transact business in this State because its real name is unavailable pursuant to §603-A.

Complete the following if applicable:

SECOND: If such assumed name is to be used at fewer than all of the limited liability company's places of business in this State, the location(s) where it will be used is (are):

_____

_____

_____

_____

☐ Additional locations are attached hereto as Exhibit ___, and made a part hereof.

THIRD: **(Foreign Limited Liability Company Only)**

Jurisdiction of organization _____ and the date on which the limited liability company was authorized to transact business in Maine _____.

DATED 3-27-07

Manager(s)/Member(s)*

(signature)

Theodore V. West, Manager

(type or print name and capacity)

For Manager(s)/Member(s) which are Entities

Name of Entity _____

By _____
(authorized signature)

_____
(type or print name and capacity)

---

*Certificate **MUST** be signed by:

(1) at least one manager **OR**
(2) at least one member if the limited liability company is managed by the members **OR**
(3) any duly authorized person.

The execution of this certificate constitutes an oath or affirmation under the penalties of false swearing under 17-A MRSA §453.

Please remit your payment made payable to the Maine Secretary of State.

SUBMIT COMPLETED FORMS TO: CORPORATE EXAMINING SECTION, SECRETARY OF STATE,
101 STATE HOUSE STATION, AUGUSTA, ME 04333-0101
TEL. (207) 624-7740

Filing Fee $50.00

DOMESTIC
LIMITED LIABILITY COMPANY

STATE OF MAINE

ARTICLES OF AMENDMENT

Capital LLC
(Name of Limited Liability Company)

_____
Deputy Secretary of State

A True Copy When Attested By Signature

_____
Deputy Secretary of State

Pursuant to 31 MRSA §623, the undersigned limited liability company executes and delivers for filing these articles of amendment:

FIRST: The name of the limited liability company has been changed to (if no change, so indicate)

Atlantic Bayside Trust, LLC
(The name must contain one of the following: "Limited Liability Company", "L.L.C." or "LLC"; §603-A.1)

SECOND: The management of the limited liability company has been changed (if no change, so indicate _____). If changed, "X" one box only.

☐ A. The management of the company is vested in a member or members.

☐ B. The management of the company is vested in a manager or managers. The minimum number shall be _____ managers and the maximum number shall be _____ managers.

THIRD: Other amendments to the articles, if any, that the members determine to adopt are set forth in Exhibit ____ attached hereto and made a part hereof.

DATED 3/27/2007

Manager(s)/Member(s)*

_____ (signature)	Theodore V. West, Manager (type or print name and capacity)
_____ (signature)	_____ (type or print name and capacity)
_____ (signature)	_____ (type or print name and capacity)

For Manager(s)/Member(s) which are Entities

Name of Entity _____

By _____ (authorized signature) _____ (type or print name and capacity)

Name of Entity _____

By _____ (authorized signature) _____ (type or print name and capacity)

Name of Entity _____

By _____ (authorized signature) _____ (type or print name and capacity)

*Articles **MUST** be signed by:

(1) at least one manager **OR**
(2) at least one member if the limited liability company is managed by the members **OR**
(3) any duly authorized person.

The execution of this certificate constitutes an oath or affirmation under the penalties of false swearing under 17-A MRSA §453.

Please remit your payment made payable to the Maine Secretary of State.

SUBMIT COMPLETED FORMS TO: CORPORATE EXAMINING SECTION, SECRETARY OF STATE, 101 STATE HOUSE STATION, AUGUSTA, ME 04333-0101 TEL. (207) 624-7740

Revised January 9, 2006

V. MOTIONS FOR THE BOARD TO CONSIDER

On the basis of plans and materials submitted by the Applicant and on the basis of information contained in Planning Report #1-07, the Board finds:

A. The plan is in conformance with the Site Plan Ordinance of the Land Use Code including Traffic Movement Permit.

Potential Conditions of Approval:

i. That the Applicant shall meet the recommendations contained in Tom Errico's (Traffic Review Consultant) memo dated 1-5-07 including a contribution of $10,000 towards implementation of identified improvements for the Franklin Arterial and Marginal intersection and an additional $22,000 contribution to the proposed extension of Somerset Street extension between Preble/Elm Streets and Forest Avenue.

ii. That the Applicant shall submit for Planning Staff review and approval the design items summarized on page 4 of Carrie Marsh's (Urban Designer) memo dated 12-27-06.

iii. That a complete site lighting plan including the parking garage shall be submitted for Planning Staff review and approval. The lighting plan for the Preble Street underpass shall also be submitted for review and approval.

iv. That the site plan shall be revised reflecting the comments of Jeff Tarling (City Arborist).

v. That the Applicant apply for and receive City approval for a license permitting portions of the planter, ramp and awning to be located within a public right-of-way.

vi. That a revised circulation and parking plan of the parking garage clearly labeling the plan scale, dimensions of the parking aisles and parking spaces shall be submitted for Staff review and approval.

vii. That a revised plan shall be submitted to the Zoning Administrator clearly delineating the property line along Marginal Way and Preble Street.

viii. That a note shall be added to the site plan referencing an agreement between the City and the Applicant for public use of the parking garage for certain hours as provided for in the agreement.

ix. That public easements including the pedestrian easement shall be submitted for City staff review and approval.

B. That the plan is in conformance with the B-7 Conditional Use Standards for structured parking of the Land Use Code.

C. The Planning Board [finds or does not find] that extraordinary conditions exist or that undue hardship may result from strict compliance with these regulations so that substantial justice may be done and the public interest secured, therefore the Planning Board [does or does not] modify the parking size and parking aisle standards of Technical and Design Standards and Guidelines for this development as shown on the submitted plan.

Attachments

A. Site Plan
B. Building Elevations
C. Background Information
D. Traffic Impact Study
E. Supplemental Traffic Related Information
F. Memo from Tom Errico, Traffic Review Consultant
G. Parking Management Plan
H. AAA Traffic Impact Study
I. Public Utility Service Information
J. Memo from Dan Goyette, Engineering Review Consultant
K. Stormwater Management Report
L. Soils Report
M. Erosion and Sedimentation Control
O. Lighting
P. Financial and Technical Capacity

Q. Property Purchase and Sale Agreement
R. Neighborhood Meeting Information
S. Memo from Carrie Marsh, Urban Designer

ATTACHMENT G
FOR NOV 14, 2006 STAFF MEMO
ATTACHMENT H FOR JANUARY 9, 2007 PLANNING BOARD REPORT

Traffic Impact Study
Bayside Site Development

Portland, Maine

March 2001

Prepared For:

Environmental Engineering & Remediation
222 St. John Street
Portland, Maine 04102

Prepared By:

Wilbur Smith Associates
Engineers•Economists•Planners
59 Middle Street
Portland, Maine 04101

ENGINEERS
PLANNERS
ECONOMISTS
Wilbur Smith Associates

STATE OF MAINE
THOMAS
A.
BRRICO
6618
REGISTERED
PROFESSIONAL ENGINEER
3/26/01

Table of Contents

SECTION 1 – INTRODUCTION 1

SECTION 2 – DATA COLLECTION 2

SECTION 3 – EXISTING/FUTURE TRAFFIC VOLUMES 2

SECTION 4 – SITE GENERATION TRAFFIC 4

SECTION 5 – BUILD TRAFFIC VOLUMES 4

SECTION 6 – INTERSECTION ANALYSIS 5

SECTION 7 – SAFETY ANALYSIS 7

SECTION 9 – PARKING/ SITE ACCESSS AND CIRCULATION 8

SECTION 10 – CONCLUSIONS/RECOMMEDATIONS 10

SECTION 1 – INTRODUCTION

Environmental Engineering & Remediation, Inc. (EER) retained Wilbur Smith Associates (WSA) to prepare a Traffic Impact Study for the proposed Bayside Site Development located on Marginal Way at the intersection of Preble Street (refer to Figure 1). As currently planned the project will consist of a 50,000 square feet office building to be constructed in the existing City of Portland's Department of Public Works Salt storage area. Access to the project will be provide via tow driveway's, one on Marginal Way west of Preble Street and one on Preble Street Extension.

The scope of this traffic study reflects input from the City of Portland Traffic Engineer.

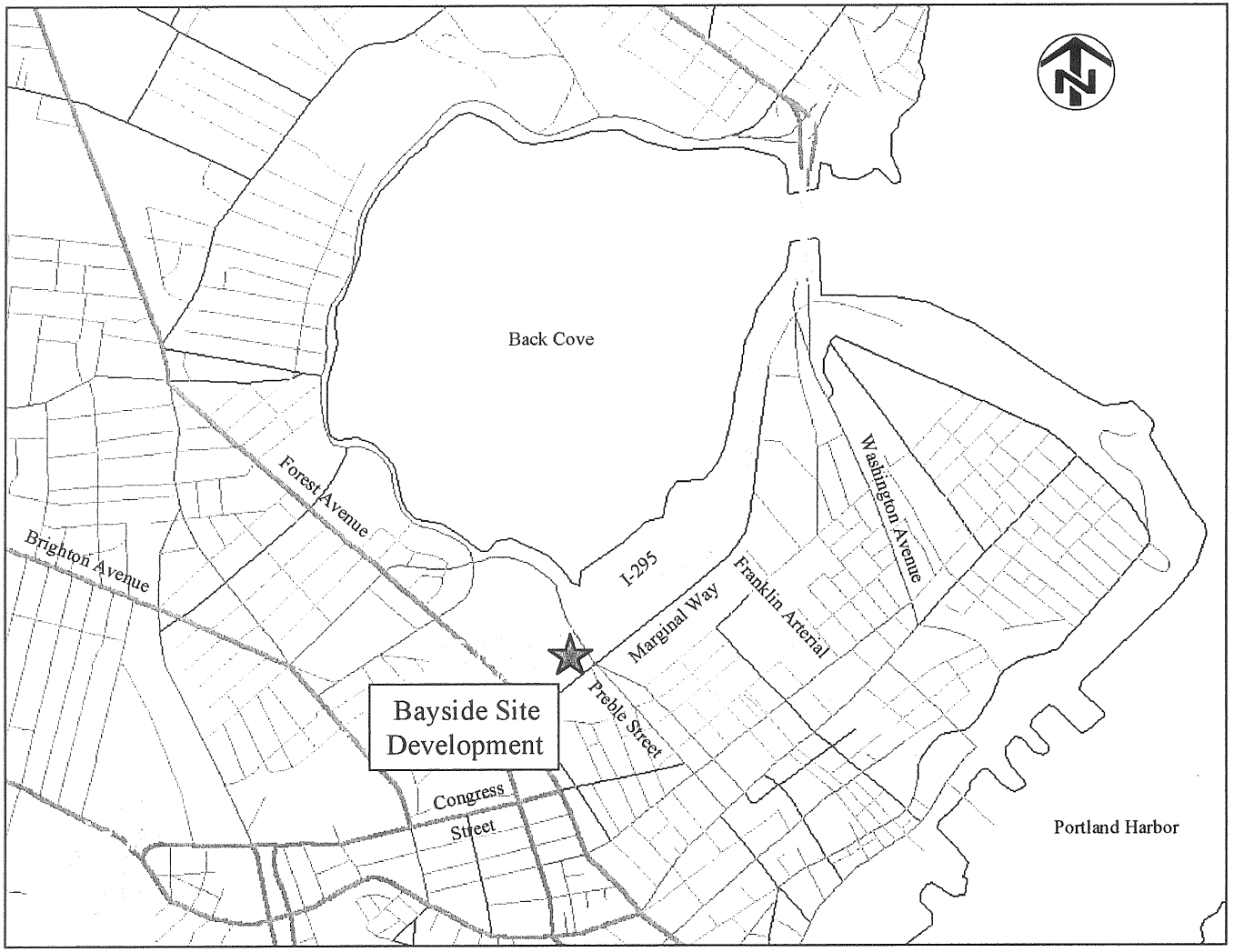
The purpose of this study is to evaluate the impact the proposed project has, on both safety and operations, on the transportation system in the vicinity of the project. Specifically the study will evaluate conditions at the Marginal Way/Preble Street and Preble Street Extension/Baxter Boulevard intersections.

The study includes the following:

- Estimate of traffic volumes in the study area for conditions without the project in 2001.
- Estimate of traffic generated from the site according to national trip generation data.
- Estimate of traffic volumes in the study area for conditions following build-out of the project in 2002.
- Evaluation of intersection operations both with and without the proposed project.
- Evaluation of accident data in the study area.
- Evaluation of access/egress, on-site parking, circulation and truck deliveries.

FIGURE 1 - SITE LOCATION MAP

Bayside Site Development
Portland, Maine



Wilbur Smith Associates
ENGINEERS
PLANNERS
ECONOMISTS

SECTION 2 – DATA COLLECTION

EER provided the following:

- Site Plan

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

- Accident data in the vicinity of the project for the 1997-1999 three-year period.

Jack Murphy provided the following:

- Manual turning movement count at the intersection of Preble Street Extension and Baxter Boulevard.

WSA performed the following:

- Manual turning movement counts at the intersection Marginal Way and Preble Street.
- Field Reconnaissance of the study area.

SECTION 3 – EXISTING/FUTURE TRAFFIC VOLUMES

The primary purpose of this study is to show what effect the proposed project will have on the local transportation system. In general, the critical time period for a given project is directly associated with peaking characteristics of both the project-related traffic and the area transportation system. For this study, traffic conditions during the Weekday AM and PM peak hours were evaluated.

Development of AM and PM peak hour traffic volumes was based upon traffic counts conducted by WSA at the Marginal Way/Preble Street intersection and by Jack Murphy, P.E. at t he Preble Street Extension/Baxter Boulevard intersection. A summary of the time and dates of the counts is presented as follows.

- Marginal Way/Preble Street – November 14, 2000 (7:00-9:00AM & 3:30-6:00PM)
- Preble Street Extension/Baxter Boulevard – November 14, 2000 (7:00-9:00AM & 3:30-6:00PM)

Design Hour Volume

The traffic pattern on any highway shows considerable variation in traffic volumes during different hours of the day and in hourly volumes throughout the year. It must be determined which of these hourly traffic volumes should be used for analysis and design. It would be wasteful to predicate the design on the (maximum) peak hour traffic of the year, yet the use of the average hourly traffic would result in an inadequate design. The hourly traffic volume used in design should not be exceeded very often or by very much. On the other hand, it should not be so high that traffic would rarely be great enough to make full use of the facility. Based upon the relationship between highest hourly volumes and daily traffic volumes, it has been concluded that the hourly traffic used in design should be the 30th Highest Hour Volume, or sometimes called Design Hour Volume.

For this study, the Design Hour Volumes were estimated from MDOT Weekly Group Mean Factors. Figure 2 presents the 2000 Design Hour traffic volumes within the study area.

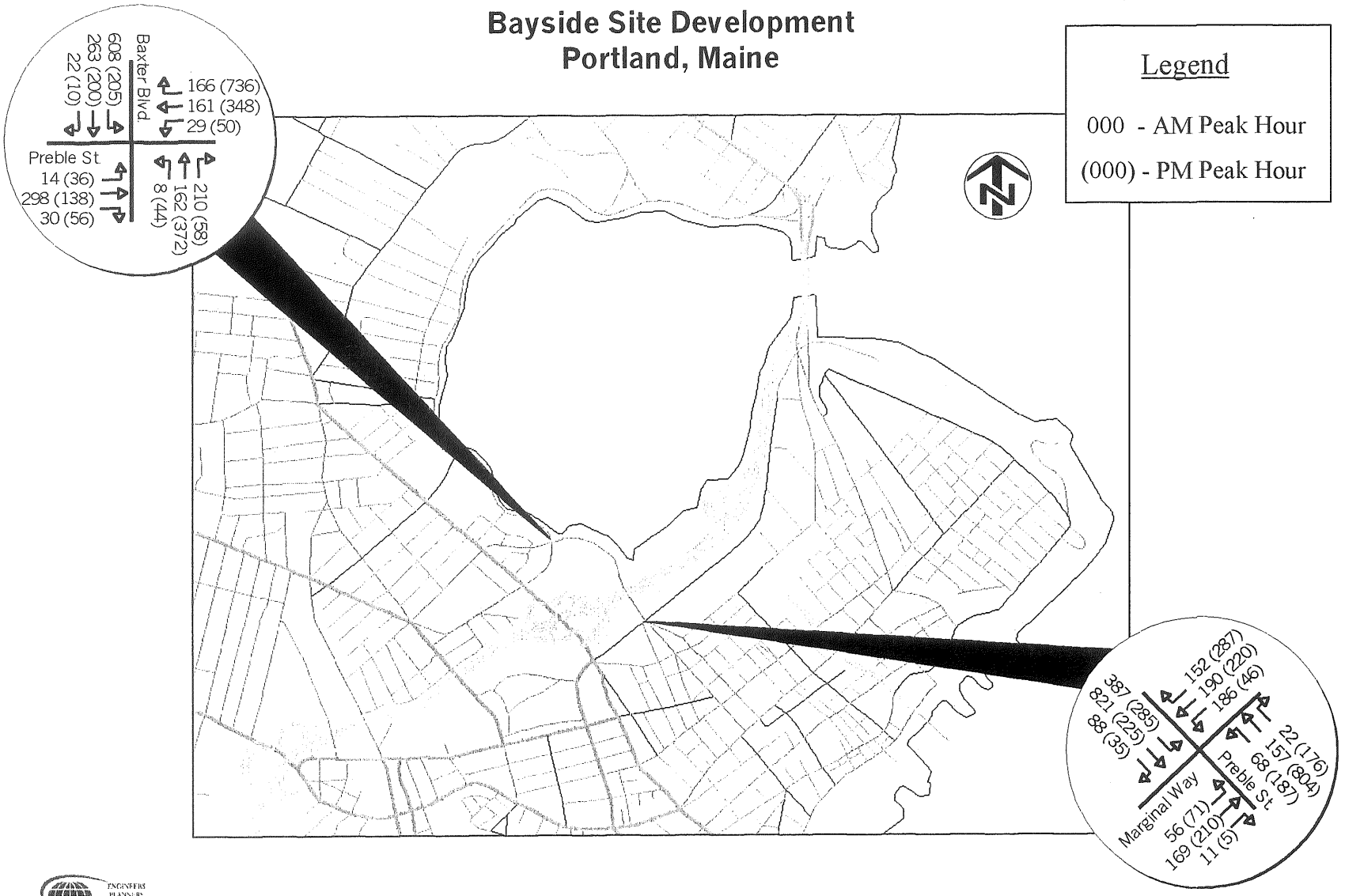
SECTION 4 – NO-BUILD TRAFFIC VOLUMES

No-Build traffic volumes (without the proposed development) were developed for the anticipated opening year of the project (2002). In order to estimate traffic volumes during the No-Build condition, it is important to incorporate traffic generated by other developments in the study area. This is important because conditions associated with nearby developments may generate traffic that impact roadways being studied. Based upon input from the City of Portland, several area projects were included in the No-Build condition. The following presents a list of the projects included.

- Wild Oats Supermarket

FIGURE 2 - 2000 DESIGN HOUR TRAFFIC VOLUMES

Bayside Site Development
Portland, Maine



Wilbur Smith Associates
ENGINEERS
PLANNERS
ECONOMISTS

To estimate future No-Build conditions, the 2000 Design Hour volumes were increased by a background growth factor of 2.0 percent per year (based upon historical data). Accordingly, the 2000 Design Hour volumes were increased by 2 percent and traffic expected from other approved developments were added. Figure 3 presents the 2002 No-Build traffic volumes (inclusive of the above developments) during both the Weekday AM and PM peak hours.

SECTION 4 – SITE GENERATION TRAFFIC

Traffic generated from the proposed development was based upon traffic generation rates contained in the publication Trip Generation, Institute of Transportation Engineers. Traffic generation was based upon Land Use Code 710 – General Office Building. The following table summarizes the expected traffic generated from the proposed 50,000 square foot office building during the AM and PM peak hours and on a weekday daily basis.

	Weekday		
	Enter	Exit	Total
AM Peak Hour	94	13	107
PM Peak Hour	23	112	135
Daily	390	390	780

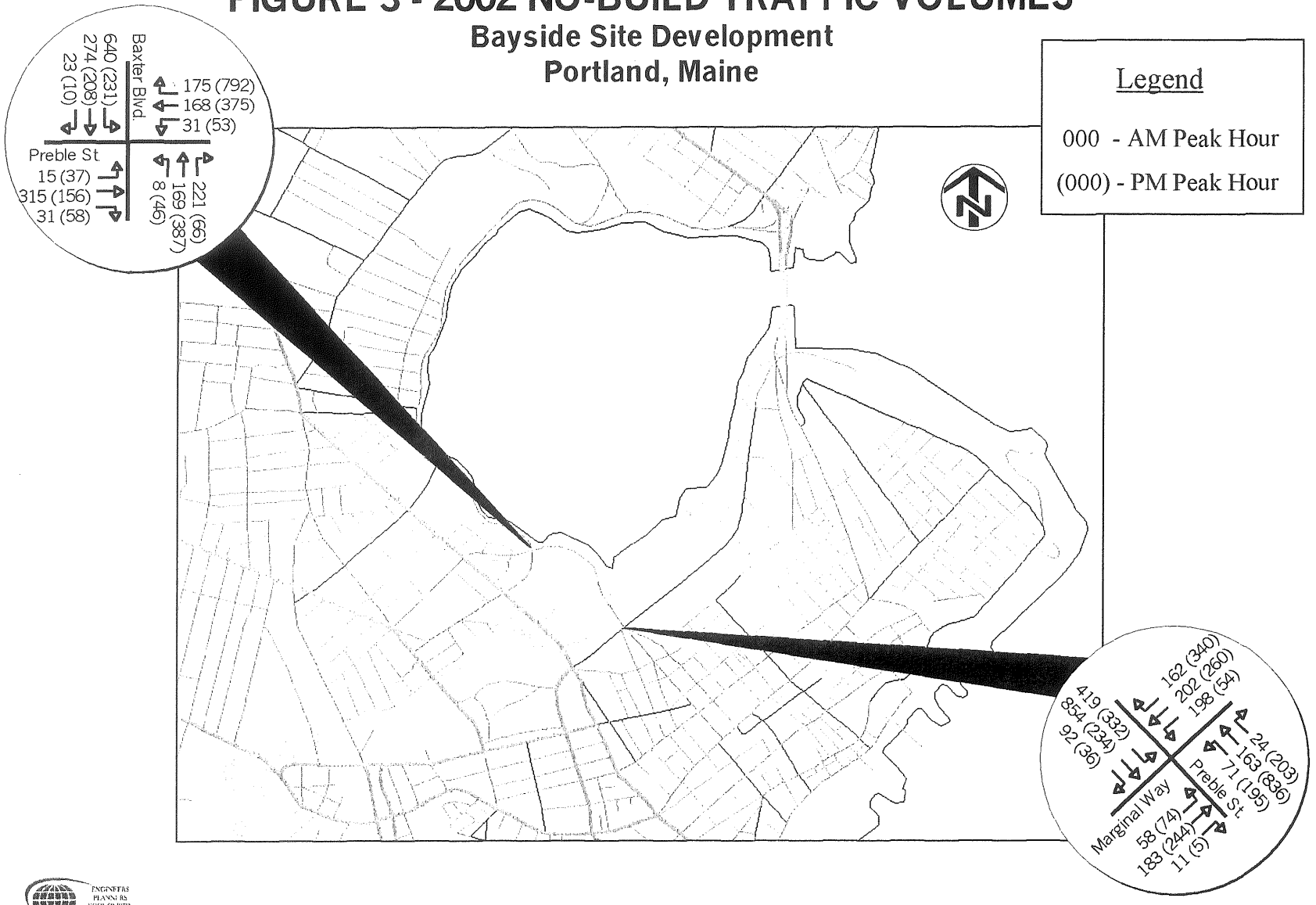
Distribution of the site-generated traffic was based upon traffic volume distribution. Figure 4 presents the site generated traffic volumes during the AM and PM peak hours.

SECTION 5 – BUILD TRAFFIC VOLUMES

The Build Traffic Volumes within the study area were estimated for the year 2002. The Build Volumes were estimated by adding the site-generated traffic depicted on Figures 4 to the 2002 No-Build traffic volumes located on Figure 3. Figures 5 presents the 2002 Build Traffic Volumes during the AM and PM peak hours.

FIGURE 3 - 2002 NO-BUILD TRAFFIC VOLUMES

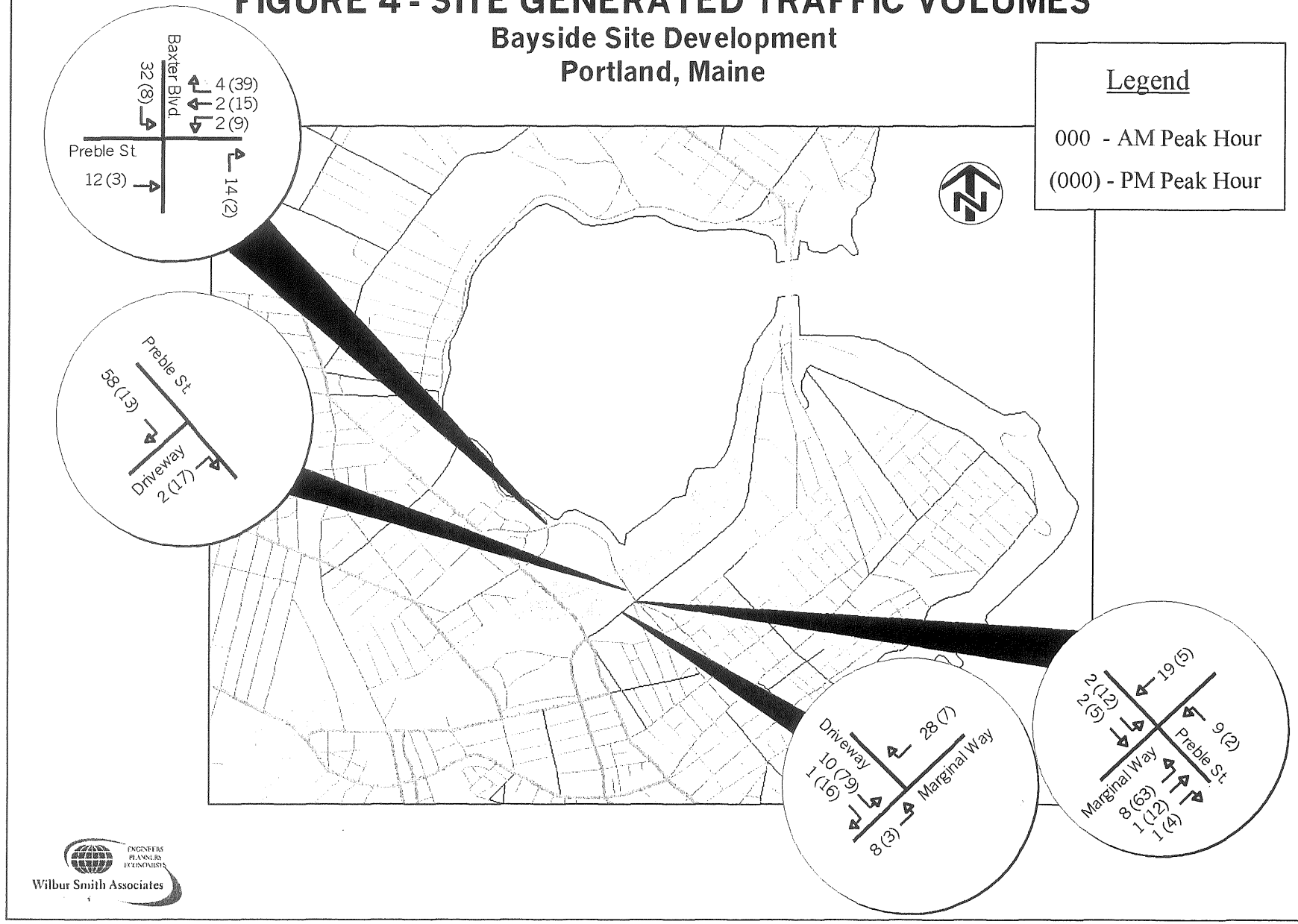
Bayside Site Development
Portland, Maine



Wilbur Smith Associates
ENGINEERS PLANNERS ECONOMISTS

FIGURE 4 - SITE GENERATED TRAFFIC VOLUMES

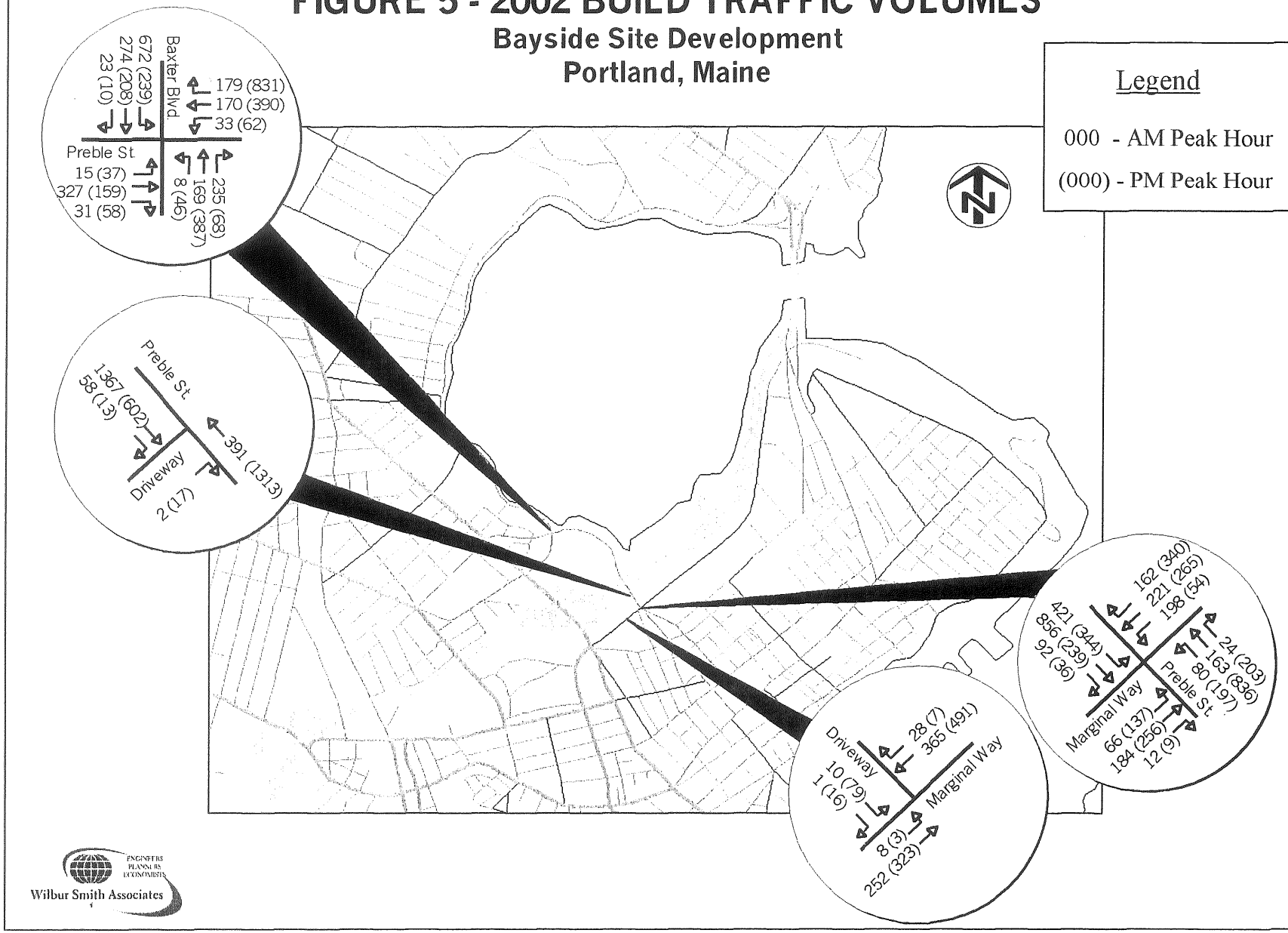
Bayside Site Development
Portland, Maine



Wilbur Smith Associates
ENGINEERS PLANNERS ECONOMISTS

FIGURE 5 - 2002 BUILD TRAFFIC VOLUMES

Bayside Site Development
Portland, Maine



SECTION 6 – INTERSECTION ANALYSIS

To evaluate the impact of traffic generated by the proposed development, capacity analysis was performed at the study intersections for the 2002 No-Build and Build conditions.

The standard used to evaluate traffic operating conditions of the transportation system is referred to as the Level of Service (LOS). This is a qualitative assessment of the quantitative effect of factors such as speed, volume of traffic, geometric features, traffic interruptions, delays, and freedom to maneuver. LOS analysis was based upon procedures detailed in the 2000 Highway Capacity Manual, Transportation Research Board.

Signalized intersection LOS is based on average stopped delay per vehicle. The following table summarizes LOS categories and their associated delay.

LOS Criteria for Signalized Intersections

Level of Service	Average Delay Per Vehicle (seconds)
A	≤10
B	> 10 and ≤20
C	> 20 and ≤35
D	> 35 and ≤55
E	> 55 and ≤80
F	> 80

The results of the unsignalized capacity analyses at the Marginal Way/Preble Street and Preble Street Extension/Baxter Boulevard intersections are presented in the following tables. The capacity analysis was based upon traffic signal phasing and timing as used in the approved Wild Oats Traffic Impact Study prepared by John L. Murphy, P.E.

Marginal Way/Preble Street
Level of Service Summary

	2002 No-Build LOS (Delay)		2002 Build Condition LOS (Delay)	
	AM	PM	AM	PM
Marginal Way EB LT	D (45.2)	E (64.7)	D (45.8)	F (180.3)
Marginal Way EB TH/RT	D (38.1)	D (40.4)	D (38.1)	D (40.7)
Marginal Way WB LT	D (45.6)	E (57.4)	D (45.6)	E (57.4)
Marginal Way WB TH/RT	C (33.2)	D (53.6)	C (33.4)	D (54.0)
Preble St. NB LT	D (47.5)	E (60.5)	D (50.0)	E (61.1)
Preble St. NB TH/RT	D (41.5)	F (122.8)	D (41.5)	F (122.8)
Preble St. SB LT	D (54.5)	E (69.5)	E (55.5)	E (75.6)
Preble St. SB TH/RT	D (42.2)	C (27.7)	D (42.5)	C (27.8)
Overall	**D (43.4)**	**E (79.7)**	**D (43.8)**	**F (85.4)**

Preble Street Extension/Baxter Boulevard
Level of Service Summary

	2002 No-Build LOS (Delay)		2002 Build Condition LOS (Delay)	
	AM	PM	AM	PM
Preble St. EB LT/TH/RT	D (39.1)	C (24.7)	D (39.5)	C (24.7)
Preble St. WB LT/TH	D (36.6)	C (26.6)	D (36.8)	C (27.1)
Preble St. WB RT	A (7.8)	B (10.8)	A (7.8)	B (11.2)
Baxter Blvd. NB LT/TH/RT	C (34.0)	C (27.7)	C (34.3)	C (27.8)
Baxter Blvd. SB LT	C (26.3)	B (17.4)	C (30.8)	B (17.7)
Baxter Blvd. SB TH/RT	A (7.0)	A (9.7)	A (7.0)	A (9.7)
Overall	**C (27.5)**	**C (21.3)**	**C (29.2)**	**C (21.3)**

Results of the capacity analysis indicate that acceptable operating conditions will exist at the Preble Street Extension/Baxter Boulevard intersection following build-out of the proposed project. At the Marginal Way/Preble Street intersection, unacceptable levels of service are estimated during the PM peak hour during both the no-build and build conditions. It should be noted that while the above table indicates overall intersection level of service will decline from 'E' to 'F', the increase in delay is projected to be minor (5.7 seconds per vehicle).

In an effort to mitigate intersection congestion, optimization of the traffic signal phasing was investigated. As noted in the following table, intersection operations are projected to

improve substantially, if the traffic signal timing is revised. As noted in the following table, intersection delay will be less than the pre-development condition.

Marginal Way/Preble Street
Level of Service Summary
With Traffic Signal Improvements

	2002 Build Condition LOS (Delay)
	PM
Marginal Way EB LT	F (123.5)
Marginal Way EB TH/RT	D (41.9)
Marginal Way WB LT	D (52.7)
Marginal Way WB TH/RT	E (72.0)
Preble St. NB LT	F (80.7)
Preble St. NB TH/RT	E (78.1)
Preble St. SB LT	F (102.7)
Preble St. SB TH/RT	C (23.6)
Overall	**E (73.4)**

SECTION 7 – SAFETY ANALYSIS

Accident data from the period 1997 – 1999 was obtained from MDOT for roadways and intersections in the vicinity of the project site. A summary of the data is presented in the following table.

LOCATION	1997-1999 ACCIDENTS	YEARLY AVERAGE	CRITICAL RATE FACTOR
Marginal Way/Preble Street	20	6.67	0.66
Preble Street/Baxter Boulevard	31	10.33	0.93
Preble Street between Marginal Way and Baxter Boulevard	8	2.67	0.27
Marginal Way between Forest and Preble	9	3.00	0.47

MDOT considers a Critical Rate Factor (CRF) of over 1.0 and 8 accidents over a three-year period as a general guideline to identify potential safety deficiencies. As noted in the above table, no study area locations meet this criterion.

SECTION 9 – SITE ACCESSS AND CIRCULATION

The following summarizes our comments relative to review of a site plan prepared by EER. Specifically, the assessment included an evaluation of sight distance, on-site circulation and access, and on-site parking supply.

Sight Distance

Driveway and intersecting road placement shall be such that an exiting vehicle has an unobstructed sight distance according to MDOT standards. Accordingly, sight distances from the existing driveways on Marginal Way and Preble Street Extension were reviewed and assessed according to standards contained in the publication Access Management Improving the Efficiency of Maine Arterials, MDOT. For roads with vehicular speeds of 35 MPH (posted speed limit) and driveways with low to medium traffic volumes, the minimum sight distance is 350 feet. The following table summarizes the field measured sight distances at the project driveways.

LOCATION	LEFT SIGHT DISTANCE (FEET)	RIGHT SIGHT DISTANCE (FEET)	MINIMUM STANDARD (FEET)
Site Drive @ Marginal Way	500+	500+	350
Site Drive @ Preble Street Extension	500+	Not Applicable	350

As noted in the above table, all driveways meet MDOT standards for sight distance. It should be note that two large trees obstruct sight distance when exiting the site drive on Marginal Way and looking westerly. Motorist should be able to pull out and avoid the trees. However, it is recommended that conditions be monitored and the trees be removed if problems develop.

Access and Circulation

In general we find the access to be acceptable with the following comments.

- The two access drives should be aligned such that they intersect Marginal Way and Preble Street Extension at an angle near 90 degrees.
- The City of Portland Traffic Engineer has expressed concern relative to vehicles exiting the Preble Street Extension driveway and performing an illegal left-turn. To help discourage this movement it is suggested that the island be extended approximately fifty feet.

On-Site Parking

A on-site parking demand analysis was conducted for the proposed 50,000 square foot office building to ascertain the adequacy of the proposed parking supply. A summary of the analysis is presented in the following table.

CURRENT PARKING SUPPLY	168 PARKING SPACES
City of Portland Parking Ordinance 1 space per 400 square feet	125 Parking Spaces
ITE Parking Generation 2.79 spaces per 1,000 square feet	140 Parking Spaces
Parking, ENO Foundation 3 spaces per 1,000 square feet	150 Parking Spaces

As noted above an adequate parking supply will be provided.

SECTION 10 – CONCLUSIONS/RECOMMEDATIONS

1. The proposed 50,000 square foot office development is expected to generate 107 vehicles (94 entering/13 exiting) during the AM peak hour. During the PM peak hour 135 vehicles (23 entering/112 exiting) will be generated. On a 24-hour basis 780 vehicles will be generated.

2. Results of the capacity analysis indicate that acceptable operating conditions will exist at the Preble Street Extension/Baxter Boulevard intersection following build-out of the proposed project. At the Marginal Way/Preble Street intersection, unacceptable levels of service are estimated during the PM peak hour during both the no-build and build conditions. It should be noted that while the analysis indicates overall intersection level of service will decline from 'E' to 'F', the increase in delay is projected to be minor (5.7 seconds per vehicle).

3. In an effort to mitigate congestion at the Marginal Way/Preble Street intersection, optimization of the traffic signal phasing is recommended. As noted in Section 6 intersection operations are projected to improve, if the traffic signal timing is revised, and intersection delay will be less than the pre-development condition.

4. Evaluation of accident data in the vicinity of the project was performed for the most recent 3-year period from the MDOT. Results indicate no roadways or intersections within the study area are High Accident Locations.

5. Sight distance was evaluated for driveways on both Marginal Way and Preble Street Extension. Results indicate all driveways meet MDOT standards for sight distance.

APPENDIX

CAPACITY ANALYSES

TURNING MOVEMENT DATA SHEETS

HCS2000: Signalized Intersections Release 4.1

Analyst: TAE
Agency: WSA
Date: 3/14/2001
Period: 2002 No-Build
Project ID:
E/W St: Marginal Way

Inter.: Marginal Way/Preble Street
Area Type: All other areas
Jurisd:
Year : AM Peak Hour

N/S St: Preble Street

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	0	1	2	0	1	2	0	1	2	0
LGConfig	L	TR		L	TR		L	TR		L	TR	
Volume	58	183	11	198	202	162	71	163	24	419	854	92
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
RTOR Vol			0			0			0			0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	A				NB	Left	A			
	Thru			A			Thru			A	
	Right			A			Right			A	
	Peds						Peds				
WB	Left	A	A			SB	Left	A	A		
	Thru		A	A			Thru		A	A	
	Right		A	A			Right		A	A	
	Peds						Peds				
NB	Right					EB	Right				
SB	Right					WB	Right				
Green		10.0	4.0	18.0				10.0	20.0	15.0	
Yellow		3.5	3.5	3.5				3.5	3.5	3.5	
All Red		1.0	1.0	1.0				1.0	1.0	1.0	

Cycle Length: 104.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	170	1770	0.35	0.10	45.2	D		
TR	608	3510	0.33	0.17	38.1	D	39.7	D
Westbound								
L	315	1770	0.68	0.18	45.6	D		
TR	842	3303	0.46	0.25	33.2	C	37.6	D
Northbound								
L	170	1770	0.52	0.10	47.5	D		
TR	500	3470	0.46	0.14	41.5	D	43.1	D
Southbound								
L	587	1770	0.93	0.33	54.5	D		
TR	1325	3488	0.93	0.38	42.2	D	46.0	D

Intersection Delay = 43.4 (sec/veh) Intersection LOS = D

HCS2000: Signalized Intersections Release 4.1

Analyst: TAE
Agency: WSA
Date: 3/14/2001
Period: 2002 No-Build
Project ID:
E/W St: Marginal Way

Inter.: Marginal Way/Preble Street
Area Type: All other areas
Jurisd:
Year : PM Peak Hour

N/S St: Preble Street

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	0	1	2	0	1	2	0	1	2	0
LGConfig	L	TR		L	TR		L	TR		L	TR	
Volume	74	244	5	54	260	340	195	836	203	332	234	36
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
RTOR Vol			0			0			0			0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A				NB	Left	A			
Thru		A				Thru			A	
Right		A				Right			A	
Peds						Peds				
WB Left	A				SB	Left	A	A		
Thru		A				Thru		A	A	
Right		A				Right		A	A	
Peds						Peds				
NB Right					EB	Right				
SB Right					WB	Right				
Green	10.0	30.0					22.0	2.0	40.0	
Yellow	3.5	3.5					3.5	3.5	3.5	
All Red	1.0	1.0					1.0	1.0	1.0	

Cycle Length: 126.5 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	140	1770	0.62	0.08	64.7	E		
TR	837	3528	0.35	0.24	40.4	D	45.9	D
Westbound								
L	140	1770	0.41	0.08	57.4	E		
TR	768	3238	0.83	0.24	53.6	D	53.9	D
Northbound								
L	308	1770	0.76	0.17	60.5	E		
TR	1086	3435	1.15	0.32	122.8	F	113.0	F
Southbound								
L	399	1770	0.89	0.23	69.5	E		
TR	1275	3468	0.23	0.37	27.7	C	50.7	D

Intersection Delay = 79.7 (sec/veh) Intersection LOS = E

HCS2000: Signalized Intersections Release 4.1

Analyst: TAE
Agency: WSA
Date: 3/14/2001
Period: 2002 Build
Project ID:
E/W St: Marginal Way

Inter.: Marginal Way/Preble Street
Area Type: All other areas
Jurisd:
Year : AM Peak Hour58

N/S St: Preble Street

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	0	1	2	0	1	2	0	1	2	0
LGConfig	L	TR		L	TR		L	TR		L	TR	
Volume	66	184	12	198	221	162	80	163	24	421	856	92
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
RTOR Vol			0			0			0			0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	A				NB	Left	A			
	Thru			A			Thru			A	
	Right			A			Right			A	
	Peds						Peds				
WB	Left	A	A			SB	Left	A	A		
	Thru		A	A			Thru		A	A	
	Right		A	A			Right		A	A	
	Peds						Peds				
NB	Right					EB	Right				
SB	Right					WB	Right				
Green		10.0	4.0	18.0				10.0	20.0	15.0	
Yellow		3.5	3.5	3.5				3.5	3.5	3.5	
All Red		1.0	1.0	1.0				1.0	1.0	1.0	

Cycle Length: 104.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	170	1770	0.41	0.10	45.8	D		
TR	607	3506	0.34	0.17	38.1	D	40.0	D
Westbound								
L	315	1770	0.68	0.18	45.6	D		
TR	845	3315	0.49	0.25	33.4	C	37.6	D
Northbound								
L	170	1770	0.58	0.10	50.0	D		
TR	500	3470	0.46	0.14	41.5	D	44.0	D
Southbound								
L	587	1770	0.93	0.33	55.5	E		
TR	1325	3488	0.93	0.38	42.5	D	46.5	D

Intersection Delay = 43.8 (sec/veh) Intersection LOS = D

HCS2000: Signalized Intersections Release 4.1

Analyst: TAE
Agency: WSA
Date: 3/14/2001
Period: 2002 Build
Project ID:
E/W St: Marginal Way

Inter.: Marginal Way/Preble Street
Area Type: All other areas
Jurisd:
Year : PM Peak Hour

N/S St: Preble Street

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	0	1	2	0	1	2	0	1	2	0
LGConfig	L	TR		L	TR		L	TR		L	TR	
Volume	137	256	9	54	265	340	197	836	203	344	239	36
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
RTOR Vol			0			0			0			0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	A				NB	Left	A			
	Thru		A				Thru			A	
	Right		A				Right			A	
	Peds						Peds				
WB	Left	A				SB	Left	A	A		
	Thru		A				Thru		A	A	
	Right		A				Right		A	A	
	Peds						Peds				
NB	Right					EB	Right				
SB	Right					WB	Right				
Green		10.0	30.0					22.0	2.0	40.0	
Yellow		3.5	3.5					3.5	3.5	3.5	
All Red		1.0	1.0					1.0	1.0	1.0	

Cycle Length: 126.5 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	140	1770	1.15	0.08	180.3	F		
TR	835	3520	0.37	0.24	40.7	D	88.2	F
Westbound								
L	140	1770	0.41	0.08	57.4	E		
TR	769	3241	0.84	0.24	54.0	D	54.3	D
Northbound								
L	308	1770	0.77	0.17	61.1	E		
TR	1086	3435	1.15	0.32	122.8	F	113.0	F
Southbound								
L	399	1770	0.93	0.23	75.6	E		
TR	1275	3469	0.23	0.37	27.8	C	54.4	D

Intersection Delay = 85.4 (sec/veh) Intersection LOS = F

HCS2000: Signalized Intersections Release 4.1

w/ SIGNAL TIMING IMPROVEMENTS

Analyst: TAE
Agency: WSA
Date: 3/14/2001
Period: 2002 Build
Project ID:
E/W St: Marginal Way

Inter.: Marginal Way/Preble Street
Area Type: All other areas
Jurisd:
Year : PM Peak Hour

N/S St: Preble Street

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	0	1	2	0	1	2	0	1	2	0
LGConfig	L	TR		L	TR		L	TR		L	TR	
Volume	137	256	9	54	265	340	197	836	203	344	239	36
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
RTOR Vol			0			0			0			0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A				NB	Left	A			
Thru		A				Thru			A	
Right		A				Right			A	
Peds						Peds				
WB Left	A				SB	Left	A	A		
Thru		A				Thru		A	A	
Right		A				Right		A	A	
Peds						Peds				
NB Right					EB	Right				
SB Right					WB	Right				
Green	11.0	25.0					18.0	2.0	42.0	
Yellow	3.5	3.5					3.5	3.5	3.5	
All Red	1.0	1.0					1.0	1.0	1.0	

Cycle Length: 120.5 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	162	1770	0.99	0.09	123.5	F		
TR	730	3520	0.43	0.21	41.9	D	69.7	E
Westbound								
L	162	1770	0.35	0.09	52.7	D		
TR	672	3241	0.96	0.21	72.0	E	70.5	E
Northbound								
L	264	1770	0.90	0.15	80.7	F		
TR	1197	3435	1.05	0.35	78.1	E	78.5	E
Southbound								
L	360	1770	1.03	0.20	102.7	F		
TR	1396	3469	0.21	0.40	23.6	C	67.6	E

Intersection Delay = 73.4 (sec/veh) Intersection LOS = E

HCS2000: Signalized Intersections Release 4.1

Analyst: TAE
Agency: Portland
Date: 2/16/2001
Period: AM
Project ID:
E/W St: Preble

Inter.: Baxter/Preble
Area Type: All other areas
Jurisd:
Year : 2002 No-Build

N/S St: Baxter

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	0	0	2	1	0	2	0	1	1	0
LGConfig		LTR			LT	R		LTR		L	TR	
Volume	15	315	31	31	168	175	8	169	221	640	274	23
Lane Width		12.0			12.0	12.0		12.0		12.0	12.0	
RTOR Vol			15			100			80			2

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	A				NB Left	A		
Thru	A				Thru	A		
Right	A				Right	A		
Peds					Peds			
WB Left	A				SB Left	A	A	
Thru	A				Thru	A	A	
Right	A				Right	A	A	
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right		P	
Green	25.0					30.0	40.0	
Yellow	3.5					3.5	3.5	
All Red	1.5					1.5	1.5	

Cycle Length: 110.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
LTR	730	3214	0.59	0.23	39.1	D	39.1	D
Westbound								
LT	590	2594	0.40	0.23	36.6	D	28.7	C
R	934	1468	0.10	0.64	7.8	A		
Northbound								
LTR	857	3143	0.49	0.27	34.0	C	34.0	C
Southbound								
L	929	1770	0.82	0.68	26.3	C		
TR	1257	1843	0.28	0.68	7.0	A	20.2	C

Intersection Delay = 27.5 (sec/veh) Intersection LOS = C

HCS2000: Signalized Intersections Release 4.1

Analyst: TAE
Agency: Portland
Date: 2/16/2001
Period: PM
Project ID:
E/W St: Preble

Inter.: Baxter/Preble
Area Type: All other areas
Jurisd:
Year : 2002 No-Build

N/S St: Baxter

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	0	0	2	1	0	2	0	1	1	0
LGConfig		LTR			LT	R		LTR			L	TR
Volume	37	156	58	53	375	792	46	387	66	231	208	10
Lane Width		12.0			12.0	12.0		12.0			12.0	12.0
RTOR Vol			15			500			25			2

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	A				NB Left	A		
Thru	A				Thru	A		
Right	A				Right	A		
Peds					Peds			
WB Left	A				SB Left	A	A	
Thru	A				Thru	A	A	
Right	A				Right	A	A	
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right		P	
Green	30.0					30.0	20.0	
Yellow	3.5					3.5	3.5	
All Red	1.5					1.5	1.5	

Cycle Length: 95.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
LTR	884	2799	0.29	0.32	24.7	C	24.7	C
Westbound								
LT	983	3114	0.48	0.32	26.6	C	20.2	C
R	926	1599	0.35	0.58	10.8	B		
Northbound								
LTR	996	3155	0.56	0.32	27.7	C	27.7	C
Southbound								
L	666	1787	0.37	0.58	17.4	B		
TR	1083	1870	0.22	0.58	9.7	A	13.7	B

Intersection Delay = 21.3 (sec/veh) Intersection LOS = C

HCS2000: Signalized Intersections Release 4.1

Analyst: TAE
Agency: Portland
Date: 2/16/2001
Period: AM
Project ID:
E/W St: Preble

Inter.: Baxter/Preble
Area Type: All other areas
Jurisd:
Year : 2002 Build

N/S St: Baxter

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	0	0	2	1	0	2	0	1	1	0
LGConfig		LTR			LT	R		LTR		L	TR	
Volume	15	327	31	33	170	179	8	169	235	672	274	23
Lane Width		12.0			12.0	12.0		12.0		12.0	12.0	
RTOR Vol			15			100			80			2

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	A				NB Left	A		
Thru	A				Thru	A		
Right	A				Right	A		
Peds					Peds			
WB Left	A				SB Left	A	A	
Thru	A				Thru	A	A	
Right	A				Right	A	A	
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right		P	
Green	25.0					30.0	40.0	
Yellow	3.5					3.5	3.5	
All Red	1.5					1.5	1.5	

Cycle Length: 110.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
LTR	731	3217	0.61	0.23	39.5	D	39.5	D
Westbound								
LT	574	2526	0.42	0.23	36.8	D	28.7	C
R	934	1468	0.10	0.64	7.8	A		
Northbound								
LTR	854	3133	0.51	0.27	34.3	C	34.3	C
Southbound								
L	920	1770	0.87	0.68	30.8	C		
TR	1257	1843	0.28	0.68	7.0	A	23.5	C

Intersection Delay = 29.2 (sec/veh) Intersection LOS = C

HCS2000: Signalized Intersections Release 4.1

Analyst: TAE
Agency: Portland
Date: 2/16/2001
Period: PM
Project ID:
E/W St: Preble

Inter.: Baxter/Preble
Area Type: All other areas
Jurisd:
Year : 2002 Build

N/S St: Baxter

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	0	0	2	1	0	2	0	1	1	0
LGConfig		LTR			LT	R		LTR		L	TR	
Volume	37	159	58	62	390	831	46	387	68	239	208	10
Lane Width		12.0			12.0	12.0		12.0		12.0	12.0	
RTOR Vol			15			500			25			2

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	A				NB Left	A		
Thru	A				Thru	A		
Right	A				Right	A		
Peds					Peds			
WB Left	A				SB Left	A	A	
Thru	A				Thru	A	A	
Right	A				Right	A	A	
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right		P	
Green	30.0					30.0	20.0	
Yellow	3.5					3.5	3.5	
All Red	1.5					1.5	1.5	

Cycle Length: 95.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
LTR	880	2787	0.30	0.32	24.7	C	24.7	C
Westbound								
LT	969	3067	0.52	0.32	27.1	C	20.4	C
R	926	1599	0.40	0.58	11.2	B		
Northbound								
LTR	996	3153	0.56	0.32	27.8	C	27.8	C
Southbound								
L	665	1787	0.39	0.58	17.7	B		
TR	1083	1870	0.22	0.58	9.7	A	13.9	B

Intersection Delay = 21.3 (sec/veh) Intersection LOS = C

ACCIDENT DATA

JAN 19,2001 AT 10:44

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY INPUT

TYPE OF STUDY: NODES ONLY TYPE OF REQUEST: ACCIDENT I & II WITHOUT LINK DETAIL
STUDY PERIOD: FROM MONTH 01 YEAR 1997 TO MONTH 12 YEAR 1999

INPUT COMMENTS

REQUEST: INT OF MARGINAL WAY AND PREBLE ST
TOWN : PORTLAND

INPUT DATA

ROUTE	COUNTY	FIRST NODE	EXCLUDE FIRST	DISTANCE	SECOND NODE	LAST NODE	EXCLUDE LAST	DISTANCE
60477	05	08943	0	0.00	09419	09419	0	0.00

JAN 19,2001 AT 10:44

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY I

COUNTY TOWN#	LOW NODE	HIGH NODE	STREET NAME OR ROUTE #	U/R	TOTAL ACCTS	LINK LENGTH	INJURY ACCIDENTS K	A	B	C	PD	PERCENT INJURY	ANNUAL HM VEH-MILES	ANNUAL M ENT-VEHS	ACCIDENT-RATES LINK	NODE	CRITI RATE	CRF
05	P08943	POR,MARGINAL WAY,ELM,PR 9			20		0	0	4	6	10	50.0		7.564		0.88	1.33	0.00
05	A09419	POR,HANOVER ST,MARGINAL			0		0	0	0	0	0	0.0		0.000		0.00	0.00	0.00*
			NODE SUBTOTALS-		20		0	0	4	6	10	50.0		7.564		0.88	1.33	0.00

* - MEV IS ZERO FOR THIS NODE -

JAN 19,2001 AT 10:44

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY I

GRAND TOTALS-	20	0.00	0	0	4	6	10	50.0	0.00000	7.564	0.88	1.33	0.66

JAN 19,2001 AT 10:44

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY II - CHARACTERISTICS

	HOUR OF DAY																									
	---AM---												---PM---													
DAY OF WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	UNKNOWN	TOTAL	
SUNDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	S
MONDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	M
TUESDAY	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	6	T
WEDNESDAY	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	3	W
THURSDAY	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	3	T
FRIDAY	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	3	F
SATURDAY	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	3	S
UNKNOWN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	U
TOTAL	0	0	0	0	0	0	0	1	4	1	1	2	1	0	0	3	1	2	3	1	0	0	0	0	0	20	T

	YEAR			
	TOTAL	1997	1998	1999
JANUARY	2	2	0	0
FEBRUARY	2	1	0	1
MARCH	4	3	0	1
APRIL	3	2	1	0
MAY	1	0	0	1
JUNE	1	1	0	0
JULY	0	0	0	0
AUGUST	3	0	1	2
SEPTEMBER	2	1	1	0
OCTOBER	0	0	0	0
NOVEMBER	1	0	0	1
DECEMBER	1	1	0	0
UNKNOWN	0	0	0	0
TOTAL	20	11	3	6

TYPE OF UNIT

01-2 DOOR	8	10-BOBTAIL	0
02-4 DOOR	15	20-2ADT	1
03-CONVERTBLE	0	30-3ASU	0
04-STAT WGN	4	40-4ASU	0
05-VAN/CAMPER	3	21-2ASA	0
06-PICKUP TRK	4	22-2ATA	0
12-SCHOOL BUS	1	31-3ASA	0
13-MOTOR HOME	0	32-3ATA	0
14-MOTORCYCLE	0	33-3ATR	0
15-MOPED	0	42-4ATA	0
16-MOTOR BIKE	0	25-2AT1A2ATR	0
17-BICYCLE	1	35-3AT1A2ATR	0
18-SNOWMOBILE	0	36-3AT2A2ATR	0
19-PEDESTRIAN	1	50-OTHER	0
23-ATV	0	81-2AX CM BUS	0
99-UNK/OTH	0	82-3AX CM BUS	0
		98-FARM/TRAC	0
TOTAL	38		

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY II - CHARACTERISTICS

TYPE OF LOCATION

ACCIDENT TYPE	ST ROAD	CURV ROAD	**AT INTERSECTION** 3-LEG	4-LEG	5-LEG	DRIVE WAYS	BRIDGE	INTER CHANGE	UN KNOWN	TOTAL
OBJECT IN ROAD	0	0	0	0	0	0	0	0	0	0
REAR END/SIDESWIPE	0	0	0	4	7	0	0	0	0	11
HEAD-ON/SIDESWIPE	0	0	0	0	1	0	0	0	0	1
INTERSECTION MOVEMENT	0	0	0	3	2	0	0	0	0	5
PEDESTRIANS	0	0	0	0	1	0	0	0	0	1
TRAIN	0	0	0	0	0	0	0	0	0	0
RAN OFF ROAD	0	0	0	0	1	0	0	0	0	1
ANIMAL	0	0	0	0	0	0	0	0	0	0
DEER	0	0	0	0	0	0	0	0	0	0
MOOSE	0	0	0	0	0	0	0	0	0	0
BEAR	0	0	0	0	0	0	0	0	0	0
SLED/BIKE	0	0	0	0	1	0	0	0	0	1
OTHER	0	0	0	0	0	0	0	0	0	0
NON COLLISION	0	0	0	0	0	0	0	0	0	0
UNKNOWN	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	7	13	0	0	0	0	20

INJURY DATA

SEV CODE	INJURY ACCIDENTS	NUMBER OF INJURIES
K	0	0
A	0	0
B	4	4
C	6	6
PD	10	
TOTAL	20	10

FIXED OBJECT STRUCK

CONSTRUCTION BARRICADES	0
TRAFFIC SIGNAL	0
R/R CROSSING	0
LIGHT POLE	0
UTILITY POLE	0
SIGN POST	0
MAIL BOXES	0
OTHER POLES/POSTS	0
FIRE PLUG/PARK METER	0
TREE/SHRUBBERY	0
CRASH CUSHION	0
MEDIAN SAFETY BARRIER	0
BRIDGE PIERS	0
OTHER GUARDRAILS	0
FENCING NOT BARRIER	0
CULVERT HEADWALL	0
EMBANKMENT/DITCH	1
BUILDING WALL	0
ROCK OUTCROPPING/LEDGE	0
OTHER	0
UNKNOWN	0
TOTAL	1

TRAFFIC CONTROL DEVICES

TRAFFIC SIG STOP/GO	19
TRAFFIC SIG FLASHING	0
OVERHEAD FLASHERS	0
ALL WAY STOP	0
STOP SIGN/OTHER	0
YIELD SIGN	0
CURVE SIGN	0
OFFICER /SCHOOL PAT	0
SCHOOL BUS STOP ARM	0
SCHOOL ZONE SIGN	0
R/R CROSSING DEVICE	0
NO PASSING ZONE	0
NONE	1
OTHER	0
UNKNOWN	0
TOTAL	20

ROAD CHARACTER

LEVEL STRAIGHT	19
LEVEL CURVED	1
ON GRADE STRAIGHT	0
ON GRADE CURVED	0
TOP OF HILL STRAIGHT	0
TOP OF HILL CURVED	0
BOTTOM OF HILL STRAIGHT	0
BOTTOM OF HILL CURVED	0
UNKNOWN	0
TOTAL	20

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY II - CHARACTERISTICS

APPARENT CONTRIBUTING FACTOR	DR 1	DR 2	DR 3	DR 4	DR 5	OTHER	TOTAL
HUMAN FACTORS							
NO INPROPER DRIVING	14	5	0	0	0	0	19
FAIL TO YIELD R-WAY	0	1	0	0	0	0	1
ILLEGAL UNSAFE SPEED	0	0	0	0	0	0	0
FOLLOW TOO CLOSE	0	1	0	0	0	0	1
DISREGARD TRAF CONTROL	1	1	0	0	0	0	2
DRIVING LEFT OF CENTER	0	0	0	0	0	0	0
IMPROPER PASSING	0	0	0	0	0	0	0
IMPROPER LANE CHANGE	0	1	0	0	0	0	1
IMPROPER START/STOP	0	0	0	0	0	0	0
IMPROPER TURN	1	1	0	0	0	0	2
UNSAFE BACKING	0	1	0	0	0	0	1
NO PROPER SIGNAL	0	0	0	0	0	0	0
IMPEDING TRAFFIC	0	0	0	0	0	0	0
DRIVER INATTENTION	2	5	0	0	0	0	7
DRIVER INEXPERIENCE	0	0	0	0	0	0	0
PEDESTRIAN VIOLATION	0	1	0	0	0	0	1
PHYSICAL IMPAIRMENT	0	0	0	0	0	0	0
VISION OBSCURED GLASS	0	0	0	0	0	0	0
VISION OBSCURED LIGHT	0	0	0	0	0	0	0
VISION OBSCURED OTHER	0	0	0	0	0	0	0
OTHER HUMAN FACTOR	1	0	0	0	0	0	1
HIT & RUN	0	0	0	0	0	0	0
VEHICULAR FACTORS							
DEFECTIVE BRAKES	0	0	0	0	0	0	0
DEFECTIVE TIRE	0	0	0	0	0	0	0
DEFECTIVE LIGHTS	0	0	0	0	0	0	0
DEFECTIVE SUSPENSION	0	0	0	0	0	0	0
DEFECTIVE STEERING	0	0	0	0	0	0	0
OTHER VEHICLE DEFECT	0	0	0	0	0	0	0
UNKNOWN	1	1	0	0	0	0	2
TOTAL	20	18	0	0	0	0	38

APPARENT PHYSICAL CONDITION	DR 1	DR 2	DR 3	DR 4	DR 5	OTHER	TOTAL
NORMAL	19	17	0	0	0	0	36
UNDER THE INFLUENCE	0	0	0	0	0	0	0
DRINKING	0	0	0	0	0	0	0
USING DRUGS	0	0	0	0	0	0	0
ASLEEP	0	0	0	0	0	0	0
FATIGUED	0	0	0	0	0	0	0
ILL	0	0	0	0	0	0	0
HANDICAPPED	0	0	0	0	0	0	0
OTHER/UNKNOWN	1	1	0	0	0	0	2
TOTAL	20	18	0	0	0	0	38

AGE	TYPE OF UNIT: DRIVER	BIKE	SNOW SLED	PED	ATV	TOTAL
9-UNDER	0	0	0	0	0	0
10-14	0	0	0	0	0	0
15-19	1	0	0	0	0	1
20-24	6	0	0	0	0	6
25-29	3	0	0	1	0	4
30-39	6	1	0	0	0	7
40-49	10	0	0	0	0	10
50-59	6	0	0	0	0	6
60-69	1	0	0	0	0	1
70-79	3	0	0	0	0	3
80-OVER	0	0	0	0	0	0
UNKNOWN	0	0	0	0	0	0
TOTAL	36	1	0	1	0	38

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY II - CHARACTERISTICS

R O A D S U R F A C E

WEATHER	LIGHT CONDITION	DRY	WET	SNOW SAND	ICE SAND	MUD	DEBRIS	OIL	SNOW	ICE	OTHER	TOTAL
CLEAR	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	5	1	1	0	0	0	0	0	0	0	7
(9)	DUSK	1	0	0	0	0	0	0	0	0	0	1
	DARK-LIGHTS	1	0	0	0	0	0	0	0	0	0	1
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
RAIN	DAWN	0	0	0	0	0	0	0	0	1	0	1
	DAYLIGHT	0	1	0	0	0	0	0	0	0	0	1
(3)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	1	0	0	0	0	0	0	0	0	1
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
SNOW	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	0	0	1	0	0	0	1	0	0	2
(2)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
SLEET/HAIL	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	0	0	0	0	0	0	0	0	0	0
(0)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
FOG/SMOG	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	0	0	0	0	0	0	0	0	0	0
(0)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0

LIGHT	
DAWN	1
DAYLIGHT	14
DUSK	1
DARK-LIGHTS	4
DARK NO LIGHTS	0
DARK LIGHTS OFF	0
OTHER	0
UNKNOWN	0
TOTAL	20

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY II - CHARACTERISTICS

WEATHER	LIGHT CONDITION	ROAD SURFACE: DRY	WET	SNOW SAND	ICE SAND	MUD	DEBRIS	OIL	SNOW	ICE	OTHER	TOTAL
CROSS WINDS	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	0	0	0	0	0	0	0	0	0	0
(0)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
SAND/DUST	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	0	0	0	0	0	0	0	0	0	0
(0)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
CLOUDY	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	3	0	0	0	0	0	0	0	0	0	3
(4)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	1	0	0	0	0	0	0	0	0	1
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
OTHER	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	0	0	0	0	0	0	0	0	1	1
(2)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	1	1
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
ROAD SURFACE TOTALS		10	4	1	1	0	0	0	1	1	2	20

JAN 19,2001 AT 10:44

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY INPUT

TYPE OF STUDY: NODES ONLY TYPE OF REQUEST: ACCIDENT I & II WITHOUT LINK DETAIL

STUDY PERIOD: FROM MONTH 01 YEAR 1997 TO MONTH 12 YEAR 1999

INPUT COMMENTS

REQUEST: INT OF PREBLE ST EXT AND BAXTER BOULEVARD
TOWN : PORTLAND

INPUT DATA

ROUTE	COUNTY	FIRST NODE	EXCLUDE FIRST	DISTANCE	SECOND NODE	LAST NODE	EXCLUDE LAST	DISTANCE
0001X	05	08944	0	0.00				0.00

JAN 19,2001 AT 10:44

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY I

COUNTY TOWN#	LOW NODE	HIGH NODE	STREET NAME OR ROUTE #	U/R	TOTAL ACCTS	LINK LENGTH	INJURY ACCIDENTS K	A	B	C	PD	PERCENT INJURY	ANNUAL HM VEH-MILES	ANNUAL M ENT-VEHS	ACCIDENT-RATES LINK	NODE	CRITI RATE	CRF
05	08944	POR,PREBLE ST.EXT,BAXTE		9	31		0	0	4	7	20	35.5		8.564		1.21	1.30	0.00
			NODE SUBTOTALS-		31		0	0	4	7	20	35.5		8.564		1.21	1.30	0.00
			GRAND TOTALS-		31	0.00	0	0	4	7	20	35.5	0.00000	8.564	1.21		1.30	0.93

JAN 19,2001 AT 10:44

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY II - CHARACTERISTICS

	HOUR OF DAY																										
	---AM---												---PM---														
DAY OF WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	UNKNOWN	TOTAL	
SUNDAY	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	S
MONDAY	0	0	0	0	0	0	0	0	1	0	0	1	0	0	4	0	0	3	0	0	0	1	0	0	0	10	M
TUESDAY	0	0	0	0	0	0	2	0	1	0	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0	6	T
WEDNESDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	W
THURSDAY	0	0	0	0	0	0	0	0	0	0	0	0	3	0	2	0	0	0	0	0	0	0	0	0	0	5	T
FRIDAY	0	0	0	0	0	0	0	0	0	0	0	0	2	1	2	1	0	0	0	1	0	0	0	0	0	7	F
SATURDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	S
UNKNOWN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	U
TOTAL	0	0	0	0	0	0	2	0	2	0	2	1	6	1	8	2	1	4	0	1	0	1	0	0	0	31	T

	YEAR			
	TOTAL	1997	1998	1999
JANUARY	1	1	0	0
FEBRUARY	2	1	1	0
MARCH	4	2	1	1
APRIL	4	2	1	1
MAY	2	0	0	2
JUNE	2	0	1	1
JULY	1	0	1	0
AUGUST	3	0	2	1
SEPTEMBER	2	0	1	1
OCTOBER	1	0	1	0
NOVEMBER	5	4	1	0
DECEMBER	4	2	1	1
UNKNOWN	0	0	0	0
TOTAL	31	12	11	8

TYPE OF UNIT

01-2 DOOR	14	10-BOBTAIL	0
02-4 DOOR	28	20-2ADT	0
03-CONVERTBLE	0	30-3ASU	0
04-STAT WGN	2	40-4ASU	0
05-VAN/CAMPER	6	21-2ASA	0
06-PICKUP TRK	11	22-2ATA	0
12-SCHOOL BUS	0	31-3ASA	0
13-MOTOR HOME	0	32-3ATA	0
14-MOTORCYCLE	0	33-3ATR	0
15-MOPED	0	42-4ATA	0
16-MOTOR BIKE	0	25-2AT1A2ATR	0
17-BICYCLE	2	35-3AT1A2ATR	0
18-SNOWMOBILE	0	36-3AT2A2ATR	0
19-PEDESTRIAN	0	50-OTHER	0
23-ATV	0	81-2AX CM BUS	0
99-UNK/OTH	0	82-3AX CM BUS	0
		98-FARM/TRAC	0
TOTAL	63		

JAN 19,2001 AT 10:44

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY II - CHARACTERISTICS

TYPE OF LOCATION

ACCIDENT TYPE	ST ROAD	CURV ROAD	**AT INTERSECTION** 3-LEG	4-LEG	5-LEG	DRIVE WAYS	BRIDGE	INTER CHANGE	UN KNOWN	TOTAL
OBJECT IN ROAD	0	0	0	0	0	0	0	0	0	0
REAR END/SIDESWIPE	0	0	0	9	0	0	0	0	0	9
HEAD-ON/SIDESWIPE	0	0	0	2	0	0	0	0	0	2
INTERSECTION MOVEMENT	0	0	0	18	0	0	0	0	0	18
PEDESTRIANS	0	0	0	0	0	0	0	0	0	0
TRAIN	0	0	0	0	0	0	0	0	0	0
RAN OFF ROAD	0	0	0	1	0	0	0	0	0	1
ANIMAL	0	0	0	0	0	0	0	0	0	0
DEER	0	0	0	0	0	0	0	0	0	0
MOOSE	0	0	0	0	0	0	0	0	0	0
BEAR	0	0	0	0	0	0	0	0	0	0
SLED/BIKE	0	0	0	1	0	0	0	0	0	1
OTHER	0	0	0	0	0	0	0	0	0	0
NON COLLISION	0	0	0	0	0	0	0	0	0	0
UNKNOWN	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	31	0	0	0	0	0	31

INJURY DATA

SEV CODE	INJURY ACCIDENTS	NUMBER OF INJURIES
K	0	0
A	0	0
B	4	6
C	7	11
PD	20	
TOTAL	31	17

FIXED OBJECT STRUCK

CONSTRUCTION BARRICADES	0
TRAFFIC SIGNAL	0
R/R CROSSING	0
LIGHT POLE	0
UTILITY POLE	0
SIGN POST	0
MAIL BOXES	0
OTHER POLES/POSTS	0
FIRE PLUG/PARK METER	0
TREE/SHRUBBERY	0
CRASH CUSHION	0
MEDIAN SAFETY BARRIER	0
BRIDGE PIERS	0
OTHER GUARDRAILS	0
FENCING NOT BARRIER	0
CULVERT HEADWALL	0
EMBANKMENT/DITCH	1
BUILDING WALL	0
ROCK OUTCROPPING/LEDGE	0
OTHER	1
UNKNOWN	0
TOTAL	2

TRAFFIC CONTROL DEVICES

TRAFFIC SIG STOP/GO	28
TRAFFIC SIG FLASHING	0
OVERHEAD FLASHERS	0
ALL WAY STOP	0
STOP SIGN/OTHER	0
YIELD SIGN	3
CURVE SIGN	0
OFFICER /SCHOOL PAT	0
SCHOOL BUS STOP ARM	0
SCHOOL ZONE SIGN	0
R/R CROSSING DEVICE	0
NO PASSING ZONE	0
NONE	0
OTHER	0
UNKNOWN	0
TOTAL	31

ROAD CHARACTER

LEVEL STRAIGHT	29
LEVEL CURVED	2
ON GRADE STRAIGHT	0
ON GRADE CURVED	0
TOP OF HILL STRAIGHT	0
TOP OF HILL CURVED	0
BOTTOM OF HILL STRAIGHT	0
BOTTOM OF HILL CURVED	0
UNKNOWN	0
TOTAL	31

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY II - CHARACTERISTICS

APPARENT CONTRIBUTING FACTOR	DR 1	DR 2	DR 3	DR 4	DR 5	OTHER	TOTAL
HUMAN FACTORS							
NO INPROPER DRIVING	19	13	0	0	0	0	32
FAIL TO YIELD R-WAY	9	5	0	0	0	0	14
ILLEGAL UNSAFE SPEED	0	0	0	0	0	0	0
FOLLOW TOO CLOSE	0	3	0	0	0	0	3
DISREGARD TRAF CONTROL	1	3	0	0	0	0	4
DRIVING LEFT OF CENTER	0	0	0	0	0	0	0
IMPROPER PASSING	0	0	0	0	0	0	0
IMPROPER LANE CHANGE	0	1	0	0	0	0	1
IMPROPER START/STOP	0	0	0	0	0	0	0
IMPROPER TURN	0	0	0	0	0	0	0
UNSAFE BACKING	0	0	0	0	0	0	0
NO PROPER SIGNAL	0	0	0	0	0	0	0
IMPEDING TRAFFIC	0	0	0	0	0	0	0
DRIVER INATTENTION	2	5	1	0	0	0	8
DRIVER INEXPERIENCE	0	0	0	0	0	0	0
PEDESTRIAN VIOLATION	0	0	0	0	0	0	0
PHYSICAL IMPAIRMENT	0	0	0	0	0	0	0
VISION OBSCURED GLASS	0	0	0	0	0	0	0
VISION OBSCURED LIGHT	0	0	0	0	0	0	0
VISION OBSCURED OTHER	0	1	0	0	0	0	1
OTHER HUMAN FACTOR	0	0	0	0	0	0	0
HIT & RUN	0	0	0	0	0	0	0
VEHICULAR FACTORS							
DEFECTIVE BRAKES	0	0	0	0	0	0	0
DEFECTIVE TIRE	0	0	0	0	0	0	0
DEFECTIVE LIGHTS	0	0	0	0	0	0	0
DEFECTIVE SUSPENSION	0	0	0	0	0	0	0
DEFECTIVE STEERING	0	0	0	0	0	0	0
OTHER VEHICLE DEFECT	0	0	0	0	0	0	0
UNKNOWN	0	0	0	0	0	0	0
TOTAL	31	31	1	0	0	0	63

APPARENT PHYSICAL CONDITION	DR 1	DR 2	DR 3	DR 4	DR 5	OTHER	TOTAL
NORMAL	31	31	1	0	0	0	63
UNDER THE INFLUENCE	0	0	0	0	0	0	0
DRINKING	0	0	0	0	0	0	0
USING DRUGS	0	0	0	0	0	0	0
ASLEEP	0	0	0	0	0	0	0
FATIGUED	0	0	0	0	0	0	0
ILL	0	0	0	0	0	0	0
HANDICAPPED	0	0	0	0	0	0	0
OTHER/UNKNOWN	0	0	0	0	0	0	0
TOTAL	31	31	1	0	0	0	63

AGE	TYPE OF UNIT: DRIVER	BIKE	SNOW SLED	PED	ATV	TOTAL
9-UNDER	0	0	0	0	0	0
10-14	0	0	0	0	0	0
15-19	2	1	0	0	0	3
20-24	11	0	0	0	0	11
25-29	7	0	0	0	0	7
30-39	18	0	0	0	0	18
40-49	12	1	0	0	0	13
50-59	6	0	0	0	0	6
60-69	2	0	0	0	0	2
70-79	3	0	0	0	0	3
80-OVER	0	0	0	0	0	0
UNKNOWN	0	0	0	0	0	0
TOTAL	61	2	0	0	0	63

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY II - CHARACTERISTICS

R O A D S U R F A C E

WEATHER	LIGHT CONDITION	DRY	WET	SNOW SAND	ICE SAND	MUD	DEBRIS	OIL	SNOW	ICE	OTHER	TOTAL
CLEAR	DAWN	1	0	0	0	0	0	0	0	0	0	1
	DAYLIGHT	17	0	0	0	0	0	0	0	0	0	17
(22)	DUSK	2	0	0	0	0	0	0	0	0	0	2
	DARK-LIGHTS	1	1	0	0	0	0	0	0	0	0	2
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
RAIN	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	1	0	0	0	0	0	0	0	0	1
(2)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	1	0	0	0	0	0	0	0	0	1
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
SNOW	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	0	0	0	0	0	0	2	0	0	2
(2)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
SLEET/HAIL	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	0	0	0	0	0	0	0	0	0	0
(0)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
FOG/SMOG	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	0	0	0	0	0	0	0	0	0	0
(0)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0

LIGHT	
DAWN	1
DAYLIGHT	25
DUSK	2
DARK-LIGHTS	3
DARK NO LIGHTS	0
DARK LIGHTS OFF	0
OTHER	0
UNKNOWN	0
TOTAL	31

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY II - CHARACTERISTICS

WEATHER	LIGHT CONDITION	ROAD SURFACE: DRY	WET	SNOW SAND	ICE SAND	MUD	DEBRIS	OIL	SNOW	ICE	OTHER	TOTAL
CROSS WINDS	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	0	0	0	0	0	0	0	0	0	0
(0)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
SAND/DUST	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	0	0	0	0	0	0	0	0	0	0
(0)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
CLOUDY	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	5	0	0	0	0	0	0	0	0	0	5
(5)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
OTHER	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	0	0	0	0	0	0	0	0	0	0
(0)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
ROAD SURFACE TOTALS		26	3	0	0	0	0	0	2	0	0	31

JAN 19,2001 AT 10:44

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY INPUT

TYPE OF STUDY: LINKS ONLY TYPE OF REQUEST: ACCIDENT I & II WITH LINK DETAIL

STUDY PERIOD: FROM MONTH 01 YEAR 1997 TO MONTH 12 YEAR 1999

INPUT COMMENTS

REQUEST: PREBLE ST EXT BETWEEN MARGINAL WAY AND BAXTER BOULEVARD
TOWN : PORTLAND

INPUT DATA

ROUTE	COUNTY	FIRST NODE	EXCLUDE FIRST	DISTANCE	SECOND NODE	LAST NODE	EXCLUDE LAST	DISTANCE
60818	05	08943	1	0.00	08944	08944	1	0.00

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY I

COUNTY TOWN#	LOW NODE	HIGH NODE	STREET NAME OR ROUTE #	U/R	TOTAL ACCTS	LINK LENGTH	INJURY ACCIDENTS K	A	B	C	PD	PERCENT INJURY	ANNUAL HM VEH-MILES	ANNUAL M ENT-VEHS	ACCIDENT-RATES LINK	NODE	CRITI RATE	CRF
05170	08943	08944	PREBLE ST EXT	2	8	0.41	0	0	1	1	6	25.0	0.02912		91.58		335.64	0.00
			LINK SUBTOTALS-		8	0.41	0	0	1	1	6	25.0	0.02912		91.57		335.64	0.00
			GRAND TOTALS-		8	0.41	0	0	1	1	6	25.0	0.02912	8.564	91.57		335.64	0.27

JAN 19,2001 AT 10:44

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY II - CHARACTERISTICS

	HOUR OF DAY																									
	---AM---												---PM---													
DAY OF WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	UNKNOWN	TOTAL	
SUNDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S
MONDAY	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	M
TUESDAY	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	2	T
WEDNESDAY	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	W
THURSDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	T
FRIDAY	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	3	F
SATURDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S
UNKNOWN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	U
TOTAL	0	0	0	0	0	0	0	1	0	0	0	3	0	0	1	0	0	0	1	0	0	2	0	0	0	8	T

	YEAR			
	TOTAL	1997	1998	1999
JANUARY	2	2	0	0
FEBRUARY	0	0	0	0
MARCH	2	1	1	0
APRIL	2	0	1	1
MAY	0	0	0	0
JUNE	0	0	0	0
JULY	0	0	0	0
AUGUST	0	0	0	0
SEPTEMBER	1	0	1	0
OCTOBER	1	0	1	0
NOVEMBER	0	0	0	0
DECEMBER	0	0	0	0
UNKNOWN	0	0	0	0
TOTAL	8	3	4	1

TYPE OF UNIT			
01-2 DOOR	2	10-BOBTAIL	0
02-4 DOOR	8	20-2ADT	0
03-CONVERTBLE	0	30-3ASU	0
04-STAT WGN	2	40-4ASU	0
05-VAN/CAMPER	0	21-2ASA	0
06-PICKUP TRK	3	22-2ATA	0
12-SCHOOL BUS	0	31-3ASA	0
13-MOTOR HOME	0	32-3ATA	0
14-MOTORCYCLE	0	33-3ATR	0
15-MOPED	0	42-4ATA	0
16-MOTOR BIKE	0	25-2AT1A2ATR	0
17-BICYCLE	0	35-3AT1A2ATR	0
18-SNOWMOBILE	0	36-3AT2A2ATR	0
19-PEDESTRIAN	1	50-OTHER	0
23-ATV	0	81-2AX CM BUS	0
99-UNK/OTH	0	82-3AX CM BUS	0
		98-FARM/TRAC	0
TOTAL	16		

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY II - CHARACTERISTICS

TYPE OF LOCATION

ACCIDENT TYPE	ST ROAD	CURV ROAD	**AT INTERSECTION** 3-LEG	4-LEG	5-LEG	DRIVE WAYS	BRIDGE	INTER CHANGE	UN KNOWN	TOTAL
OBJECT IN ROAD	0	0	0	0	0	0	0	0	0	0
REAR END/SIDESWIPE	2	0	0	0	0	0	0	0	0	2
HEAD-ON/SIDESWIPE	0	1	0	0	0	0	0	0	0	1
INTERSECTION MOVEMENT	0	0	0	0	0	4	0	0	0	4
PEDESTRIANS	1	0	0	0	0	0	0	0	0	1
TRAIN	0	0	0	0	0	0	0	0	0	0
RAN OFF ROAD	0	0	0	0	0	0	0	0	0	0
ANIMAL	0	0	0	0	0	0	0	0	0	0
DEER	0	0	0	0	0	0	0	0	0	0
MOOSE	0	0	0	0	0	0	0	0	0	0
BEAR	0	0	0	0	0	0	0	0	0	0
SLED/BIKE	0	0	0	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0	0	0	0
NON COLLISION	0	0	0	0	0	0	0	0	0	0
UNKNOWN	0	0	0	0	0	0	0	0	0	0
TOTAL	3	1	0	0	0	4	0	0	0	8

INJURY DATA

SEV CODE	INJURY ACCIDENTS	NUMBER OF INJURIES
K	0	0
A	0	0
B	1	1
C	1	1
PD	6	
TOTAL	8	2

FIXED OBJECT STRUCK

CONSTRUCTION BARRICADES	0
TRAFFIC SIGNAL	0
R/R CROSSING	0
LIGHT POLE	0
UTILITY POLE	0
SIGN POST	0
MAIL BOXES	0
OTHER POLES/POSTS	0
FIRE PLUG/PARK METER	0
TREE/SHRUBBERY	0
CRASH CUSHION	0
MEDIAN SAFETY BARRIER	0
BRIDGE PIERS	0
OTHER GUARDRAILS	0
FENCING NOT BARRIER	0
CULVERT HEADWALL	0
EMBANKMENT/DITCH	0
BUILDING WALL	0
ROCK OUTCROPPING/LEDGE	0
OTHER	0
UNKNOWN	0
TOTAL	0

TRAFFIC CONTROL DEVICES

TRAFFIC SIG STOP/GO	0
TRAFFIC SIG FLASHING	0
OVERHEAD FLASHERS	0
ALL WAY STOP	0
STOP SIGN/OTHER	0
YIELD SIGN	0
CURVE SIGN	0
OFFICER /SCHOOL PAT	0
SCHOOL BUS STOP ARM	0
SCHOOL ZONE SIGN	0
R/R CROSSING DEVICE	0
NO PASSING ZONE	0
NONE	8
OTHER	0
UNKNOWN	0
TOTAL	8

ROAD CHARACTER

LEVEL STRAIGHT	6
LEVEL CURVED	1
ON GRADE STRAIGHT	1
ON GRADE CURVED	0
TOP OF HILL STRAIGHT	0
TOP OF HILL CURVED	0
BOTTOM OF HILL STRAIGHT	0
BOTTOM OF HILL CURVED	0
UNKNOWN	0
TOTAL	8

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY II - CHARACTERISTICS

APPARENT CONTRIBUTING FACTOR	DR 1	DR 2	DR 3	DR 4	DR 5	OTHER	TOTAL
HUMAN FACTORS							
NO INPROPER DRIVING	4	3	0	0	0	0	7
FAIL TO YIELD R-WAY	1	1	0	0	0	0	2
ILLEGAL UNSAFE SPEED	0	0	0	0	0	0	0
FOLLOW TOO CLOSE	0	0	0	0	0	0	0
DISREGARD TRAF CONTROL	0	0	0	0	0	0	0
DRIVING LEFT OF CENTER	0	0	0	0	0	0	0
IMPROPER PASSING	0	0	0	0	0	0	0
IMPROPER LANE CHANGE	1	0	0	0	0	0	1
IMPROPER START/STOP	0	0	0	0	0	0	0
IMPROPER TURN	0	0	0	0	0	0	0
UNSAFE BACKING	0	0	0	0	0	0	0
NO PROPER SIGNAL	1	0	0	0	0	0	1
IMPEDING TRAFFIC	0	0	0	0	0	0	0
DRIVER INATTENTION	0	2	0	0	0	0	2
DRIVER INEXPERIENCE	0	0	0	0	0	0	0
PEDESTRIAN VIOLATION	0	0	0	0	0	0	0
PHYSICAL IMPAIRMENT	0	0	0	0	0	0	0
VISION OBSCURED GLASS	0	0	0	0	0	0	0
VISION OBSCURED LIGHT	0	1	0	0	0	0	1
VISION OBSCURED OTHER	0	0	0	0	0	0	0
OTHER HUMAN FACTOR	1	1	0	0	0	0	2
HIT & RUN	0	0	0	0	0	0	0
VEHICULAR FACTORS							
DEFECTIVE BRAKES	0	0	0	0	0	0	0
DEFECTIVE TIRE	0	0	0	0	0	0	0
DEFECTIVE LIGHTS	0	0	0	0	0	0	0
DEFECTIVE SUSPENSION	0	0	0	0	0	0	0
DEFECTIVE STEERING	0	0	0	0	0	0	0
OTHER VEHICLE DEFECT	0	0	0	0	0	0	0
UNKNOWN	0	0	0	0	0	0	0
TOTAL	8	8	0	0	0	0	16

APPARENT PHYSICAL CONDITION	DR 1	DR 2	DR 3	DR 4	DR 5	OTHER	TOTAL
NORMAL	8	7	0	0	0	0	15
UNDER THE INFLUENCE	0	0	0	0	0	0	0
DRINKING	0	1	0	0	0	0	1
USING DRUGS	0	0	0	0	0	0	0
ASLEEP	0	0	0	0	0	0	0
FATIGUED	0	0	0	0	0	0	0
ILL	0	0	0	0	0	0	0
HANDICAPPED	0	0	0	0	0	0	0
OTHER/UNKNOWN	0	0	0	0	0	0	0
TOTAL	8	8	0	0	0	0	16

AGE	TYPE OF UNIT: DRIVER	BIKE	SNOW SLED	PED	ATV	TOTAL
9-UNDER	0	0	0	0	0	0
10-14	0	0	0	0	0	0
15-19	1	0	0	0	0	1
20-24	4	0	0	0	0	4
25-29	0	0	0	0	0	0
30-39	3	0	0	0	0	3
40-49	4	0	0	0	0	4
50-59	0	0	0	1	0	1
60-69	1	0	0	0	0	1
70-79	2	0	0	0	0	2
80-OVER	0	0	0	0	0	0
UNKNOWN	0	0	0	0	0	0
TOTAL	15	0	0	1	0	16

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY II - CHARACTERISTICS

R O A D S U R F A C E

WEATHER	LIGHT CONDITION	DRY	WET	SNOW SAND	ICE SAND	MUD	DEBRIS	OIL	SNOW	ICE	OTHER	TOTAL
CLEAR	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	3	0	0	0	0	0	0	0	0	0	3
(6)	DUSK	1	0	0	0	0	0	0	0	0	0	1
	DARK-LIGHTS	2	0	0	0	0	0	0	0	0	0	2
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
RAIN	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	0	0	0	0	0	0	0	1	0	1
(1)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
SNOW	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	0	0	0	0	0	0	0	0	0	0
(0)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
SLEET/HAIL	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	0	0	0	0	0	0	0	0	0	0
(0)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
FOG/SMOG	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	0	0	0	0	0	0	0	0	0	0
(0)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0

LIGHT	
DAWN	0
DAYLIGHT	5
DUSK	1
DARK-LIGHTS	2
DARK NO LIGHTS	0
DARK LIGHTS OFF	0
OTHER	0
UNKNOWN	0
TOTAL	8

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY II - CHARACTERISTICS

R O A D S U R F A C E

WEATHER	LIGHT CONDITION	DRY	WET	SNOW SAND	ICE SAND	MUD	DEBRIS	OIL	SNOW	ICE	OTHER	TOTAL
CROSS WINDS	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	0	0	0	0	0	0	0	0	0	0
(0)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
SAND/DUST	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	0	0	0	0	0	0	0	0	0	0
(0)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
CLOUDY	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	1	0	0	0	0	0	0	0	0	0	1
(1)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
OTHER	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	0	0	0	0	0	0	0	0	0	0
(0)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
ROAD SURFACE TOTALS		7	0	0	0	0	0	0	0	1	0	8

JAN 19,2001 AT 10:44

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY INPUT

TYPE OF STUDY: LINKS ONLY TYPE OF REQUEST: ACCIDENT I & II WITH LINK DETAIL

STUDY PERIOD: FROM MONTH 01 YEAR 1997 TO MONTH 12 YEAR 1999

INPUT COMMENTS

REQUEST: PREBLE ST EXT BETWEEN MARGINAL WAY AND BAXTER BOULEVARD
TOWN : PORTLAND

INPUT DATA

ROUTE	COUNTY	FIRST NODE	EXCLUDE FIRST	DISTANCE	SECOND NODE	LAST NODE	EXCLUDE LAST	DISTANCE
60818	05	08943	1	0.00	08944	08944	1	0.00

JAN 19,2001 AT 10:44

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

LINK DETAIL

TOWN#	STREET NAME OR ROUTE #	LOW NODE	HIGH NODE	DISTANCE	TOTAL ACCIDENTS	INJURY ACCIDENTS K	A	B	C	PD	ACCIDENT REPORT NUMBERS				
05170	PREBLE ST EXT	08943	08944	0.1	2	0	0	1	0	1	199833115	199815676			
				0.3	5	0	0	0	1	4	199701425	199703273	199714101	199809474	199914391
				0.4	1	0	0	0	0	1	199838091				
				TOTALS-	8	0	0	1	1	6					

JAN 19,2001 AT 10:44

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY INPUT

TYPE OF STUDY: NODES AND LINKS TYPE OF REQUEST: ACCIDENT I & II WITH LINK DETAIL

STUDY PERIOD: FROM MONTH 01 YEAR 1997 TO MONTH 12 YEAR 1999

INPUT COMMENTS

REQUEST: MARGINAL WAY BETWEEN FOREST AVE AND FRANKLIN ART.
TOWN : PORTLAND

INPUT DATA

ROUTE	COUNTY	FIRST NODE	EXCLUDE FIRST	DISTANCE	SECOND NODE	LAST NODE	EXCLUDE LAST	DISTANCE
60477	05	07254	1	0.00	09419	09420	1	0.00

JAN 19,2001 AT 10:44

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY I

COUNTY TOWN#	LOW NODE	HIGH NODE	STREET NAME OR ROUTE #	U/R	TOTAL ACCTS	LINK LENGTH	INJURY ACCIDENTS K	A	B	C	PD	PERCENT INJURY	ANNUAL HM VEH-MILES	ANNUAL M ENT-VEHS	ACCIDENT-RATES LINK	NODE	CRITI RATE	CRF
05	A09419	POR,HANOVER ST,MARGINAL			0		0	0	0	0	0	0.0		0.000		0.00	0.00	0.00*
05	P08943	POR,MARGINAL WAY,ELM,PR		9	20		0	0	4	6	10	50.0		7.564		0.88	1.33	0.00
		NODE SUBTOTALS-			20		0	0	4	6	10	50.0		7.564		0.88	1.33	0.00

* - MEV IS ZERO FOR THIS NODE -

JAN 19,2001 AT 10:44

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY I

COUNTY TOWN#	LOW NODE	HIGH NODE	STREET NAME OR ROUTE #	U/R	TOTAL ACCTS	LINK LENGTH	INJURY ACCIDENTS K	A	B	C	PD	PERCENT INJURY	ANNUAL HM VEH-MILES	ANNUAL M ENT-VEHS	ACCIDENT-RATES LINK	NODE	CRITI RATE	CRF
	07254	09419	MARGINAL WAY	2	3	0.16	0	0	0	1	2	33.3	0.00367		272.48		561.06	0.00
	08943	09419		2	1	0.01	0	0	0	0	1	0.0	0.00026		1282.05		997.07	1.29
	08943	09420		2	5	0.36	0	0	1	2	2	60.0	0.01180		141.24		426.85	0.00
			LINK SUBTOTALS-		9	0.53	0	0	1	3	5	44.4	0.01573		190.71		402.37	0.00
			GRAND TOTALS-		29	0.53	0	0	5	9	15	48.3	0.01573	7.564	614.53		669.61	0.92

JAN 19,2001 AT 10:44

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY II - CHARACTERISTICS

	HOUR OF DAY																									
	---AM---												---PM---													
DAY OF WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	UNKNOWN	TOTAL	
SUNDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	S
MONDAY	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	2	M
TUESDAY	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	7	T
WEDNESDAY	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	0	0	1	0	0	0	0	0	0	0	4	W
THURSDAY	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	1	1	0	0	0	0	0	0	0	0	5	T
FRIDAY	0	0	0	0	0	0	0	0	1	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	5	F
SATURDAY	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	0	1	0	0	0	0	0	0	5	S
UNKNOWN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	U
TOTAL	1	0	0	0	0	0	0	2	4	1	2	2	1	1	2	4	2	2	3	1	1	0	0	0	0	29	T

	YEAR			
	TOTAL	1997	1998	1999
JANUARY	3	2	1	0
FEBRUARY	2	1	0	1
MARCH	4	3	0	1
APRIL	3	2	1	0
MAY	1	0	0	1
JUNE	1	1	0	0
JULY	2	1	1	0
AUGUST	5	0	2	3
SEPTEMBER	4	1	2	1
OCTOBER	0	0	0	0
NOVEMBER	1	0	0	1
DECEMBER	3	3	0	0
UNKNOWN	0	0	0	0
TOTAL	29	14	7	8

TYPE OF UNIT

01-2 DOOR	11	10-BOBTAIL	0
02-4 DOOR	20	20-2ADT	1
03-CONVERTBLE	0	30-3ASU	0
04-STAT WGN	5	40-4ASU	0
05-VAN/CAMPER	6	21-2ASA	0
06-PICKUP TRK	7	22-2ATA	0
12-SCHOOL BUS	1	31-3ASA	0
13-MOTOR HOME	0	32-3ATA	0
14-MOTORCYCLE	0	33-3ATR	0
15-MOPED	0	42-4ATA	0
16-MOTOR BIKE	0	25-2AT1A2ATR	0
17-BICYCLE	1	35-3AT1A2ATR	0
18-SNOWMOBILE	0	36-3AT2A2ATR	0
19-PEDESTRIAN	1	50-OTHER	0
23-ATV	0	81-2AX CM BUS	1
99-UNK/OTH	0	82-3AX CM BUS	0
		98-FARM/TRAC	0
TOTAL	54		

JAN 19,2001 AT 10:44

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY II - CHARACTERISTICS

TYPE OF LOCATION

ACCIDENT TYPE	ST ROAD	CURV ROAD	**AT INTERSECTION** 3-LEG	4-LEG	5-LEG	DRIVE WAYS	BRIDGE	INTER CHANGE	UN KNOWN	TOTAL
OBJECT IN ROAD	1	0	0	0	0	0	0	0	0	1
REAR END/SIDESWIPE	4	0	0	4	7	1	0	0	0	16
HEAD-ON/SIDESWIPE	1	0	0	0	1	1	0	0	0	3
INTERSECTION MOVEMENT	0	0	0	3	2	1	0	0	0	6
PEDESTRIANS	0	0	0	0	1	0	0	0	0	1
TRAIN	0	0	0	0	0	0	0	0	0	0
RAN OFF ROAD	0	0	0	0	1	0	0	0	0	1
ANIMAL	0	0	0	0	0	0	0	0	0	0
DEER	0	0	0	0	0	0	0	0	0	0
MOOSE	0	0	0	0	0	0	0	0	0	0
BEAR	0	0	0	0	0	0	0	0	0	0
SLED/BIKE	0	0	0	0	1	0	0	0	0	1
OTHER	0	0	0	0	0	0	0	0	0	0
NON COLLISION	0	0	0	0	0	0	0	0	0	0
UNKNOWN	0	0	0	0	0	0	0	0	0	0
TOTAL	6	0	0	7	13	3	0	0	0	29

INJURY DATA

SEV CODE	INJURY ACCIDENTS	NUMBER OF INJURIES
K	0	0
A	0	0
B	5	5
C	9	10
PD	15	
TOTAL	29	15

FIXED OBJECT STRUCK

CONSTRUCTION BARRICADES	0
TRAFFIC SIGNAL	0
R/R CROSSING	0
LIGHT POLE	0
UTILITY POLE	0
SIGN POST	0
MAIL BOXES	0
OTHER POLES/POSTS	0
FIRE PLUG/PARK METER	0
TREE/SHRUBBERY	0
CRASH CUSHION	0
MEDIAN SAFETY BARRIER	0
BRIDGE PIERS	0
OTHER GUARDRAILS	0
FENCING NOT BARRIER	0
CULVERT HEADWALL	0
EMBANKMENT/DITCH	1
BUILDING WALL	0
ROCK OUTCROPPING/LEDGE	0
OTHER	1
UNKNOWN	0
TOTAL	2

TRAFFIC CONTROL DEVICES

TRAFFIC SIG STOP/GO	19
TRAFFIC SIG FLASHING	0
OVERHEAD FLASHERS	0
ALL WAY STOP	0
STOP SIGN/OTHER	0
YIELD SIGN	0
CURVE SIGN	0
OFFICER /SCHOOL PAT	0
SCHOOL BUS STOP ARM	0
SCHOOL ZONE SIGN	0
R/R CROSSING DEVICE	0
NO PASSING ZONE	0
NONE	10
OTHER	0
UNKNOWN	0
TOTAL	29

ROAD CHARACTER

LEVEL STRAIGHT	27
LEVEL CURVED	2
ON GRADE STRAIGHT	0
ON GRADE CURVED	0
TOP OF HILL STRAIGHT	0
TOP OF HILL CURVED	0
BOTTOM OF HILL STRAIGHT	0
BOTTOM OF HILL CURVED	0
UNKNOWN	0
TOTAL	29

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY II - CHARACTERISTICS

APPARENT CONTRIBUTING FACTOR	DR 1	DR 2	DR 3	DR 4	DR 5	OTHER	TOTAL
HUMAN FACTORS							
NO INPROPER DRIVING	21	6	0	0	0	0	27
FAIL TO YIELD R-WAY	0	2	0	0	0	0	2
ILLEGAL UNSAFE SPEED	0	0	0	0	0	0	0
FOLLOW TOO CLOSE	1	2	0	0	0	0	3
DISREGARD TRAF CONTROL	1	1	0	0	0	0	2
DRIVING LEFT OF CENTER	0	0	0	0	0	0	0
IMPROPER PASSING	0	0	0	0	0	0	0
IMPROPER LANE CHANGE	0	1	0	0	0	0	1
IMPROPER START/STOP	1	0	0	0	0	0	1
IMPROPER TURN	1	2	0	0	0	0	3
UNSAFE BACKING	0	1	0	0	0	0	1
NO PROPER SIGNAL	0	0	0	0	0	0	0
IMPEDING TRAFFIC	0	0	0	0	0	0	0
DRIVER INATTENTION	2	8	0	0	0	0	10
DRIVER INEXPERIENCE	0	0	0	0	0	0	0
PEDESTRIAN VIOLATION	0	1	0	0	0	0	1
PHYSICAL IMPAIRMENT	0	0	0	0	0	0	0
VISION OBSCURED GLASS	0	0	0	0	0	0	0
VISION OBSCURED LIGHT	0	0	0	0	0	0	0
VISION OBSCURED OTHER	0	0	0	0	0	0	0
OTHER HUMAN FACTOR	1	0	0	0	0	0	1
HIT & RUN	0	0	0	0	0	0	0
VEHICULAR FACTORS							
DEFECTIVE BRAKES	0	0	0	0	0	0	0
DEFECTIVE TIRE	0	0	0	0	0	0	0
DEFECTIVE LIGHTS	0	0	0	0	0	0	0
DEFECTIVE SUSPENSION	0	0	0	0	0	0	0
DEFECTIVE STEERING	0	0	0	0	0	0	0
OTHER VEHICLE DEFECT	0	0	0	0	0	0	0
UNKNOWN	1	1	0	0	0	0	2
TOTAL	29	25	0	0	0	0	54

APPARENT PHYSICAL CONDITION	DR 1	DR 2	DR 3	DR 4	DR 5	OTHER	TOTAL
NORMAL	28	24	0	0	0	0	52
UNDER THE INFLUENCE	0	0	0	0	0	0	0
DRINKING	0	0	0	0	0	0	0
USING DRUGS	0	0	0	0	0	0	0
ASLEEP	0	0	0	0	0	0	0
FATIGUED	0	0	0	0	0	0	0
ILL	0	0	0	0	0	0	0
HANDICAPPED	0	0	0	0	0	0	0
OTHER/UNKNOWN	1	1	0	0	0	0	2
TOTAL	29	25	0	0	0	0	54

	TYPE OF UNIT					
AGE	DRIVER	BIKE	SNOW SLED	PED	ATV	TOTAL
9-UNDER	0	0	0	0	0	0
10-14	0	0	0	0	0	0
15-19	3	0	0	0	0	3
20-24	6	0	0	0	0	6
25-29	7	0	0	1	0	8
30-39	11	1	0	0	0	12
40-49	11	0	0	0	0	11
50-59	8	0	0	0	0	8
60-69	1	0	0	0	0	1
70-79	4	0	0	0	0	4
80-OVER	1	0	0	0	0	1
UNKNOWN	0	0	0	0	0	0
TOTAL	52	1	0	1	0	54

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY II - CHARACTERISTICS

R O A D S U R F A C E

WEATHER	LIGHT CONDITION	DRY	WET	SNOW SAND	ICE SAND	MUD	DEBRIS	OIL	SNOW	ICE	OTHER	TOTAL
CLEAR	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	9	1	1	0	0	0	0	0	0	0	11
(13)	DUSK	1	0	0	0	0	0	0	0	0	0	1
	DARK-LIGHTS	1	0	0	0	0	0	0	0	0	0	1
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
RAIN	DAWN	0	0	0	0	0	0	0	0	1	0	1
	DAYLIGHT	0	1	0	0	0	0	0	0	0	0	1
(5)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	3	0	0	0	0	0	0	0	0	3
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
SNOW	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	0	0	1	0	0	0	1	0	0	2
(2)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
SLEET/HAIL	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	1	0	0	0	0	0	0	0	0	1
(1)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
FOG/SMOG	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	0	0	0	0	0	0	0	0	0	0
(0)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0

LIGHT	
DAWN	1
DAYLIGHT	21
DUSK	1
DARK-LIGHTS	6
DARK NO LIGHTS	0
DARK LIGHTS OFF	0
OTHER	0
UNKNOWN	0
TOTAL	29

JAN 19,2001 AT 10:44

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY II - CHARACTERISTICS

WEATHER	LIGHT CONDITION	ROAD SURFACE: DRY	WET	SNOW SAND	ICE SAND	MUD	DEBRIS	OIL	SNOW	ICE	OTHER	TOTAL
CROSS WINDS	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	0	0	0	0	0	0	0	0	0	0
(0)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
SAND/DUST	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	0	0	0	0	0	0	0	0	0	0
(0)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
CLOUDY	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	5	0	0	0	0	0	0	0	0	0	5
(6)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	1	0	0	0	0	0	0	0	0	1
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
OTHER	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	0	0	0	0	0	0	0	0	1	1
(2)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	1	1
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
ROAD SURFACE TOTALS		16	7	1	1	0	0	0	1	1	2	29

JAN 19,2001 AT 10:44

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY INPUT

TYPE OF STUDY: NODES AND LINKS TYPE OF REQUEST: ACCIDENT I & II WITH LINK DETAIL

STUDY PERIOD: FROM MONTH 01 YEAR 1997 TO MONTH 12 YEAR 1999

INPUT COMMENTS

REQUEST: MARGINAL WAY BETWEEN FOREST AVE AND FRANKLIN ART.
TOWN : PORTLAND

INPUT DATA

ROUTE	COUNTY	FIRST NODE	EXCLUDE FIRST	DISTANCE	SECOND NODE	LAST NODE	EXCLUDE LAST	DISTANCE
60477	05	07254	1	0.00	09419	09420	1	0.00

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

LINK DETAIL

TOWN#	STREET NAME OR ROUTE #	LOW NODE	HIGH NODE	DISTANCE	TOTAL ACCIDENTS	INJURY ACCIDENTS K	A	B	C	PD	ACCIDENT REPORT NUMBERS		
	MARGINAL WAY	07254	09419	0.1	3	0	0	0	1	2	199725240	199825126	199833546
		08943	09419	0.1	1	0	0	0	0	1	199745215		
		08943	09420	0.1	3	0	0	1	1	1	199745455	199827542	199934028
				0.2	2	0	0	0	1	1	199805228	199932096	
				TOTALS-	9	0	0	1	3	5			

Site Code : 22222222
N-S Veh : Franklin Art./I-295
E-W Veh : Marginal Way
Counter : JLM

Primary Movements: Vehicles

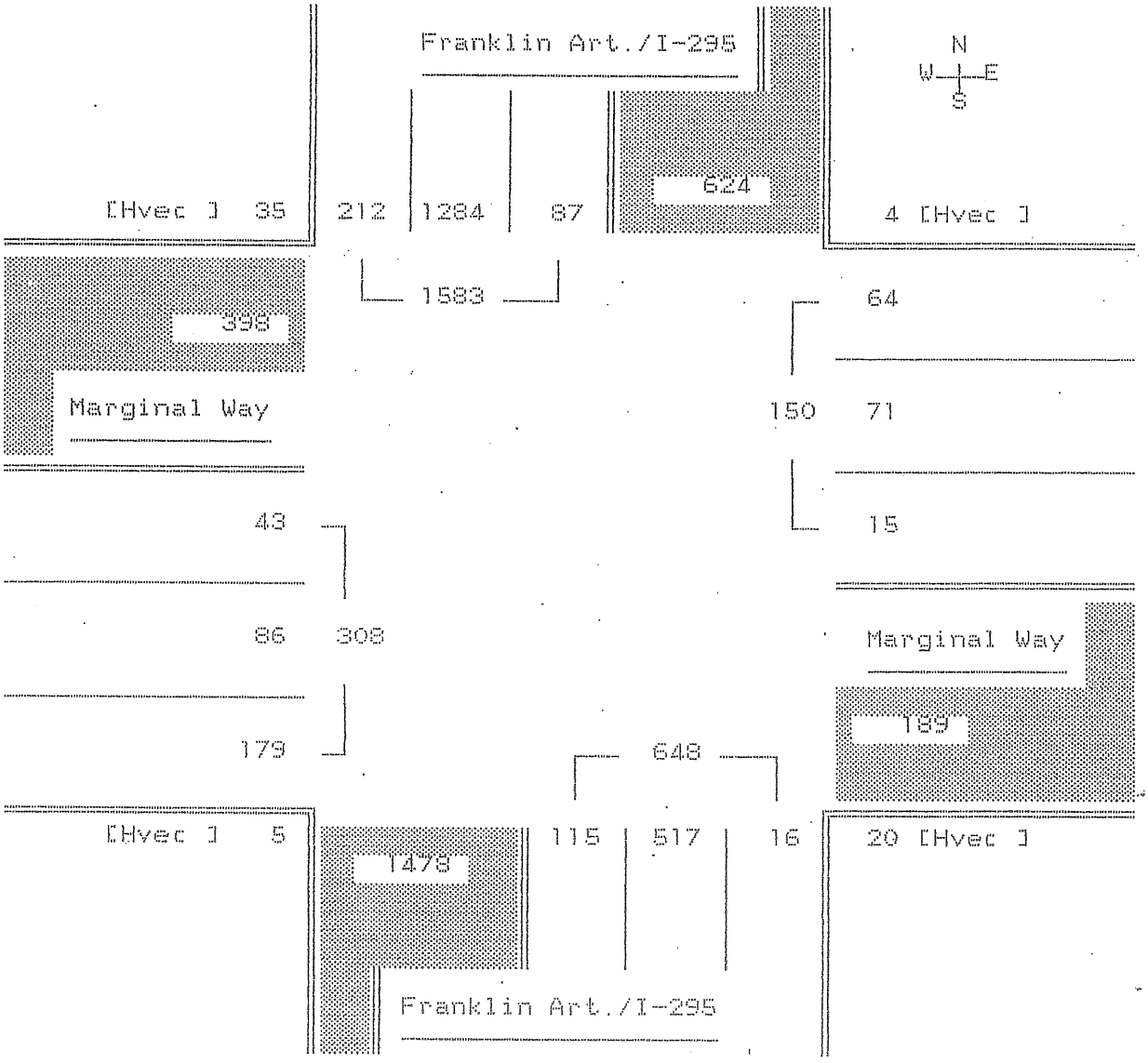
DATE: 11/15/00

PEAK PERIOD ANALYSIS FOR THE PERIOD: 7:00 AM - 9:00 AM

DIRECTION FROM	START PEAK HOUR	PEAK HR FACTOR	VOLUMES Hvec	Right	Thru	Left	Total	PERCENTS Hvec	Right	Thru	Left
North	7:30 AM	0.91	35	212	1284	87	1583	-	13	81	5
East	8:00 AM	0.78	3	62	72	19	153	-	41	47	12
South	7:30 AM	0.96	20	16	517	115	648	-	2	80	18
West	7:30 AM	0.86	5	179	86	43	308	-	58	28	14

Entire Intersection

North	7:30 AM	0.91	35	212	1284	87	1583	-	13	81	5
East		0.77	4	64	71	15	150	-	43	47	10
South		0.96	20	16	517	115	648	-	2	80	18
West		0.86	5	179	86	43	308	-	58	28	14



Portland, Me. 2000

Site Code : 22222222
N-S Veh : Franklin Art./I-295
E-W Veh : Marginal Way
Counter : JLM

PAGE: 1
FILE: fmwpm00

Primary Movements: Vehicles

DATE: 11/14/00

Time Begin	From North Hvec	RT	THRU	LT	From East Hvec	RT	THRU	LT	From South Hvec	RT	THRU	LT	From West Hvec	RT	THRU	LT	Vehicle Total	Hvec Total
3:00 PM	12	27	132	14	1	30	22	3	3	5	124	40	3	51	37	68	553	19
3:15	15	28	130	16	3	31	21	5	6	4	120	41	2	49	36	66	547	26
3:30	7	26	120	21	2	32	22	4	4	2	158	63	1	42	26	49	565	14
3:45	13	22	123	19	3	33	23	5	7	5	271	58	3	43	32	62	696	26
HR TOTAL	47	103	505	70	9	126	88	17	20	16	673	202	9	185	131	245	2361	85
4:00 PM	11	26	121	23	1	45	35	6	6	3	303	59	1	57	37	73	788	19
4:15	13	33	135	21	6	40	32	3	5	4	329	60	0	43	31	58	789	24
4:30	14	37	142	11	2	36	35	3	3	3	337	52	1	45	31	63	795	20
4:45	6	34	154	26	2	32	34	6	2	4	357	68	2	42	33	74	864	12
HR TOTAL	44	130	552	81	11	153	136	18	16	14	1326	239	4	187	132	268	3236	75
5:00 PM	6	34	166	25	2	39	37	1	2	4	425	66	3	65	30	62	954	13
5:15	7	35	165	22	2	35	28	2	1	2	380	69	1	42	26	58	864	11
5:30	11	33	119	19	3	36	22	4	2	3	306	63	2	43	30	59	737	18
5:45	4	32	127	23	1	31	19	2	2	1	260	51	1	41	31	39	657	8
HR TOTAL	28	134	577	89	8	141	106	9	7	10	1371	249	7	191	117	218	3212	50
DAY TOTAL	119	367	1634	240	28	420	330	44	43	40	3370	690	20	563	380	731	8809	210

PEAK PERIOD ANALYSIS FOR THE PERIOD: 3:00 PM - 6:00 PM

DIRECTION FROM	START PEAK HOUR	PEAK HR FACTOR	VOLUMES Hvec	Right	Thru	Left	Total	PERCENTS Hvec	Right	Thru	Left
North	4:30 PM	0.95	33	140	627	84	851	-	16	74	10
East	4:00 PM	0.89	11	153	136	18	307	-	50	44	6
South	4:30 PM	0.89	8	13	1499	255	1767	-	1	85	14
West	4:00 PM	0.88	4	187	132	268	587	-	32	22	46
Entire Intersection											
North	4:30 PM	0.95	33	140	627	84	851	-	16	74	10
East		0.94	8	142	134	12	288	-	49	47	4
South		0.89	8	13	1499	255	1767	-	1	85	14
West		0.91	7	194	120	257	571	-	34	21	45

Portland, Me. 2000

Site Code : 22222222
N-S Veh : Franklin Art./I-295
E-W Veh : Marginal Way
Counter : JLM

PAGE: 1
FILE: fmwpm00

Primary Movements: Vehicles

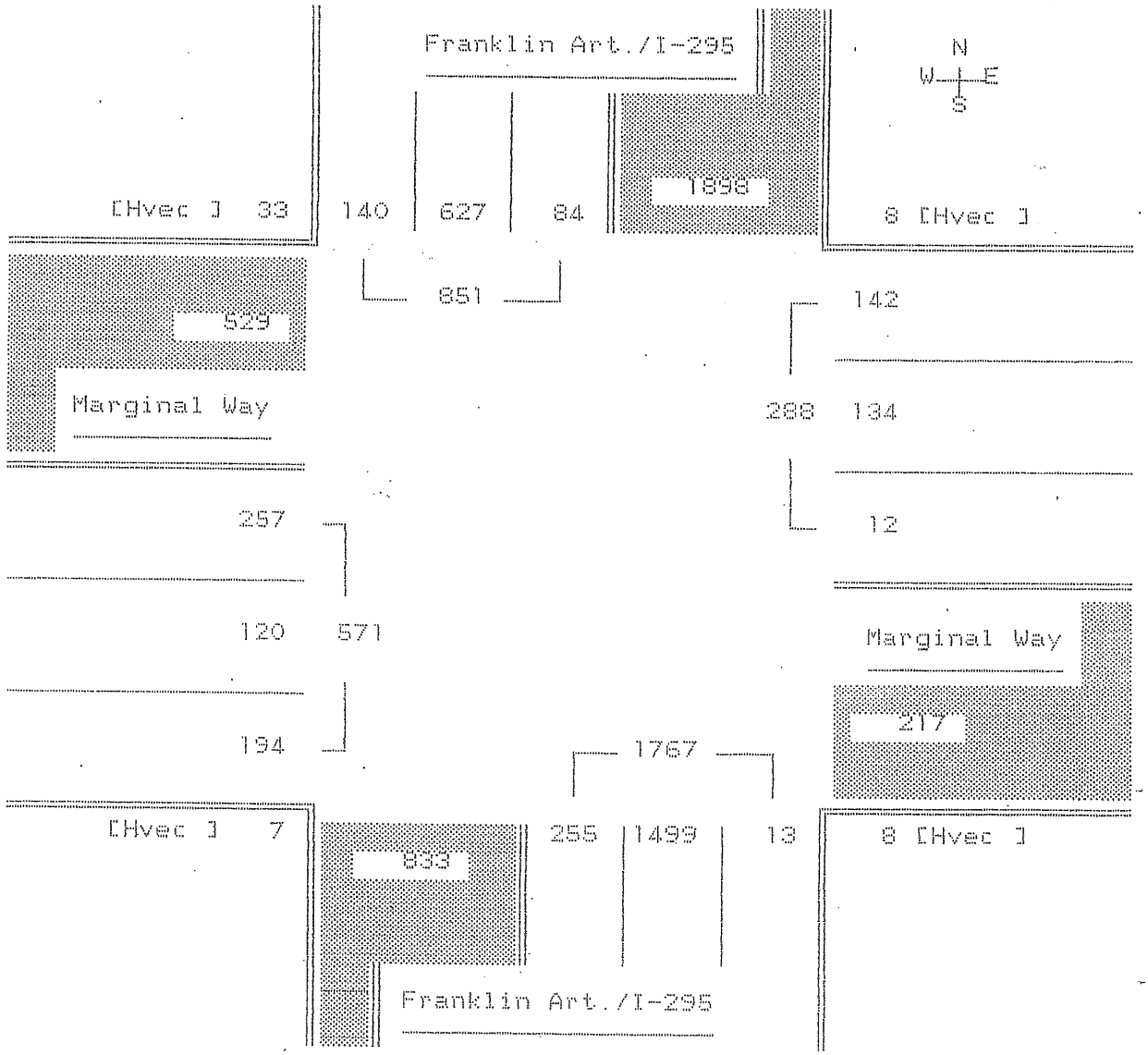
DATE: 11/14/00

PEAK PERIOD ANALYSIS FOR THE PERIOD: 3:00 PM - 6:00 PM

DIRECTION FROM	START PEAK HOUR	PEAK HR FACTOR	VOLUMES Hvec	Right	Thru	Left	Total	PERCENTS Hvec	Right	Thru	Left
North	4:30 PM	0.95	33	140	627	84	851	-	16	74	10
East	4:00 PM	0.89	11	153	136	18	307	-	50	44	6
South	4:30 PM	0.89	8	13	1499	255	1767	-	1	85	14
West	4:00 PM	0.88	4	187	132	268	587	-	32	22	46

Entire Intersection

North	4:30 PM	0.95	33	140	627	84	851	-	16	74	10
East		0.94	8	142	134	12	288	-	49	47	4
South		0.89	8	13	1499	255	1767	-	1	85	14
West		0.91	7	194	120	257	571	-	34	21	45



Site Code : 12345678
N-S Veh : Baxter Blvd.
E-W Veh : Preble St. Ext.
Counter : JLM

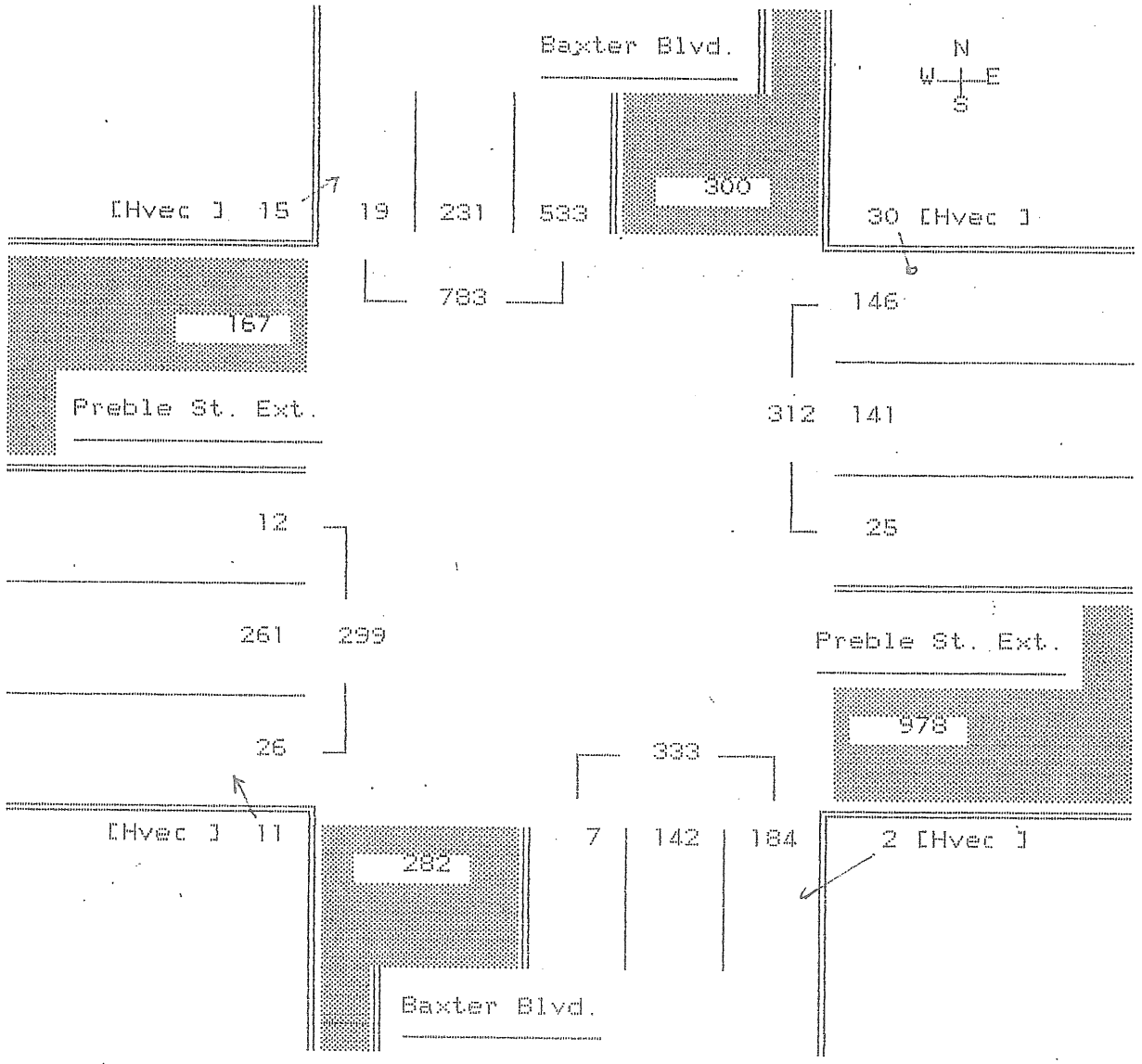
PAGE: 1
FILE: pbbam00

Primary Movements: Vehicles

DATE: 11/13/00

PEAK PERIOD ANALYSIS FOR THE PERIOD: 7:00 AM - 9:00 AM

DIRECTION FROM	START PEAK HOUR	PEAK HR FACTOR	VOLUMES Hvec	Right	Thru	Left	Total	PERCENTS Hvec	Right	Thru	Left
North	7:45 AM	0.84	13	19	228	537	784	-	2	29	68
East	7:30 AM	0.84	30	146	141	25	312	-	47	45	8
South	7:15 AM	0.81	3	167	176	8	351	-	48	50	2
West	7:30 AM	0.81	11	26	261	12	299	-	9	87	4
Entire Intersection											
North	7:30 AM	0.84	15	19	231	533	783	-	2	30	68
East		0.84	30	146	141	25	312	-	47	45	8
South		0.76	2	184	142	7	333	-	55	43	2
West		0.81	11	26	261	12	299	-	9	87	4



Portland, Me. 2000

Site Code : 87651234
N-S Veh : Baxter Blvd.
E-W Veh : Preble St. Ext.
Counter : JLM

PAGE: 1
FILE: pbbpm00

Primary Movements: Vehicles

DATE: 11/13/00

Time Begin	From North Hvec	RT	THRU	LT	From East Hvec	RT	THRU	LT	From South Hvec	RT	THRU	LT	From West Hvec	RT	THRU	LT	Vehicle Total	Hvec Total
3:30	5	5	54	70	8	82	62	17	2	12	60	5	4	12	30	5	414	19
3:45	2	1	57	62	4	96	50	15	3	16	69	6	2	10	35	13	430	11
HR TOTAL	7	6	111	132	12	178	112	32	5	28	129	11	6	22	65	18	844	30
4:00 PM	3	1	46	67	7	109	48	11	0	26	56	9	1	15	42	5	435	11
4:15	1	2	33	46	2	118	63	8	0	15	62	8	4	15	37	14	421	7
4:30	1	1	44	35	1	163	69	11	0	15	63	6	5	12	36	7	462	7
4:45	2	3	45	50	1	142	65	12	2	18	96	9	3	15	33	5	493	8
HR TOTAL	7	7	168	198	11	532	245	42	2	74	277	32	13	57	148	31	1811	33
5:00 PM	0	2	45	47	2	164	84	10	0	5	98	12	0	12	24	9	512	2
5:15	0	3	41	48	3	177	87	11	0	13	70	12	1	10	28	11	511	4
5:30	0	3	28	36	1	124	54	5	0	16	89	8	0	12	21	6	402	1
5:45	0	2	24	33	2	101	53	3	0	12	72	4	1	11	22	2	339	3
HR TOTAL	0	10	138	164	8	566	278	29	0	46	329	36	2	45	95	28	1764	10
DAY TOTAL	14	23	417	494	31	1276	635	103	7	148	735	79	21	124	308	77	4419	73

PEAK PERIOD ANALYSIS FOR THE PERIOD: 3:30 PM - 6:00 PM

DIRECTION FROM	START PEAK HOUR	PEAK HR FACTOR	VOLUMES Hvec	Right	Thru	Left	Total	PERCENTS Hvec	Right	Thru	Left
North	3:30 PM	0.86	11	9	190	245	444	-	2	43	55
East	4:30 PM	0.90	7	646	305	44	995	-	65	31	4
South	4:45 PM	0.91	2	52	353	41	446	-	12	79	9
West	3:45 PM	0.91	12	52	150	39	241	-	22	62	16

Entire Intersection

North	4:30 PM	0.93	3	9	175	180	364	-	2	48	49
East		0.90	7	646	305	44	995	-	65	31	4
South		0.85	2	51	327	39	417	-	12	78	9
West		0.92	9	49	121	32	202	-	24	60	16

Portland, Me. 2000

Site Code : 87651234
N-S Veh : Baxter Blvd.
E-W Veh : Preble St. Ext.
Counter : JLM

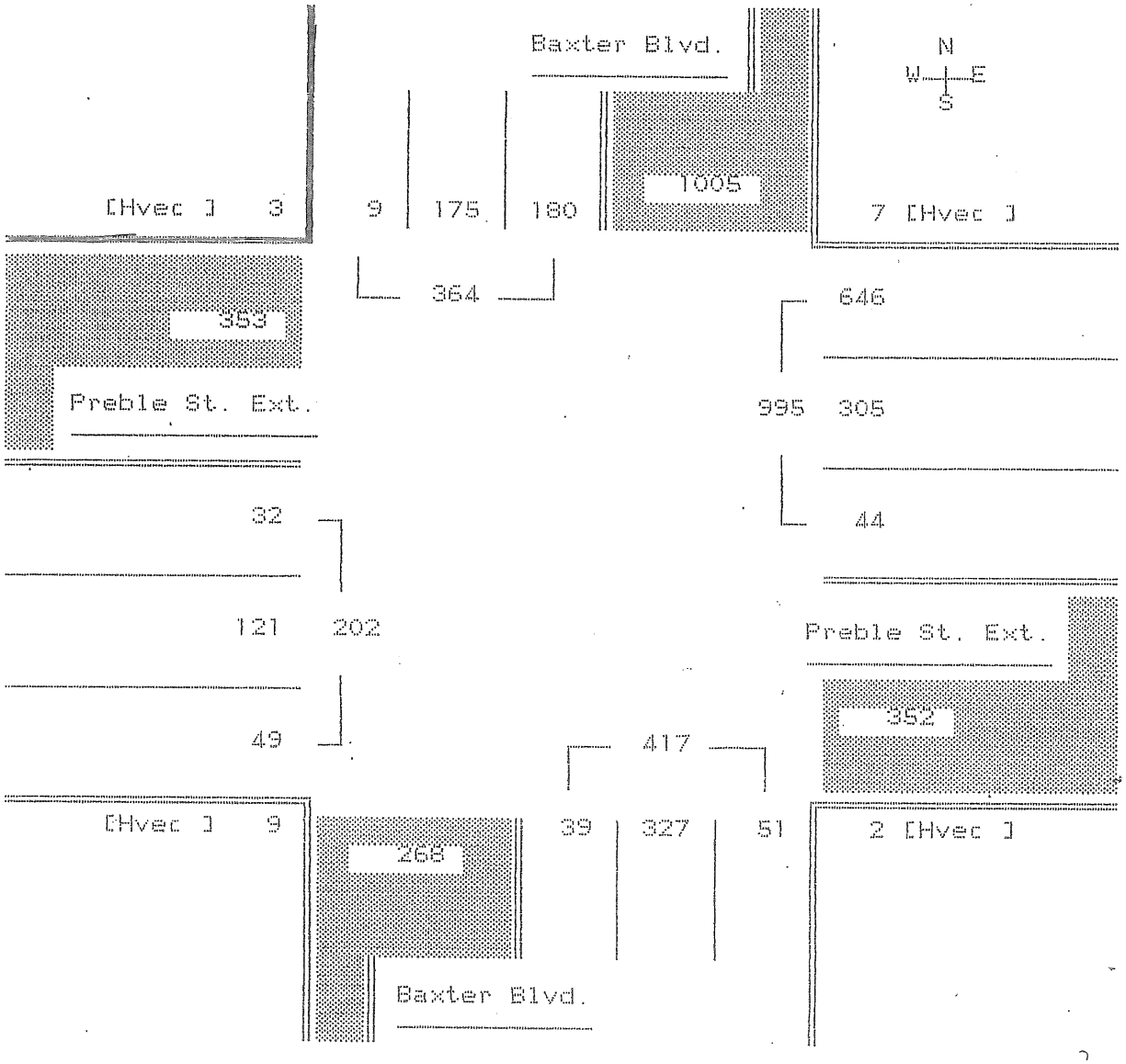
PAGE: 1
FILE: pbbpm00

Primary Movements: Vehicles

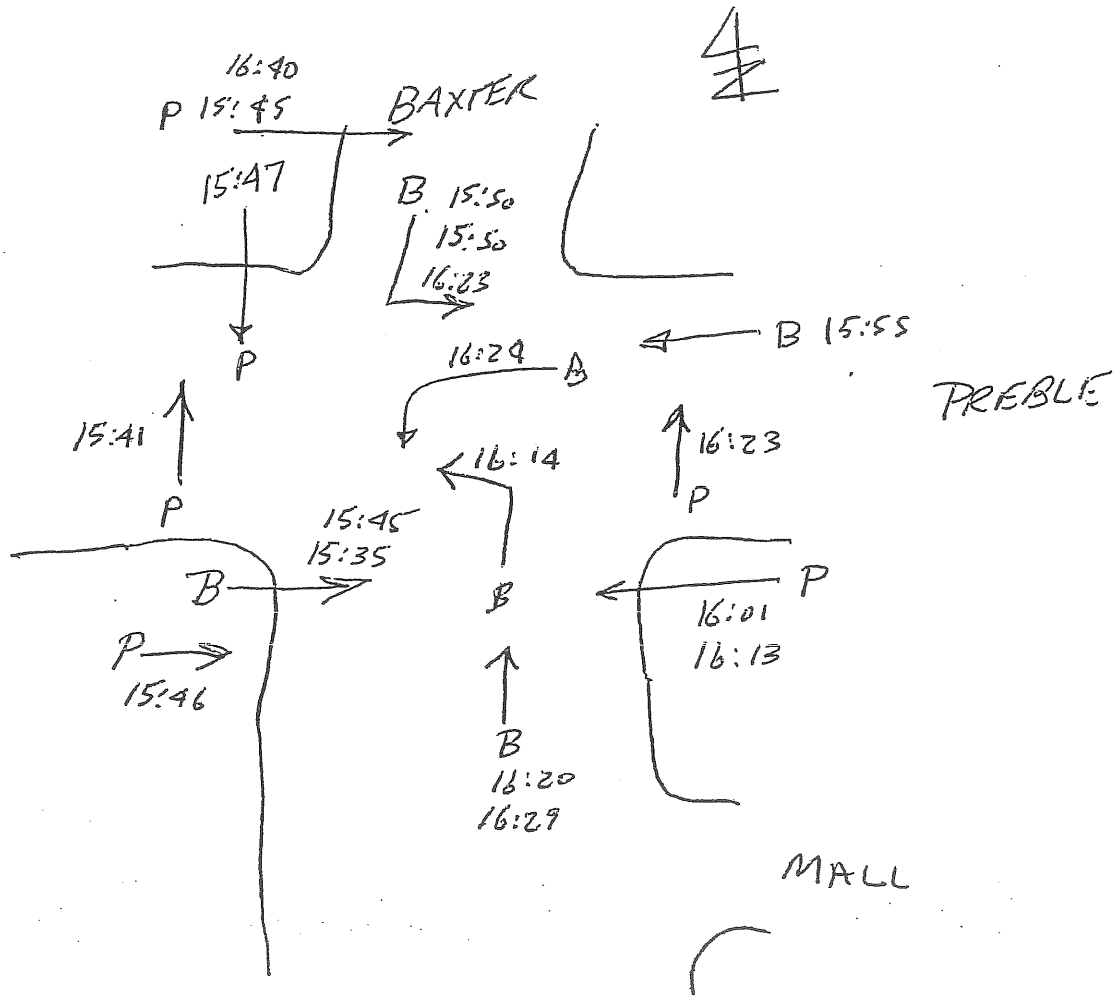
DATE: 11/13/00

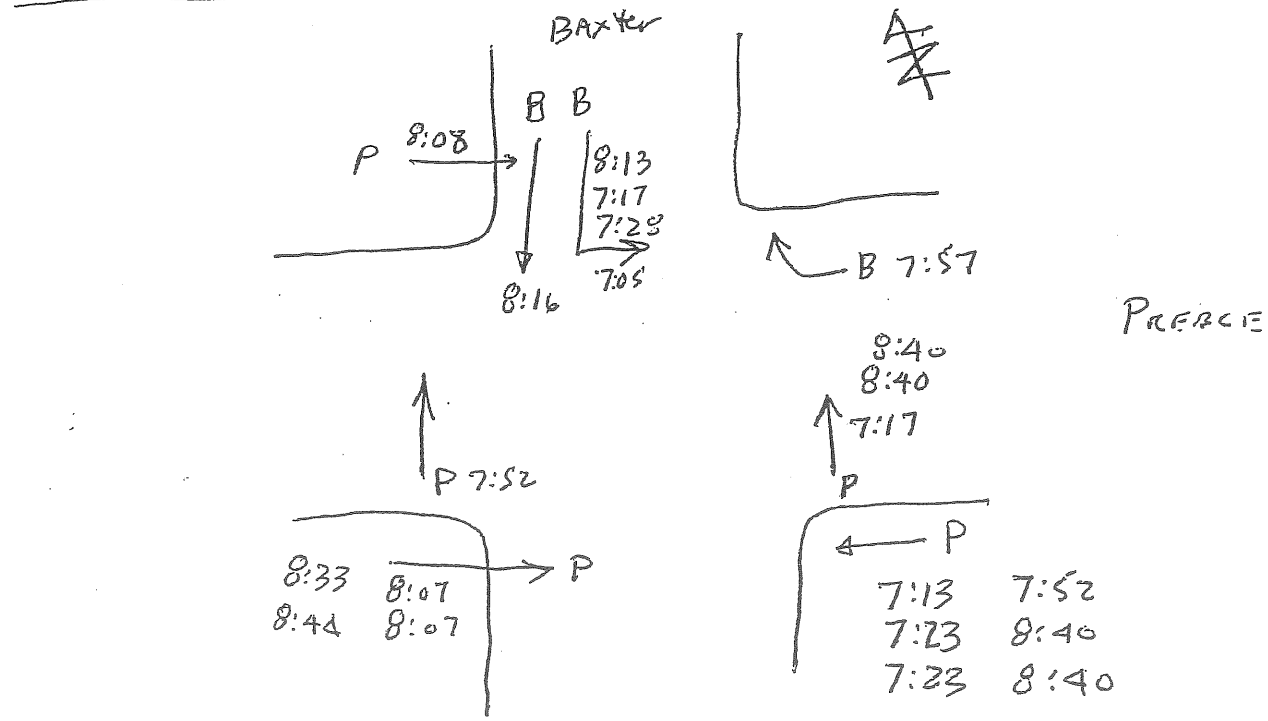
PEAK PERIOD ANALYSIS FOR THE PERIOD: 3:30 PM - 6:00 PM

DIRECTION FROM	START PEAK HOUR	PEAK HR FACTOR	VOLUMES Hvec	Right	Thru	Left	Total	PERCENTS Hvec	Right	Thru	Left
North	3:30 PM	0.86	11	9	190	245	444	-	2	43	55
East	4:30 PM	0.90	7	646	305	44	995	-	65	31	4
South	4:45 PM	0.91	2	52	353	41	446	-	12	79	9
West	3:45 PM	0.91	12	52	150	39	241	-	22	62	16
Entire Intersection											
North	4:30 PM	0.93	3	9	175	180	364	-	2	48	49
East		0.90	7	646	305	44	995	-	65	31	4
South		0.85	2	51	327	39	417	-	12	78	9
West		0.92	9	49	121	32	202	-	24	60	16



PEDS = P BIKE = B


16:40
P 15:45
BAXTER
15:47
B 15:50
15:50
16:23
P
B 15:55
16:29
B
PREBLE
15:41
P
16:14
16:23
P
15:45
15:35
B
P
P
15:46
16:01
16:13
B
16:20
16:29
MALL


BAXter
B B
P 8:08
8:13
7:17
7:23
7:05
8:16
B 7:57
PIERCE
8:40
8:40
7:17
P
P 7:52
P
8:33 8:07
8:44 8:07
P
7:13 7:52
7:23 8:40
7:23 8:40

Preble St./Marginal Way Office Developme

November 14, 2000

Counter: DB400
Counted By: Shirley Mooers/Jill Gorneau
Weather: Raining
Preble St./Marginal Way, Portland, Maine

7:00-9:00 AM and 3:30-6:00 PM Cars and Trucks

File Name : PrebleMarginalOffice.n14
Site Code : 00000000
Start Date : 11/14/2000
Page No : 1

Groups Printed- Unshifted - Bank 1

	PREBLE STREET From North					MARGINAL WAY From East					PREBLE STREET From South					MARGINAL WAY From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
07:00 AM	5	58	41	0	104	19	25	27	0	71	2	11	9	0	22	1	29	7	0	37	234
07:15 AM	9	119	46	0	174	22	23	25	0	70	4	19	7	0	30	2	28	9	0	39	313
07:30 AM	19	164	79	0	262	39	39	37	0	115	2	22	16	0	40	2	33	16	0	51	468
07:45 AM	23	252	95	0	370	40	40	43	3	126	4	40	23	0	67	1	39	10	0	50	613
Total	56	593	261	0	910	120	127	132	3	382	12	92	55	0	159	6	129	42	0	177	1628
08:00 AM	23	162	91	0	276	21	43	40	0	104	5	36	11	0	52	3	40	11	0	54	486
08:15 AM	12	142	74	0	228	33	45	43	0	121	8	40	10	0	58	4	36	12	0	52	459
08:30 AM	15	124	67	0	206	32	34	16	0	82	4	33	11	0	48	1	41	12	0	54	390
08:45 AM	7	117	69	0	193	39	48	22	0	109	11	43	17	0	71	2	32	9	0	43	416
Total	57	545	301	0	903	125	170	121	0	416	28	152	49	0	229	10	149	44	0	203	1751
03:30 PM	8	46	53	1	108	78	55	12	0	145	5	76	26	0	107	1	45	27	0	73	433
03:45 PM	11	56	73	1	141	60	44	10	0	114	11	66	26	0	103	1	42	16	0	59	417
Total	19	102	126	2	249	138	99	22	0	259	16	142	52	0	210	2	87	43	0	132	850
04:00 PM	8	50	72	1	131	90	48	5	0	143	16	101	32	1	150	2	38	16	2	58	482
04:15 PM	16	42	62	1	121	78	59	11	0	148	19	107	33	3	162	6	39	6	0	51	482
04:30 PM	10	47	55	2	114	60	46	9	2	117	34	153	32	1	220	1	33	11	0	45	496
04:45 PM	11	58	59	1	129	69	47	13	1	130	30	170	40	3	243	0	57	14	0	71	573
Total	45	197	248	5	495	297	200	38	3	538	99	531	137	8	775	9	167	47	2	225	2033
05:00 PM	6	50	65	1	122	60	54	9	1	124	30	174	39	2	245	1	47	25	1	74	565
05:15 PM	4	42	71	0	117	63	46	9	1	119	43	208	53	4	308	2	47	12	0	61	605
05:30 PM	9	45	50	1	105	65	58	11	0	134	25	102	34	0	161	0	30	15	0	45	445
05:45 PM	8	39	50	1	98	59	26	7	1	93	20	102	29	1	152	0	38	6	1	45	388
Total	27	176	236	3	442	247	184	36	3	470	118	586	155	7	866	3	162	58	2	225	2003
Grand Total	204	1613	1172	10	2999	927	780	349	9	2065	273	1503	448	15	2239	30	694	234	4	962	8265
Apprch %	6.8	53.8	39.1	0.3		44.9	37.8	16.9	0.4		12.2	67.1	20.0	0.7		3.1	72.1	24.3	0.4		
Total %	2.5	19.5	14.2	0.1	36.3	11.2	9.4	4.2	0.1	25.0	3.3	18.2	5.4	0.2	27.1	0.4	8.4	2.8	0.0	11.6	

432
0 x 13.5

Preble St./Marginal Way Office Developme

November 14, 2000
7:00-9:00 AM and 3:30-6:00 PM

Counter: DB400
Counted By: Shirley Mooers/Jill Gorneau
Weather: Raining
Preble St./Marginal Way, Portland, Maine

Trucks

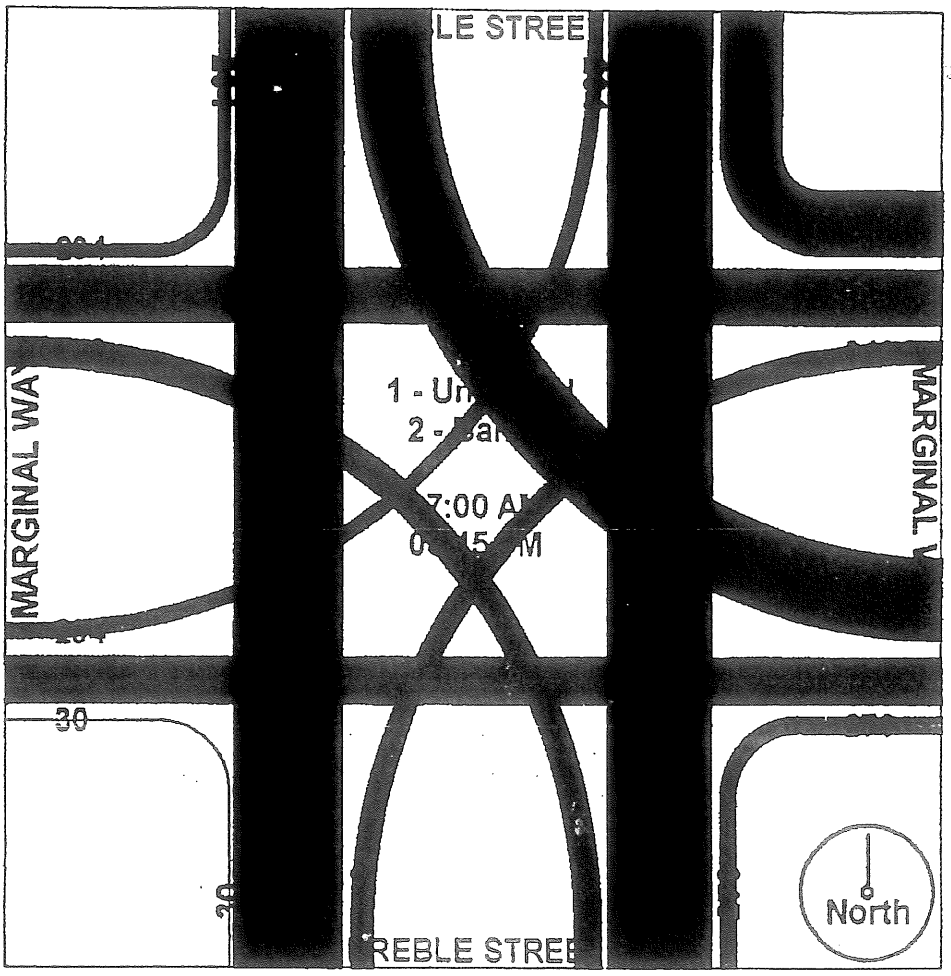
File Name : PrebleMarginalOffice.n14
Site Code : 00000000
Start Date : 11/14/2000
Page No : 1

Groups Printed- Bank 1

	PREBLE STREET From North					MARGINAL WAY From East					PREBLE STREET From South					MARGINAL WAY From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
07:00 AM	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	2	1	0	3	5
07:15 AM	0	1	1	0	2	1	0	0	0	1	1	1	0	0	2	0	4	1	0	5	10
07:30 AM	2	0	1	0	3	4	3	0	0	7	0	0	2	0	2	0	1	2	0	3	15
07:45 AM	2	1	0	0	3	4	2	0	0	6	1	4	2	0	7	0	2	0	0	2	18
Total	4	2	4	0	10	9	5	0	0	14	2	5	4	0	11	0	9	4	0	13	48
08:00 AM	2	1	2	0	5	1	0	2	0	3	0	0	0	0	0	0	1	4	0	5	13
08:15 AM	1	1	2	0	4	3	3	2	0	8	1	1	0	0	2	0	2	3	0	5	19
08:30 AM	0	1	0	0	1	2	1	1	0	4	0	0	0	0	0	0	6	0	0	6	11
08:45 AM	1	1	2	0	4	1	4	0	0	5	5	4	1	0	10	0	1	2	0	3	22
Total	4	4	6	0	14	7	8	5	0	20	6	5	1	0	12	0	10	9	0	19	65
03:30 PM	0	1	0	0	1	1	1	1	0	3	0	1	1	0	2	0	5	0	0	5	11
03:45 PM	0	0	2	0	2	0	1	0	0	1	2	0	2	0	4	0	2	0	0	2	9
Total	0	1	2	0	3	1	2	1	0	4	2	1	3	0	6	0	7	0	0	7	20
04:00 PM	0	2	2	0	4	2	1	1	0	4	0	0	0	0	0	0	2	1	0	3	11
04:15 PM	1	0	1	0	2	0	2	0	0	2	1	0	1	0	2	0	0	0	0	0	6
04:30 PM	0	0	1	0	1	1	2	2	0	5	0	0	0	0	0	0	2	0	0	2	8
04:45 PM	1	0	1	0	2	1	1	1	0	3	1	0	2	0	3	0	1	1	0	2	10
Total	2	2	5	0	9	4	6	4	0	14	2	0	3	0	5	0	5	2	0	7	35
05:00 PM	0	1	0	0	1	1	4	0	0	5	0	0	0	0	0	0	2	0	0	2	8
05:15 PM	0	0	1	0	1	0	0	0	0	0	1	1	1	0	3	0	1	0	0	1	5
05:30 PM	0	0	0	0	0	2	3	0	0	5	0	0	1	0	1	0	3	0	0	3	9
05:45 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	3	0	0	3	4
Total	0	1	1	0	2	4	7	0	0	11	1	1	2	0	4	0	9	0	0	9	26
Grand Total	10	10	18	0	38	25	28	10	0	63	13	12	13	0	38	0	40	15	0	55	194
Apprch %	26.3	26.3	47.4	0.0		39.7	44.4	15.9	0.0		34.2	31.6	34.2	0.0		0.0	72.7	27.3	0.0		
Total %	5.2	5.2	9.3	0.0	19.6	12.9	14.4	5.2	0.0	32.5	6.7	6.2	6.7	0.0	19.6	0.0	20.6	7.7	0.0	28.4	

Preble St./Marginal Way Office Developme
November 14, 2000
7:00-9:00 AM and 3:30-6:00 PM
Cars and Trucks

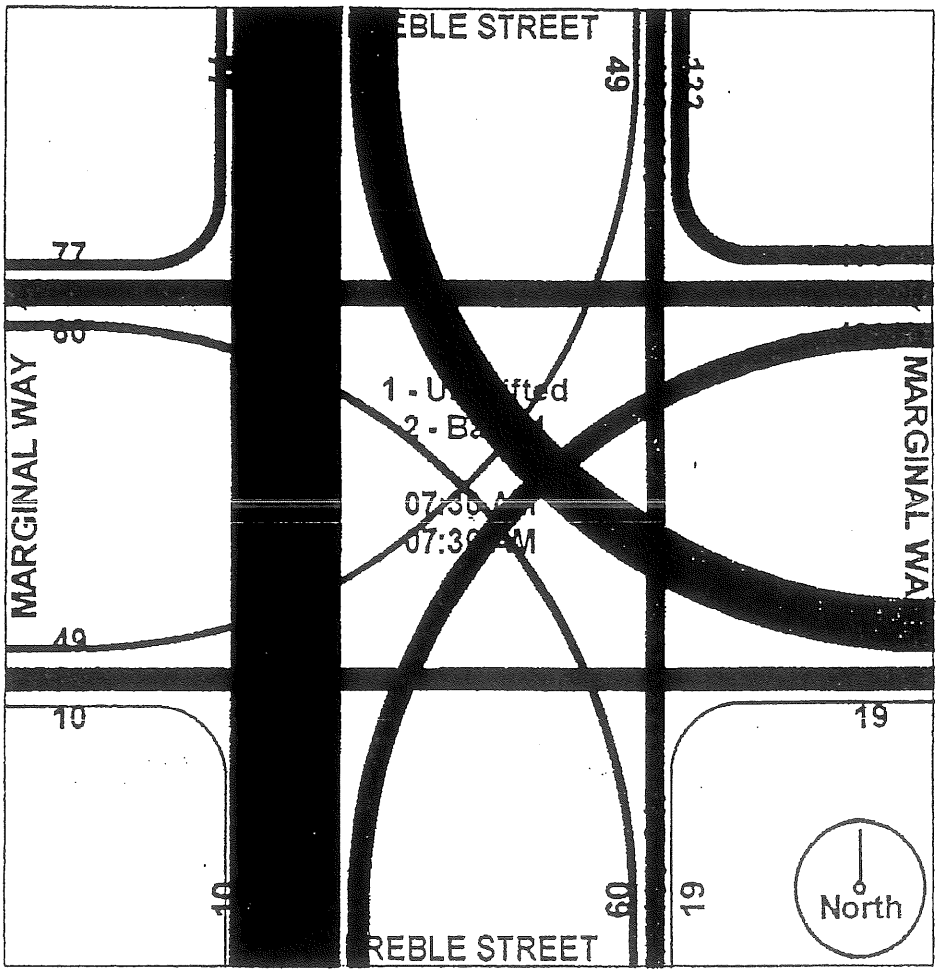
File Name : PrebleMarginalOffice.n14
Site Code : 00000000
Start Date : 11/14/2000
Page No : 2



	PREBLE STREET From North					MARGINAL WAY From East					PREBLE STREET From South					MARGINAL WAY From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Intersection	07:30 AM																				
Volume	77	720	339	0	1136	133	167	163	3	466	19	138	60	0	217	10	148	49	0	207	2026
Percent	6.8	63.4	29.8	0.0		28.5	35.8	35.0	0.6		8.8	63.6	27.6	0.0		4.8	71.5	23.7	0.0		
07:45 Volume	23	252	95	0	370	40	40	43	3	126	4	40	23	0	67	1	39	10	0	50	613
Peak Factor																					0.826
High Int.	07:45 AM					07:45 AM					07:45 AM					08:00 AM					
Volume	23	252	95	0	370	40	40	43	3	126	4	40	23	0	67	3	40	11	0	54	
Peak Factor					0.768					0.925					0.810					0.958	

Preble St./Marginal Way Office Developme
November 14, 2000
7:00-9:00 AM and 3:30-6:00 PM
Cars and Trucks

File Name : PrebleMarginalOffice.n14
Site Code : 00000000
Start Date : 11/14/2000
Page No : 3



Peak Hour From 03:30 PM to 05:45 PM - Peak 1 of 1

Intersection	04:30 PM																				
Volume	31	197	250	4	482	252	193	40	5	490	137	705	164	10	1016	4	184	62	1	251	2239
Percent	6.4	40.9	51.9	0.8		51.4	39.4	8.2	1.0		13.5	69.4	16.1	1.0		1.6	73.3	24.7	0.4		
05:15 Volume	4	42	71	0	117	63	46	9	1	119	43	208	53	4	308	2	47	12	0	61	605
Peak Factor																					0.925
High Int.	04:45 PM					04:45 PM					05:15 PM					05:00 PM					
Volume	11	58	59	1	129	69	47	13	1	130	43	208	53	4	308	1	47	25	1	74	
Peak Factor					0.934					0.942					0.825					0.849	

S↻ W↻ N↻ E↻

Site Code : 22222222
N-S Veh : Forest Ave
E-W Veh : Marginal Way/State St.
Counter : JLM

Primary Movements: Vehicles

DATE: 11/09/00

Time Begin	From North hvec	RT	THRU	LT	From East hvec	RT	THRU	LT	From South hvec	RT	THRU	LT	From West hvec	RT	THRU	LT	Vehicle Total	hvec Total
7:00 AM	9	142	121	21	1	50	12	2	2	10	189	0	0	0	0	0	547	12
7:15	15	154	144	26	0	61	16	1	1	11	220	0	0	0	0	0	633	16
7:30	12	186	187	25	0	72	19	4	3	12	298	1	0	0	0	0	804	15
7:45	13	197	210	19	0	71	23	5	0	10	340	0	0	0	0	0	875	13
HR TOTAL	49	679	662	91	1	254	70	12	6	43	1047	1	0	0	0	0	2859	56
8:00 AM	15	211	218	33	1	73	25	3	1	8	303	0	0	0	0	0	874	17
8:15	11	213	190	35	0	76	19	3	2	14	239	0	0	0	0	0	789	13
8:30	12	167	166	25	0	73	20	1	2	13	279	1	0	0	0	0	745	14
8:45	10	134	144	16	0	62	30	3	0	13	288	0	0	0	0	0	690	10
HR TOTAL	48	725	718	109	1	284	94	10	5	48	1109	1	0	0	0	0	3098	54
DAY TOTAL	97	1404	1380	200	2	538	164	22	11	91	2156	2	0	0	0	0	5957	110

PEAK PERIOD ANALYSIS FOR THE PERIOD: 7:00 AM - 9:00 AM

DIRECTION FROM	START PEAK HOUR	PEAK HR FACTOR	VOLUMES hvec	Right	Thru	Left	Total	PERCENTS hvec	Right	Thru	Left
North	7:30 AM	0.93	51	807	805	112	1724	-	47	47	6
East	7:30 AM	0.97	1	292	86	15	393	-	74	22	4
South	7:30 AM	0.88	6	44	1180	1	1225	-	4	96	0
West	7:30 AM	0.00	0	0	0	0	0	-	0	0	0

Entire Intersection

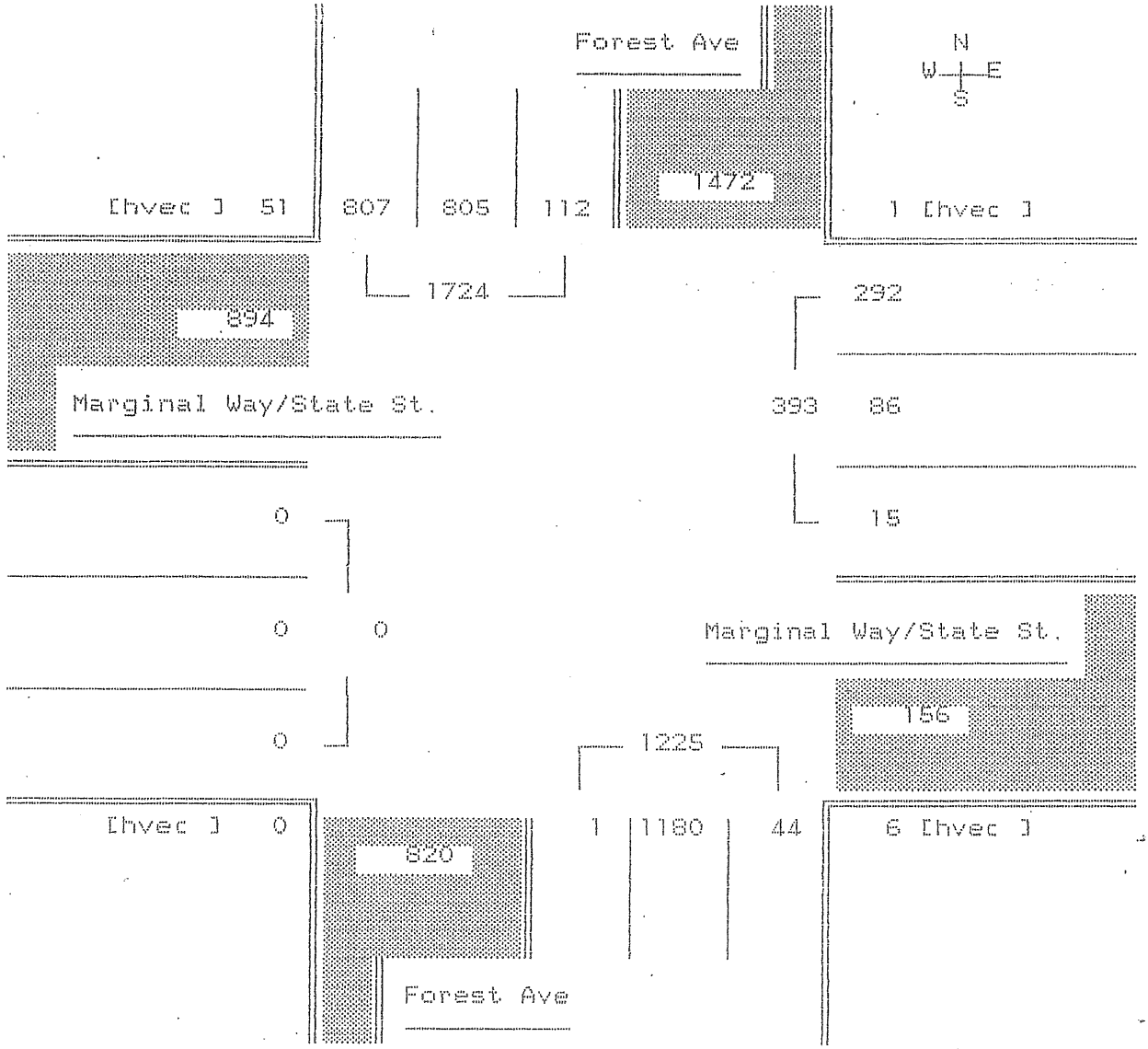
North	7:30 AM	0.93	51	807	805	112	1724	-	47	47	6
East		0.97	1	292	86	15	393	-	74	22	4
South		0.88	6	44	1180	1	1225	-	4	96	0
West		0.00	0	0	0	0	0	-	0	0	0

N-S Veh : Forest Ave
E-W Veh : Marginal Way/State St.
Counter : JLM

Primary Movements: Vehicles

PEAK PERIOD ANALYSIS FOR THE PERIOD: 7:00 AM - 9:00 AM

DIRECTION FROM	START PEAK HOUR	PEAK HR FACTOR	VOLUMES hvec	Right	Thru	Left	Total	PERCENTS hvec	Right	Thru	Left
North	7:30 AM	0.93	51	807	805	112	1724	-	47	47	6
East	7:30 AM	0.97	1	292	86	15	393	-	74	22	4
South	7:30 AM	0.88	6	44	1180	1	1225	-	4	96	0
West	7:30 AM	0.00	0	0	0	0	0	-	0	0	0
Entire Intersection											
North	7:30 AM	0.93	51	807	805	112	1724	-	47	47	6
East		0.97	1	292	86	15	393	-	74	22	4
South		0.88	6	44	1180	1	1225	-	4	96	0
West		0.00	0	0	0	0	0	-	0	0	0



Site Code : 22222222
N-S Veh : Forest Ave
E-W Veh : Marginal Way/State St.
Counter : JLM

PAGE: 1
FILE: mwpm00

Primary Movements: Vehicles

DATE: 11/09/00

Time Begin	From North hvec	RT	THRU	LT	From East hvec	RT	THRU	LT	From South hvec	RT	THRU	LT	From West hvec	RT	THRU	LT	Vehicle Total	hvec Total
3:00 PM	9	172	112	20	1	60	22	3	6	10	304	0	0	0	0	0	703	16
3:15	5	174	100	19	0	69	36	2	5	11	320	0	0	0	0	0	731	10
3:30	5	186	110	25	0	66	39	4	3	12	358	0	0	0	0	0	800	8
3:45	3	197	110	29	0	73	33	5	4	11	340	0	0	0	0	0	798	7
HR TOTAL	22	729	432	93	1	268	130	14	18	44	1322	0	0	0	0	0	3032	41
4:00 PM	9	211	121	34	1	88	42	8	5	16	393	0	0	0	0	0	913	15
4:15	5	213	136	24	0	94	50	3	9	18	331	0	0	0	0	0	869	14
4:30	4	227	122	29	0	93	55	4	7	13	389	0	0	0	0	0	932	11
4:45	6	234	114	26	0	97	45	4	4	12	411	0	0	0	0	0	943	10
HR TOTAL	24	885	493	113	1	372	192	19	25	59	1524	0	0	0	0	0	3657	50
5:00 PM	2	234	113	22	1	101	60	5	3	11	431	0	0	0	0	0	977	6
5:15	7	265	115	22	0	98	34	3	5	17	445	0	0	0	0	0	999	12
5:30	3	233	111	19	0	86	42	5	4	12	420	0	0	0	0	0	928	7
5:45	4	202	103	12	1	61	38	3	2	9	325	0	0	0	0	0	753	7
HR TOTAL	16	934	442	75	2	346	174	16	14	49	1621	0	0	0	0	0	3657	32
DAY TOTAL	62	2548	1367	281	4	986	496	49	57	152	4467	0	0	0	0	0	10346	123

PEAK PERIOD ANALYSIS FOR THE PERIOD: 3:00 PM - 6:00 PM

DIRECTION FROM	START PEAK HOUR	PEAK HR FACTOR	VOLUMES hvec	Right	Thru	Left	Total	PERCENTS hvec	Right	Thru	Left
North	4:30 PM	0.95	19	960	464	99	1523	-	63	30	7
East	4:15 PM	0.92	1	385	210	16	611	-	63	34	3
South	4:45 PM	0.95	16	52	1707	0	1759	-	3	97	0
West	4:45 PM	0.00	0	0	0	0	0	-	0	0	0

Entire Intersection

North	4:30 PM	0.95	19	960	464	99	1523	-	63	30	7
East		0.90	1	389	194	16	599	-	65	32	3
South		0.94	19	53	1676	0	1729	-	3	97	0
West		0.00	0	0	0	0	0	-	0	0	0

Site Code : 22222222
N-S Veh : Forest Ave
E-W Veh : Marginal Way/State St.
Counter : JLM

Primary Movements: Vehicles

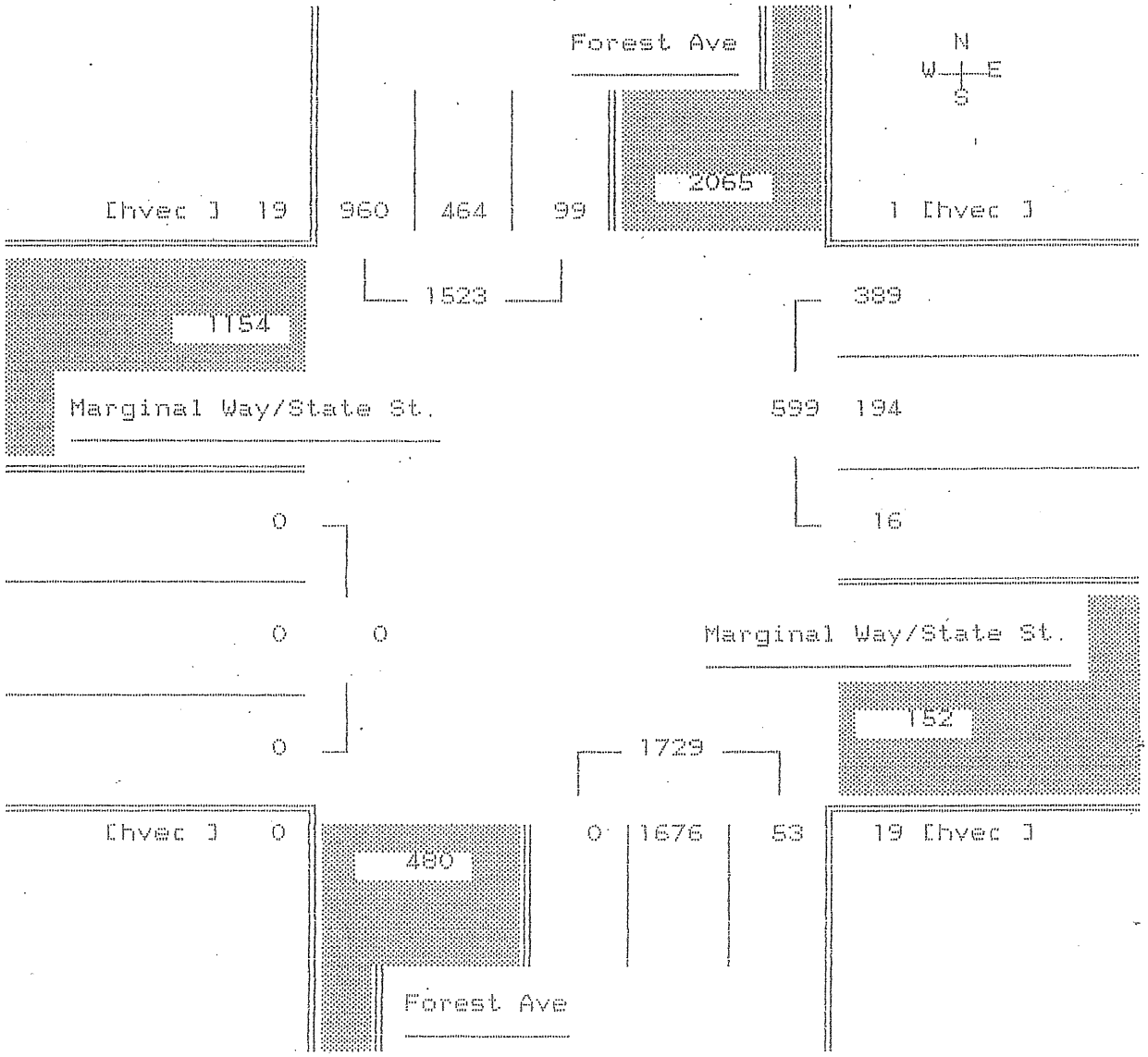
DATE: 11/09/00

PEAK PERIOD ANALYSIS FOR THE PERIOD: 3:00 PM - 6:00 PM

DIRECTION FROM	START PEAK HOUR	PEAK HR FACTOR	VOLUMES hvec	Right	Thru	Left	Total	PERCENTS hvec	Right	Thru	Left
North	4:30 PM	0.95	19	960	464	99	1523	-	63	30	7
East	4:15 PM	0.92	1	385	210	16	611	-	63	34	3
South	4:45 PM	0.95	16	52	1707	0	1759	-	3	97	0
West	4:45 PM	0.00	0	0	0	0	0	-	0	0	0

Entire Intersection

North	4:30 PM	0.95	19	960	464	99	1523	-	63	30	7
East		0.90	1	389	194	16	599	-	65	32	3
South		0.94	19	53	1676	0	1729	-	3	97	0
West		0.00	0	0	0	0	0	-	0	0	0



Mitchell
& Associates
LANDSCAPE ARCHITECTS

The Staples School
70 Center Street
Portland, Maine 04101
P: 207.774.4427
F: 207.874.2460
www.mitchellassociates.biz

January 24, 2008

Rick Knowland, Senior Planner
Portland Planning Department
389 Congress Street, 4th Floor
Portland, Maine 04101

RE: 84 Marginal Way
De Minimis Change Request
Atlantic Bayside Trust, f/k/a Capital LLC

Dear Rick:

Mitchell & Associates, on behalf of Atlantic Bayside Trust, is submitting for a De Minimis change request for the 84 Marginal Way project which received approval on January 9, 2007 and amended approval on March 27, 2007. The De Minimis change request is for installation of a standby emergency generator to be located along the rear of the building facing I-295.

The standby emergency generator specified is manufactured by Caterpillar and is 500 eKW. It will operate once weekly, to maintain the manufacturer's warranty, for a period of 15 minutes between 4pm and 6pm. The times have been coordinated with rush hour to minimize the noise disturbance. The generator will have a C15 Sound Attenuated Enclosure to bring the decibel level to 75.8 dBA at a distance of 7 meters (23 feet). All exhaust discharge from the equipment is vertical. To supplement screening from Preble Street Extension, we have provided additional shrubs as shown on the attached sketch. Please see attached cut-sheets for information and site layout plan for location.

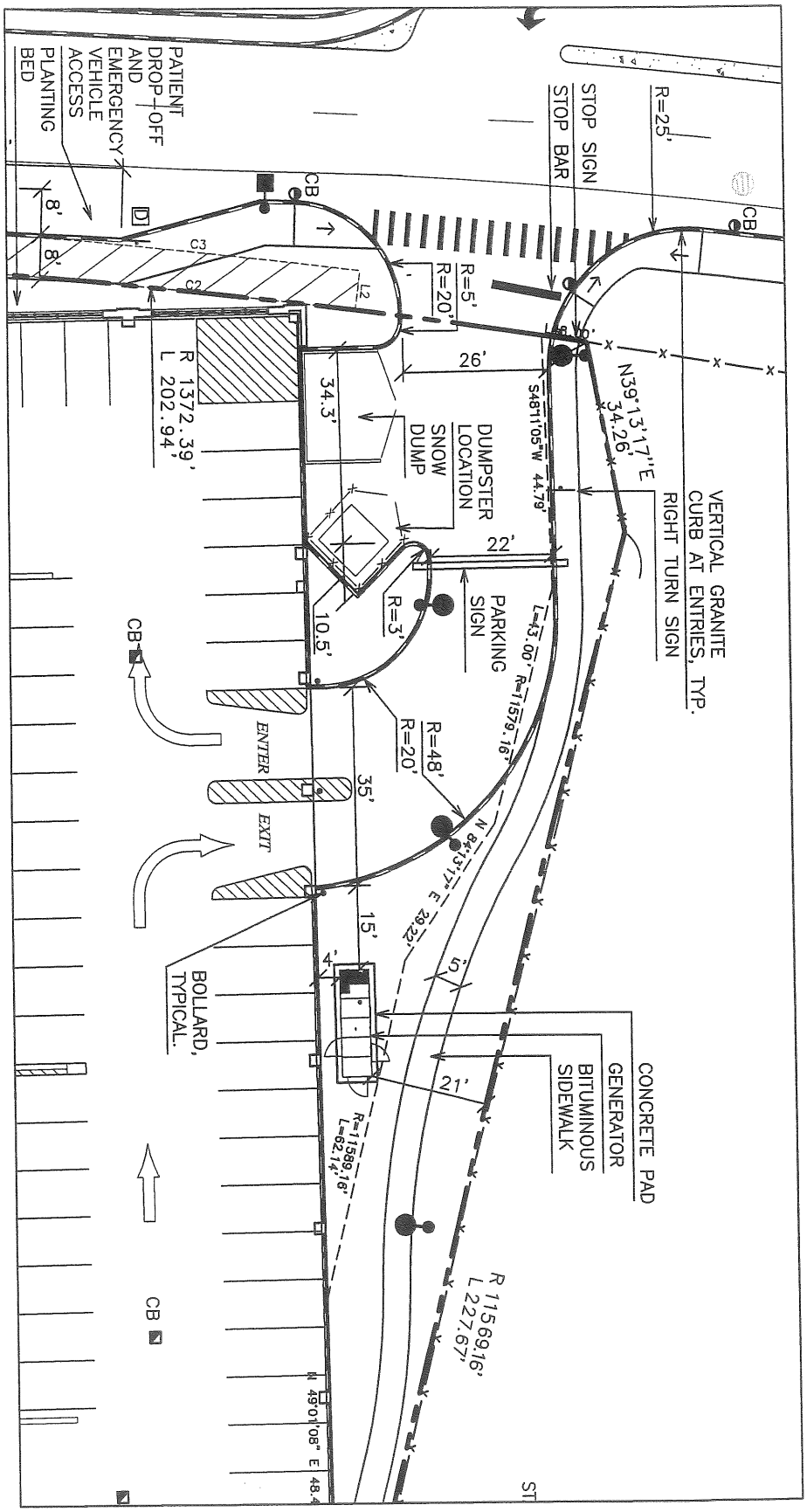
Should you require additional information, please feel free to contact me.

Sincerely,
Mitchell & Associates

Bob Metcalf

Enclosure

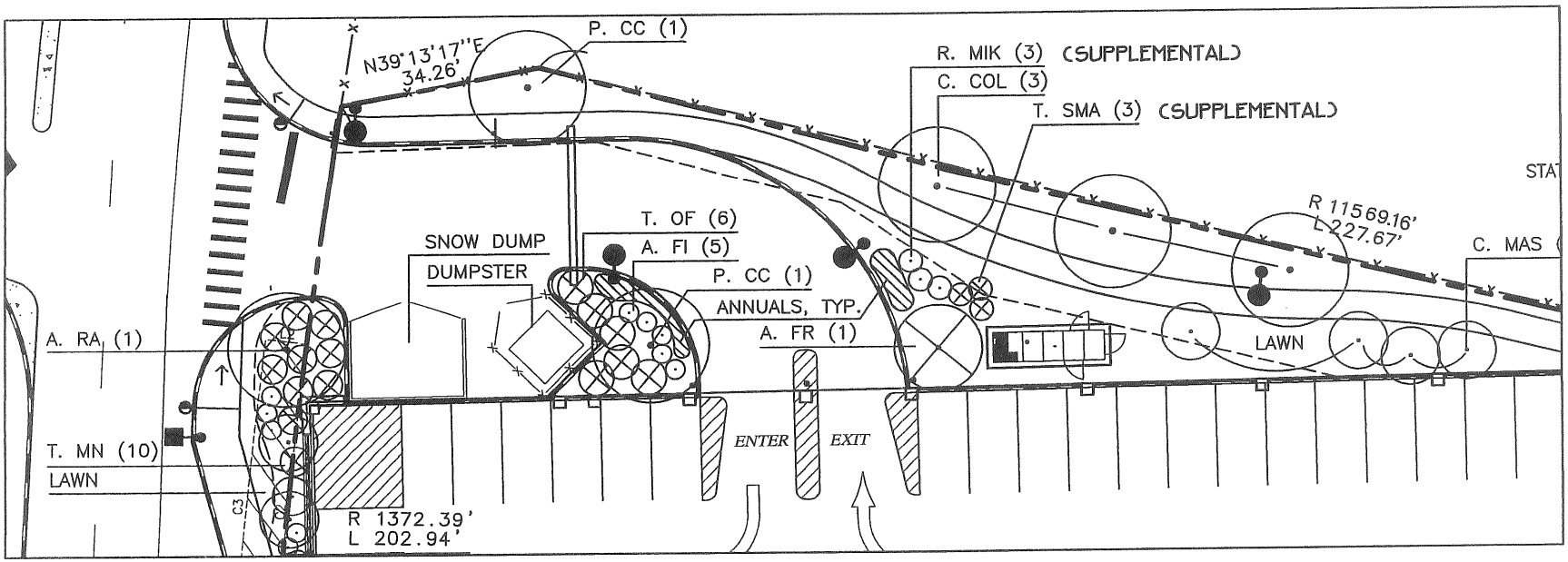
cc. Ed Marsh, Atlantic Bayside Trust
Pat Keating, Pizzagalli Construction
Judy Johnson, Harriman Associates



Mitchell & Associates Landscape Architects 70 Center Street Portland, Maine 04101 (207) 774-4427	Title: DE MINIMIS CHANGE REQUEST STANDBY EMERGENCY GENERATOR		North:
	Date: JAN. 24, 2008	Scale: 1"=30'	A
	Project: 84 MARGINAL WAY		

PLANT LIST - GROUND LEVEL

KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE
		TREES		
A. FR	1	ABIES FRASERI	FRASIER FIR	5'-6' HT
A. RA	1	ACER RUBRUM 'ARMSTRONG'	ARMSTRONG RED MAPLE	2 1/2"-3" CAL
C. MAS	4	CORNUS MAS	CORNELLIAN CHERRY	1 1/2"-2" CAL
C. COL	3	CORYLUS COLURNA	TURKISH FILBERT	2"-2 1/2" CAL
G. BM	4	GINGKO BILOBA 'MAYGAR"	MAYGAR GINGKO	2"-2 1/2" CAL
M. JE	7	MALUS 'JEWELCOLE'	PROFUSION FLOWERING CRAB	2"-2 1/2" CAL
M. ZUM	3	MALUS x ZUMI 'CALOCARPA'	ZUMI CALOCARPA FLOWERING CRAB	2 1/2"-3" CAL
P. CC	2	PYRUS 'CLEVELAND'	CLEVELAND ORNAMENTAL PEAR	2 1/2"-3" CAL
U. NH	6	ULMUS AMERICANA 'NEW HARMONY'	NEW HARMONY ELM	2 1/2"-3" CAL
		SHRUBS		
A. FI	21	AZALEA 'FIRESTAR'	FIRESTAR AZALEA	#5
A. WW	6	AZALEA 'WHITNEY'S WHITE'	WHITNEY'S WHITE AZALEA	#5
F. WE	25	FORSYTHIA 'WEEKEND'	WEEKEND FORSYTHIA	#5
J. OB	7	JUNIPERUS CHINENSIS 'OBELISK'	OBELISK JUNIPER	#5
J. SH	6	JUNIPERUS SQUAMATA 'HOLGER'	HOLGER JUNIPER	#5
R. HK	4	RHODODENDRON 'HONG KONG'	HONG KONG RHODODENDRON	2'-2 1/2'
R. MIK	3	RHODODENDRON 'MIKKELI'	MIKKELI RHODODENDRON	2'-2 1/2'
T. MN	20	TAXUS x MEDIA 'NIGRA'	NIGRA TAXUS	2'-2 1/2'
T. OF	6	THUJA OCCIDENTALIS 'FILIFORMIS'	THREAD ARBORVITAE	2'-2 1/2'
T. SMA	3	THUJA OCCIDENTALIS 'SMARAGD'	EMERALD GREEN ARBORVITAE	6'-7' HT



B

North:

Title: DE MINIMIS CHANGE REQUEST
STANDBY EMERGENCY GENERATOR

Scale: 1"=30'

Date: JAN. 24, 2008

Project: 84 MARGINAL WAY

Mitchell & Associates
Landscape Architects
70 Center Street
Portland, Maine 04101
(207) 774-4427

DIESEL GENERATOR SET

CATERPILLAR®

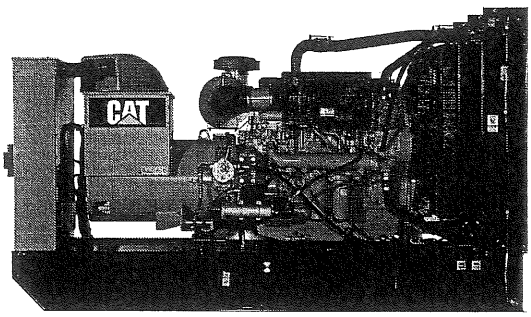


Image shown may not reflect actual package.

STANDBY
500 ekW 625 kVA
60 Hz 1800 rpm 480 Volts

Caterpillar is leading the power generation marketplace with Power Solutions engineered to deliver unmatched flexibility, expandability, reliability, and cost-effectiveness.

FEATURES

FUEL/EMISSIONS STRATEGY
- TIER 1 CAPABLE

FULL RANGE OF ATTACHMENTS
- Wide range of bolt-on system expansion attachments, factory designed and tested

SINGLE-SOURCE SUPPLIER
- Fully prototype tested with certified torsional vibration analysis available

WORLDWIDE PRODUCT SUPPORT
- Caterpillar® dealers provide extensive post sale support including maintenance and repair agreements
- Caterpillar dealers fill 99.7% of parts orders within 24 hours
- Caterpillar dealers have over 1,798 dealer branch stores operating in 200 countries
- The Cat® S•O•S℠ program cost effectively detects internal engine component condition, even the presence of unwanted fluids and combustion by-products

UL 2200
- UL 2200 listed packages are available. Certain restrictions may apply. Consult with your Caterpillar dealer network

CAT® C15 ATAAC DIESEL ENGINE
- Utilizes ACERT™ Technology
- Reliable, rugged, durable design
- Field-proven in thousands of applications worldwide
- Four-stroke diesel engine combines consistent performance and excellent fuel economy with minimum weight
- Electronic engine control

CAT GENERATOR
- Designed to match performance and output charactistics of Caterpillar diesel engines
- 2/3 Pitch
- UL 1446 Recognized Class H Insulation

CAT EMCP 3 CONTROL PANELS
- Controls designed to meet individual customer needs
- Options for power metering and protective relaying are available
- Options to meet UL/CSA/NFPA
- Rear mounted power center provides convenient location for control panel,and optional circuit breakers

STANDBY 500 ekW 625 kVA

60 Hz 1800 rpm 480 Volts

CATERPILLAR®

FACTORY INSTALLED STANDARD & OPTIONAL EQUIPMENT

System	Standard	Optional
Air Inlet	• Light Duty Air filter	• Canister Style Air Cleaners • Air Cleaner - single stage • Dual element • Heavy duty
Cooling	• Radiator package mounted(50°C) • Coolant drain line with valve terminated at edge of base • Fan and belt guards • Coolant level sight gauge • Caterpillar Extended Life Coolant	• Radiator removal • Radiator duct flange & guard
Exhaust	• Dry exhaust manifold • Flanged faced outlets • Stainless Steel Flex with split-cuff connection	• Mufflers • Manifold & Turbocharger guards • Elbows
Fuel	• Primary fuel filter with integral water separator • Secondary fuel filters • Fuel priming pump • Engine fuel transfer pump • Flex fuel lines • Engine fuel transfer pump • Fuel cooler* *Not included with packages without radiators	• Integral UL listed fuel tank base • Manual transfer pump • Fuel level switch
Generator	• Self excited • Class H insulation • Random Wound • 2/3 pitch • R448 voltage regulator with load adjustment module • IP23 Protection	• Permanent magnet excitation • CDVR with KVAR/PF control • AREP Excitation • Oversize and premium generators • Bearing/Stator temperature detection (premium generator) • 3 phase sensing • Anti-condensation space heaters • Cable access box • Reactive droop
Power Termination	• Power Terminator Strips Mounted inside Power Center • Segregated low voltage wiring panel	• Circuit breakers, UL listed, 3 pole • Circuit breakers, IEC compliant, 3 pole • Circuit breaker Shunt trip • Circuit breaker Auxillary contact • Top & bottom power cable entry • Floor standing UL breakers
Governor	• ADEM™A4	• Load share module
Control Panels	• EMCP 3.1 (rear mounted) • Speed adjust • Emergency stop pushbutton • Voltage adjust	• EMCP 3.2 & EMCP 3.3 (can be RH mounted) • Local annuniciator modules (NFPA 99/110) • Remote annunicator modules (NFPA 99/110) • Discrete I/O module
Lube	• Lubricating oil and filter • Oil drain line with valves • Fumes disposal • Gear type lube oil pump	• Manual sump pump
Mounting	• Formed steel wide base frame • Linear vibration isolation-seismic zone 4	• Formed steel wide base frame
Starting/Charging	• 24 volt starting motor • 45 amp charging alternator • Battery with rack and cables	• Jacket water heater with shut off valves • Block heater • Ether starting aids • Battery disconnect switch • Battery charger(5A,10A) • Oversize batteries
General	• Paint - Caterpillar yellow except rails and radiators gloss black • Flywheel and flywheel housing - SAE No.1	

STANDBY 500 ekW 625 kVA

60 Hz 1800 rpm 480 Volts

CATERPILLAR®

SPECIFICATIONS

CAT GENERATOR

Frame size.....LC6114F
Excitation.....Self Excited
Pitch.....0.6667
Number of poles.....4
Number of bearings..... Single Bearing
Insulation..... UL 1446 Recognized Class H with tropicalization and antiabrasion
- Consult your Caterpillar dealer for available voltages
IP Rating.....Drip Proof IP22
Alignment..... Pilot Shaft
Overspeed capability..... 125% of rated
Wave form Deviation (Line to Line)..... 2%
Voltage regulator..... 3 Phase sensing with selectible volts/Hz
Voltage regulation.....Less than +/- 1/2% (steady state)
Less than +/- ½% (w/ 3% speed change)
Telephone influence factor.....Less than 50
Harmonic Distortion.....Less than 5%

CAT DIESEL ENGINE

C15 ATTAC, L-6, 4-stroke water-cooled diesel
Bore..... 137.20 mm (5.4 in)
Stroke..... 171.40 mm (6.75 in)
Displacement.....15.20 L (927.56 in³)
Compression Ratio..... 16.1:1
Aspiration..... ATAAC
Fuel System..... MEUI
Governor Type..... Caterpillar ADEM control system

CAT EMCP 3 CONTROL PANELS

- EMCP 3.1 (Standard)
- UL/CSA/CE
- NEMA 1, IP22 enclosure
- Run/Auto/Stop control
- True RMS metering, 3-phase
- Speed Adjust
- Vandel cover (option)
- Voltage adjust
- Digital Indication for:
- RPM
- Operating hours
- Oil Pressure
- Coolant temperature
- System DC volts
- L-L volts, L-N volts, phase amps, Hz
- ekW, kVA, kVAR,kW-hr, %kW, PF,(EMCP3.2/3.3)
- Shutdowns with common indicating light for:
- Low oil pressure
- High coolant temperature
- Low coolant level
- Overspeed
- Emergency stop
- Failure to start (overcrank)
- Programmable protective relaying functions: (EMCP 3.2 & 3.3)
-Under and over voltage
-Under and over frequency
- Reverse power
- Overcurrent
- MODBUS isolated data link (RS-485 half-duplex EMCP 3.2 & 3.3)

STANDBY 500 ekW 625 kVA

60 Hz 1800 rpm 480 Volts

CATERPILLAR®

TECHNICAL DATA

Open Generator Set - - 1800 rpm/60 Hz/480 Volts	DM9115	
Tier 1 Capable		
Generator Set Package Performance		
Genset Power rating @ 0.8 pf	625 kVA	
Genset Power rating with fan	500 ekW	
Fuel Consumption		
100% load with fan	141.6 L/hr	37.4 Gal/hr
75% load with fan	107.9 L/hr	28.5 Gal/hr
50% load with fan	89.9 L/hr	23.7 Gal/hr
Cooling System[1]		
Air flow restriction (system)	0.12 kPa	0.48 in. water
Engine coolant capacity	20.8 L	5.5 gal
Inlet Air		
Combustion air inlet flow rate	40.2 m^3/min	1419.7 cfm
Exhaust System		
Exhaust stack gas temperature	509.1 ° C	948.4 ° F
Exhaust gas flow rate	111.2 m^3/min	3927.0 cfm
Exhaust system backpressure (maximum allowable)	6.8 kPa	27.3 in. water
Heat Rejection		
Heat rejection to coolant (total)	192 kW	10919 Btu/min
Heat rejection to exhaust (total)	497 kW	28264 Btu/min
Heat rejection to atmosphere from engine	120 kW	6824 Btu/min
Heat rejection to atmosphere from generator	29.1 kW	1654.9 Btu/min
Alternator[2]		
Motor starting capability @ 30% voltage dip	1428 skVA	
Frame	LC6114F	
Temperature Rise	130 ° C	266 ° F
Emissions (Nominal)[3]		
NOx g/hp-hr	5.78 g/hp-hr	
CO g/hp-hr	.39 g/hp-hr	
HC g/hp-hr	.01 g/hp-hr	
PM g/hp-hr	.017 g/hp-hr	

[1] Ambient capability at 300m (984 ft) above sea level. For ambient capability at other altitudes, consult your Caterpillar dealer. Air flow restriction (system) is added to existing restriction from factory. Generator temperature rise is based on a 40 C (104 F) ambient per NEMA MG1-32

[2] Generator temperature rise is based on a 40° C (104° F) ambient per NEMA MG1-32.

[3] Emissions data measurement procedures are consistent with those described in EPA CFR 40 Part 89, Subpart D & E and ISO8178-1 for measuring HC, CO, PM, NOx. Data shown is based on steady state operating conditions of 77°F, 28.42 in HG and number 2 diesel fuel with 35° API and LHV of 18,390 btu/lb. The nominal emissions data shown is subject to instrumentation, measurement, facility and engine to engine variations. Emissions data is based on 100% load and thus cannot be used to compare to EPA regulations which use values based on a weighted cycle.

STANDBY 500 ekW 625 kVA

60 Hz 1800 rpm 480 Volts

CATERPILLAR®

RATING DEFINITIONS AND CONDITIONS

Meets or Exceeds International Specifications: AS1359, AS2789, CSA, EGSA101P,IEC60034, ISO3046, ISO8528,NEMA MG 1-32, UL508, 72/23/EEC, 89/336/EEC, 98/37/EEC.

Standby - Output available with varying load for the duration of the interruption of the normal source power. Standby power in accordance with ISO8528. Fuel stop power in accordance with ISO3046, AS2789, and BS5514. Standby ambient temperatures shown indicate a coolant top tank temperature just below shutdown at 100 percent load.

Prime - Output available with varying load for an unlimited time. Prime power in accordance with ISO8528. 10% overload power in accordance with ISO3046, AS2789, and BS5514. Prime ambient temperatures shown indicate a coolant top tank temperature just below shutdown at 100 percent load.

Ratings are based on SAE J1995 standard conditions. These ratings also apply at ISO3046 standard conditions. **Fuel rates** are based on fuel oil of 35° API [16° C (60° F)] gravity having an LHV of 42 780 kJ/kg (18,390 Btu/lb) when used at 29° C (85° F) and weighing 838.9 g/liter (7.001 lbs/U.S. gal.). Additional ratings may be available for specific customer requirements. Consult your Caterpillar representative for details.

STANDBY 500 ekW 625 kVA

60 Hz 1800 rpm 480 Volts

CATERPILLAR®

DIMENSIONS

Package Dimensions		
Length	3775.1 mm	148.63 in
Width	1110.0 mm	43.7 in
Height	2091.0 mm	82.32 in
Weight	3881 kg	8,556 lb

Note: Do not use for installation design. See general dimension drawings for detail (Drawing #2899689).

Performance No.: DM9115

Feature Code:: C15DE4W

Source:: U.S. Sourced

19 May 2006

6872504

www.CAT-ElectricPower.com

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Materials and specifications are subject to change without notice. The International System of Units (SI) is used in this publication.

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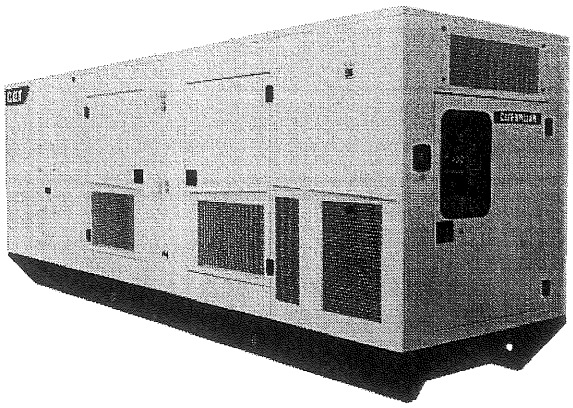


Picture shown may not reflect actual package.

C15 SOUND ATTENUATED ENCLOSURES

Larne 50 Hz/60 Hz

These sound attenuated, factory installed enclosures incorporate internally mounted super critical level silencers, designed for safety and aesthetic value on integral fuel tank bases or optional fabricated steel bases. These enclosures are of extremely rugged construction to withstand exposure to the elements of weather.

FEATURES

ROBUST/HIGHLY CORROSION RESISTANT CONSTRUCTION

- Factory installed
- Environmentally friendly, polyester powder baked paint
- 14 gauge steel
- Zinc plated or stainless steel fasteners
- Internally mounted super critical exhaust silencing system

EXCELLENT ACCESS

- Large cable entry area for installation ease
- Accommodates rear mounted breaker
- Double doors on both sides
- Vertically hinged doors allow 180° opening rotation
- Lube oil and coolant drains pipes to exterior of enclosure and terminated drain valves
- Radiator fill cover

SECURITY AND SAFETY

- Lockable access doors which give full access to control panel and breaker
- Cooling fan and battery charging alternator fully guarded
- Fuel fill, oil fill, coolant and battery can only be reached via lockable access
- Externally mounted emergency stop button
- Designed for spreader-bar lifting to ensure safety
- Control panel viewing window

OPTIONS

- Yellow or white paint
- Interior lighting system
- Skid base with dragging and fork pockets
- Integral fuel tank base

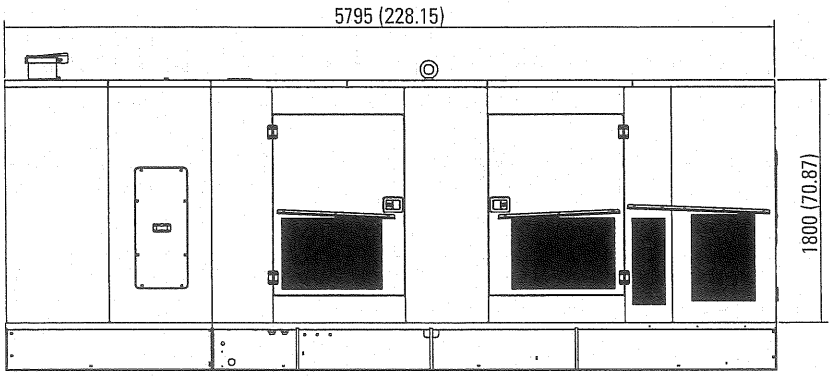
SOUND ATTENTUATED ENCLOSURE OPERATING CHARACTERISTICS

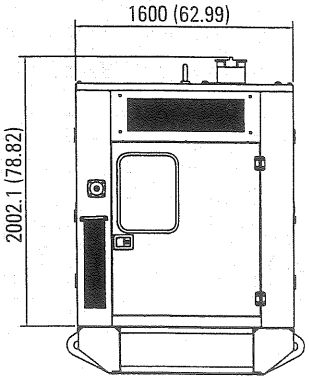
60 Hz SA Enclosure 1 Breaker			Ambient Capability*		Airflow Rate		Sound Pressure Levels dBA @ Full Load			Exhaust Back Pressure	
ekW	kVA	PP/SB	°C	°F	m³/s	Cfm	1 m	7 m	15 m	in/H₂O	kPa
550	687.5	SB	42	108	11.9	25,215	87.7	76.7	70.7	18.0	4.5
500	625.0	SB	46	115	11.9	25,215	87.0	75.8	69.8	16.0	4.0
455	568.8	PP	44	111	11.9	25,215	86.4	75.2	69.2	14.3	3.6
450	562.5	SB	47	117	9.9	20,978	84.6	74.6	68.6	14.1	3.5
410	512.5	PP	44	111	9.9	20,978	84.2	74.0	68.0	12.5	3.1
400	500.0	SB	50	122	9.9	20,978	84.1	73.9	67.9	12.2	3.0
365	456.3	PP	47	117	9.9	20,978	83.8	73.4	67.4	10.9	2.7
350	437.5	SB	54	129	9.9	20,978	83.7	73.2	67.2	10.4	2.6
320	400.0	PP	50	122	9.9	20,978	83.5	72.9	66.9	9.3	2.3

*Ambient measured with Caterpillar Extended Life Coolant

50 Hz SA Enclosure (Low Emissions)			Ambient Capability*		Airflow Rate		Sound Pressure Levels dBA @ Full Load			Exhaust Back Pressure	
kVA	ekW	PP/SB	°C	°F	m³/s	Cfm	1 m	7 m	15 m	in/H₂O	kPa
550	440	SB	45	113	7.7	16,315	81.3	70.8	64.8	12.4	3.08
500	400	PP	43	109	7.7	16,315	80.7	70.0	64.0	10.9	2.71
500	400	SB	48	118	7.7	16,315	80.7	70.0	64.0	10.9	2.71
455	364	PP	46	115	7.7	16,315	80.1	69.4	63.4	9.5	2.35
450	360	SB	52	126	7.7	16,315	80.1	69.3	63.3	9.3	2.31
410	328	PP	50	122	7.7	16,315	79.6	68.8	62.8	7.9	1.98
400	320	SB	56	133	7.7	16,315	79.5	68.6	62.6	7.6	1.89
365	292	PP	53	127	7.7	16,315	79.2	68.2	62.2	6.4	1.60

*Ambient measured with Caterpillar Extended Life Coolant





Approximate weight of enclosure package: 4984 kg (10,988 lb). Exact weight is dependent on options. Enclosure weight includes: sound attenuated enclosure, exhaust system, extended base and generator set. Caterpillar is pleased to offer these additional generator set enclosure colors: white and yellow.

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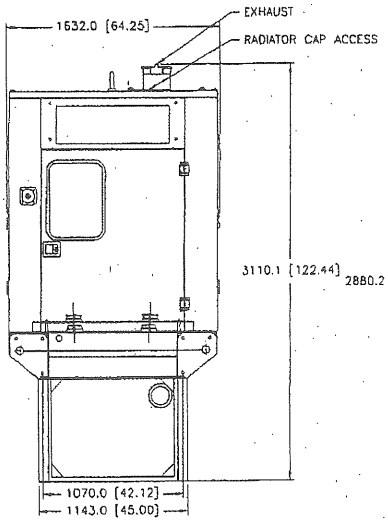
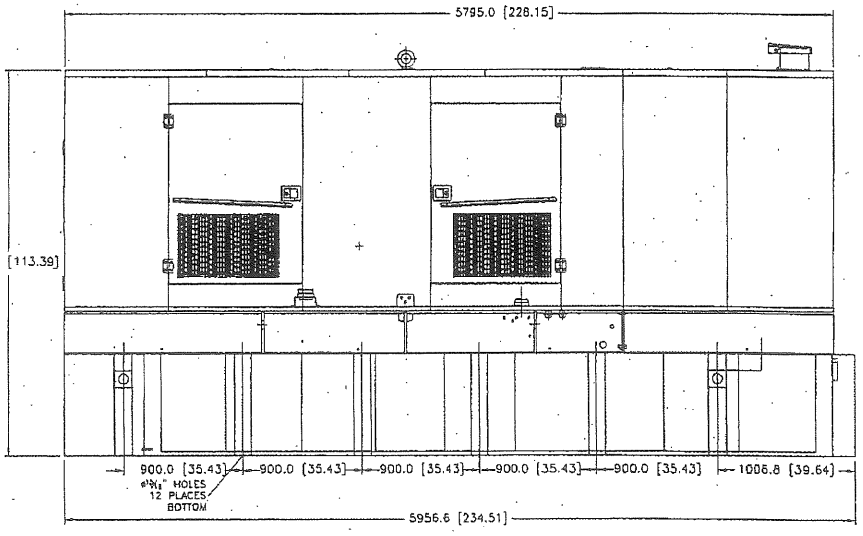


REAR VIEW



RIGHT SIDE VIEW

REVISION HISTORY		
REV	BY	DATE
04		
03		
02		
01		
00		

DIMENSIONS WITHOUT ARROWHEADS ARE LOCATED FROM PARALLEL ZERO PLANE.

MILTON CAT

POWER SYSTEMS DIVISION

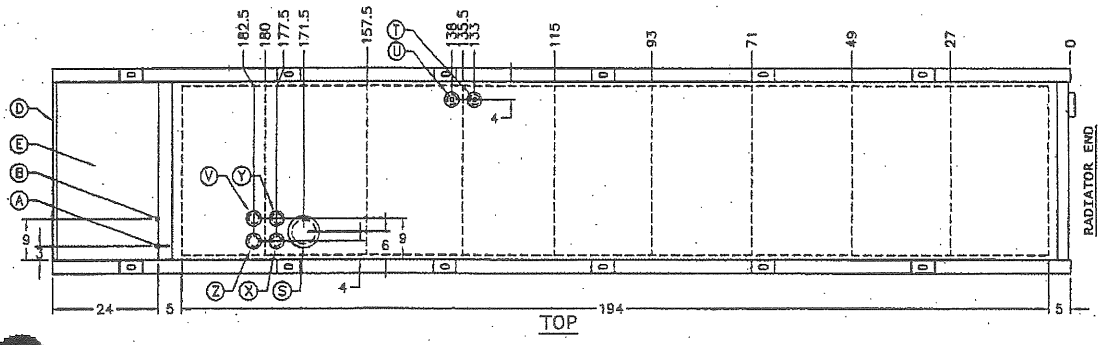
84 Marginal Way C15/500KW/860 Gal Tank
MILTON-CAT POWER SYSTEMS

ALL DIMENSIONS IN INCHES	DRAWN BY: H. CHRISTENSEN
NOT TO SCALE	CHECKED: H. CHRISTENSEN
DATE: November 2007	APPROVED: H. CHRISTENSEN
DWG No. E20877	SHEET 1 OF 1

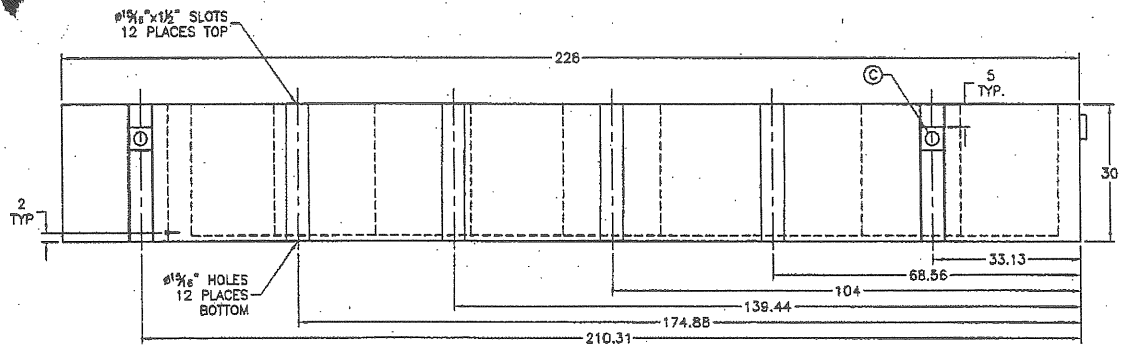
JOB #	TANK CAPACITY	GENSET MODEL	GENSET FOOTPRINT	TANK WEIGHT
13597	893 GAL	C15 SAE	44.88" X 228.35"	3175 LBS

APPROVED BY: _____ DATE: _____

BILL OF MATERIAL			
LETTER	PART #	DESCRIPTION	QTY
S	3165	FLANGE, 5", E-VENT	2
T	3650	FLANGE, 2", RETURN, W/ 1/2" DIP TUBE	1
U	3650	FLANGE, 2", SUPPLY, W/ 1/2" DIP TUBE	1
V	1000	FLANGE, 2", LOW LEVEL ALARM @ 50%	1
X	1003	FLANGE, 2", FUEL LEVEL GAUGE	1
Y	3152	FLANGE, 2", STANDARD VENT	1
Z	3005	FLANGE, 2", LOCKING FILL PORT	1
A	4306	FUEL IN BASIN ALARM	1
B	3502	FLANGE, 1/2", BASIN DRAIN	1
C	6410	FLUSH MOUNT LIFTING PLATE	4
D	8001	REMOVABLE END PLATE-1" BEND	1
E	4000	24" STAND. ELECTRICAL STUB UP	1
	OW-101	SECONDARY CONTAINMENT	1
	BLACK	PAINT COLOR	



TOP



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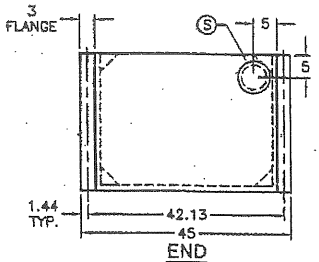

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1-1

REVISIONS				REVISIONS			
REV	DATE:	CHANGE MADE	BY	REV	DATE:	CHANGE MADE	BY

SUB BASE TANK W/ RUPTURE BASIN & STUB UP

CUSTOMER/ID: MILTON CAT
JOB REF: 84 MARGINAL WAY - C15 - E20877
DRAWING REF: X
DWG #: 15-13597
DATE: 11/12/07
DRAWN BY: MJ

GLOBAL POWER COMPONENTS

105

Capital Services, LLC's
Draft First-Year Plan for Transportation Demand Management
84 Marginal Way
August 2008

Project Background

The City of Portland required that Capital Services, LLC complete a travel/transportation demand management plan as a condition of their site plan approval dated April 24, 2007 for the construction of 84 Marginal Way to be completed in the summer/fall of 2008. The specific conditions were as follows:

Site Plan conditions of approval:

"i. That the Applicant shall meet the recommendations contained in Tom Errico's (Traffic Review Consultant) memo dated March 23, 2007."

The March 23, 2007 memo from Tom Errico contained the following regarding the TDM plan:

> *"A Travel Demand Management (TDM) Program shall be implemented that may comprise of the elements (e.g. rideshare program) noted by the traffic impact study."*

The objective of the Transportation Demand Management Plan is to cut back on the number of cars brought to Portland by employees at 84 Marginal Way, using a variety of specific strategies such as incentives for car pooling, transit, bicycling, and walking. These measures can reduce the number of vehicles in downtown Portland and help to reduce congestion. However, there are a variety of initiatives currently underway that may influence this plan, such as the Peninsula Transit Study and the Metro Route Study. Therefore, the purpose of this first-year plan is to implement an initial (year one) plan with the understanding that it may require updates based on the findings of the ongoing initiatives mentioned in this TDM plan. Revisions will take place in future years as methods and practices are refined, and addition information, such as the Peninsula Transit Study, and the METRO Bus Route Study become available. The first-year TDM plan includes:

- Selecting a transportation coordinator
- Educational and promotional materials
- Provision of an annual survey
- Rideshare Program
- Incentives for transit
- Incentives for bicycling and walking
- Use of flexible hours, staggered shifts, and other hourly incentives
- Review and feedback, as well as recommendations for the City-based review process

The implementation schedule is described in detail at the end of this narrative.

TDM Plan

The following paragraphs describe the features of this first year plan. Each major component of the first year plan includes a discussion of the approach, followed by action items.

1. Selection of a Transportation Coordinator

Capital Services, LLC has designated ???, Property Manager for 84 Marginal Way, as the transportation coordinator for the facility. The Coordinator is responsible for working with the City of Portland staff, Portland Area Comprehensive Transportation Committee (PACTS) in implementing the current Plan and subsequent year plans as necessary.

2. Educational/Promotional Materials

Capital Services, LLC will prepare educational/promotional material for employees to highlight the goals of the plan and their participation, the desired outcomes, and to obtain their thoughts and suggestions. This material will emphasize an "open door" policy with respect to continued feedback and suggestions for the program.

Promotional and educational outreach is being done in the following manner:

- Flyers will be prepared and placed in conspicuous areas in 84 Marginal Way, such as the front lobby, and major points of entry and exit. These flyers will have information about specific programs, incentives, and provide employees with contact information of the TDM Coordinator.
- Letters/flyers will be sent out to all employees at 84 Marginal Way providing additional detail above and beyond that posted on the flyers in January and June. These will be distributed via each company's human resources department (or the admin department if there is no HR department).
- Capital Services, LLC will host an annual transportation fair for all employees at 84 Marginal Way, which will provide information about the TDM program in a relaxed setting. Prizes will be offered (see Encouragement of Bicycling and Walking later in this Plan for additional detail) to those who have demonstrated the greatest commitment to reduction of single-occupant vehicle based commuting, as well as those who are able to envision changes or new aspects of the TDM program. This fair would coincide with Commute Another Way Week, typically in May, sponsored by the Bicycle Coalition of Maine, GPCOG, MaineDOT, and other agencies.

3. *Annual Survey*

Capital Services, LLC will prepare a transportation survey for all employees at 84 Marginal Way. The survey will be submitted to the City Planning Department staff for review and input. The survey will consist of a variety of questions, which will include questions similar to the following:

- What year were you born?
- What is your gender?
- How do you travel to work?
- What major local roadway do you take to work, if you travel by private vehicle?
- What time do you typically arrive at 84 Marginal?
- What time do you typically leave at 84 Marginal?
- If you travel by private vehicle, do you carpool?
- If you travel by private vehicle, what keeps you from using transit options?
- If bus service were more frequent, would you be more likely to use it?
- Do you live less than one mile from 84 Marginal Way? Five miles?
- If you live close to your place of employment, what keeps you from biking or walking to 84 Marginal Way?
- If gasoline were to exceed five dollars a gallon, would you reconsider other modes of travel? Six dollars?
- Would you be willing to work an adjusted schedule if it was encouraged by your employer?

The surveys would be completed on-line via a provider such as SurveyMonkey, with the information being linked to a database program that would allow for quick and powerful analysis of the information.

Capital Services, LLC will share the results of its survey with the City Planning Department since such data will provide useful information for refining regional routes and timetables that would be compatible with the schedules and travel routes of employees at 84 Marginal Way.

4. *Rideshare Program*

Capital Services, LLC will have approximately 500 spaces within the building, and charge $xx per month per space. As such, it will be less costly for employees to commute in alternative ways, and this trend will be encouraged with promotions of other types of travel, as discussed in Items 5 and 6. It should also be noted that part of this fee will go toward the employer subsidy for METRO passes as discussed in Section 4.

To further this end, Capital Services, LLC will administer a rideshare program for employees of

84 Marginal Way. This program includes a database program for matching rideshare candidates and will be administered by the TDM Coordinator and Human Resources staff. The rideshare plan will operate with a cluster of employees from a compatible location and work schedule, and will have between two and four riders per vehicle, based on locations and routes, and have a designated driver for each vehicle, with a second in case of illness, scheduling conflict, or family emergency. The driver will be given a priority space in the parking garage. In addition, the fee for a car-share space will be reduced over the standard monthly fee by fifty percent.

The TDM Coordinator will assess the effectiveness of this program and refine it, as necessary, to create an updated plan for future years. The carpool program will have a goal of five percent of employees by the end of Year One, with a two-year goal of seven percent.

5. Encourage Use of Transit

Realty Resources, the developer for Bayside Village adjacent to 84 Marginal Way, has negotiated an adjustment of METRO Route #8, the Peninsula Loop, such that it will stop at the student housing site, or in very close proximity to 84 Marginal Way. It should also be noted at as #8 also travels to the heart of the downtown peninsula, the route allows for access to many amenities downtown as well as allowing for ease of connections to other bus routes. This route typically has twenty-minute headways during peak commuter periods, making it relatively convenient to coordinate with work schedules.

In addition to the ease and convenience of utilizing the METRO service to get to and from 84 Marginal Way, this TDM Plan encourages use of transit by making transit passes available to employees via the TDM coordinator. Each employer will subsidize half of the cost of a METRO pass, resulting in the cost to the employee dropping from $37.50 per month to $18.75 per month. The goal will be for five percent of employees to commute via METRO in the first year of the program, with a final goal of ten percent for subsequent years.

6. Encouragement of Walking and Bicycling

Capital Services, LLC, as part of the off-site improvements association with the 84 Marginal Way facility is contributing toward significant improvements to the pedestrian environment in the vicinity of the project. Marginal Way is being reduced in width from two travel lanes in each direction to one, and a pedestrian connection will be available along Preble Street Extension, where a new median-protected pedestrian crossing is being constructed. In addition, a sidewalk is to be constructed as part of other projects along Baxter Boulevard to the Forest Avenue and Bedford Street corridors/Deering neighborhood. The overall result is an environment much more welcoming to pedestrians.

As part of the design of 84 Marginal Way, a secure bicycle storage area has been provided for xx

bicycles in a secure facility within the building; remaining employees using bicycles may easily bring their bicycle on an elevator to their work area. In addition, Preble Street Extension and Marginal Way in the vicinity of the site are being reconstructed and restriped to include bicycle lanes to further encourage use of this mode. Employees not bringing their vehicles to 84 Marginal Way will be able to participate in a drawing in May and again in October for a new bicycle from a local merchant.

The first-year goal will be to have five percent of employees either bicycling or walking to 84 Marginal Way, with a two-year plan of ten percent.

7. *Use of Flexible Hours, Staggered Shifts, and Other Hourly Incentives*

While 84 Marginal Way will house several employers, the largest employer will be InterMed. As this facility will be of a medical office variety, opportunities may exist to adjust employee schedules to reduce peak hour travel demands. This can be done through flexible hours, or more likely in the case of InterMed, staggered work shifts. During the course of Year One of the TDM Plan, The Transportation Coordinator and Capital Services, LLC will conduct a survey through the Human Resources/admin departments of each employer at 84 Marginal Way to determine what measures may be achievable. If, after Year One, Capital Services, LLC determines that five percent of employees could participate in such a program, a pilot program will be established for Year Two.

8. *Multiyear TDM Plan*

The first-year TDM plan will be carefully documented and observed to determine how each component is effectively reducing private vehicle demand for 84 Marginal Way employees. Its main goal will be to have fifteen percent of its workforce commuting by alternative means. If this goal is met in the first year, the program will be considered successful and Capital Services, LLC will determine if additional increases in other modes is feasible. If first-year goal is not met, Capital Services, LLC will provide a revised TDM Plan with more aggressive measures to reducing the need for private vehicles.

The importance of the Peninsula Transit Plan and the METRO Route Study should not be overlooked as part of this process. Capital Services, LLC anticipates that recommendations from the Transit Plan will be available prior to a review and potential update of the First Year TDM Plan, so it will be reviewed for relevant information to create the 2009 and beyond plans.

The 2009 plan will be presented to the City in June of 2009, for review and approval by the Transportation Committee. This will be the first of ongoing annual reports on the effectiveness and functioning of each year's TDM Plan as required in the Conditional Rezone provisions. In addition, June is also Commute Another Way Month (a followup from Commute Another Way week in May), so it will also provide a venue to encourage other travel options citywide.

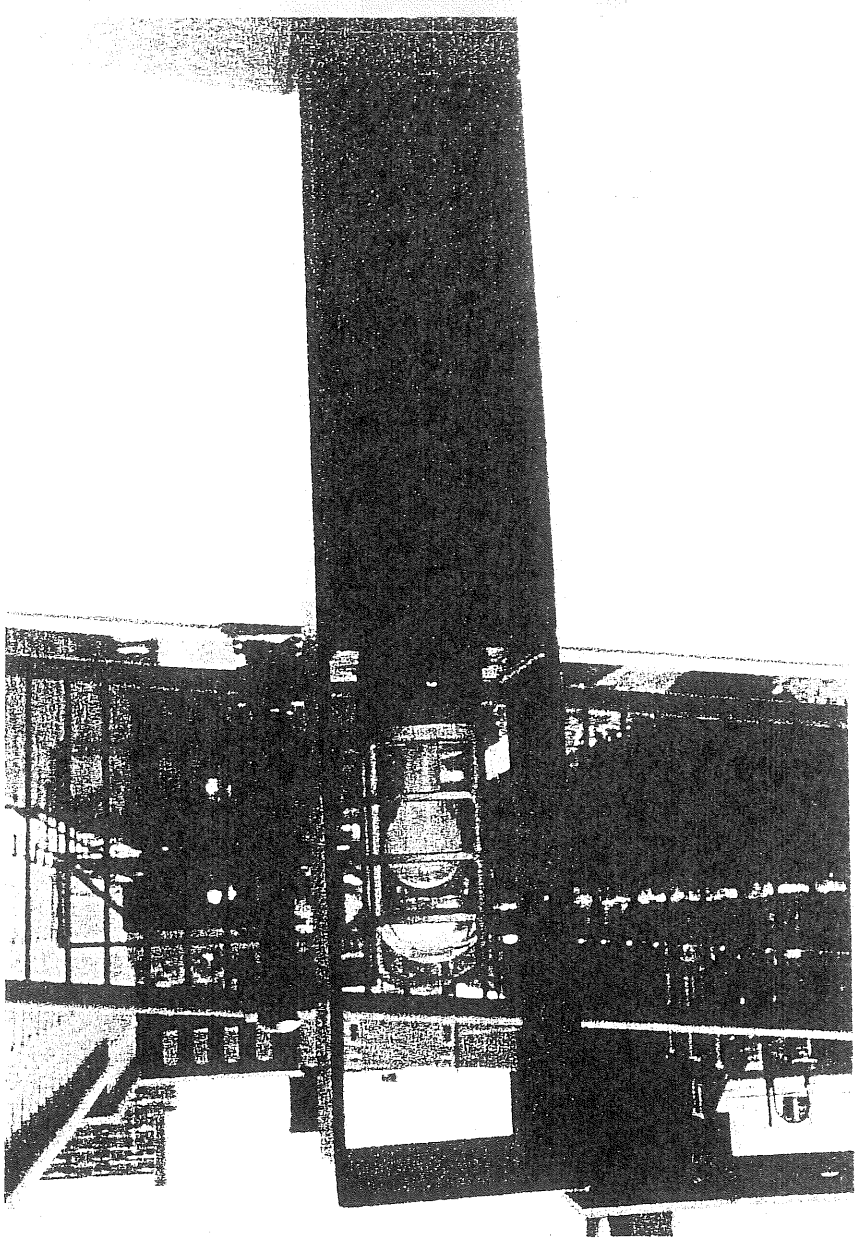
9. Timetable for Plan Action Items

The estimated time frames for each of the action items presented in this First Year TDM plan are summarized in the following table:

Action Item	Timeframe for Implementation
Appoint Transportation Coordinator	August 2008 (Completed)
Complete first-year TDM Plan	August 2008 (Pending)
Prepare Promotional Material	September 2008
Communicate TDM Plan to Employees	September 2008
Offer discounted METRO passes (half-subsidized)	September 2008
Implement Ride Share Program	November 2008
Assess success of First Year TDM Plan	June 2009
Submit 2009 TDM Plan to City	July 2009

End Draft TDM Plan

JN1361.05/Draft_TDM_Plan.doc



From: Rick Knowland
To: bmetcalf@mitchellassoc.biz
Date: 11/13/2006 3:59:22 PM
Subject: Fwd: RE: planning board stuff

Bob, Below is the traffic impact fee that Tom Errico has calculated for the 84 marginal way project.

>>> "Thomas Errico" <terrico@wilbursmith.com> 11/13/2006 3:44:56 PM >>>
Rick –The following outlines my comments as it relates to conditions for the proposed project above those being proposed in the immediate area of the project site (Marginal Way/Preble Street intersection):To improve access opportunities in the Bayside area, I would suggest that the applicant participate in the funding of connecting Somerset Street between Preble Street and Elm Street. This action will minimize impacts to Marginal Way and help to offset left-turn capacity reductions from Preble Street onto Marginal Way. I would suggest that the applicant contribute $22,000.00 to the extension of Somerset Street extension between Preble/Elm Streets and Forest Avenue. The intersection of Franklin Arterial and Marginal Way is currently operating at poor levels of service and improvements have been identified for implementation. Developments in the area have contributed to this location and I would suggest that the applicant contribute $10,000.00 towards implementation of the identified improvements. Please call me if you have any questions. **Thomas A. Errico, P.E.**Senior Transportation EngineerWilbur Smith Associates59 Middle StreetPortland, Maine 04101w: 207.871.1785 f: 207.871.5825TErrico@WilburSmith.comwww.WilburSmith.com

From: Rick Knowland [mailto:RWK@portlandmaine.gov]
Sent: Monday, November 13, 2006 3:27 PM
To: terrico@wilbursmith.com
Subject: planning board stuff
Tom, Attached is the staff memo for 84 Marginal Way. You will note that one of the listed attachments had your name on it. I had already labeled my attachments so your memo is "missing" since I never received it.

CC: Alex Jaegerman ; John Lufkin

National Cooperative Highway Research Program

NCHRP Report 348

Access Management Guidelines for Activity Centers

Transportation Research Board
National Research Council

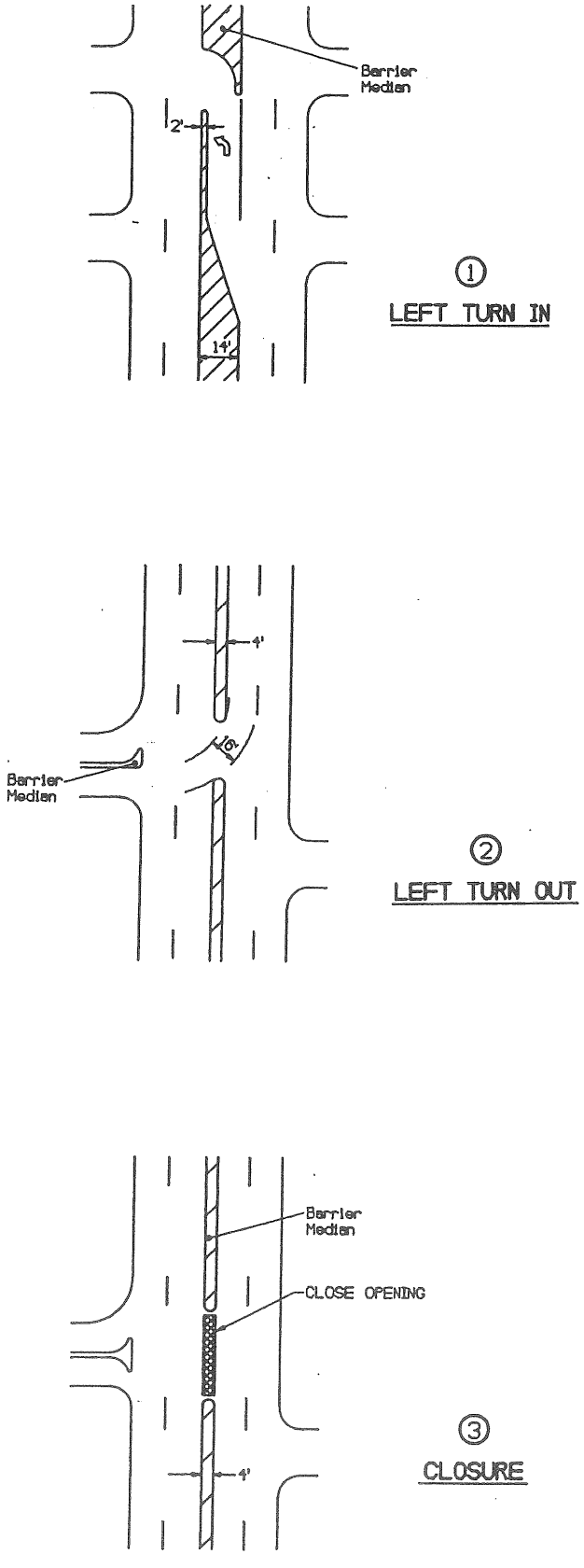


Figure 8-30. Median closing designs.

of an intersection with a public street (see Figure 8-31). Driveways that are less than 150 ft from a driveway on the opposite side of an undivided highway are candidates for relocation.

Design. Driveway design should be coordinated with internal site roads; random access should be discouraged. Storage areas should be increased and medians extended (see Figure 8-32).

A key retrofit action is to improve the back-to-back "H" resulting from driveway intersections with the public highway and the internal ring road system at activity centers. A closely spaced ring road and arterial road result in frequent conflicts. Channelizing both intersections, installing a median within the driveway, eliminating left turns from the highway, and increasing driveway storage space will reduce conflicts, simplify signal phasing, and increase capacity. Figure 8-33 shows how the back-to-back "H" can be improved by these actions. Figure 8-34 illustrates proposed driveway changes for an existing shopping center.

Consolidation. Driveway consolidation is especially desirable for adjacent strip developments along a highway. However, opportunities are frequently limited by differences in terrain, building placement, and internal road and parking arrangements that inhibit or preclude consolidation. An internal roadway that connects adjacent developments and their parking areas usually makes possible the consolidation of access points. In other cases, changes in parking arrangements can permit driveway closure or consolidation. One possibility is to provide a development bonus for such consolidation (see Figure 8-35).

Internal Site Changes

Retrofit opportunities within an activity center or among adjacent centers include: (1) rearranging internal circulation road, (2) expanding and channelizing key intersection, and (3) redesigning and reorienting parking areas (see Figures 8-36 and 8-37). These changes are usually done concurrently with driveway improvements.

Implications

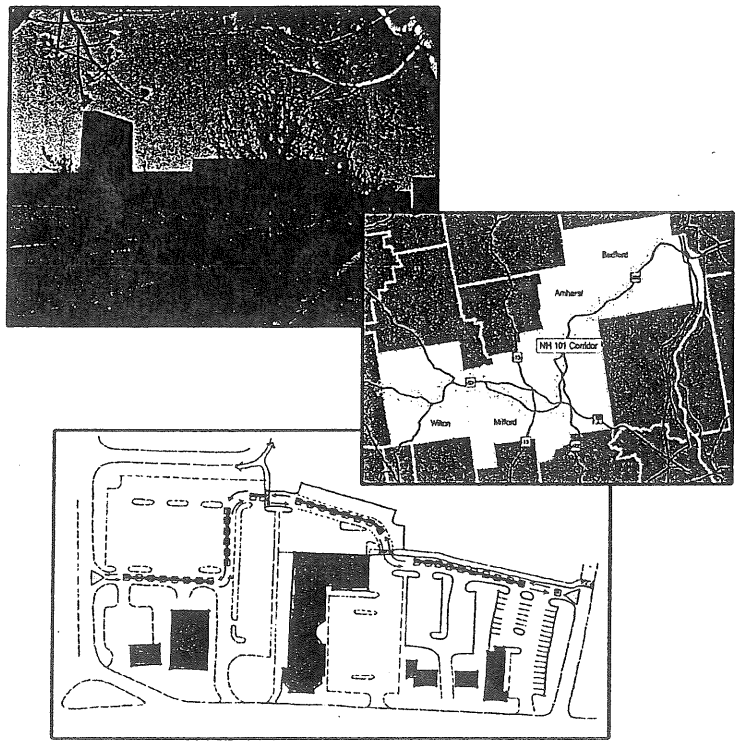
The retrofitting process should be continuous. Access management and control techniques, just as other traffic engineering actions, may need modification as conditions change. Recommended spacing and design should be applied wherever possible.

REFERENCES

1. LEVINSON, H.S., *Operational Measures Future.* Proc., Institute of Traffic Engineers (1962).
2. BRETHERTON, WOMBLE, PARSONSON and BLACK, "One Suburban County: Policy for Selecting Median Treatments for Arterials." ITE, *Compendium of Technical Papers* (1990).

ACCESS MANAGEMENT GUIDELINES

APRIL 2002



Prepared by the

NRPC NASHUA REGIONAL PLANNING COMMISSION

with funding by

THE STATE OF NEW HAMPSHIRE * DEPARTMENT OF TRANSPORTATION *

This project was funded in part by the New Hampshire Department of Transportation.

MEDIANS

Medians are used to control and manage left turns and crossing movements as well as separating traffic moving in opposite directions. Restricting left turning movements reduces the conflicts between through and turning traffic, resulting in improved safety. Medians are typically used on arterial or other roadways with high volumes of traffic and four or more lanes of traffic.

The use and design of a median is determined by the characteristics of the roadway such as: traffic volumes, speed, number and configuration of lanes, right-of-way width and land uses along the roadway. The need for a median can be identified through engineering review, a traffic study assessing the impact of a proposed project, or as a recommendation of a roadway corridor study. Median designs need to consider pedestrian safety and should incorporate a pedestrian refuge at all crossings.

In addition, medians are often used in commercial and residential developments to separate lanes of traffic and limit conflicts caused by left turns. Medians can also add to the overall aesthetics of a roadway corridor or a development by incorporating landscaping or other items of visual interest.

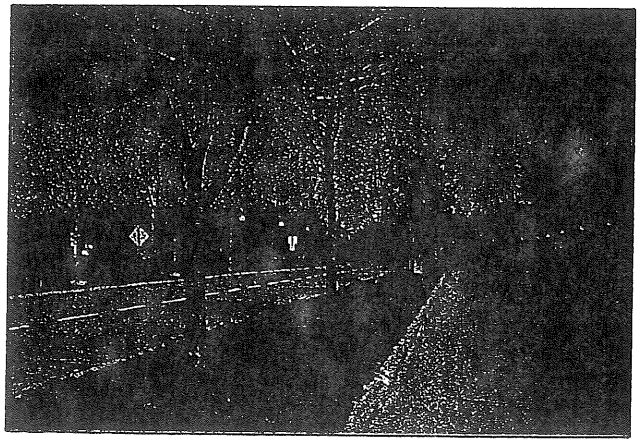


Figure 27. Center median, Nashua.

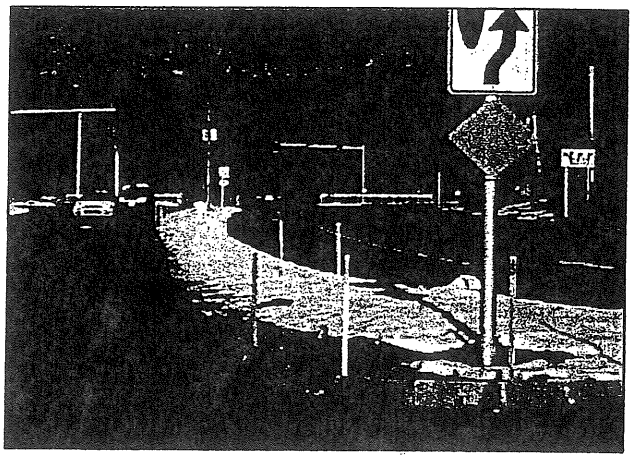


Figure 28. Median controlling left turns, Nashua.

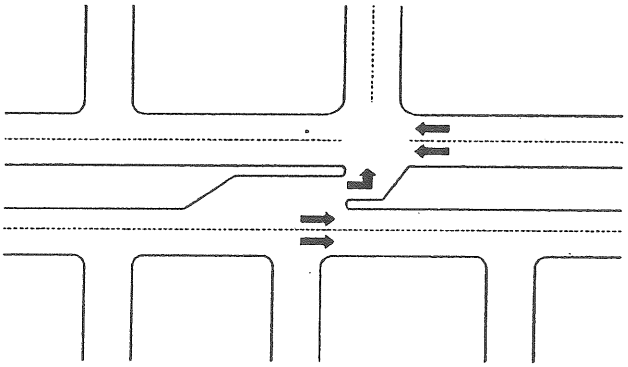


Figure 29. Center median with left turning lane and median break.

Local Actions

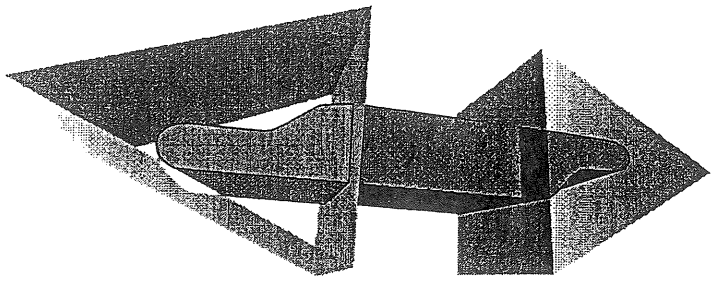
Review the subdivision and site plan review regulations to determine the requirements for traffic impact studies.

Amend the subdivision and site plan review regulations to require traffic impact studies to identify needed roadway improvements resulting from the proposed development.

MEDIAN

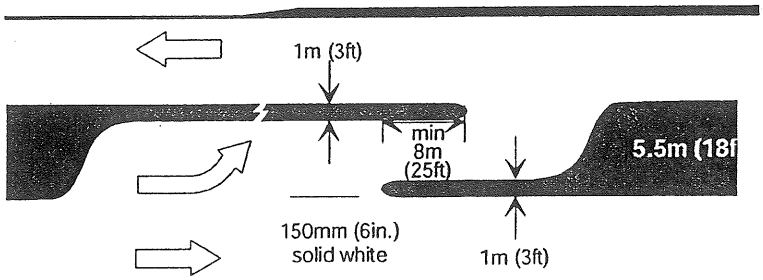
HANDBOOK

Updates Contact Gary Sokolow

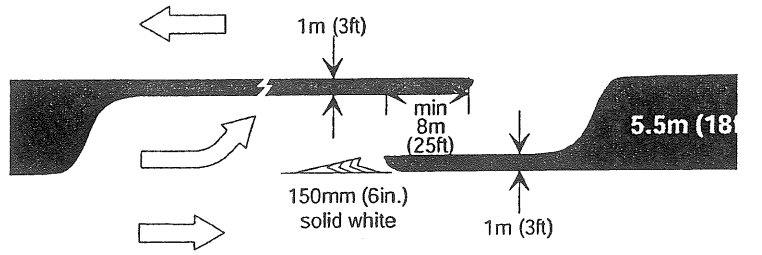


STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

4.4 SOME EXAMPLES



Minimum Design for Restrictive Left-Turn Ingress

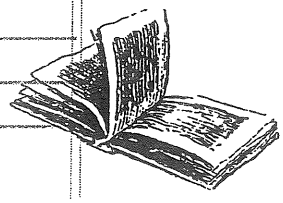


Desirable Design for Restrictive Left-Turn Ingress

Median Width: 9m (30 ft) - What it does

Desirable Aspects

- ✔ Greater flexibility in the choice of lane widths and separation width at double left-turn, full median openings.
- ✔ Additional width for landscaping the overlapping "traffic separators" at directional median openings.
- ✔ Permits separate vertical and/or horizontal alignment of the two roadways.



For More Information On Turn Lane Width:

- Plans Preparation Manual Table 2.1.1

ATTACHMENT C-1

MITCHELL & ASSOCIATES
LANDSCAPE ARCHITECTS

November 29, 2006

Mr. Richard Knowland, Senior Planner
City of Portland
389 Congress Street
Portland, Maine 04101

RE: Capital LLC
Mixed Office, Retail and Parking Garage Development
84 Marginal Way

Dear Rick:

The following submission has been prepared to provide revised site plans and architectural design for continuation of the workshop session with the planning board on December 12, 2006. The primary focus of the workshop will be on architecture, with discussion of site issues limited to address modifications resulting from changes to the architecture.

Site Plan

The site plan has been revised to address changes in the building footprint that are a result of program or spatial requirements and to address staff comments raised during our recent meeting with staff. The modifications to the building design have required repositioning of the footprint within the property. The most notable is shifting of the building toward I-295 to provide space along the retail uses to address grading requirements, ADA requirements and the pedestrian scale and experience along Marginal Way.

The retail façade will be setback ten (10) feet from the property line and comply with the B-7 zone requirements. The shift allows for room to address a two (2) foot grade change from Marginal Way to the finish floor of the building. The elevation requirement is due to the flood zone ordinance requirement to set the finish floor of the structure two (2) feet above the 100 year flood elevation. We are providing a raised arcade along the retail use to address the change in grade. Access to the arcade will occur by an ADA compliant ramp on the easterly end of the building and at grade on the westerly end. There will be a low retaining wall along the sidewalk, punctuated with two sets of stairs to access the upper level. We are proposing to incorporate planting beds along the arcade to provide enhancement for the pedestrian scale along the building and along the eight (8) foot wide public side walk.

THE STAPLES SCHOOL
70 CENTER STREET
PORTLAND, MAINE 04101

Telephone (207) 774-4427
Fax (207) 874-2460
Website www.mitchellassociates.biz

The main entry to the building at the corner of Marginal Way has been modified to address architectural changes and meet accessibility requirements. The final design of the exterior public space is on-going and subject to further modifications.

The design of the private-tenant elevator and stair access on Preble Street has been changed. The pedestrian access design has been modified to accommodate for pedestrian and for emergency rescue access, providing both ramp and stair access.

To accommodate for the changes in the architecture and to respond to staff comments, the building had to be shifted to the east toward Bayside Village. This has resulted in a two (2) foot encroachment in to the twenty (20) foot wide city easement that was included in the city's recently approved subdivision plan. The reduction in the easement has no impact on the intent of the easement for public city and utility access. The width of the easement on the Bayside Village parcel is eighteen (18) feet. The encroachment would require an amendment to the subdivision plat.

We have made revisions to the Layout and Lighting Plan and the Grading, Drainage and Utility Plans. Grading along the exterior of the building does not alter the drainage pattern along Marginal Way or Preble Street from previous submissions. There will be subsequent revisions to the Grading, Drainage and Utility Plan to respond to the interior stormwater management for the garage once the design is further refined.

The landscape plan has not been revised at this time. We will submit a revised plan for comment before the workshop session. The architectural plans have been prepared by Harriman Associates and are enclosed as part of this submission.

Enclosed for your review are the following:

Plan Drawings

- Layout and Lighting Plan — Sheet 2
- Grading, Drainage and Utility Plan — Sheet 3

Architectural Drawings

- Ground Floor Plan — Sheet A10.1
- Exterior Elevation — Sheet A20.1
- Exterior Elevation — Sheet A20.2
- Exterior Elevation — Sheet A20.3
- Exterior Elevation — Sheet A20.4

- Architectural Narrative prepared by Harriman Associates

- 81/2 x 11 Architectural Renderings prepared by Harriman Associates

We look forward to meeting with you and the planning board on December 12, 2006 to continue the workshop session to discuss the architecture and site modifications. Should you have any question or comments, please do not hesitate to call me.

Sincerely,
Mitchell & Associates

BOB METCALF

Robert B. Metcalf

Enclosure

cc: Ted West
Greg Shinberg
Matt Young
Judy Johnson
Will Haskell

AH. D

Memorandum
Department of Planning and Development
Planning Division

To: Chair Beal and Members of the City of Portland Planning Board

From: Carrie M. Marsh, AICP, Urban Designer, City of Portland, Planning Division

Date: 12/08/06

Re: Intermed Building, 84 Marginal Way
Compliance with B-3 *Urban Design Standards*

Staff met with the applicant and design team for the Intermed building at 84 Marginal Way on November 27 and December 6, 2006. The conceptual designs for the building which were submitted on December 8 were reviewed for compliance with the *B-3 Urban Design Guidelines*. The project substantially meets the requirements of these guidelines.

1. The issues that are still outstanding include the following:

2. Samples of all building materials shall be provided.

3. Specifications for doors, windows, awnings, grills and other details shall be provided.

4. Specifications of the signage shall be provided.

5. Details of the storefront design shall be provided.

6. Specifications of the arcade and planting bed design shall be provided.

7. The metal product for the parapet roof at Marginal and Preble shall be provided.

8. The planting bed and the steps leading up to the arcade on Marginal Way may need to be reconsidered in order to increase the perceived accessibility to the retail spaces. One option for achieving this would be to increase the width of the steps leading up to the arcade.

9. The detailing of the parking garage on the East and North elevations shall be considered for opportunities to mitigate the raw concrete parking structure from the perspective of the pedestrian using the path behind the building. Opportunities for material finishes, landscaping, lighting and other measures to mitigate these facades should be considered.

Att. E

Rick Knowland - 84 Marginal Way

From: "Thomas Errico" <terrico@wilbursmith.com>
To: "'Rick Knowland '" <RWK@portlandmaine.gov>
Date: 12/08/2006 9:16 AM
Subject: 84 Marginal Way
CC: "'James Carmody'" <JPC@portlandmaine.gov>

Rick –

As requested I have provided the following information as it relates to the projects compatibility with the conceptual plans developed for the Marginal Way Master Plan.

- Changes in pedestrian crossing distances at the Marginal Way/Preble Street intersection.

Crosswalk	Existing	Master Plan	84 Marginal Way
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Preble Street Extension	110 feet	70 feet	80 feet
Preble Street	90 feet	70 feet	90 feet

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- The proposed Master Plan concept was developed such that it will be compatible with all possible future modes of transportation, including light rail. The applicant should provide a response ensuring the proposed project frontage design on Marginal Way allows for all possible transportation mode implementation.

- As part of development of the interim plan for Marginal Way, the applicant will be providing two travel lanes on Marginal Way in the eastbound direction. As such the applicant should provide technical documentation on the required length of carrying the two lanes from Preble Street towards Chestnut Street. The City would like to minimize the length of the two lanes.

I will follow-up with an email on the issue of short-term versus long-term implementation later today.

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Please contact me if you have any questions. I will be in attendance at the Planning Board Workshop next week.

Best Regards,

Thomas A. Errico, P.E.

Senior Transportation Engineer

Wilbur Smith Associates

59 Middle Street

Portland, Maine 04101

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ATTACHMENT F

WOODARD & CURRAN
Engineering • Science • Operations

CORPORATE OFFICES: Maine, Massachusetts, New Hampshire, Connecticut, Florida
Operational offices throughout the U.S.

MEMORANDUM

TO: Rick Knowland

FROM: Dan Goyette, PE – Development Review Engineer, Woodard & Curran, Inc.

DATE: December 6, 2006

RE: 84 Marginal Way.

Woodard & Curran has reviewed the latest submission for the proposed project at 84 Marginal Way. The project involves constructing a medical office building with a parking facility.

Documents Reviewed

- Engineering plan set prepared by Mitchell & Associates, sheets 2 and 3, dated November 28, 2006 and architectural sheets A10.1, A20.1-20.4.

1. General Comments

A. Preble Street is a moratorium street and will need to be reconstructed in accordance with the City moratorium street requirements.

B. It is unclear why the applicant is proposing a water line connection from Preble Street and from Marginal Way. It also appears that the connection on Marginal Way is very close to the new connection being proposed for Bayside Village. A single connection to the system could be made on Marginal Way which could service both buildings. Please provide additional information on the water line connections.

DRG

203848.68

cc: File

Memorandum
Department of Planning and Development
Planning Division

To: Chair Beal and Members of the Portland Planning Board

From: Richard Knowland, Senior Planner

Date: Prepared on: December 8, 2006
Prepared for: December 12, 2006

Re: Medical Office Building; Corner of Marginal Way and Preble Street; Vicinity of 84 Marginal Way

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Capital, LLC. (Ted West) has requested a fourth workshop for a proposed building and parking garage on the corner of Marginal Way and Preble Street. The project is subject to site plan and conditional use (parking garage) review. A traffic movement permit will be required. The first (August 8, 2006), second (September 26, 2006) and third workshop (November 14, 2006) memos are attached. Please refer to these memos for background information. A public hearing for this project has been tentatively scheduled for January 9th. Updated Building Façade Design Plans and Site Plans are shown on Attachment A and B.

The focus of Tuesday's workshop will be the building façade design and remaining site plan issues.

121 notices were sent to area property owners.

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The initial site plan submission back in August included a concept design for the building façade. Design work on the façade was put on hold while the Applicant focused on traffic related issues associated with the project.

A new façade design has been submitted. See Attachment A for façade drawings and a design narrative. The plan represents a significant improvement over the initial submission in terms of design direction and choice of materials. The design has more of a contemporary treatment with extensive use of glass (tinted glass and spandrel glass), aluminum curtain wall or storefront and use of brick to highlight certain elements of the façade. The site is in a highly visible gateway location so that the design and height of the building (120 feet) provides an opportunity to help shape and diversify the gateway experience.

Staff has met with the project architect twice since the last workshop including more recently on Wednesday of this week. The design has been evolving and updated façade elevations have clarified the design intent. In today's packet, the most up to date façade design has been submitted. The more detailed façade drawings cover the Marginal Way and Preble Street sides of the building.

Comments from Carrie Marsh, Urban Designer, are shown on Attachment D.

The first floor of the retail space along Marginal Way will be located behind a one story high arcade. The arcade is 10 feet wide. This change was made to address the challenge of providing pedestrian access into the retail storefront while elevating the building above the flood hazard elevation.

Site Plan Modifications

There have been a few revisions to the site plan since the last workshop. The building has been shifted slightly to I-295 but is still in compliance with the 10 foot maximum street set back of the B-7 zone. As discussed above this change allows room to address the flood hazard requirement to set the finish floor elevation of the building two feet above the 100 year flood elevation while providing pedestrian access into the retail storefront. Access to the storefront arcade will occur by an ADA compliant ramp on the easterly end of the building and at grade on the westerly end. There will be a low retaining wall along the sidewalk with two step areas in front of the store fronts. A planter will be incorporated into the retaining wall.

The adjustment in the building footprint has resulted in a two foot encroachment in to the 20 foot public easement between the student housing project and this project. This will require a revision to the recently approved Marginal Way subdivision plan. This easement is part of a 38 foot wide public easement between 84 Marginal Way (20 feet wide) and student housing (18 feet wide) which serves primarily as a common driveway between the properties. The change should have no significant impact on the public use of the easement for utilities or access. The pedestrian sidewalk that connects to the walkway behind 84 Marginal Way will not be affected since the sidewalk is located on the student housing property.

Applicant is in process of revising the landscaping plan which will be presented at the workshop. Details such as lighting for the parking garage, documentation of compliance with the B-7 zoning and other details will need to be submitted in advance of the public hearing.

Marginal Way Master Plan

At the last workshop there were several questions regarding this project's compatibility with the plans developed for the Marginal Way Master Plan including the changes in pedestrian crossing distances at the Marginal Way and Preble Street intersection.

Attached is a memo from Tom Errico, Traffic Review Consultant, with a response to these questions. See Attachment E.

Attachments

A. Building Façade Narrative and Design
B. Updated Site Plan
C. Updated Site Plan Submission Narrative
D. Memo from Carrie Marsh, Urban Designer
E. Memo from Tom Errico, Traffic Review Engineer
F. Memo from Dan Goyette, Engineering Review Consultant

ATTACHMENT A

Architects + Engineers

HARRIMAN ASSOCIATES

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Portland, Maine 04101

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Building communities
since 1870

84 Marginal Way
Medical Office Building

Design Narrative
29 November 2006

Context
The nine story building at 84 Marginal Way will be comprised of five stories of offices (primarily medical) above four levels of parking. Each office floor is approximately 16,500 square feet in area. The floor area of each level of the garage is approximately 43,000 square feet. The site is a highly visible Gateway to the City as it is located at the intersection of Marginal Way and Preble Streets as well as being adjacent to I-295. Approximately 190-feet of storefront for retail space on Marginal Way will enhance the level of pedestrian activity in Bayside. At a height of 120-feet, the building will be a 'front face' to the City.

Design Parti
It is our intent to create a gateway building with its own unique contemporary architecture that respects the character of Bayside. Since the building will be viewed from all directions, the design challenge will be to provide one architectural aesthetic that responds to the four differing adjacencies.

The building mass is a five story office building that is less than half of the floor plate size of the garage. The garage is the anchor for the building that is solid as it meets the ground. The five stories of offices has the appearance of a 'lighter' structure.

The design strategy for the exterior materials is really very simple. We have chosen to use materials that can be found in many of the buildings throughout Portland in unique ways to create the buildings mass and façade design. Brick, aluminum curtainwall or storefront, tinted glass and spandrel glass are the major exterior materials. The parking garage structure consists of exposed precast concrete panels with a standard form liner design pattern. Exterior building elements reflect the function of the interior space. Stairwells and elevator shafts are expressed as solid brick elements with punched windows for daylight.

The building is primarily orthogonal in plan; however the property line at the major building corner is curved. Turning the corner in a manner that respects the opposing three corners of Marginal Way and Preble Street is a critical component of the buildings design feature. Plan

solutions such as a 45-degree angle or a curve are obvious and may even be expected. However, our goal is to create a contemporary building and take the expected and 'bend the rules' to create the unexpected. Therefore, in plan, the corner is set at an acute angle at the lower levels of the lobby. Above at the office levels a cantilever of about 3-feet that angles back to the building on the Preble Street façade provides a contrast to the orthogonal nature of the plan. This simple gesture is extremely powerful in creating contemporary architecture.

Since the building is 120-feet in height the entrance should be apparent for the pedestrian and also for those arriving by vehicles. Therefore this corner is a tall, vertical, glass curtainwall element that delineates the entry to the building. A metal cap at the top of this element not only provides a location for signage but is also the mechanical penthouse for the building as well.

Even though the building is contemporary in design the traditional elements of base, middle and cap are still present but with a modern interpretation. The base of the building is primarily brick and storefront with grilles at the parking garage structure. Rising above the garage level is the body of the office building which is primarily aluminum curtainwall and glass/spandrel glass structure with brick 'bookends'. The cape of the building is once again the aluminum curtainwall and glass/spandrel glass materials.

The 'rules' of the traditional elements of the base, middle and cap are expressed in a more contemporary method with the glass entry rising from street to cornice as its own element. The brick base rises into the middle or body of the building while the glass cap is an extension of the middle or body of the building. The traditional tri-parti design elements still exist but are once again used in a non-traditional manor to create a more unified appearance to the building design.

The main entrance to the building will be located at the corner of Marginal Way and Preble Streets. This entrance will not only serve as the main pedestrian access to the building but will also be the lobby for the parking garage as well. A four story glass atrium with balconies at the elevators will enhance the arrival experience for the building's occupants and clients while giving all of those who enter the building a view of bayside and Portland.

Circulation into and out of the garage will take place along Preble Street and at the northeast end of the building on Marginal Way.

Conclusion

Our intent is for 84 Marginal Way to take its place comfortably in Bayside. The intent of the façade composition is to provide a contemporary design clarity so that the building presents a unique identity for its owners and tenants. Equally important we strive for a quality pedestrian experience in keeping with City desires to provide a walkable, comfortable and humane urban environment. The Capital LLC team looks forward to creating a building that contributes in a positive way to the character of Bayside.

ATTACHMENT C-1

MITCHELL & ASSOCIATES
LANDSCAPE ARCHITECTS

November 29, 2006

Mr. Richard Knowland, Senior Planner
City of Portland
389 Congress Street
Portland, Maine 04101

RE: Capital LLC
Mixed Office, Retail and Parking Garage Development
84 Marginal Way

Dear Rick:

The following submission has been prepared to provide revised site plans and architectural design for continuation of the workshop session with the planning board on December 12, 2006. The primary focus of the workshop will be on architecture, with discussion of site issues limited to address modifications resulting from changes to the architecture.

Site Plan

The site plan has been revised to address changes in the building footprint that are a result of program or spatial requirements and to address staff comments raised during our recent meeting with staff. The modifications to the building design have required repositioning of the footprint within the property. The most notable is shifting of the building toward I-295 to provide space along the retail uses to address grading requirements, ADA requirements and the pedestrian scale and experience along Marginal Way.

The retail façade will be setback ten (10) feet from the property line and comply with the B-7 zone requirements. The shift allows for room to address a two (2) foot grade change from Marginal Way to the finish floor of the building. The elevation requirement is due to the flood zone ordinance requirement to set the finish floor of the structure two (2) feet above the 100 year flood elevation. We are providing a raised arcade along the retail use to address the change in grade. Access to the arcade will occur by an ADA compliant ramp on the easterly end of the building and at grade on the westerly end. There will be a low retaining wall along the sidewalk, punctuated with two sets of stairs to access the upper level. We are proposing to incorporate planting beds along the arcade to provide enhancement for the pedestrian scale along the building and along the eight (8) foot wide public side walk.

THE STAPLES SCHOOL
70 CENTER STREET
PORTLAND, MAINE 04101

Telephone (207) 774-4427
Fax (207) 874-2460
Website www.mitchellassociates.biz

The main entry to the building at the corner of Marginal Way has been modified to address architectural changes and meet accessibility requirements. The final design of the exterior public space is on-going and subject to further modifications.

The design of the private-tenant elevator and stair access on Preble Street has been changed. The pedestrian access design has been modified to accommodate for pedestrian and for emergency rescue access, providing both ramp and stair access.

To accommodate for the changes in the architecture and to respond to staff comments, the building had to be shifted to the east toward Bayside Village. This has resulted in a two (2) foot encroachment in to the twenty (20) foot wide city easement that was included in the city's recently approved subdivision plan. The reduction in the easement has no impact on the intent of the easement for public city and utility access. The width of the easement on the Bayside Village parcel is eighteen (18) feet. The encroachment would require an amendment to the subdivision plat.

We have made revisions to the Layout and Lighting Plan and the Grading, Drainage and Utility Plans. Grading along the exterior of the building does not alter the drainage pattern along Marginal Way or Preble Street from previous submissions. There will be subsequent revisions to the Grading, Drainage and Utility Plan to respond to the interior stormwater management for the garage once the design is further refined.

The landscape plan has not been revised at this time. We will submit a revised plan for comment before the workshop session. The architectural plans have been prepared by Harriman Associates and are enclosed as part of this submission.

Enclosed for your review are the following:

Plan Drawings

- Layout and Lighting Plan — Sheet 2
- Grading, Drainage and Utility Plan — Sheet 3

Architectural Drawings

- Ground Floor Plan — Sheet A10.1
- Exterior Elevation — Sheet A20.1
- Exterior Elevation — Sheet A20.2
- Exterior Elevation — Sheet A20.3
- Exterior Elevation — Sheet A20.4

- Architectural Narrative prepared by Harriman Associates

- 81/2 x 11 Architectural Renderings prepared by Harriman Associates

We look forward to meeting with you and the planning board on December 12, 2006 to continue the workshop session to discuss the architecture and site modifications. Should you have any question or comments, please do not hesitate to call me.

Sincerely,
Mitchell & Associates

ROB METCALF

Robert B. Metcalf

Enclosure

cc: Ted West
Greg Shinberg
Matt Young
Judy Johnson
Will Haskell

AH. D

Memorandum
Department of Planning and Development
Planning Division

To: Chair Beal and Members of the City of Portland Planning Board

From: Carrie M. Marsh, AICP, Urban Designer, City of Portland, Planning Division

Date: 12/08/06

Re: Intermed Building, 84 Marginal Way
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ATTACHMENT F

WOODARD & CURRAN
Engineering • Science • Operations

CORPORATE OFFICES: Maine, Massachusetts, New Hampshire, Connecticut, Florida
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MEMORANDUM

TO: Rick Knowland

FROM: Dan Goyette, PE – Development Review Engineer, Woodard & Curran, Inc.

DATE: December 6, 2006

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DRG

203848.68

cc: File

Site Plan & Conditional Use (garage)

Memorandum
Department of Planning and Development
Planning Division

To: Chair Beal and Members of the Portland Planning Board

From: Richard Knowland, Senior Planner

Date: Prepared on: December 8, 2006
Prepared for: December 12, 2006

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ATTACHMENT A

Architects + Engineers

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solutions such as a 45-degree angle or a curve are obvious and may even be expected. However, our goal is to create a contemporary building and take the expected and 'bend the rules' to create the unexpected. Therefore, in plan, the corner is set at an acute angle at the lower levels of the lobby. Above at the office levels a cantilever of about 3-feet that angles back to the building on the Preble Street façade provides a contrast to the orthogonal nature of the plan. This simple gesture is extremely powerful in creating contemporary architecture.

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Even though the building is contemporary in design the traditional elements of base, middle and cap are still present but with a modern interpretation. The base of the building is primarily brick and storefront with grilles at the parking garage structure. Rising above the garage level is the body of the office building which is primarily aluminum curtainwall and glass/spandrel glass structure with brick 'bookends'. The cape of the building is once again the aluminum curtainwall and glass/spandrel glass materials.

The 'rules' of the traditional elements of the base, middle and cap are expressed in a more contemporary method with the glass entry rising from street to cornice as its own element. The brick base rises into the middle or body of the building while the glass cap is an extension of the middle or body of the building. The traditional tri-parti design elements still exist but are once again used in a non-traditional manor to create a more unified appearance to the building design.

The main entrance to the building will be located at the corner of Marginal Way and Preble Streets. This entrance will not only serve as the main pedestrian access to the building but will also be the lobby for the parking garage as well. A four story glass atrium with balconies at the elevators will enhance the arrival experience for the building's occupants and clients while giving all of those who enter the building a view of bayside and Portland.

Circulation into and out of the garage will take place along Preble Street and at the northeast end of the building on Marginal Way.

Conclusion

Our intent is for 84 Marginal Way to take its place comfortably in Bayside. The intent of the façade composition is to provide a contemporary design clarity so that the building presents a unique identity for its owners and tenants. Equally important we strive for a quality pedestrian experience in keeping with City desires to provide a walkable, comfortable and humane urban environment. The Capital LLC team looks forward to creating a building that contributes in a positive way to the character of Bayside.

ATTACHMENT C-1

MITCHELL & ASSOCIATES
LANDSCAPE ARCHITECTS

November 29, 2006

Mr. Richard Knowland, Senior Planner
City of Portland
389 Congress Street
Portland, Maine 04101

RE: Capital LLC
Mixed Office, Retail and Parking Garage Development
84 Marginal Way

Dear Rick:

The following submission has been prepared to provide revised site plans and architectural design for continuation of the workshop session with the planning board on December 12, 2006. The primary focus of the workshop will be on architecture, with discussion of site issues limited to address modifications resulting from changes to the architecture.

Site Plan

The site plan has been revised to address changes in the building footprint that are a result of program or spatial requirements and to address staff comments raised during our recent meeting with staff. The modifications to the building design have required repositioning of the footprint within the property. The most notable is shifting of the building toward I-295 to provide space along the retail uses to address grading requirements, ADA requirements and the pedestrian scale and experience along Marginal Way.

The retail façade will be setback ten (10) feet from the property line and comply with the B-7 zone requirements. The shift allows for room to address a two (2) foot grade change from Marginal Way to the finish floor of the building. The elevation requirement is due to the flood zone ordinance requirement to set the finish floor of the structure two (2) feet above the 100 year flood elevation. We are providing a raised arcade along the retail use to address the change in grade. Access to the arcade will occur by an ADA compliant ramp on the easterly end of the building and at grade on the westerly end. There will be a low retaining wall along the sidewalk, punctuated with two sets of stairs to access the upper level. We are proposing to incorporate planting beds along the arcade to provide enhancement for the pedestrian scale along the building and along the eight (8) foot wide public side walk.

THE STAPLES SCHOOL
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Telephone (207) 774-4427
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Website www.mitchellassociates.biz

The main entry to the building at the corner of Marginal Way has been modified to address architectural changes and meet accessibility requirements. The final design of the exterior public space is on-going and subject to further modifications.

The design of the private-tenant elevator and stair access on Preble Street has been changed. The pedestrian access design has been modified to accommodate for pedestrian and for emergency rescue access, providing both ramp and stair access.

To accommodate for the changes in the architecture and to respond to staff comments, the building had to be shifted to the east toward Bayside Village. This has resulted in a two (2) foot encroachment in to the twenty (20) foot wide city easement that was included in the city's recently approved subdivision plan. The reduction in the easement has no impact on the intent of the easement for public city and utility access. The width of the easement on the Bayside Village parcel is eighteen (18) feet. The encroachment would require an amendment to the subdivision plat.

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The landscape plan has not been revised at this time. We will submit a revised plan for comment before the workshop session. The architectural plans have been prepared by Harriman Associates and are enclosed as part of this submission.

Enclosed for your review are the following:

Plan Drawings

- Layout and Lighting Plan — Sheet 2
- Grading, Drainage and Utility Plan — Sheet 3

Architectural Drawings

- Ground Floor Plan — Sheet A10.1
- Exterior Elevation — Sheet A20.1
- Exterior Elevation — Sheet A20.2
- Exterior Elevation — Sheet A20.3
- Exterior Elevation — Sheet A20.4

- Architectural Narrative prepared by Harriman Associates

- 81/2 x 11 Architectural Renderings prepared by Harriman Associates

We look forward to meeting with you and the planning board on December 12, 2006 to continue the workshop session to discuss the architecture and site modifications. Should you have any question or comments, please do not hesitate to call me.

Sincerely,
Mitchell & Associates

BOB METCALF

Robert B. Metcalf

Enclosure

cc: Ted West
Greg Shinberg
Matt Young
Judy Johnson
Will Haskell

AH. D

Memorandum
Department of Planning and Development
Planning Division

To: Chair Beal and Members of the City of Portland Planning Board

From: Carrie M. Marsh, AICP, Urban Designer, City of Portland, Planning Division

Date: 12/08/06

Re: Intermed Building, 84 Marginal Way
Compliance with B-3 *Urban Design Standards*

Staff met with the applicant and design team for the Intermed building at 84 Marginal Way on November 27 and December 6, 2006. The conceptual designs for the building which were submitted on December 8 were reviewed for compliance with the *B-3 Urban Design Guidelines*. The project substantially meets the requirements of these guidelines.

1. The issues that are still outstanding include the following:

2. Samples of all building materials shall be provided.

3. Specifications for doors, windows, awnings, grills and other details shall be provided.

4. Specifications of the signage shall be provided.

5. Details of the storefront design shall be provided.

6. Specifications of the arcade and planting bed design shall be provided.

7. The metal product for the parapet roof at Marginal and Preble shall be provided.

8. The planting bed and the steps leading up to the arcade on Marginal Way may need to be reconsidered in order to increase the perceived accessibility to the retail spaces. One option for achieving this would be to increase the width of the steps leading up to the arcade.

9. The detailing of the parking garage on the East and North elevations shall be considered for opportunities to mitigate the raw concrete parking structure from the perspective of the pedestrian using the path behind the building. Opportunities for material finishes, landscaping, lighting and other measures to mitigate these facades should be considered.

Att. E

Rick Knowland - 84 Marginal Way

From: "Thomas Errico" <terrico@wilbursmith.com>
To: "'Rick Knowland '" <RWK@portlandmaine.gov>
Date: 12/08/2006 9:16 AM
Subject: 84 Marginal Way
CC: "'James Carmody'" <JPC@portlandmaine.gov>

Rick –

As requested I have provided the following information as it relates to the projects compatibility with the conceptual plans developed for the Marginal Way Master Plan.

- Changes in pedestrian crossing distances at the Marginal Way/Preble Street intersection.

Crosswalk	Existing	Master Plan	84 Marginal Way
Marginal Way west of Preble	100 feet	65 feet	80 feet
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Preble Street Extension	110 feet	70 feet	80 feet
Preble Street	90 feet	70 feet	90 feet

  - Marginal Way west of Preble – The crossing distance does not meet the Master Plan distance due to the requirement for no modification on southerly Marginal Way curb line (in front of Gorham Savings Bank) and a larger radius on the 'AAA' corner. I will check this radius and make a determination on its appropriateness.
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  - Preble Street Extension – The crossing distance does not meet the Master Plan distance due to the provision of larger radii on the corners. I will check this and make a determination on its appropriateness.
  - Preble Street – No changes are proposed on the south side of Marginal Way.

- The proposed Master Plan concept was developed such that it will be compatible with all possible future modes of transportation, including light rail. The applicant should provide a response ensuring the proposed project frontage design on Marginal Way allows for all possible transportation mode implementation.

- As part of development of the interim plan for Marginal Way, the applicant will be providing two travel lanes on Marginal Way in the eastbound direction. As such the applicant should provide technical documentation on the required length of carrying the two lanes from Preble Street towards Chestnut Street. The City would like to minimize the length of the two lanes.

I will follow-up with an email on the issue of short-term versus long-term implementation later today.

From: "Thomas Errico" <terrico@wilbursmith.com>
To: "'Rick Knowland '" <RWK@portlandmaine.gov>
Date: 12/8/2006 3:23:10 PM
Subject: 84 Marginal Way

Rick -

The City recognizes that the full implementation of the Marginal Way Master Plan will be conducted in phases and as such is supportive of the construction of a short-term or initial implementation program. In respect to the 84 Marginal Way project, a key element of the short-term implementation plan is the provision of two left-turn movements (one from a dedicated left-turn lane and one from a shared left/through lane) from Preble Street Extension onto eastbound Marginal Way. This short-term action allows for a roadway cross-section on Preble Street Extension that is consistent with the full-build Master Plan, but continues to require two Marginal Way eastbound through lanes, which is not consistent with the full-build Master Pan. The City wishes to systematically reduce the left-turn capacity from Preble Street Extension and will monitor conditions at the subject intersection during the implementation of area roadway improvements and the completion of development projects.

Please contact me if you have any questions. I will be in attendance at the Planning Board Workshop next week.

Best Regards,

Thomas A. Errico, P.E.

Senior Transportation Engineer

Wilbur Smith Associates

59 Middle Street

Portland, Maine 04101

w: 207.871.1785 f: 207.871.5825

TErrico@WilburSmith.com

www.WilburSmith.com

ATTACHMENT F

WOODARD & CURRAN
Engineering • Science • Operations

CORPORATE OFFICES: Maine, Massachusetts, New Hampshire, Connecticut, Florida
Operational offices throughout the U.S.

MEMORANDUM

TO: Rick Knowland

FROM: Dan Goyette, PE – Development Review Engineer, Woodard & Curran, Inc.

DATE: December 6, 2006

RE: 84 Marginal Way.

Woodard & Curran has reviewed the latest submission for the proposed project at 84 Marginal Way. The project involves constructing a medical office building with a parking facility.

Documents Reviewed

- Engineering plan set prepared by Mitchell & Associates, sheets 2 and 3, dated November 28, 2006 and architectural sheets A10.1, A20.1-20.4.

1. General Comments

A. Preble Street is a moratorium street and will need to be reconstructed in accordance with the City moratorium street requirements.

B. It is unclear why the applicant is proposing a water line connection from Preble Street and from Marginal Way. It also appears that the connection on Marginal Way is very close to the new connection being proposed for Bayside Village. A single connection to the system could be made on Marginal Way which could service both buildings. Please provide additional information on the water line connections.

DRG

203848.68

cc: File

Memorandum
Department of Planning and Development
Planning Division

To: Chair Beal and Members of the Portland Planning Board

From: Richard Knowland, Senior Planner

Date: Prepared on: December 8, 2006
Prepared for: December 12, 2006

Re: Medical Office Building; Corner of Marginal Way and Preble Street; Vicinity of 84 Marginal Way

Capital, LLC. (Ted West) has requested a fourth workshop for a proposed building and parking garage on the corner of Marginal Way and Preble Street. The project is subject to site plan and conditional use (parking garage) review. A traffic movement permit will be required. The first (August 8, 2006), second (September 26, 2006) and third workshop (November 14, 2006) memos are attached. Please refer to these memos for background information. A public hearing for this project has been tentatively scheduled for January 9th. Updated Building Façade Design Plans and Site Plans are shown on Attachment A and B.

The focus of Tuesday's workshop will be the building façade design and remaining site plan issues.

121 notices were sent to area property owners.

Building Façade Design

The initial site plan submission back in August included a concept design for the building façade. Design work on the façade was put on hold while the Applicant focused on traffic related issues associated with the project.

A new façade design has been submitted. See Attachment A for façade drawings and a design narrative. The plan represents a significant improvement over the initial submission in terms of design direction and choice of materials. The design has more of a contemporary treatment with extensive use of glass (tinted glass and spandrel glass), aluminum curtain wall or storefront and use of brick to highlight certain elements of the façade. The site is in a highly visible gateway location so that the design and height of the building (120 feet) provides an opportunity to help shape and diversify the gateway experience.

Staff has met with the project architect twice since the last workshop including more recently on Wednesday of this week. The design has been evolving and updated façade elevations have clarified the design intent. In today's packet, the most up to date façade design has been submitted. The more detailed façade drawings cover the Marginal Way and Preble Street sides of the building.

Comments from Carrie Marsh, Urban Designer, are shown on Attachment D.

The first floor of the retail space along Marginal Way will be located behind a one story high arcade. The arcade is 10 feet wide. This change was made to address the challenge of providing pedestrian access into the retail storefront while elevating the building above the flood hazard elevation.

Site Plan Modifications

There have been a few revisions to the site plan since the last workshop. The building has been shifted slightly to I-295 but is still in compliance with the 10 foot maximum street set back of the B-7 zone. As discussed above this change allows room to address the flood hazard requirement to set the finish floor elevation of the building two feet above the 100 year flood elevation while providing pedestrian access into the retail storefront. Access to the storefront arcade will occur by an ADA compliant ramp on the easterly end of the building and at grade on the westerly end. There will be a low retaining wall along the sidewalk with two step areas in front of the store fronts. A planter will be incorporated into the retaining wall.

The adjustment in the building footprint has resulted in a two foot encroachment in to the 20 foot public easement between the student housing project and this project. This will require a revision to the recently approved Marginal Way subdivision plan. This easement is part of a 38 foot wide public easement between 84 Marginal Way (20 feet wide) and student housing (18 feet wide) which serves primarily as a common driveway between the properties. The change should have no significant impact on the public use of the easement for utilities or access. The pedestrian sidewalk that connects to the walkway behind 84 Marginal Way will not be affected since the sidewalk is located on the student housing property.

Applicant is in process of revising the landscaping plan which will be presented at the workshop. Details such as lighting for the parking garage, documentation of compliance with the B-7 zoning and other details will need to be submitted in advance of the public hearing.

Marginal Way Master Plan

At the last workshop there were several questions regarding this project's compatibility with the plans developed for the Marginal Way Master Plan including the changes in pedestrian crossing distances at the Marginal Way and Preble Street intersection.

Attached is a memo from Tom Errico, Traffic Review Consultant, with a response to these questions. See Attachment E.

Attachments

A. Building Façade Narrative and Design
B. Updated Site Plan
C. Updated Site Plan Submission Narrative
D. Memo from Carrie Marsh, Urban Designer
E. Memo from Tom Errico, Traffic Review Engineer
F. Memo from Dan Goyette, Engineering Review Consultant

ATTACHMENT A

Architects + Engineers

HARRIMAN ASSOCIATES

66 Pearl Street, Suite 301
Portland, Maine 04101

207.775.0053 telephone
207.775.0460 fax
www.harriman.com

Building communities
since 1870

84 Marginal Way
Medical Office Building

Design Narrative
29 November 2006

Context

The nine story building at 84 Marginal Way will be comprised of five stories of offices (primarily medical) above four levels of parking. Each office floor is approximately 16,500 square feet in area. The floor area of each level of the garage is approximately 43,000 square feet. The site is a highly visible Gateway to the City as it is located at the intersection of Marginal Way and Preble Streets as well as being adjacent to I-295. Approximately 190-feet of storefront for retail space on Marginal Way will enhance the level of pedestrian activity in Bayside. At a height of 120-feet, the building will be a 'front face' to the City.

Design Parti

It is our intent to create a gateway building with its own unique contemporary architecture that respects the character of Bayside. Since the building will be viewed from all directions, the design challenge will be to provide one architectural aesthetic that responds to the four differing adjacencies.

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LANDSCAPE ARCHITECTS

November 29, 2006

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RE: Capital LLC
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BOB METCALF

Robert B. Metcalf

Enclosure

cc: Ted West
Greg Shinberg
Matt Young
Judy Johnson
Will Haskell

Att. D

Memorandum
Department of Planning and Development
Planning Division

To: Chair Beal and Members of the City of Portland Planning Board

From: Carrie M. Marsh, AICP, Urban Designer, City of Portland, Planning Division

Date: 12/08/06

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To: "'Rick Knowland '" <RWK@portlandmaine.gov>
Date: 12/08/2006 9:16 AM
Subject: 84 Marginal Way
CC: "'James Carmody'" <JPC@portlandmaine.gov>

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Subject: 84 Marginal Way

Rick -

The City recognizes that the full implementation of the Marginal Way Master Plan will be conducted in phases and as such is supportive of the construction of a short-term or initial implementation program. In respect to the 84 Marginal Way project, a key element of the short-term implementation plan is the provision of two left-turn movements (one from a dedicated left-turn lane and one from a shared left/through lane) from Preble Street Extension onto eastbound Marginal Way. This short-term action allows for a roadway cross-section on Preble Street Extension that is consistent with the full-build Master Plan, but continues to require two Marginal Way eastbound through lanes, which is not consistent with the full-build Master Pan. The City wishes to systematically reduce the left-turn capacity from Preble Street Extension and will monitor conditions at the subject intersection during the implementation of area roadway improvements and the completion of development projects.

Please contact me if you have any questions. I will be in attendance at the Planning Board Workshop next week.

Best Regards,

Thomas A. Errico, P.E.

Senior Transportation Engineer

Wilbur Smith Associates

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ATTACHMENT F

WOODARD & CURRAN
Engineering • Science • Operations

CORPORATE OFFICES: Maine, Massachusetts, New Hampshire, Connecticut, Florida
Operational offices throughout the U.S.

MEMORANDUM

TO: Rick Knowland

FROM: Dan Goyette, PE – Development Review Engineer, Woodard & Curran, Inc.

DATE: December 6, 2006

RE: 84 Marginal Way.

Woodard & Curran has reviewed the latest submission for the proposed project at 84 Marginal Way. The project involves constructing a medical office building with a parking facility.

Documents Reviewed

- Engineering plan set prepared by Mitchell & Associates, sheets 2 and 3, dated November 28, 2006 and architectural sheets A10.1, A20.1-20.4.

1. General Comments

A. Preble Street is a moratorium street and will need to be reconstructed in accordance with the City moratorium street requirements.

B. It is unclear why the applicant is proposing a water line connection from Preble Street and from Marginal Way. It also appears that the connection on Marginal Way is very close to the new connection being proposed for Bayside Village. A single connection to the system could be made on Marginal Way which could service both buildings. Please provide additional information on the water line connections.

DRG

203848.68

cc: File

From: Rick Knowland
To: bmetcalf@mitchellassoc.biz
Date: 11/13/2006 3:59:22 PM
Subject: Fwd: RE: planning board stuff

Bob, Below is the traffic impact fee that Tom Errico has calculated for the 84 marginal way project.

>>> "Thomas Errico" <terrico@wilbursmith.com> 11/13/2006 3:44:56 PM >>>
Rick –The following outlines my comments as it relates to conditions for the proposed project above those being proposed in the immediate area of the project site (Marginal Way/Preble Street intersection):To improve access opportunities in the Bayside area, I would suggest that the applicant participate in the funding of connecting Somerset Street between Preble Street and Elm Street. This action will minimize impacts to Marginal Way and help to offset left-turn capacity reductions from Preble Street onto Marginal Way. I would suggest that the applicant contribute $22,000.00 to the extension of Somerset Street extension between Preble/Elm Streets and Forest Avenue. The intersection of Franklin Arterial and Marginal Way is currently operating at poor levels of service and improvements have been identified for implementation. Developments in the area have contributed to this location and I would suggest that the applicant contribute $10,000.00 towards implementation of the identified improvements. Please call me if you have any questions. **Thomas A. Errico, P.E.**Senior Transportation EngineerWilbur Smith Associates59 Middle StreetPortland, Maine 04101w: 207.871.1785 f: 207.871.5825TErrico@WilburSmith.comwww.WilburSmith.com

From: Rick Knowland [mailto:RWK@portlandmaine.gov]
Sent: Monday, November 13, 2006 3:27 PM
To: terrico@wilbursmith.com
Subject: planning board stuff
Tom, Attached is the staff memo for 84 Marginal Way. You will note that one of the listed attachments had your name on it. I had already labeled my attachments so your memo is "missing" since I never received it.

CC: Alex Jaegerman ; John Lufkin

Memorandum
Department of Planning and Development
Planning Division

To: Chair Beal and Members of the Portland Planning Board

From: Richard Knowland, Senior Planner

Date: Prepared on: December 8, 2006
Prepared for: December 12, 2006

Re: Medical Office Building; Corner of Marginal Way and Preble Street; Vicinity of 84 Marginal Way

Capital, LLC. (Ted West) has requested a fourth workshop for a proposed building and parking garage on the corner of Marginal Way and Preble Street. The project is subject to site plan and conditional use (parking garage) review. A traffic movement permit will be required. The first (August 8, 2006), second (September 26, 2006) and third workshop (November 14, 2006) memos are attached. Please refer to these memos for background information. A public hearing for this project has been tentatively scheduled for January 9th. Updated Building Façade Design Plans and Site Plans are shown on Attachment A and B.

The focus of Tuesday's workshop will be the building façade design and remaining site plan issues.

121 notices were sent to area property owners.

Building Façade Design

The initial site plan submission back in August included a concept design for the building façade. Design work on the façade was put on hold while the Applicant focused on traffic related issues associated with the project.

A new façade design has been submitted. See Attachment A for façade drawings and a design narrative. The plan represents a significant improvement over the initial submission in terms of design direction and choice of materials. The design has more of a contemporary treatment with extensive use of glass (tinted glass and spandrel glass), aluminum curtain wall or storefront and use of brick to highlight certain elements of the façade. The site is in a highly visible gateway location so that the design and height of the building (120 feet) provides an opportunity to help shape and diversify the gateway experience.

Staff has met with the project architect twice since the last workshop including more recently on Wednesday of this week. The design has been evolving and updated façade elevations have clarified the design intent. In today's packet, the most up to date façade design has been submitted. The more detailed façade drawings cover the Marginal Way and Preble Street sides of the building.

Comments from Carrie Marsh, Urban Designer, are shown on Attachment D.

The first floor of the retail space along Marginal Way will be located behind a one story high arcade. The arcade is 10 feet wide. This change was made to address the challenge of providing pedestrian access into the retail storefront while elevating the building above the flood hazard elevation.

Site Plan Modifications

There have been a few revisions to the site plan since the last workshop. The building has been shifted slightly to I-295 but is still in compliance with the 10 foot maximum street set back of the B-7 zone. As discussed above this change allows room to address the flood hazard requirement to set the finish floor elevation of the building two feet above the 100 year flood elevation while providing pedestrian access into the retail storefront. Access to the storefront arcade will occur by an ADA compliant ramp on the easterly end of the building and at grade on the westerly end. There will be a low retaining wall along the sidewalk with two step areas in front of the store fronts. A planter will be incorporated into the retaining wall.

The adjustment in the building footprint has resulted in a two foot encroachment in to the 20 foot public easement between the student housing project and this project. This will require a revision to the recently approved Marginal Way subdivision plan. This easement is part of a 38 foot wide public easement between 84 Marginal Way (20 feet wide) and student housing (18 feet wide) which serves primarily as a common driveway between the properties. The change should have no significant impact on the public use of the easement for utilities or access. The pedestrian sidewalk that connects to the walkway behind 84 Marginal Way will not be affected since the sidewalk is located on the student housing property.

Applicant is in process of revising the landscaping plan which will be presented at the workshop. Details such as lighting for the parking garage, documentation of compliance with the B-7 zoning and other details will need to be submitted in advance of the public hearing.

Marginal Way Master Plan

At the last workshop there were several questions regarding this project's compatibility with the plans developed for the Marginal Way Master Plan including the changes in pedestrian crossing distances at the Marginal Way and Preble Street intersection.

Attached is a memo from Tom Errico, Traffic Review Consultant, with a response to these questions. See Attachment E.

Attachments

A. Building Façade Narrative and Design
B. Updated Site Plan
C. Updated Site Plan Submission Narrative
D. Memo from Carrie Marsh, Urban Designer
E. Memo from Tom Errico, Traffic Review Engineer
F. Memo from Dan Goyette, Engineering Review Consultant

ATTACHMENT A

Architects + Engineers

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Building communities
since 1870

84 Marginal Way
Medical Office Building

Design Narrative
29 November 2006

Context

The nine story building at 84 Marginal Way will be comprised of five stories of offices (primarily medical) above four levels of parking. Each office floor is approximately 16,500 square feet in area. The floor area of each level of the garage is approximately 43,000 square feet. The site is a highly visible Gateway to the City as it is located at the intersection of Marginal Way and Preble Streets as well as being adjacent to I-295. Approximately 190-feet of storefront for retail space on Marginal Way will enhance the level of pedestrian activity in Bayside. At a height of 120-feet, the building will be a 'front face' to the City.

Design Parti

It is our intent to create a gateway building with its own unique contemporary architecture that respects the character of Bayside. Since the building will be viewed from all directions, the design challenge will be to provide one architectural aesthetic that responds to the four differing adjacencies.

The building mass is a five story office building that is less than half of the floor plate size of the garage. The garage is the anchor for the building that is solid as it meets the ground. The five stories of offices has the appearance of a 'lighter' structure.

The design strategy for the exterior materials is really very simple. We have chosen to use materials that can be found in many of the buildings throughout Portland in unique ways to create the buildings mass and façade design. Brick, aluminum curtainwall or storefront, tinted glass and spandrel glass are the major exterior materials. The parking garage structure consists of exposed precast concrete panels with a standard form liner design pattern. Exterior building elements reflect the function of the interior space. Stairwells and elevator shafts are expressed as solid brick elements with punched windows for daylight.

The building is primarily orthogonal in plan; however the property line at the major building corner is curved. Turning the corner in a manner that respects the opposing three corners of Marginal Way and Preble Street is a critical component of the buildings design feature. Plan

solutions such as a 45-degree angle or a curve are obvious and may even be expected. However, our goal is to create a contemporary building and take the expected and 'bend the rules' to create the unexpected. Therefore, in plan, the corner is set at an acute angle at the lower levels of the lobby. Above at the office levels a cantilever of about 3-feet that angles back to the building on the Preble Street façade provides a contrast to the orthogonal nature of the plan. This simple gesture is extremely powerful in creating contemporary architecture.

Since the building is 120-feet in height the entrance should be apparent for the pedestrian and also for those arriving by vehicles. Therefore this corner is a tall, vertical, glass curtainwall element that delineates the entry to the building. A metal cap at the top of this element not only provides a location for signage but is also the mechanical penthouse for the building as well.

Even though the building is contemporary in design the traditional elements of base, middle and cap are still present but with a modern interpretation. The base of the building is primarily brick and storefront with grilles at the parking garage structure. Rising above the garage level is the body of the office building which is primarily aluminum curtainwall and glass/spandrel glass structure with brick 'bookends'. The cape of the building is once again the aluminum curtainwall and glass/spandrel glass materials.

The 'rules' of the traditional elements of the base, middle and cap are expressed in a more contemporary method with the glass entry rising from street to cornice as its own element. The brick base rises into the middle or body of the building while the glass cap is an extension of the middle or body of the building. The traditional tri-parti design elements still exist but are once again used in a non-traditional manor to create a more unified appearance to the building design.

The main entrance to the building will be located at the corner of Marginal Way and Preble Streets. This entrance will not only serve as the main pedestrian access to the building but will also be the lobby for the parking garage as well. A four story glass atrium with balconies at the elevators will enhance the arrival experience for the building's occupants and clients while giving all of those who enter the building a view of bayside and Portland.

Circulation into and out of the garage will take place along Preble Street and at the northeast end of the building on Marginal Way.

Conclusion

Our intent is for 84 Marginal Way to take its place comfortably in Bayside. The intent of the façade composition is to provide a contemporary design clarity so that the building presents a unique identity for its owners and tenants. Equally important we strive for a quality pedestrian experience in keeping with City desires to provide a walkable, comfortable and humane urban environment. The Capital LLC team looks forward to creating a building that contributes in a positive way to the character of Bayside.

Dear Mr. Blumenthal

This letter is to confirm that the Perimeter Planning Group has received the application for two freestanding directional signs for the 84 Margaret Mitchell office building owned by Atlanta National Trust LLC. Both signs are approx 8' 10" by 5'-3" with height from grade of 11 ft 10 in. Based on our review of site and the Boundary Survey in the Planning Commission agenda

B-7 Mixed Use Urban District Zone
Design Principles and Standards

TABLE OF CONTENTS

I. PURPOSE

II. APPLICABILITY

III. PRINCIPLES AND STANDARDS

PRINCIPLE A URBAN DESIGN

STANDARD A-1: **Sense of Place**
STANDARD A-2: **Edges and Transitions**
STANDARD A-3: **Gateways**
STANDARD A-4: **Views and Landmarks**
STANDARD A-5: **Pedestrian Environment**
STANDARD A-6: **Mix of Uses**
STANDARD A-7: **Building Orientation**

PRINCIPLE B ACCESS AND CIRCULATION

STANDARD B-1: **Streets and Alleys**
STANDARD B-2: **Street Connectivity**
STANDARD B-3: **Mid-Block Permeability**
STANDARD B-4: **Sidewalks and Crosswalks**
STANDARD B-5: **Green Streets**
STANDARD B-6: **Multi-modality**
STANDARD B-7: **Continuity of street level uses**
STANDARD B-8: **Traffic-calming**
STANDARD B-9: **Streetscape Design**
STANDARD B-10: **Encroachments**
STANDARD B-11: **Lighting**

PRINCIPLE C PARKING, LOADING AND SERVICE AREAS

STANDARD C-1: **Parking Structures**
STANDARD C-2: **Parking Entrances**
STANDARD C-3: **Active Uses**
STANDARD C-4: **Back of Parking Structures**
STANDARD C-5: **Decks and Ramps**
STANDARD C-6: **Surface Lots**
STANDARD C-7: **Bike Racks and Pedestrian Amenities**
STANDARD C-8: **Service, Utility and Mechanical Infrastructure**

PRINCIPLE D **OPEN SPACE AND THE PUBLIC REALM**

STANDARD D-1; **Open Space Design**
STANDARD D-2: **Bayside Trail**
STANDARD D-3: **Landscaping and Street Furniture (private and public)**
STANDARD D-4: **Pedestrian Amenities**
STANDARD D-5: **Public Art**

PRINCIPLE E **ARCHITECTURAL DESIGN**

STANDARD E-1: **Architectural Design**
STANDARD E-2: **Height**
STANDARD E-3: **Massing**
STANDARD E-4: **Articulation**
STANDARD E-5: **Flexibility of Interior Layout**
STANDARD E-6: **Entrances**
STANDARD E-7: **Windows**
STANDARD E-8: **Storefronts**
STANDARD E-9: **Back Sides of Buildings**
STANDARD E-10: **Rooftop Appurtenances**
STANDARD E-11: **Fences and Walls**
STANDARD E-12: **Materials**
STANDARD E-13: **Transparency**
STANDARD E-14: **Illumination**
STANDARD E-15: **Weather Protection**
STANDARD E-16: **Signage**
STANDARD E-17: **Historic Buildings**
STANDARD E-18: **Sustainable Design**
STANDARD E-19: **Shadows**
STANDARD E-20: **Wind**

GLOSSARY

APPENDICES / REFERENCES

I. PURPOSE

The *B-7 Design Principles and Standards* are intended to guide Bayside neighborhood residents, developers, designers, City officials and staff and others in the creation of a vibrant, aesthetic and sustainable neighborhood which is dense, mixed-use, and pedestrian-friendly. The B-7 Design Standards support excellence in urban and architectural design which contributes to a strong sense of place, encourages 24-hour activity, promotes multi-modal transportation, provides public spaces and protects scenic views. The B-7 Design Standards meet the following goals:

1. Support and reinforce the goals of *A New Vision for Bayside*.

2. Accentuate Bayside as a gateway to the city by highlighting major corridors and corners.

3. Preserve the neighborhood building scale that is typical of the small blocks of Portland.

4. Extend the existing street grid and create mid-block permeability, in order to provide opportunities for multi-modal access, service alleys, public spaces, view corridors, and access to light and air. Design pedestrian oriented streets with significant landscaping.

5. Preserve view corridors toward Back Cove and the White Mountains, as well as views looking toward the spine of the Portland peninsula, as shown in the *Bayside Height Map*.

6. Create dense, mixed-use, multi-modal development that is adjacent to infrastructure, highways, jobs and educational opportunities.

7. Create spaces of various scales that are attractive to creative industries, such as art, architecture, design, film, media, music, performing arts, publishing and software design

8. Allow building heights that create space for a critical mass of people needed to make a new urban neighborhood successful. Ensure that development is human in scale at the pedestrian level.

9. Encourage architecture which expresses the aesthetic of the time in which it was built, that respects local urban design patterns, and that is compatible with adjacent traditional residential neighborhoods. The Portland Peninsula has been Maine's most urban area for several centuries and new architectural styles and materials are often introduced here. It is expected that this will continue to be the case as sites in the B-7 Zone are redeveloped.

10. Incorporate "green" design, smart growth policies, and sustainable technology into the urban design, site plan design, and architectural designs of the Bayside neighborhood.

11. Create a variety of mixed-use commercial opportunities that serve the neighborhood, city and region. Ensure that commercial development which is regional in scale, is compatible in design and massing to the adjacent traditional residential neighborhoods.

12. Provide a hierarchy of green spaces on public and private land with parks, playgrounds, plazas and trails. Ensure that the streetscape design enhances the pedestrian experience.

13. Use authentic building materials and construction methods that are of the highest quality and appropriate to an urban environment and expected to last at least 50 years.

14. Adaptively reuse existing buildings.

II. APPLICABILITY

The *Design Principles and Standards* shall apply to all development in the *B-7 Mixed Use Urban District Zone* which is subject to the review of the City of Portland

Unless otherwise indicated, the *B-7 Design Principles and Standards* shall apply to portions of the building and sites visible from the public rights of way.

When referenced, the context of a site refers to a two-block radius with special attention given to the existing streetscape on both side of the street within the block of the proposed site (unless a different range is identified during development review).

The B-7 Mixed Use Urban District Zone Design Principles and Standards will be evaluated by the Planning Board five years from the date of the approval of March 26, 2008.

III. PRINCIPLES AND STANDARDS

PRINCIPLE A Urban Design

All development in Bayside shall be designed to create a strong urban identity and sense of place. *Buildings may be a variety of architectural styles, particularly those that are innovative and express the aesthetic of the time in which they were built, and shall be organized according to principles of urban design that integrate with the urban fabric of surrounding neighborhoods and Portland as a whole. These principles shall strengthen the overall sense of place, accentuate views, gateways and landmarks, establish defined boundaries and ensure sensitive transitions to surrounding neighborhoods, enhance the physical amenities of the neighborhood, and create a pedestrian oriented environment with safe and vital streets.*

STANDARD A-1: **Sense of Place.** The identity and "sense of place" of Bayside is based on design elements that contribute to the character of the district. New development shall respond to unique characteristics such as: existing patterns of design and development; opportunities to extend the street grid; changes in topography; proximity and views to significant buildings, amenities or natural features; access to light and air; connection to the pedestrian and bicycle network and public spaces; access to the regional transportation system, and opportunity for innovative design.

All development shall meet the goals of *A New Vision for Bayside*. The City's Bayside Streetscape Subcommittee further identified characteristics which will strengthen the identity of the district such as building on the industrial heritage of the past; enhancing the artistic personality of Bayside in the future; respecting the vernacular of existing buildings; encouraging innovative architectural design that expresses the aesthetic of the time in which it was built; encouraging adaptive reuse; respecting the "patina" of age and maintaining historic materials; strengthening the connections to adjacent neighborhoods of Bayside, Downtown, Back Cove, Deering Oaks, and the East End; preserving views; mitigating the widths of the major arterials such as Marginal Way and Franklin Arterial which border the neighborhood; highlighting Portland and Cumberland Streets as "Main Streets" to the traditional residential portions of the neighborhood; mitigating traffic/pedestrian concerns across major streets, creating mixed uses that have a neighborhood scale; creating neighborhood green spaces as places to gather; and utilizing native plant materials in landscaping.

STANDARD A-2: **Edges and Transitions.** Transitions between larger scale, mixed use buildings and smaller-scale residential uses shall be designed so that there is a seamless connection to adjacent residential neighborhoods to ensure that these zones remain stable, quiet, and secure. This shall be achieved through the mitigation of height, massing, stepbacks, materials, and details and design of the façade at the pedestrian level. Potentially nuisance features or uses, such as dumpsters and air handlers, parking, service areas, blank walls, or backs of buildings shall not be sited or designed in a manner that forms a boundary to the residential neighborhood. Larger scale developments may use public open spaces to provide transitions to lower scale uses. [See Standard C-8 Service, Utility and Mechanical Infrastructure, and Standard E-9 Back Sides of Buildings].

STANDARD A-3: **Gateways.** Gateways serve as landmarks, signal arrival into neighborhood and the city and help to promote the distinct identity of Bayside. The designated gateways in Bayside are shown on the *Bayside Street Hierarchy Map.* These gateways shall be visible to and oriented to vehicular, bicycle, and pedestrian traffic; and shall be of the highest quality materials appropriate to an urban environment. Development at designated gateways shall include elements such as dramatic architectural forms and details, public space, distinctive paving patterns and landscaping, public art, historical markers, water features, unique accent lighting, wayfinding or "welcome" signage, and crosswalks.

STANDARD A-4: **Views and Landmarks.** View corridors to buildings and natural resources help to define the character of Bayside. New development shall be designed with consideration for its impact on significant views and view corridors as shown on the *Downtown Height Study* and the *Bayside Height Overlay Map,* as well as other important views as may be identified during the City's development review process. View corridors shall be highlighted with significant architecture and quality materials. New development shall be sited so that it does not block view corridors. Taller portions of structures shall step back out of the view corridor. Roof top appurtenances shall not to be visible from view corridors, nor shall they obscure important landmarks. Additionally, development along corridors on the east-west axis

through Bayside shall be evaluated to maximize sun and light. [Also see Standard E-10 Rooftop Appurtenances].

STANDARD A-5: **Pedestrian Environment.** Development on public streets or public spaces shall be human scale at the pedestrian level and enhance the pedestrian environment through the use of elements at the first floor such as a mix of uses; detailed facades; building materials and signage of the highest quality; fully-functioning entries oriented to the street; active windows and storefronts; awnings and weather protection; outdoor seating and sales displays; traffic calming; adequately sized sidewalks; appropriately scaled streetlights; gathering spaces; trees and landscaping; street furniture; and amenities such as public art, water features, and historical markers. [See Principle B Access and Circulation, Principle D Open Space and the Public Realm, and Principle E Architectural Design].

STANDARD A-6: **Mix of Uses.** New development in Bayside shall incorporate a mix of residential, retail, commercial and open space uses of various types and scales in order to serve the neighborhood, city and the region. All new development shall be designed to allow a flexibility of use over time [See Standard E-5 Flexibility of Interior Layout].

STANDARD A-7: **Building Orientation.** Buildings shall be located at or near the property street line in order to provide very clear definition and character to the street. This will compliment and complete the established streetwall pattern that is predominant on the Portland peninsula. The primary facades and entrances of buildings shall be oriented to streets, major pedestrian routes, or open spaces in order to enhance the pedestrian-oriented environment. The primary facades and entrances of buildings shall not be oriented toward parking lots.

PRINCIPLE B Access and Circulation

Streets and sidewalks in Bayside shall be designed to encourage a pedestrian friendly, walkable environment. *The goal is to create streets that are scaled and designed for pedestrian and bicycle use; are well landscaped; promote traffic calming; allow for mid-block permeability, and extend the pattern and scale of Portland's traditional street grid and blocks in accordance with the 1914 Atlas of the City of Portland.*

[NOTE: Insert the 1914 City Atlas section for Bayside]

STANDARD B-1: **Streets and Alleys.** Streets and alleys shall be scaled for expected vehicle, pedestrian, bicycle, and transit activity; support mixed use development; be well landscaped; promote traffic calming; allow for on-street parking; and follow the existing scale and pattern of Portland's street grid and blocks. All development shall extend the grid as feasible. The *Bayside Street Hierarchy Map* details the hierarchy of streets.

1. A Streets - Marginal, Forest, Franklin

2. B Streets - Cumberland, Lancaster, Kennebec, Somerset, Preble, Elm
3. C Streets - Parris, Hanover, Chestnut, Pearl, Portland, Oxford
4. D Streets - Mechanic, Brattle, Upper Parris, Upper Hanover, Alder, Wilmot, Cedar
5. Alleys – mid-block permeability between future buildings

Development along all streets, public rights of ways and open space shall incorporate the City's streetscape standards for Bayside which include specifications for sidewalks, streetlights, street furniture, fencing and walls, landscaping and signage. This information is provided in Appendix ___.

STANDARD B-2: **Street Connectivity.** The prevailing pattern of streets on the Portland peninsula runs parallel and perpendicular to the waterfront. This pattern is expressed in relatively short blocks, buildings with small footprints and narrow facades, reasonable walking distances between blocks, and frequent opportunities to turn corners or move from one street to parallel streets. Extension of the street grid pattern will ensure that the massing of new development is consistent with the traditional scale and urban patterns of Portland, protect view corridors, provide opportunities for sun and airflow, enable efficient and flexible vehicular and pedestrian circulation, and provide opportunities for service alleys. New development shall coordinate with, intersect, and extend existing streets and sidewalks at multiple access points. See the *Downtown Height Study* and the *Bayside Height Overlay Map* for key view corridors and potential street extensions. As land use and development opportunity allow, Somerset Street shall be extended west towards Forest Avenue.

STANDARD B-3: **Mid-Block Permeability.** Development shall incorporate mid-block permeability that is perpendicular to Marginal Way, and where feasible that is parallel to Marginal Way, in order to encourage building footprints that are in scale with the existing traditional pattern of development in Portland. These corridors shall be developed as street extensions, service alleys with public access, pedestrian corridors, trail access, plazas and pocket parks. These corridors shall be designed for the pedestrian first, with limited vehicular accessibility. These corridors shall not be designed solely as access to parking or loading areas, and shall be designed to be handicap accessible, well lit, paved in concrete,brick or stone, and appropriately landscaped. Asphalt surfaces shall not be allowed. (Wharf Street in the Old Port is an example of a desired level of design for this type of public way).

A primary circulation system shall be developed through streets, alleys, sidewalks and trails. A secondary circulation system shall be provided internally within buildings for public use through the use of fully functioning entrances on all street sides of a building, and internal lobbies and corridors that permeate through the ground floor of a building, unless the building program precludes such design and cannot be modified to meet this requirement due to small scale or security reasons.

Many larger buildings in Downtown Portland have incorporated frequent opportunities to pass through the interiors of street-level spaces. This element is important to the liveliness and accessibility of retail businesses and cultural amenities. The development

or redevelopment of larger sites, and the potential assembly of more than one block or parcel through the discontinuance of intervening streets, shall carefully consider this characteristic pattern of pedestrian circulation.

[NOTE: Insert photos Wharf Street]

STANDARD B-4: **Sidewalks and Crosswalks.** The provision of all sidewalks and crosswalks shall conform to the specifications and details contained within the City's *Technical and Design Standards and Guidelines,* and the City's Crosswalk Standards at a minimum. New sidewalks along public streets shall be at least 10 feet wide measured from curb to property line where feasible, except where it can be demonstrated that site constraints preclude such width. Sidewalks that are 12-15 feet wide and bump-outs shall be provided along A and B Streets where feasible, in order to allow for amenities such as larger tree wells, landscaping, café seating, shop displays and public art. Where appropriate, crosswalks shall be transversely striped and at a minimum as wide as the sidewalk to which it connects.

STANDARD B-5: **Green Streets.** Frederick Law Olmsted created networks of "Green Streets" in many cities in which major streets were landscaped to enhance the connection between parks and open spaces throughout a city, and were designed for both pedestrian and vehicular use. The Olmsted firm created a plan for Marginal Way as a green boulevard that would have connected Deering Oaks to the Eastern Prom. As feasible, new development shall support the opportunity to realize this historic plan, and to shall apply the principles of Green Streets to streets in Bayside. This will reinforce connections to Back Cove, Deering Oaks and the Eastern Prom.

[Note: Include the graphic of the historic Marginal Way plan].

STANDARD B-6: **Multi-modality.** *A New Vision for Bayside* designates all of Bayside as a transit-oriented development. All new development in Bayside shall accommodate a full range of multi-modal transportation options. New development shall create a functional and safe environment that provides a continuous travel corridor for pedestrians and bicycles which serves the same major destinations as automobiles. New development along transit corridors shall incorporate facilities for transit users. A future train station is proposed at the end of Chestnut Street at I-295. Development along Marginal Way shall be designed to address the potential for rail service.

STANDARD B-7: **Continuity of Street Level Uses.** Continuity of pedestrian-oriented uses along street frontages, particularly A and B streets, is important to encourage pedestrian interest, movement and safety. Service entrances and vehicular entrances which interrupt the continuity of street-level uses shall not be located along A or B streets, or areas of high pedestrian activity. Where such uses are unavoidable, extraordinary care shall be taken to assure that the pedestrian environment remains both attractive and safe, and such interruptions shall be kept to a minimum in both numbers and lengths. In such instances, the pedestrian shall clearly have priority.

STANDARD B-8: **Traffic-calming.** Development on public streets shall support traffic calming measures to the extent allowed by City and State policies and requirements at a minimum. Particular attention shall be paid to the traffic calming measures taken where the Bike Trail will cross Chestnut Street. Potential traffic calming measures include gateway treatments, corner neck-downs, narrowed travel lanes, speed tables, trees and landscaping, and transversely striped crosswalks. Crosswalks shall be at a minimum as wide as the sidewalk to which they connect.

STANDARD B-9: **Streetscape Design.** New development in the public realm shall utilize the City's streetscape standards for Bayside which include specifications for sidewalks, streetlights, street furniture, fencing and walls, landscaping and signage in order to create a unified image of the neighborhood. This information is provided in the appendix. Privately owned, publicly accessible open spaces shall be designed to coordinate with the surrounding area by incorporating the City's standards for streetscape design elements. Streetscape design on privately owned, publicly accessible open spaces may select a different style which complements the City's standard for the area if the design of the space commands a special, unique, and equally distinctive feature.

[NOTE: insert details of fencing at Whole Foods parking lot, brick sidewalks etc]

STANDARD B-10: **Encroachments.** Encroachments on the sidewalk shall be sited and designed to encourage pedestrian activity. The design, location, and construction or installation of such features shall be human scale, shall be appropriate in character with the surrounding buildings and open space, shall be comprised of durable and attractive materials, and shall be consistent with the City's streetscape standards. The encroachment shall not impede the visual transparency or the perceived physical interaction with the internal uses of the building.

STANDARD B-11: **Lighting.** Street lights along public streets shall be scaled to the size, traffic volume and use that is typical for that street, as defined in the street hierarchy in Standard B-1 Streets and Alleys. Street lighting shall comply with the *Technical and Design Standards and Guidelines* at a minimum and may also be required to meet The Illuminating Engineering Society of North America Standards (IESNA), and the Leadership in Energy and Environmental Design (LEED) standards for light pollution.

Street Lighting:

"A Streets" lighting shall be the City's selected Holophane model for Bayside, at the 24'3" foot height in the Silver Metallic Aluminum color #F264H.

"B Streets" shall be the City's selected Holophane model for Bayside, at the 19'3" foot height in the Silver Metallic Aluminum color #F264H.

"C Streets" shall be the Holophane model for Bayside, at the 19' 3" foot height in the Tribo color.

"D Streets" shall be the Holophane model for Bayside, at the 12'9" foot height in the Tribo color.

Sidewalk Lighting: Sidewalks shall be lit with a combination of pole mounted, building mounted, or bollard lighting, as well as light from store windows, entries and other building features. The placement of lighting fixtures shall be pedestrian scaled, downwardly directed, and shielded or reflected so as to prevent glare and excess lighting spilling onto private property or skyward.

[NOTE: Insert photo of bollard lights from Lowell or other examples].

Open Space: Lighting along public open spaces shall be of a height in scale with the space, as determined by City staff. Privately owned, publicly accessible open spaces may select a different luminaire style which complements the City's standard for the area if the design of the space commands a special, unique, and equally distinctive feature.

PRINCIPLE C Parking, Loading and Service Areas

Parking, loading and service areas shall be designed and located so as to present an attractive façade to neighboring use, to minimize their visual presence in the neighborhood, and to minimize the impact along pedestrian oriented streets and residential areas.

STANDARD C-1: **Parking Structures**. Parking structures shall be designed to be compatible with adjacent uses and architecture in form, bulk, massing, articulation, and materials. These structures shall incorporate architectural design elements that provide visual interest on all sides visible from public rights of way, for the full height of the structure. The visual impact of parking garages along primary and secondary streets shall be mitigated through the use of features such as the site topography and façade articulation such as decorative metal grills, green screens with plant materials or artwork. The parking garage may incorporate "green roof" technologies. Internal lighting shall not include bare overhead lighting. The glare of headlights shall be screened from view of adjacent structures. Pedestrian level lighting shall be provided on the exterior.

STANDARD C-2: **Parking Entrances.** The entrance to parking garages shall respect the pedestrian realm and minimize the visual impact of the garage through provision of design elements such as: enhancement of the pedestrian entries; physical separation of entrances and exits; recessing the entry or extending portions of the structure over the entry; and incorporation of landscaping or artwork. The exits from parking garages shall be designed to inform the driver that s/he is entering in to a pedestrian realm. Gates shall be located interior to the building at a distance that allows cars to stack internal to the structure rather than on the street.

STANDARD C-3: **Active Uses.** Parking structures shall incorporate liner buildings along the full front façade, or enclosed active uses on the first floors along all A and B streets (excluding frontage dedicated to entrances, lobbies, and stair towers). Such space

shall be provided with a minimum of 10 foot floor to ceiling clearance height, a 25 foot depth (measured from the exterior building wall), and a column spacing that would allow commercial uses to be developed in the structure, shall the structure be adapted for such uses in the future. [See also Standard E-5 Flexibility of Interior Layout].

STANDARD C-4: **Back of Parking Structures.** Parking structures that have a rear or side elevation along a right of way, pedestrian access route, trail, open space, or which can be viewed from the public right of way, must incorporate design considerations noted in Standard E-9: Back Sides of Buildings

STANDARD C-5: **Decks and Ramps.** Parking structures shall have horizontal decks on all levels where the decks are visible from the public rights of way. Ramps and non-horizontal parking decks shall be screened from all visible angles and shall not be permitted on facades located along or within 45 feet of a public right of way. (Note: such space would allow for the construction of a liner building and a ten foot separation).

STANDARD C-6: **Surface Lots**. Areas devoted to surface parking shall be screened from public rights of way and significant views through the use of design elements such as plantings, fencing, grade changes, and/or walls. A landscaped border shall be created around all surface parking lots. Any parking lot containing ten (10) or more parking spaces shall include one (1) or more landscaped islands within the interior of the lot. There shall be at least one (1) island for every twenty (20) spaces.

STANDARD C-7: **Bike Racks.** Bike racks shall be provided in a convenient location, proximate to the entry or entries of the building(s), either immediately adjacent to or no further than the associated motor vehicle parking, and shall be visible from the street or provided with prominent directional signage visible from the street as detailed in the Technical and Design Standards and Guidelines Manual and in compliance with the City's Off-street bicycle parking standards - *Chapter 14-332.1*

STANDARD C-8: **Service, Utility and Mechanical Infrastructure.** Service, utility and mechanical infrastructure (such as loading docks, delivery areas, truck parking, outdoor storage, utility meters, HVAC equipment, visible rooftop mechanicals, pipes, ducts, vents, access doors, meters, transformers and other building systems equipment, trash collection, trash compaction, power generators, fuel tanks and similar services) shall be located at the rear or side of buildings, along service alleys, or in the interior of parking garages. Such uses shall not result in adverse visual and audible or other noxious impacts on adjacent properties and public streets and spaces. Areas for outdoor storage and trash collection or compaction shall not be visible from public rights of way, or located within 20 feet of any public street, sidewalk, or open space. Mechanical equipment shall be located away from pedestrian ways and seating areas to minimize noise, exhaust or visual impacts. Mechanical equipment shall not be located in the front setbacks between building and public rights-of-way.

All service, utility and mechanical infrastructure shall be visually screened from adjacent uses, adjoining properties and public rights of way. Screening materials, landscaping,

colors, and design shall conform to those used on the building. Roof equipment shall be fully screened from street level and all view corridors by parapets, roof screens or equipment wells. Wherever possible, roof equipment shall be clustered and included in one screen. New buildings and new additions shall plan for roof equipment screens and include them in the design of the building. Garage doors and loading areas shall be screened from view of public rights of way with materials, colors and finishes that are consistent with the exterior elevations of the overall building. Loading docks shall be screened from residential uses by a minimum 8 foot high masonry wall with 10 foot wide landscaped strip. Loading ramps and service entrances with garage doors visible from primary and secondary streets shall be recessed behind the front façade of the main structure. The garage door width may be no more than 10% of the width of the building's overall façade width, except that no garage door need be reduced to less than 9 feet in width. Outdoor storage and trash collection areas visible from public streets and spaces shall be screened, recessed or enclosed with solid fences or walls. Materials, colors, and design of screening walls and fences shall conform to those used on the building.

PRINCIPLE D Open Space and the Public Realm

Public and privately owned open spaces shall be designed to promote a visually pleasing, safe, and active environment. *Opportunities to extend the City's bike and pedestrian trail system shall be maximized. Landscaping throughout the neighborhood shall be designed to complement the architecture, enhance the human scale, add seasonal interest, reinforce pedestrian circulation paths, and provide a more comfortable urban environment.*

NOTE: The *Bayside Open Space Priorities and Principles* document was adopted by the Bayside Trail and Open Space Committee on 7/24/06 and was used as a reference document in the drafting of these guidelines. This document shall be considered in the provision and design of open space in the B-7 Zone of Bayside. All new development shall consider this document for specifications on desired locations, components, and design of open space.

STANDARD D-1: **Open Space Design**. Publicly-accessible parks, plazas, and other open space shall be accessible from sidewalks and surrounding buildings. Further, publicly accessible open space shall be located and designed to allow views from the sidewalk, street, and surrounding buildings into the open space as well as outward from within the space. Pedestrian amenities such as seating, lighting, artwork, trash receptacles, etc. shall be compatible with the City's Streetscape Standards for Bayside. Streetscape design on privately owned, publicly accessible open spaces may select a different style which complements the City's standard for the area if the design of the space commands a special, unique, and equally distinctive feature. Solar access, wind protection, and landscaping shall be considered to enhance pedestrian comfort and provide a variety of sunny and shaded areas.

STANDARD D-2: **Bayside Trail.** A conceptual or final plan for the Bayside Trail from Franklin Arterial to Elm Street shall be considered in the review of all new

development. Buildings adjacent to the Bayside Trail shall be designed so that the façades along the trail incorporate design elements that enhance the trail use such as active doors into the building, plazas, outdoor seating, and food service. The design of retail or restaurant uses shall incorporate a means of ingress and egress that is oriented to the trail. Businesses that complement the use of the trail, such as sporting goods stores, equipment rentals, coffee and ice cream shops, etc. shall orient entrances to the trail where feasible.

STANDARD D-3: **Landscaping and Street Furniture.** Landscaping for public property, and private property that is accessible to the public shall comply with the *Technical and Design Standards and Guidelines* at a minimum, and with the standards below. Substitutions shall be reviewed for approval by the City Arborist.

Landscaping: Landscaping such as overhead/canopy trees, ornamental trees, shrubs, ground cover, and flowers, as well as the use of plants with attractive flowers, colorful and changing foliage, distinctive bark, and prominent or unusual shape enrich the visual environment and shall be used to enhance the character and livability of Bayside

Plant selection: The selection of all plant material shall consider native plant materials wherever feasible, and the plant's tolerance to urban conditions which include poor drainage, litter and salt problems, vandalism and abuse, shade conditions, and disease and insects.

Compatibility: The selection of the primary plant materials (in particular the larger materials such as street and ornamental trees) and their location on a particular site, and other site improvements shall be considered in coordination with public streetscape improvements which occur or are planned for the immediate area.
Use and placement: The placement of street trees and planters within the public right-of-way shall complement and enhance the pattern of similar features on adjacent and nearby properties and be consistent with planting programs established by the City.

Planters, wells and tree grates : Raised planters shall be used wherever possible to increase the viability of plant materials. Such planters shall be consistent in style and character throughout Bayside. Where individual tree wells are located along streets, the wells shall be as large as possible to allow adequate water and air to the soil and root system. Where the dimensions of the sidewalk area permit, planting strips or portions of brick sidewalk set on sand shall be considered to allow an even greater area of permeable surface. Tree grates and guards shall be provided in order to assure adequate air and water access and to provide protection for trees located within pedestrian activity areas. In certain areas, where wide sidewalks exist and ample pedestrian circulation area is available, the use of granite pavers may be substituted for tree grates

Irrigation and Drainage: An adequate provision of a water source, irrigation system and method of drainage shall be provided for planted areas. Such areas shall also have drainage systems designed to prevent excess water accumulation or runoff onto

pedestrian walk areas. Individual tree wells shall be designed to allow adequate drainage, tying into curb line drainage systems wherever possible.

Lighting: Lighting of plant materials shall complement existing City programs for street and sidewalk lighting, and shall enhance the pedestrian environment. Such illumination shall generally be maintained by the owner of the proposed development, and the failure to maintain or a decision to remove such illumination shall not result in an unattractive landscape. Special lighting design may be proposed to highlight significant trees.

Maintenance: A regular program of feeding, watering, pruning, damage repair, pest and weed control, and replacement of declining plant material shall be established at the time of initial design and installation, and maintained thereafter.

STANDARD D-4: **Pedestrian Amenities.**

Pedestrian amenities shall comply with the City's *Technical and Design Standards and Guidelines* at a minimum, and also with the streetscape standards selected for Bayside.

1. Seating. Seating along heavily used pedestrian routes shall be provided to accommodate pedestrian related activities. Placement of seating shall not obstruct pedestrian circulation, and shall assure maintenance and appropriate use. One linear foot of seating for each thirty (30) square feet of open space, or 30 linear feet of pedestrian route shall be provided within publicly accessible open space.

2. Bus shelters. Bus shelters or sheltered waiting areas along building frontages shall be provided along designate bus routes. The placement and design of shelters shall not obstruct pedestrian circulation and shall ensure maintenance and proper use. Shelters shall provide a heated waiting area wherever feasible and shall be adequately illuminated and provide seating, signage, and schedule/route information.

3. Streetscape Amenities. Streetscape amenities such as trash receptacles, mailboxes, and newspaper boxes shall not create a visual appearance of clutter, shall not obstruct pedestrian circulation, shall be designed to ensure maintenance and proper use, and shall complement the character of surrounding buildings, streets and open space. Streetscape amenities shall be designed and sited so as to prevent vehicles from parking on the sidewalk.

4. Directional and Informational Signage. It is important that adequate orientation be provided in order to assure the greatest possible use of the area by pedestrians,. Directional and Informational Signage shall be consistent with guidelines established within STANDARD E-16: Signage, with signage requirements of the City Land Use Code, and with other applicable City signage plans such as the results of the City's Wayfinding Study (underway in 2008), as identified during review.

STANDARD D-5: Public Art and other special features. The provision of art and other special features such as fountains and kiosks adds visual interest, a sense of creativity; and elements of discovery that enhance the pedestrian experience. All public art shall be designed and implemented in accordance with the *Guidelines for the City of Portland's Public Art Program.* The location of such features shall not obstruct pedestrian circulation and shall complement the character of surrounding buildings, streets and open space.

PRINCIPLE E Architectural Design

New development shall contribute positively to a new identity for the neighborhood as outlined in A New Vision for Bayside. New development shall create a mixed-use, pedestrian-friendly setting that contributes to the context of the surrounding urban fabric and provides a sensitive transition to adjacent residential neighborhoods. The Portland peninsula has a coherent urban fabric of traditional building forms, street grid, and streetscape design that contributes to the legibility of the city. New development in Bayside may be a variety of architectural styles, particularly those that are innovative and express the aesthetic of the time in which it was built, and shall be organized according to principles of urban design that integrate with the urban fabric of surrounding neighborhoods and Portland as a whole. The scale, massing and fenestration of new development shall reflect its context, include the highest quality design, materials and construction systems expected to last at least 50 years; flexible and adaptable floor plates; functional and aesthetic architectural details; sustainable and green design; and excellence in streetscape, landscape, signage and lighting which is appropriate for an urban setting in the northeastern United States.

STANDARD E-1: **Architectural Design.** New development in Bayside may be a variety of architectural styles, particularly that which is innovative and expresses the aesthetic of the time in which it was built, and shall be organized according to principles of urban design that integrate with the urban fabric of surrounding neighborhoods and Portland as a whole. A respectful integration of contemporary design within the existing context shall complement, reinforce and enhance the prevailing patterns and proportions of adjacent buildings without requiring imitation or repetition.

[NOTE: Insert Bayside Height Overlay Map]

STANDARD E-2: **Height.** In general, building heights shall meet the heights approved on the *Bayside Height Overlay Map*. Heights along the edges of the B-7 Zone shall transition to the scale of adjacent neighborhood development through design elements such as variations in massing; articulation of the facades in intervals that reflect existing structures or platting pattern, stepping the architecture to adjacent buildings and/or contextual proportions of building elements, use of architectural style and details such as roof lines, belt courses, cornices, or fenestration, and color or materials that derive from the less intensive zone.

The street wall heights of buildings shall be stepped back 15 feet minimum once they exceed by 50% the average height of the buildings 4 stories or taller on both side of the street within the block of the proposed site.

The design of the building top, roofline or vertical termination shall be designed to create visual interest on the skyline.

STANDARD E-3: **Massing.** Large expanses of undifferentiated facade or uniform cladding is not allowed along public rights of way. The composition of a proposed building façade shall be defined by horizontal and vertical articulation, with vertical articulation being predominant, in keeping with the local context of the urban form.

New buildings that are four stories or higher shall have three components: base; middle; and top. The base provides a portion of the building with a scale and articulation that is related directly to the pedestrian. The middle portion of the building provides a pattern of fenestration and detail that lends a sense of rhythm and scale to a building both horizontally and vertically. The top portion of the façade typically receives special treatment that terminates the building in a distinctive manner. Exceptions shall be permitted, as determined by the City's planning staff, only when a specific architectural style offers other types of facade articulation that are consistent with that style.

STANDARD E-4: **Articulation.** Blank, flat, unadorned, or repetitive facades shall not be allowed on facades visible from public rights of way. Facades visible from public rights of way shall incorporate design elements that break the facades into components scaled to the pedestrian, and to the context of other buildings on the street. This may be accomplished through an expression of the building's base, middle and top, vertical fenestration, variation in the planes of the façade, architectural details such as windows, doors, bays, balconies, cornices, reveals, expansion joints, trim, changes in color, texture, and material, permanent artwork, etc. The maximum length of blank or undifferentiated facades shall not exceed thirty feet horizontally or vertically and shall not exceed 15 feet horizontally or vertically along streets, primarily A and B Streets. The design elements listed above may be used to mitigate blank walls if it can be demonstrated that the program of the building precludes the use of windows or functional doors every 30 feet at the pedestrian level.

The base of the building which relates to the pedestrian realm, shall be designed with a high level of detailing and material quality utilizing the options listed above. Buildings which are less than four stories must meet this standard on the entire height of the façade. Buildings that are four or five stories shall meet this standard on the first 14 feet, or the first floor at a minimum. Buildings which are six and seven stories shall meet this standard on the first 24 feet, or the first two floors at a minimum. Buildings which are eight stories or higher shall meet this standard on the first 35 feet of the building façade, or the first three levels at a minimum. A deviation shall be made from this standard only to the closest natural breaking point in the building.

All buildings shall maintain a pedestrian scale through the use of building elements at the street level such as windows, entries, commercial displays, building entries, a variety of materials, colors, ornamentation, texture, elements indicating floor-to-floor heights, appropriately scaled building materials, cornice lines, signage, awnings and canopies. Ground floor facades that face public streets shall actively engage pedestrians through such features listed above along no less than 60 percent of their horizontal length.

For interior uses which require large volumes of windowless space, every effort shall be made to contain these uses within the central portion of a site away from street fronting facades of the building. Building entrances and large windows may not be feasible in some cases, due to topographic change or windowless interior uses which cannot be located in any other portion of a site. In such situations, it is important that the design of the facades incorporate features such as those listed above..

STANDARD E-5: **Flexibility of Interior Layout.** The interior layout of a space can impact its viability for pedestrian oriented uses. The first forty (40) feet of depth of floor area along street frontages shall be laid out to be able to accommodate retail or other pedestrian oriented uses. Placement of exterior and interior building features at the first floor level (such as columns, bearing walls, stairs, elevators, and mechanical systems) shall be designed and constructed to be flexible over time and to accommodate the broadest possible variety of layouts, or be able to be modified at reasonable cost to accommodate future pedestrian oriented uses. New commercial development shall incorporate floor plates that can accommodate different sized spaces, storefront windows with the ability to provide separate entrances from the sidewalk, and floor to ceiling heights of 14' on the ground floor. Parking garages shall be designed to be convertible to future uses through the provision of a minimum of a 10 floor to ceiling height, if feasible.

STANDARD E-6: **Entrances.** Buildings along public streets shall have the primary entrances oriented to the street. Primary entrances shall not be oriented to a parking lot or structure. If a building sits at a corner of two streets that are defined as A or B Streets, the primary building entrance shall orient to the corner unless the building program precludes such design. An exception to a corner entrance may be considered where an alternative orientation achieves a superior relationship of the building to the adjacent streets. Primary building entrances shall be fully functional in design and use and shall provide access to lobbies, elevators, stairs and common areas. Entrances shall be scaled to the overall massing of the building. Commercial and mixed use buildings shall be permeable and accessible on all sides from the public way, unless the building program precludes such design due to building scale or for reasonably necessary security purposes. Residential buildings are only required to have one entrance for security purposes.

STANDARD E-7: **Windows.** Windows shall be located on all facades visible from public rights of way. Window style shall be appropriate to the overall building style and scaled to the overall massing. The first floor transparency along public streets and the trail shall be equal to at least 50% of the wall area between the height of 2 and 9 feet. The first floor windows and storefronts shall be transparent with active uses visible

behind them. Opaque glass shall not be allowed at the first floor level [See Standard E-13 Transparency]. Upper floors of all new buildings shall have at least 15% to 40% transparency of wall surface along public rights of way, with the range depending on program requirements. If it can be demonstrated that the building program precludes windows along first floor street frontages, then other surface details shall be used in accordance with Standard E-4Articulation].

STANDARD E-8: **Storefronts.** Storefronts shall be designed to accommodate doors at regular intervals, so that doors may be installed in the future as the building program changes over time. Storefront glass shall be transparent in accordance with Standard E-13: Transparency, and shall not be blocked with opaque glass, or other means. Fixed, collapsible and rolling security grills and gates shall not be allowed on display windows and doors visible from public rights of way.

STANDARD E-9: **Back Sides of Buildings.** The back sides of buildings, particularly along streets, the trail, alleys, or other pedestrian access ways, or which face an adjacent residential neighborhood, shall be designed in a manner that incorporates high quality facade materials, transparent windows, operable building entrances, and other design features that are consistent with the primary facades of the building. Exterior fire escapes, ladders, standpipes, vents, etc. shall be well maintained and painted to blend with the color of the building, or painted a dark recessive color. Utility meters, exhaust vents, etc. shall be unobtrusive and located at the side or rear of the building. See also Standard C-8: Service, Utility and Mechanical Infrastructure.

STANDARD E-10: **Rooftop Appurtenances.** Rooftop appurtenances shall not be visible along or block view corridors, or views to specific landmark features such as the City Hall Clock Tower, Portland Observatory, the Cathedral of the Immaculate Conception or important views as may be identified during the City's development review process. Rooftop appurtenances shall be consolidated physically or visually through unified screening. Rooftop appurtenances shall be located and designed so to appear as an integral part of the architectural character of the building on which they are located. The exterior appearance of these features shall incorporate a scale, shape and choice of materials that is consistent with the principal building.

STANDARD E-11: **Fences and Walls.** Fences and walls along public streets, trails, alleys, or public spaces shall be made of high quality, durable and weather resistant materials such as brick, stone, wood, and high grade metals. The Bayside parking lot fence detail consists of granite posts with pipe rails. This design shall be used at parking lots edges and other appropriate locations. An alternate fence design of equal or higher quality may be presented for consideration during the development review process. Ornamental fencing and walls shall be as low as possible and integrated with plant materials or other amenity wherever adequate space allows. Chain link fences, plastic fences, or fences which are rustic or rural in character, shall not be allowed anywhere that is visible from the public right of way. Chain link fences used on areas internal to a property shall be black vinyl coated. The fence design shall not create a blank façade at the pedestrian level.

STANDARD E-12: **Materials.** Facades visible from public rights of way shall use natural and authentic building materials that are expected to last at least 50years. Predominant materials shall be brick, stone, precast concrete and other masonry products, wood, glass and high quality metals such as steel, titanium and copper. Traditional stucco on wire lath or masonry may be used. Renewable and recyclable materials approved for use by LEED Standards (Leadership in Energy and Environmental Design) may be used. Cellular PVC trim and dimensional stock shall be allowed.

Materials such as thin gauge metal panels, exterior insulation and finish systems (EIFS), panelized "thin brick", vinyl siding, or stucco on Styrofoam or a similar backing shall not be used on facades visible from public rights of way. Fiber-cement clapboard and shingles may be used. Fiber cement panels shall only be used on portions of the building not visible from public rights of way. Public spaces shall be constructed of permanent, durable materials such as concrete, brick or stone.

STANDARD E-13: **Transparency.** Windows shall use untinted, lightly tinted, or the minimum tint needed to meet LEED Standards. Windows that have daylighting application on all levels of the façade shall use glass with a visible transmittance (VT) value above 60% which looks clear. Any value below 60% shall not be allowed as it looks dark and/or reflective. The VT rating shall apply to the glass only, not the frame components.

Opaque, heavily tinted or reflective glass shall not be used at the pedestrian level unless it can be demonstrated that the building program precludes the use of transparent glass. Opaque, heavily tinted or reflective glass shall not be allowed on facades that are visible from public rights of way, except as a design accent covering no more than 10% of upper story fenestration areas.

If window film is used, it shall be an energy efficient film with little or no color, that is virtually invisible and neutral in appearance.

STANDARD E-14: **Illumination**. Prominent building facades shall be lit by carefully designed downwash systems of appropriate color and intensity. Only historic landmarks and civic buildings shall be fully illuminated, as well as buildings which substantially contribute to the character of the street, and have sufficient ornamental detail to provide visual interest. See also STANDARD B-12 Lighting. Also see the City's Revised Lighting Standards for Architectural Up-lighting.

STANDARD E-15: **Weather Protection.** Pedestrian sidewalks and walkways shall include weather protection features such as awnings or arcades a minimum of 30 feet at all entrances along A and B streets parallel to the building façade, or along at least 60% of that frontage. Canopies shall be constructed of permanent, durable materials, with glass and steel preferred.

STANDARD E-16: **Signage.** New styles of architecture frequently use signage with new materials, lighting techniques, and graphic images. Such signage shall be allowed on new construction within the B-7 Zone, where it will not have a detrimental effect on the pedestrian environment and character of surrounding buildings. Such signage shall relate to, and be an integral part of, the design of the building while still allowing adaptability for changing tenants and uses over time. Standard internally illuminated plastic signs shall not be considered as "architectural usage of new materials, lighting techniques, and graphic images for signage".

The signage standards described for the City's Pedestrian Activities District (PAD) in the Downtown shall apply to signage in the B-7 Zone. Signage shall also conform with the following standards:.

- A master signage plan shall be required for all new construction as part of the site plan review process. Signage on new buildings shall be related to, and an integral part of, the design of the building. The master sign plan shall allow adaptability for changing tenants and uses over time.

- Each building may have a total of two signs at the upper level (defined as the area between the top of the first floor and the roofline), one sign per storefront tenant at the pedestrian level, one sign board at each entrance with a tenant roster, and a street number sign at entrances as necessary. Signs at the rooftop or cornice line shall be the name or number of the building, the owner of the building, or the major tenant. Signs for minor tenants (except retail storefront uses) are not allowed on the exterior of the building, except on the tenant roster.

- Trademarked corporate signage shall, in some instances, be required to be reinterpreted to ensure compatibility with its surrounding context. Such reinterpretation may include, but not be limited to, use of alternative materials or lighting solutions, adjustments in the scale of trademark logos or graphics, etc.

- Standard internally-illuminated signs—including plastic faced, box-type signs and individual plastic letters shall be prohibited. Acceptable forms of internal illumination may include halo-lit signs and die-cut metal sign panels that illuminate individual letters and symbols only.

- Permanent signs placed inside windows and/or doors visible from the public right of way shall be subject to review for conformance with these standards.

- Rooftop signs, or signs along the cornice line, shall be allowed on a maximum of two faces of the building for a total of two upper story signs.

- Signage materials within the pedestrian scale (as defined in Standard E-3 Articulation) shall be glass, wood, or high quality metals such as copper or steel. Signage may creatively incorporate artwork or lighting such as artistic neon.

STANDARD E-17: **Historic Buildings.** The City of Portland's Historic Preservation staff shall be consulted on proposed changes to historic structures in the B-7 Zone. Historic structures shall be rehabilitated in a way that is consistent with their original architectural intent. Past alterations that have acquired historical significance in their own right (as defined in the City's Historic Preservation Design Standards) shall be retained. New additions to historic buildings shall be designed to be compatible with the original structure in size, style, and material, and shall result in the minimum necessary loss of original architectural material.

STANDARD E-18: **Sustainable Design.** Property that is controlled or conveyed by the City shall be developed at a minimum in a manner that is certifiable within the standards for building and neighborhood design in accordance with the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED).

STANDARD E-19: **Shadows.** All new development along the Bayside Trail, and all buildings in excess of 65 feet in height, shall be designed so that substantial shadow impacts on accessible open space are avoided. All development along the Trail and buildings in excess of 65 feet in height shall conduct a shadow study during the equinoxes and solstices of the year, at 9:00 am, noon, and 3:00pm. New development shall not increase the area in shadow by more than 10 percent during the period from March 21 to September 21. Shadow impacts which shall be evaluated include:

1. the amount of area of publicly-accessible open space that is shadowed;
2. the time and duration of the shadow impact within the open space; and
3. the importance of sunlight to the utility of the type of open space being shadowed.

STANDARD E-20: **Wind.** Consideration of wind impact relating to new construction shall establish and maintain a comfortable pedestrian environment. Comfort levels for pedestrian use are related to wind speed, reflect the type of pedestrian activity that might be acceptable, and can be categorized (Melbourne's Criteria) as: 1. unacceptable and dangerous; 2. uncomfortable for walking; 3. acceptable for walking; 4. acceptable for short periods of standing or sitting; and 5. acceptable for long periods of standing or sitting.

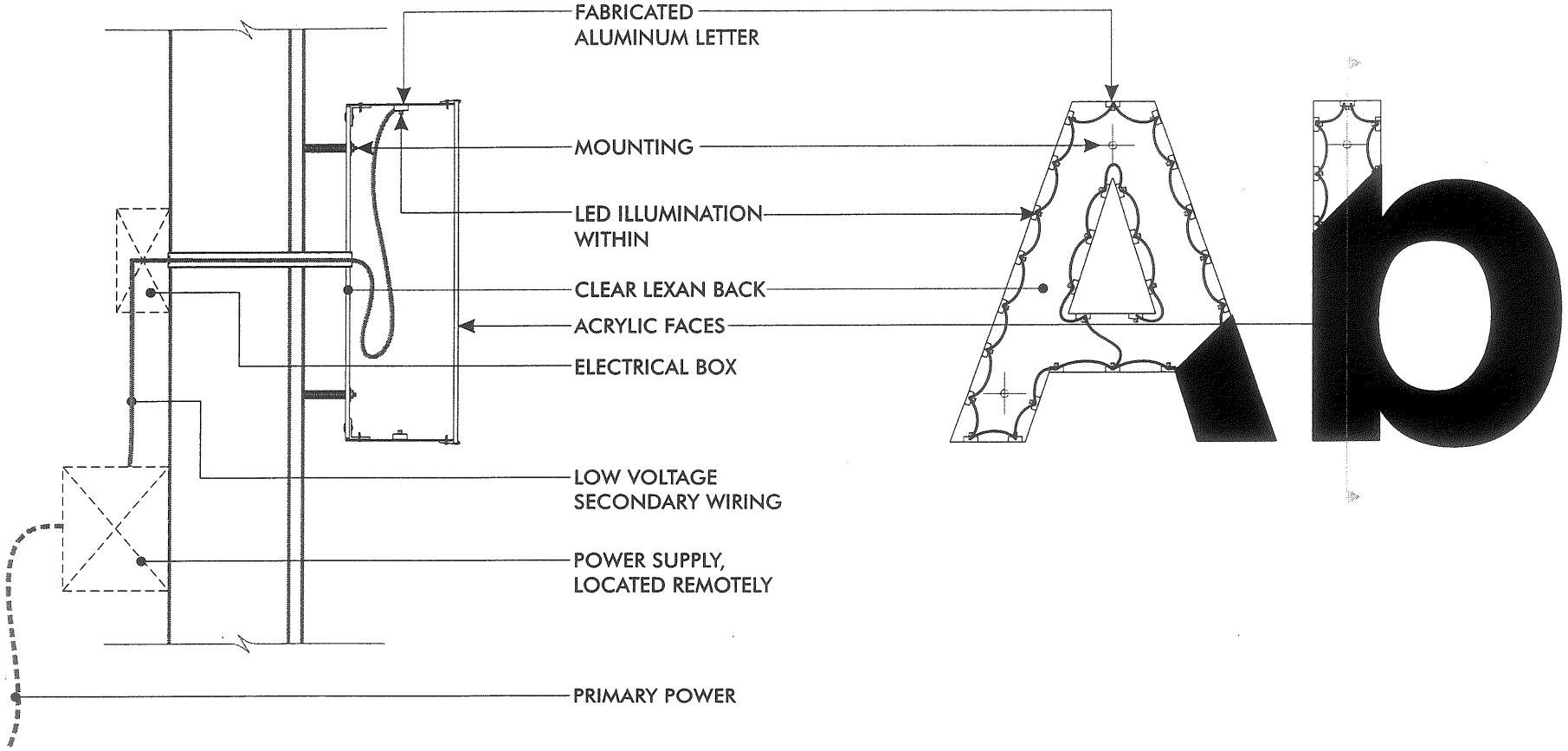
The following factors shall be considered in evaluating whether adverse wind impacts are created: 1. Pre-development and projected post-development wind speeds and their impact on pedestrian movement; and 2. Impact of projected wind speed on the use of and comfort within existing and proposed pedestrian seating areas and other adverse impacts on the surrounding area.

GLOSSARY [To be defined]

Active uses
Authentic Materials
Auto-oriented
Building Orientation
Neighborhood Edges
Circulation system
Cohesive
Connectivity
Contextual - the context of a site refers to a two-block radius with special attention given to the existing streetscape on both side of the street within the block of the proposed site (unless a different range is identified during development review).
Defensible Space
Gateways
Green Roofs
Historic Building
Human Scale
Institutional
Landmarks
Liner Buildings
Massing
Multi-modality
Pedestrian oriented environment
Proportion
Public Rights of Way
Scale
Setbacks
Stepbacks
Traffic calming
View Corridors
View Terminations

APPENDICES / REFERENCES

A New Vision for Bayside
1914 Atlas of the City of Portland (Bayside references)
B-7 Mixed Development District Zone
Bayside Height Overlay Map
Bayside Street Hierarchy Map
Bayside Open Space Priorities and Principles
Bayside Streetscape Subcommittee Standards
Bayside Trail Plan
Bicycle parking standards - *Chapter 14-332.1*
City's Transportation Plan (Bayside references
Downtown Height Study (Bayside references)
Frederick Law Olmstead's firm – Plan for Marginal Way
Marginal Way Street Concept Design Study
Revised Lighting Standards for Architectural Up-lighting (under revision)
Sustainable Portland Report
PAD Signage Requirements
Peninsula Traffic Study (Bayside references)
Peninsula Transit Study (as applicable)
Portland Public Art Guidelines and Ordinance
Technical and Design Standards and Guidelines (lighting, crosswalks, etc).



TYPICAL SECTION
NO SCALE

LED ILLUMINATED CHANNEL LETTER—BACK LIT & FACE LIT
NO SCALE

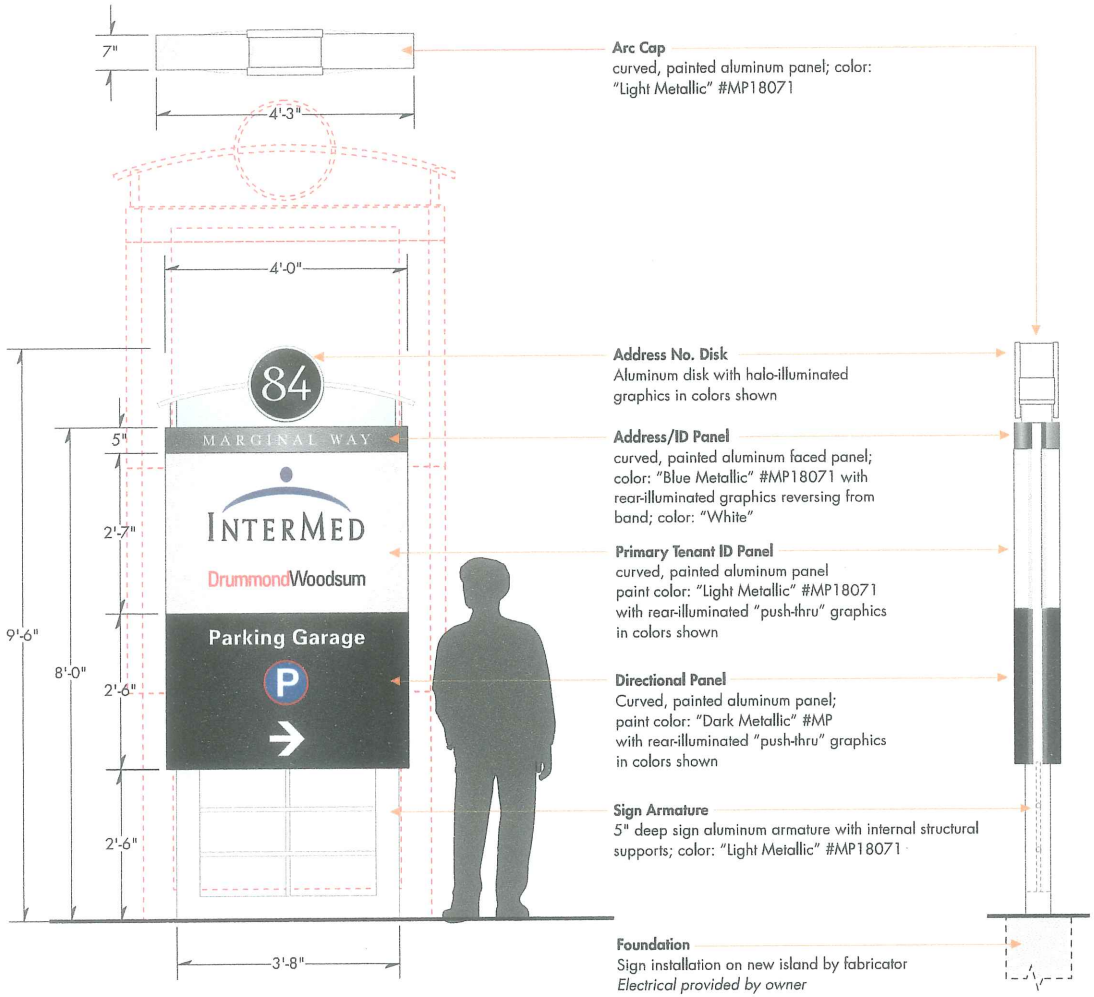
DATE: **09.05.2007**

LED ILLUMINATION, BACK LIT AND FACE LIT, REMOTE POWER SUPPLY

INTERMED / DETAILS

Neokraft

Neokraft Signs Inc.
686 Main Street
Lewiston, Maine 04240
Telephone: 207.782.9654
Facsimile: 207.782.0009
1.800.339.2258
http://www.neokraft.com



Arc Cap
curved, painted aluminum panel; color: "Light Metallic" #MP18071

Address No. Disk
Aluminum disk with halo-illuminated graphics in colors shown

Address/ID Panel
curved, painted aluminum faced panel; color: "Blue Metallic" #MP18071 with rear-illuminated graphics reversing from band; color: "White"

Primary Tenant ID Panel
curved, painted aluminum panel paint color: "Light Metallic" #MP18071 with rear-illuminated "push-thru" graphics in colors shown

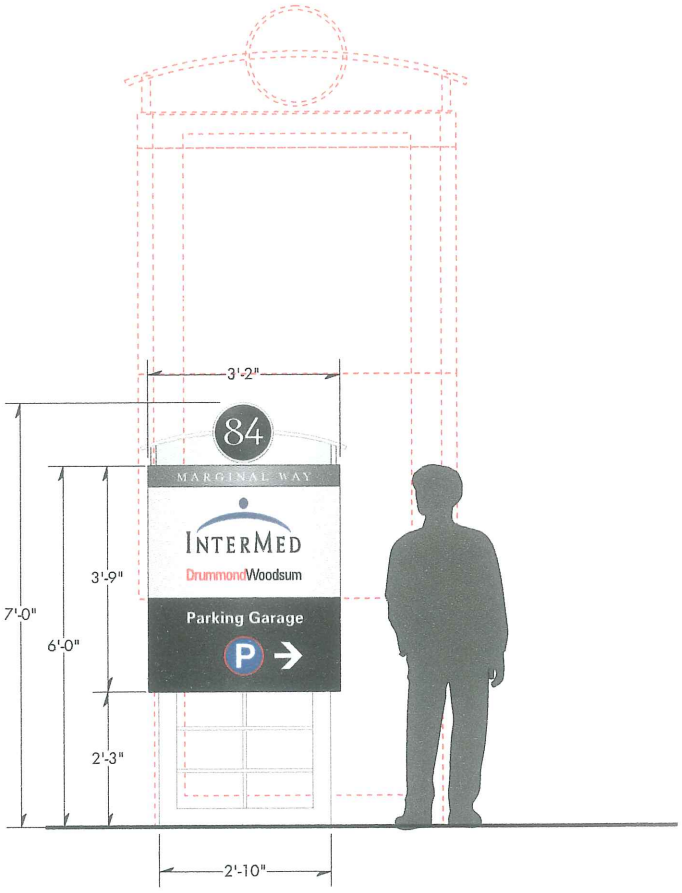
Directional Panel
Curved, painted aluminum panel; paint color: "Dark Metallic" #MP with rear-illuminated "push-thru" graphics in colors shown

Sign Armature
5" deep sign aluminum armature with internal structural supports; color: "Light Metallic" #MP18071

Foundation
Sign installation on new island by fabricator
Electrical provided by owner

D1 8' **Primary ID/Directional Sign 8'** Study *Reduced Size: 8'-0"*
Scale: 1/2" = 1'-0"

Side View
typical



D1 8' **Primary ID/Directional Sign 8'** Study *Reduced Size: 6'-0"*
Scale: 1/2" = 1'-0"

84 MARGINAL WAY
Portland, Maine

ENVIRONMENTAL GRAPHICS
Gamble Design LLC
154 Maplewood Avenue
Portsmouth NH 03801
✆ 603.427.1300

ARCHITECTURE
Harriman Architects + Engineers
123 Middle Street
Portland ME 0053
✆ 207.775.0053

DRAWING TITLE
Primary ID/Directional *Reduced size studies*
Freestanding at vehicular entry drives
Scale: as shown
26 September 2008

DRAWING N°
D1.R

Edward B. 240-6352

Signage/Awning Permit Application

If you or the property owner owes real estate or personal property taxes or user charges on any property within the City, payment arrangements must be made before permits of any kind are accepted.

Location/Address of Construction: 84 Marginal Way

Tax Assessor's Chart, Block & Lot Chart# Block# Lot#	Owner: Atlantic National Trust LLC 50 Portland Pier, Suite 400 Portland, ME 04101	Telephone: 207-553-2000 x-208
Lessee/Buyer's Name (If Applicable) Intermed	Contractor name, address & telephone: Neakraft Signs Inc. 686 Main St. Lewiston, ME 04240 207-782-9654	Total s.f. of signage x $2.00 Per s.f. plus $30.00/$65.00 For H.D. signage= Total Fee: $ 212.00 Awning Fee= cost of work ____ Total Fee: $ 212.00

91 sq. ft. to

Who should we contact when the permit is ready: Shane Moffett phone: 782-9654

Tenant/allocated building space frontage (feet): Length: _____ Height _____
Lot Frontage (feet) _____ Single Tenant or Multi Tenant Lot _____

on file w/recently permitted building signage

Current Specific use: office building
If vacant, what was prior use: N/A
Proposed Use: office building

Information on proposed sign(s):
For Both Signs: 8'-11" X 5'-3" - each w/ 1'-8" diameter "84"

a) Freestanding (e.g., pole) sign? Yes ✓ No ___ Dimensions proposed: _____ Height from grade: 11'-10"
Bldg. wall sign? (attached to bldg) Yes ___ No ___ Dimensions proposed: _____

Proposed awning? Yes ___ No ✓ Is awning backlit? Yes ___ No ___
Height of awning: _____ Length of awning: _____ Depth: _____
Is there any communication, message, trademark or symbol on it? Yes ___ No ___
If yes, total s.f. of panels w/communications, message, trademark or symbol: _____ s.f.

AUG 21 2008

Information on existing and previously permitted sign(s):
Freestanding (e.g., pole) sign? Yes ___ No ✓ Dimensions: _____
Bldg. wall sign? (attached to bldg) Yes ✓ No ___ Dimensions: _____
Awning? Yes ___ No ✓ Sq. ft. area of awning w/communication: _____

see recently permitted building signage for the location: i.e. Winxnet, Drummond Woodsum, Intermed

A site sketch and building sketch showing exactly where existing and new signage is located must be provided. Sketches and/or pictures of proposed signage and existing building are also required.

Please submit all of the information outlined in the Sign/Awning Application Checklist. Failure to do so may result in the automatic denial of your permit.

In order to be sure the City fully understands the full scope of the project, the Planning and Development Department may request additional information prior to the issuance of a permit. For further information visit us on-line at www.portlandmaine.gov, stop by the Building Inspections office, room 315 City Hall or call 874-8703.

I hereby certify that I am the Owner of record of the named property, or that the owner of record authorizes the proposed work and that I have been authorized by the owner to make this application as his/her authorized agent. I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in this application is issued, I certify that the Code Official's authorized representative shall have the authority to enter all areas covered by this permit at any reasonable hour to enforce the provisions of the codes applicable to this permit.

Signature of applicant: Shane Moffett (Neakraft Signs Inc.) Date: 8-19-08

This is not a permit; you may not commence ANY work until the permit is issued.

freestanding sign.
16' max
6' max. 5' from property lines.
B-7.

	additional

TABLE 2.8 SIGN REGULATIONS BY ZONE

Downtown Business (B-3), Urban Commercial (B-5), Waterfront Central (WC), and Waterfront Special Use (WSU) Zones

* Signs located on individual landmark properties or within historic districts, PAD overlay districts or PAD encouragement areas shall, in addition to the provisions herein, be subject to article IX of this Code or the Downtown Urban Design Guidelines, as applicable. Where the design guidelines are more restrictive than these regulations, the design guidelines shall supersede the otherwise applicable dimensional standards.

* Freestanding signs shall be allowed only if the front facade of the building (or individual tenant's/tenants' frontage in the case of a multi-tenant building) is set back a distance of at least twenty (20) feet from either of the front facades of the abutting buildings (or other tenants' frontage in the same multi-tenant building).

Freestanding Signs

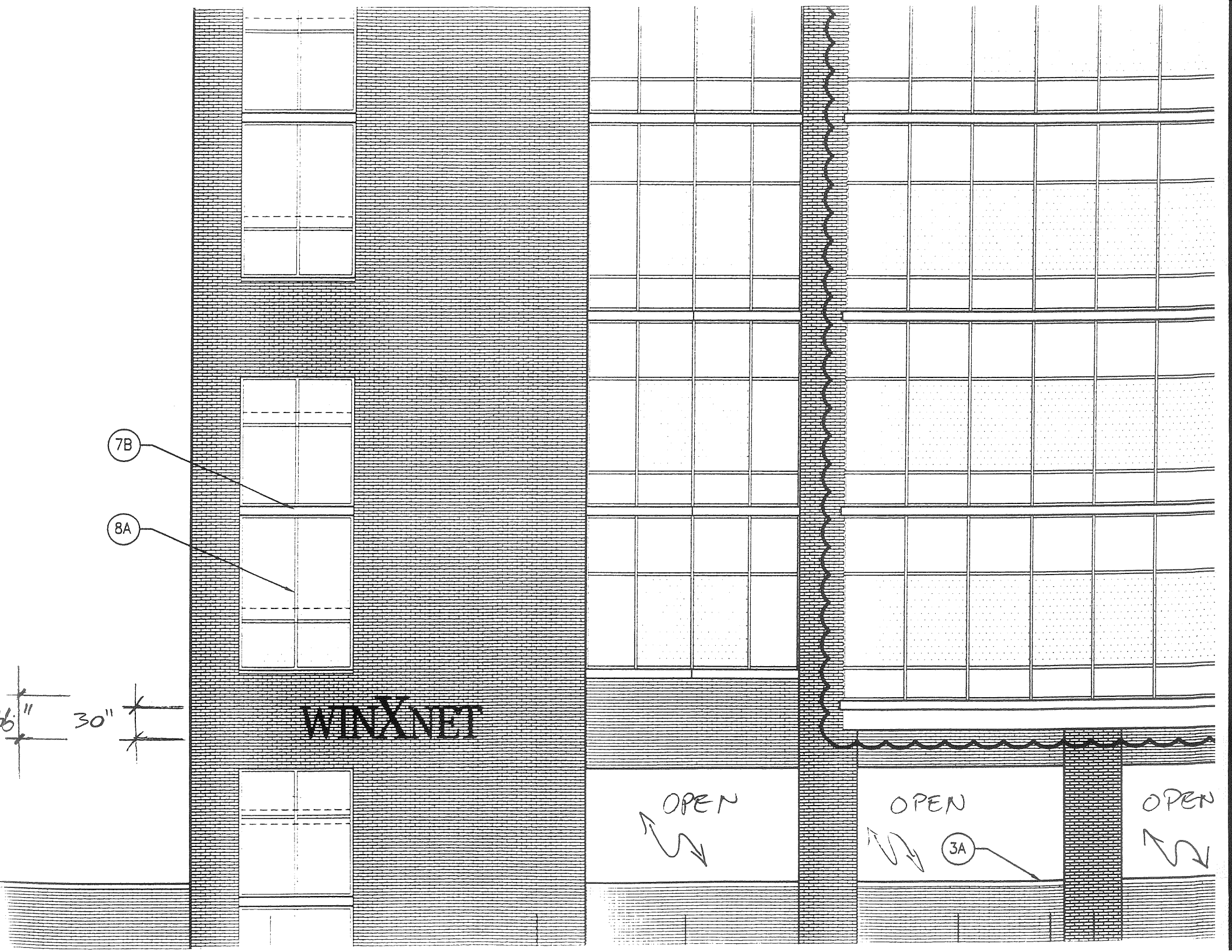
	Single & Multi-Tenant Buildings
Area	16 sq. ft.
Height	6 ft.
Minimum setback	5 ft.
Number of freestanding signs	1 per abutting street

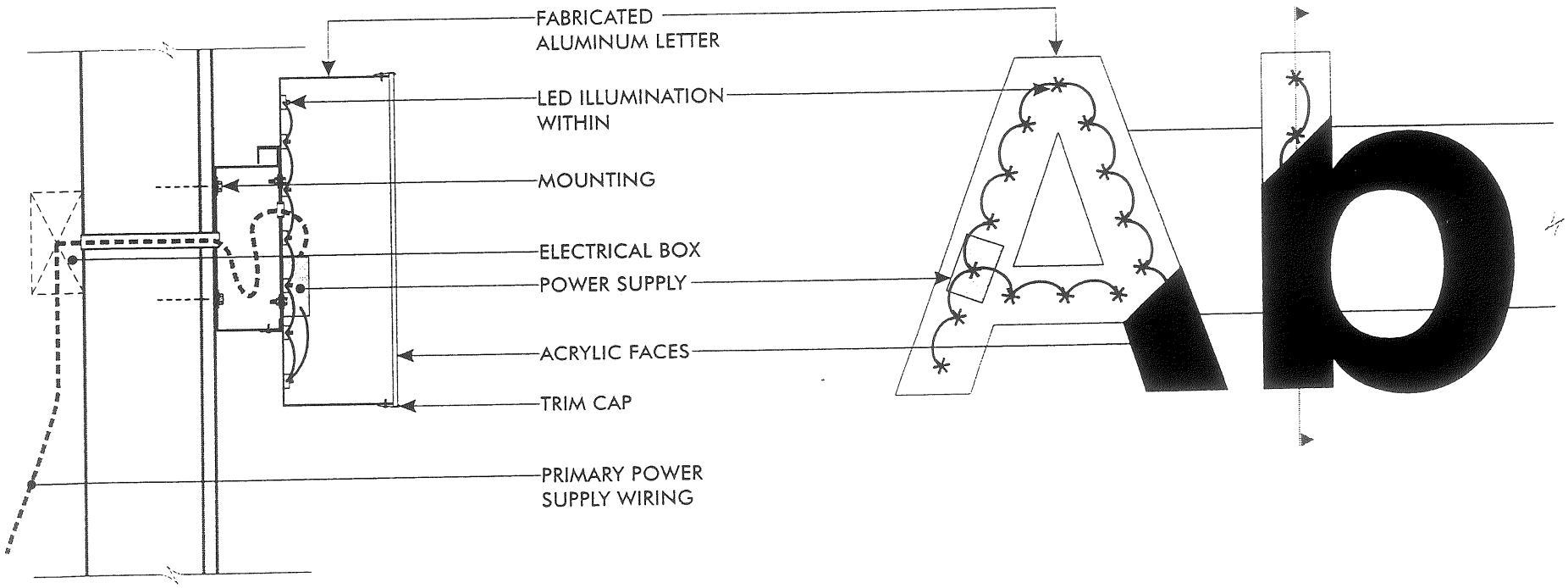
per lot	

Building Signs

		Multi-Tenant Buildings	
	Single Tenant Buildings	*Building ID Sign and/or Upper Floor Tenant Signs*	*Ind. Ground Floor Tenant Signs*
Maximum cumulative permitted area of all building signs	Na	*Na*	*na*
Square feet per linear feet of building facade on which sign will be placed	2 sq. ft.	na	2 sq. ft. per ft. of tenant's building frontage
Maximum percent of wall area on which sign(s) is(are) to be placed	Na	5%	na
Number of building signs permitted per lot	1 per facade + 1	1 per facade + 1 per tenant	1 per tenant (a)

(a) If individual tenant fronts on more than one (1) street, one (1) additional building sign is permitted for each


7B
8A
36"
30"
WINXNET
OPEN
OPEN
3A
OPEN



TYPICAL SECTION

NO SCALE

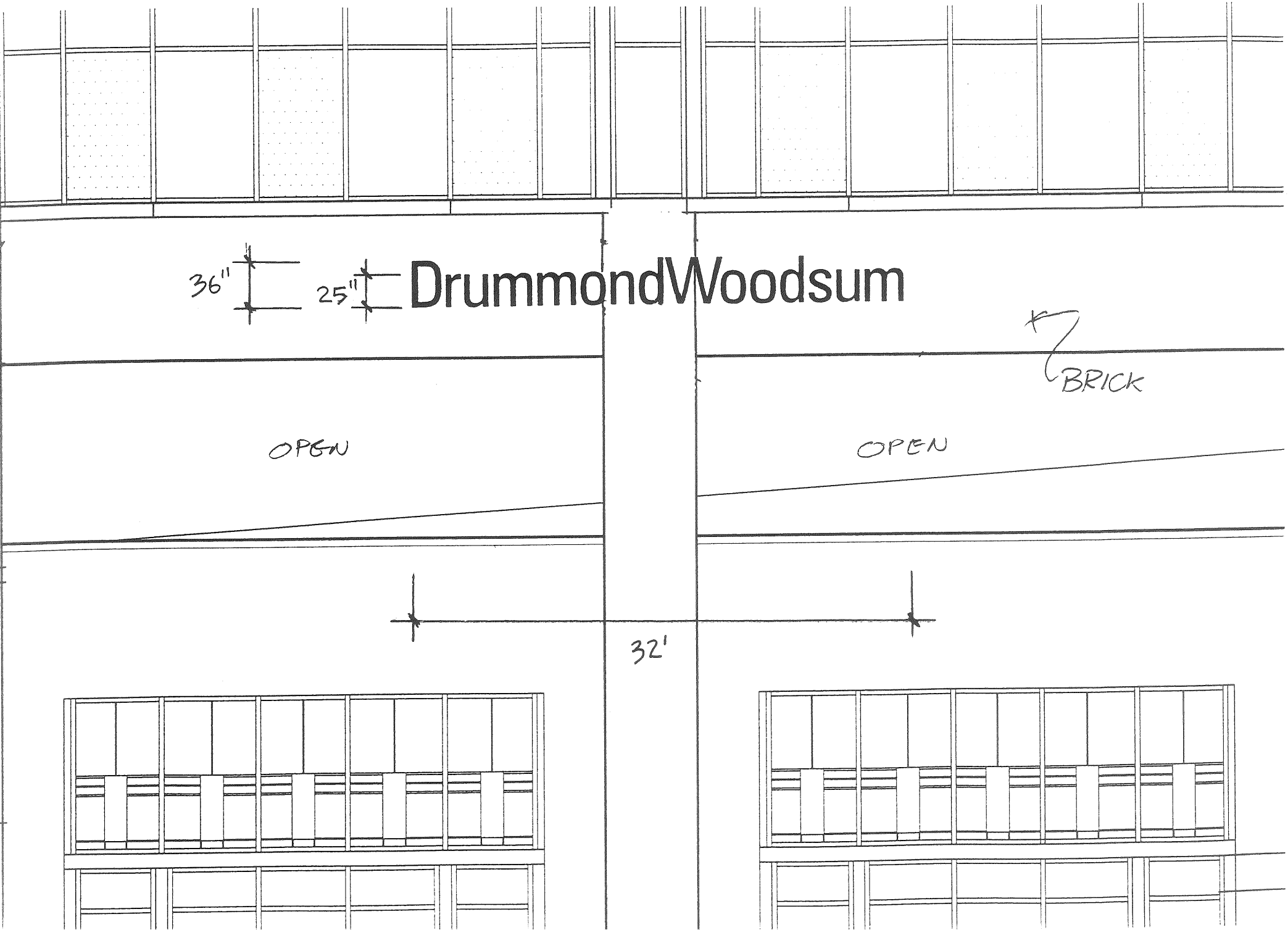
LED ILLUMINATED CHANNEL LETTER—WIRE-WAY MOUNT

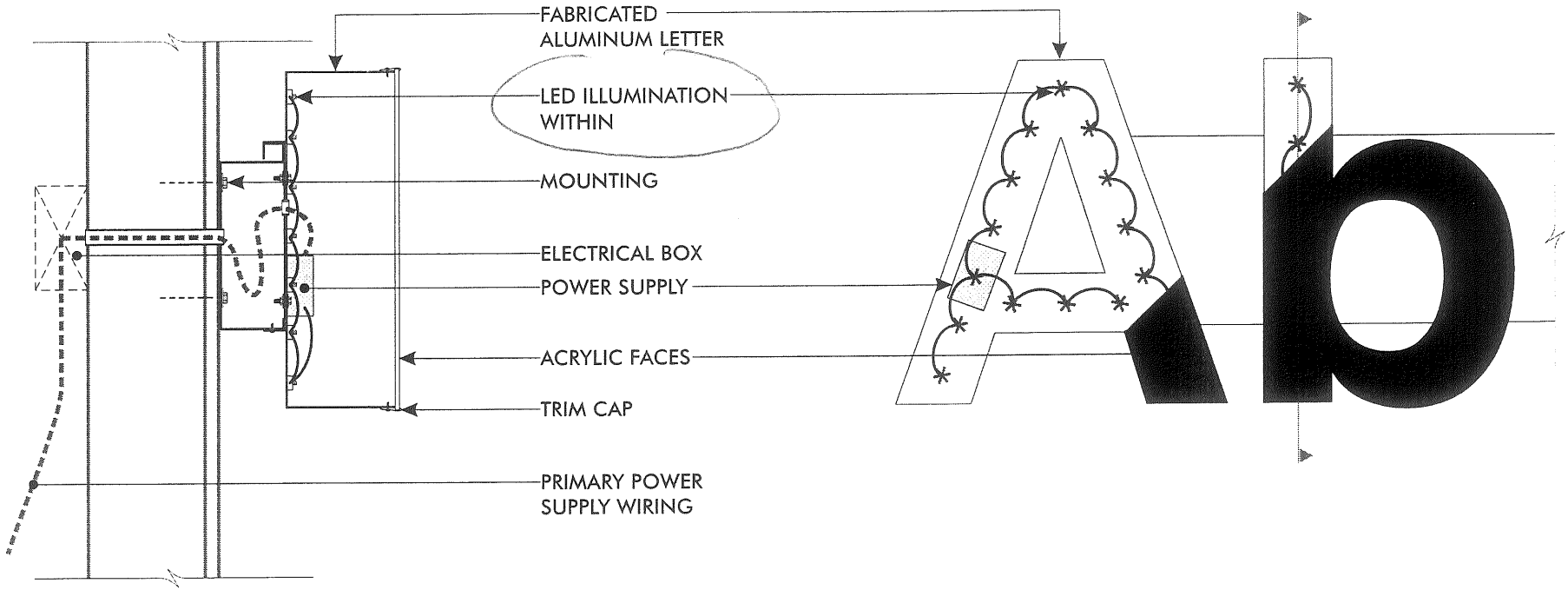
NO SCALE

DATE: **09.05.2007**

LED ILLUMINATION, SELF CONTAINED ON WIRE WAY

1/8" = 1'.0"





TYPICAL SECTION

NO SCALE

LED ILLUMINATED CHANNEL LETTER—WIRE-WAY MOUNT

NO SCALE

DATE: **09.05.2007**

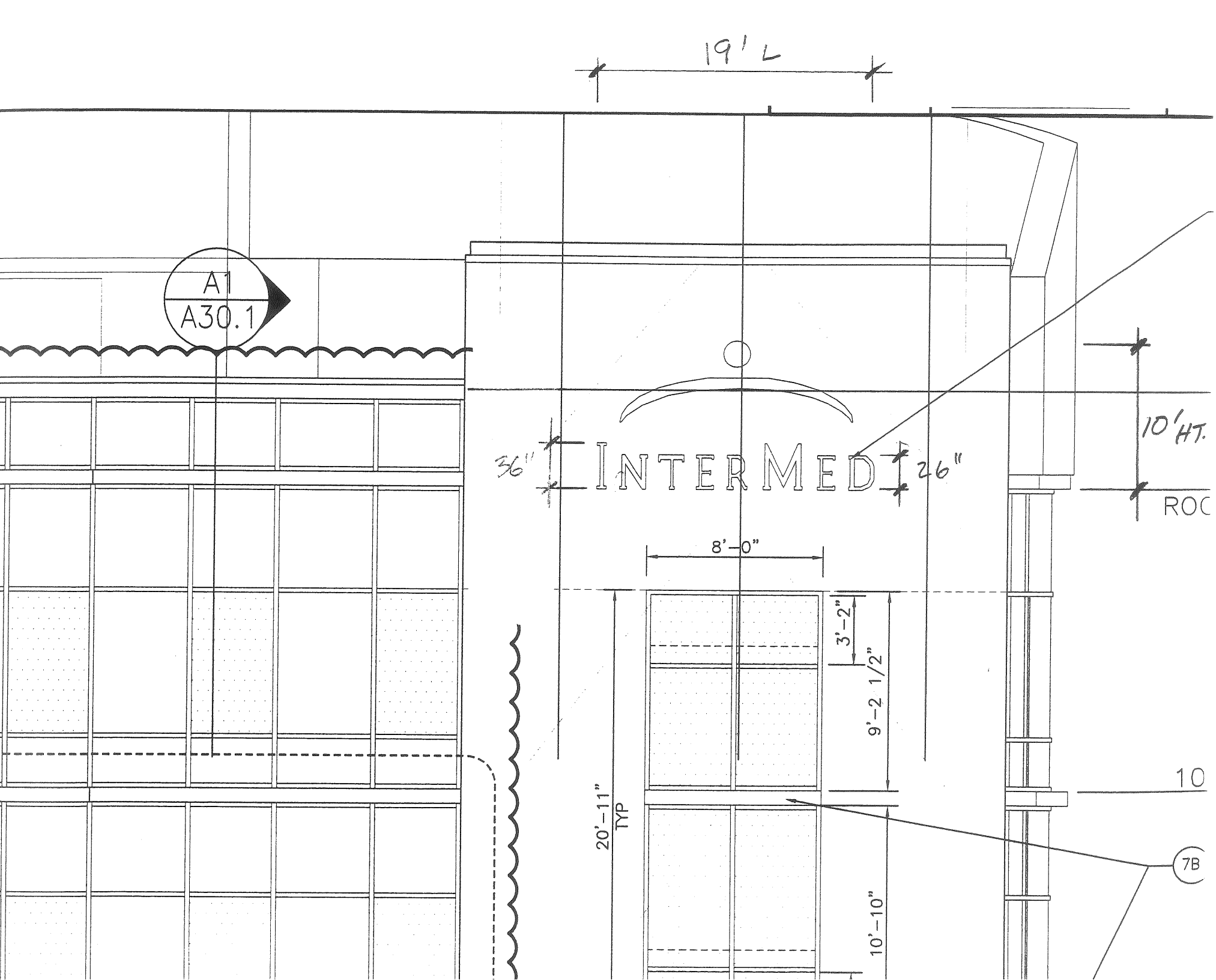
LED ILLUMINATION, SELF CONTAINED ON WIRE WAY

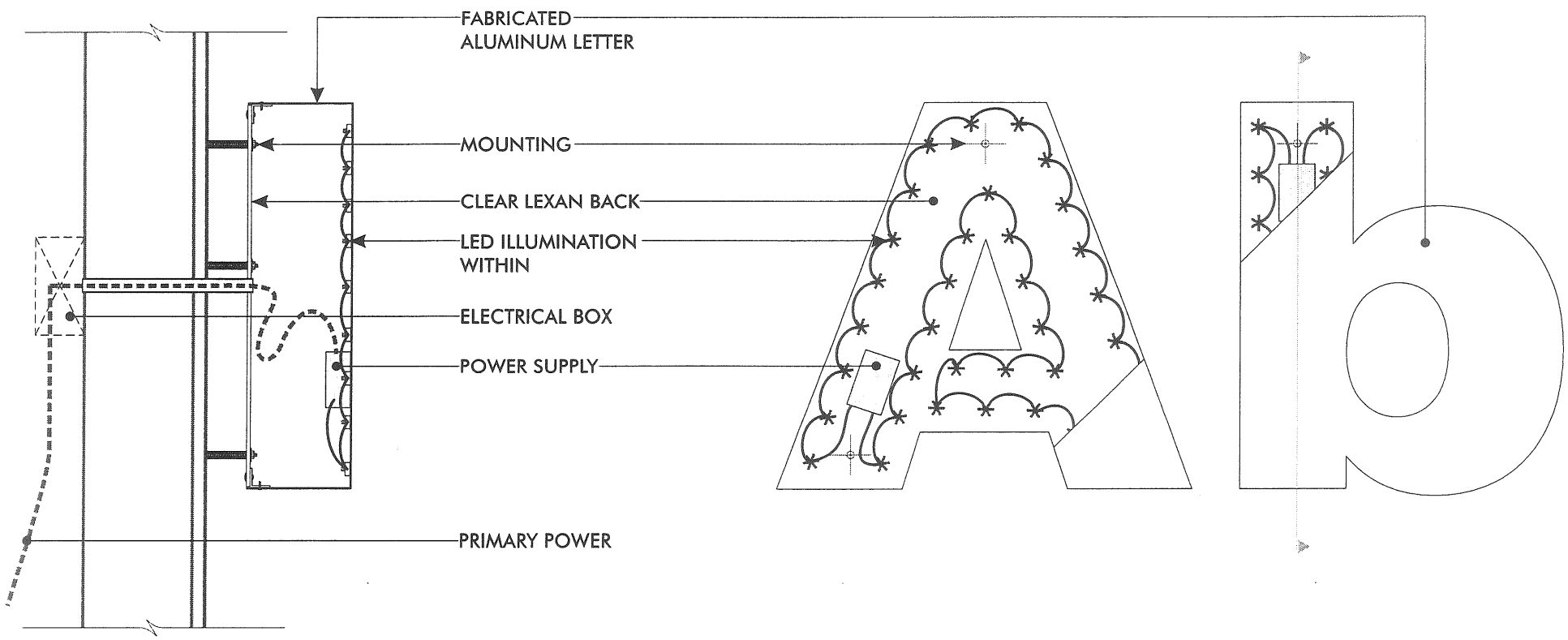
Neokraft

Neokraft Signs Inc.
686 Main Street
Lewiston, Maine 04240
Telephone: 207.782.9654
Facsimile: 207.782.0009
1.800.339.2258
http://www.neokraft.com

Drummond Woodsum

INTERMED
WINXNET
DrummondWoodsum


19'-0"
A1
A30.1
36"
INTERMED
26"
10'-0" HT.
ROC
8'-0"
3'-2"
9'-2 1/2"
20'-11"
TYP
10'-10"
10
7B



TYPICAL SECTION
NO SCALE

LED ILLUMINATED CHANNEL LETTER—BACK LIT
NO SCALE

DATE: **09.05.2007**

LED ILLUMINATION, BACK LIT, SELF CONTAINED

curvwork.com

22 Free Street
Suite A
Portland, ME 04101

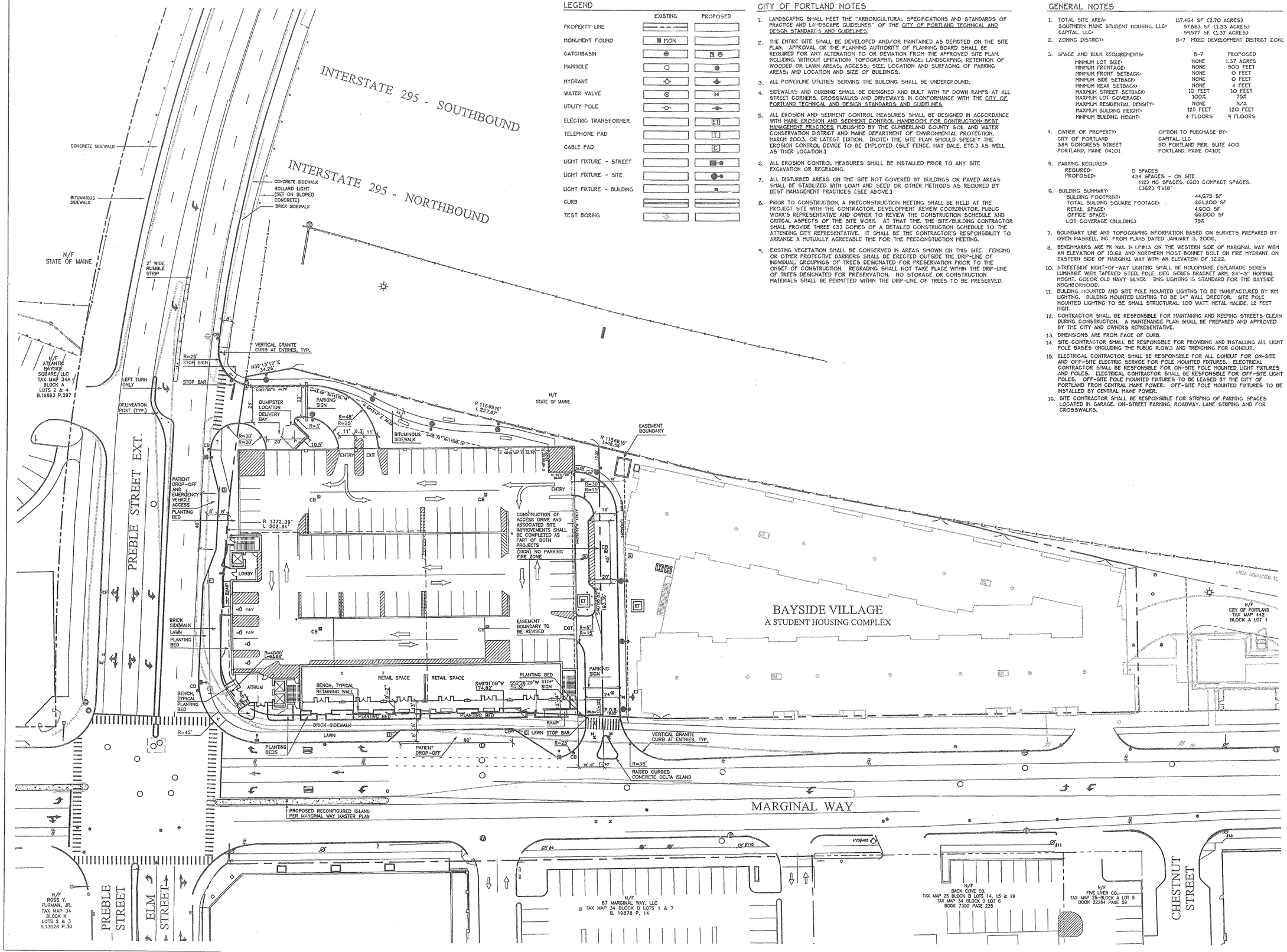
V 207-775-7780
V 800-385-1059
F 207-775-9164

curvwork

Revision 2.0-4.7.08

Submittal For Exterior Signage At 84 Marginal Way

ATTACHMENT B-1



LEGEND

	EXISTING	PROPOSED
PROPERTY LINE		
MONUMENT FOUND	MON	
CATCHBASIN		
MANHOLE		
HYDRANT		
WATER VALVE		
UTILITY POLE		
ELECTRIC TRANSFORMER		E.T.
TELEPHONE PAD		T
CABLE PAD		C
LIGHT FIXTURE - STREET		
LIGHT FIXTURE - SITE		
LIGHT FIXTURE - BUILDING		
CURB		
TEST BORING		

CITY OF PORTLAND NOTES

1. LANDSCAPING SHALL MEET THE "ARBORICULTURAL SPECIFICATIONS AND STANDARDS OF PRACTICE AND LANDSCAPE GUIDELINES" OF THE CITY OF PORTLAND TECHNICAL AND DESIGN STANDARDS AND GUIDELINES.
2. THE ENTIRE SITE SHALL BE DEVELOPED AND/OR MAINTAINED AS DEPICTED ON THE SITE PLAN. APPROVAL OR THE PLANNING AUTHORITY OF PLANNING BOARD SHALL BE REQUIRED FOR ANY ALTERATION TO OR DEVIATION FROM THE APPROVED SITE PLAN, INCLUDING, WITHOUT LIMITATION: TOPOGRAPHY; DRAINAGE; LANDSCAPING; RETENTION OF WOODED OR LAWN AREAS; ACCESS; SIZE, LOCATION AND SURFACING OF PARKING AREAS; AND LOCATION AND SIZE OF BUILDINGS.
3. ALL POWERLINE UTILITIES SERVING THE BUILDING SHALL BE UNDERGROUND.
4. SIDEWALKS AND CURBING SHALL BE DESIGNED AND BUILT WITH TIP DOWN RAMPS AT ALL STREET CORNERS. CROSSWALKS AND DRIVEWAYS IN CONFORMANCE WITH THE CITY OF PORTLAND TECHNICAL AND DESIGN STANDARDS AND GUIDELINES.
5. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE DESIGNED IN ACCORDANCE WITH MAINE EROSION AND SEDIMENT CONTROL HANDBOOK FOR CONTRUCTION: BEST MANAGEMENT PRACTICES PUBLISHED BY THE CUMBERLAND COUNTY SOIL AND WATER CONSERVATION DISTRICT AND MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, MARCH 2003, OR LATEST EDITION. [NOTE: THE SITE PLAN SHOULD SPECIFY THE EROSION CONTROL DEVICE TO BE EMPLOYED (SILT FENCE, HAY BALE, ETC.) AS WELL AS THIER LOCATION.]
6. ALL EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY SITE EXCAVATION OR REGRADING.
7. ALL DISTURBED AREAS ON THE SITE NOT COVERED BY BUILDINGS OR PAVED AREAS SHALL BE STABILIZED WITH LOAM AND SEED OR OTHER METHODS AS REQUIRED BY BEST MANAGEMENT PRACTICES (SEE ABOVE.)
8. PRIOR TO CONSTRUCTION, A PRECONSTRUCTION MEETING SHALL BE HELD AT THE PROJECT SITE WITH THE CONTRACTOR, DEVELOPMENT REVIEW COORDINATOR, PUBLIC WORK'S REPRESENTATIVE AND OWNER TO REVIEW THE CONSTRUCTION SCHEDULE AND CRITICAL ASPECTS OF THE SITE WORK. AT THAT TIME, THE SITE/BUILDING CONTRACTOR SHALL PROVIDE THREE (3) COPIES OF A DETAILED CONSTRUCTION SCHEDULE TO THE ATTENDING CITY REPRESENTATIVE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ARRANGE A MUTUALLY AGREEABLE TIME FOR THE PRECONSTUCTION MEETING.
9. EXISTING VEGETATION SHALL BE CONSERVED IN AREAS SHOWN ON THIS SITE. FENCING OR OTHER PROTECTIVE BARRIERS SHALL BE ERECTED OUTSIDE THE DRIP-LINE OF INDIVIDUAL, GROUPINGS OF TREES DESIGNATED FOR PRESERVATION PRIOR TO THE ONSET OF CONSTRUCTION. REGRADING SHALL NOT TAKE PLACE WITHIN THE DRIP-LINE OF TREES DESIGNATED FOR PRESERVATION. NO STORAGE OR CONSTRUCTION MATERIALS SHALL BE PERMITTED WITHIN THE DRIP-LINE OF TREES TO BE PRESERVED.

GENERAL NOTES

1. TOTAL SITE AREA: 117,464 SF (2.70 ACRES)
   SOUTHERN MAINE STUDENT HOUSING, LLC: 57,887 SF (1.33 ACRES)
   CAPITAL, LLC: 59,577 SF (1.37 ACRES)
2. ZONING DISTRICT: B-7 MIXED DEVELOPMENT DISTRICT ZONE
3. SPACE AND BULK REQUIREMENTS:

	B-7	PROPOSED
MINIMUM LOT SIZE:	NONE	1.37 ACRES
MINIMUM FRONTAGE:	NONE	500 FEET
MINIMUM FRONT SETBACK:	NONE	0 FEET
MINIMUM SIDE SETBACK:	NONE	0 FEET
MINIMUM REAR SETBACK:	NONE	4 FEET
MAXIMUM STREET SETBACK:	10 FEET	10 FEET
MAXIMUM LOT COVERAGE:	100%	75%
MAXIMUM RESIDENTIAL DENSITY:	NONE	N/A
MAXIMUM BUILDING HEIGHT:	125 FEET	120 FEET
MINIMUM BUILDING HEIGHT:	4 FLOORS	9 FLOORS

4. OWNER OF PROPERTY: CITY OF PORTLAND, 389 CONGRESS STREET, PORTLAND, MAINE 04101 — OPTION TO PURCHASE BY: CAPITAL, LLC, 50 PORTLAND PIER, SUITE 400, PORTLAND, MAINE 04101
5. PARKING REQUIRED:
   REQUIRED: 0 SPACES
   PROPOSED: 434 SPACES - ON SITE (12) HC SPACES, (60) COMPACT SPACES. (362) 9'x18'
6. BUILDING SUMMARY:

BUILDING FOOTPRINT:	44,675 SF
TOTAL BUILDING SQUARE FOOTAGE:	261,200 SF
RETAIL SPACE:	4,600 SF
OFFICE SPACE:	66,000 SF
LOT COVERAGE (BUILDING)	75%

7. BOUNDARY LINE AND TOPOGRAPHIC INFORMATION BASED ON SURVEYS PREPARED BY OWEN HASKELL INC. FROM PLANS DATED JANUARY 3, 2006.
8. BENCHMARKS ARE PK NAIL IN UP#13 ON THE WESTERN SIDE OF MARGINAL WAY WITH AN ELEVATION OF 10.62 AND NORTHERN MOST BONNET BOLT ON FIRE HYDRANT ON EASTERN SIDE OF MARGINAL WAY WITH AN ELEVATION OF 12.22.
10. STREETSIDE RIGHT-OF-WAY LIGHTING SHALL BE HOLOPHANE ESPLANADE SERIES LUMINAIRE WITH TAPERED STEEL POLE, GEO SERIES BRACKET ARM, 24'-3" NOMINAL HEIGHT, COLOR OLD NAVY SILVER. THIS LIGHTING IS STANDARD FOR THE BAYSIDE NEIGHBORHOOD.
11. BUILDING MOUNTED AND SITE POLE MOUNTED LIGHTING TO BE MANUFACTURED BY RAB LIGHTING. BUILDING MOUNTED LIGHTING TO BE 14" WALL BRACKTOR. SITE POLE MOUNTED LIGHTING TO BE SMALL STRUCTURAL, 100 WATT, METAL HALIDE, 12 FEET HIGH.
12. CONTRACTOR SHALL BE RESPONSIBLE FOR MANTAINING AND KEEPING STREETS CLEAN DURING CONSTRUCTION. A MAINTENANCE PLAN SHALL BE PREPARED AND APPROVED BY THE CITY AND OWNER'S REPRESENTATIVE.
13. DIMENSIONS ARE FROM FACE OF CURB.
14. SITE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ALL LIGHT POLE BASES (INCLUDING THE PUBLIC R.O.W.) AND TRENCHING FOR CONDUIT.
15. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONDUIT FOR ON-SITE AND OFF-SITE ELECTRIC SERVICE FOR POLE MOUNTED FIXTURES. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ON-SITE POLE MOUNTED LIGHT FIXTURES AND POLES. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR OFF-SITE LIGHT POLES. OFF-SITE POLE MOUNTED FIXTURES TO BE LEASED BY THE CITY OF PORTLAND FROM CENTRAL MAINE POWER. OFF-SITE POLE MOUNTED FIXTURES TO BE INSTALLED BY CENTRAL MAINE POWER.
16. SITE CONTRACTOR SHALL BE RESPONSIBLE FOR STRIPING OF PARKING SPACES LOCATED IN GARAGE, ON-STREET PARKING, ROADWAY, LANE STRIPING AND FOR CROSSWALKS.

Prepared For:
Applicant:
CAPITAL, LLC
50 Portland Pier, Suite 400
Portland, Maine 04101

Prepared By:
MITCHELL & ASSOCIATES
Landscape Architects
The Staples School
70 Center Street
Portland, Maine 04101
Tel: (207) 774-4427

Gorrill-Palmer Consulting Engineers, Inc.
Traffic and Civil Engineering Services
15 Shaker Road, Gray, ME 04039 — 207-657-6910 — FAX: 207-657-6912

84 MARGINAL WAY

Portland, Maine

84 Marginal Way

Date: JULY 25, 2006

Issued For: PRELIMINARY SITE PLAN REVIEW

Revisions:
- Aug. 31, 2006 - Additional Survey Data on Preble Street Extension.
- Sept. 12, 2006 - Revised per Staff Comments.
- Oct. 11, 2006 - Per Planning Board and Staff Comments.
- Nov. 28, 2006 - Revised Architectural Footprint.

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Title: LAYOUT AND LIGHTING PLAN

Scale: 1"=30'

0 10 20 30 60 ft.

North:

Sheet No.: 2

ATTACHMENT AA-1

EASEMENTS

No.	Bearing	Distance
L2	N49°01'08"E	20.0000'
L3	N40°58'52"W	17.0000'
L4	S52°26'29"W	38.0679'
L5	N39°13'17"E	34.2600'
L6	S49°01'08"W	36.0800'
L7	N40°58'52"W	15.0000'
L8	S49°01'08"W	35.7027'
L9	S84°13'17"W	29.2179'
L10	N48°11'05"E	44.79'

No.	Delta	Radius	Arc Length	Chord Length	Chord Bearing
C2	00°05'31"	11569.1600	18.5804	18.5804	N63°22'39"E
C3	01°07'39"	11569.1600	227.6770	227.6734	N63°59'14"E
C4	00°22'28"	11589.1600	75.7166	75.7165	S63°57'07"W
C5	00°15'54"	11579.1600	43.00	43.00	S64°24'27"W
C6	00°26'35"	1372.3900	8.00	7.99	N31°13'22"W

LEGEND

	EXISTING	PROPOSED
PROPERTY LINE		
MONUMENT FOUND	MON	
CATCHBASIN	CB	CB
MANHOLE		
HYDRANT		
WATER VALVE		
UTILITY POLE		
ELECTRIC TRANSFORMER		ET
TELEPHONE PAD		T
CABLE PAD		C
LIGHT FIXTURE - STREET		
LIGHT FIXTURE - SITE		
LIGHT FIXTURE - BULDING		
CURB		
TEST BORING		

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5. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE DESIGNED IN ACCORDANCE WITH MAINE EROSION AND SEDIMENT CONTROL HANDBOOK FOR CONTRUCTION: BEST MANAGEMENT PRACTICES PUBLISHED BY THE CUMBERLAND COUNTY SOIL AND WATER CONSERVATION DISTRICT AND MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, MARCH 2003, OR LATEST EDITION. (NOTE: THE SITE PLAN SHOULD SPECIFY THE EROSION CONTROL DEVICE TO BE EMPLOYED (SILT FENCE, HAY BALE, ETC.) AS WELL AS THEIR LOCATION.)
6. ALL EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY SITE EXCAVATION OR REGRADING.
7. ALL DISTURBED AREAS ON THE SITE NOT COVERED BY BUILDINGS OR PAVED AREAS SHALL BE STABILIZED WITH LOAM AND SEED OR OTHER METHODS AS REQUIRED BY BEST MANAGEMENT PRACTICES (SEE ABOVE.)
8. PRIOR TO CONSTRUCTION, A PRECONSTRUCTION MEETING SHALL BE HELD AT THE PROJECT SITE WITH THE CONTRACTOR, DEVELOPMENT REVIEW COORDINATOR, PUBLIC WORK'S REPRESENTATIVE AND OWNER TO REVIEW THE CONSTRUCTION SCHEDULE AND CRITICAL ASPECTS OF THE SITE WORK. AT THAT TIME, THE SITE/BUILDING CONTRACTOR SHALL PROVIDE THREE (3) COPIES OF A DETAILED CONSTRUCTION SCHEDULE TO THE ATTENDING CITY REPRESENTATIVE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ARRANGE A MUTUALLY AGREEABLE TIME FOR THE PRECONSTUCTION MEETING.
9. EXISTING VEGETATION SHALL BE CONSERVED IN AREAS SHOWN ON THIS SITE. FENCING OR OTHER PROTECTIVE BARRIERS SHALL BE ERECTED OUTSIDE THE DRIP-LINE OF INDIVIDUAL GROUPINGS OF TREES DESIGNATED FOR PRESERVATION PRIOR TO THE ONSET OF CONSTRUCTION. REGRADING SHALL NOT TAKE PLACE WITHIN THE DRIP-LINE OF TREES DESIGNATED FOR PRESERVATION. NO STORAGE OR CONSTRUCTION MATERIALS SHALL BE PERMITTED WITHIN THE DRIP-LINE OF TREES TO BE PRESERVED.

GENERAL NOTES

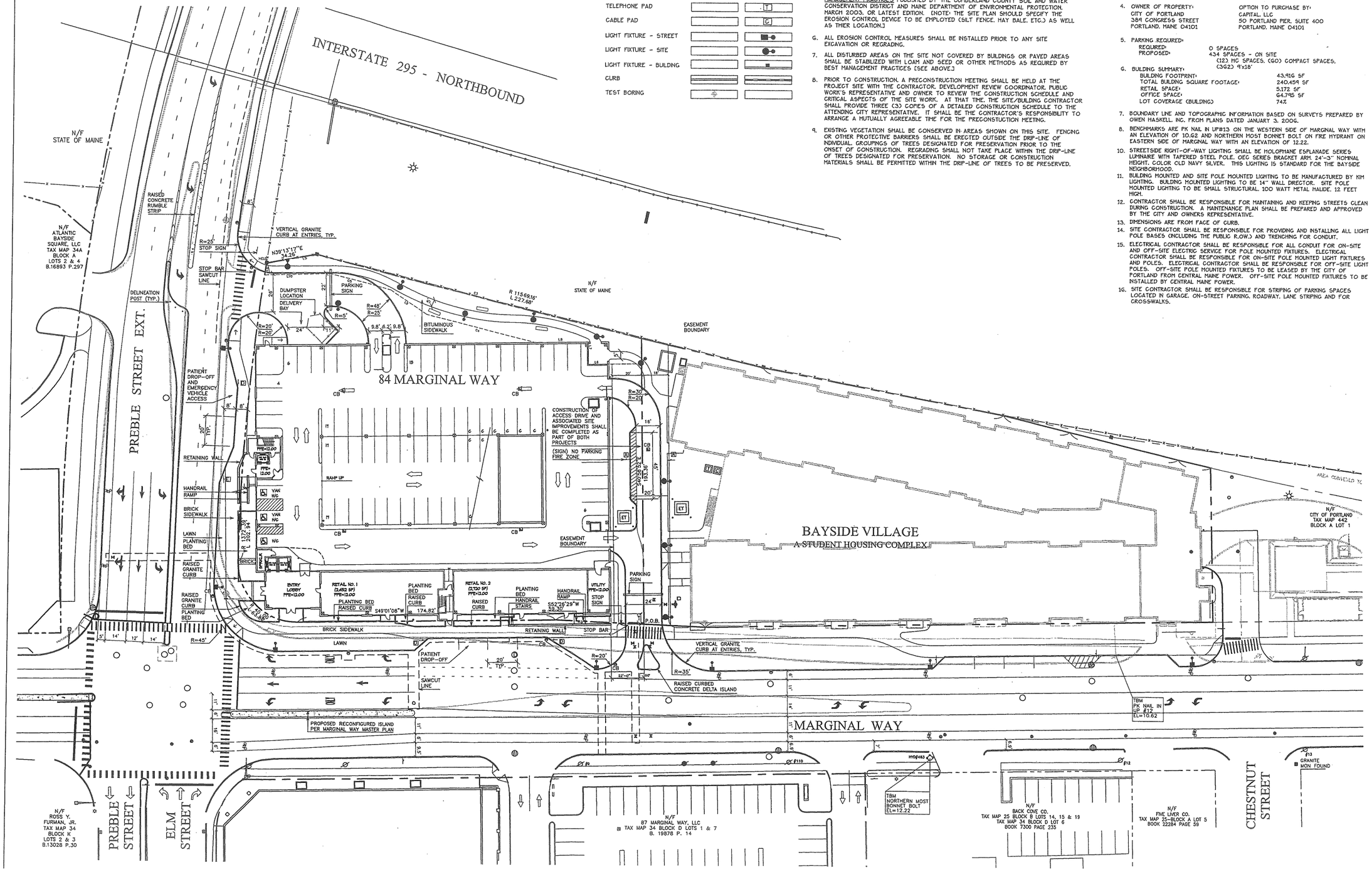
1. TOTAL SITE AREA: 117,464 SF (2.70 ACRES)
   SOUTHERN MAINE STUDENT HOUSING, LLC: 57,887 SF (1.33 ACRES)
   CAPITAL, LLC: 59,577 SF (1.37 ACRES)
2. ZONING DISTRICT: B-7 MIXED DEVELOPMENT DISTRICT ZONE
3. SPACE AND BULK REQUIREMENTS:

	B-7	PROPOSED
MINIMUM LOT SIZE:	NONE	1.37 ACRES
MINIMUM FRONTAGE:	NONE	500 FEET
MINIMUM FRONT SETBACK:	NONE	0 FEET
MINIMUM SIDE SETBACK:	NONE	0 FEET
MINIMUM REAR SETBACK:	NONE	4 FEET
MAXIMUM STREET SETBACK:	10 FEET	4 FEET
MAXIMUM LOT COVERAGE:	100%	74%
MAXIMUM RESIDENTIAL DENSITY:	NONE	N/A
MAXIMUM BUILDING HEIGHT:	125 FEET	105 FEET
MINIMUM BUILDING HEIGHT:	4 FLOORS	8 FLOORS

4. OWNER OF PROPERTY: CITY OF PORTLAND, 389 CONGRESS STREET, PORTLAND, MAINE 04101
   OPTION TO PURCHASE BY: CAPITAL, LLC, 50 PORTLAND PIER, SUITE 400, PORTLAND, MAINE 04101
5. PARKING REQUIRED:
   REQUIRED: 0 SPACES
   PROPOSED: 434 SPACES - ON SITE
   (12) HC SPACES, (60) COMPACT SPACES, (362) 9'x18'
6. BUILDING SUMMARY:

BUILDING FOOTPRINT:	43,916 SF
TOTAL BUILDING SQUARE FOOTAGE:	240,459 SF
RETAIL SPACE:	5,172 SF
OFFICE SPACE:	64,795 SF
LOT COVERAGE (BUILDING)	74%

7. BOUNDARY LINE AND TOPOGRAPHIC INFORMATION BASED ON SURVEYS PREPARED BY OWEN HASKELL, INC. FROM PLANS DATED JANUARY 3, 2006.
8. BENCHMARKS ARE PK NAIL IN UP#13 ON THE WESTERN SIDE OF MARGINAL WAY WITH AN ELEVATION OF 10.62 AND NORTHERN MOST BONNET BOLT ON FIRE HYDRANT ON EASTERN SIDE OF MARGINAL WAY WITH AN ELEVATION OF 12.22.
10. STREETSIDE RIGHT-OF-WAY LIGHTING SHALL BE HOLOPHANE ESPLANADE SERIES LUMINARE WITH TAPERED STEEL POLE. OEC SERIES BRACKET ARM. 24'-3" NOMINAL HEIGHT. COLOR OLD NAVY SILVER. THIS LIGHTING IS STANDARD FOR THE BAYSIDE NEIGHBORHOOD.
11. BULDING MOUNTED AND SITE POLE MOUNTED LIGHTING TO BE MANUFACTURED BY KIM LIGHTING. BULDING MOUNTED LIGHTING TO BE 14" WALL DIRECTOR. SITE POLE MOUNTED LIGHTING TO BE SMALL STRUCTURAL. 100 WATT METAL HALIDE. 12 FEET HIGH.
12. CONTRACTOR SHALL BE RESPONSIBLE FOR MANTAINING AND KEEPNG STREETS CLEAN DURING CONSTRUCTION. A MAINTENANCE PLAN SHALL BE PREPARED AND APPROVED BY THE CITY AND OWNERS REPRESENTATIVE.
13. DIMENSIONS ARE FROM FACE OF CURB.
14. SITE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ALL LIGHT POLE BASES (NCLUDING THE PUBLIC R.O.W.) AND TRENCHING FOR CONDUIT.
15. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONDUIT FOR ON-SITE AND OFF-SITE ELECTRIC SERVICE FOR POLE MOUNTED FIXTURES. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ON-SITE POLE MOUNTED LIGHT FIXTURES AND POLES. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR OFF-SITE LIGHT POLES. OFF-SITE POLE MOUNTED FIXTURES TO BE LEASED BY THE CITY OF PORTLAND FROM CENTRAL MAINE POWER. OFF-SITE POLE MOUNTED FIXTURES TO BE INSTALLED BY CENTRAL MAINE POWER.
16. SITE CONTRACTOR SHALL BE RESPONSIBLE FOR STRIPING OF PARKING SPACES LOGATED IN GARAGE, ON-STREET PARKING, ROADWAY, LANE STRIPING AND FOR CROSSWALKS.



Prepared For:
Applicant:
CAPITAL, LLC
50 Portland Pier, Suite 400
Portland, Maine 04101

Prepared By:
MITCHELL & ASSOCIATES
Landscape Architects
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Portland, Maine 04101
Tel: (207) 774-4427

Gorrill-Palmer Consulting Engineers, Inc.
Traffic and Civil Engineering Services
15 Shaker Road, Gray, ME 04039
207-657-6910
FAX: 207-657-6912

MARGINAL WAY
84 MARGINAL WAY
Portland, Maine
84 Marginal Way

Date: JULY 25, 2006

Issued For: PRELIMINARY SITE PLAN REVIEW

Revisions:
Aug. 31, 2006 - Additional Survey Data on Preble Street Extension.
Sept. 12, 2006 - Revised per Staff Comments.

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Title: LAYOUT AND LIGHTING PLAN

Scale: 1"=30'
0 10 20 30 60 ft.

North:

Sheet No.: 2

AA-2

UTILITY NOTE

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA. EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. CALL 1-888-DIGSAFE AT LEAST THREE BUSINESS DAYS BEFORE PERFORMING ANY CONSTRUCTION.

STORM DRAIN AND SANITARY STRUCTURES

	RIM	INV. IN	INV. OUT
CB#1	11.15	-	7.15
CB#2	11.15	6.56	6.46
CB#3	11.15	5.99	5.89
CB#4	11.15	5.30 (15")	5.20
		5.30 (15")	
		7.15 (6")	
CB#8	9.46	-	6.62
CB#6	9.34	6.33	6.23
CB#7	10.05	5.79	5.69
CB#8	9.48	5.60 (12")	5.50
		5.60 (12")	
CB#9	9.33	-	5.94
EDMH#2	9.07	4.78 (15")	4.57
SMH#1	10.00	6.00	-5.51

LEGEND

	EXISTING	PROPOSED
PROPERTY LINE		
MONUMENT FOUND	MON	
CONTOUR	10	10
SPOT ELEVATION	+80.43	+80.43
CATCHBASIN		
DRAIN INLET		
MANHOLE		
HYDRANT		
WATER VALVE		
UTILITY POLE		
TEST BORING		
WATER SERVICE	EW	W
SEWER SERVICE	ES	S

	EXISTING	PROPOSED
STORM DRAIN	ESD	SD
COMBINED SEWER	ECS	
ELECTRIC SERVICE	EE	E
GAS SERVICE	EG	G
TELEPHONE AND CABLE SERVICE		T+C
OVERHEAD WIRES	EOHW	
SITE LIGHTING ELECTRIC		E
ELECTRIC TRANSORMER		ET
TELEPHONE PAD		T
CABLE PAD		C
LIGHT FIXTURE - STREET		
LIGHT FIXTURE - SITE		
LIGHT FIXTURE - BULDING		
CURB		
TEST BORING		

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84 MARGINAL WAY

Portland, Maine

84 Marginal Way

Date: JULY 25, 2006

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Revisions:
Aug. 31, 2006 - Additional Survey Data on Preble Street Extension.
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Title: GRADING, DRAINAGE AND UTILITIES PLAN

Scale: 1"=30'
0 10 20 30 60 ft.

North:

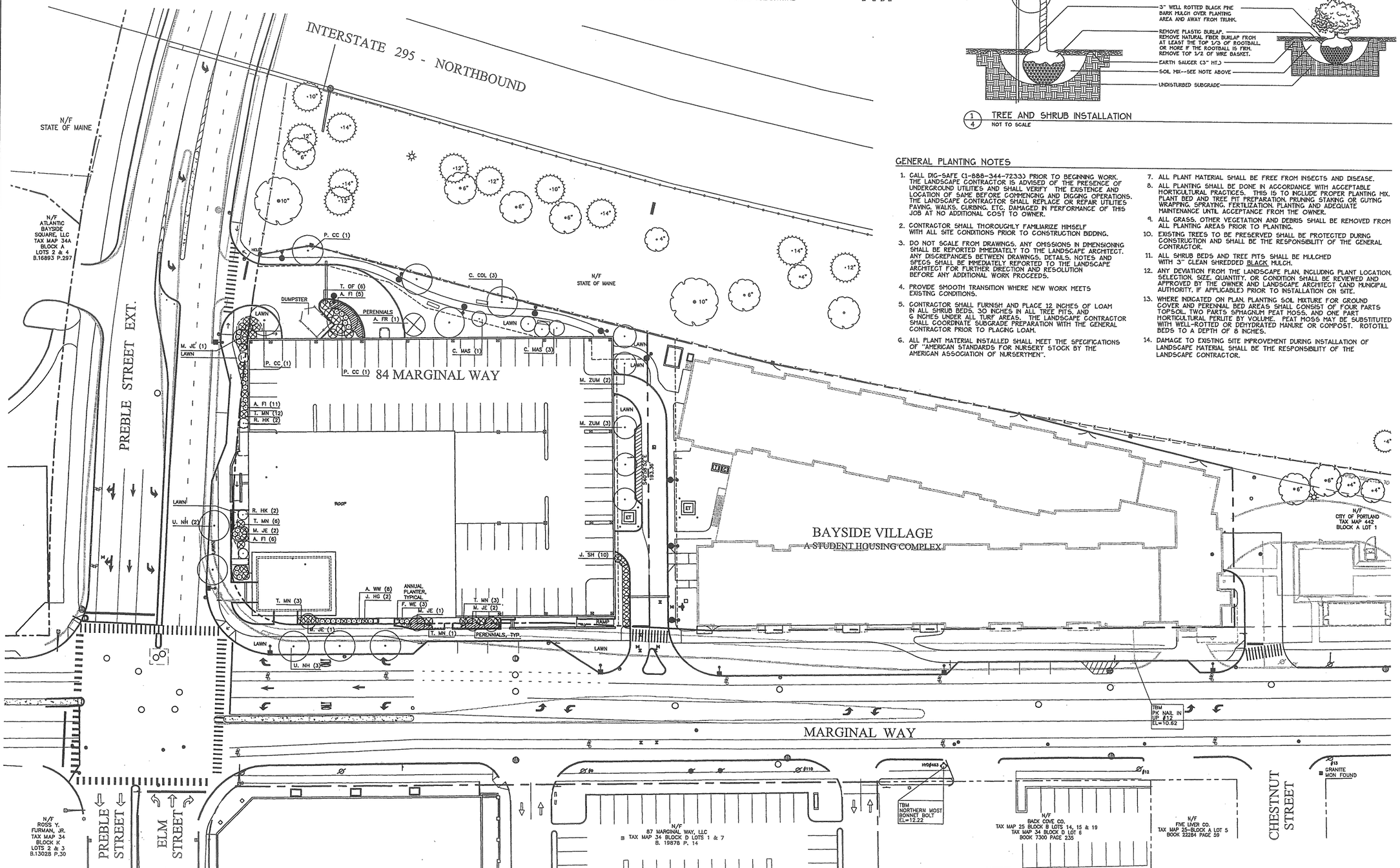
Sheet No.: 3

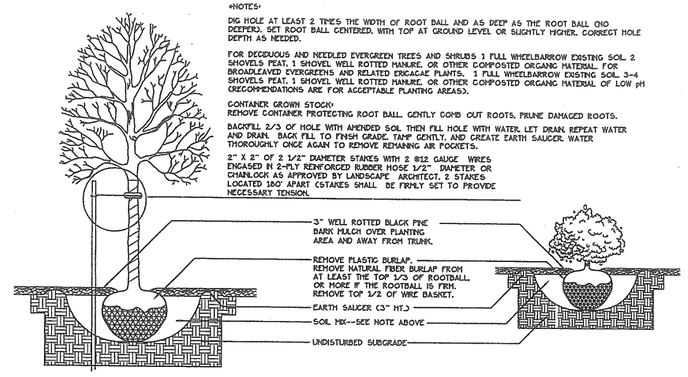
LEGEND

	EXISTING	PROPOSED		EXISTING	PROPOSED
PROPERTY LINE			ELECTRIC TRANSFORMER		ET
MONUMENT FOUND	MON		TELEPHONE PAD		T
CATCHBASIN			CABLE PAD		C
MANHOLE			LIGHT FIXTURE - STREET		
HYDRANT			LIGHT FIXTURE - SITE		
WATER VALVE			LIGHT FIXTURE - BULDING		
UTILITY POLE			CURB		

PLANT LIST - GROUND LEVEL

KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE
		TREES		
A. FR	1	ABIES FRASERI	FRASIER FIR	5'-6' HT
C. MAS	4	CORNUS MAS	CORNELLIAN CHERRY	1 1/2"-2" CAL
C. COL	3	CORYLUS COLURNA	TURKISH FILBERT	2"-2 1/2" CAL
M. JE	7	MALUS 'JEWELCOLE'	PROFUSION FLOWERING CRAB	2"-2 1/2" CAL
M. ZUM	5	MALUS x ZUMI 'CALOCARPA'	ZUMI CALOCARPA FLOWERING CRAB	2 1/2"-3" CAL
P. CC	3	PYRUS 'CLEVELAND'	CLEVELAND ORNAMENTAL PEAR	2 1/2"-3" CAL
U. NH	5	ULMUS AMERICANA 'NEW HARMONY'	NEW HARMONY ELM	2 1/2"-3" CAL
		SHRUBS		
A. FI	22	AZALEA 'FIRESTAR'	FIRESTAR AZALEA	#5
A. WW	8	AZALEA 'WHITNEY'S WHITE'	WHITNEY'S WHITE AZALEA	#5
F. WE	3	FORSYTHIA 'WEEKEND'	WEEKEND FORSYTHIA	#3
J. SH	10	JUNIPERUS SQUAMATA 'HOLGER'	HOLGER JUNIPER	#5
R. HK	4	RHODODENDRON 'HONG KONG'	HONG KONG RHODODENDRON	2'-2 1/2'
T. MN	25	TAXUS x MEDIA 'NIGRA'	NIGRA TAXUS	2'-2 1/2'
T. OF	6	THUJA OCCIDENTALIS 'FILIFORMS'	THREAD ARBORVITAE	2'-2 1/2'





1/4 TREE AND SHRUB INSTALLATION
NOT TO SCALE

NOTES

DIG HOLE AT LEAST 2 TIMES THE WIDTH OF ROOT BALL AND AS DEEP AS THE ROOT BALL CHO DEEPER). SET ROOT BALL CENTERED, WITH TOP AT GROUND LEVEL OR SLIGHTLY HIGHER. CORRECT HOLE DEPTH AS NEEDED.

FOR DECIDUOUS AND NEEDLED EVERGREEN TREES AND SHRUBS 1 FULL WHEELBARROW EXISTING SOIL, 2 SHOVELS PEAT, 1 SHOVEL WELL ROTTED MANURE, OR OTHER COMPOSTED ORGANIC MATERIAL. FOR BROADLEAVED EVERGREENS AND RELATED ERICACAE PLANTS, 1 FULL WHEELBARROW EXISTING SOIL, 3-4 SHOVELS PEAT, 1 SHOVEL WELL ROTTED MANURE, OR OTHER COMPOSTED ORGANIC MATERIAL OF LOW pH CREGOMENDATIONS ARE FOR ACCEPTABLE PLANTING AREAS).

CONTAINER GROWN STOCK*
REMOVE CONTAINER PROTECTING ROOT BALL. GENTLY COMB OUT ROOTS, PRUNE DAMAGED ROOTS.

BACKFILL 2/3 OF HOLE WITH AMENDED SOIL THEN FILL HOLE WITH WATER, LET DRAIN REPEAT WATER AND DRAIN. BACK FILL TO FINISH GRADE. TAMP GENTLY, AND CREATE EARTH SAUCER. WATER THOROUGHLY ONCE AGAIN TO REMOVE REMAINING AIR POCKETS.

2" X 2" OF 2 1/2" DIAMETER STAKES WITH 2 #12 GAUGE WIRES ENGAGED IN 2-PLY REINFORCED RUBBER HOSE 1/2" DIAMETER OR CHAINLOCK AS APPROVED BY LANDSCAPE ARCHITECT. 2 STAKES LOCATED 180° APART (STAKES SHALL BE FIRMLY SET TO PROVIDE NECESSARY TENSION.

GENERAL PLANTING NOTES

1. CALL DIG-SAFE (1-888-344-7233) PRIOR TO BEGINNING WORK. THE LANDSCAPE CONTRACTOR IS ADVISED OF THE PRESENCE OF UNDERGROUND UTILITIES AND SHALL VERIFY THE EXISTENCE AND LOCATION OF SAME BEFORE COMMENCING AND DIGGING OPERATIONS. THE LANDSCAPE CONTRACTOR SHALL REPLACE OR REPAIR UTILITIES PAVING, WALKS, CURBING, ETC. DAMAGED IN PERFORMANCE OF THIS JOB AT NO ADDITIONAL COST TO OWNER.
2. CONTRACTOR SHALL THOROUGHLY FAMILIARIZE HIMSELF WITH ALL SITE CONDITIONS PRIOR TO CONSTRUCTION BIDDING.
3. DO NOT SCALE FROM DRAWINGS. ANY OMISSIONS N DIMENSIONING SHALL BE REPORTED IMMEDIATELY TO THE LANDSCAPE ARCHITECT. ANY DISCREPANCIES BETWEEN DRAWINGS, DETAILS, NOTES AND SPECS SHALL BE IMMEDIATELY REPORTED TO THE LANDSCAPE ARCHITECT FOR FURTHER DIRECTION AND RESOLUTION BEFORE ANY ADDITIONAL WORK PROCEEDS.
4. PROVIDE SMOOTH TRANSITION WHERE NEW WORK MEETS EXISTING CONDITIONS.
5. CONTRACTOR SHALL FURNISH AND PLACE 12 INCHES OF LOAM IN ALL SHRUB BEDS, 30 INCHES IN ALL TREE PITS, AND 6 INCHES UNDER ALL TURF AREAS. THE LANDSCAPE CONTRACTOR SHALL COORDINATE SUBGRADE PREPARATION WITH THE GENERAL CONTRACTOR PRIOR TO PLACING LOAM.
6. ALL PLANT MATERIAL INSTALLED SHALL MEET THE SPECIFICATIONS OF "AMERICAN STANDARDS FOR NURSERY STOCK BY THE AMERICAN ASSOCIATION OF NURSERYMEN".
7. ALL PLANT MATERIAL SHALL BE FREE FROM INSECTS AND DISEASE.
8. ALL PLANTING SHALL BE DONE IN ACCORDANCE WITH ACCEPTABLE HORTICULTURAL PRACTICES. THIS IS TO INCLUDE PROPER PLANTING MIX, PLANT BED AND TREE PIT PREPARATION, PRUNING STAKING OR GUYING WRAPPING, SPRAYING, FERTILIZATION, PLANTING AND ADEQUATE MAINTENANCE UNTIL ACCEPTANCE FROM THE OWNER.
9. ALL GRASS, OTHER VEGETATION AND DEBRIS SHALL BE REMOVED FROM ALL PLANTING AREAS PRIOR TO PLANTING.
10. EXISTING TREES TO BE PRESERVED SHALL BE PROTECTED DURING CONSTRUCTION AND SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.
11. ALL SHRUB BEDS AND TREE PITS SHALL BE MULCHED WITH 3" CLEAN SHREDDED BLACK MULCH.
12. ANY DEVIATION FROM THE LANDSCAPE PLAN, INCLUDING PLANT LOCATION, SELECTION, SIZE, QUANTITY, OR CONDITION SHALL BE REVIEWED AND APPROVED BY THE OWNER AND LANDSCAPE ARCHITECT (AND MUNICIPAL AUTHORITY, IF APPLICABLE) PRIOR TO INSTALLATION ON SITE.
13. WHERE INDICATED ON PLAN, PLANTING SOIL MIXTURE FOR GROUND COVER AND PERENNIAL BED AREAS SHALL CONSIST OF FOUR PARTS TOPSOIL, TWO PARTS SPHAGNUM PEAT MOSS, AND ONE PART HORTICULTURAL PERLITE BY VOLUME. PEAT MOSS MAY BE SUBSTITUTED WITH WELL-ROTTED OR DEHYDRATED MANURE OR COMPOST. ROTOTILL BEDS TO A DEPTH OF 8 INCHES.
14. DAMAGE TO EXISTING SITE IMPROVEMENT DURING INSTALLATION OF LANDSCAPE MATERIAL SHALL BE THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR.

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Portland, Maine 04101

Prepared By:
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84 MARGINAL WAY

84 Marginal Way — Portland, Maine

Date: JULY 25, 2006

Issued For: PRELIMINARY SITE PLAN REVIEW

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Title: PLANTING PLAN AND ROOF PLAN

Scale: 1"=30'
0 10 20 30 60 ft.

North:

Sheet No: 4

ATTACHMENT A-1

84 MARGINAL WAY

Portland, Maine

Cumberland County

APPLICANT AND DEVELOPER

CAPITAL, LLC
50 PORTLAND PIER, SUITE 400
PORTLAND, MAINE 04101

PREPARED BY:

LANDSCAPE ARCHITECT:
MITCHELL & ASSOCIATES
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PORTLAND, MAINE 04101
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FAX: 207.874.2460
CONTACT: BOB METCALF
E-MAIL: RMETCALF@MITCHELLASSOCIATES.BIZ

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FAX: 207.657.6912
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E-MAIL: WHASKELL@GORRILLPALMER.COM
CONTACT: TOM GORRILL (TRAFFIC ENGINEER)
E-MAIL: TGORRILL@GORRILLPALMER.COM

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CWS ARCHITECTS
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PORTLAND, MAINE 04101
TEL: 207.774.4441
FAX: 207.774.4016
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E-MAIL: BWALTER@CWSARCH.COM

SURVEYOR
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PORTLAND, MAINE 04101
PHONE: 207.774.0424
FAX: 207.774.0511
CONTACT: JOHN SWAN

GEOTECHNICAL:
S.W. COLE ENGINEERING, INC.
286 PORTLAND ROAD
GRAY, MAINE 04039
TEL: 207.657.2866
FAX: 207.657.2640
CONTACT: ANDREW R. SIMMONS, P.E.

UTILITIES:

ELECTRIC:
CENTRAL MAINE POWER
ELECTRICAL DISTRIBUTION ENGINEERING
162 CANCO ROAD
PORTLAND, MAINE 04103
PHONE: 207.842.2367
CONTACT: JAMIE COUGH
E-MAIL: JAMES.COUGH@CMPCO.COM

TELEPHONE:
VERIZON
ENGINEERING, FLOOR 2
5 DAVIS FARM ROAD
PORTLAND, MAINE 04103
PHONE: 207.797.1842
FAX: 207.797.1098
CONTACT: SUE SARRETTE
E-MAIL: SUSAN.M.SARRETTE@VERIZON.COM

WATER:
PORTLAND WATER DISTRICT
225 DOUGLASS STREET
P.O. BOX 3553
PORTLAND, MAINE 04104-3553
PHONE: 207.761.8310
FAX: 207.879.5837
CONTACT: JIM PANDISCIO
E-MAIL: JPANDISCIO@PWD.ORG

SEWER:
CITY OF PORTLAND PUBLIC WORKS DEPARTMENT
55 PORTLAND STREET
PORTLAND, MAINE 04101
PHONE: 207.874.8832
FAX: 207.874.8816
CONTACT: FRANK BRANCELY

CABLE:
TIME WARNER CABLE OF MAINE
P.O. BOX 8180
PORTLAND, MAINE 04102
TEL: 207.253.2325
CONTACT: COLIN CHASE
E-MAIL: COLIN.CHASE@TWCABLE.COM

NATURAL GAS:
NORTHERN UTILITIES
325 WEST ROAD
P.O. BOX 606
PORTSMOUTH, NEW HAMPSHIRE 03802-0508
TEL: 800.552.3047 x5377
CONTACT: PAT DYER
E-MAIL: PDYER@NISOURCE.COM

PERMITS:

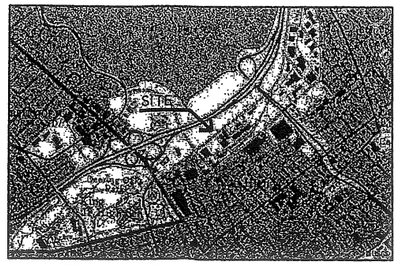
TYPE OF PERMIT:	GOVERNING BODY:
SITE PLAN APPLICATION	CITY OF PORTLAND 389 CONGRESS STREET PORTLAND, MAINE 04101 TEL: 207.874.8725 CONTACT: RICK KNOWLAND, SENIOR PLANNER E-MAIL: RWK@PORTLANDMAINE.GOV
TRAFFIC MOVEMENT PERMIT	CITY OF PORTLAND 389 CONGRESS STREET PORTLAND, MAINE 04101 TEL: 207.871.7795 CONTACT: TOM ERRICO, REVIEW ENGINEER E-MAIL: TERRICO@WILBERSMITH.COM

STATUS:
SUBMITTED: JULY 25, 2006
PLANNING BOARD WORKSHOP: AUGUST 8, 2006

SUBMITTED: JULY 25, 2006

SHEET INDEX:

SHEET	CP	COVER SHEET
SHEET	1	EXISTING CONDITIONS AND DEMOLITION PLAN
SHEET	2	LAYOUT AND LIGHTING PLAN
SHEET	3	GRADING, DRAINAGE AND UTILITIES PLAN
SHEET	4	PLANTING PLAN
SHEET	5	EROSION AND SEDIMENTATION CONTROL PLAN
SHEET	6	SITE DETAILS
SHEET	7	RESERVED
SHEET	8	UTILITY AND DRAINAGE DETAILS
SHEET	9	UTILITY AND DRAINAGE DETAILS
SHEET	10	UTILITY AND DRAINAGE DETAILS
SHEET	11	EROSION AND SEDIMENTATION CONTROL DETAILS AND NOTES
SHEET	A3.1	EXTERIOR ELEVATION
SHEET	A3.2	EXTERIOR ELEVATION
SHEET	A3.3	EXTERIOR ELEVATION
SHEET	A3.4	EXTERIOR ELEVATION



LOCATION MAP
NOT TO SCALE

Prepared For:
Applicant:
CAPITAL, LLC
50 Portland Pier, Suite 400
Portland, Maine 04101

Prepared By:
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84 MARGINAL WAY
84 Marginal Way
Portland, Maine

Date:
JULY 25, 2006

Issued For:
PRELIMINARY SITE PLAN REVIEW

Revisions:

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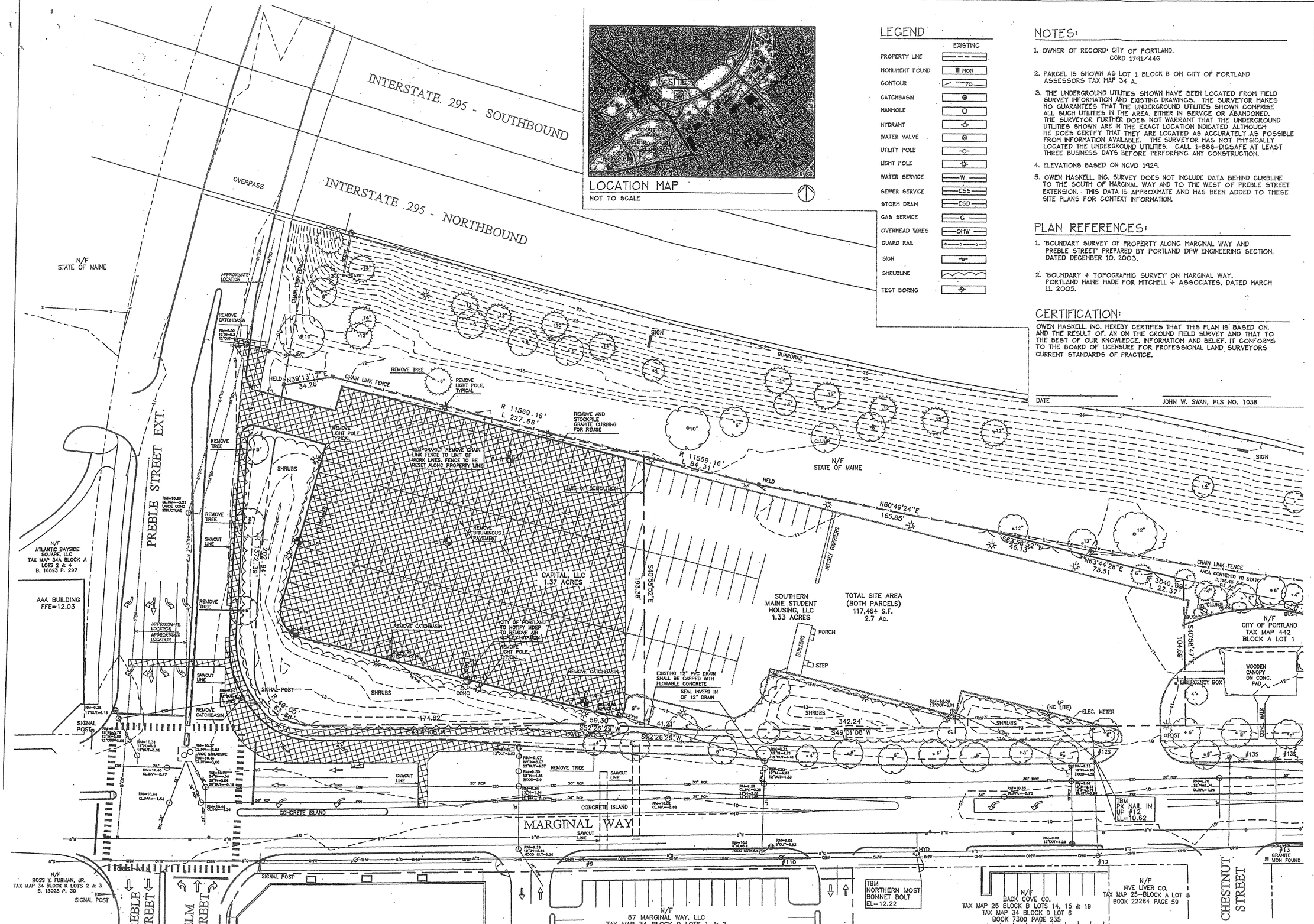
Title:
COVER PAGE

Scale:

North:

Sheet No.:
CP



LOCATION MAP

NOT TO SCALE

LEGEND

	EXISTING
PROPERTY LINE	
MONUMENT FOUND	MON
CONTOUR	70
CATCHBASIN	
MANHOLE	
HYDRANT	
WATER VALVE	
UTILITY POLE	
LIGHT POLE	
WATER SERVICE	W
SEWER SERVICE	ESS
STORM DRAIN	ESD
GAS SERVICE	G
OVERHEAD WIRES	OHW
GUARD RAIL	
SIGN	
SHRUBLINE	
TEST BORING	

NOTES:

1. OWNER OF RECORD: CITY OF PORTLAND. CCRD 1741/446
2. PARCEL IS SHOWN AS LOT 1 BLOCK B ON CITY OF PORTLAND ASSESSORS TAX MAP 34 A.
3. THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. CALL 1-888-DIGSAFE AT LEAST THREE BUSINESS DAYS BEFORE PERFORMING ANY CONSTRUCTION.
4. ELEVATIONS BASED ON NGVD 1929.
5. OWEN HASKELL, INC. SURVEY DOES NOT INCLUDE DATA BEHIND CURBLINE TO THE SOUTH OF MARGINAL WAY AND TO THE WEST OF PREBLE STREET EXTENSION. THIS DATA IS APPROXIMATE AND HAS BEEN ADDED TO THESE SITE PLANS FOR CONTEXT INFORMATION.

PLAN REFERENCES:

1. "BOUNDARY SURVEY OF PROPERTY ALONG MARGINAL WAY AND PREBLE STREET" PREPARED BY PORTLAND DPW ENGINEERING SECTION, DATED DECEMBER 10, 2003.
2. "BOUNDARY + TOPOGRAPHIC SURVEY" ON MARGINAL WAY, PORTLAND MAINE MADE FOR MITCHELL + ASSOCIATES, DATED MARCH 11, 2005.

CERTIFICATION:

OWEN HASKELL, INC. HEREBY CERTIFIES THAT THIS PLAN IS BASED ON, AND THE RESULT OF, AN ON THE GROUND FIELD SURVEY AND THAT TO THE BEST OF OUR KNOWLEDGE, INFORMATION AND BELIEF, IT CONFORMS TO THE BOARD OF LICENSURE FOR PROFESSIONAL LAND SURVEYORS CURRENT STANDARDS OF PRACTICE.

DATE

JOHN W. SWAN, PLS NO. 1038

Prepared For:
Applicant:

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50 Portland Pier, Suite 400
Portland, Maine 04101

Prepared By:

MITCHELL & ASSOCIATES
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84 MARGINAL WAY

Portland, Maine

84 Marginal Way

Date:
JULY 25, 2006

Issued For:
PRELIMINARY SITE PLAN REVIEW

Revisions:

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Title:
EXISTING CONDITIONS AND DEMOLITION PLAN

Scale: 1"=30'

0 10 20 30 60 ft.

North:

Sheet No.:
1

A-3

EASEMENTS

No.	Bearing	Distance
L2	N49°01'08"E	20.0000'
L3	N40°58'52"W	17.0000'
L4	S52°26'29"W	38.0679'
L5	N39°13'17"E	34.2600'
L6	S49°01'08"W	36.0800'
L7	N40°58'52"W	15.0000'
L8	S49°01'08"W	35.7027'
L9	S84°13'17"W	29.2179'
L10	S39°13'17"W	35.5655'

No.	Delta	Radius	Arc Length	Chord Length	Chord Bearing
C2	00°05'31"	11569.1600	18.5804	18.5804	N63°22'39"E
C3	01°07'39"	11569.1600	227.6770	227.6734	N63°56'14"E
C4	00°22'28"	11589.1600	75.7165	75.7165	S63°57'07"W
C5	00°15'54"	11579.1600	53.5641	53.5640	S64°24'27"W
C6	00°26'35"	1372.3900	10.6122	10.6122	N31°13'22"W

LEGEND

	EXISTING	PROPOSED
PROPERTY LINE		
MONUMENT FOUND	■ MON	
CATCHBASIN	⊖	⊖ CB
MANHOLE	○	●
HYDRANT		
WATER VALVE	⊗	⊗ W
UTILITY POLE		
ELECTRIC TRANSFORMER		ET
TELEPHONE PAD		T
CABLE PAD		C
LIGHT FIXTURE - STREET		
LIGHT FIXTURE - SITE		
LIGHT FIXTURE - BUILDING		
CURB		
TEST BORING		

CITY OF PORTLAND NOTES

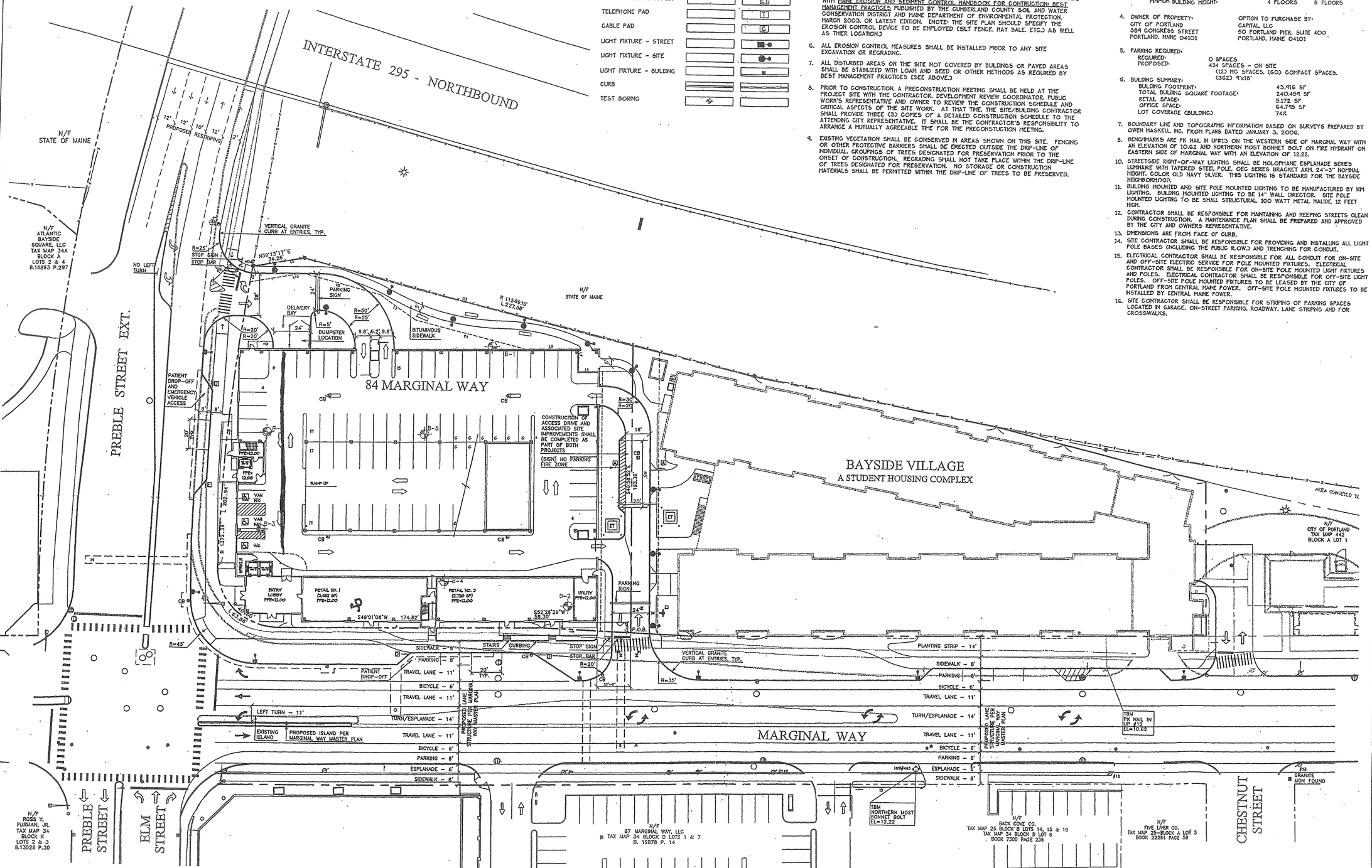
1. LANDSCAPING SHALL MEET THE "ARBORICULTURAL SPECIFICATIONS AND STANDARDS OF PRACTICE AND LANDSCAPE GUIDELINES" OF THE CITY OF PORTLAND TECHNICAL AND DESIGN STANDARDS AND GUIDELINES.
2. THE ENTIRE SITE SHALL BE DEVELOPED AND/OR MAINTAINED AS DEPICTED ON THE SITE PLAN. APPROVAL OR THE PLANNING AUTHORITY OF PLANNING BOARD SHALL BE REQUIRED FOR ANY ALTERATION TO OR DEVIATION FROM THE APPROVED SITE PLAN, INCLUDING, WITHOUT LIMITATION, TOPOGRAPHY; DRAINAGE, LANDSCAPING; RETENTION OF WOODED OR LAWN AREAS; ACCESS; SIZE, LOCATION AND SURFACING OF PARKING AREAS; AND LOCATION AND SIZE OF BUILDINGS.
3. ALL POWERLINE UTILITIES SERVING THE BUILDING SHALL BE UNDERGROUND.
4. SIDEWALKS AND CURBING SHALL BE DESIGNED AND BUILT WITH TP DOWN RAMPS AT ALL STREET CORNERS. CROSSWALKS AND DRIVEWAYS 'N CONFORMANCE WITH THE CITY OF PORTLAND TECHNICAL AND DESIGN STANDARDS AND GUIDELINES.
5. ALL EROSION AND SEDMENT CONTROL MEASURES SHALL BE DESIGNED IN ACCORDANCE WITH MAINE EROSION AND SEDMENT CONTROL HANDBOOK FOR CONTRUCTION: BEST MANAGEMENT PRACTICES PUBLISHED BY THE CUMBERLAND COUNTY SOIL AND WATER CONSERVATION DISTRICT AND MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION. MARCH 2003, OR LATEST EDITION. [NOTE: THE SITE PLAN SHOULD SPECIFY THE EROSION CONTROL DEVICE TO BE EMPLOYED (SILT FENCE, HAY BALE, ETC.) AS WELL AS THEIR LOCATION.]
6. ALL EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY SITE EXCAVATION OR REGRADING.
7. ALL DISTURBED AREAS ON THE SITE NOT COVERED BY BUILDINGS OR PAVED AREAS SHALL BE STABILIZED WITH LOAM AND SEED OR OTHER METHODS AS REQUIRED BY BEST MANAGEMENT PRACTICES (SEE ABOVE.)
8. PRIOR TO CONSTRUCTION, A PRECONSTRUCTION MEETING SHALL BE HELD AT THE PROJECT SITE WITH THE CONTRACTOR, DEVELOPMENT REVIEW COORDINATOR, PUBLIC WORK'S REPRESENTATIVE AND OWNER TO REVIEW THE CONSTRUCTION SCHEDULE AND CRITICAL ASPECTS OF THE SITE WORK. AT THAT TIME, THE SITE/BUILDING CONTRACTOR SHALL PROVIDE THREE (3) COPIES OF A DETAILED CONSTRUCTION SCHEDULE TO THE ATTENDING CITY REPRESENTATIVE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ARRANGE A MUTUALLY AGREEABLE TIME FOR THE PRECONSTUCTION MEETING.
9. EXISTING VEGETATION SHALL BE CONSERVED IN AREAS SHOWN ON THIS SITE. FENCING OR OTHER PROTECTIVE BARRIERS SHALL BE ERECTED OUTSIDE THE DRIP-LINE OF INDIVIDUAL GROUPINGS OF TREES DESIGNATED FOR PRESERVATION PRIOR TO THE ONSET OF CONSTRUCTION. REGRADING SHALL NOT TAKE PLACE WITHIN THE DRIP-LINE OF TREES DESIGNATED FOR PRESERVATION. NO STORAGE OR CONSTRUCTION MATERIALS SHALL BE PERMITTED WITHIN THE DRIP-LINE OF TREES TO BE PRESERVED.

GENERAL NOTES

1. TOTAL SITE AREA:
   SOUTHERN MAINE STUDENT HOUSING, LLC: 117,464 SF (2.70 ACRES)
   CAPITAL, LLC: 57,887 SF (1.33 ACRES)
   54,577 SF (1.37 ACRES)
2. ZONING DISTRICT: B-7 MIXED DEVELOPMENT DISTRICT ZONE
3. SPACE AND BULK REQUIREMENTS:

	B-7	PROPOSED
MINIMUM LOT SIZE:	NONE	1.37 ACRES
MINIMUM FRONTAGE:	NONE	500 FEET
MINIMUM FRONT SETBACK:	NONE	0 FEET
MINIMUM SIDE SETBACK:	NONE	0 FEET
MINIMUM REAR SETBACK:	NONE	4 FEET
MAXIMUM STREET SETBACK:	10 FEET	4 FEET
MAXIMUM LOT COVERAGE:	100%	74%
MAXIMUM RESIDENTIAL DENSITY:	NONE	N/A
MAXIMUM BUILDING HEIGHT:	125 FEET	105 FEET
MINIMUM BUILDING HEIGHT:	4 FLOORS	8 FLOORS

4. OWNER OF PROPERTY:
   CITY OF PORTLAND
   389 CONGRESS STREET
   PORTLAND, MAINE 04101
   OPTION TO PURCHASE BY:
   CAPITAL LLC
   50 PORTLAND PIER, SUITE 400
   PORTLAND, MAINE 04101
5. PARKING REQUIRED:
   REQUIRED: 0 SPACES
   PROPOSED: 434 SPACES - ON SITE
   (12) HC SPACES, (60) COMPACT SPACES.
   (362) 9'x18'
6. BUILDING SUMMARY:
   BUILDING FOOTPRINT: 43,916 SF
   TOTAL BUILDING SQUARE FOOTAGE: 240,459 SF
   RETAIL SPACE: 5,172 SF
   OFFICE SPACE: 64,795 SF
   LOT COVERAGE (BUILDING) 74%
7. BOUNDARY LINE AND TOPOGRAPHIC INFORMATION BASED ON SURVEYS PREPARED BY OWEN HASKELL, INC. FROM PLANS DATED JANUARY 3, 2006.
8. BENCHMARKS ARE PK NAIL IN UP#13 ON THE WESTERN SIDE OF MARGNAL WAY WITH AN ELEVATION OF 10.62 AND NORTHERN MOST BONNET BOLT ON FIRE HYDRANT ON EASTERN SIDE OF MARGINAL WAY WITH AN ELEVATION OF 12.22.
10. STREETSIDE RIGHT-OF-WAY LIGHTING SHALL BE HOLOPHANE ESPLANADE SERIES LUMINAIRE WITH TAPERED STEEL POLE. OEC SERIES BRACKET ARM, 24'-3" NOMINAL HEIGHT. COLOR OLD NAVY SILVER. THIS LIGHTING IS STANDARD FOR THE BAYSIDE NEIGHBORHOOD.
11. BUILDING MOUNTED AND SITE POLE MOUNTED LIGHTING TO BE MANUFACTURED BY RAM LIGHTING. BUILDING MOUNTED LIGHTING TO BE 14" WALL DIRECTOR. SITE POLE MOUNTED LIGHTING TO BE SMALL STRUCTURAL. 100 WATT METAL HALIDE. 12 FEET HIGH.
12. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING AND KEEPING STREETS CLEAN DURING CONSTRUCTION. A MAINTENANCE PLAN SHALL BE PREPARED AND APPROVED BY THE CITY AND OWNERS REPRESENTATIVE.
13. DIMENSIONS ARE FROM FACE OF CURB.
14. SITE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ALL LIGHT POLE BASES (INCLUDING THE PUBLIC R.O.W.) AND TRENCHING FOR CONDUIT.
15. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONDUIT FOR ON-SITE AND OFF-SITE ELECTRIC SERVICE FOR POLE MOUNTED FIXTURES. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ON-SITE POLE MOUNTED LIGHT FIXTURES AND POLES. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR OFF-SITE LIGHT POLES. OFF-SITE POLE MOUNTED FIXTURES TO BE LEASED BY THE CITY OF PORTLAND FROM CENTRAL MAINE POWER. OFF-SITE POLE MOUNTED FIXTURES TO BE INSTALLED BY CENTRAL MAINE POWER.
16. SITE CONTRACTOR SHALL BE RESPONSIBLE FOR STRIPING OF PARKING SPACES LOCATED IN GARAGE, ON-STREET PARKING, ROADWAY, LANE STRIPING AND FOR CROSSWALKS.



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84 MARGINAL WAY

Portland, Maine

84 Marginal Way

Date: JULY 25, 2006

Issued For: PRELIMINARY SITE PLAN REVIEW

Revisions:

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Title: LAYOUT AND LIGHTING PLAN

Scale: 1"=30'
0 10 20 30 60 ft.

North:

Sheet No.: 2

UTILITY NOTE

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. CALL 1-888-DIGSAFE AT LEAST THREE BUSINESS DAYS BEFORE PERFORMING ANY CONSTRUCTION.

STORM DRAIN AND SANITARY STRUCTURES

	RIM	INV. IN	INV. OUT
CB#1	11.15	-	7.15
CB#2	11.15	6.56	6.46
CB#3	11.15	5.99	5.89
CB#4	11.15	5.30 (15")	5.20
		5.30 (15")	
		7.15 (6")	
CB#8	9.46	-	6.62
CB#6	9.53	6.33	6.23
CB#7	10.05	-	6.05
CB#8	9.48	5.60 (12")	5.50
		5.60 (12")	
EDMH#2	9.07	4.78 (15")	4.37
SMH#1	10.00	6.00	-5.51

LEGEND

	EXISTING	PROPOSED
PROPERTY LINE		
MONUMENT FOUND	MON	
CONTOUR	10	10
SPOT ELEVATION	+80.43	+80.43
CATCHBASIN		
DRAIN INLET		
MANHOLE		
HYDRANT		
WATER VALVE		
UTILITY POLE		
TEST BORING		
WATER SERVICE	W	W
SEWER SERVICE	SS	SS

	EXISTING	PROPOSED
STORM DRAIN	SD	SD
COMBINED SEWER	CB	
ELECTRIC SERVICE	E	E
GAS SERVICE	G	G
TELEPHONE AND CABLE SERVICE		T+C
OVERHEAD WIRES	OHW	
SITE LIGHTING ELECTRIC		E
ELECTRIC TRANSORMER		ET
TELEPHONE PAD		T
CABLE PAD		C
LIGHT FIXTURE - STREET		
LIGHT FIXTURE - SITE		
LIGHT FIXTURE - BUILDING		
CURB		
TEST BORING		

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84 MARGINAL WAY

Portland, Maine

84 Marginal Way

Date: JULY 25, 2006

Issued For: PRELIMINARY SITE PLAN REVIEW

Revisions:

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Title: GRADING, DRAINAGE AND UTILITIES PLAN

Scale: 1"=30'

0 10 20 30 60 ft.

North:

Sheet No.: 3

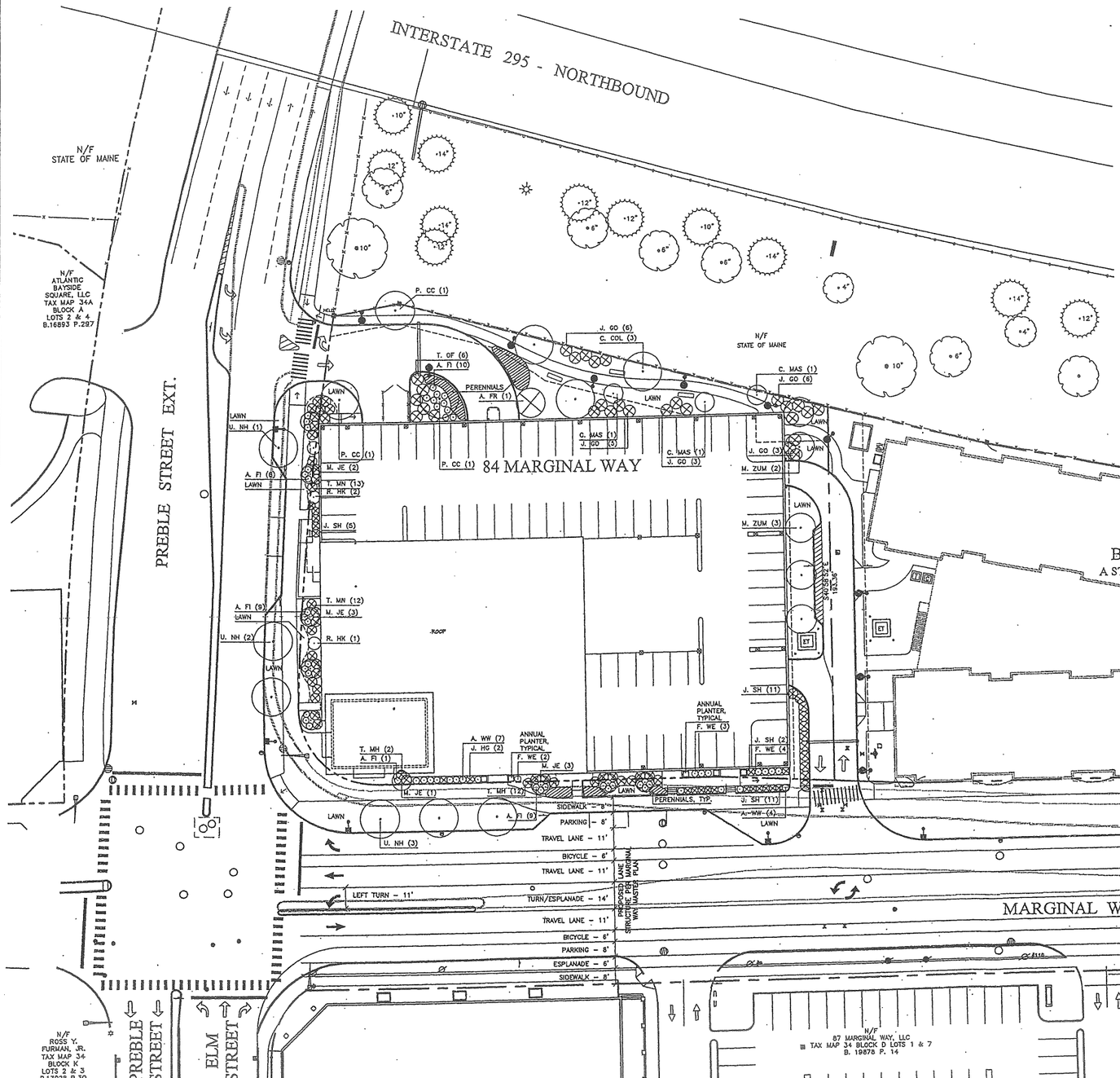
A-5

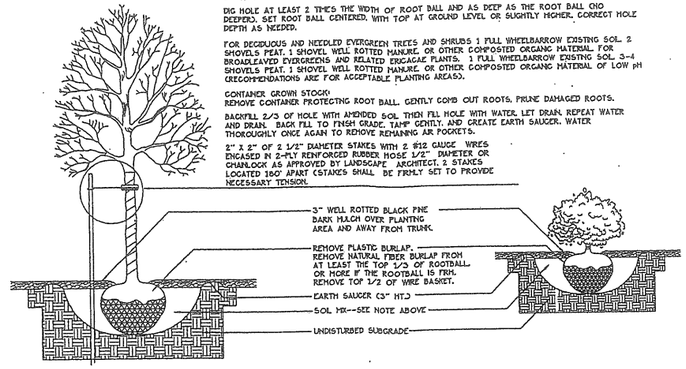
LEGEND

	EXISTING	PROPOSED		EXISTING	PROPOSED
PROPERTY LINE			ELECTRIC TRANSFORMER		ET
MONUMENT FOUND	MON		TELEPHONE PAD		T
CATCHBASIN			CABLE PAD		C
MANHOLE			LIGHT FIXTURE - STREET		
HYDRANT			LIGHT FIXTURE - SITE		
WATER VALVE			LIGHT FIXTURE - BUILDING		
UTILITY POLE			CURB		

PLANT LIST - GROUND LEVEL

KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE
		TREES		
A. FR	1	ABIES FRASERI	FRASIER FIR	5'-6' HT
C. MAS	1	CORNUS MAS	CORNELLIAN CHERRY	1 1/2"-2" CAL
C. COL	3	CORYLUS COLURNA	TURKISH FILBERT	2"-2 1/2" CAL
M. JE	9	MALUS 'JEWELCOLE'	PROFUSION FLOWERING CRAB	2"-2 1/2" CAL
M. ZUM	5	MALUS x ZUMI 'CALOCARPA'	ZUMI CALOCARPA FLOWERING CRAB	2 1/2"-3" CAL
P. CC	3	PYRUS 'CLEVELAND'	CLEVELAND ORNAMENTAL PEAR	2 1/2"-3" CAL
U. NH	6	ULMUS AMERICANA 'NEW HARMONY'	NEW HARMONY ELM	2 1/2"-3" CAL
		SHRUBS		
A. FI	25	AZALEA 'FIRESTAR'	FIRESTAR AZALEA	#5
A. WW	11	AZALEA 'WHITNEY'S WHITE'	WHITNEY'S WHITE AZALEA	#5
F. WE	9	FORSYTHIA 'WEEKEND'	WEEKEND FORSYTHIA	#3
J. SH	29	JUNPERUS SQUAMATA 'HOLGER'	HOLGER JUNIPER	#5
J. GO	22	JUNPERUS VIRGINIANA 'GRAY OWL'	GRAY OWL JUNPER	#5
R. HK	3	RHODODENDRON 'HONG KONG'	HONG KONG RHODODENDRON	2'-2 1/2'
T. MN	34	TAXUS x MEDIA 'NIGRA'	NIGRA TAXUS	2'-2 1/2'
T. OF	6	THUJA OCCIDENTALIS 'FILIFORMS'	THREAD ARBORVITAE	2'-2 1/2'





1/4 TREE AND SHRUB INSTALLATION
NOT TO SCALE

GENERAL PLANTING NOTES

1. CALL DIG-SAFE (1-888-344-7233) PRIOR TO BEGINNING WORK. THE LANDSCAPE CONTRACTOR IS ADVISED OF THE PRESENCE OF UNDERGROUND UTILITIES AND SHALL VERIFY THE EXISTENCE AND LOCATION OF SAME BEFORE COMMENCING AND DIGGING OPERATIONS. THE LANDSCAPE CONTRACTOR SHALL REPLACE OR REPAIR UTILITIES PAVING, WALKS, CURBING, ETC. DAMAGED IN PERFORMANCE OF THIS JOB AT NO ADDITIONAL COST TO OWNER.
2. CONTRACTOR SHALL THOROUGHLY FAMILIARIZE HIMSELF WITH ALL SITE CONDITIONS PRIOR TO CONSTRUCTION BIDDING.
3. DO NOT SCALE FROM DRAWINGS. ANY OMISSIONS IN DIMENSIONING SHALL BE REPORTED IMMEDIATELY TO THE LANDSCAPE ARCHITECT. ANY DISCREPANCIES BETWEEN DRAWINGS, DETAILS, NOTES AND SPECS SHALL BE IMMEDIATELY REPORTED TO THE LANDSCAPE ARCHITECT FOR FURTHER DIRECTION AND RESOLUTION BEFORE ANY ADDITIONAL WORK PROCEEDS.
4. PROVIDE SMOOTH TRANSITION WHERE NEW WORK MEETS EXISTING CONDITIONS.
5. CONTRACTOR SHALL FURNISH AND PLACE 12 INCHES OF LOAM IN ALL SHRUB BEDS, 30 INCHES IN ALL TREE PITS, AND 6 INCHES UNDER ALL TURF AREAS. THE LANDSCAPE CONTRACTOR SHALL COORDINATE SUBGRADE PREPARATION WITH THE GENERAL CONTRACTOR PRIOR TO PLACING LOAM.
6. ALL PLANT MATERIAL INSTALLED SHALL MEET THE SPECIFICATIONS OF "AMERICAN STANDARDS FOR NURSERY STOCK BY THE AMERICAN ASSOCIATION OF NURSERYMEN".
7. ALL PLANT MATERIAL SHALL BE FREE FROM INSECTS AND DISEASE.
8. ALL PLANTING SHALL BE DONE IN ACCORDANCE WITH ACCEPTABLE HORTICULTURAL PRACTICES. THIS IS TO INCLUDE PROPER PLANTING MIX, PLANT BED AND TREE PIT PREPARATION, PRUNING STAKING OR GUYING WRAPPING, SPRAYING, FERTILIZATION, PLANTING AND ADEQUATE MAINTENANCE UNTIL ACCEPTANCE FROM THE OWNER.
9. ALL GRASS, OTHER VEGETATION AND DEBRIS SHALL BE REMOVED FROM ALL PLANTING AREAS PRIOR TO PLANTING.
10. EXISTING TREES TO BE PRESERVED SHALL BE PROTECTED DURING CONSTRUCTION AND SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.
11. ALL SHRUB BEDS AND TREE PITS SHALL BE MULCHED WITH 3" CLEAN SHREDDED BLACK MULCH.
12. ANY DEVIATION FROM THE LANDSCAPE PLAN, INCLUDING PLANT LOCATION, SELECTION, SIZE, QUANTITY, OR CONDITION SHALL BE REVIEWED AND APPROVED BY THE OWNER AND LANDSCAPE ARCHITECT (AND MUNICIPAL AUTHORITY, IF APPLICABLE) PRIOR TO INSTALLATION ON SITE.
13. WHERE INDICATED ON PLAN, PLANTING SOIL MIXTURE FOR GROUND COVER AND PERENNIAL BED AREAS SHALL CONSIST OF FOUR PARTS TOPSOIL, TWO PARTS SPHAGNUM PEAT MOSS, AND ONE PART HORTICULTURAL PERLITE BY VOLUME. PEAT MOSS MAY BE SUBSTITUTED WITH WELL-ROTTED OR DEHYDRATED MANURE OR COMPOST. ROTOTILL BEDS TO A DEPTH OF 6 INCHES.
14. DAMAGE TO EXISTING SITE IMPROVEMENT DURING INSTALLATION OF LANDSCAPE MATERIAL SHALL BE THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR.

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84 MARGINAL WAY

Portland, Maine

84 Marginal Way

Date: JULY 25, 2006

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Revisions:

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Title: PLANTING PLAN AND ROOF PLAN

Scale: 1"=30'
0 10 20 30 60 ft.

North:

Sheet No.: 4

A-6

NOTES:

1. REFER TO SHEET NO. 11 EROSION & SEDIMENTATION CONTROL DETAILS FOR ADDITIONAL INFORMATION.

2. CONTRACTOR SHALL SWEEP AND MAINTAIN MARGINAL WAY AND PREBLE STREET EXTENSION FREE OF DUST AND DEBRIS AS REQUIRED DURING CONSTRUCTION.

3. CONTRACTOR SHALL INSTALL & MAINTAIN A STABILIZED CONSTRUCTION ENTRANCE FROM MARGINAL WAY ONTO THE SITE DURING CONSTRUCTION WHEN NEW ACCESS IS CREATED TO PREVENT OFFTRACKING OF DEBRIS AND DIRT IS OCCURING AT THE EXISTING SITE ENTRANCE.

INTERSTATE 295 - SOUTHBOUND

INTERSTATE 295 - NORTHBOUND

INSTALL EROSION CONTROL MESH FROM HIGH POINT OF CONSTRUCTED DITCH TO CATCH BASIN INLET GRATE. MESH SHALL BE INSTALLED WITH A BOTTOM WIDTH OF FOUR (4) FEET AND SHALL EXTEND UP DITCH WALL SLOPES AT LEAST TWO (2) FEET ON EACH SIDE

STONE CHECK DAM (TYP)

MAINTAIN INLET PROTECTION ON EXISTING CATCH BASINS UNTIL STRUCTURE IS DEMOLISHED

SILT FENCE OR WOOD WASTE COMPOST/BARK FILTER BERM (TYP)

SEE NOTE 3

N/F STATE OF MAINE

N/F ATLANTIC BAYSIDE SQUARE, LLC TAX MAP 34A BLOCK A LOTS 3 & 4 B.16083 P.297

EASEMENT BOUNDARY

CAPITAL, L.L.C.

PREBLE STREET EXT.

MARGINAL WAY

CHESTNUT STREET

N/F CITY OF PORTLAND TAX MAP 42Z BLOCK A LOT 1

N/F ROSS Y. FURMAN, JR. TAX MAP 34 BLOCK K LOTS 2 & 3 B.13028 P.26

PREBLE STREET

ELM STREET

N/F 87 MARGINAL WAY, LLC TAX MAP 34 BLOCK D LOTS 1 & 7 B. 19878 P. 14

N/F BACK COVE CO. TAX MAP 25 BLOCK B LOTS 14, 15 & 19 TAX MAP 34 BLOCK D LOT 6 BOOK 7300 PAGE 235

N/F FIVE LIVER CO. TAX MAP 25 BLOCK A LOT 5 BOOK 22284 PAGE 59

ITEM NORTHERN MOST BONNET BOLT EL=12.22

ITEM PK NAIL IN UP 912 EL=10.62

DRAINAGE MON FOUND

WILLIAM C. HASKELL NO. 8518 REGISTERED PROFESSIONAL ENGINEER STATE OF MAINE

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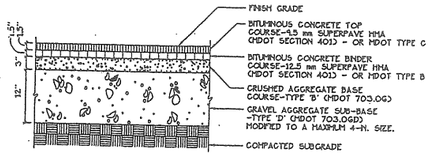
Title: EROSION AND SEDIMENTATION CONTROL PLAN

Scale: 1"=30'

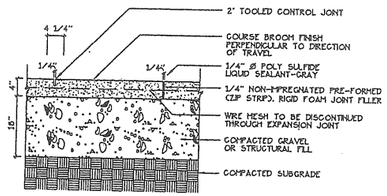
0 10 20 30 60 ft.

North:

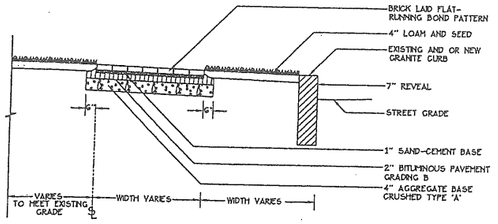
Sheet No.: 5



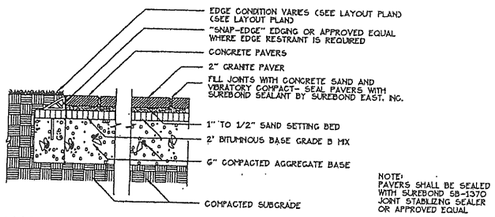
1/5 BITUMINOUS PAVEMENT- DRIVEWAY + PARKING GARAGE
NOT TO SCALE



2/5 CONCRETE WALK
NOTE: DO NOT PROVIDE TOOLED EDGE ALONG GRANITE CURB
NOT TO SCALE

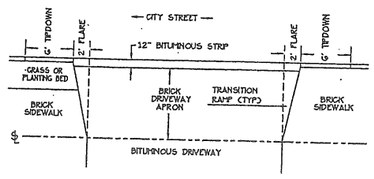


3/5 BRICK SIDEWALK WITH GRANITE CURB
NOT TO SCALE

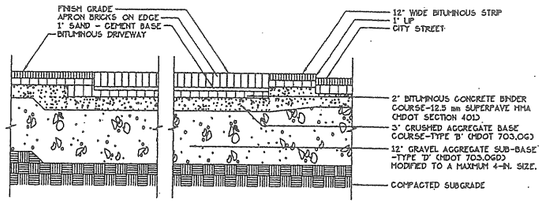


NOTE: PAVERS SHALL BE SEALED WITH SUREBOND SB-1370 JOINT STABILIZING SEALER OR APPROVED EQUAL

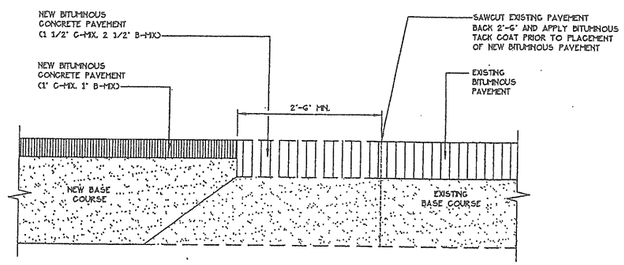
4/5 CONCRETE PAVERS
NOT TO SCALE



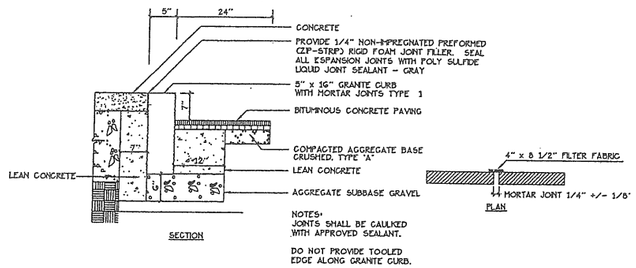
5/5 BRICK SIDEWALK + DRIVEWAY CONSTRUCTION
NOT TO SCALE



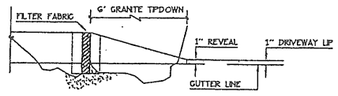
6/5 BRICK DRIVEWAY APRON
NOT TO SCALE



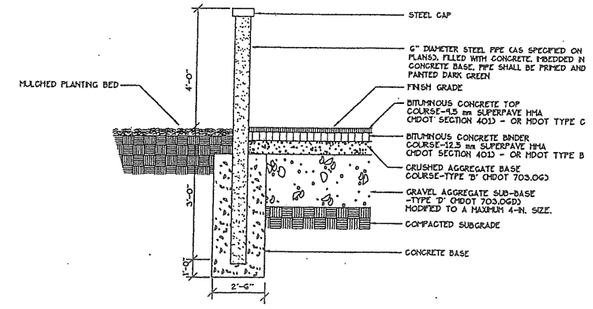
7/5 PAVEMENT SAWCUT DETAIL
NOT TO SCALE



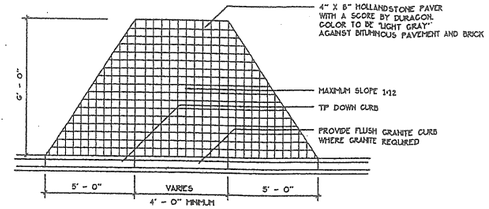
8/5 VERTICAL GRANITE CURB
NOT TO SCALE



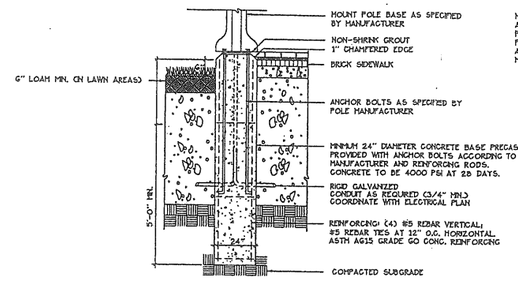
9/5 TIPDOWN CURB
NOT TO SCALE



10/5 BOLLARD DETAIL
NOT TO SCALE

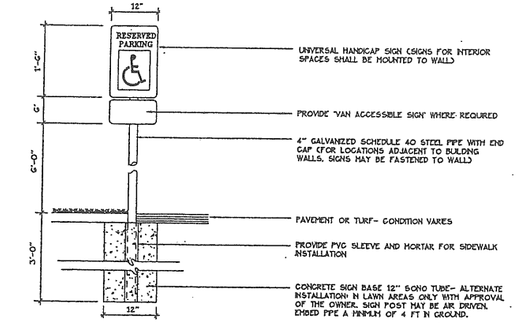


11/5 HANDICAP RAMP
NOT TO SCALE



NOTE: ALL POLE BASES LOCATED IN PAVED AREAS SHALL BE SET FLUSH WITH PAVEMENT TO ALLOW POLE BASE TO BE MOUNTED FLUSH WITH PAVEMENT.

12/5 LIGHT POLE BASE
NOT TO SCALE

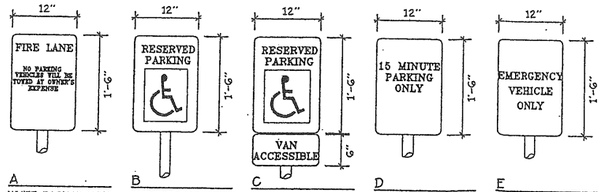


NOTE: ALL REGULATORY SIGNS SHALL CONFORM TO MDOT OR NATIONAL HIGHWAY STANDARDS- SIGN HEIGHT TO BE 6 FT HIGH TO BOTTOM OF SIGN.

SIGNS WITHIN PARKING GARAGE TO BE MOUNTED ON WALL WITH SIGN HEIGHT TO BE 6 FT TO BOTTOM OF SIGN.

13/5 SIGNAGE
NOT TO SCALE

SIGNAGE LEGEND



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A-7

84 MARGINAL WAY
84 Marginal Way
Portland, Maine

Date: JULY 25, 2006

Issued For: PRELIMINARY SITE PLAN REVIEW

Revisions:

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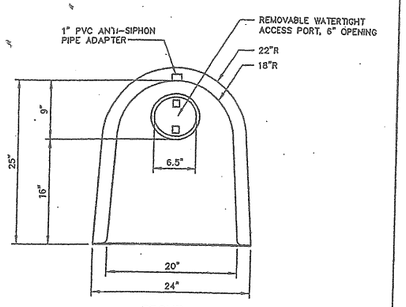
Title: SITE DETAILS

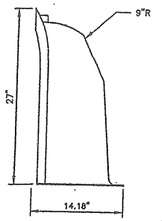
Scale:

North:

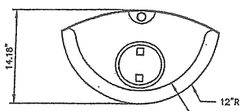
Sheet No.: 6



FRONT



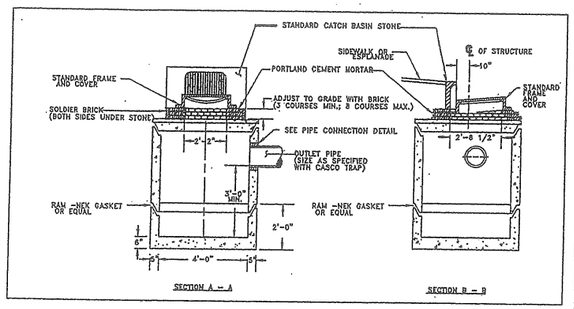
SIDE

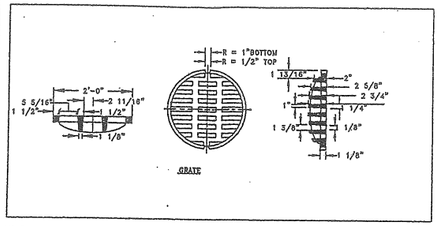


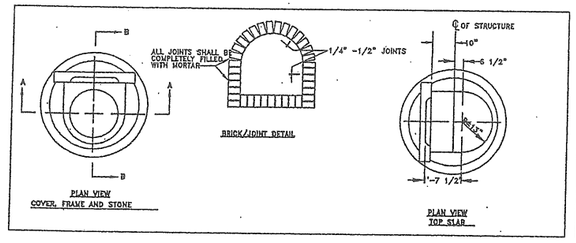
PLAN

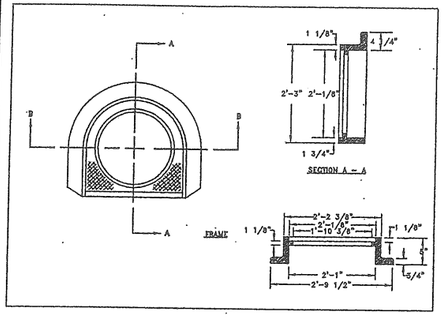
THE SNOUT

N.T.S.







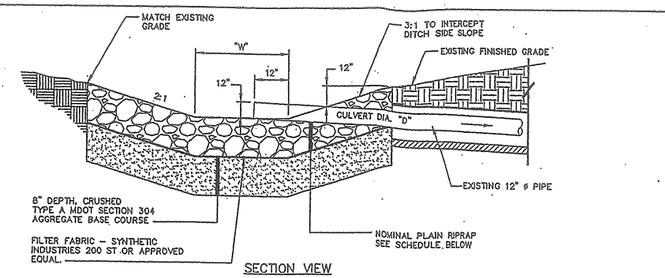


GENERAL NOTES

1. ALL CONCRETE SHALL BE A CLASS "A" AND HAVE A MINIMUM ULTIMATE STRENGTH OF 4000 lbs. PER SQ. INCH AT THE END OF 28 DAYS, UNLESS OTHERWISE NOTED.
2. PRECAST REINFORCED CONE BARREL MANUFACTURE PER ASTM SPEC. C-478-67
3. SEWER BRICK TO CONFORM TO ASTM SPEC. DESIGNATE ON C-32-63, GRADE MA AND SA.
4. ALL MANHOLES SHALL HAVE A BITUMINOUS WATERPROOFING APPLIED TO THE EXTERIOR SURFACE. IF CONSTRUCTION OF BRICK MASONRY, THE SMOOTH MORTAR SURFACE SHALL BE PLASTERED WITH A SMOOTH MORTAR FINISH 3/8" THICK. AFTER THE MORTAR HAS SET, THE SURFACE SHALL BE WATERPROOFED AS REQUIRED BY SUPPLEMENTAL SPECIFICATIONS SECTION 604.
5. CASTINGS SHALL CONFORM TO ASTM DESIGNATION A48-CLASS 35. ALL PARTS OF CASTINGS, EXCEPT FINISHED SURFACE, SHALL RECEIVE A COAT OF COAL TAR PITCH VARNISH OR ASPHALTUM PAINT WHICH SHALL BE SMOOTH AND TOUGH BUT NOT BRITTLE.
6. MANHOLES MAY BE CONSTRUCTED OF MASONRY, PRECAST REINFORCED CONCRETE, OR CAST IN PLACE.
7. ALL PRECAST MANHOLES AND CATCH BASINS SHALL BE IDENTIFIED BY STATION AND OFFSET, PAINTED ON THE SIDE OF THE STRUCTURE BY THE MANUFACTURER.
8. STORM AND SEWER MANHOLES SHALL HAVE SOLID COVERS WITH ONE DRILLED HOLE.
9. EXISTING MANHOLE AND CATCH BASIN FRAMES AND COVERS SHALL BE SALVAGED BY THE CONTRACTOR, AND REMAIN THE PROPERTY OF THE CITY OF PORTLAND.
10. CASCO TRAPS SHALL BE PROVIDED WITHIN ALL CATCH BASINS WITH 12" OUTLETS.

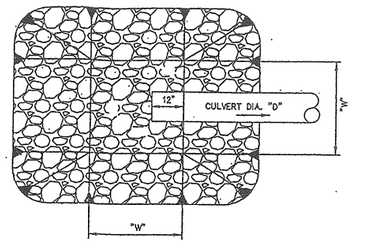
PRECAST CONCRETE CATCH BASIN TYPE "E"

N.T.S.



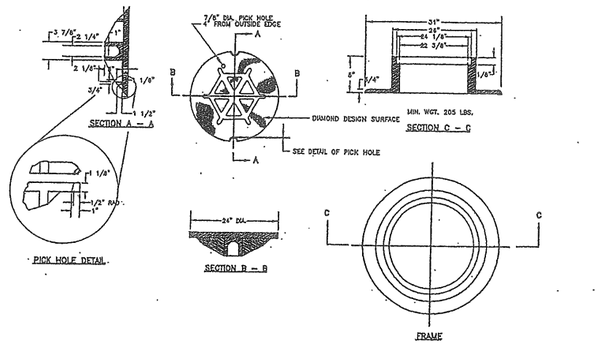
SECTION VIEW

SCHEDULE			
CULVERT DIAMETER (D)	WIDTH (W)	STONE D_{50}	RIPRAP THICKNESS
12"	3'	4"	9"



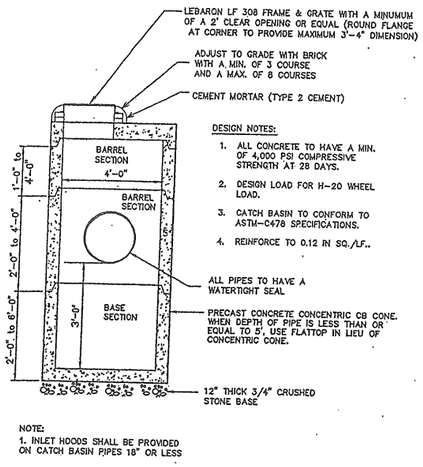
INLET APRON

N.T.S.



TYPE "A" MANHOLE COVER AND FRAME

N.T.S.



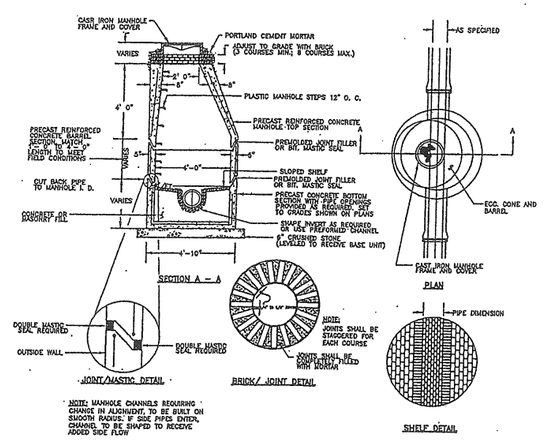
DESIGN NOTES:

1. ALL CONCRETE TO HAVE A MIN. OF 4,000 PSI COMPRESSIVE STRENGTH AT 28 DAYS.
2. DESIGN LOAD FOR H-20 WHEEL LOAD.
3. CATCH BASIN TO CONFORM TO ASTM-C478 SPECIFICATIONS.
4. REINFORCE TO 0.12 IN SQ./LF..

NOTE:
1. INLET HOODS SHALL BE PROVIDED ON CATCH BASIN PIPES 18" OR LESS

4'-0" PRECAST CATCH BASIN

N.T.S.



GENERAL NOTES

1. ULTIMATE STRENGTH OF 4000 lbs. PER SQ. INCH AT THE END OF 28 DAYS, UNLESS OTHERWISE NOTED.
2. ASTM SPEC. C-478-67
3. C-32-63, GRADE MA AND SA.
4. APPLIED TO THE EXTERIOR SURFACE. IF CONSTRUCTION OF BRICK MASONRY, THE SMOOTH MORTAR SURFACE SHALL BE PLASTERED WITH A SMOOTH MORTAR FINISH 3/8" THICK. AFTER THE MORTAR HAS SET, THE SURFACE SHALL BE WATERPROOFED AS REQUIRED BY SUPPLEMENTAL SPECIFICATIONS SECTION 604.
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6. MANHOLES MAY BE CONSTRUCTED OF MASONRY, PRECAST REINFORCED CONCRETE, OR CAST IN PLACE.
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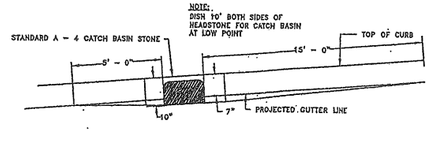
8. STORM AND SEWER MANHOLES SHALL HAVE SOLID COVERS WITH ONE DRILLED HOLE.
9. EXISTING MANHOLE AND CATCH BASIN FRAMES AND COVERS SHALL BE SALVAGED BY THE CONTRACTOR, AND REMAIN THE PROPERTY OF THE CITY OF PORTLAND.

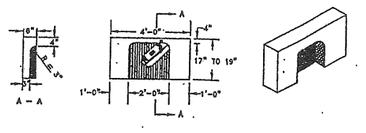
PRECAST CONCRETE MANHOLE TYPE "A"

N.T.S.



TYPICAL PAVEMENT GRADING ON SLOPES FOR CATCH BASIN AND INLET

N.T.S.



TYPICAL A-4 CATCH BASIN STONE

N.T.S.

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84 MARGINAL WAY

84 Marginal Way
Portland, Maine

Date:
JULY 25, 2006

Issued For:
PRELIMINARY SITE PLAN REVIEW

Revisions:

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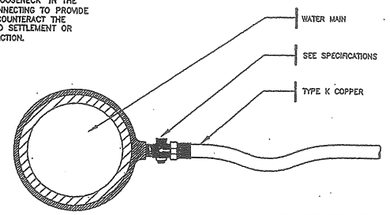
Title:
UTILITY AND DRAINAGE DETAILS

Scale: NONE

North:

Sheet No.:
8

NOTE: SERVICE CONNECTIONS (DIRECT TAPS AND SERVICE CLAMPS) WILL BE INSTALLED SO THAT THE OUTLET IS AT AN ANGLE OF NOT MORE THAN 45° ABOVE THE HORIZONTAL. ALWAYS PUT A BEND OR 'GOOSENECK' IN THE SERVICE LINE PRIOR TO CONNECTING TO PROVIDE FLEXIBILITY AND 'GIVE' TO COUNTERACT THE EFFECTS OF A LOAD DUE TO SETTLEMENT OR EXPANSION AND/OR CONTRACTION.

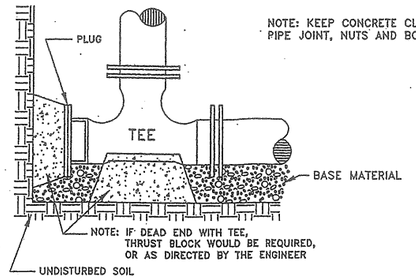


SEE NOTE 3 IN THRUST BLOCK NOTES DETAIL ON SHEET 8

WATER SERVICE

(1 1/2". AND 2 1/2" C.C. OR IRON PIPE THREAD)

N.T.S.

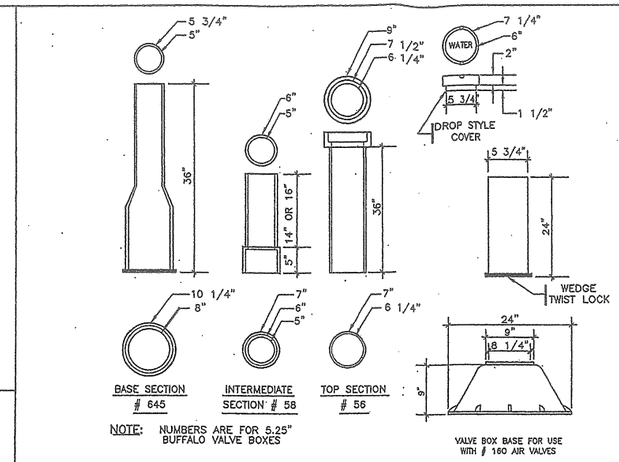


NOTE: KEEP CONCRETE CLEAR OF PIPE JOINT, NUTS AND BOLTS

SEE NOTE 3 IN THRUST BLOCK NOTES DETAIL

STANDARD TEE BLOCKING

N.T.S.

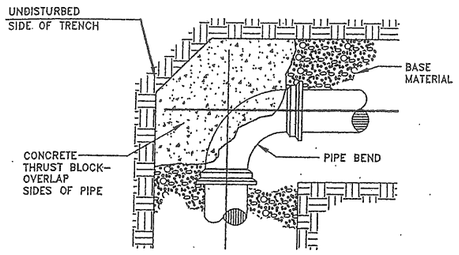


NOTE: NUMBERS ARE FOR 5.25" BUFFALO VALVE BOXES

SEE NOTE 3 IN THRUST BLOCK NOTES DETAIL

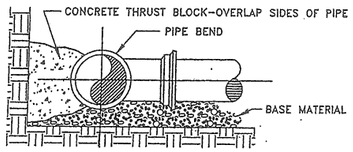
TYPICAL VALVE BOXES

N.T.S.



PLAN VIEW

NOTE: KEEP CONCRETE CLEAR OF PIPE JOINT, NUTS AND BOLTS



SECTION

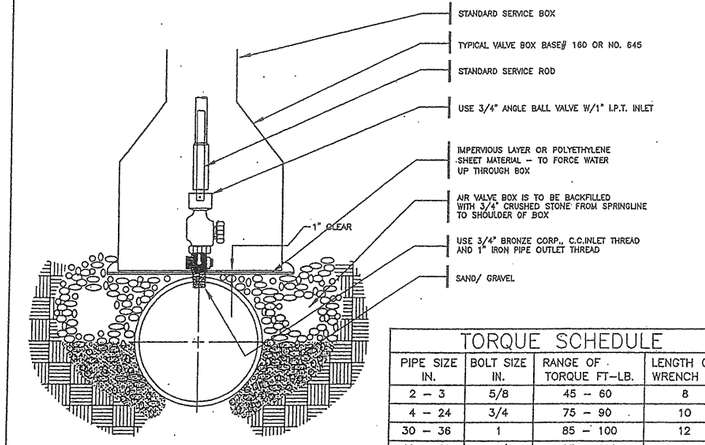
THRUST/RETAINER GLAND SCHEDULE		
1/4 BEND	(90°)	USE POURED-IN-PLACE THRUST BLOCK w/RETAINERS
1/8 BEND	(45°)	THRUST BLOCK w/RETAINERS
1/16 BEND	(22 1/2°)	THRUST BLOCK
1/32 BEND	(11 1/4°)	THRUST BLOCK

THE ABOVE SCHEDULE IS SUBJECT TO THE APPROVAL OF THE ON-SITE INSPECTOR DUE TO SOILS AND WORKING PRESSURES IN THE AREA.

SEE NOTE 3 IN THRUST BLOCK NOTES DETAIL

TYPICAL THRUST BLOCK PLACEMENT ON BENDS

N.T.S.



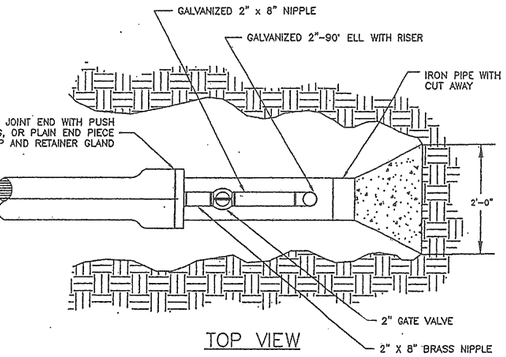
TORQUE SCHEDULE			
PIPE SIZE IN.	BOLT SIZE IN.	RANGE OF TORQUE FT-LB.	LENGTH OF WRENCH IN *
2 - 3	5/8	45 - 60	8
4 - 24	3/4	75 - 90	10
30 - 36	1	85 - 100	12
42 - 48	1 1/4	105 - 120	14

* THE TORQUE LOADS MAY BE APPLIED WITH TORQUE MEASURING OR TORQUE INDICATING WRENCHES, WHICH MAY ALSO BE USED TO CHECK THE APPLICATION OF APPROXIMATE TORQUE LOADS APPLIED BY A PERSON TRAINED TO GIVE AN AVERAGE PULL ON A DEFINITE LENGTH OF REGULAR SOCKET WRENCH.

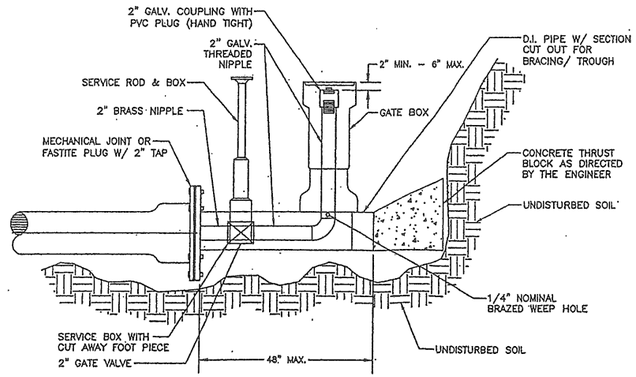
SEE NOTE 3 IN THRUST BLOCK NOTES DETAIL

TYPICAL AIR VALVE SECTION (1")

N.T.S.



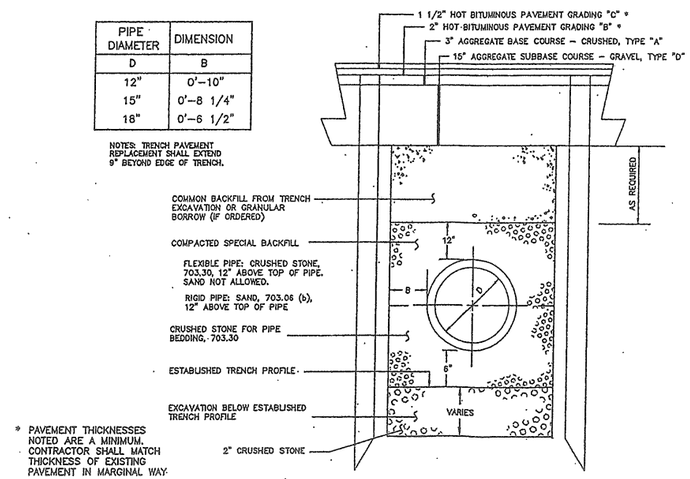
TOP VIEW



ELEVATION VIEW

STANDARD 2" BLOW OFF

N.T.S.



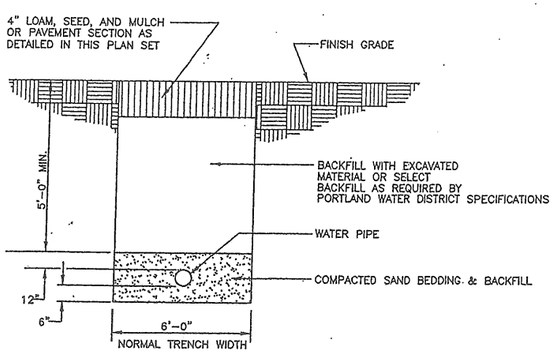
PIPE DIAMETER	DIMENSION
D	B
12"	0'-10"
15"	0'-8 1/4"
18"	0'-6 1/2"

NOTES: TRENCH PAVEMENT REPLACEMENT SHALL EXTEND 9" BEYOND EDGE OF TRENCH.

* PAVEMENT THICKNESSES NOTED ARE A MINIMUM. CONTRACTOR SHALL MATCH THICKNESS OF EXISTING PAVEMENT IN MARGINAL WAY.

TYPICAL PIPE INSTALLATION DETAIL

N.T.S.



SEE NOTE 3 IN THRUST BLOCK NOTES DETAIL

WATER SERVICE TRENCH SECTION

N.T.S.

Prepared For:
Applicant:
CAPITAL, LLC
60 Portland Pier, Suite 400
Portland, Maine 04101

Prepared By:
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207-657-6910
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84 MARGINAL WAY

Portland, Maine

84 Marginal Way

Date: JULY 25, 2006

Issued For: PRELIMINARY SITE PLAN REVIEW

Revisions:

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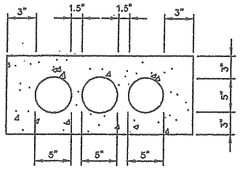
Title: UTILITY AND DRAINAGE DETAILS

Scale: NONE

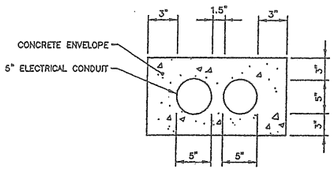
North:

Sheet No.: 9

STATE OF MAINE
WILLIAM C. HASKELL
NO. 8518
REGISTERED PROFESSIONAL ENGINEER



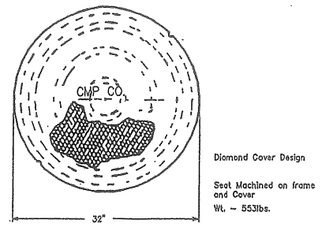
3 CONDUIT LAYOUT



2 CONDUIT LAYOUT

ELECTRICAL CONDUIT PROFILES

N.T.S.



32" MANHOLE COVER & FRAME

N.T.S.

NOTES

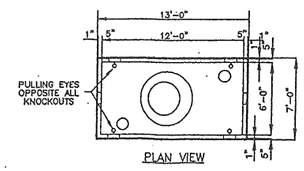
NOTES:

1. VAULT AND ECCENTRIC CONE SHALL BE DESIGNED TO WITHSTAND H20 WHEEL LOADED WITH 6' OF OVERBURDEN. THE DESIGN SHALL ALSO COMPLY WITH THE STRENGTH REQUIREMENTS OF NATIONAL ELECTRICAL SAFETY CODE SECTION 323A. PROVIDE SHOP DRAWINGS STAMPED BY A STATE OF MAINE REGISTERED PROFESSIONAL ENGINEER UPON REQUEST.

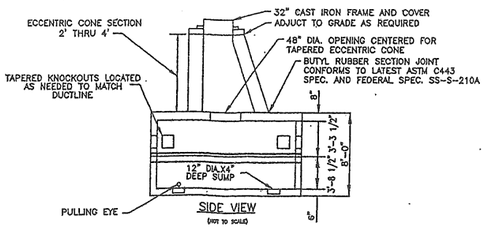
2. JOINTS SEALED WITH BUTYL RUBBER.

3. MOUNTINGS FOR CABLE RACKS ETC. CAST IN WALL BY FURTHER PLANS OR FIELD LOCATED.

4. MANHOLE SHALL BE SET ON A SUITABLE GRAVEL BASE.

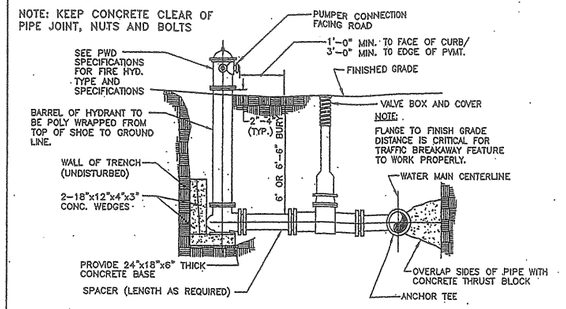


PLAN VIEW



PRECAST CONCRETE MANHOLE (FOR CMP)

N.T.S.



SEE NOTE 3 IN THRUST BLOCK NOTES DETAIL

FIRE HYDRANT INSTALLATION

N.T.S.

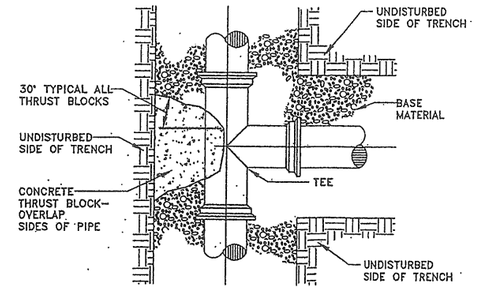
THRUST BLOCK NOTES

1. INSTALL POLY BARRIER BETWEEN PIPE AND ALL THRUST BLOCKS.
2. ANY MODIFICATION TO THRUST BLOCK SIZING OR PIPE RESTRAINT REVISIONS SHALL BE APPROVED IN WRITING BY THE ENGINEER PRIOR TO IMPLEMENTATION IN THE FIELD
3. ANY WORK RELATING TO WATER PIPING OR DETAILS SHALL BE IN ACCORDANCE WITH THE PORTLAND WATER DISTRICT SPECIFICATIONS

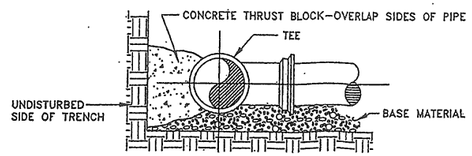
PIPE SIZE	1/32 BEND	1/16 BEND	1/8 BEND	1/4 BEND	TEES/CAPS
4"	1.8	3.6	7.0	12.8	9.1
6"	3.7	7.3	14.3	26.4	8.7
8"	6.4	12.6	24.7	45.5	32.2

BEARING SURFACE REQUIRED IN SQUARE FEET

NOTE: KEEP CONCRETE CLEAR OF PIPE JOINT, NUTS AND BOLTS



PLAN VIEW



SECTION

TYPICAL THRUST BLOCK PLACEMENT ON T

N.T.S.

STATE OF MAINE
WILLIAM C. HASKELL
NO. 8518
REGISTERED PROFESSIONAL ENGINEER

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84 MARGINAL WAY
84 Marginal Way Portland, Maine

Date: JULY 25, 2006

Issued For: PRELIMINARY SITE PLAN REVIEW

Revisions:

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Title: UTILITY AND DRAINAGE DETAILS

Scale: NONE

North:

Sheet No.: 10

I. Erosion Control Measures and Site Stabilization

The primary emphasis of the erosion/sedimentation control plan to be implemented for the infrastructure construction is as follows:
- Development of a careful construction sequence.
- Rapid revegetation of denuded areas to minimize the period of soil exposure.
- Rapid stabilization of drainage paths to avoid rill and gully erosion.
- The use of on-site measures to capture sediment (silt fence, check dams, etc.).

The following temporary and permanent erosion and sediment control devices will be implemented as part of the site development. These devices shall be installed as indicated on the plans or as described within this report. For further reference, see the Maine Erosion and Sediment Control Handbook for Construction: Best Management Practices.

A. Temporary Erosion Control Measures

The following measures are planned as temporary erosion/sedimentation control measures during construction:

1. Utilize the existing entrance onto Preble Street Extension. If access shall be required at the proposed entrance onto Marginal Way at the northerly property line with the abutting property, a stabilized construction entrance shall be installed and maintained during construction to prevent off-tracking of dirt and debris.

2. Siltation fence or wood waste compost berms shall be installed downstream of any disturbed areas to trap runoff borne sediments until adequate catch (90% or greater) has occurred. The silt fence and/or the wood waste compost berms shall be installed per the details provided in this package and inspected immediately after each rainfall and at least daily during prolonged rainfall. Repairs shall be made if there are any signs of erosion or sedimentation below the fence or berm line. If there are signs of undercutting at the center or the edges, or impounding of large volumes of water behind fence or berm, the barrier shall be replaced with a stone check dam. Wood waste compost berms are not to be used adjacent to wetland areas that are to be left undisturbed.

3. Straw or hay mulch including hydroseeding is intended to provide cover for denuded or seeded areas until revegetation is established. Mulch placed between April 15th and September 15th on slopes of less than 15 percent shall be anchored by applying water; mulch placed on slopes of equal to or steeper than 15 percent shall be covered by a fabric netting and anchored with staples in accordance with manufacturer's recommendation. Mulch placed between September 15th and April 15th on slopes equal to or steeper than 8 percent shall be covered with a fabric netting and anchored with staples in accordance with the manufacturer's recommendations. Slopes steeper than 3:1 and the drainage swale located in the I-295 Right-of-Way that are to be revegetated shall receive Curlex blankets by American Excelsior or Engineer approved equivalent. Mulch application rates are provided in Attachment A of this section. Mulch shall not be placed over snow.

4. Temporary stockpiles of stumps, grubbings, or common excavation will be protected as follows:

a) Temporary stockpiles shall not be located within 100 feet of any wetlands that are to be left undisturbed and any slopes exceeding 15%.

b) Stockpiles shall be stabilized within 7 days by either temporarily seeding the stockpile with a hydroseed method containing an emulsified mulch tackifier or by covering the stockpile with mulch.

c) Stockpiles shall be surrounded by silt fence or wood-waste compost berms at the time of formation.

5. All denuded areas within 100 feet of an undisturbed wetland that have been rough graded and are not located within a roadway subbase area shall receive mulch or erosion control mesh fabric within 7 days of initial soil disturbance. All areas within 50 feet of undisturbed wetland area shall be mulched prior to any predicted rain event regardless of the 7-day window. In other areas, the time period may be extended to 14 days. All disturbed areas located within 100 feet of a protected natural resource must be protected with a double row of sediment barriers.

6. For work conducted between September 15th and April 15th of any calendar year, all denuded areas will be covered with hay mulch applied at twice the normal application rate and anchored with fabric netting. The time period for applying mulch as noted in Paragraph I.A.5 shall be limited to 7 days for all areas.

7. Marginal Way and Preble Street Extension shall be swept to control off-tracking of mud, debris, and dust as necessary.

8. During grubbing operations stone check dams will be installed at any evident concentrated flow discharge points.

9. Silt fencing with a maximum stake spacing of 6 feet should be used, unless the fence is supported by wire fence reinforcement of minimum 14 gauge and with a maximum mesh spacing of 6 inches, in which case stakes may be spaced a maximum of 10 feet apart. The bottom of the fence should be anchored.

10. Wood waste compost/bark berms may be used in lieu of siltation fencing. Berms shall be removed and spread into a layer not to exceed 3" thick once upstream areas are completed and a 90% catch of vegetation is attained. Wood waste erosion tubes may also be used for perimeter sediment control or check dams, or to reduce slope lengths. These tubes may be created by filling Filtrexx mesh tubes or approved equivalent with wood waste material and staking the tube to the ground where the control is necessary.

11. Inlet Protection measures shall be implemented for all catch basins located with the disturbed construction area. Measures shall be maintained regularly and shall not cause flooding in public right-of-ways.

12. Water shall be furnished and applied in accordance with MDOT specifications – Section 637 – Dust Control.

13. Loam and seed is intended to serve as the primary permanent revegetative measure for all denuded areas not provided with other erosion control measures such as riprap. Application rates are provided in Attachment A of this section. Seeding shall not occur over snow.

B. Permanent Erosion Control Measures

The following permanent erosion control measures have been designed as part of the Erosion and Sedimentation Control Plan:

1. All areas disturbed during construction but not subject to other restoration (building, paving, riprap, etc.) shall be loamed, limed, fertilized, mulched, and seeded. Fabric netting anchored with staples shall be placed over the mulch in areas as noted in Paragraph I.A.3. All disturbed areas within 100 feet of an undisturbed wetland area shall be mulched prior to any predicted rain event regardless of the 7-day window. Native topsoil shall be stockpiled and reused for final restoration if deemed to be of sufficient quality.

II. Implementation Schedule

The following construction sequence shall be required to insure that the effectiveness of the erosion and sedimentation control measures is optimized:

Note: For all grading activities, the contractor shall exercise extreme caution not to overexpose the site by limiting the disturbed area.

1. Install perimeter siltation fence and/or wood waste berms prior to grubbing respective areas.
2. Clear and grub area as necessary for construction.
3. Remove existing pavement within work limits.
4. During grubbing operations, install stone check dams at any evident concentrated flow discharge points.
5. Commence earthwork operations for proposed driveways and building foundation.
6. Continue grading to subgrade as necessary.
7. Commence installation of underground utilities.
8. Complete remaining earthwork operations.
9. Install subbase and base course gravels for driveways.
10. Complete installation of utility appurtenances.
11. Install surface course gravels for the driveways.
12. Loam, lime, fertilize, seed, and mulch remaining disturbed areas.
13. Remove accumulated sediment from ahead of any sediment barriers as necessary.
14. Once the site is stabilized and a 90% catch of vegetation has been obtained, remove all temporary erosion control measures.
15. Touch up loam and seed.

Note: All denuded areas not subject to final paving, riprap, or gravel shall be revegetated.

Prior to construction of the project, the contractor shall submit to the owner a schedule for the completion of the work, which will satisfy the following criteria:

1. The above construction sequence shall generally be completed in the specified order; however, several separate items may be constructed simultaneously. Work must also be scheduled or phased to prevent the extent of the exposed areas as specified below. The intent of the above sequence is to provide for sufficient erosion and sedimentation control and to have structural measures such as silt fence and construction entrance in place before large areas of land are denuded.

2. The work shall be conducted in sections which will:

a) Limit the amount of exposed area to those areas in which work is expected to be undertaken during the proceeding 30 days.

b) Revegetate disturbed areas as rapidly as possible. All areas shall be permanently stabilized within 7 days of final grading or before a storm event; or temporarily stabilized within 7 days of initial disturbance of soil for areas within 100 feet of an undisturbed wetland area and within 14 days for all other areas. Areas within 100 feet of an undisturbed wetland shall be mulched prior to any predicted rain event regardless of the 7-day window.

III. Winter Stabilization Plan

If a summer/fall construction schedule is not possible and construction is necessary between September 15th and April 15th of any calendar year, the contractor shall submit a schedule, which will satisfy the following criteria:

1. The extent of exposed area shall be limited to those areas in which work is expected to be undertaken during the proceeding 15 days and can be mulched in the event of a predicted snow event.

2. All disturbed areas shall be covered with mulch within 7 days of final grading. Mulch shall not be placed over snow.

3. Once final grade has been established, the contractor may choose to dormant seed the disturbed areas prior to placement of mulch and placement of staple-anchored fabric netting.

a. If dormant seeding is used for the site, all disturbed areas shall receive 6" of loam and seed at an application rate of 5 lbs. per 1000 s.f. Seeding shall not occur over snow.

All areas seeded during the winter months shall be inspected in the spring for adequate catch. All areas insufficiently vegetated (less than 80% catch) shall be revegetated by replacing loam, seed, and mulch as necessary to achieve 80% catch.

b. If dormant seeding is not used for the site, all disturbed areas shall be revegetated in the spring.

4. The area of denuded non-stabilized construction area shall be limited to the minimum area practicable. An area shall be considered denuded until the subbase gravel is installed or the areas of future loam and seed have been loamed, seeded, and mulched at a rate twice that specified in the seeding plan (e.g. 115 lbs. per 1,000 s.f. x 2 = 230 lbs. per 1,000 s.f.).

5. The above schedule shall be subject to the approval of the Owner.

The Contractor shall install any added measures that may be necessary to control erosion and sedimentation from the site dependent upon the actual site and weather conditions.

The Contractor shall note that no areas within 100 feet of an undisturbed wetland shall remain denuded for longer than 7 days before being temporarily stabilized. All other areas shall be stabilized within 14 days. For construction between September 15th and April 15th of any calendar year, all areas shall be temporarily stabilized within 7 days.

IV. Inspection and Maintenance

The following inspection and maintenance standards shall be required to insure the effectiveness of the erosion and sedimentation control measures are optimized during construction.

For further reference, see the Maine Department of Environmental Protection Chapter 500 Stormwater Management Rules and the Maine Construction General Permit (MCGP) requirements.

1. Inspect disturbed and impervious areas, erosion control measures, materials storage areas exposed to precipitation and locations where vehicles enter or exit the site. Inspection should occur at least once a week as well as before and after a storm event, and prior to completing permanent stabilization measures.

2. Maintain all erosion and stormwater control measures until areas are permanently stabilized. If maintenance, modification, and/or installation of additional best management practices (BMPs) are necessary, implementation must be completed within 7 calendar days and prior to any storm event.

V. Housekeeping

The following standards shall be required. For further reference, see the Maine Department of Environmental Protection Chapter 500 Stormwater Management Rules.

1. Spill prevention controls must be utilized to prevent pollutants from being discharged from materials onsite.

2. During construction, liquid petroleum products and other hazardous materials with the potential to contaminate groundwater may not be stored or handled in areas of the site draining to an infiltration area or adjacent to the stormwater catch basins and drain manholes.

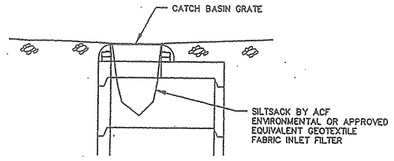
3. Action must be taken to ensure activities do not result in noticeable erosion of soils or fugitive dust emissions during or after construction.

4. Litter, construction debris, and chemicals exposed to stormwater must be prevented from becoming a pollutant source.

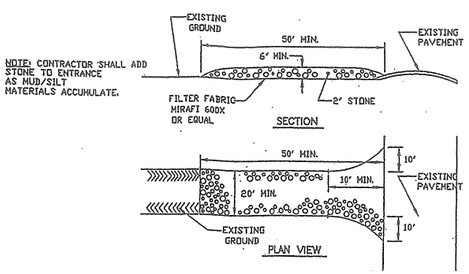
5. Water collected as a result of trench dewatering must be spread through natural wooded buffers or removed to areas that are specifically designed to collect the maximum amount of sediment possible, like a cofferdam sedimentation basin. Avoid allowing the water to flow over disturbed areas of the site.

6. Identify and prevent contamination by non-stormwater discharges.

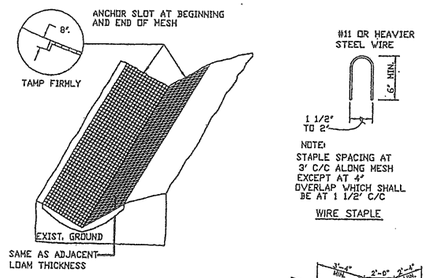
7. Additional requirements may be applied on a site-specific basis.

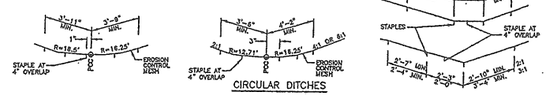


INLET PROTECTION
N.T.S.



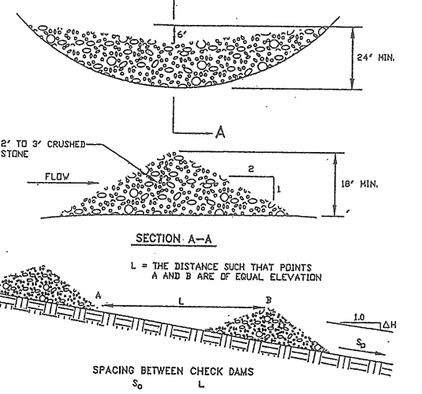
STABILIZED CONSTRUCTION ENTRANCE
N.T.S.





STAPLES AT EDGES, AT QUARTER POINTS, AT 4' OVERLAP

EROSION CONTROL MESH
N.T.S.



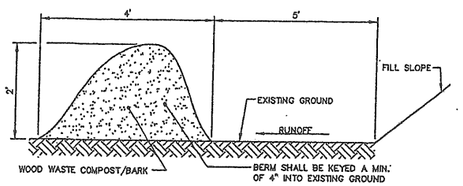
SPACING BETWEEN CHECK DAMS

S_0 (FT./FT.)	L (FT.)
0.020	75
0.030	50
0.040	40
0.050	30
0.080	20
0.100	15'

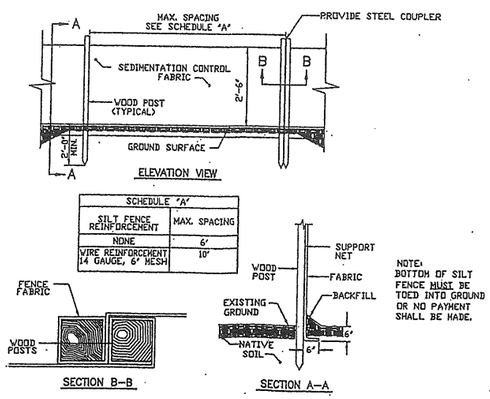
STONE CHECK DAM
N.T.S.

NOTES:

1. THE WOOD WASTE COMPOST/BARK MIX SHALL CONFORM TO THE FOLLOWING STANDARDS:
   - A. MOISTURE CONTENT – 30-60%.
   - B. pH – 5.0 – 8.0.
   - C. SCREEN SIZE – 100% LESS THAN 3". MAX. 70% LESS THAN 1".
   - D. NO LESS THAN 40% ORGANIC MATERIAL (DRY WEIGHT) BY LOSS OF IGNITION.
   - E. NO STONES LARGER THAN 2" IN DIAMETER.
   - F. SILTS, CLAYS OR SUGAR SANDS ARE NOT ACCEPTABLE IN THE MIX.
2. THE COMPOST BERM SHALL BE PLACED, UNCOMPACTED, ALONG A RELATIVELY LEVEL CONTOUR.
3. THE WOOD WASTE COMPOST/BARK FILTER BERM MAY BE USED IN LIEU OF SILTATION FENCE, AT THE TOE OF SHALLOW SLOPES, ON FROZEN GROUND, LEDGE OUT CROPS, VERY ROOTED FORESTED AREA OR AT THE EDGE OF GRAVEL PARKING AREAS.
4. BERMS SHALL REMAIN IN PLACE UNTIL UPSTREAM AREA IS COMPLETED OR 70% CATCH OF VEGETATION IS ATTAINED. BERMS SHALL BE REMOVED BY SPREADING SUCH THAT NATIVE EARTH CAN BE SEEN BELOW.
5. WOOD WASTE COMPOST/BARK FILTER BERM SHALL NOT BE USED IN WETLAND AREAS.



WOOD WASTE COMPOST/BARK FILTER BERM
N.T.S.



SILTATION FENCE
N.T.S

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84 MARGINAL WAY
84 Marginal Way
Portland, Maine

Date: JULY 25, 2006

Issued For: PRELIMINARY SITE PLAN REVIEW

Revisions:

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Title: EROSION AND SEDIMENTATION CONTROL DETAILS AND NOTES

Scale: NONE

North:

Sheet No.: 11

A-12

NOTES:

1. EXISTING SOILS ARE CLASSIFIED AS CUT AND FILL LANDS IN THE SCS MEDIUM INTENSITY SOILS SURVEY FOR CUMBERLAND COUNTY. FOR THE PURPOSES OF STORMWATER MODELING, ALL SOILS WERE ASSUMED TO BE HYDROLOGIC SOILS GROUP D.

2. WATERSHED SUBCATCHMENT TIME-OF-CONCENTRATION (Tc) PATHS ARE SHOWN FOR INFORMATIONAL PURPOSES. TIME OF CONCENTRATIONS WERE CALCULATED BASED ON TR-55 METHODOLOGY AND ALL WERE LESS THAN 5 MINUTES, THEREFORE, TIME OF CONCENTRATIONS FOR ALL SUBCATCHMENTS HAVE BEEN ASSUMED TO BE FIVE (5) MINUTES.

LEGEND

- 4 — SUBCATCHMENT AREA
- P — POND
- D — WATERSHED BOUNDARY
- SF — SHEET FLOW
- SCF — SHALLOW CONCENTRATED FLOW
- PF — PIPE FLOW
- P.O.I. — POINT OF INTEREST
- D SOILS

INTERSTATE 295

PREBLE STREET

MARGINAL WAY

CHESTNUT STREET

OVERPASS

AAA BUILDING
FFE=12.03

P.O.I. #1

P.O.I. #2

P.O.I. #3

TOTAL SITE AREA
117,464 S.F.
2.7 Ac.

PROPOSED PROPERTY LINE

TBM
PK NAIL IN
UP #12
EL=10.62

TBM
NORTHERN MOST
BONNET BOLT
EL=12.22

GRANITE
MON FOUND

STATE OF MAINE
WILLIAM C. HASKELL
NO. 8518
REGISTERED PROFESSIONAL ENGINEER

Rev.	Date	Revision
–	–	–

Issued For	Date	By
–	–	–

Design: CAP	Draft: GJL	Date: July 06
Checked: WCH	Scale: 1"=30'	Job No.: 1410
File Name: 1410_WS-PRE.dwg		

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PO Box 1237
15 Shaker Road
Gray, ME 04039
Traffic and Civil Engineering Services
207-657-6910
FAX: 207-657-6912
E-Mail: mailbox@gorrillpalmer.com

Drawing Name:	Pre-Development Watershed Map
Project:	84 MARGINAL WAY
Client:	Capital, LLC 50 Portland Pier, Suite 400, Portland, Maine 04101

Drawing No. 1

A-13

NOTES:

1. EXISTING SOILS ARE CLASSIFIED AS CUT AND FILL LANDS IN THE SCS MEDIUM INTENSITY SOILS SURVEY FOR CUMBERLAND COUNTY. FOR THE PURPOSES OF STORMWATER MODELING, ALL SOILS WERE ASSUMED TO BE HYDROLOGIC SOILS GROUP D.

2. WATERSHED SUBCATCHMENT TIME-OF-CONCENTRATION (Tc) PATHS ARE SHOWN FOR INFORMATIONAL PURPOSES. TIME OF CONCENTRATIONS WERE CALCULATED BASED ON TR-55 METHODOLOGY AND ALL WERE LESS THAN 5 MINUTES, THEREFORE, TIME OF CONCENTRATIONS FOR ALL SUBCATCHMENTS HAVE BEEN ASSUMED TO BE FIVE (5) MINUTES.

LEGEND

- 4 — SUBCATCHMENT AREA
- P — POND
- D — WATERSHED BOUNDARY
- SF — SHEET FLOW
- SCF — SHALLOW CONCENTRATED FLOW
- PF — PIPE FLOW
- P.O.I. — POINT OF INTEREST
- D SOILS

N/F STATE OF MAINE

N/F ATLANTIC BANSHIE SQUARE, LLC TAX MAP 34A BLOCK A LOTS 2 & 4 B.16883 P.287

P.O.I. #3

P.O.I. #4

P.O.I. #2

P.O.I. #1

SIGHT DISTANCE LOOKING LEFT

SIGHT DISTANCE LOOKING RIGHT > 1,000'

SIGHT DISTANCE LOOKING LEFT > 1,000'

MARGINAL WAY
35 MPH

AREA CONVEYED TO STATE

CITY OF PORTLAND TAX MAP 442 BLOCK A LOT 1

2-1 2-2 2-3 2-4 2-5

WILLIAM C. HASKELL NO. 8518 REGISTERED PROFESSIONAL ENGINEER 7/23/08

1 inch = 30 ft.

Rev.	Date	Revision
–	–	–

Issued For	Date	By
–	–	–

Design: CAP	Draft: GJL	Date: JULY 08
Checked: WCH	Scale: 1"=30'	Job No.: 1410
File Name: 1410_WS-POST.dwg		

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Traffic and Civil Engineering Services
207-657-6910
FAX: 207-657-6912
E-Mail: mailbox@gorrillpalmer.com

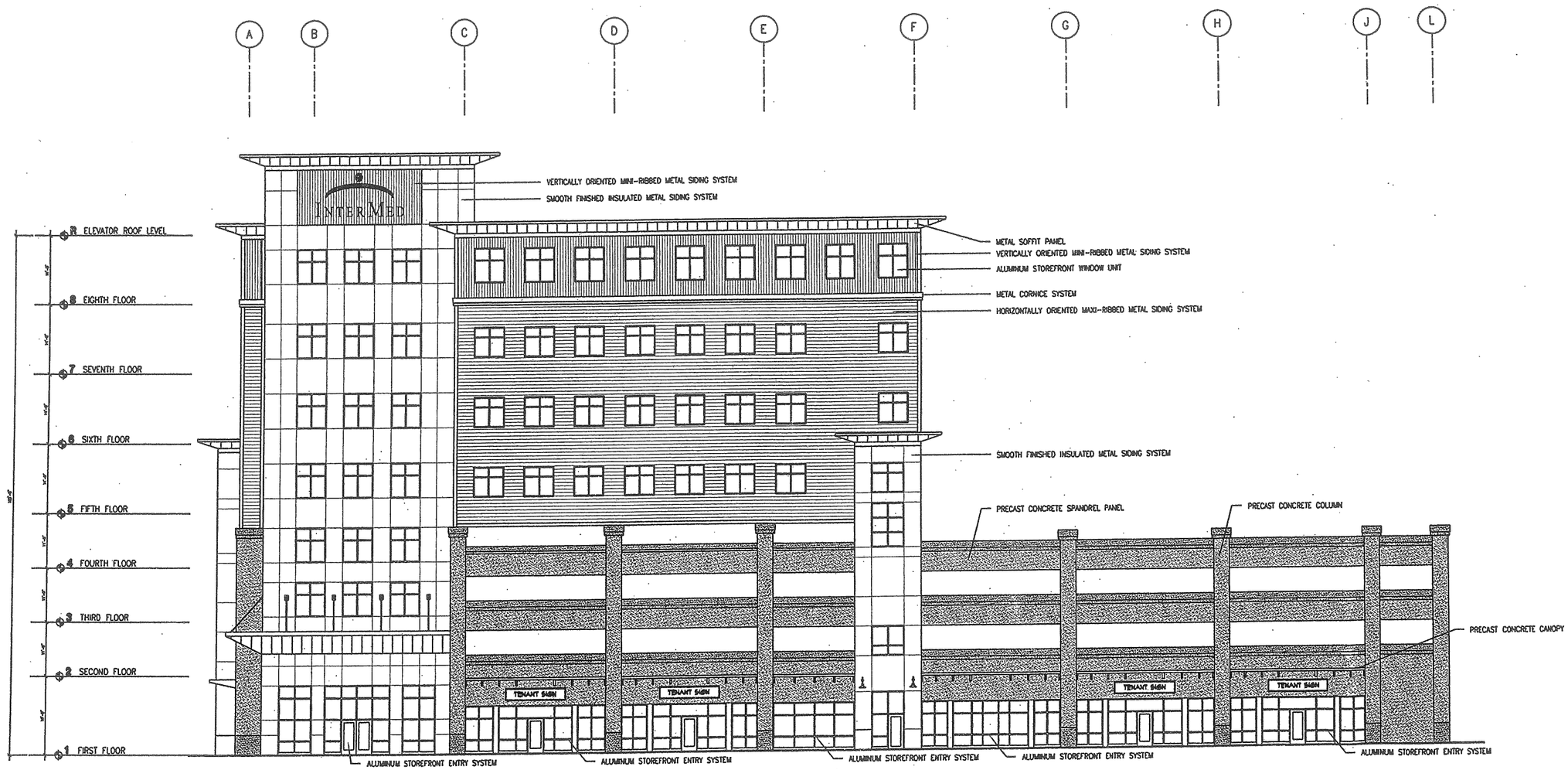
Drawing Name: Post-Development Watershed Map

Project: 84 MARGINAL WAY

Client: Capital, LLC
50 Portland Pier, Suite 400, Portland, Maine 04101

Drawing No. 2

ATTACHMENT B-1



SOUTH - MARGINAL WAY ELEVATION

© CWS Architects - 6/20/06

PRELIMINARY - NOT FOR CONSTRUCTION

A SOUTH ELEVATION - MARGINAL WAY

SCALE: 3/32" = 1'-0"

REFERENCED FROM:

CWS Architects
454 Cumberland Avenue
Portland, ME 04101
Phone: (207) 774-4441
Fax: (207) 774-4016
www.CWSarch.com

PROPOSED OFFICE BUILDING AND PARKING GARAGE
MARGINAL WAY
PORTLAND, MAINE
04101

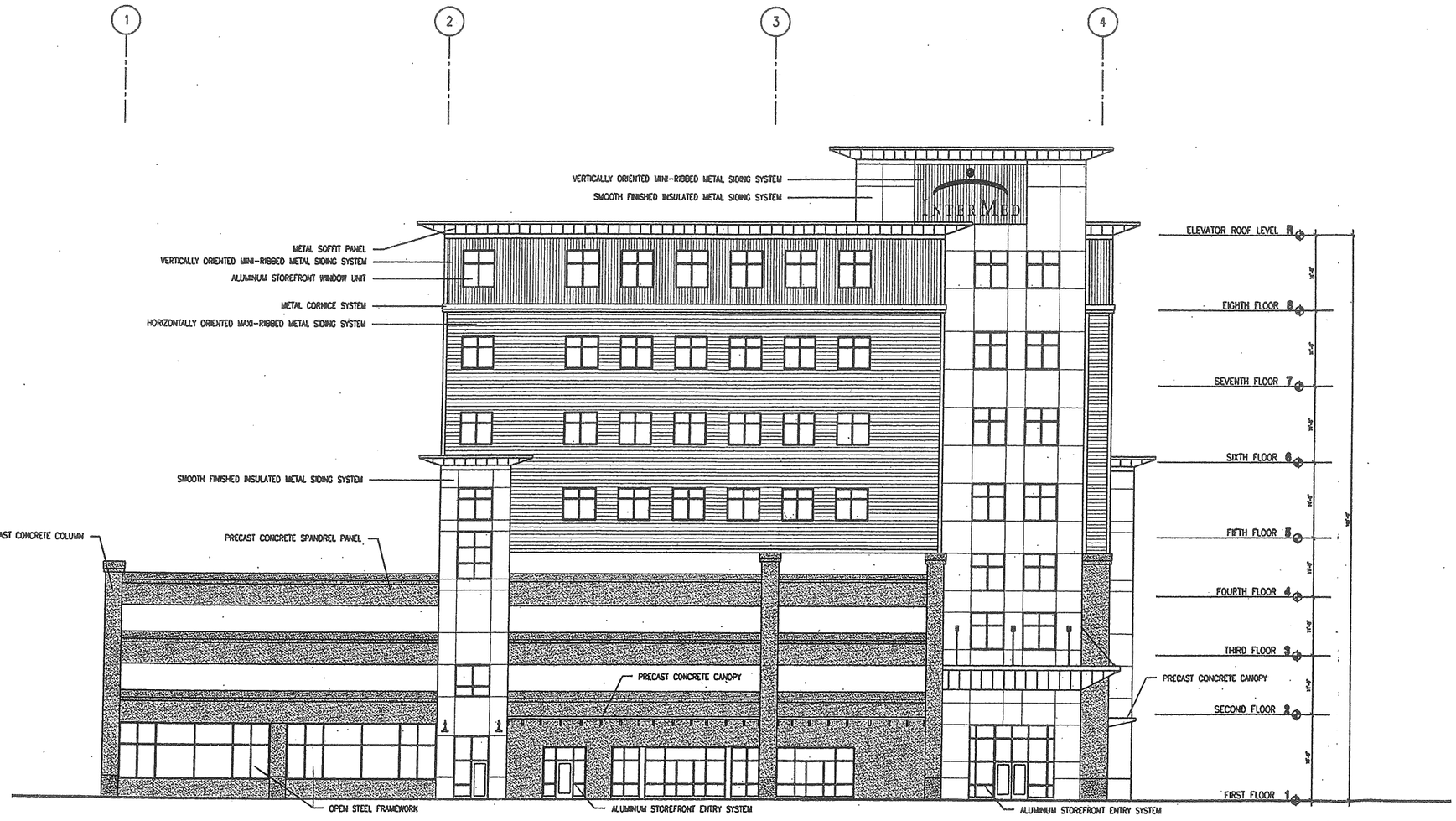
Owner:
CAPITAL LLC
50 PORTLAND PIER
SUITE 400
PORTLAND, MAINE 04101
(207) 828-1080
(207) 828-1048

REVISIONS:
Description:
Date:

Drawing Title:
EXTERIOR ELEVATION

Scale: 3/32"=1'-0"
Date: 1/25/06
CWS Proj. No.: 05424.1mj

Drawing Number:
A3.1



WEST - PREBLE STREET ELEVATION

© CWS Architects - 6/20/06

A WEST ELEVATION - PREBLE STREET

REFERENCED FROM:

SCALE: 3/32" = 1'-0"

PRELIMINARY - NOT FOR CONSTRUCTION

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454 Cumberland Avenue
Portland, ME 04101
Phone: (207) 774-4441
Fax: (207) 774-4016
www.CWSarch.com

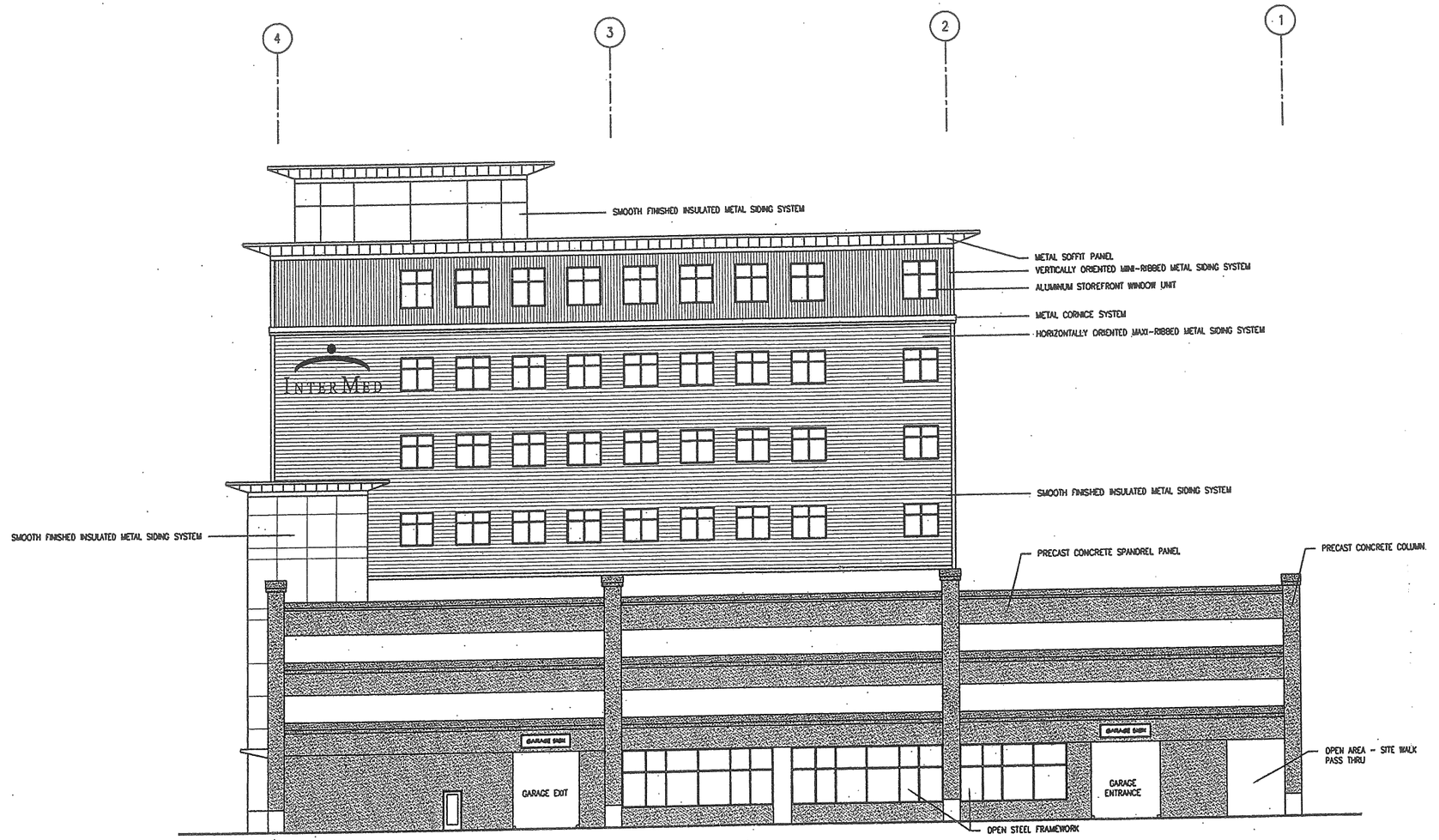
PROPOSED OFFICE BUILDING AND PARKING GARAGE
MARGINAL WAY
PORTLAND, MAINE
04101

Owner: CAPITAL LLC
50 PORTLAND PIER
SUITE 100
PORTLAND, MAINE 04101
(207) 828-1080
(207) 828-1048

REVISIONS:
Description: Date:

Drawing Title: EXTERIOR ELEVATION
Scale: 3/32"=1'-0"
Date: 7/25/06
CWS Proj. No.: 05424.1m

Drawing Number: A3.3



EAST - ELEVATION

© CWS Architects - 6/20/06

PRELIMINARY - NOT FOR CONSTRUCTION

A EAST ELEVATION

REFERENCED FROM:

SCALE: 3/32" = 1'-0"

CWS Architects
454 Cumberland Avenue
Portland, ME 04101
Phone: (207) 774-4441
Fax: (207) 774-4016
www.CWSarch.com

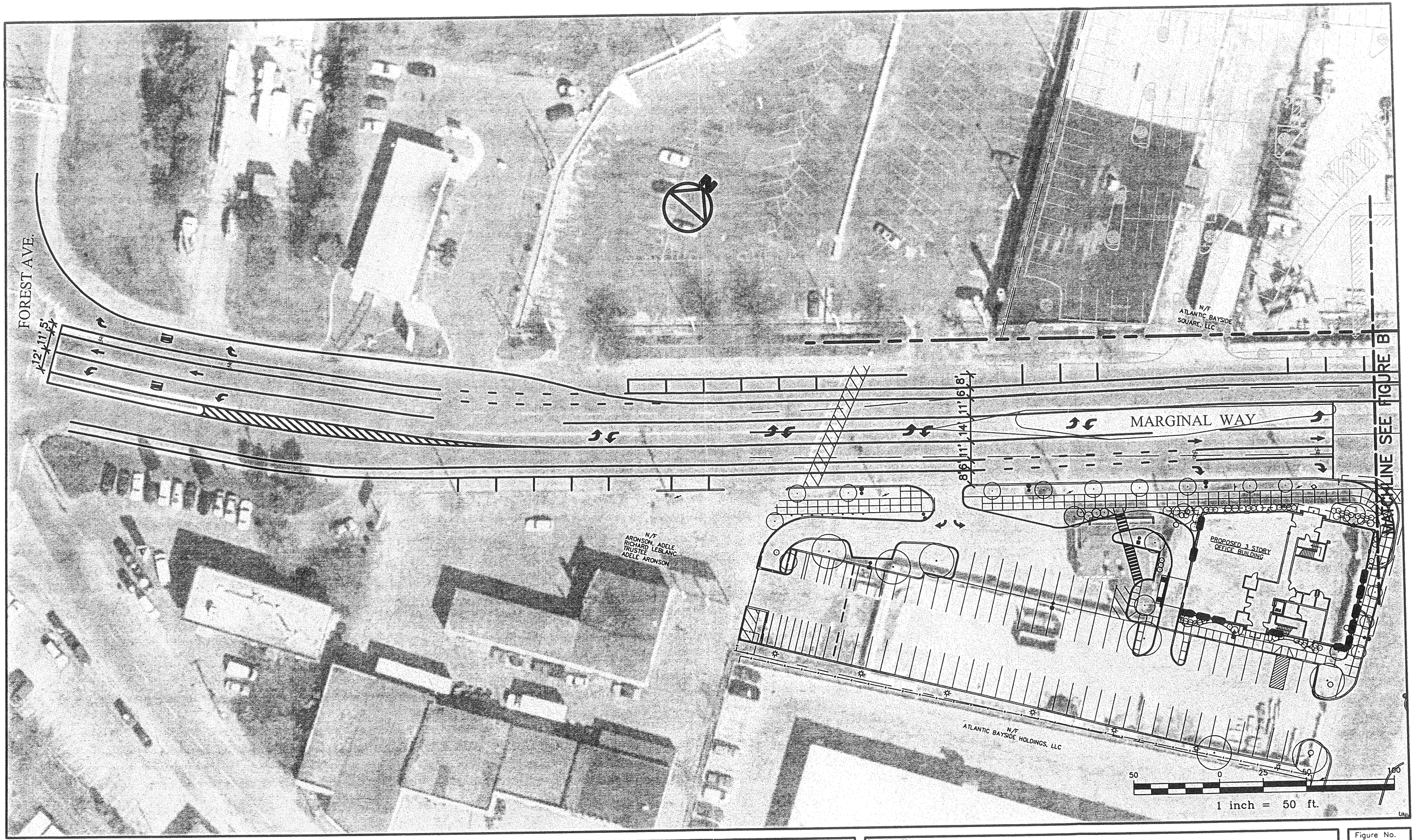
PROPOSED OFFICE BUILDING AND PARKING GARAGE
MARGINAL WAY
PORTLAND, MAINE
04101

Owner:
CAPITAL LLC
50 PORTLAND PIER
SUITE 100
PORTLAND, MAINE 04101
(207) 828-1080
(207) 828-1046

REVISIONS:
Description: Date:

Drawing Title: EXTERIOR ELEVATION
Scale: 3/32"=1'-0"
Date: 7/25/06
CWS Proj. No.: 05424.1m1

Drawing Number:
A3.4



Rev.	Date	Revision
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Design: JJB	Date: AUG 2006
Draft: DB	Job No.: 1361
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File Name: 1361-01_pbase.dwg	

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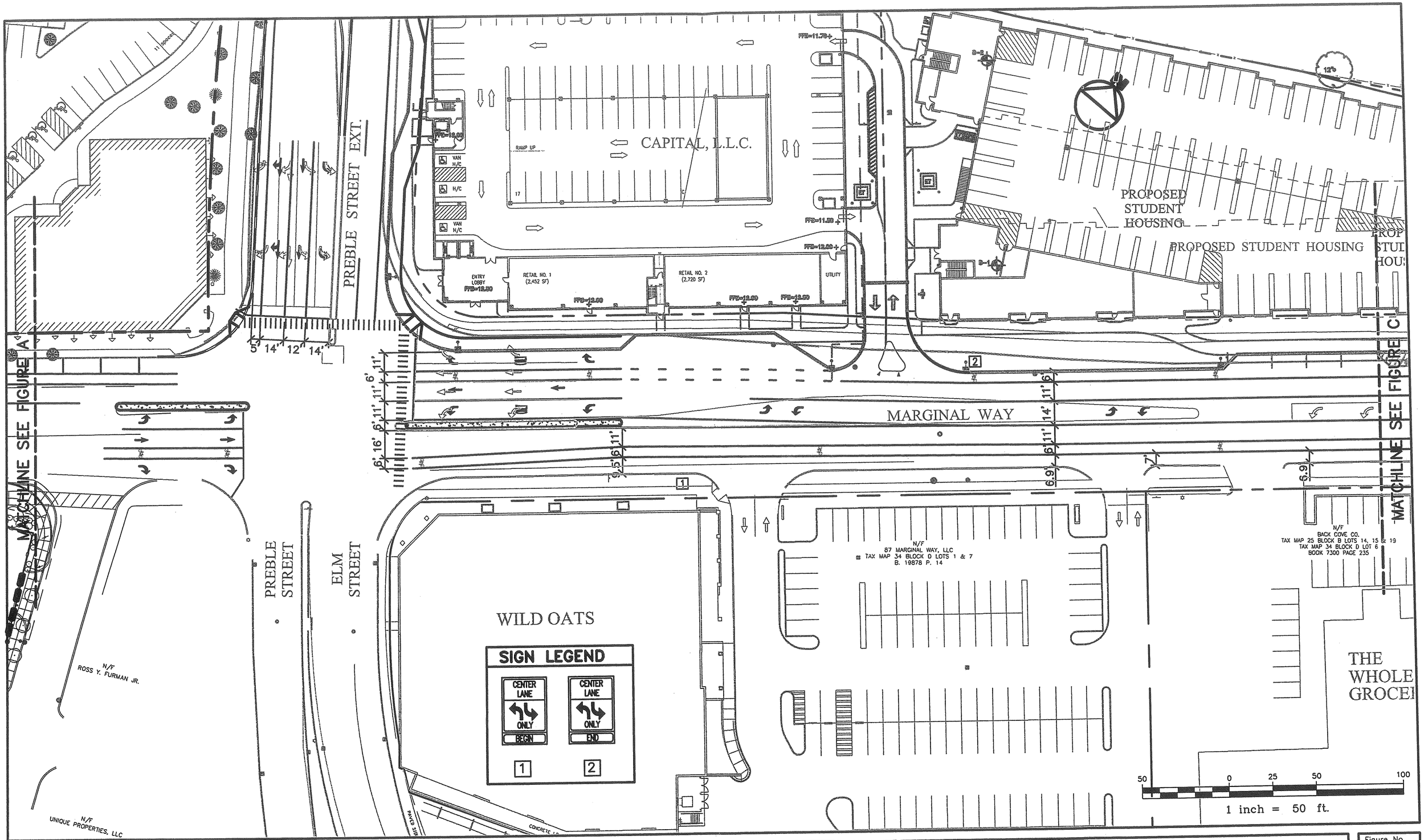
Traffic and Civil Engineering Services
PO Box 1237
15 Shaker Road
Gray, ME 04039
207-657-6910
FAX: 207-657-6912
E-Mail: mailbox@gorrillpalmer.com

Drawing Name: **Conceptual Roadway Improvements Plan**

Project: **MEDICAL OFFICE BUILDING – 84 MARGINAL WAY PORTLAND, MAINE**

Figure No. **A**



Rev.	Date	Revision
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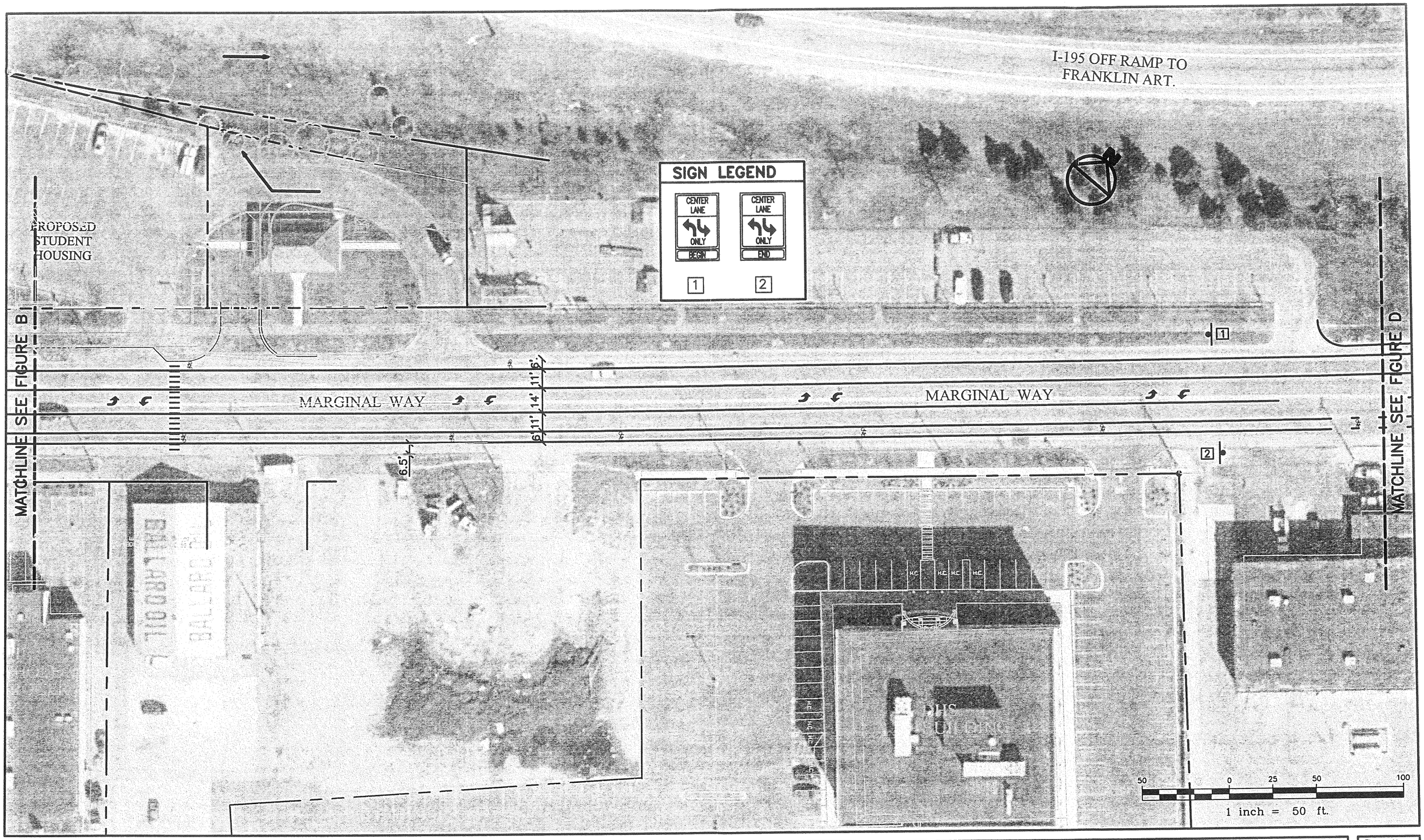
Drawing Name: **Conceptual Roadway Improvements Plan**

Project: **MEDICAL OFFICE BUILDING – 84 MARGINAL WAY PORTLAND, MAINE**

Figure No. *B*



Rev.	Date	Revision
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Design:	JJB	Date:	AUG 2006
Draft:	DB	Job No.:	1361
Checked:	PAH	Scale:	1"=50'
File Name:	1361-01_pbase.dwg		

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FAX: 207-657-6912
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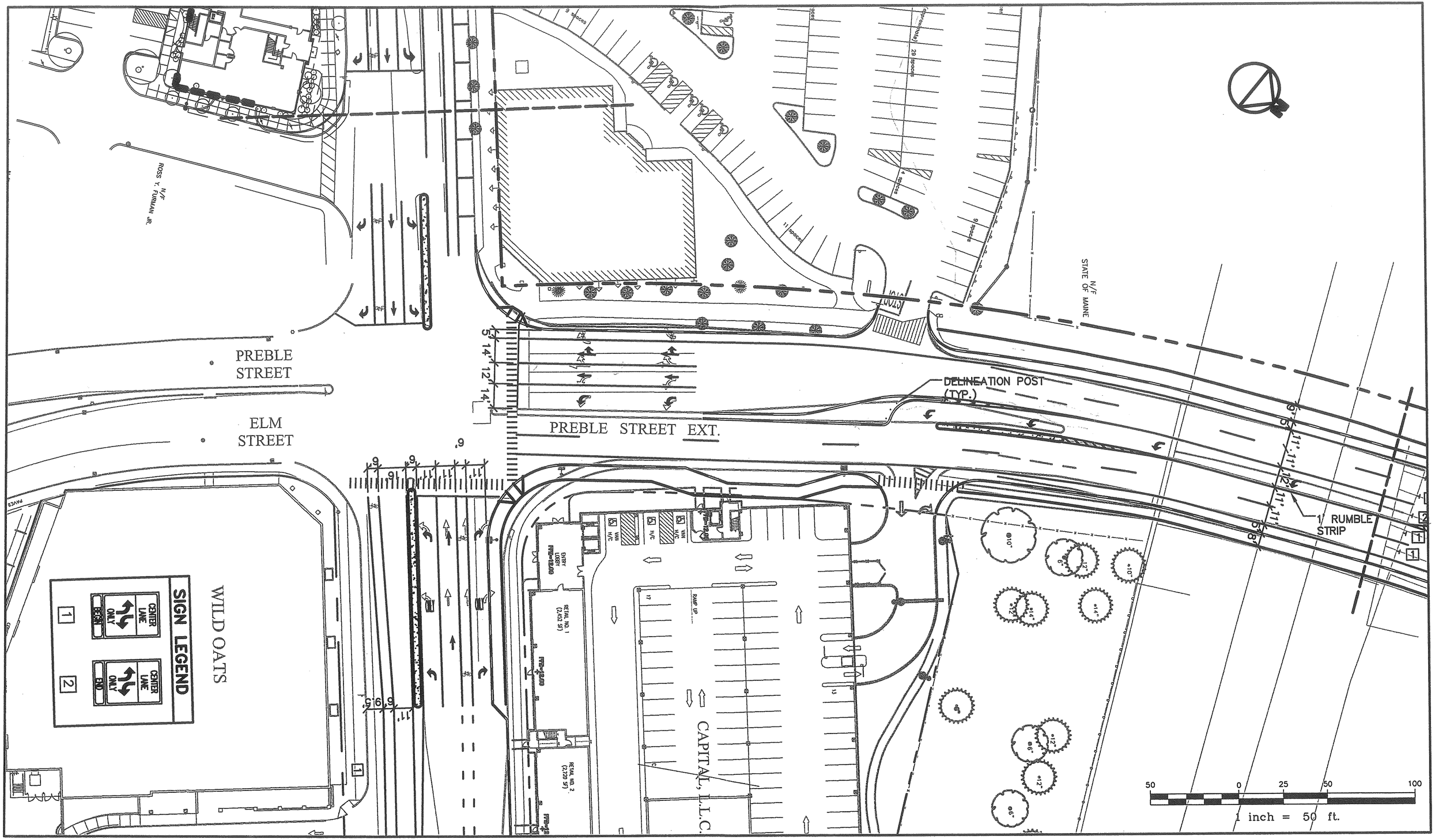
Drawing Name: **Conceptual Roadway Improvements Plan**

Project: **MEDICAL OFFICE BUILDING – 84 MARGINAL WAY
PORTLAND, MAINE**

Figure No. **C**



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Design: JJB	Date: AUG 2006
Draft: DB	Job No.: 1361
Checked: PAH	Scale: 1"=50'
File Name: 1361-pbase.dwg	

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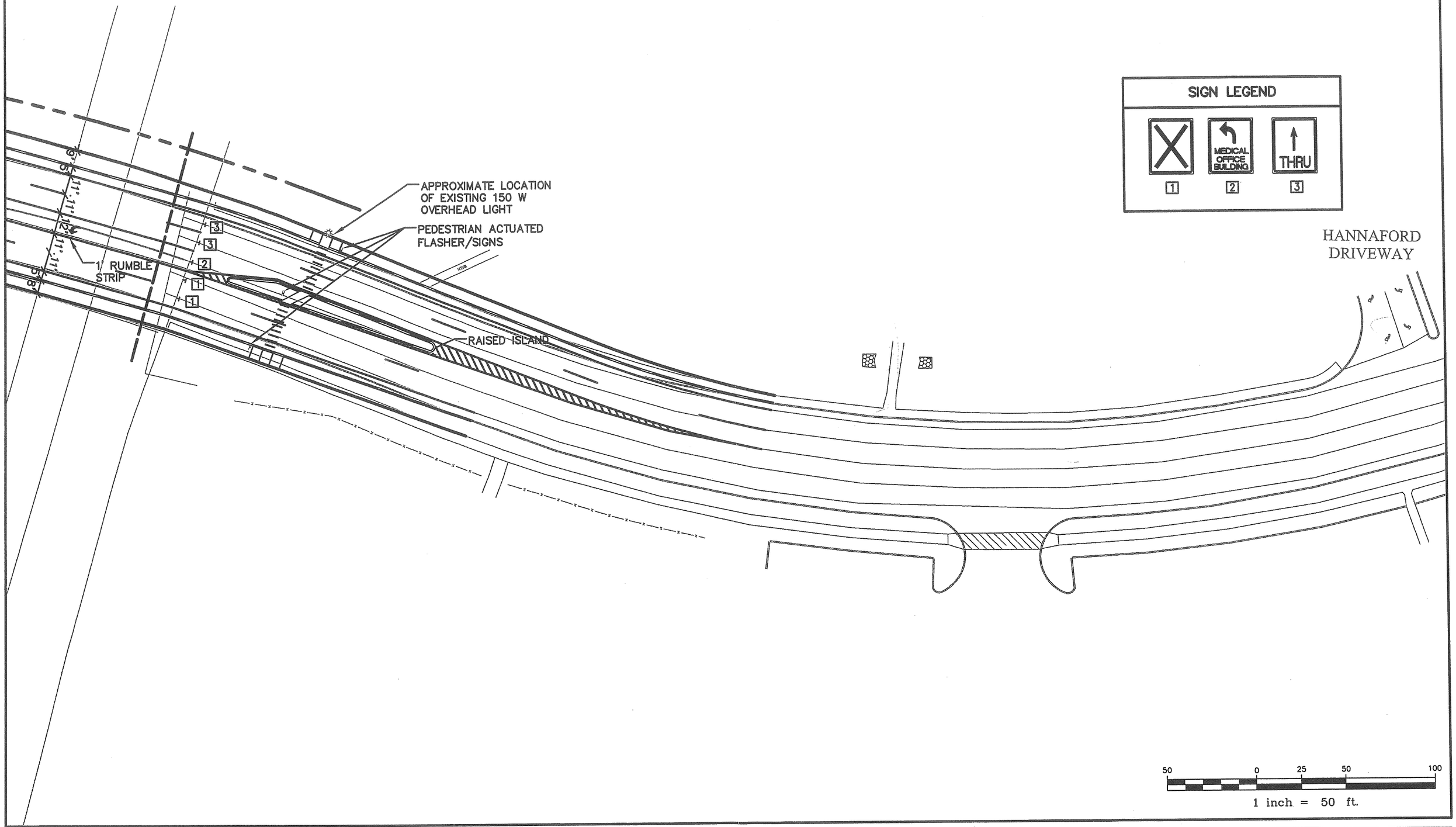
207-657-6910
FAX: 207-657-6912
E-Mail: mailbox@gorrillpalmer.com

Drawing Name: **Conceptual Roadway Improvements Plan**

Project: **BAYSIDE VILLAGE–A STUDENT HOUSING COMPLEX**
PORTLAND, MAINE

Figure No. *D*



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15 Shaker Road
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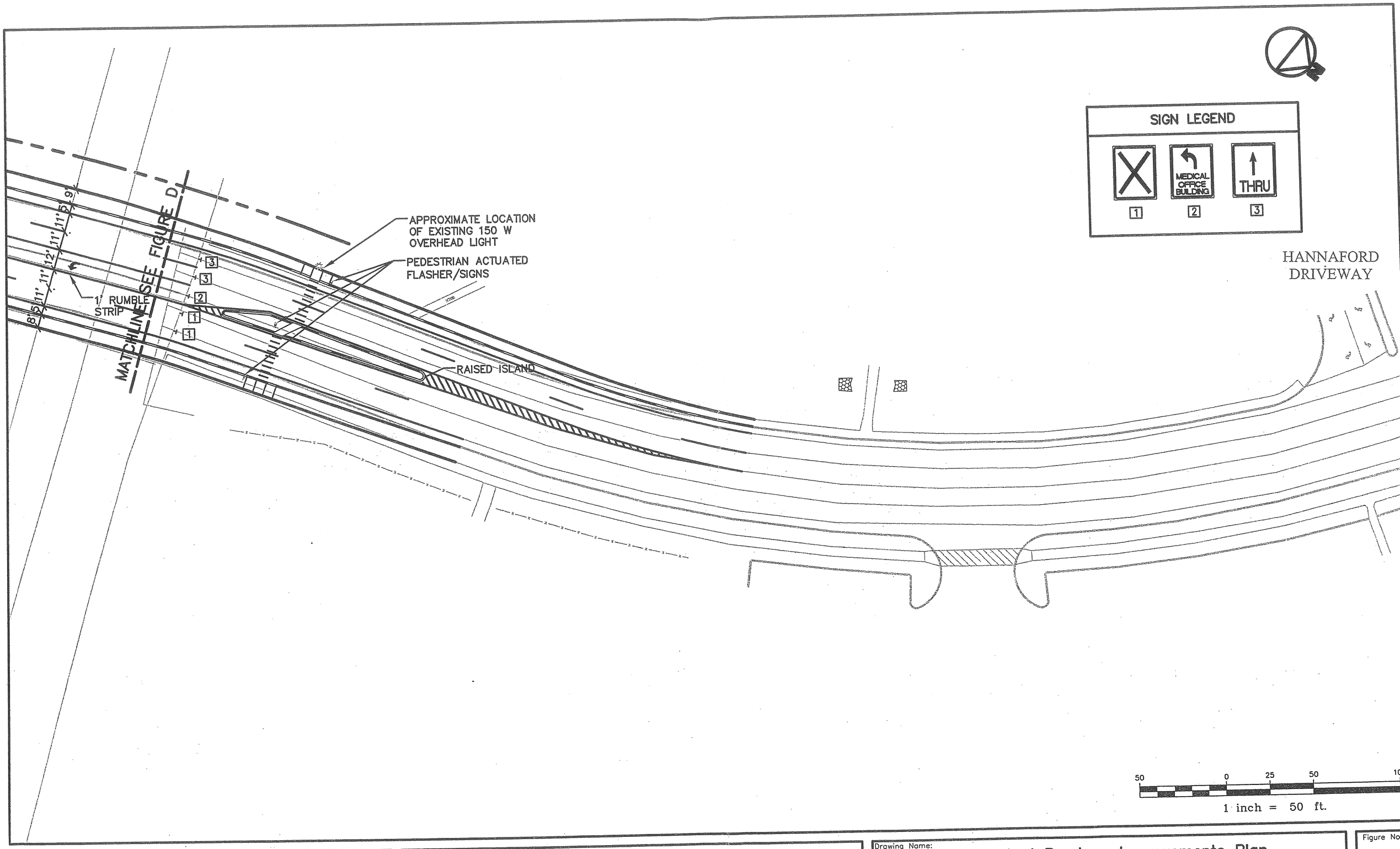
207-657-6910
FAX: 207-657-6912
E-Mail: mailbox@gorrillpalmer.com

Drawing Name: **Conceptual Roadway Improvements Plan**

Project: **BAYSIDE VILLAGE-A STUDENT HOUSING COMPLEX PORTLAND, MAINE**

Figure No. *E*



Rev.	Date	Revision
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Design: JJB	Date: AUG 2006
Draft: DB	Job No.: 1361
Checked: PAH	Scale: 1"=50'
File Name: 1361-01_pbase.dwg	

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Gray, ME 04039
207-657-6910
FAX: 207-657-6912
E-Mail: mailbox@gorrillpalmer.com

Drawing Name: **Conceptual Roadway Improvements Plan**

Project: **MEDICAL OFFICE BUILDING – 84 MARGINAL WAY PORTLAND, MAINE**

Figure No.
F

AA-4

NOTES:

1. REFER TO SHEET NO. 11 EROSION & SEDIMENTATION CONTROL DETAILS FOR ADDITIONAL INFORMATION.

2. CONTRACTOR SHALL SWEEP AND MAINTAIN MARGINAL WAY AND PREBLE STREET EXTENSION FREE OF DUST AND DEBRIS AS REQUIRED DURING CONSTRUCTION.

3. CONTRACTOR SHALL INSTALL & MAINTAIN A STABILIZED CONSTRUCTION ENTRANCE FROM MARGINAL WAY ONTO THE SITE DURING CONSTRUCTION WHEN NEW ACCESS IS CREATED TO PREVENT OFFTRACKING OF DEBRIS AND DIRT IS OCCURING AT THE EXISTING SITE ENTRANCE.

INTERSTATE 295 - SOUTHBOUND

INTERSTATE 295 - NORTHBOUND

N/F STATE OF MAINE

APPROXIMATE LOCATION

INSTALL EROSION CONTROL MESH FROM HIGH POINT OF CONSTRUCTED DITCH TO CATCH BASIN INLET GRATE. MESH SHALL BE INSTALLED WITH A BOTTOM WIDTH OF FOUR (4) FEET AND SHALL EXTEND UP DITCH WALL SLOPES AT LEAST TWO (2) FEET ON EACH SIDE

STONE CHECK DAM (TYP)

EXISTING FIELD INLET TO BE MAINTAINED. RIP-RAP INLET APRON SHALL BE CONSTRUCTED

N/F STATE OF MAINE

EASEMENT BOUNDARY

PREBLE STREET EXT.

84 MARGINAL WAY

HP 12.00 (UNDER RAMP)

BAYSIDE VILLAGE
A STUDENT HOUSING COMPLEX

MAINTAIN INLET PROTECTION ON EXISTING CATCH BASINS UNTIL STRUCTURE IS DEMOLISHED

SEE NOTE 3

SILT FENCE OR WOOD WASTE COMPOST/BARK FILTER BERM (TYP)

DROP INVERT PROPOSED

SMH #1
RIM=10.00
INV. IN=6.00
CL. INV.=-5.51

MARGINAL WAY

IRON PIN FOUND

REBAR FOUND

IRON PIN SET

CONCRETE MON FOUND

GRANITE MON FOUND

N/F
87 MARGINAL WAY, LLC
TAX MAP 34 BLOCK D LOTS 1 & 7
B. 19878 P. 10

N/F
BACK COVE CO.
TAX MAP 25 BLOCK B LOTS 14, 15 & 19
TAX MAP 34 BLOCK D LOT 8
BOOK 7300 PAGE 235

N/F
FINE LINER CO.
TAX MAP 35-BLOCK A LOT 5
BOOK 22284 PAGE 59

N/F
CITY OF PORTLAND
TAX MAP 442
BLOCK A LOT 1

AREA CONVEYED I

CHESTNUT STREET

PREBLE STREET

ELM STREET

STATE OF MAINE
WILLIAM C. HASKELL
NO. 8518
REGISTERED PROFESSIONAL ENGINEER

Prepared For:
Applicant:
CAPITAL, LLC
50 Portland Pier, Suite 400
Portland, Maine 04101

Prepared By:
MITCHELL & ASSOCIATES
Landscape Architects
The Staples School
70 Center Street
Portland, Maine 04101
Tel: (207) 774-4427

Gorrill-Palmer Consulting Engineers, Inc.
Traffic and Civil Engineering Services
15 Shaker Road, Gray, ME 04039 — 207-657-6910 — FAX: 207-657-6912

84 MARGINAL WAY

Portland, Maine

84 Marginal Way

Date:
JULY 25, 2006

Issued For:
PRELIMINARY SITE PLAN REVIEW

Revisions:
Aug. 31, 2006 - Additional Survey Data on Preble Street Extension.
Sept. 12, 2006 - Revised per Staff Comments.

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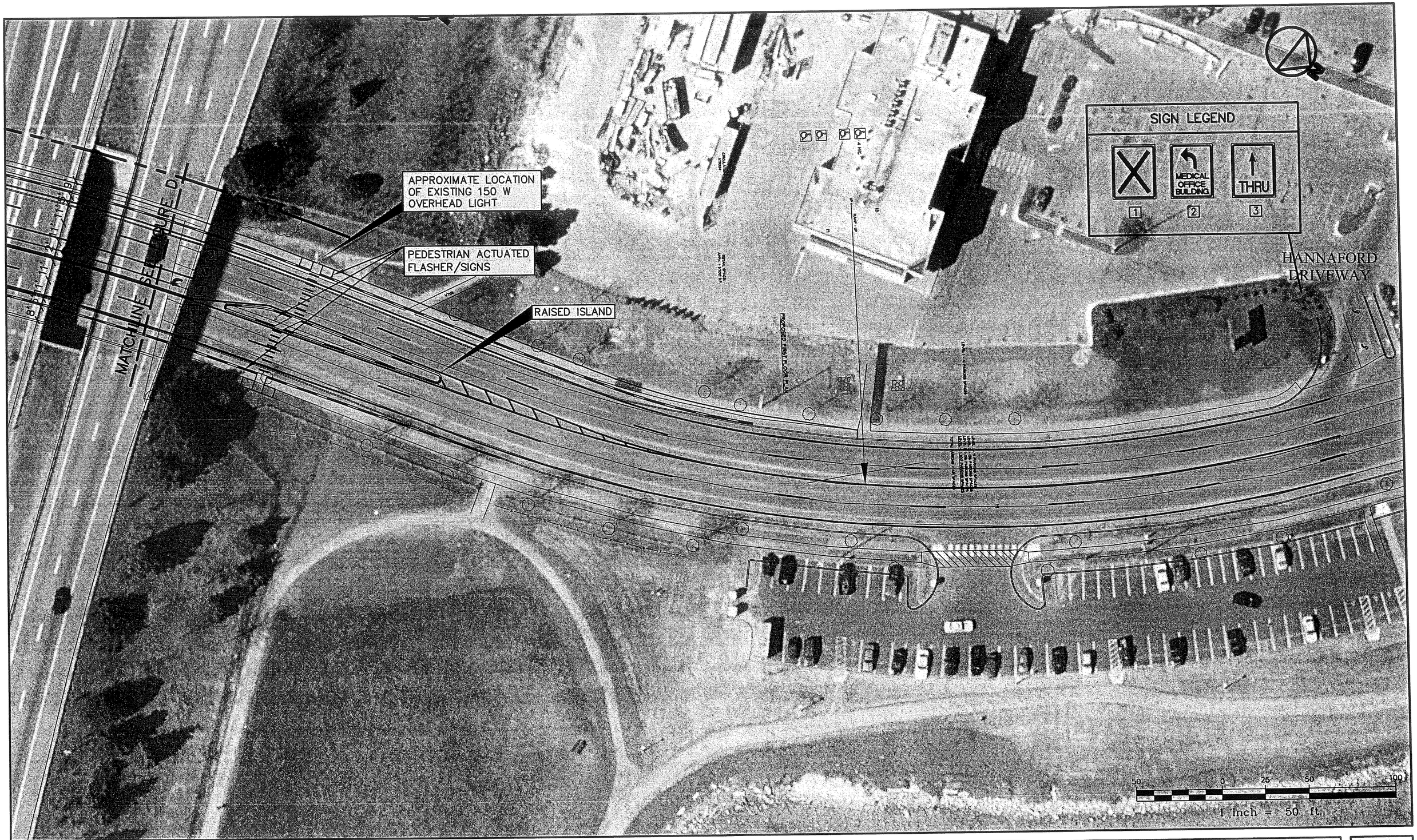
Title:
EROSION AND SEDIMENTATION CONTROL PLAN

Scale: 1"=30'
0 10 20 30 60 ft.

North:

Sheet No.:
5



Rev.	Date	Revision
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Design: JJB	Date: AUG 2006
Draft: ZRJ	Job No.: 1361.01
Checked: PAH	Scale: 1"=50'
File Name: 1361-01_pbase_with BOT1.dwg	

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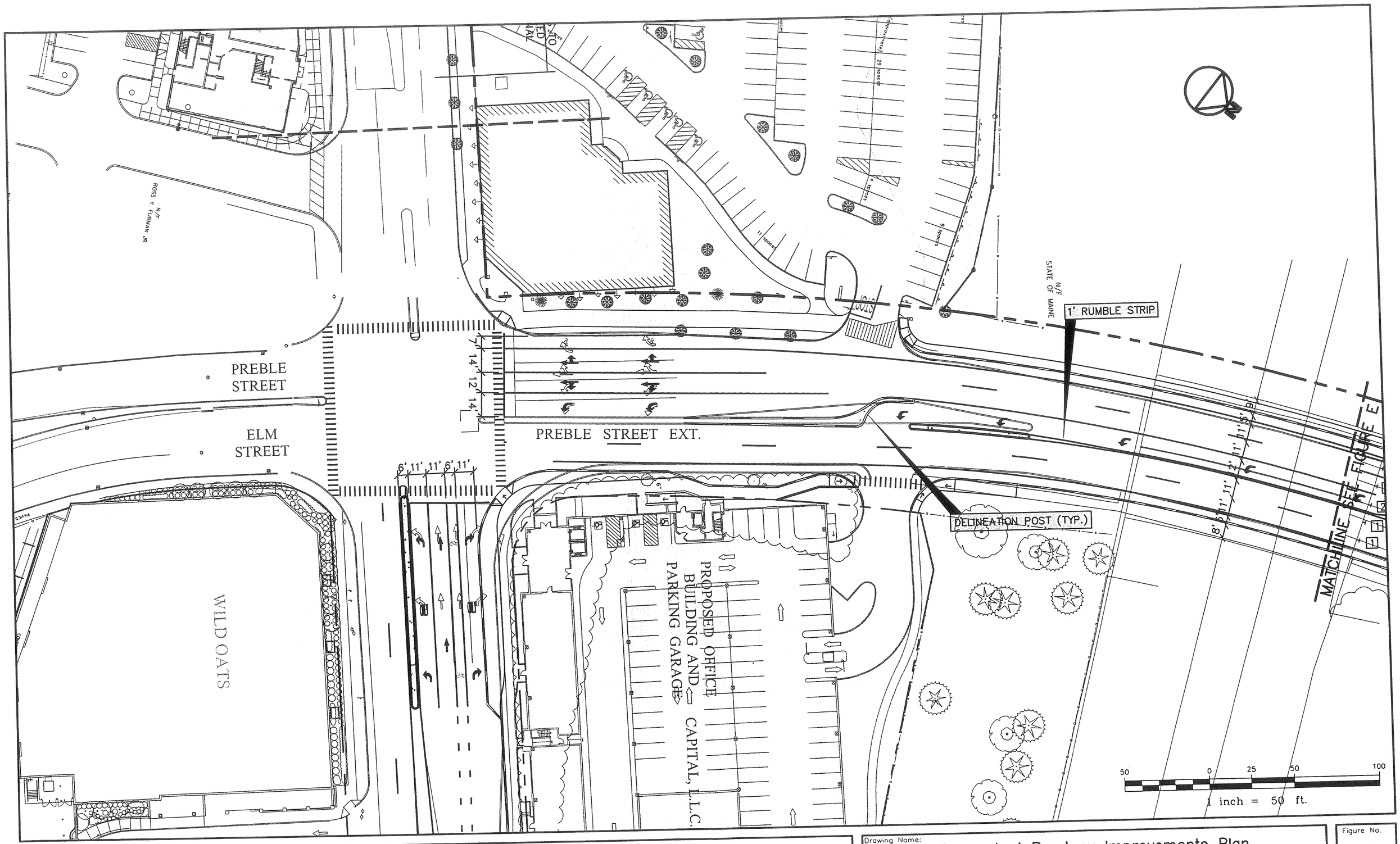
15 Shaker Road
Gray, ME 04039
207-657-6910
FAX: 207-657-6912
E-Mail: mailbox@gorrillpalmer.com

Drawing Name: Conceptual Roadway Improvements Plan

Project: BAYSIDE VILLAGE AND 84 MARGINAL WAY
PORTLAND, MAINE

Figure No. *E*



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E-Mail: mailbox@gorrillpalmer.com

Drawing Name: Conceptual Roadway Improvements Plan

Project: BAYSIDE VILLAGE AND 84 MARGINAL WAY
PORTLAND, MAINE

Figure No. D

Rev.	Date	Revision
-	-	-

Design:	JJB	Date:	AUG 2006
Draft:	ZRJ	Job No.:	1361.01
Checked:	PAH	Scale:	1"=50'
File Name:	1361-01_pbase_with BOT4.dwg		

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207-657-6910
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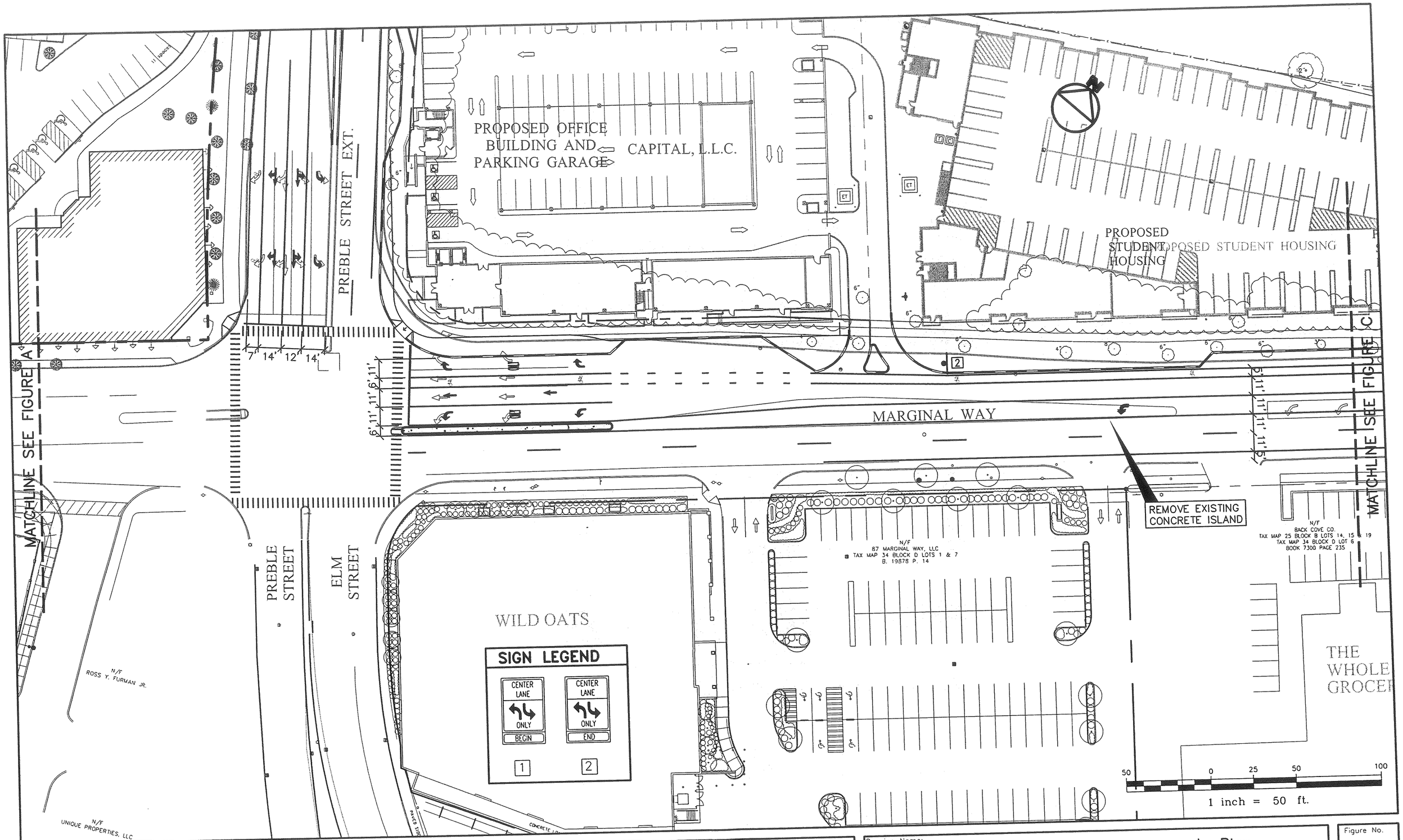
Drawing Name: Conceptual Roadway Improvements Plan

Project: BAYSIDE VILLAGE AND 84 MARGINAL WAY
PORTLAND, MAINE

Figure No. C



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Design: JJB	Date: AUG 2006		
Draft: ZRJ	Job No.: 1361.01		
Checked: PAH	Scale: 1"=50'		
File Name: 1361-01_pbase_with BOT1.dwg			

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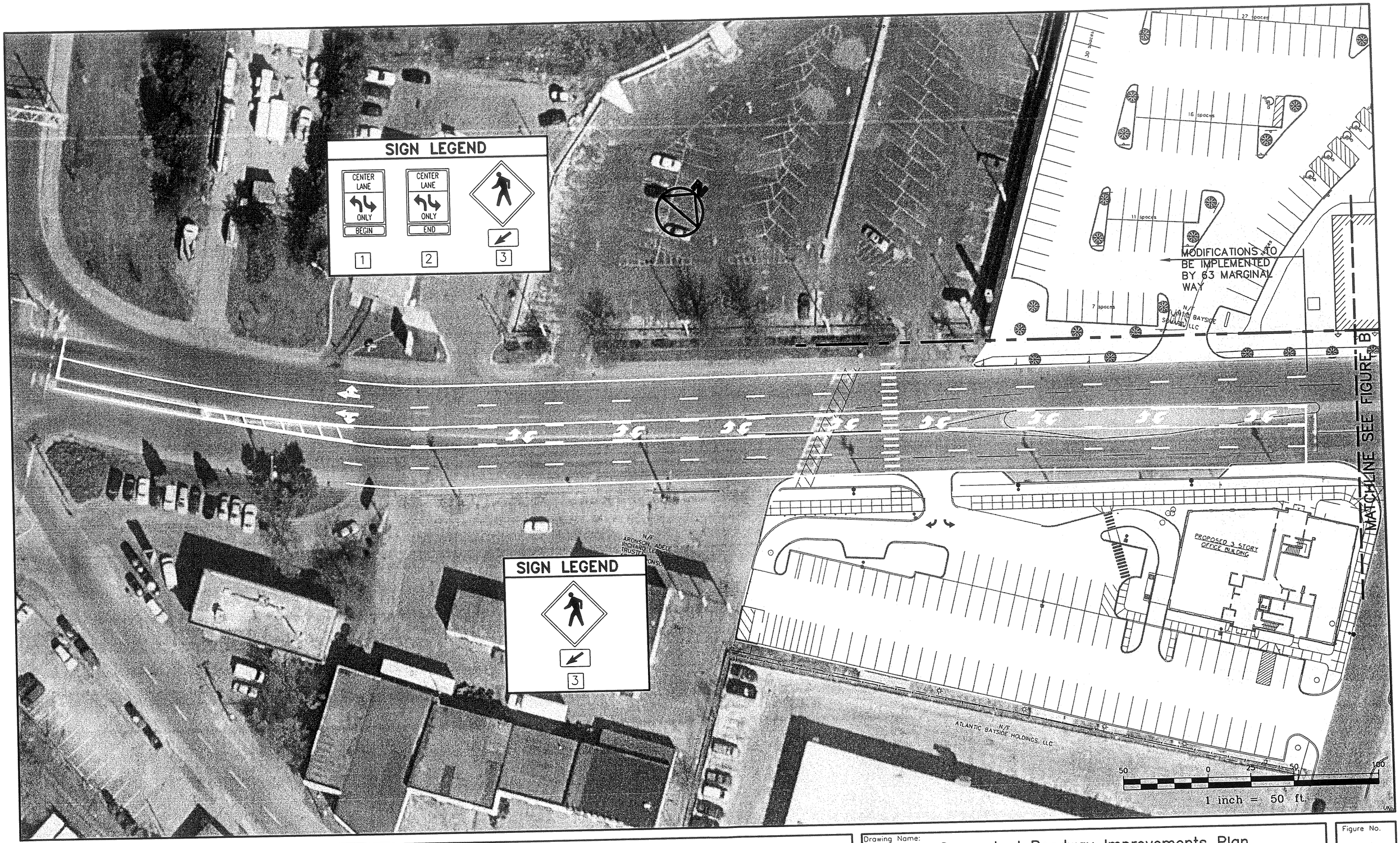
207-657-6910
FAX: 207-657-6912
E-Mail: mailbox@gorrillpalmer.com

Drawing Name: **Conceptual Roadway Improvements Plan**

Project: **BAYSIDE VILLAGE AND 84 MARGINAL WAY PORTLAND, MAINE**

Figure No. *B*



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Design: JJB	Date: AUG 2006
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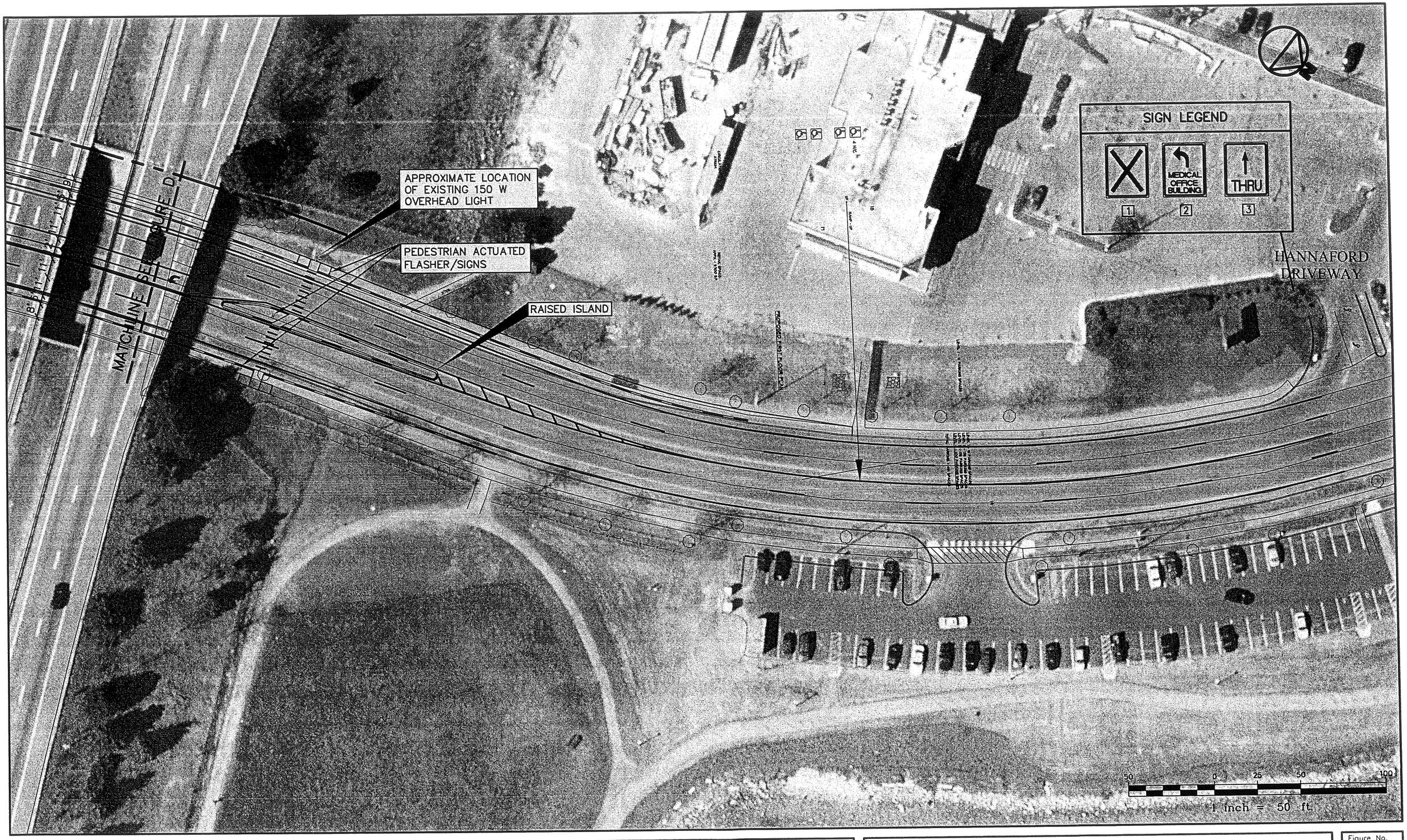
207-657-6910
FAX: 207-657-6912
E-Mail: mailbox@gorrillpalmer.com

Drawing Name: Conceptual Roadway Improvements Plan

Project: BAYSIDE VILLAGE AND 84 MARGINAL WAY
PORTLAND, MAINE

Figure No. *A*



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File Name: 1361-01_pbase_with MO	

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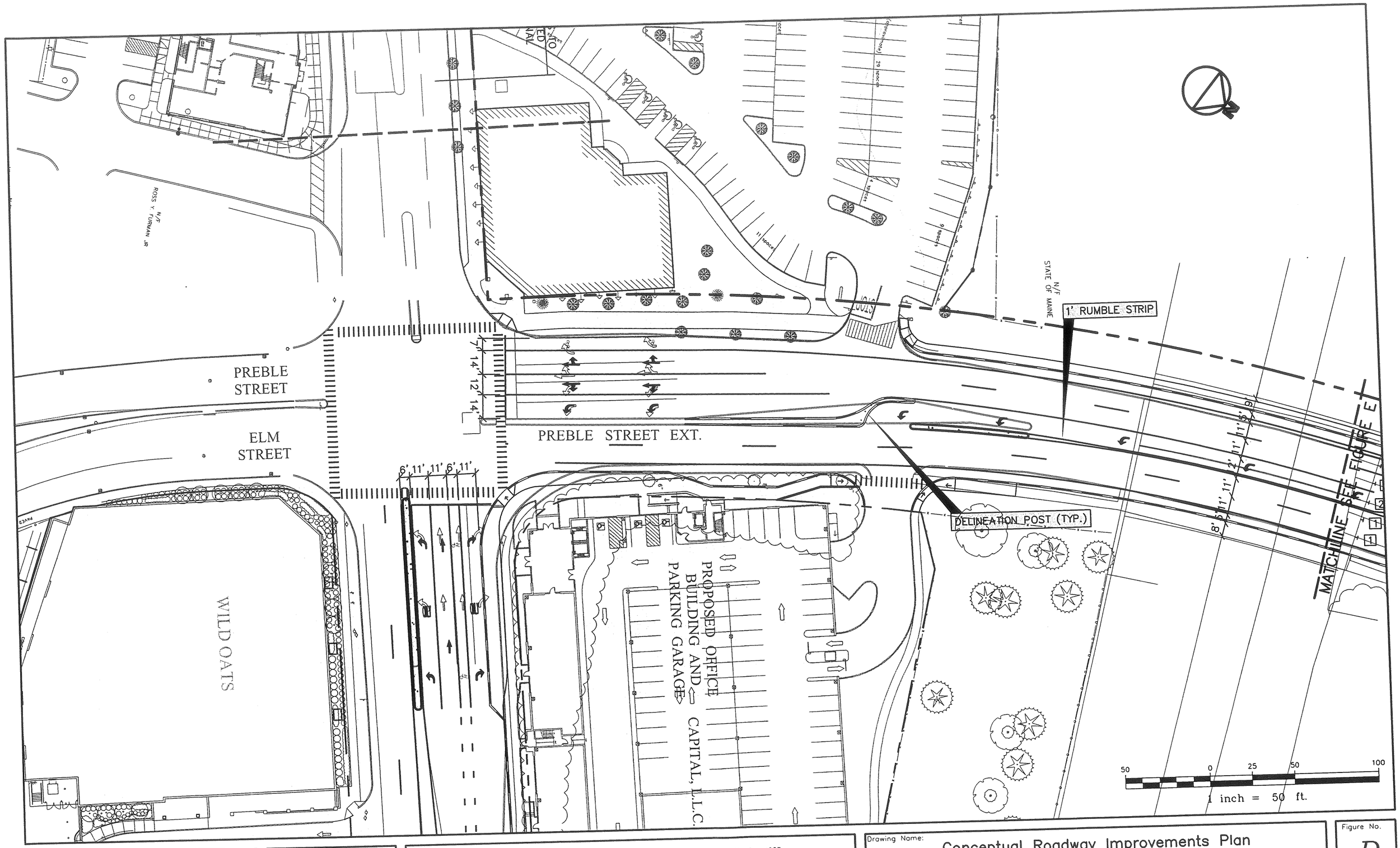
207-657-6910
FAX: 207-657-6912
E-Mail: mailbox@gorrillpalmer.com

Drawing Name: Conceptual Roadway Improvements Plan

Project: MEDICAL OFFICE BUILDING – 84 MARGINAL WAY
PORTLAND, MAINE

Figure No. *E*



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No.	Date	Revision

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Draft: ZRJ/DB	Job No.: 1361.01		
Checked: PAH	Scale: 1"=50'		
File Name: 1361-01_pbase_with MO			

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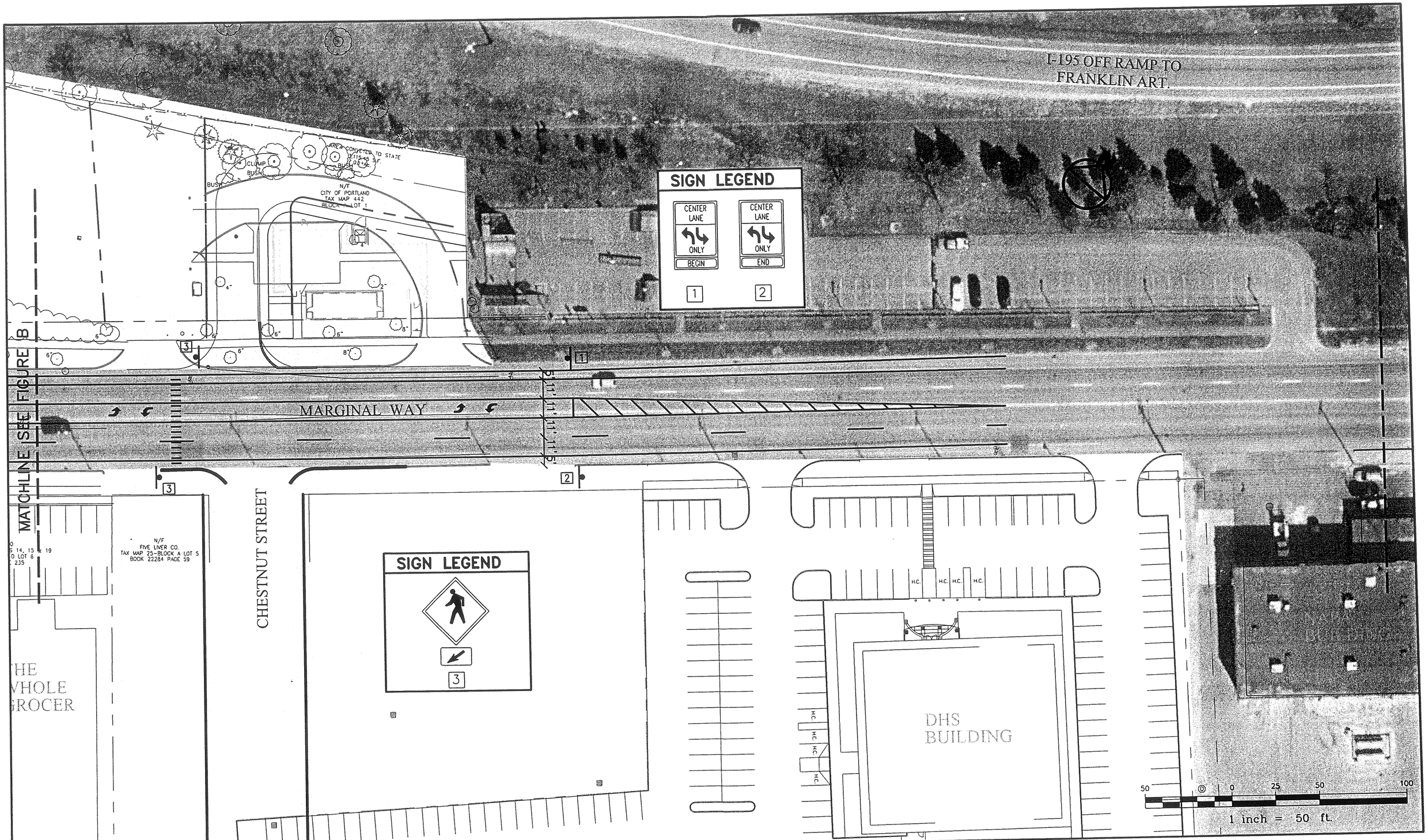
Drawing Name: Conceptual Roadway Improvements Plan

Project: MEDICAL OFFICE BUILDING – 84 MARGINAL WAY
PORTLAND, MAINE

Figure No. D



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Design: JJB	Date: AUG 2006
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Drawing Name: Conceptual Roadway Improvements Plan

Project: MEDICAL OFFICE BUILDING – 84 MARGINAL WAY
PORTLAND, MAINE

Figure No. C

PROPOSED OFFICE BUILDING AND PARKING GARAGE

CAPITAL, L.L.C.

PREBLE STREET EXT.

MARGINAL WAY

MATCHLINE SEE FIGURE A

MATCHLINE SEE FIGURE C

PREBLE STREET

ELM STREET

WILD OATS

REMOVE EXISTING CONCRETE ISLAND

N/F
87 MARGINAL WAY, LLC
TAX MAP 34 BLOCK D LOTS 1 & 7
B. 19878 P. 14

N/F
BACK COVE CO.
TAX MAP 25 BLOCK B LOTS 14, 15 & 19
TAX MAP 34 BLOCK D LOT 6
BOOK 7300 PAGE 235

THE WHOLE GROCE

N/F
ROSS Y. FURMAN JR.

N/F
UNIQUE PROPERTIES, LLC

SIGN LEGEND

CENTER LANE ONLY BEGIN	CENTER LANE ONLY END
1	2

7' 14' 12' 14'

6', 11', 11', 6', 11'

5', 11', 11', 11', 5'

50 0 25 50 100

1 inch = 50 ft.

Rev	Date	Revision
-	-	-

Design: JJB	Date: AUG 2006
Draft: ZRJ/DB	Job No.: 1361.01
Checked: PAH	Scale: 1"=50'
File Name: 1361-01_pbase_with MO	

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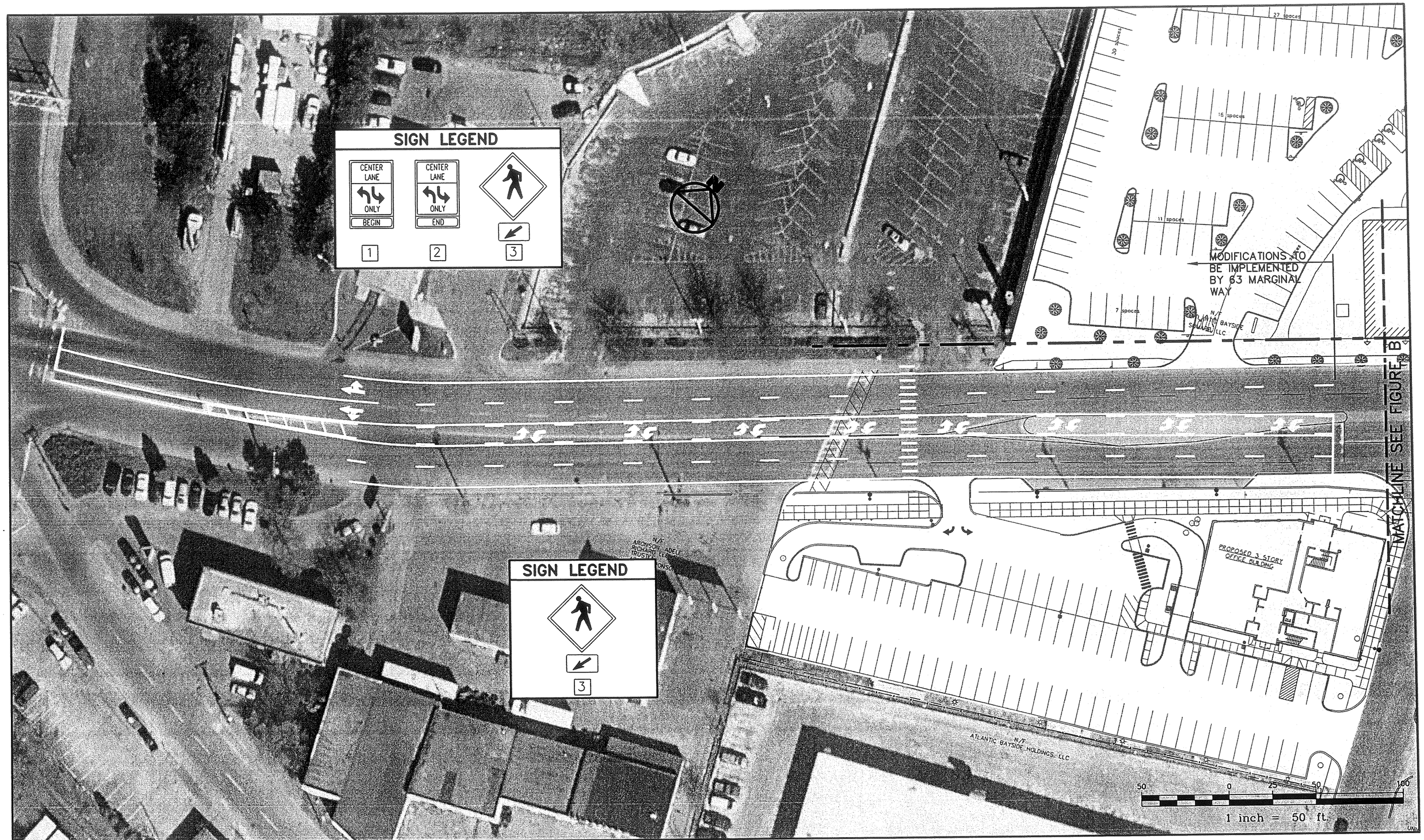
207-657-6910
FAX: 207-657-6912
E-Mail: mailbox@gorrillpalmer.com

Drawing Name: Conceptual Roadway Improvements Plan

Project: MEDICAL OFFICE BUILDING – 84 MARGINAL WAY
PORTLAND, MAINE

Figure No. B



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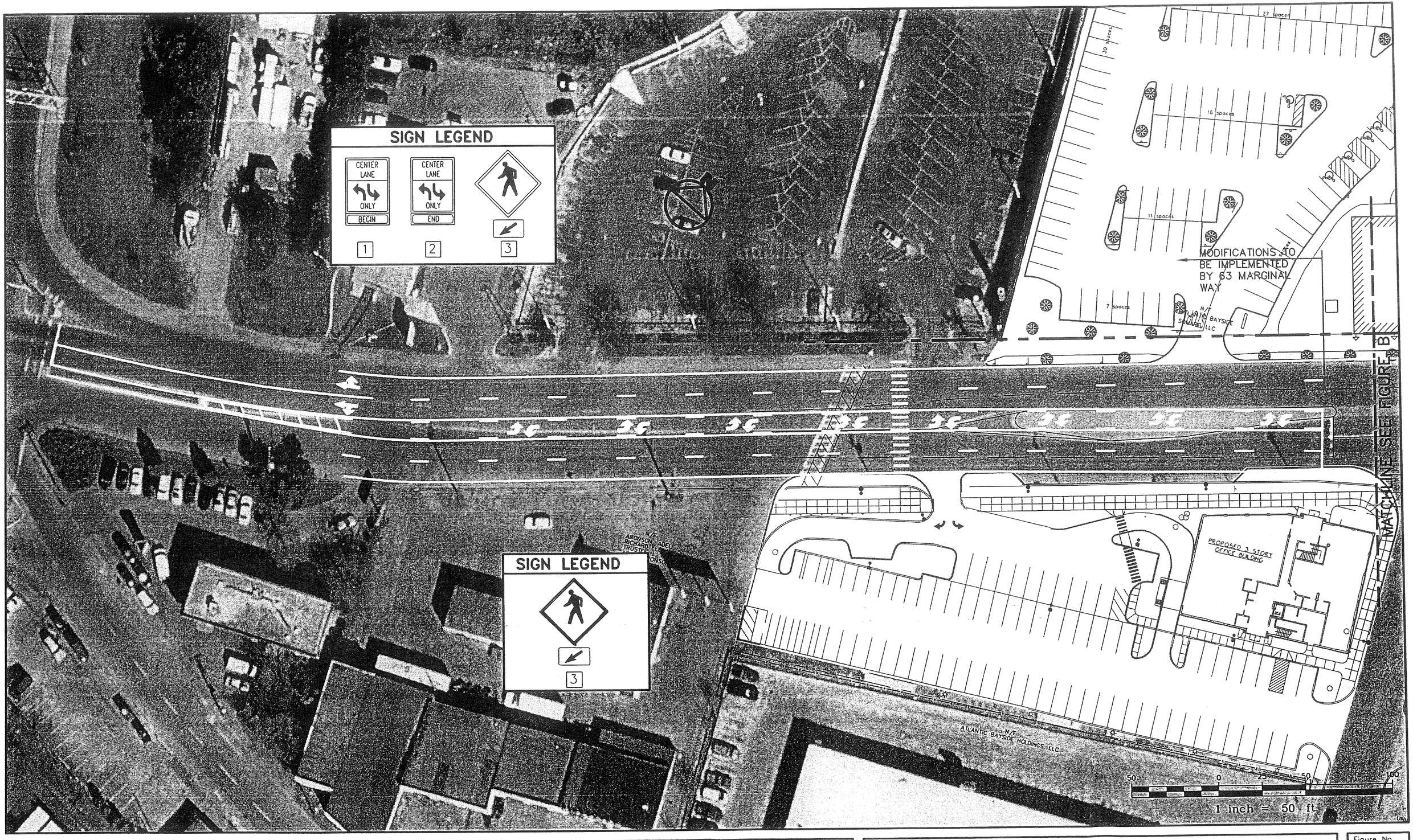
Drawing Name: Conceptual Roadway Improvements Plan

Project: MEDICAL OFFICE BUILDING – 84 MARGINAL WAY
PORTLAND, MAINE

Figure No. A



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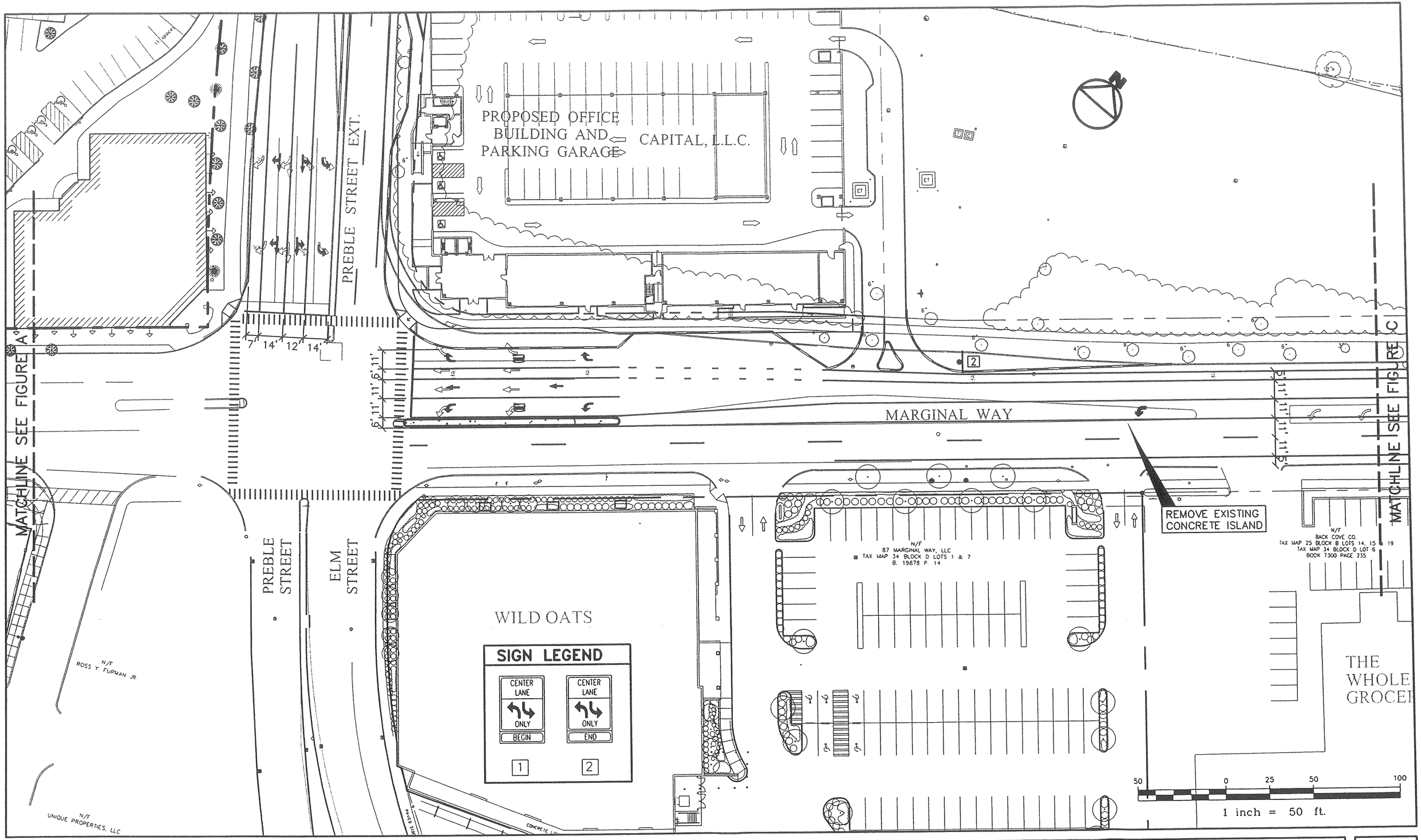
PORTLAND, MAINE

Figure No. A



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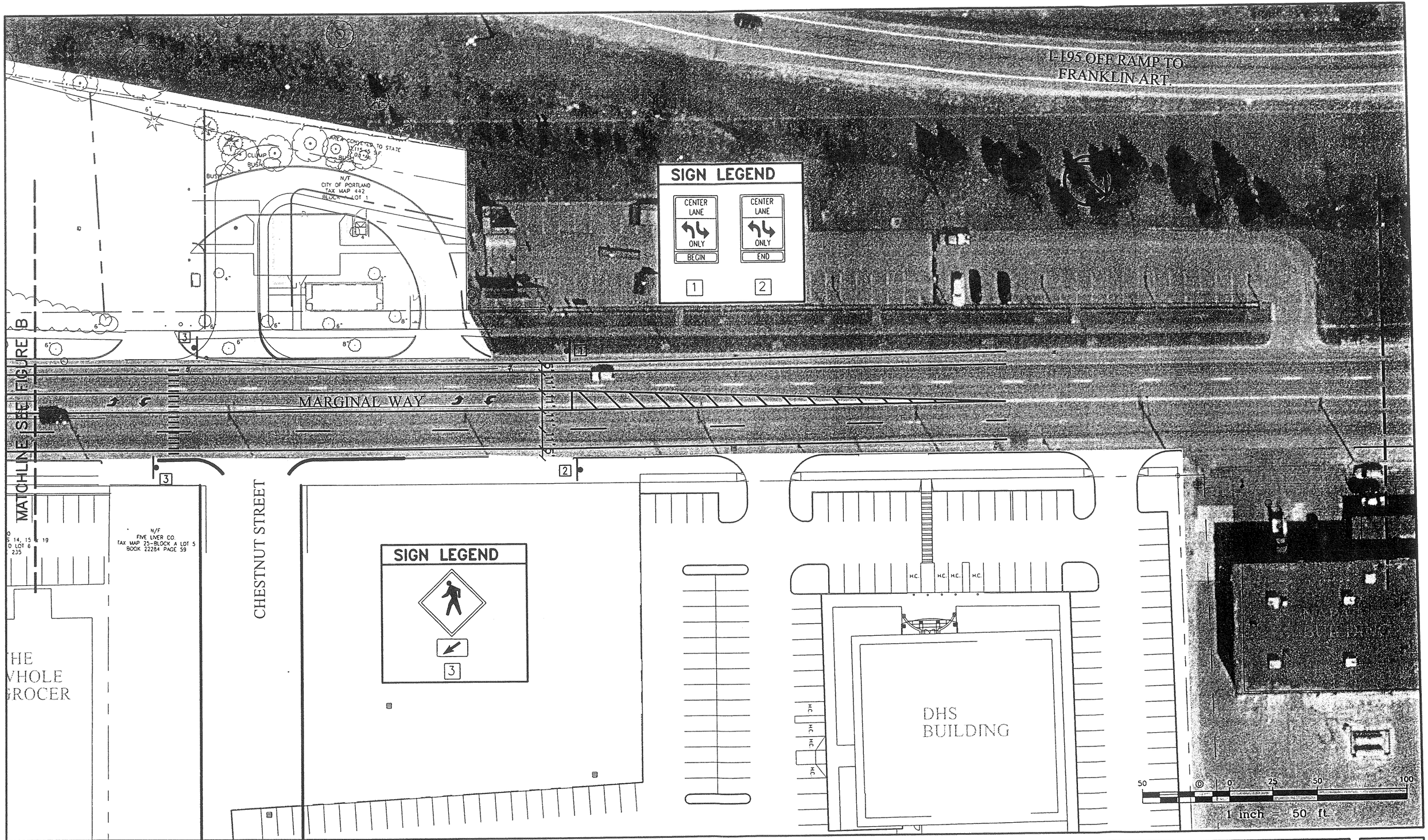
Drawing Name: Conceptual Roadway Improvements Plan

Project: MEDICAL OFFICE BUILDING – 84 MARGINAL WAY
PORTLAND, MAINE

Figure No. B



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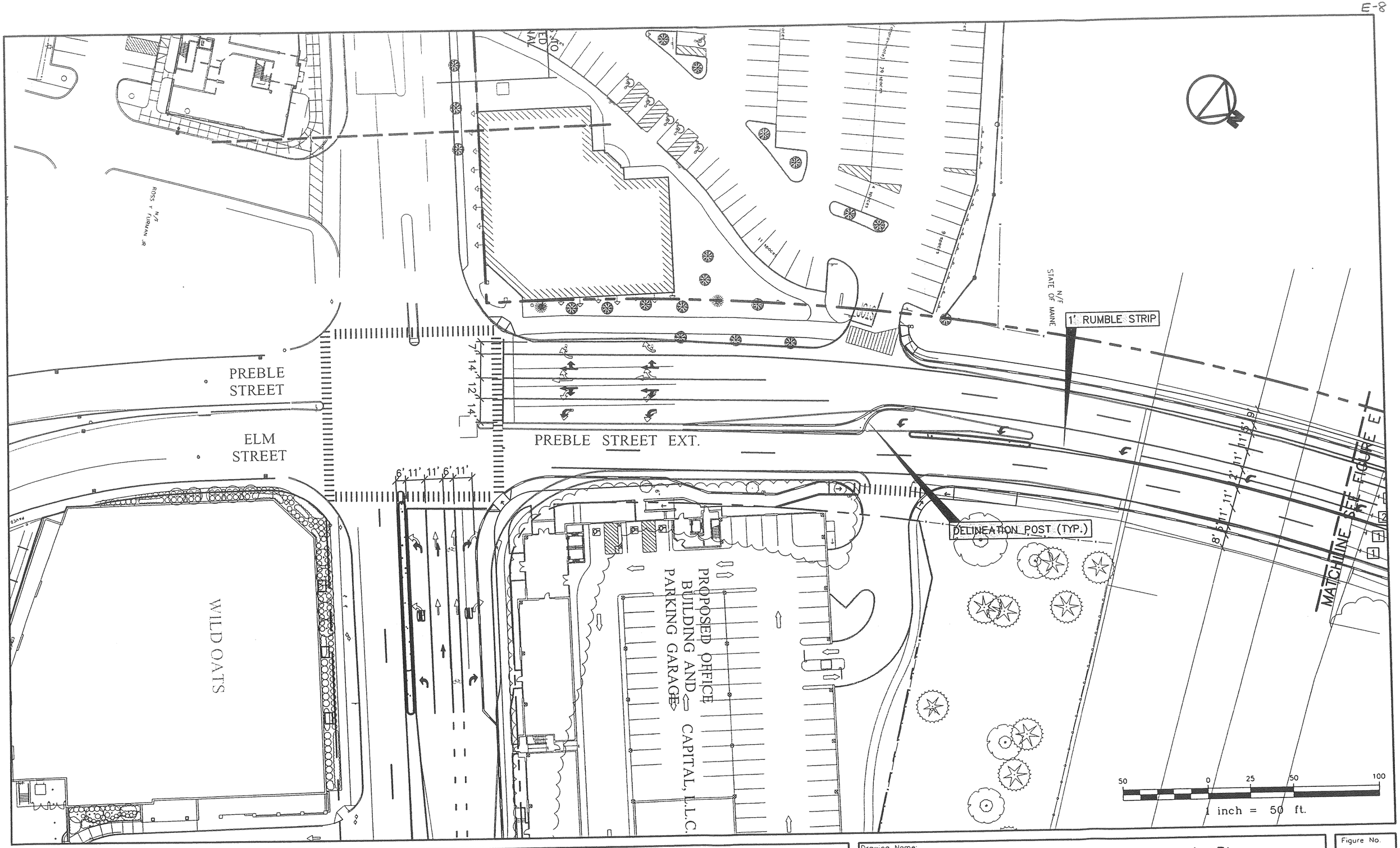
Drawing Name: Conceptual Roadway Improvements Plan

Project: MEDICAL OFFICE BUILDING – 84 MARGINAL WAY
PORTLAND, MAINE

Figure No. C



Rev	Date	Revision
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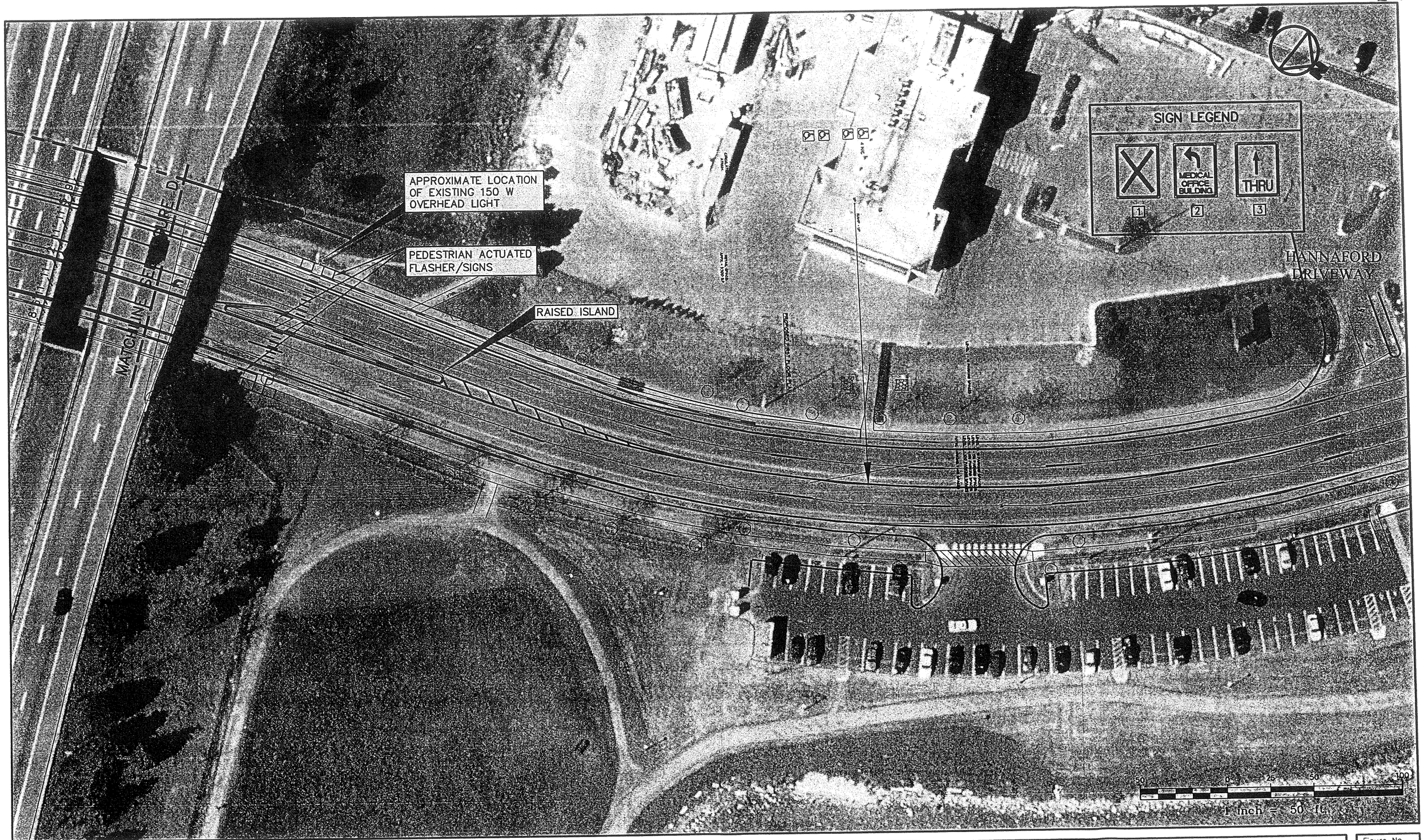
Drawing Name: Conceptual Roadway Improvements Plan

Project: MEDICAL OFFICE BUILDING – 84 MARGINAL WAY
PORTLAND, MAINE

Figure No. D



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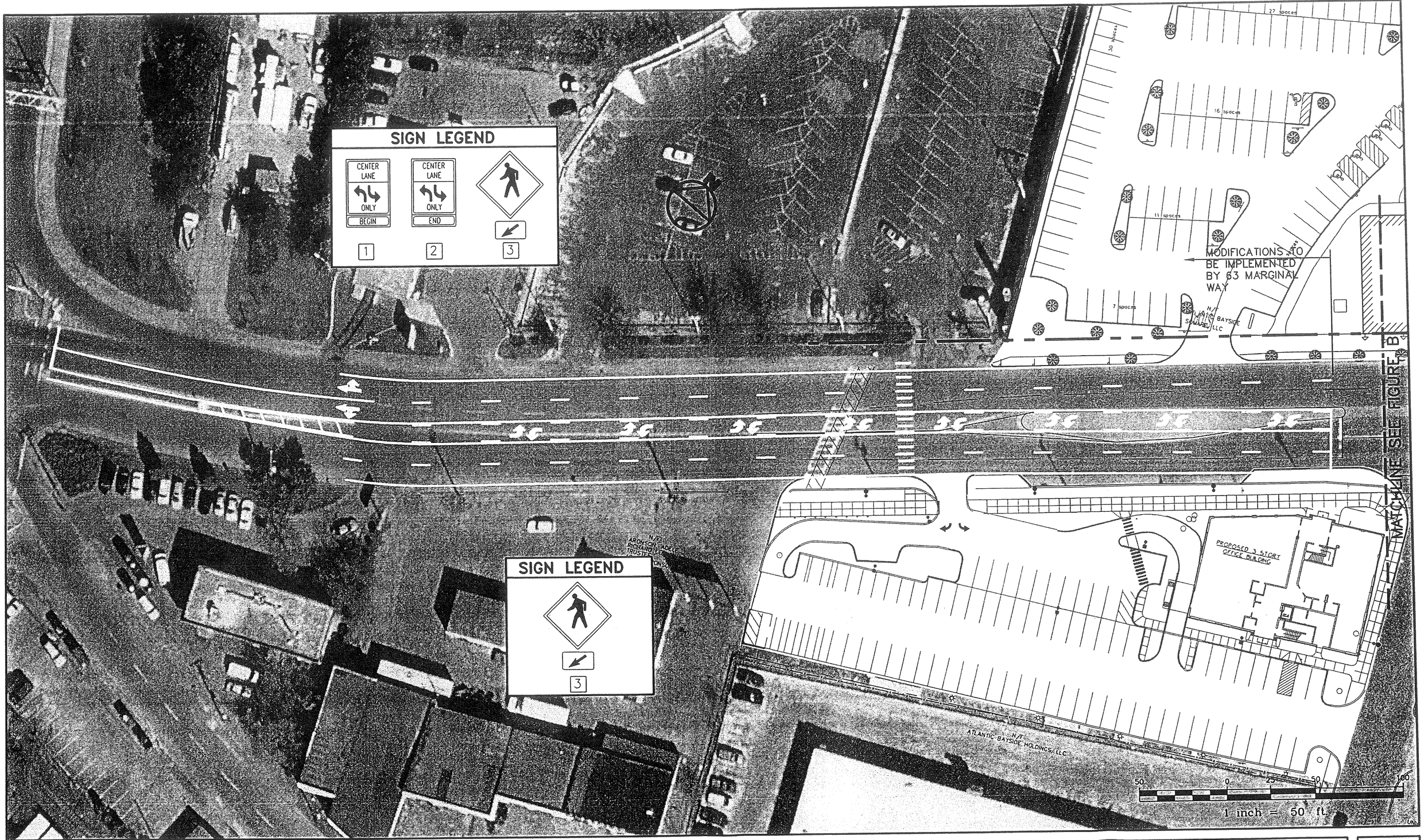
Drawing Name: Conceptual Roadway Improvements Plan

Project: MEDICAL OFFICE BUILDING – 84 MARGINAL WAY
PORTLAND, MAINE

Figure No. *E*



Rev.	Date	Revision
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Design: JJB	Date: AUG 2006
Draft: ZRJ	Job No.: 1361.01
Checked: PAH	Scale: 1"=50'
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Drawing Name: Conceptual Roadway Improvements Plan

Project: BAYSIDE VILLAGE AND 84 MARGINAL WAY
PORTLAND, MAINE

Figure No. A

PROPOSED OFFICE BUILDING AND PARKING GARAGE

CAPITAL, L.L.C.

PROPOSED STUDENT HOUSING

PROPOSED STUDENT HOUSING

PREBLE STREET EXT.

7' 14' 12' 14'

MARGINAL WAY

6' 11' 11' 6' 11'

11' 11' 11' 11.5'

MATCHLINE SEE FIGURE A

MATCHLINE SEE FIGURE C

PREBLE STREET

ELM STREET

WILD OATS

SIGN LEGEND

CENTER LANE ONLY BEGIN	CENTER LANE ONLY END
1	2

N/F
ROSS Y. FURMAN JR.

N/F
UNIQUE PROPERTIES, LLC

N/F
87 MARGINAL WAY, LLC
TAX MAP 34 BLOCK D LOTS 1 & 7
B. 19878 P. 14

REMOVE EXISTING CONCRETE ISLAND

N/F
BACK COVE CO.
TAX MAP 25 BLOCK B LOTS 14, 15 & 19
TAX MAP 34 BLOCK D LOT 6
BOOK 7300 PAGE 235

THE WHOLE GROCE

50 0 25 50 100

1 inch = 50 ft.

Rev	Date	Revision
-	-	-

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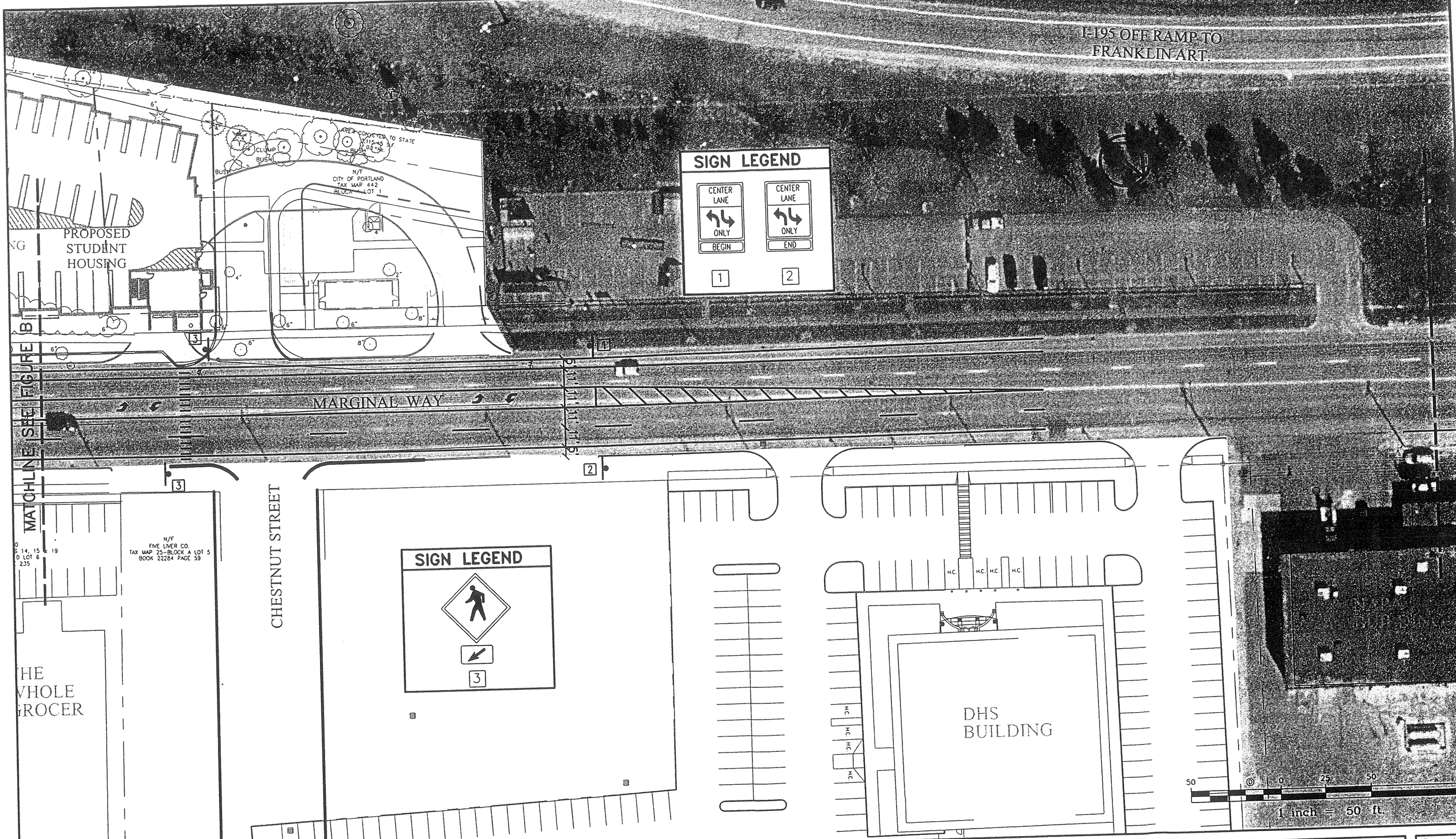
Drawing Name: Conceptual Roadway Improvements Plan

Project: BAYSIDE VILLAGE AND 84 MARGINAL WAY
PORTLAND, MAINE

Figure No. B



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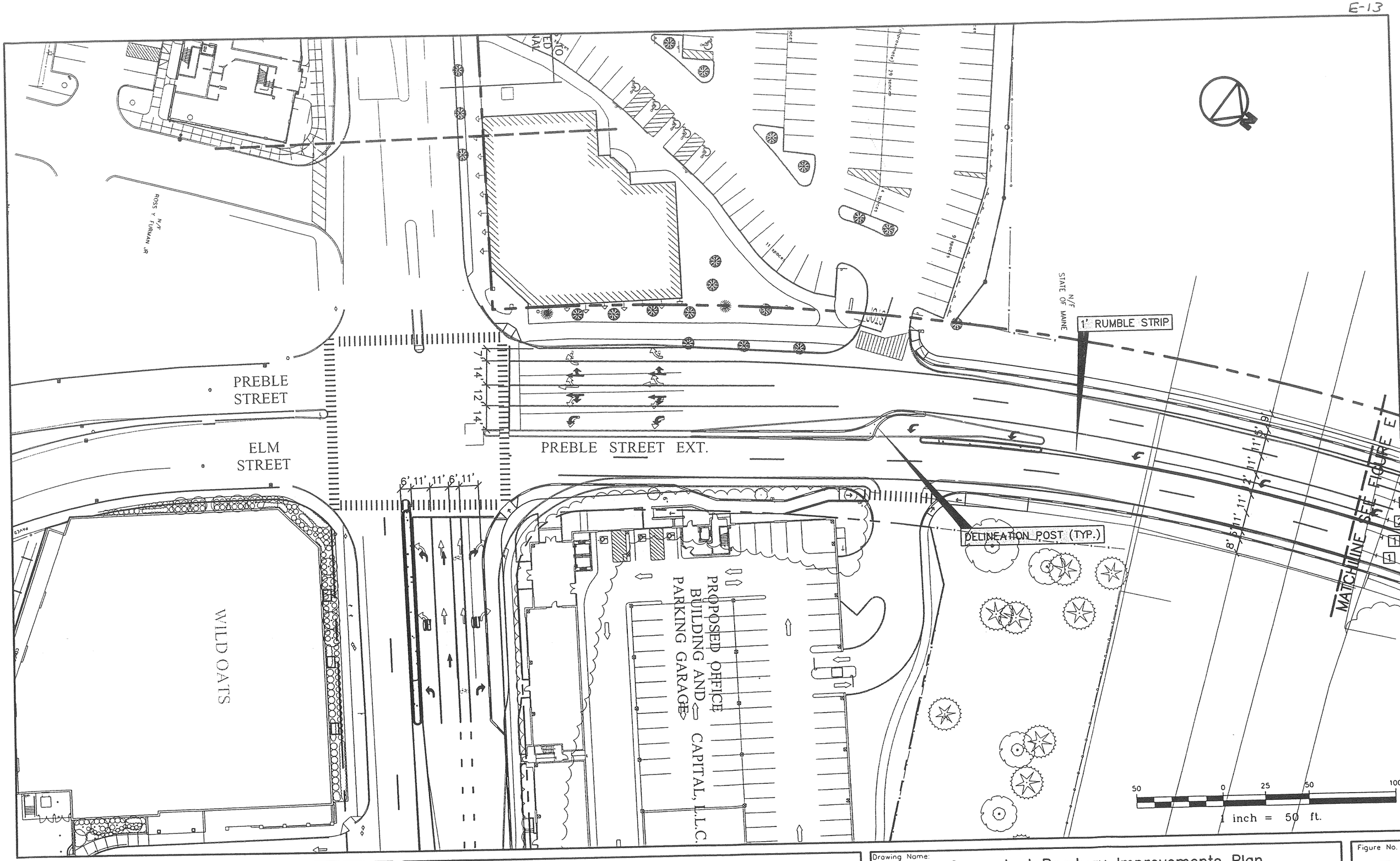
Drawing Name: Conceptual Roadway Improvements Plan

Project: BAYSIDE VILLAGE AND 84 MARGINAL WAY
PORTLAND, MAINE

Figure No.
C



Rev	Date	Revision
-	-	-

Design: JJB	Date: AUG 2006
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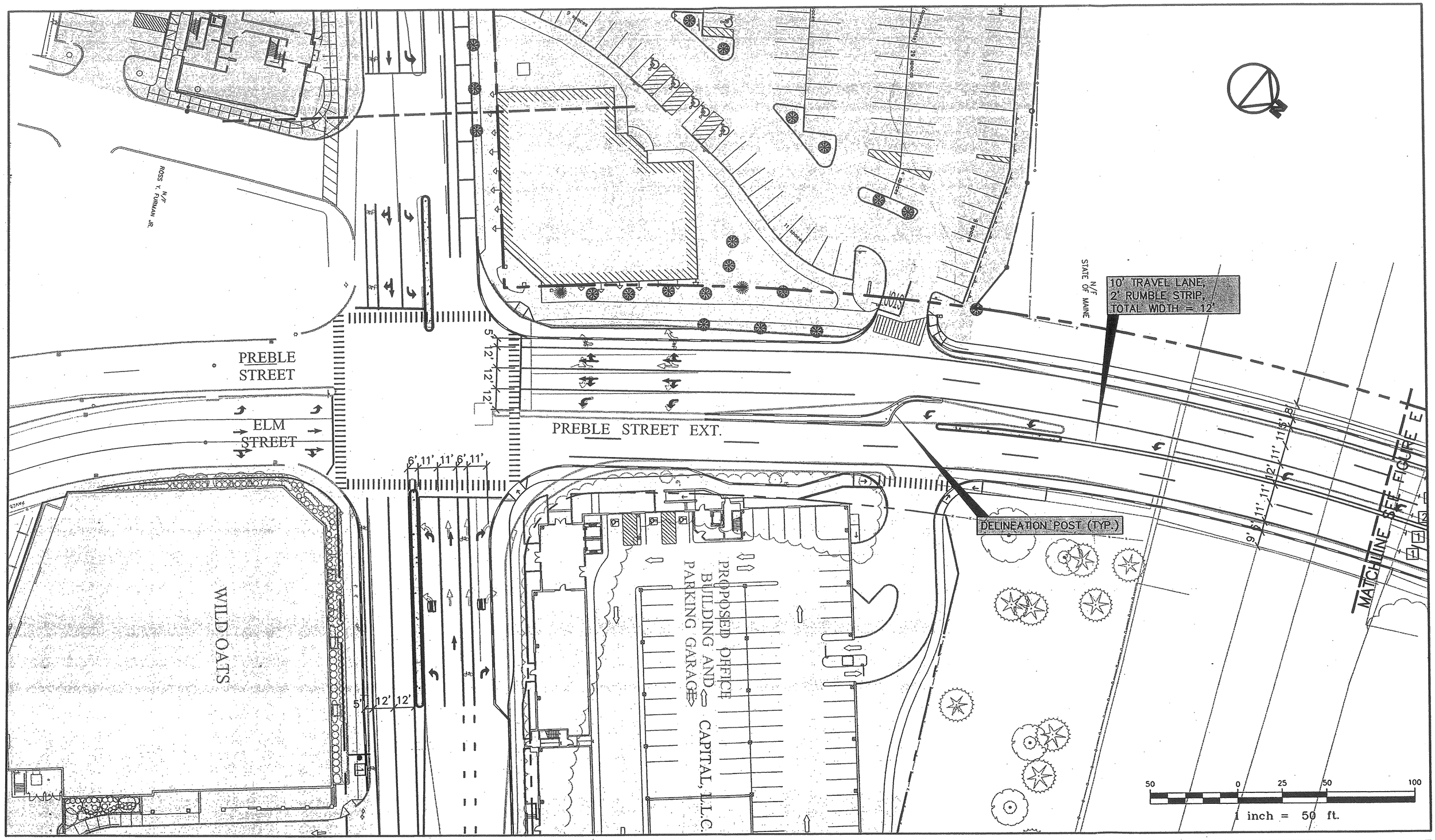
Drawing Name: Conceptual Roadway Improvements Plan

Project: BAYSIDE VILLAGE AND 84 MARGINAL WAY
PORTLAND, MAINE

Figure No. D

ATTACHMENT A-1



Rev.	Date	Revision
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Design: JJB	Date: AUG 2006
Draft: ZRJ	Job No.: 1361.01
Checked: PAH	Scale: 1"=50'
File Nome: 1361-01_pbose MASTER	

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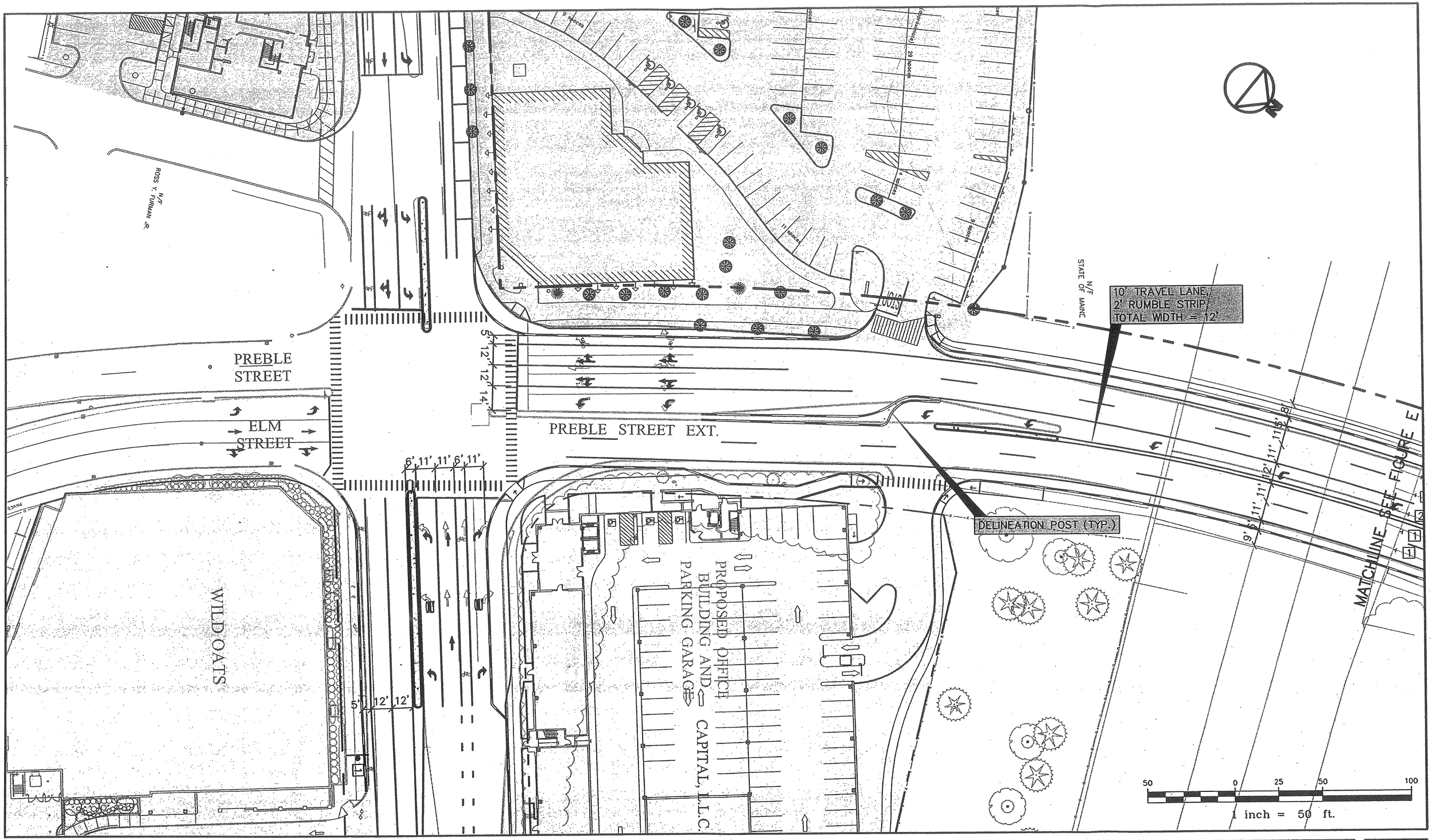
Drawing Name:
Conceptual Roadway Improvements Plan – Option 1

Project:
MEDICAL OFFICE BUILDING – 84 MARGINAL WAY
PORTLAND, MAINE

Figure No.
E-1

A-2



Rev.	Date	Revision
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15 Shaker Road
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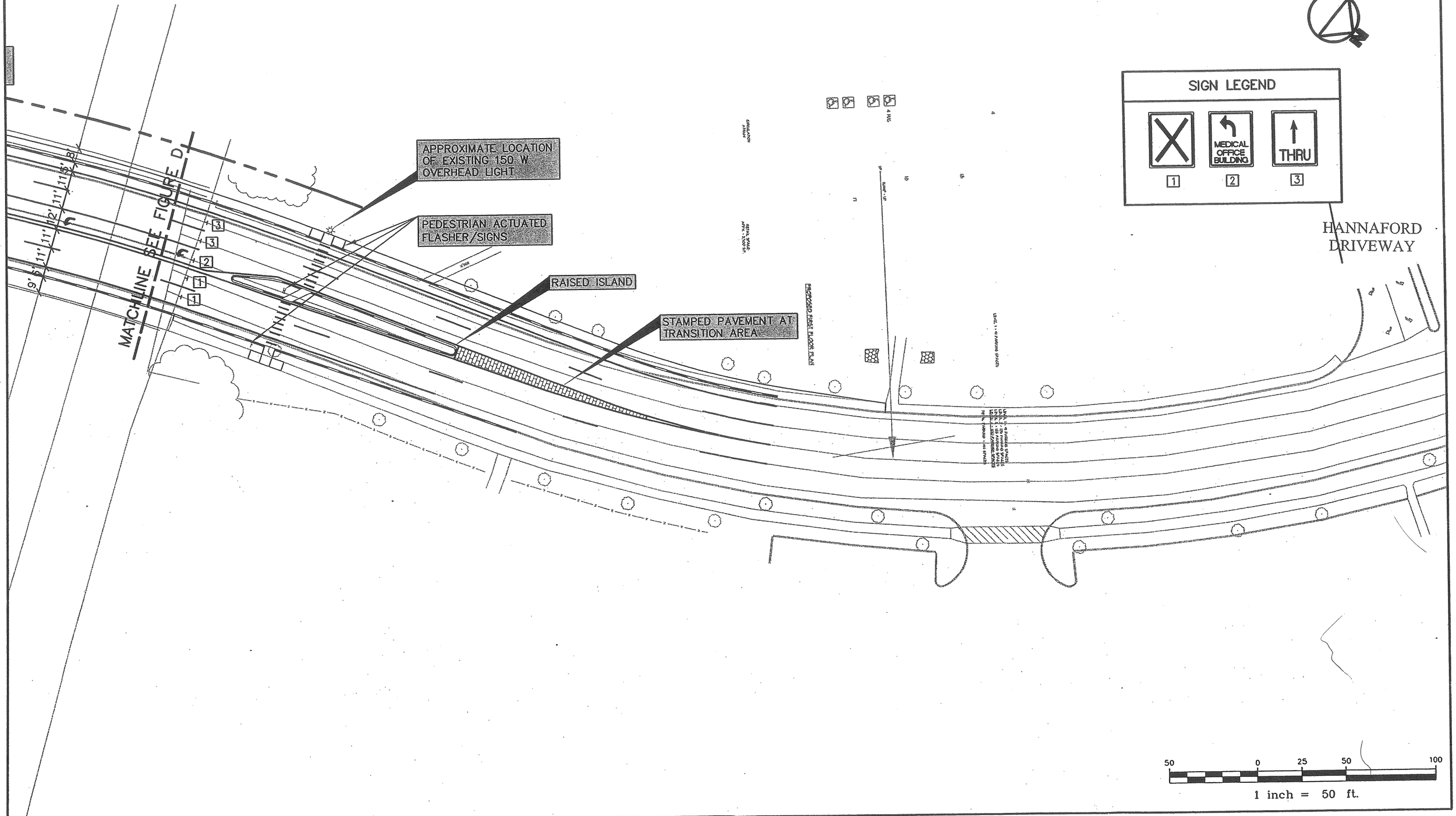
E-Mail: mailbox@gorrillpalmer.com

Drawing Name:
Conceptual Roadway Improvements Plan – Option 2

Project:
MEDICAL OFFICE BUILDING – 84 MARGINAL WAY
PORTLAND, MAINE

Figure No.
E-2



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Drawing Name: Conceptual Roadway Improvements Plan

Project: MEDICAL OFFICE BUILDING – 84 MARGINAL WAY
PORTLAND, MAINE

Figure No. F

UTILITY NOTE

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. CALL 1-888-DIGSAFE AT LEAST THREE BUSINESS DAYS BEFORE PERFORMING ANY CONSTRUCTION.

STORM DRAIN AND SANITARY STRUCTURES

	RIM	INV. IN	INV. OUT
CB#1	11.15	-	7.15
CB#2	11.15	6.56	6.46
CB#3	11.15	5.99	5.89
CB#4	11.15	5.30 (15")	5.20
		5.30 (15")	
		7.15 (6")	
CB#5	9.46	-	GG2
CB#6	9.34	6.33	6.23
CB#7	10.05	5.79	5.69
CB#8	9.48	5.60 (12")	5.50
		5.60 (12")	
CB#9	9.33	-	5.94
EDMH#2	9.07	4.78 (15")	4.57
SMH#1	10.00	6.00	-5.51

NOTE:
GARAGE INTERNAL DRAINAGE PLAN TO BE REVISED

LEGEND

	EXISTING	PROPOSED
PROPERTY LINE		
MONUMENT FOUND	MON	
CONTOUR	10	10
SPOT ELEVATION	+80.43	+80.43
CATCHBASIN		
DRAIN INLET		
MANHOLE		
HYDRANT		
WATER VALVE		
UTILITY POLE		
TEST BORING		
WATER SERVICE	W	W
SEWER SERVICE	SS	SS

	EXISTING	PROPOSED
STORM DRAIN	SD	SD
COMBINED SEWER	CS	
ELECTRIC SERVICE	E	E
GAS SERVICE	G	G
TELEPHONE AND CABLE SERVICE	T+C	T+C
OVERHEAD WIRES	OHW	
SITE LIGHTING ELECTRIC	E	E
ELECTRIC TRANSORMER	ET	ET
TELEPHONE PAD	T	T
CABLE PAD	C	C
LIGHT FIXTURE - STREET		
LIGHT FIXTURE - SITE		
LIGHT FIXTURE - BUILDING		
CURB		
TEST BORING		

Prepared For:
Applicant:
CAPITAL, LLC
50 Portland Pier, Suite 400
Portland, Maine 04101

Prepared By:
MITCHELL & ASSOCIATES
Landscape Architects
The Staples School
70 Center Street
Portland, Maine 04101
Tel: (207) 774-4427

Gorrill-Palmer Consulting Engineers, Inc.
Traffic and Civil Engineering Services
15 Shaker Road
Cape Elizabeth, ME 04107
207-657-6910
FAX: 207-767-7872

84 MARGINAL WAY

Portland, Maine

84 Marginal Way

Date:
JULY 25, 2006

Issued For:
PRELIMINARY SITE PLAN REVIEW

Revisions:
Aug. 31, 2006 - Additional Survey Data on Preble Street Extension.
Sept. 12, 2006 - Revised per Staff Comments.
Nov. 28, 2006 - Revised Architectural Footprint.

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Title:
GRADING, DRAINAGE AND UTILITIES PLAN

Scale: 1"=30'
0 10 20 30 60 ft.

North:

Sheet No.:
3

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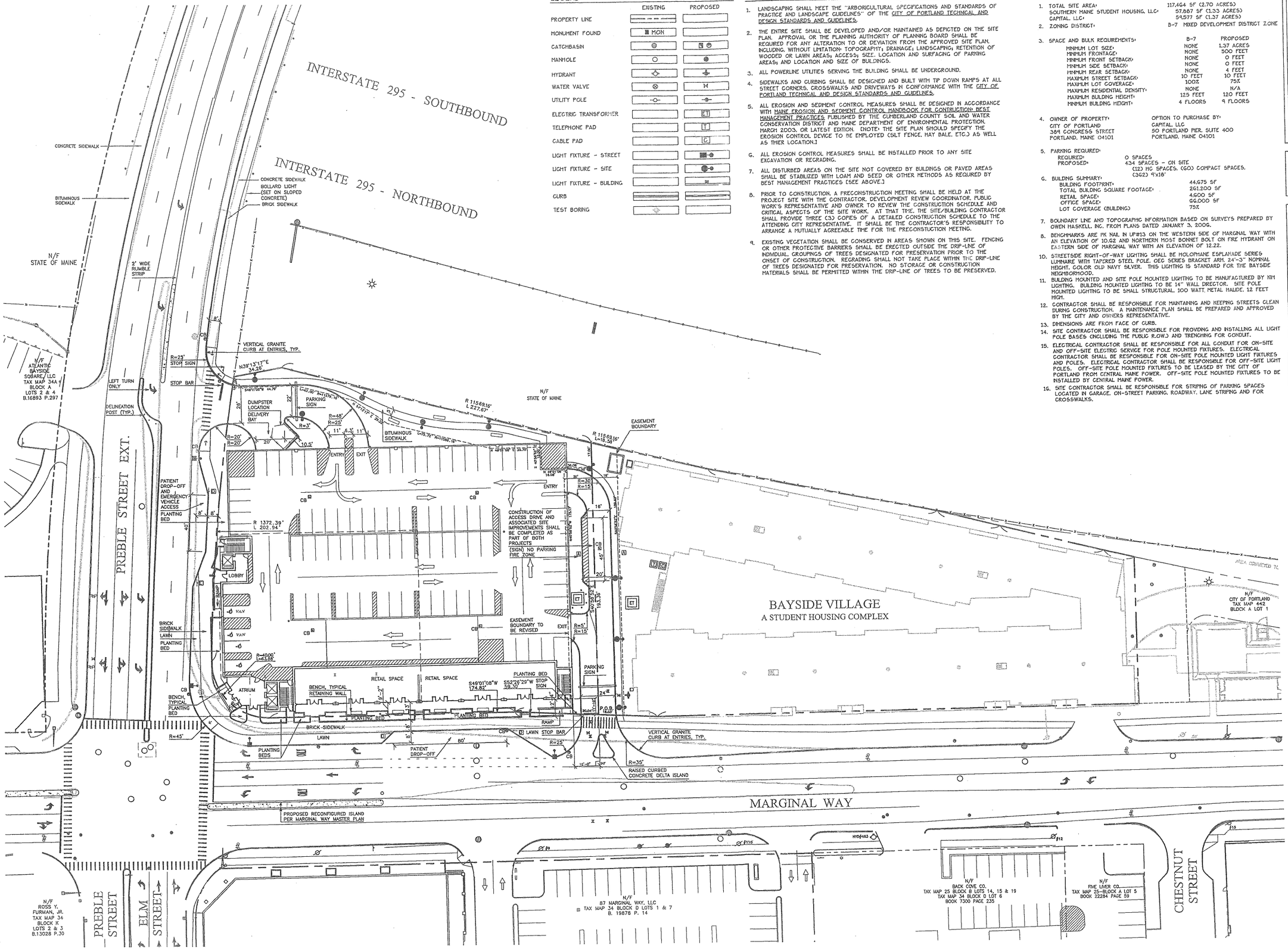
ATTACHMENT 7 B-1



LEGEND

	EXISTING	PROPOSED
PROPERTY LINE		
MONUMENT FOUND	MON	
CATCHBASIN		
MANHOLE		
HYDRANT		
WATER VALVE		
UTILITY POLE		
ELECTRIC TRANSFORMER		ET
TELEPHONE PAD		T
CABLE PAD		C
LIGHT FIXTURE - STREET		
LIGHT FIXTURE - SITE		
LIGHT FIXTURE - BUILDING		
CURB		
TEST BORING		

CITY OF PORTLAND NOTES

1. LANDSCAPING SHALL MEET THE "ARBORICULTURAL SPECIFICATIONS AND STANDARDS OF PRACTICE AND LANDSCAPE GUIDELINES" OF THE CITY OF PORTLAND TECHNICAL AND DESIGN STANDARDS AND GUIDELINES.
2. THE ENTIRE SITE SHALL BE DEVELOPED AND/OR MAINTAINED AS DEPICTED ON THE SITE PLAN. APPROVAL OR THE PLANNING AUTHORITY OF PLANNNG BOARD SHALL BE REQUIRED FOR ANY ALTERATION TO OR DEVIATION FROM THE APPROVED SITE PLAN, INCLUDING, WITHOUT LIMITATION: TOPOGRAPHY; DRAINAGE; LANDSCAPING; RETENTION OF WOODED OR LAWN AREAS; ACCESS; SIZE, LOCATION AND SURFACING OF PARKING AREAS; AND LOCATION AND SIZE OF BUILDINGS.
3. ALL POWERLINE UTILITIES SERVING THE BUILDING SHALL BE UNDERGROUND.
4. SIDEWALKS AND CURBING SHALL BE DESIGNED AND BUILT WITH TIP DOWN RAMPS AT ALL STREET CORNERS. CROSSWALKS AND DRIVEWAYS IN CONFORMANCE WITH THE CITY OF PORTLAND TECHNICAL AND DESIGN STANDARDS AND GUIDELINES.
5. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE DESIGNED IN ACCORDANCE WITH MAINE EROSION AND SEDIMENT CONTROL HANDBOOK FOR CONTRUCTION: BEST MANAGEMENT PRACTICES PUBLISHED BY THE CUMBERLAND COUNTY SOIL AND WATER CONSERVATION DISTRICT AND MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, MARCH 2003, OR LATEST EDITION. [NOTE: THE SITE PLAN SHOULD SPECIFY THE EROSION CONTROL DEVICE TO BE EMPLOYED (SILT FENCE, HAY BALE, ETC.) AS WELL AS THEIR LOCATION.]
6. ALL EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY SITE EXCAVATION OR REGRADING.
7. ALL DISTURBED AREAS ON THE SITE NOT COVERED BY BUILDINGS OR PAVED AREAS SHALL BE STABILIZED WITH LOAM AND SEED OR OTHER METHODS AS REQUIRED BY BEST MANAGEMENT PRACTICES (SEE ABOVE.)
8. PRIOR TO CONSTRUCTION, A PRECONSTRUCTION MEETING SHALL BE HELD AT THE PROJECT SITE WITH THE CONTRACTOR, DEVELOPMENT REVIEW COORDINATOR, PUBLIC WORK'S REPRESENTATIVE AND OWNER TO REVIEW THE CONSTRUCTION SCHEDULE AND CRITICAL ASPECTS OF THE SITE WORK. AT THAT TIME, THE SITE/BUILDING CONTRACTOR SHALL PROVIDE THREE (3) COPIES OF A DETAILED CONSTRUCTION SCHEDULE TO THE ATTENDING CITY REPRESENTATIVE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ARRANGE A MUTUALLY AGREEABLE TIME FOR THE PRECONSTUCTION MEETING.
9. EXISTING VEGETATION SHALL BE CONSERVED IN AREAS SHOWN ON THIS SITE. FENCING OR OTHER PROTECTIVE BARRIERS SHALL BE ERECTED OUTSIDE THE DRIP-LINE OF INDIVIDUAL GROUPINGS OF TREES DESIGNATED FOR PRESERVATION PRIOR TO THE ONSET OF CONSTRUCTION. REGRADING SHALL NOT TAKE PLACE WITHIN THE DRIP-LINE OF TREES DESIGNATED FOR PRESERVATION. NO STORAGE OR CONSTRUCTION MATERIALS SHALL BE PERMITTED WITHIN THE DRIP-LINE OF TREES TO BE PRESERVED.

GENERAL NOTES

1. TOTAL SITE AREA: 117,464 SF (2.70 ACRES)
   SOUTHERN MAINE STUDENT HOUSING, LLC: 57,887 SF (1.33 ACRES)
   CAPITAL, LLC: 59,577 SF (1.37 ACRES)
2. ZONING DISTRICT: B-7 MIXED DEVELOPMENT DISTRICT ZONE
3. SPACE AND BULK REQUIREMENTS:

	B-7	PROPOSED
MINIMUM LOT SIZE:	NONE	1.37 ACRES
MINIMUM FRONTAGE:	NONE	500 FEET
MINIMUM FRONT SETBACK:	NONE	0 FEET
MINIMUM SIDE SETBACK:	NONE	0 FEET
MINIMUM REAR SETBACK:	NONE	4 FEET
MAXIMUM STREET SETBACK:	10 FEET	10 FEET
MAXIMUM LOT COVERAGE:	100%	75%
MAXIMUM RESIDENTIAL DENSITY:	NONE	N/A
MAXIMUM BULDING HEIGHT:	125 FEET	120 FEET
MINIMUM BULDING HEIGHT:	4 FLOORS	9 FLOORS

4. OWNER OF PROPERTY: CITY OF PORTLAND, 389 CONGRESS STREET, PORTLAND, MAINE 04101 — OPTION TO PURCHASE BY: CAPITAL LLC, 50 PORTLAND PIER, SUITE 400, PORTLAND, MAINE 04101
5. PARKING REQUIRED:
   REQUIRED: 0 SPACES
   PROPOSED: 434 SPACES - ON SITE
   (12) HC SPACES. (60) COMPACT SPACES.
   (362) 9'x18'
6. BUILDING SUMMARY:

BUILDING FOOTPRINT:	44,675 SF
TOTAL BUILDING SQUARE FOOTAGE:	261,200 SF
RETAIL SPACE:	4,600 SF
OFFICE SPACE:	66,000 SF
LOT COVERAGE (BULDING)	75%

7. BOUNDARY LINE AND TOPOGRAPHIC INFORMATION BASED ON SURVEYS PREPARED BY OWEN HASKELL, INC. FROM PLANS DATED JANUARY 3, 2006.
8. BENCHMARKS ARE PK NAIL IN UP#13 ON THE WESTERN SIDE OF MARGINAL WAY WITH AN ELEVATION OF 10.62 AND NORTHERN MOST BONNET BOLT ON FIRE HYDRANT ON EASTERN SIDE OF MARGINAL WAY WITH AN ELEVATION OF 12.22.
10. STREETSIDE RIGHT-OF-WAY LIGHTING SHALL BE HOLOPHANE ESPLANADE SERIES LUMINARE WITH TAPERED STEEL POLE, OEC SERIES BRACKET ARM, 24'-3" NOMINAL HEIGHT, COLOR OLD NAVY SILVER. THIS LIGHTING IS STANDARD FOR THE BAYSIDE NEIGHBORHOOD.
11. BULDING MOUNTED AND SITE POLE MOUNTED LIGHTING TO BE MANUFACTURED BY RAM LIGHTING. BULDING MOUNTED LIGHTING TO BE 14" WALL DIRECTOR. SITE POLE MOUNTED LIGHTING TO BE SMALL STRUCTURAL, 100 WATT METAL HALIDE, 12 FEET HIGH.
12. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING AND KEEPING STREETS CLEAN DURING CONSTRUCTION. A MAINTENANCE PLAN SHALL BE PREPARED AND APPROVED BY THE CITY AND OWNERS REPRESENTATIVE.
13. DIMENSIONS ARE FROM FACE OF CURB.
14. SITE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ALL LIGHT POLE BASES (INCLUDING THE PUBLIC R.O.W.) AND TRENCHING FOR CONDUIT.
15. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONDUIT FOR ON-SITE AND OFF-SITE ELECTRIC SERVICE FOR POLE MOUNTED FIXTURES. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ON-SITE POLE MOUNTED LIGHT FIXTURES AND POLES. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR OFF-SITE LIGHT POLES. OFF-SITE POLE MOUNTED FIXTURES TO BE LEASED BY THE CITY OF PORTLAND FROM CENTRAL MAINE POWER. OFF-SITE POLE MOUNTED FIXTURES TO BE INSTALLED BY CENTRAL MAINE POWER.
16. SITE CONTRACTOR SHALL BE RESPONSIBLE FOR STRIPING OF PARKING SPACES LOCATED IN GARAGE, ON-STREET PARKING, ROADWAY, LANE STRIPING AND FOR CROSSWALKS.

Prepared For:
Applicant:
CAPITAL, LLC
50 Portland Pier, Suite 400
Portland, Maine 04101

Prepared By:
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84 MARGINAL WAY

84 Marginal Way
Portland, Maine

Date: JULY 25, 2006

Issued For: PRELIMINARY SITE PLAN REVIEW

Revisions:
Aug. 31, 2006 - Additional Survey Data on Preble Street Extension.
Sept. 12, 2006 - Revised per Staff Comments.
Oct. 11, 2006 - Per Planning Board and Staff Comments.
Nov. 28, 2006 - Revised Architectural Footprint.

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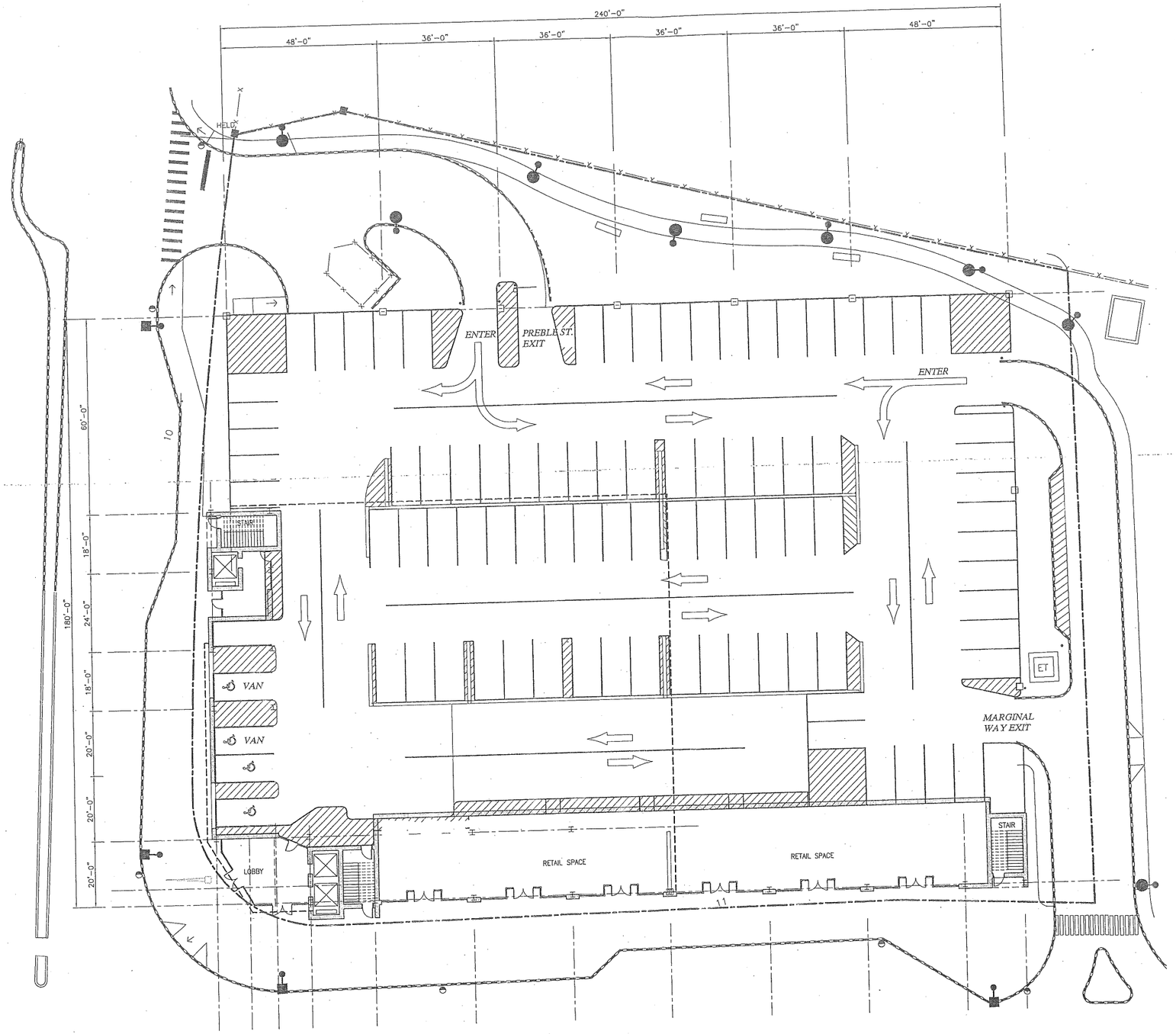
Title: LAYOUT AND LIGHTING PLAN

Scale: 1"=30'
0 10 20 30 60 ft.

North:

Sheet No.: 2



GROUND FLOOR PLAN | A1

1/16" = 1'-0" | 0 6' 12' 24' | REF: --

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construction company

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Project Title
84 MARGINAL WAY
Portland, Maine

HA Project No. 06196

Key Plan

Mark	Date	Description
--	11.28.06	FOR INFORMATION ONLY

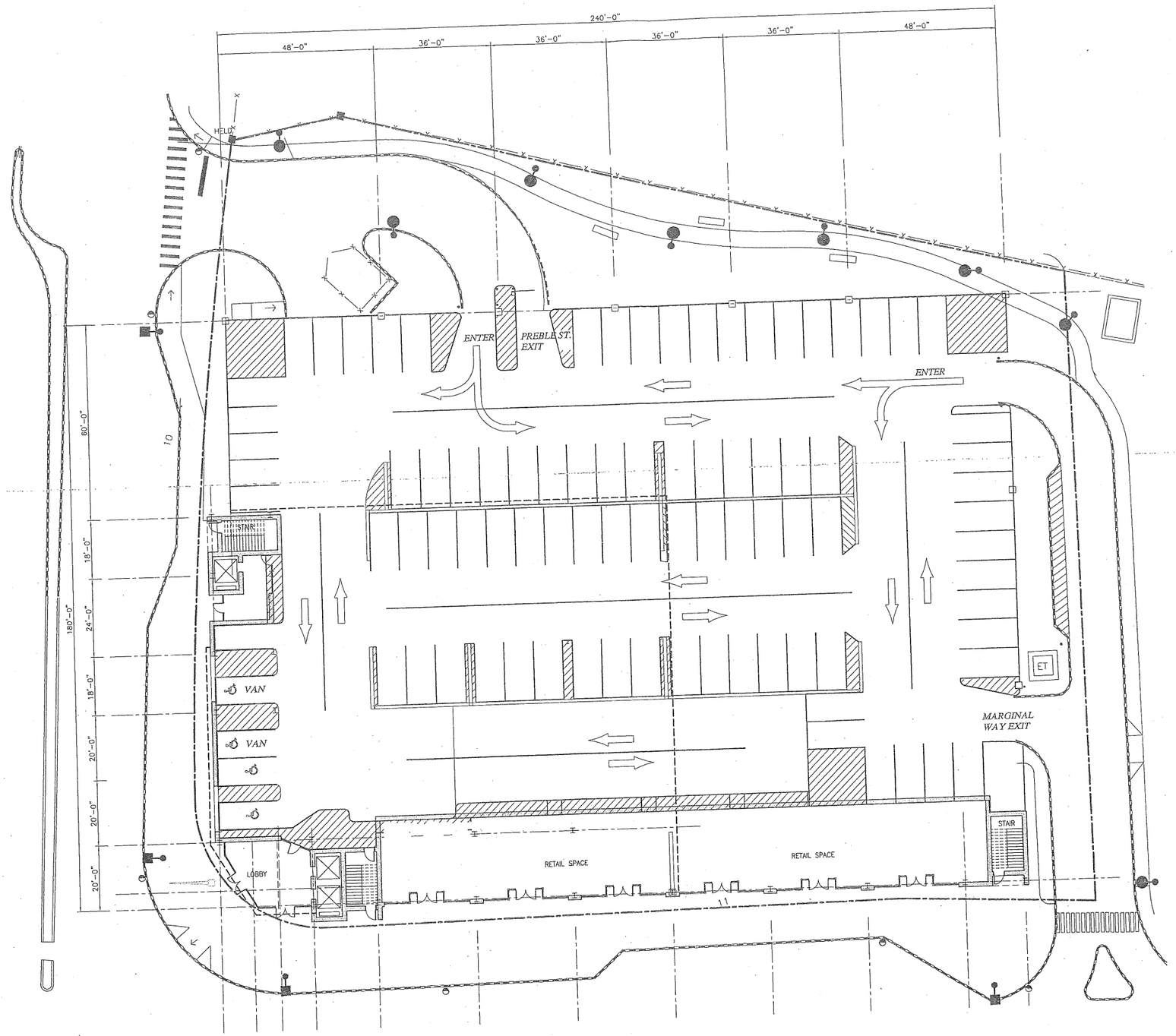
Issue Dates

Drawing Status
REVIEW

Drawing Title
GROUND FLOOR PLAN

PA / PE: JLJ | Drawn By: MMO

Drawing Number
A10.1



GROUND FLOOR PLAN
1/16" = 1'-0" | 0 6" 12" 24" | REF: -
A1

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Drawing Title

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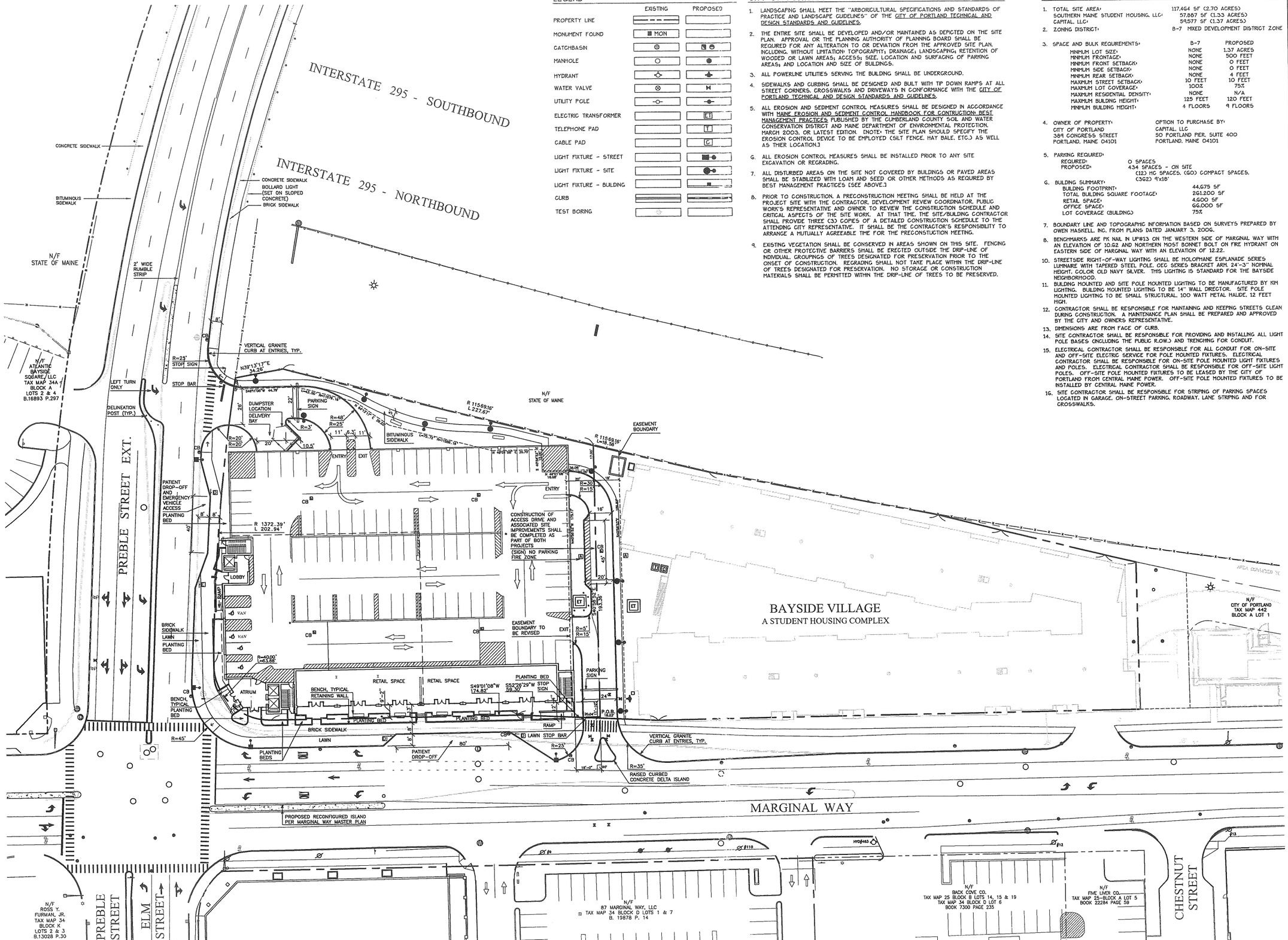
ATTACHMENT B-1



LEGEND

	EXISTING	PROPOSED
PROPERTY LINE		
MONUMENT FOUND	MON	
CATCHBASIN		
MANHOLE		
HYDRANT		
WATER VALVE		
UTILITY POLE		
ELECTRIC TRANSFORMER		E.T.
TELEPHONE PAD		T
CABLE PAD		C
LIGHT FIXTURE - STREET		
LIGHT FIXTURE - SITE		
LIGHT FIXTURE - BUILDING		
CURB		
TEST BORING		

CITY OF PORTLAND NOTES

1. LANDSCAPING SHALL MEET THE "ARBORICULTURAL SPECIFICATIONS AND STANDARDS OF PRACTICE AND LANDSCAPE GUIDELINES" OF THE CITY OF PORTLAND TECHNICAL AND DESIGN STANDARDS AND GUIDELINES.
2. THE ENTIRE SITE SHALL BE DEVELOPED AND/OR MAINTAINED AS DEPICTED ON THE SITE PLAN. APPROVAL OR THE PLANNING AUTHORITY OF PLANNING BOARD SHALL BE REQUIRED FOR ANY ALTERATION TO OR DEVIATION FROM THE APPROVED SITE PLAN, INCLUDING, WITHOUT LIMITATION: TOPOGRAPHY, DRAINAGE, LANDSCAPING; RETENTION OF WOODED OR LAWN AREAS; ACCESS; SIZE, LOCATION AND SURFACING OF PARKING AREAS; AND LOCATION AND SIZE OF BUILDINGS.
3. ALL POWERLINE UTILITIES SERVING THE BUILDING SHALL BE UNDERGROUND.
4. SIDEWALKS AND CURBING SHALL BE DESIGNED AND BUILT WITH TIP DOWN RAMPS AT ALL STREET CORNERS, CROSSWALKS AND DRIVEWAYS IN CONFORMANCE WITH THE CITY OF PORTLAND TECHNICAL AND DESIGN STANDARDS AND GUIDELINES.
5. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE DESIGNED IN ACCORDANCE WITH MAINE EROSION AND SEDIMENT CONTROL HANDBOOK FOR CONTRUCTION: BEST MANAGEMENT PRACTICES, PUBLISHED BY THE CUMBERLAND COUNTY SOIL AND WATER CONSERVATION DISTRICT AND MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, MARCH 2003, OR LATEST EDITION. [NOTE: THE SITE PLAN SHOULD SPECIFY THE EROSION CONTROL DEVICE TO BE EMPLOYED (SILT FENCE, HAY BALE, ETC.) AS WELL AS THEIR LOCATION.]
6. ALL EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY SITE EXCAVATION OR REGRADING.
7. ALL DISTURBED AREAS ON THE SITE NOT COVERED BY BUILDINGS OR PAVED AREAS SHALL BE STABILIZED WITH LOAM AND SEED OR OTHER METHODS AS REQUIRED BY BEST MANAGEMENT PRACTICES (SEE ABOVE.)
8. PRIOR TO CONSTRUCTION, A PRECONSTRUCTION MEETING SHALL BE HELD AT THE PROJECT SITE WITH THE CONTRACTOR, DEVELOPMENT REVIEW COORDINATOR, PUBLIC WORKS REPRESENTATIVE AND OWNER TO REVIEW THE CONSTRUCTION SCHEDULE AND CRITICAL ASPECTS OF THE SITE WORK. AT THAT TIME, THE SITE/BUILDING CONTRACTOR SHALL PROVIDE THREE (3) COPIES OF A DETAILED CONSTRUCTION SCHEDULE TO THE ATTENDING CITY REPRESENTATIVE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ARRANGE A MUTUALLY AGREEABLE TIME FOR THE PRECONSTUCTION MEETING.
9. EXISTING VEGETATION SHALL BE CONSERVED IN AREAS SHOWN ON THIS SITE. FENCING OR OTHER PROTECTIVE BARRIERS SHALL BE ERECTED OUTSIDE THE DRIP-LINE OF INDIVIDUAL GROUPINGS OF TREES DESIGNATED FOR PRESERVATION PRIOR TO THE ONSET OF CONSTRUCTION. REGRADING SHALL NOT TAKE PLACE WITHIN THE DRIP-LINE OF TREES DESIGNATED FOR PRESERVATION. NO STORAGE OR CONSTRUCTION MATERIALS SHALL BE PERMITTED WITHIN THE DRIP-LINE OF TREES TO BE PRESERVED.

GENERAL NOTES

1. TOTAL SITE AREA: 117,464 SF (2.70 ACRES)
   SOUTHERN MAINE STUDENT HOUSING, LLC: 57,887 SF (1.33 ACRES)
   CAPITAL, LLC: 59,577 SF (1.37 ACRES)
2. ZONING DISTRICT: B-7 MIXED DEVELOPMENT DISTRICT ZONE
3. SPACE AND BULK REQUIREMENTS:

	B-7	PROPOSED
MINIMUM LOT SIZE:	NONE	1.37 ACRES
MINIMUM FRONTAGE:	NONE	500 FEET
MINIMUM FRONT SETBACK:	NONE	0 FEET
MINIMUM SIDE SETBACK:	NONE	0 FEET
MINIMUM REAR SETBACK:	NONE	4 FEET
MAXIMUM STREET SETBACK:	10 FEET	10 FEET
MAXIMUM LOT COVERAGE:	100%	75%
MAXIMUM RESIDENTIAL DENSITY:	NONE	N/A
MAXIMUM BUILDING HEIGHT:	125 FEET	120 FEET
MINIMUM BUILDING HEIGHT:	4 FLOORS	9 FLOORS

4. OWNER OF PROPERTY: CITY OF PORTLAND, 389 CONGRESS STREET, PORTLAND, MAINE 04101
   OPTION TO PURCHASE BY: CAPITAL, LLC, 50 PORTLAND PIER, SUITE 400, PORTLAND, MAINE 04101
5. PARKING REQUIRED:
   REQUIRED: 0 SPACES
   PROPOSED: 434 SPACES - ON SITE
   (12) HC SPACES, (60) COMPACT SPACES, (362) 9'x18'
6. BUILDING SUMMARY:

BUILDING FOOTPRINT:	44,675 SF
TOTAL BUILDING SQUARE FOOTAGE:	251,200 SF
RETAIL SPACE:	4,600 SF
OFFICE SPACE:	66,000 SF
LOT COVERAGE (BUILDING)	75%

7. BOUNDARY LINE AND TOPOGRAPHIC INFORMATION BASED ON SURVEYS PREPARED BY OWEN HASKELL, INC. FROM PLANS DATED JANUARY 3, 2006.
8. BENCHMARKS ARE PK NAIL IN UP#13 ON THE WESTERN SIDE OF MARGINAL WAY WITH AN ELEVATION OF 10.62 AND NORTHERN MOST BONNET BOLT ON FRE HYDRANT ON EASTERN SIDE OF MARGINAL WAY WITH AN ELEVATION OF 12.22.
10. STREETSIDE RIGHT-OF-WAY LIGHTING SHALL BE HOLOPHANE ESPLANADE SERIES LUMINARE WITH TAPERED STEEL POLE, OEG SERIES BRACKET ARM, 24'-3" NOMINAL HEIGHT, COLOR OLD NAVY SILVER. THIS LIGHTING IS STANDARD FOR THE BAYSIDE NEIGHBORHOOD.
11. BUILDING MOUNTED AND SITE POLE MOUNTED LIGHTING TO BE MANUFACTURED BY KIM LIGHTING. BUILDING MOUNTED LIGHTING TO BE 14" WALL DIRECTOR. SITE POLE MOUNTED LIGHTING TO BE SMALL STRUCTURAL, 100 WATT METAL HALIDE, 12 FEET HIGH.
12. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING AND KEEPING STREETS CLEAN DURING CONSTRUCTION. A MAINTENANCE PLAN SHALL BE PREPARED AND APPROVED BY THE CITY AND OWNERS REPRESENTATIVE.
13. DIMENSIONS ARE FROM FACE OF CURB.
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84 MARGINAL WAY

Portland, Maine

84 Marginal Way

Date: JULY 25, 2006

Issued For: PRELIMINARY SITE PLAN REVIEW

Revisions:
Aug. 31, 2006 - Additional Survey Data on Preble Street Extension.
Sept. 12, 2006 - Revised per Staff Comments.
Oct. 11, 2006 - Per Planning Board and Staff Comments.
Nov. 28, 2006 - Revised Architectural Footprint.

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Title: LAYOUT AND LIGHTING PLAN

Scale: 1"=30'
0 10 20 30 60 ft.

North:

Sheet No.: 2

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UTILITY NOTE

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. CALL 1-888-DIGSAFE AT LEAST THREE BUSINESS DAYS BEFORE PERFORMING ANY CONSTRUCTION.

STORM DRAIN AND SANITARY STRUCTURES

	RIM	INV. IN	INV. OUT
CB#1	11.15	-	7.15
CB#2	11.15	6.56	6.46
CB#3	11.15	5.99	5.89
CB#4	11.15	5.30 (15")	5.20
		5.30 (15")	
		7.15 (6")	
CB#8	9.46	-	6.62
CB#6	9.34	6.33	6.23
CB#7	10.05	5.79	5.69
CB#8	9.48	5.60 (12")	5.50
		5.60 (12")	
CB#9	9.33	-	5.94
EDMH#2	9.07	4.78 (15")	4.57
SMH#1	10.00	6.00	-5.51

NOTE:
GARAGE INTERNAL DRAINAGE PLAN TO BE REVISED

LEGEND

	EXISTING	PROPOSED
PROPERTY LINE		
MONUMENT FOUND	■ MON	
CONTOUR	10	10
SPOT ELEVATION	+ 80.43	+ 80.43
CATCHBASIN		
DRAIN INLET		
MANHOLE		
HYDRANT		
WATER VALVE		
UTILITY POLE		
TEST BORING		
WATER SERVICE	W	W
SEWER SERVICE	SS	SS

	EXISTING	PROPOSED
STORM DRAIN	SD	SD
COMBINED SEWER	CS	
ELECTRIC SERVICE	E	E
GAS SERVICE	G	G
TELEPHONE AND CABLE SERVICE		T+C
OVERHEAD WIRES	OHW	
SITE LIGHTING ELECTRIC		E
ELECTRIC TRANSORMER		ET
TELEPHONE PAD		T
CABLE PAD		C
LIGHT FIXTURE - STREET		
LIGHT FIXTURE - SITE		
LIGHT FIXTURE - BUILDING		
CURB		
TEST BORING		

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84 MARGINAL WAY

Portland, Maine

84 Marginal Way

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Title: GRADING, DRAINAGE AND UTILITIES PLAN

Scale: 1"=30'
0 10 20 30 60 ft.

North:

Sheet No.: 3

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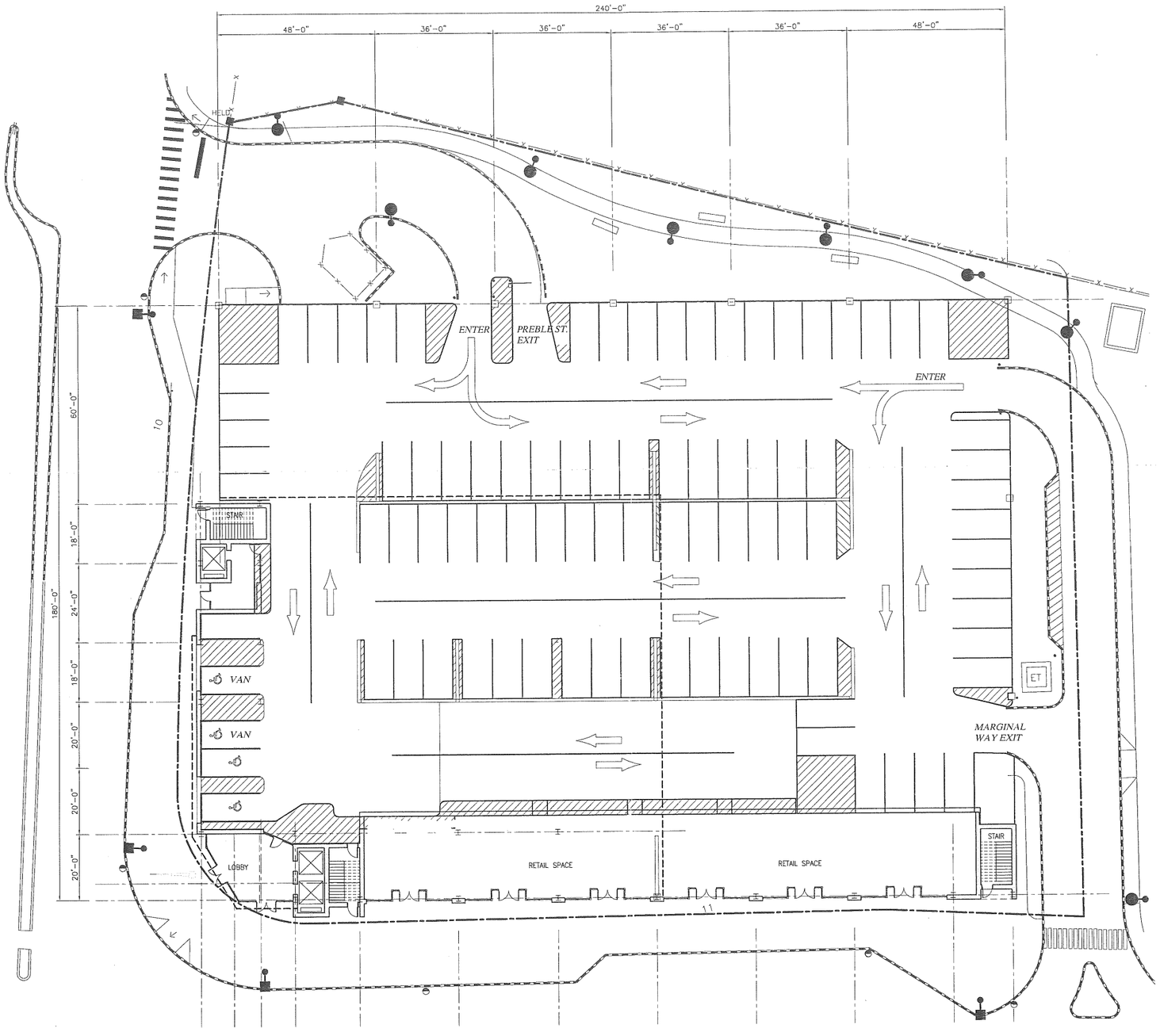
B-3



GROUND FLOOR PLAN

1/16" = 1'-0" | 0 6' 12' 24' | REF: –

A1

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Project Title

84 MARGINAL WAY
Portland, Maine

HA Project No. 06196

Key Plan

Mark	Date	Description
–	11.28.06	FOR INFORMATION ONLY

Issue Dates

Drawing Status

REVIEW

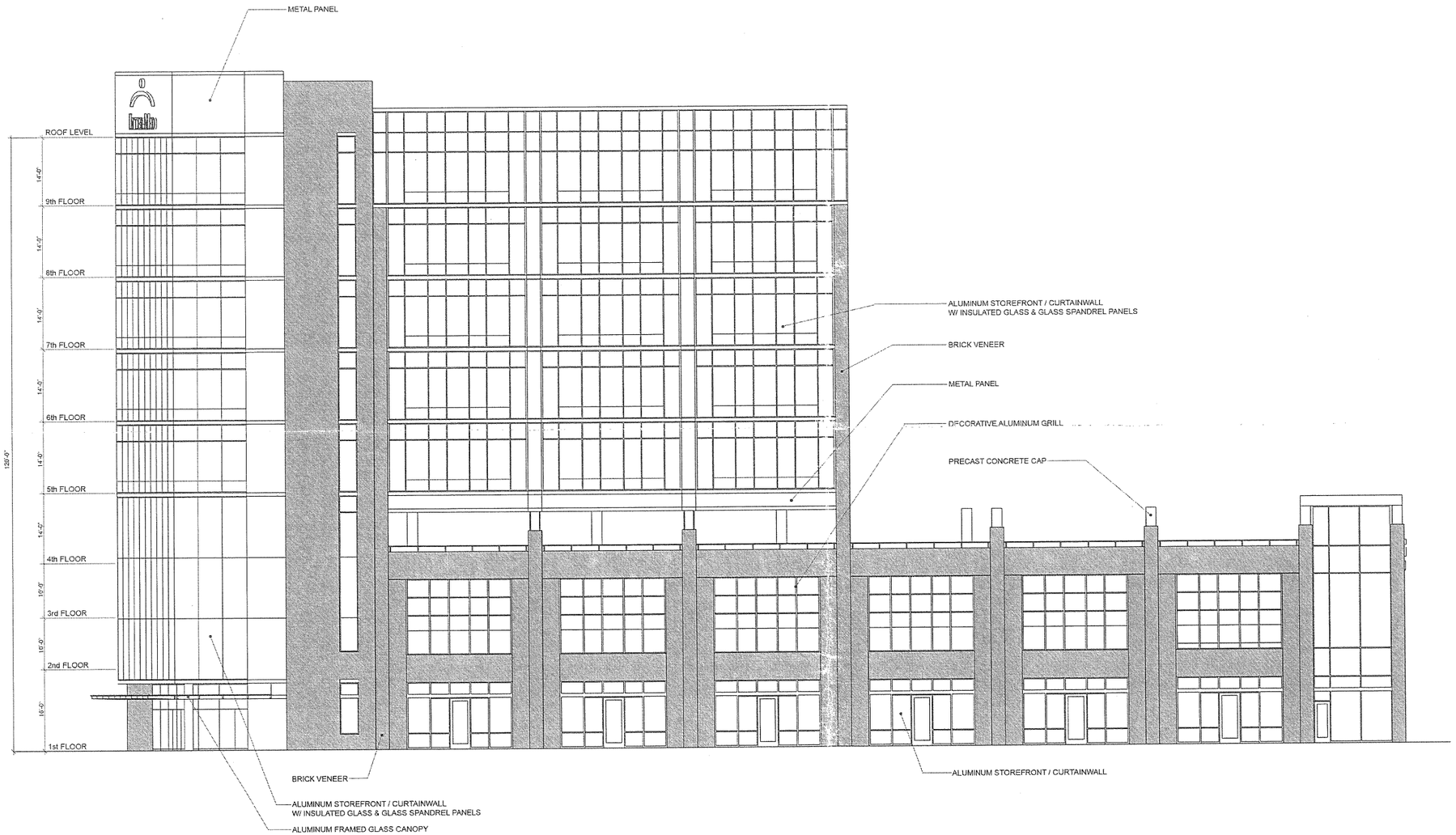
Drawing Title

GROUND FLOOR PLAN

PA / PE: JLJ | Drawn By: MMO

Drawing Number

A10.1



NOT FOR CONSTRUCTION

SOUTHEAST - MARGINAL WAY ELEVATION

3/32" = 1'-0"

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Portland, Maine

HA Project No.	06196

Key Plan

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Drawing Status

REVIEW

Drawing Title

EXTERIOR ELEVATION

PA / PE: JLJ	Drawn By: RAT

Drawing Number

A20.1

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SOUTHWEST - PREBLE STREET ELEVATION

3/32" = 1'-0"

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Project Title

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Portland, Maine

HA Project No. 06196

Key Plan

Mark	Date	Description
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Issue Dates

Drawing Status

REVIEW

Drawing Title

EXTERIOR ELEVATION

PA / PE: JLJ | Drawn By: RAT

Drawing Number

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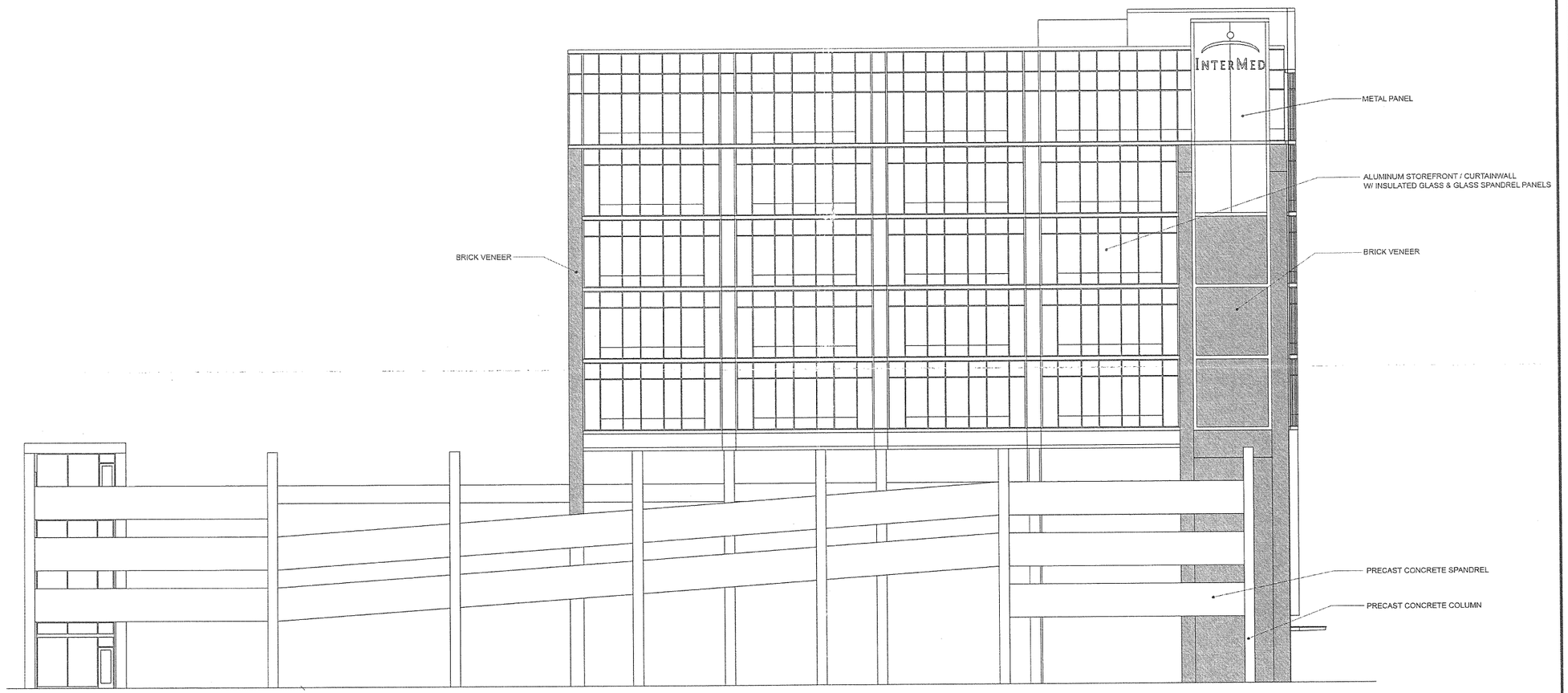

NOT FOR CONSTRUCTION

NORTHWEST ELEVATION
3/32" = 1'-0"

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Drawing Title

EXTERIOR ELEVATION

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Drawing Number

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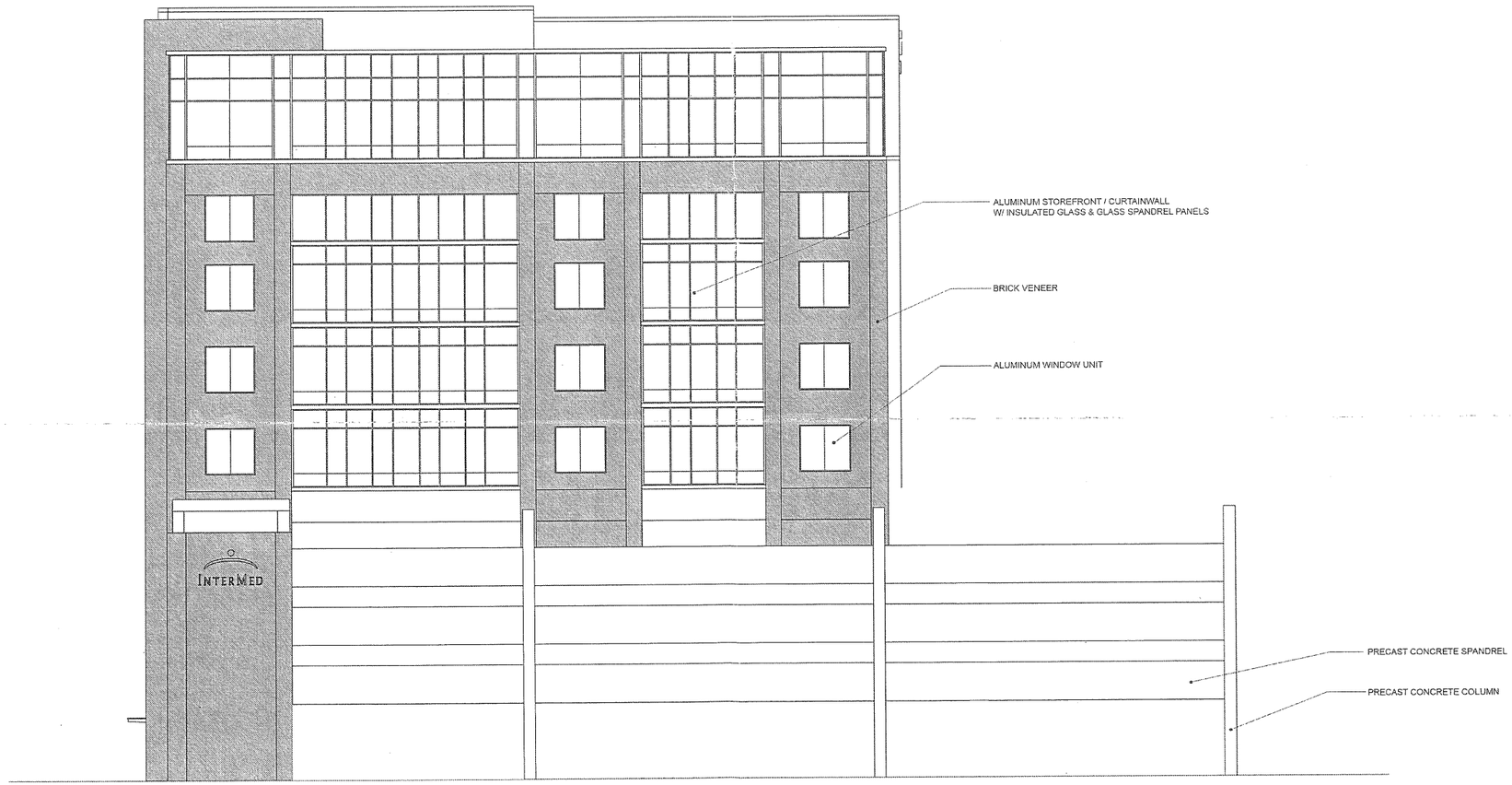

NOT FOR CONSTRUCTION

SOUTHWEST ELEVATION
3/32" = 1'-0"

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HA Project No.	06196

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REVIEW

Drawing Title

EXTERIOR ELEVATION

PA / PE: JLJ	Drawn By: RAT

Drawing Number

A20.4

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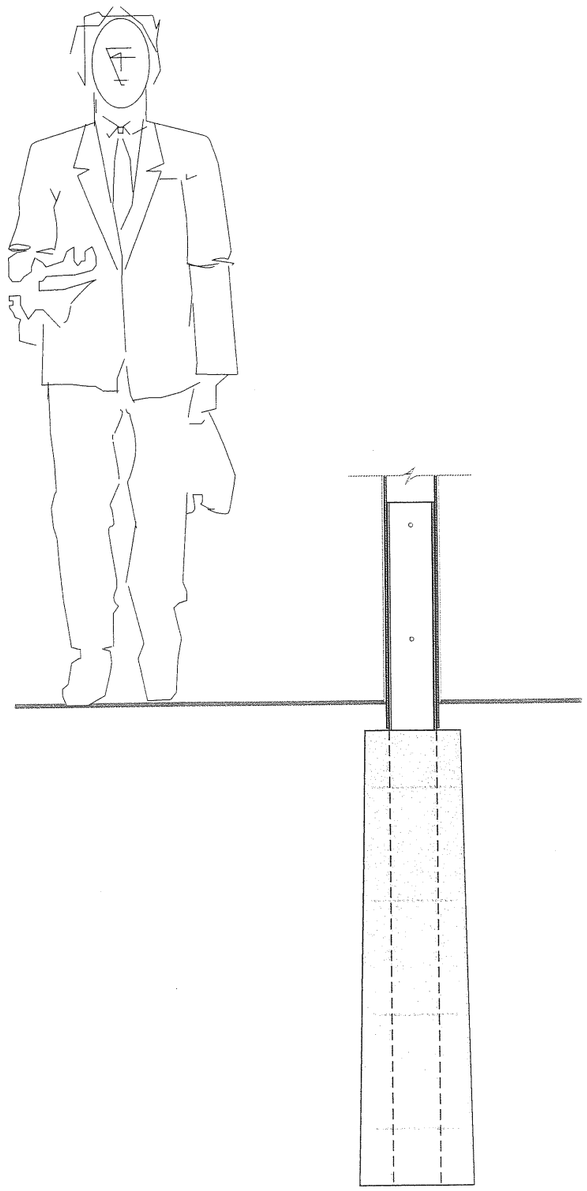
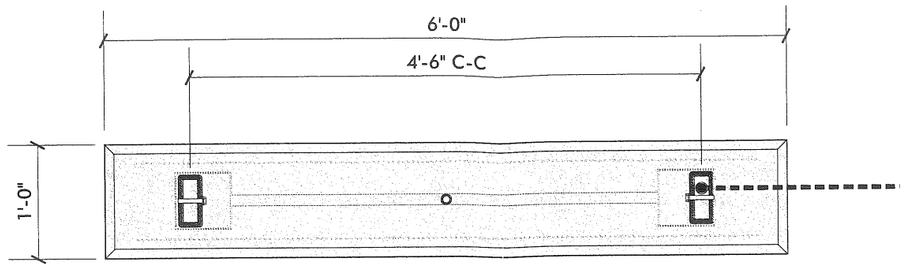
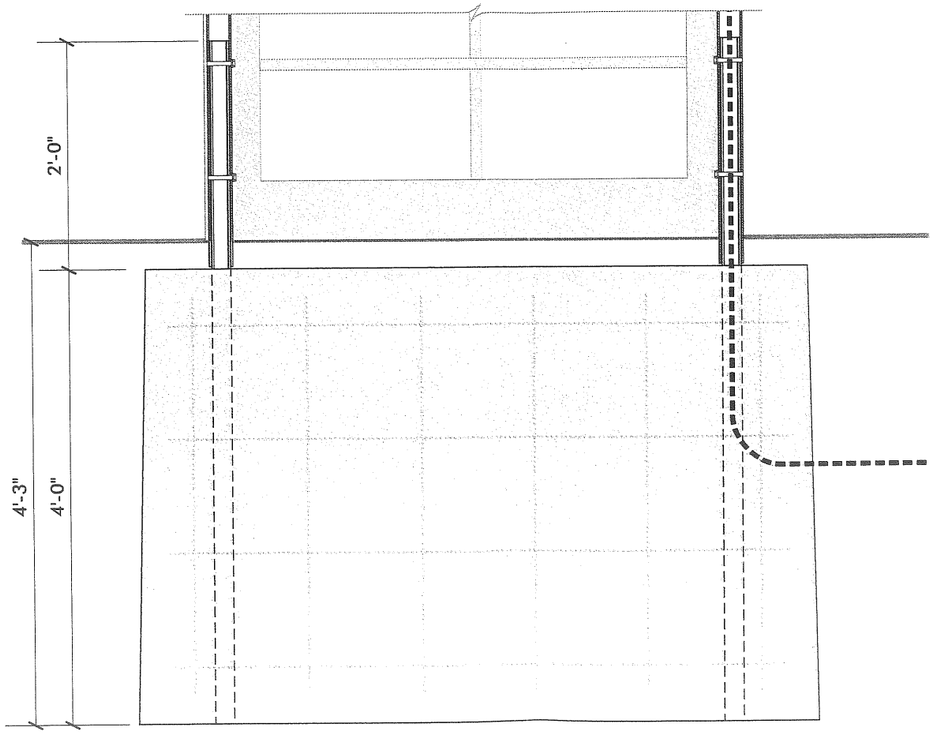
Composite Default screen







2½"x 5½" RECT STL POLES IN SIGN SLEEVE OVER 2"x 5" RECT STL TUBE STUBS SET IN REINFORCED CONCRETE BASE, BOLTED CONNECTION

BASE DETAILS

SCALE: ¾"=1'-0"

Neokraft Signs Inc.
686 Main Street
Lewiston, Maine 04240
Telephone: 207.782.9654
Facsimile: 207.782.0009
1.800.339.2258
http://www.neokraft.com

Custom Sign Fabrication

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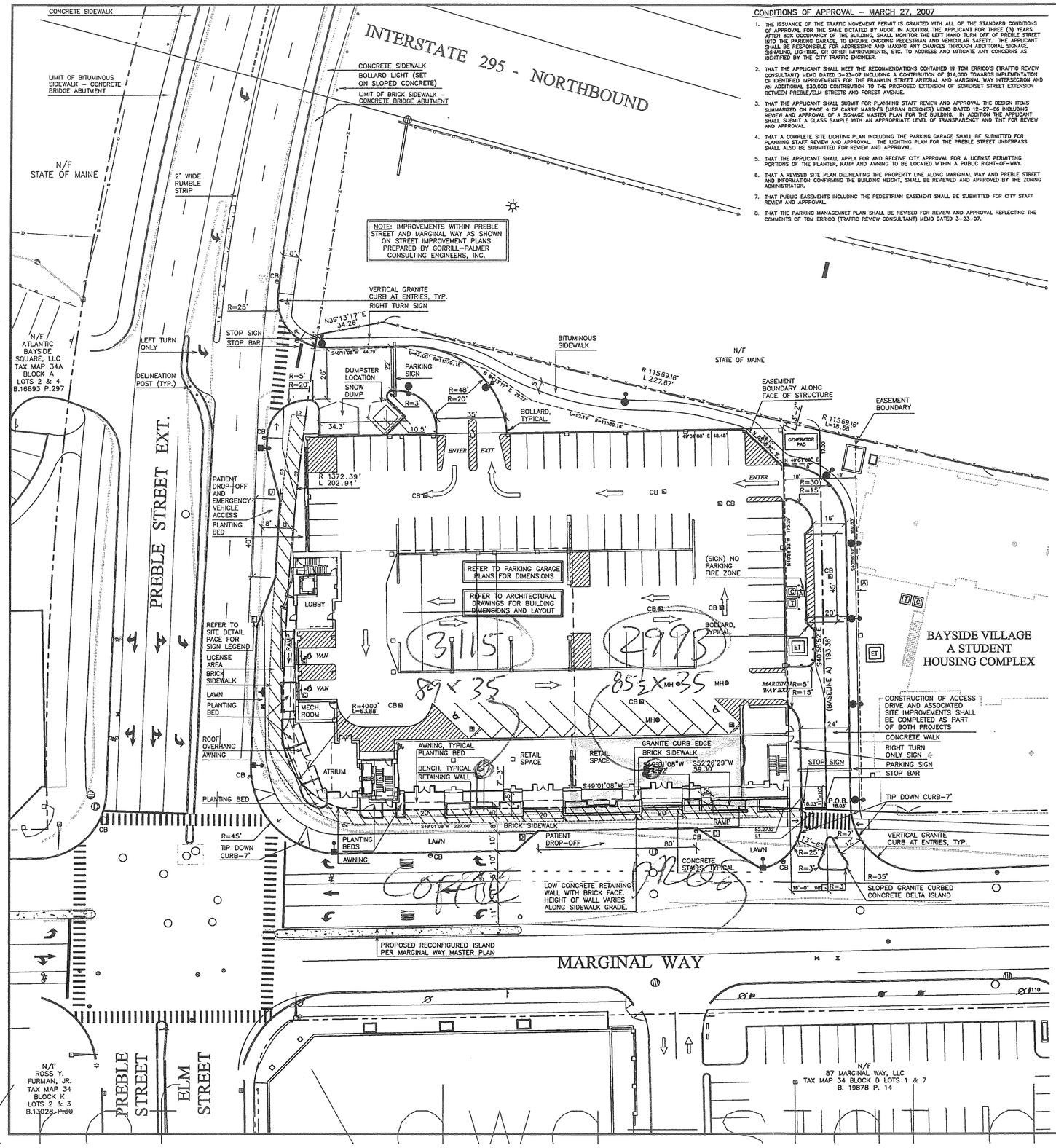
Intermed
NL010693

PROPERTY WAYFINDING

Location:	84 Marginal Way	
	Portland, ME	
Drawing No.:	3 of 3	
Drawn by:	DS	Rep.: EB
Date:	08.19.2008	
Lead No.:	NL010693	
Gen Ref.:	9073	



CONDITIONS OF APPROVAL – MARCH 27, 2007

1. THE ISSUANCE OF THE TRAFFIC MOVEMENT PERMIT IS GRANTED WITH ALL OF THE STANDARD CONDITIONS OF APPROVAL FOR THE SAME DICTATED BY MDOT. IN ADDITION, THE APPLICANT FOR THREE (3) YEARS AFTER BOS OCCUPANCY OF THE BUILDING, SHALL MONITOR THE LEFT HAND TURN OFF OF PREBLE STREET INTO THE PARKING GARAGE, TO ENSURE ONGOING PEDESTRIAN AND VEHICULAR SAFETY. THE APPLICANT SHALL BE RESPONSIBLE FOR ADDRESSING AND MAKING ANY CHANGES THROUGH ADDITIONAL SIGNAGE, SIGNALING, LIGHTING, OR OTHER IMPROVEMENTS, ETC. TO ADDRESS AND MITIGATE ANY CONCERNS AS IDENTIFIED BY THE CITY TRAFFIC ENGINEER.
2. THAT THE APPLICANT SHALL MEET THE RECOMMENDATIONS CONTAINED IN TOM ERRICO'S (TRAFFIC REVIEW CONSULTANT) MEMO DATED 3–23–07 INCLUDING A CONTRIBUTION OF $14,000 TOWARDS IMPLEMENTATION OF IDENTIFIED IMPROVEMENTS FOR THE FRANKLIN STREET ARTERIAL AND MARGINAL WAY INTERSECTION AND AN ADDITIONAL $30,000 CONTRIBUTION TO THE PROPOSED EXTENSION OF SOMERSET STREET EXTENSION BETWEEN PREBLE/ELM STREETS AND FOREST AVENUE.
3. THAT THE APPLICANT SHALL SUBMIT FOR PLANNING STAFF REVIEW AND APPROVAL THE DESIGN ITEMS SUMMARIZED ON PAGE 4 OF CARRIE MARSH'S (URBAN DESIGNER) MEMO DATED 12–27–06 INCLUDING REVIEW AND APPROVAL OF A SIGNAGE MASTER PLAN FOR THE BUILDING. IN ADDITION THE APPLICANT SHALL SUBMIT A GLASS SAMPLE WITH AN APPROPRIATE LEVEL OF TRANSPARENCY AND TINT FOR REVIEW AND APPROVAL.
4. THAT A COMPLETE SITE LIGHTING PLAN INCLUDING THE PARKING GARAGE SHALL BE SUBMITTED FOR PLANNING STAFF REVIEW AND APPROVAL. THE LIGHTING PLAN FOR THE PREBLE STREET UNDERPASS SHALL ALSO BE SUBMITTED FOR REVIEW AND APPROVAL.
5. THAT THE APPLICANT SHALL APPLY FOR AND RECEIVE CITY APPROVAL FOR A LICENSE PERMITTING PORTIONS OF THE PLANTER, RAMP AND AWNING TO BE LOCATED WITHIN A PUBLIC RIGHT–OF–WAY.
6. THAT A REVISED SITE PLAN DELINEATING THE PROPERTY LINE ALONG MARGINAL WAY AND PREBLE STREET AND INFORMATION CONFIRMING THE BUILDING HEIGHT, SHALL BE REVIEWED AND APPROVED BY THE ZONING ADMINISTRATOR.
7. THAT PUBLIC EASEMENTS INCLUDING THE PEDESTRIAN EASEMENT SHALL BE SUBMITTED FOR CITY STAFF REVIEW AND APPROVAL.
8. THAT THE PARKING MANAGEMENT PLAN SHALL BE REVISED FOR REVIEW AND APPROVAL REFLECTING THE COMMENTS OF TOM ERRICO (TRAFFIC REVIEW CONSULTANT) MEMO DATED 3–23–07.

ORIGINAL CONDITIONS OF APPROVAL – JANUARY 9, 2007

1. THAT THE APPLICANT SHALL MEET THE RECOMMENDATIONS CONTAINED IN TOM ERRICO'S (TRAFFIC REVIEW CONSULTANT) MEMO DATED 1–5–07 INCLUDING A CONTRIBUTION OF $10,000 TOWARDS IMPLEMENTATION OF IDENTIFIED IMPROVEMENTS FOR THE FRANKLIN STREET ARTERIAL AND MARGINAL WAY INTERSECTION AND AN ADDITIONAL $22,000 CONTRIBUTION TO THE PROPOSED EXTENSION OF SOMERSET STREET EXTENSION BETWEEN PREBLE/ELM STREET AND FOREST AVENUE.
2. THAT THE APPLICANT SHALL SUBMIT FOR PLANNING STAFF REVIEW AND APPROVAL THE DESIGN ITEMS SUMMARIZED ON PAGE 4 OF CARRIE MARSH'S (URBAN DESIGNER) MEMO DATED 12–27–06.
3. THAT A COMPLETE SITE LIGHTING PLAN INCLUDING THE PARKING GARAGE SHALL BE SUBMITTED FOR PLANNING STAFF REVIEW AND APPROVAL. THE LIGHTING PLAN FOR THE PREBLE STREET UNDERPASS SHALL ALSO BE SUBMITTED FOR REVIEW AND APPROVAL.
4. THAT THE SITE PLAN SHALL BE REVISED REFLECTING THE COMMENTS OF JEFF TARLING (CITY ARBORIST).
5. THAT THE APPLICANT SHALL APPLY FOR AND RECEIVE CITY APPROVAL FOR A LICENSE PERMITTING PORTIONS OF THE PLANTER, RAMP AND AWNING TO BE LOCATED WITHIN A PUBLIC RIGHT–OF–WAY.
6. THAT A REVISED CIRCULATION AND PARKING PLAN OF THE PARKING GARAGE CLEARLY LABELING THE PLAN SCALE, DIMENSIONS OF THE PARKING AISLES AND PARKING SPACES SHALL BE SUBMITTED FOR STAFF REVIEW AND APPROVAL.
7. THAT A REVISED PLAN SHALL BE SUBMITTED TO THE ZONING ADMINISTRATOR FOR REVIEW AND APPROVAL CLEARLY DELINEATING THE PROPERTY LINE ALONG MARGINAL WAY AND PREBLE STREET AND THAT ADDITIONAL INFORMATION BE PROVIDED TO CONFIRM THE BUILDING HEIGHT.
8. THAT PUBLIC EASEMENTS INCLUDING THE PEDESTRIAN EASEMENT SHALL BE SUBMITTED FOR CITY STAFF REVIEW AND APPROVAL.
9. THAT THE SIDEWALK SHALL BE EXTENDED AT THE CORNER OF MARGINAL WAY AND PREBLE STREET TO THE STREET CURB LINE.
10. THE APPLICANT SHALL MEET WITH THE CITY STAFF TO REVISIT THE SCREENING OF THE PARKING GARAGE (AT THE BASE OF THE OFFICE BUILDING ON THE FOURTH FLOOR LEVEL) ALONG PREBLE STREET AND MARGINAL WAY TO ENSURE ITS CONFORMANCE WITH THE B–3 URBAN DESIGN GUIDELINES.
11. THAT THE PARKING MANAGEMENT PLAN SUBMITTED AS ATTACHMENT G OF PLANNING REPORT 01–07 (MEMORANDUM DATED MAY 31, 2006 FROM BILL CRAINSHAW, P.E. VHB, INC. TO GREG SHINBERG, COPY ATTACHED) SHALL BE FINALIZED AND SUBMITTED FOR STAFF REVIEW AND APPROVAL.
12. THE WIDTH AND LOCATION OF STAIRS/PLANTERS AND OTHER ELEMENTS SHALL BE FINALIZED IN CONFORMANCE WITH THE B–3 URBAN DESIGN GUIDELINES SUBJECT TO REVIEW AND APPROVAL BY THE CITY URBAN DESIGNER.

GENERAL NOTES

1. TOTAL SITE AREA: 59,576 SF (1.37 ACRES)
2. ZONING DISTRICT: B–7 MIXED DEVELOPMENT DISTRICT ZONE
3. SPACE AND BULK REQUIREMENTS:

	B–7	PROPOSED
MINIMUM LOT SIZE:	NONE	1.37 ACRES
MINIMUM FRONTAGE:	NONE	500 FEET
MINIMUM FRONT SETBACK:	NONE	1 FOOT
MINIMUM SIDE SETBACK:	NONE	18 FEET
MINIMUM REAR SETBACK:	NONE	3 FEET
MAXIMUM STREET SETBACK:	10 FEET	10 FEET
MAXIMUM LOT COVERAGE:	100%	75%
MAXIMUM RESIDENTIAL DENSITY:	NONE	N/A
MAXIMUM BUILDING HEIGHT:	125 FEET	135 FEET
MINIMUM BUILDING HEIGHT:	4 FLOORS	10 FLOORS

4. OWNER OF PROPERTY:
   CAPITAL, LLC
   50 PORTLAND PIER, SUITE 400
   PORTLAND, MAINE 04101
5. PARKING REQUIRED:
   REQUIRED: 0 SPACES
   PROPOSED: 308 SPACES – ON SITE
6. BUILDING SUMMARY:

BUILDING FOOTPRINT:	44,580 SF
TOTAL BUILDING SQUARE FOOTAGE:	293,520 SF
RETAIL SPACE:	4,500 SF
OFFICE SPACE:	105,000 SF
LOT COVERAGE (BUILDING):	75%

7. BOUNDARY LINE AND TOPOGRAPHIC INFORMATION BASED ON SURVEYS PREPARED BY OWEN HASKELL, INC. FROM PLANS DATED JANUARY 3, 2006.
8. BENCHMARKS ARE PK NAIL IN UP#13 ON THE WESTERN SIDE OF MARGINAL WAY WITH AN ELEVATION OF 10.62 AND NORTHERN MOST BONNET BOLT ON FIRE HYDRANT ON EASTERN SIDE OF MARGINAL WAY WITH AN ELEVATION OF 12.22.
9. STREETSIDE RIGHT–OF–WAY LIGHTING SHALL BE HOLOPHANE ESPLANADE SERIES LUMINAIRE WITH TAPERED STEEL POLE, DEC SERIES BRACKET ARM, 24'–3" NOMINAL HEIGHT, COLOR SILVER METALLIC ALUMINUM (F264H) TO CONFORM TO CITY STANDARDS. THIS LIGHTING IS STANDARD FOR THE BAYSIDE NEIGHBORHOOD.
10. SITE AND GARAGE LIGHTING TO BE MANUFACTURED BY KIM LIGHTING. SITE LIGHTING TO BE POLE MOUNTED SAR2 AND SAR3, THE ARCHETYPE, 175 WATT METAL HALIDE IN DARK BRONZE MOUNTED AT 14'–6". GARAGE OVERHEAD FIXTURES TO BE PGL4, PARKING GARAGE LUMINAIRES, 175 WATT METAL HALIDE IN PLATINUM SILVER. GARAGE POLE MOUNTED LIGHTING TO BE AR3, THE ARCHETYPE, 250 WATT METAL HALIDE IN DARK BRONZE MOUNTED AT 18'–0".
11. BUILDING MOUNTED AND SITE POLE MOUNTED LIGHTING TO BE APPROVED BY PLANNING STAFF.
12. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING AND KEEPING STREETS CLEAN DURING CONSTRUCTION. A MAINTENANCE PLAN SHALL BE PREPARED AND APPROVED BY THE CITY AND OWNERS REPRESENTATIVE.
13. DIMENSIONS ARE FROM FACE OF CURB AND OR EXTERIOR FACADE OF BUILDING.
14. SITE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ALL LIGHT POLE BASES (INCLUDING THE PUBLIC R.O.W.) AND TRENDING FOR CONDUIT. ALL STREET LIGHT POWER LINES TO BE UNDERGROUND.
15. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONDUIT FOR ON–SITE AND OFF–SITE ELECTRIC SERVICE FOR POLE MOUNTED FIXTURES. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ON–SITE POLE MOUNTED LIGHT FIXTURES AND POLES. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR OFF–SITE LIGHT POLES. OFF–SITE POLE MOUNTED FIXTURES TO BE LEASED BY THE CITY OF PORTLAND FROM CENTRAL MAINE POWER. OFF–SITE POLE MOUNTED FIXTURES TO BE INSTALLED BY CENTRAL MAINE POWER.
16. DOORS FOR THE PROPOSED RETAIL BUILDING SPACES ALONG MARGINAL WAY AND THE MAIN ENTRANCE AT THE CORNER OF PREBLE STREET AND MARGINAL WAY SHALL BE OPEN TO THE PUBLIC DURING NORMAL BUSINESS HOURS.

CITY OF PORTLAND NOTES

1. LANDSCAPING SHALL MEET THE "ARBORICULTURAL SPECIFICATIONS AND STANDARDS OF PRACTICE AND LANDSCAPE GUIDELINES" OF THE CITY OF PORTLAND TECHNICAL AND DESIGN STANDARDS AND GUIDELINES.
2. THE ENTIRE SITE SHALL BE DEVELOPED AND/OR MAINTAINED AS DEPICTED ON THE SITE PLAN. APPROVAL OR THE PLANNING AUTHORITY OF PLANNING BOARD SHALL BE REQUIRED FOR ANY ALTERATION TO OR DEVIATION FROM THE APPROVED SITE PLAN, INCLUDING, WITHOUT LIMITATION: TOPOGRAPHY; DRAINAGE; LANDSCAPING; RETENTION OF WOODED OR LAWN AREAS; ACCESS; SIZE, LOCATION AND SURFACING OF PARKING AREAS; AND LOCATION AND SIZE OF BUILDINGS.
3. ALL POWERLINE UTILITIES SERVING THE BUILDING SHALL BE UNDERGROUND.
4. SIDEWALKS AND CURBING SHALL BE DESIGNED AND BUILT WITH TIP DOWN RAMPS AT ALL STREET CORNERS, CROSSWALKS AND DRIVEWAYS IN CONFORMANCE WITH THE CITY OF PORTLAND TECHNICAL AND DESIGN STANDARDS AND GUIDELINES.
5. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE DESIGNED IN ACCORDANCE WITH MAINE EROSION AND SEDIMENT CONTROL HANDBOOK FOR CONSTRUCTION: BEST MANAGEMENT PRACTICES PUBLISHED BY THE CUMBERLAND COUNTY SOIL AND WATER CONSERVATION DISTRICT AND MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, MARCH 2003, OR LATEST EDITION. [NOTE: THE SITE PLAN SHOULD SPECIFY THE EROSION CONTROL DEVICE TO BE EMPLOYED (SILT FENCE, HAY BALE, ETC.) AS WELL AS THEIR LOCATION.]
6. ALL EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY SITE EXCAVATION OR REGRADING.
7. ALL DISTURBED AREAS ON THE SITE NOT COVERED BY BUILDINGS OR PAVED AREAS SHALL BE STABILIZED WITH LOAM AND SEED OR OTHER METHODS AS REQUIRED BY BEST MANAGEMENT PRACTICES [SEE ABOVE.]
8. PRIOR TO CONSTRUCTION, A PRECONSTRUCTION MEETING SHALL BE HELD AT THE PROJECT SITE WITH THE CONTRACTOR, DEVELOPMENT REVIEW COORDINATOR, PUBLIC WORK'S REPRESENTATIVE AND OWNER TO REVIEW THE CONSTRUCTION SCHEDULE AND CRITICAL ASPECTS OF THE SITE WORK. AT THAT TIME, THE SITE/BUILDING CONTRACTOR SHALL PROVIDE THREE (3) COPIES OF A DETAILED CONSTRUCTION SCHEDULE TO THE ATTENDING CITY REPRESENTATIVE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ARRANGE A MUTUALLY AGREEABLE TIME FOR THE PRECONSTRUCTION MEETING.
9. EXISTING VEGETATION SHALL BE CONSERVED IN AREAS SHOWN ON THIS SITE. FENCING OR OTHER PROTECTIVE BARRIERS SHALL BE ERECTED OUTSIDE THE DRIP–LINE OF INDIVIDUAL, GROUPINGS OF TREES DESIGNATED FOR PRESERVATION PRIOR TO THE ONSET OF CONSTRUCTION. REGRADING SHALL NOT TAKE PLACE WITHIN THE DRIP–LINE OF TREES DESIGNATED FOR PRESERVATION. NO STORAGE OR CONSTRUCTION MATERIALS SHALL BE PERMITTED WITHIN THE DRIP–LINE OF TREES TO BE PRESERVED.

LEGEND

	EXISTING	PROPOSED		EXISTING	PROPOSED
PROPERTY LINE			WATER VALVE	⊗	M
EASEMENT LINE			UTILITY POLE	–○–	–○–
LICENSE AREA			ELECTRIC TRANSFORMER		ET
MONUMENT FOUND	▣ MON		TELEPHONE PAD		T
CATCHBASIN	⊕	CB	CABLE PAD		C
MANHOLE	○	●	LIGHT FIXTURE – STREET		
HYDRANT			LIGHT FIXTURE – SITE		
			CURB		

LICENSE AREA METES & BOUNDS

No.	Delta	Radius	Arc Length	Chord Length	Chord Bearing
C1	91°30'42"	47.0000	75.0674	67.3390	N85°13'38"W
C2	06°43'18"	1379.3900	161.8231	161.7304	N38°06'47"W
C3	06°43'18"	1372.3900	161.0022	160.9099	S38°06'47"E
C4	91°30'43"	40.0000	63.8874	57.3100	S85°13'39"E

No.	Bearing	Distance
L1	S40°58'52"E	3.8794'
L2	N57°14'52"E	7.0000'

Scale: 1"=20'
0 10 20 40 FT

SEAL

pizzagalli construction company

MITCHELL & ASSOCIATES
Landscape Architects
The Staples School
70 Center Street
Portland, Maine 04101
Tel: (207) 774–4427
Fax: (207) 774–2460

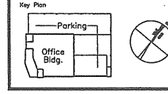
Gorrill–Palmer Consulting Engineers, Inc.
Traffic and Civil Engineering Services
15 Shaker Road, Gray, ME 04039
207–657–6910
FAX: 207–657–6912

Project Title

84 MARGINAL WAY
Portland, Maine

HA Project No.: 06195

Key Plan



Mark	Date	Description

Issue Dates

Drawing Status

Drawing Title
LAYOUT AND LIGHTING PLAN

PA / PE: RBM | Drawn By: BAM

Drawing Number
2

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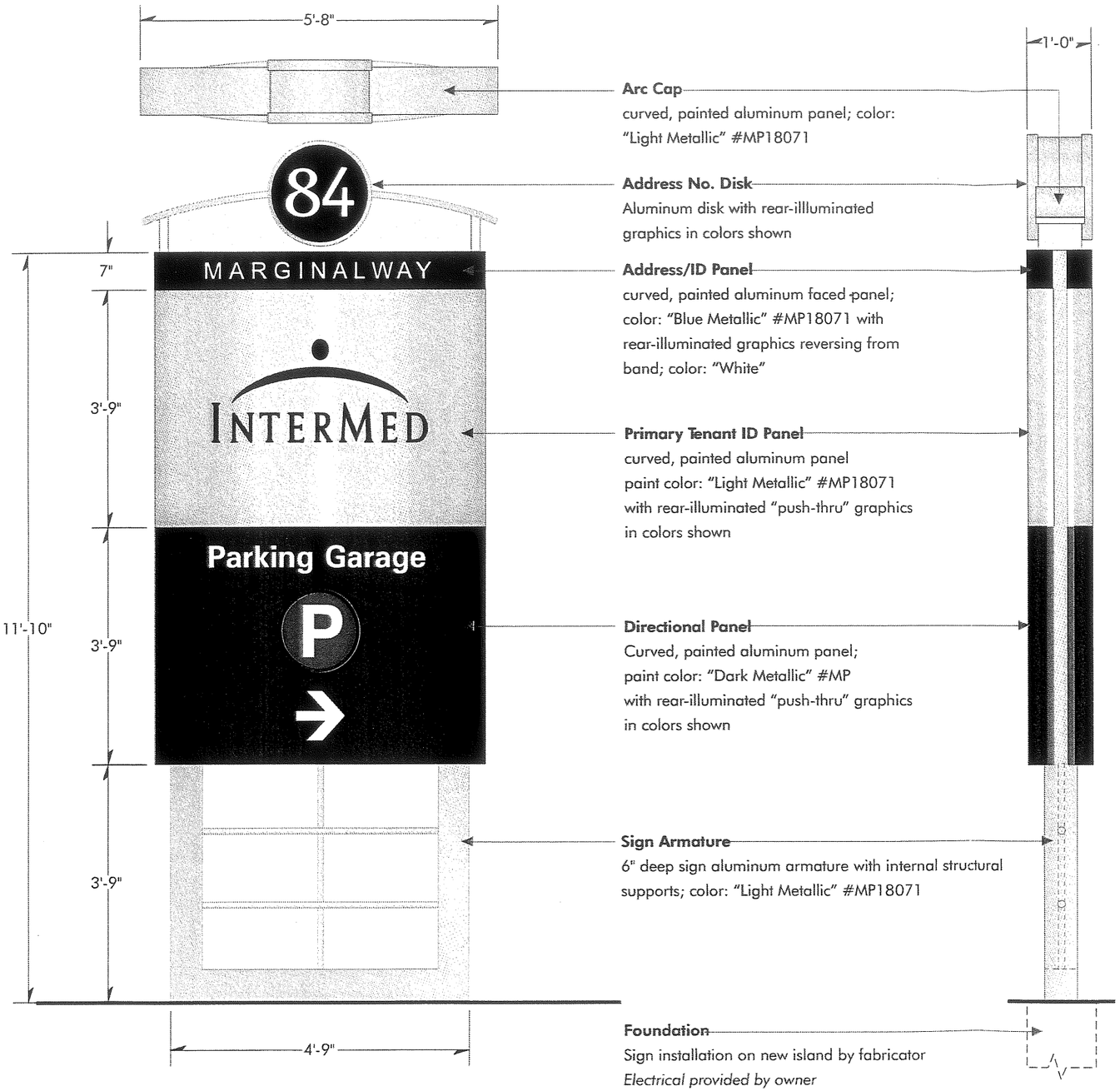
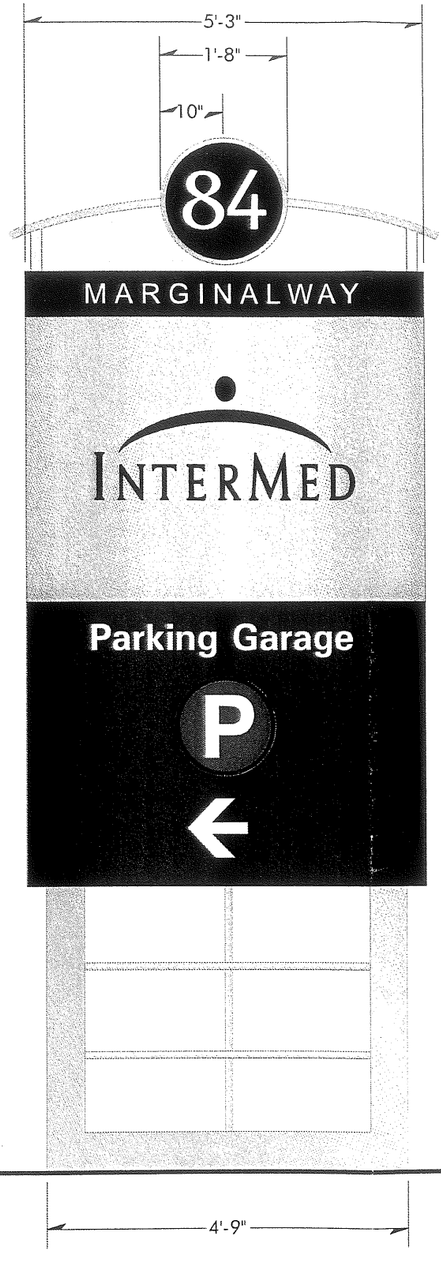
Composite Default screen





D1 2 **Primary ID/Directional Sign** Side **A** *on Marginal Way*
Scale: 1/2" = 1'-0"

Side View
typical

Primary ID/Directional Sign Side **B** *on Marginal Way*
Scale: 1/2" = 1'-0"

Neokraft SIGNS

Neokraft Signs Inc.
686 Main Street
Lewiston, Maine 04240
Telephone: 207.782.9654
Facsimile: 207.782.0009
1.800.339.2258
http://www.neokraft.com

Custom Sign Fabrication

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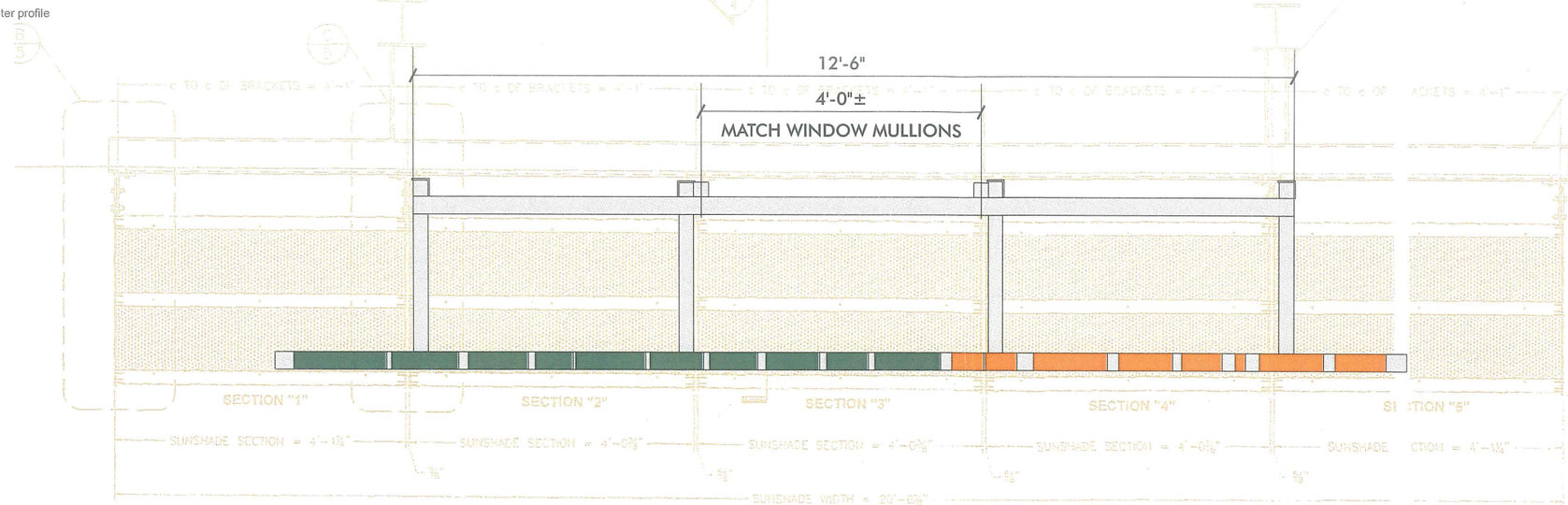
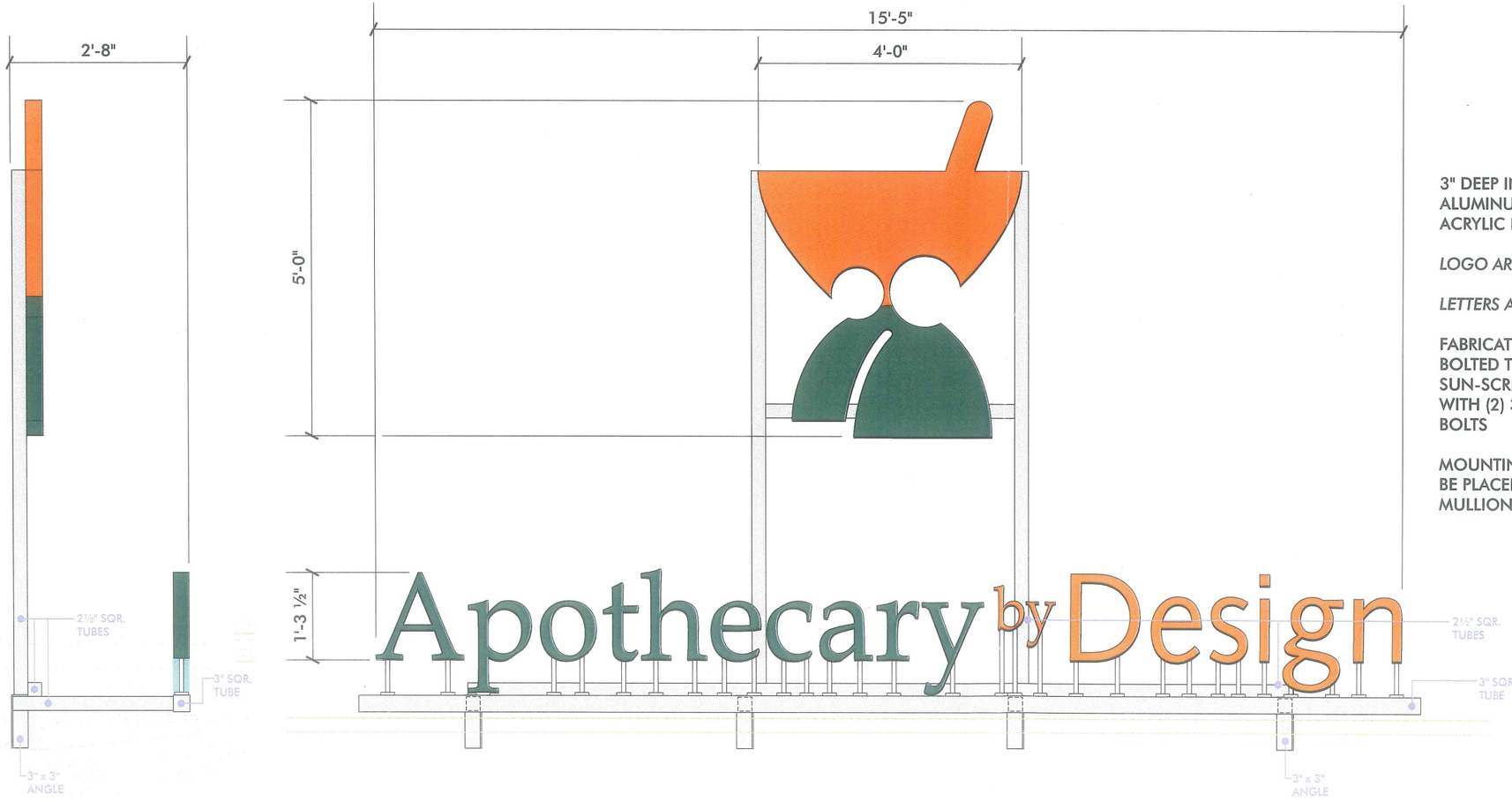
Intermed
NL010693

ROPERTY WAYFINDING

ation:	84 Marginal Way
	Portland, ME
wing No.:	2 of 3
Drawn by:	DS Rep.: EB
Date:	08.19.2008
Lead No.:	NL010693
Gen Ref.:	9073

Color profile: Generic CMYK printer profile
Composite Default screen





3" DEEP INTERNAL LED ILLUMINATED ALUMINUM GRAPHICS WITH TRIMMED ACRYLIC FACES

LOGO AREA: 20 SQ. FT.

LETTERS AREA: 20 SQ. FT.

FABRICATED ALUMINUM STRUCTURE, BOLTED TO EXISTING STEEL TUBE AT SUN-SCREEN MOUNTING LOCATIONS WITH (2) 3/8" DIA.-16x 2"LG S/S H/ BOLTS

MOUNTING STRUCTURE VERTICALS TO BE PLACED IN FRONT OF WINDOW MULLIONS; VERIFY ALL DIMENSIONS

CANOPY ID—PHARMACY

SCALE: ½"=1'-0" (1) REQUIRED

Neokraft Signs

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http://www.neokraft.com

Custom Sign Fabrication

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Apothecary by Design 9574

Location:	84 Marginal Way	
	Portland, ME	
Drawing No.:	3 of 4	
Drawn by:	DS	Rep.: EB
Date:	11.04.2008	
Lead No.:	NL010626	
Gen Ref.:		

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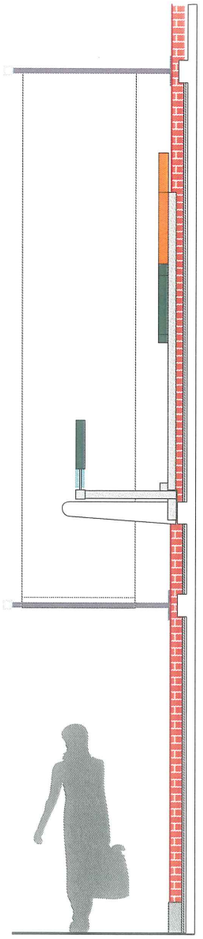
Color profile: Generic CMYK printer profile
Composite Default screen

Storefront Logo *Café*
3" deep channel
graphics in colors shown
mounted to fabricated
aluminum structure



Canopy ID *Café*
3" deep channel
letters in colors shown
post-mounted to fabricated
aluminum structure

2ID B **Café Retail ID** Banners/Dimensional Graphics *canopy/storefront mounted*
Scale: 1/4" = 1'- 0"

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Apothecary by Design 9574

Location:	84 Marginal Way	
	Portland, ME	
Drawing No.:	2 of 4	
Drawn by:	DS	Rep.: EB
Date:	11.04.2008	
Lead No.:	NL010626	
Gen Ref.:		

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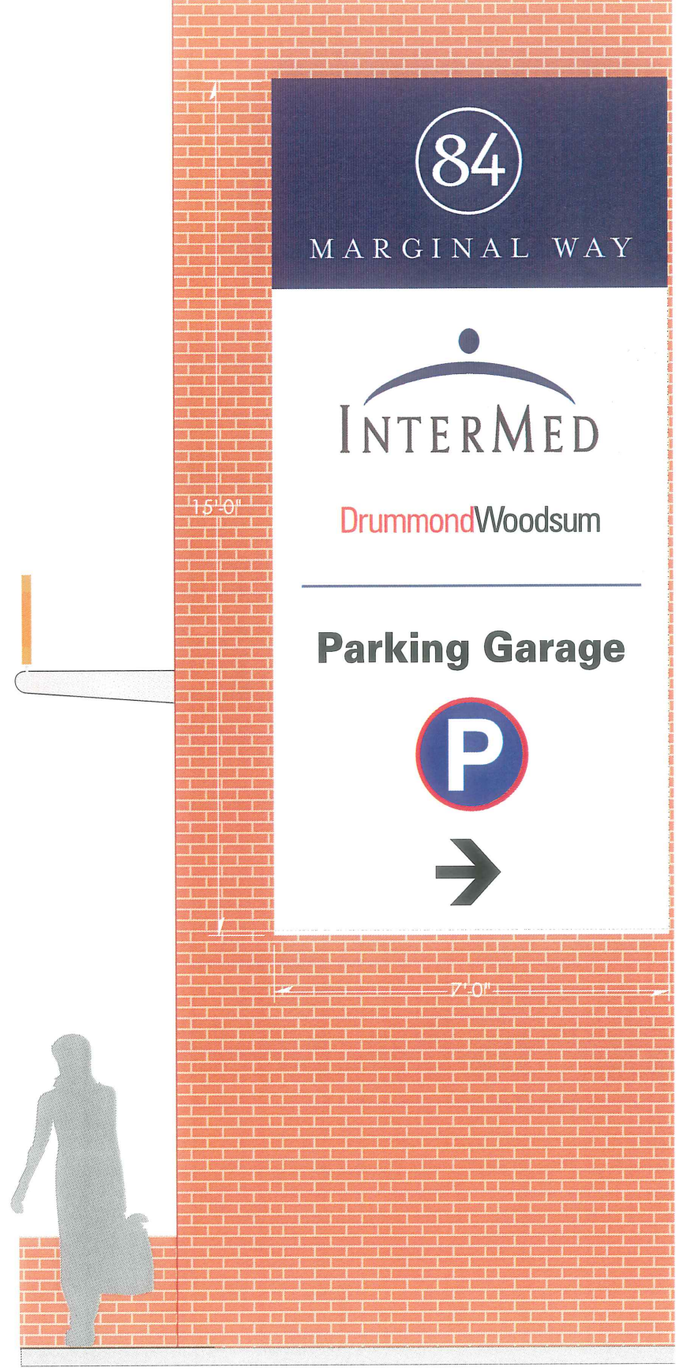
Temporary Banner
Appliqué or digital graphics applied to banner fabricated from nylon flag bunting or scrim material and securely mounted to brick masonry wall in location shown.



PID T **Parking ID/Directional** Temporary Banner *masonry wall mounted*
Scale: relative to image

PID A **Temporary Banner** *mounted to brick masonry*
Scale: 3/8" = 1'- 0"

84 MARGINAL WAY
Portland, Maine

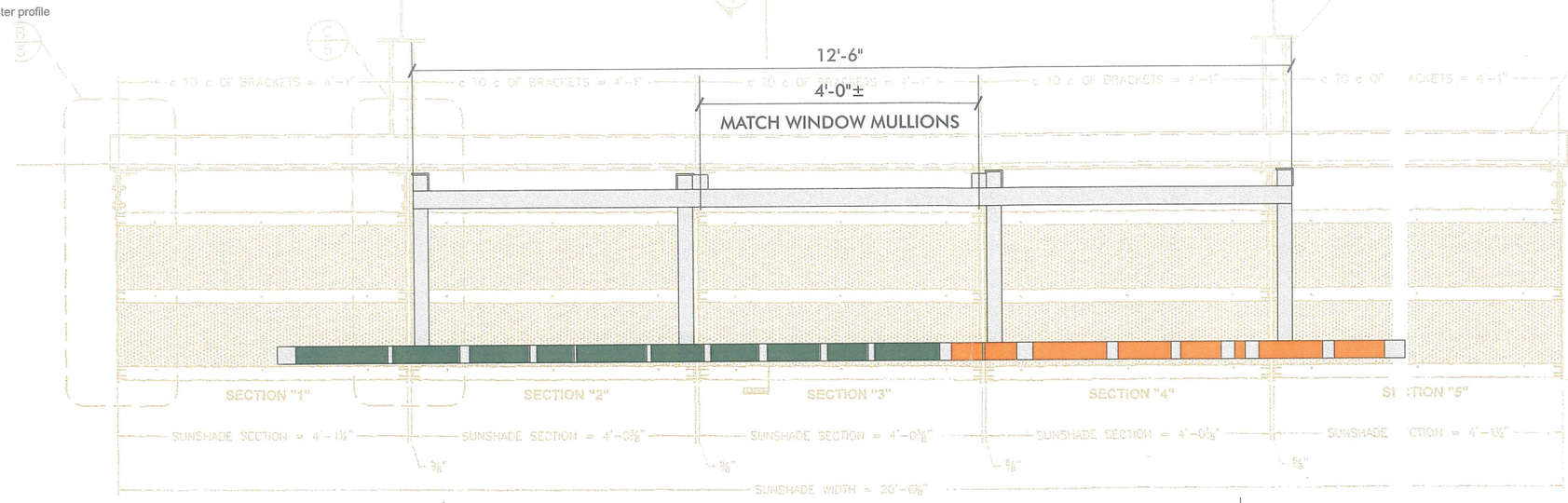
ENVIRONMENTAL GRAPHICS
Gamble Design LLC
154 Maplewood Avenue
Portsmouth NH 03801
✆ 603.427.1300

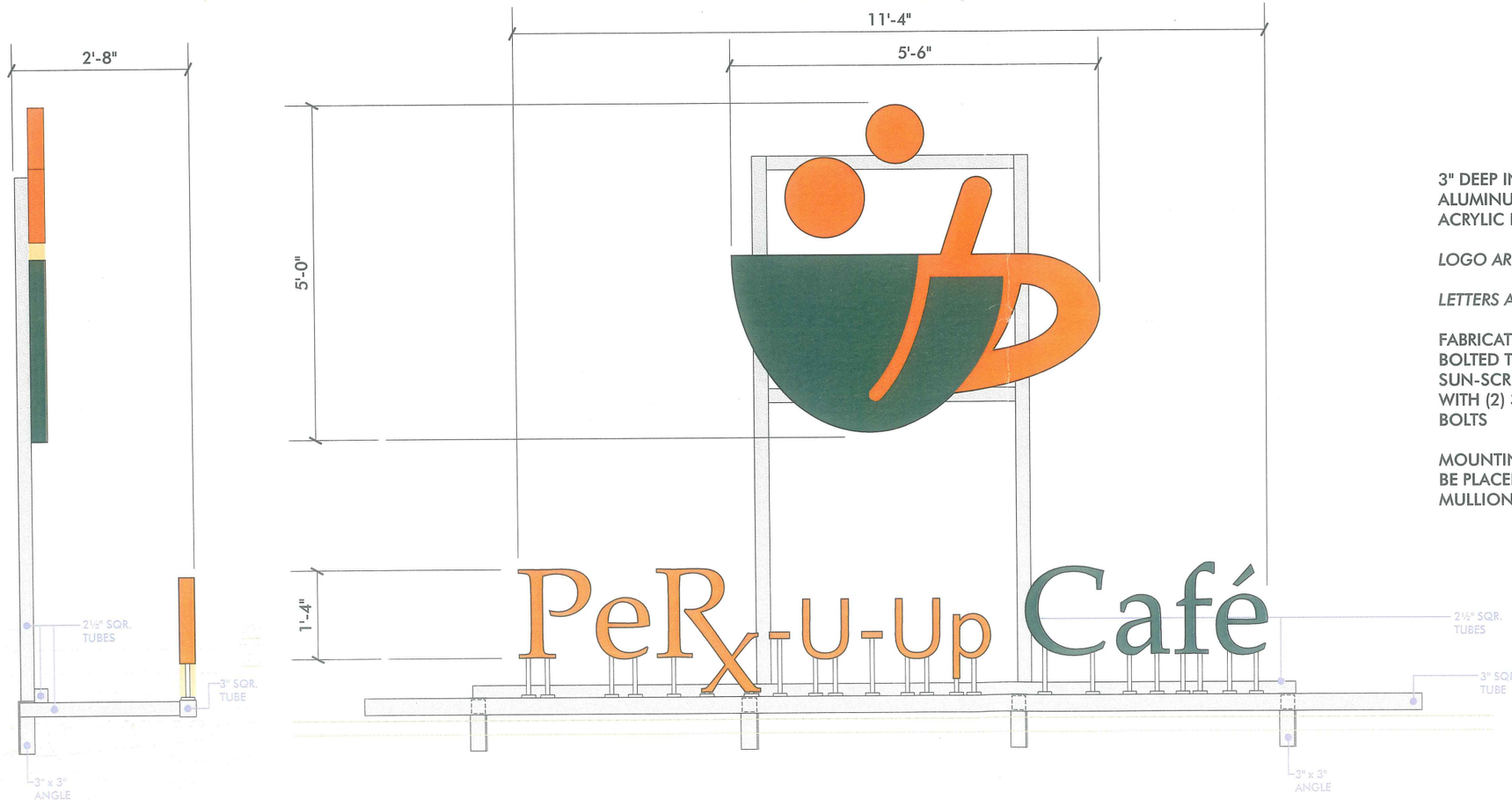
ARCHITECTURE
Harriman Architects + Engineers
123 Middle Street
Portland ME 04101
✆ 207.775.0053

DRAWING TITLE
Parking/Building ID *at Marginal Way access drive*
Temporary banner graphics on *flag bunting or scrim*
Scale: as shown
28 October 2008

DRAWING N°
PID.T>

Color profile: Generic CMYK printer profile
Composite Default screen





3" DEEP INTERNAL LED ILLUMINATED ALUMINUM GRAPHICS WITH TRIMMED ACRYLIC FACES

LOGO AREA: 27.5 SQ. FT.

LETTERS AREA: 15.1 SQ. FT.

FABRICATED ALUMINUM STRUCTURE, BOLTED TO EXISTING STEEL TUBE AT SUN-SCREEN MOUNTING LOCATIONS WITH (2) 3/8" DIA.-16x 2"LG S/S H/ BOLTS

MOUNTING STRUCTURE VERTICALS TO BE PLACED IN FRONT OF WINDOW MULLIONS; VERIFY ALL DIMENSIONS

CANOPY ID—CAFE

SCALE: ½"=1'-0" (1) REQUIRED

Neokraft SIGNS

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Apothecary by Design 9574

Location:	84 Marginal Way	
	Portland, ME	
Drawing No.:	4 of 4	
Drawn by:	DS	Rep.: EB
Date:	11.04.2008	
Lead No.:	NL010626	
Gen Ref.:		

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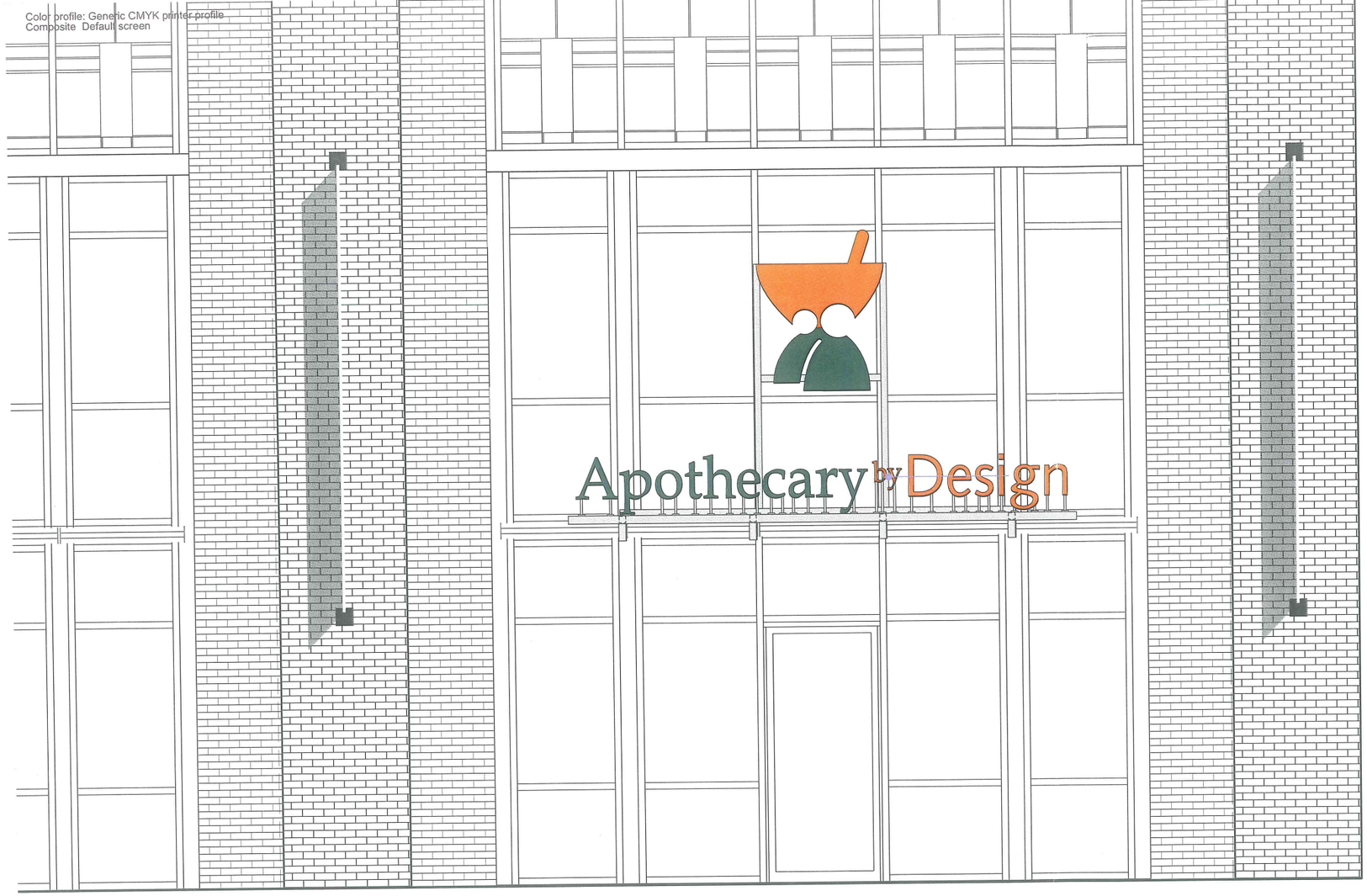
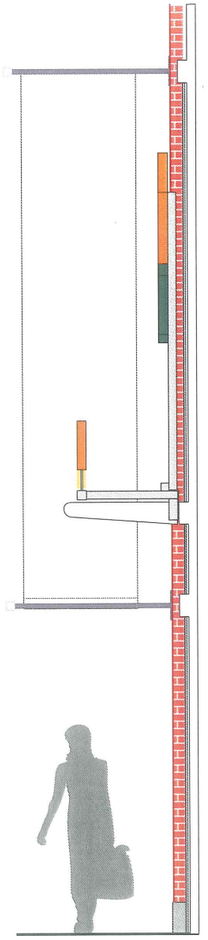
Color profile: Generic CMYK printer profile
Composite Default screen



Canopy ID *Pharmacy*
3" deep channel
letters in colors shown
post-mounted to fabricated
aluminum structure

Storefront Logo *Pharmacy*
3" deep channel
graphics in colors shown
mounted to fabricated
aluminum structure



1ID A **Pharmacy Retail ID** Banners/Dimensional Graphics *canopy/storefront mounted*
Scale: 1/4" = 1'- 0"

Neokraft SIGNS

Neokraft Signs Inc.
686 Main Street
Lewiston, Maine 04240
Telephone: 207.782.9654
Facsimile: 207.782.0009
1.800.339.2258
http://www.neokraft.com

Custom Sign Fabrication

These plans are the exclusive property of Neokraft Signs, Inc. and are the result of the original work of its employees. They are submitted to Neokraft's client for the sole purpose of consideration of whether to purchase these plans or to purchase from Neokraft a sign manufactured according to these plans.

Distribution or exhibition of these plans to anyone other than employees of said client, or use of these plans to construct a sign similar to the one embodied herein, is expressly forbidden. In the event that such exhibition or construction occurs, Neokraft expects to be reimbursed $1500 in compensation for time and effort entailed in creating these plans.

Apothecary by Design 9574

Location:	84 Marginal Way	
	Portland, ME	
Drawing No.:	1 of 4	
Drawn by:	DS	Rep.: EB
Date:	11.04.2008	
Lead No.:	NL010626	
Gen Ref.:		

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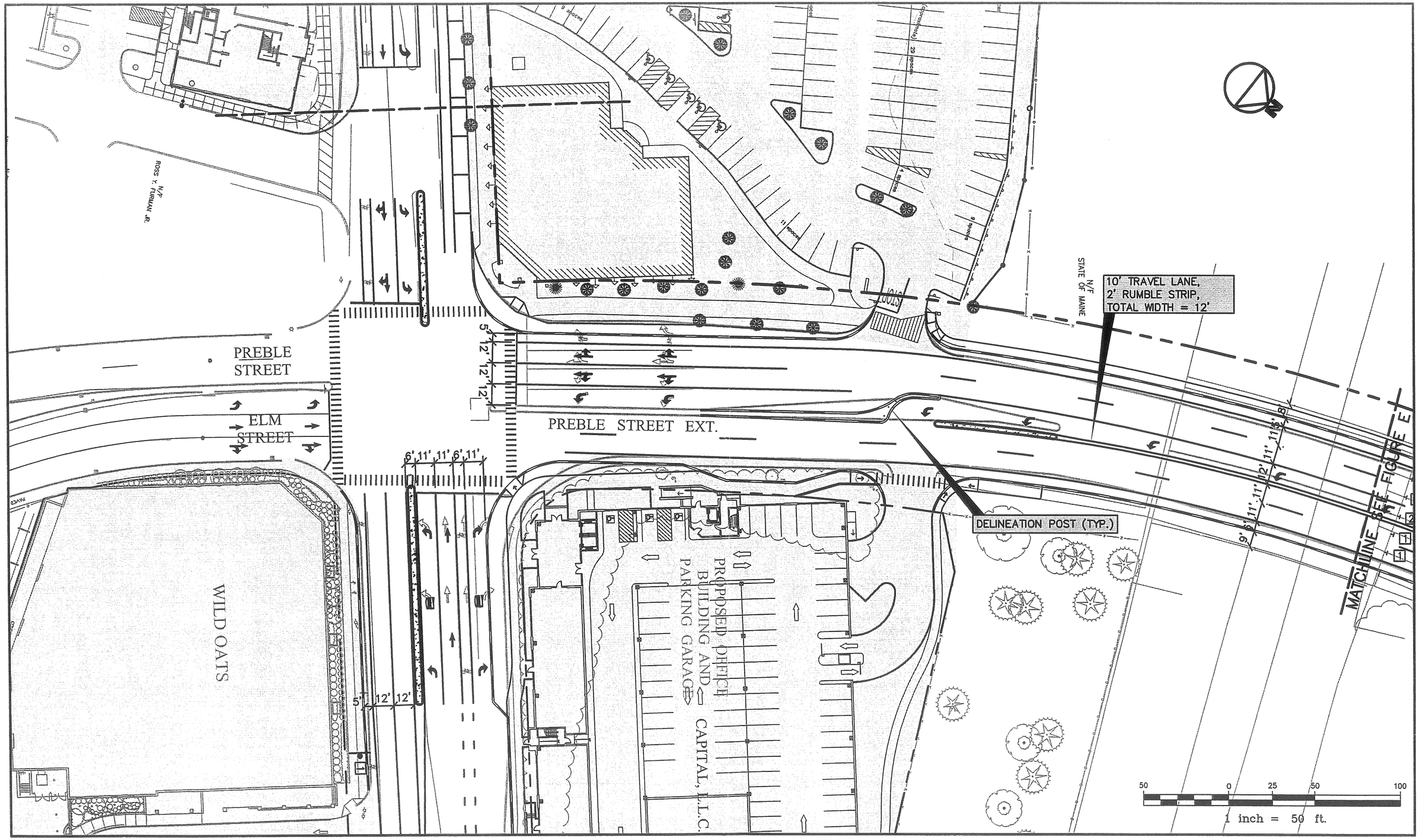


Rev.	Date	Revision
-	-	-

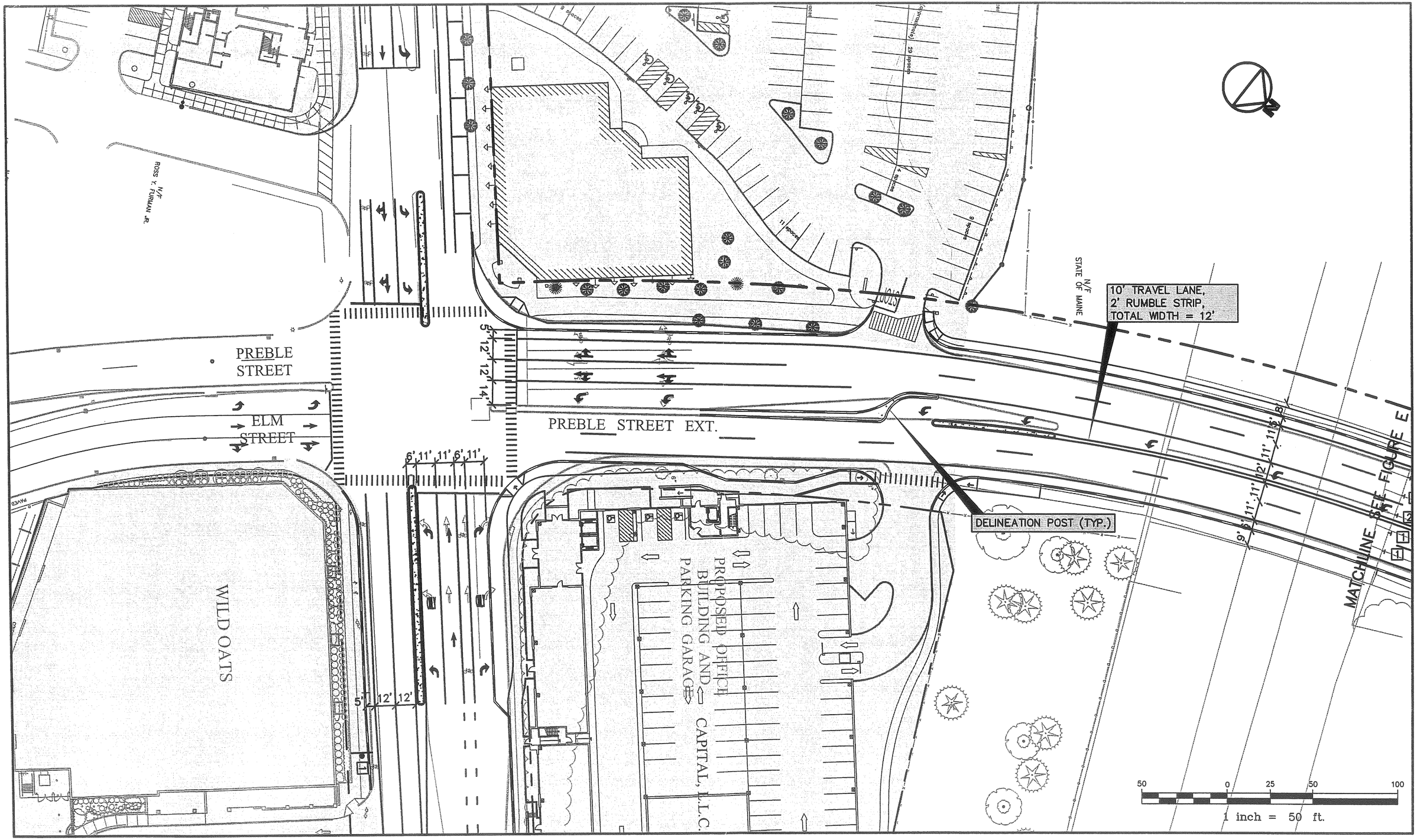
Design:	JJB	Date:	AUG 2006
Draft:	ZRJ	Job No.:	1361.01
Checked:	PAH	Scale:	1"=50'
File Name:	1361-01_pbase MASTER		

GP Gorrill-Palmer Consulting Engineers, Inc.
Traffic and Civil Engineering Services
PO Box 1237
15 Shaker Road
Gray, ME 04039
207-657-6910
FAX: 207-657-6912
E-Mail: mailbox@gorrillpalmer.com

Drawing Name: Conceptual Roadway Improvements Plan – Option 1

Project: MEDICAL OFFICE BUILDING – 84 MARGINAL WAY
PORTLAND, MAINE

Figure No. E-1



Rev.	Date	Revision
-	-	-

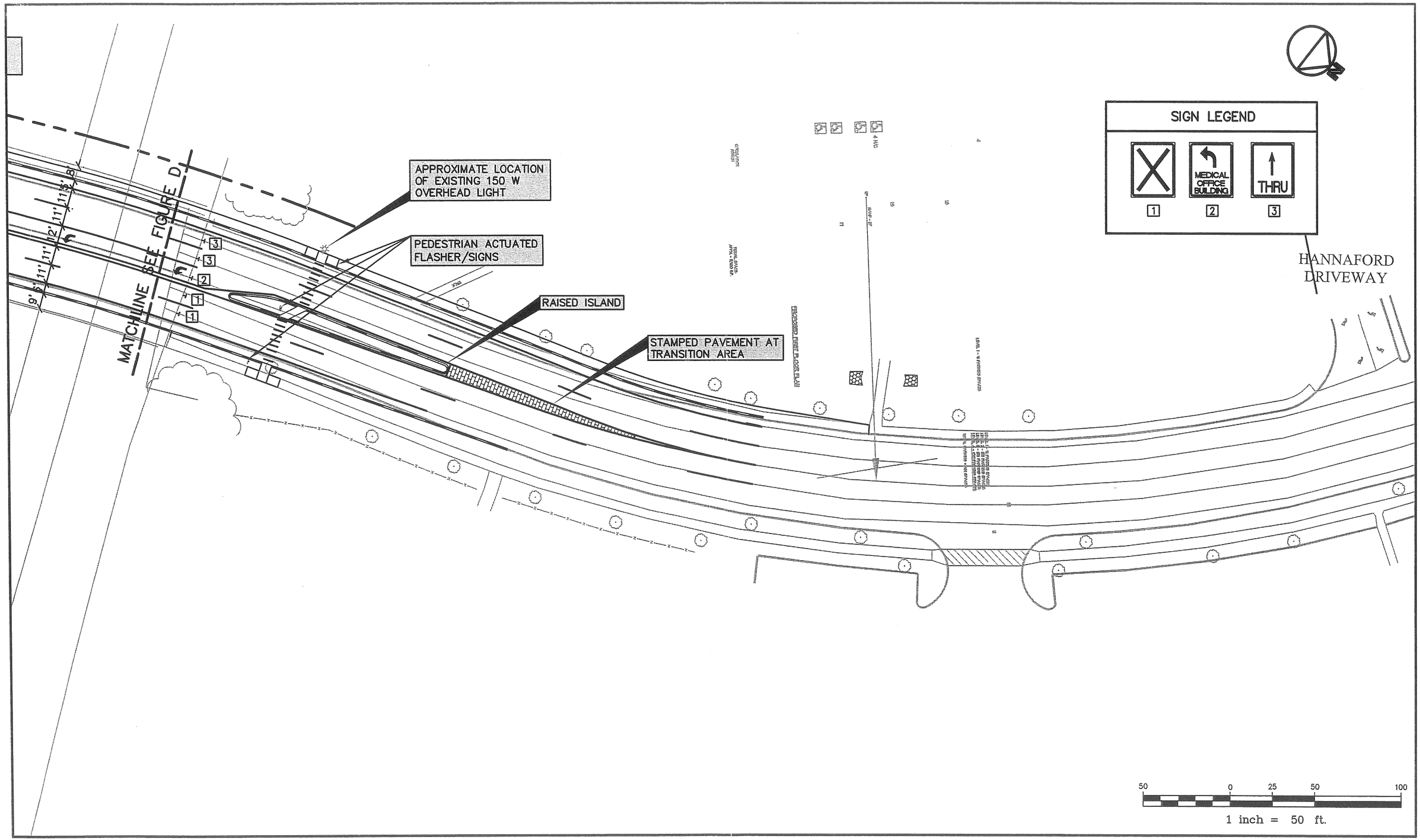
Design: JJB	Date: AUG 2006		
Draft: ZRJ	Job No.: 1361.01		
Checked: PAH	Scale: 1"=50'		
File Name: 1361-01_pbase MASTER_14' LT LANE			

GP Gorrill-Palmer Consulting Engineers, Inc.
Traffic and Civil Engineering Services
PO Box 1237
15 Shaker Road
Gray, ME 04039
207-657-6910
FAX: 207-657-6912
E-Mail: mailbox@gorrillpalmer.com

Drawing Name:
Conceptual Roadway Improvements Plan – Option 2

Project:
MEDICAL OFFICE BUILDING – 84 MARGINAL WAY
PORTLAND, MAINE

Figure No.
E-2



Rev.	Date	Revision
–	–	–

Design: JJB	Date: AUG 2006
Draft: ZRJ	Job No.: 1361.01
Checked: PAH	Scale: 1"=50'
File Name: 1361-01_pbase MASTER.dwg	

GP Gorrill-Palmer Consulting Engineers, Inc.
Traffic and Civil Engineering Services
PO Box 1237
15 Shaker Road
Gray, ME 04039
207-657-6910
FAX: 207-657-6912
E-Mail: mailbox@gorrillpalmer.com

Drawing Name: Conceptual Roadway Improvements Plan

Project: MEDICAL OFFICE BUILDING – 84 MARGINAL WAY
PORTLAND, MAINE

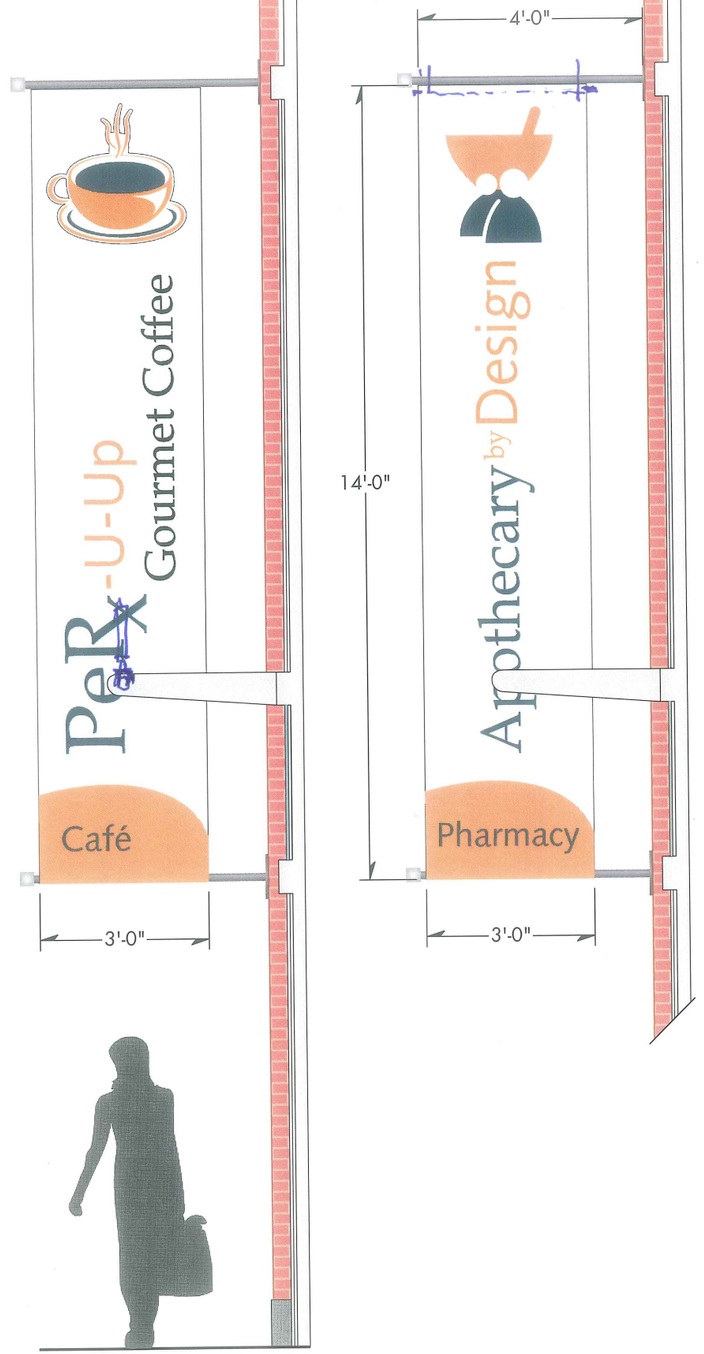
Figure No. F

PeRx-U-Up Gourmet Coffee

Apothecary by Design

Retail Tenant ID
Dimensional graphics mounted to projecting canopies; ID banners project symmetrically from architectural façade; Final colors/materials/illlumination TBD

RID A **Retail Tenant ID** Banners/Dimensional Graphics *canopy mounted*
Scale: relative to image



RID B **Retail Banners** final design TBD *mounted to brick pilasters*
Scale: 3/8" = 1'- 0"

84 MARGINAL WAY
Portland, Maine

ENVIRONMENTAL GRAPHICS
Gamble Design LLC
154 Maplewood Avenue
Portsmouth NH 03801
✆ 603.427.1300

ARCHITECTURE
Harriman Architects + Engineers
66 Pearl Street *Suite 301*
Portland ME 0053
✆ 207.775.0053

DRAWING TITLE
Retail Graphics *Marginal Way*
Canopy/banner graphics
Scale: as shown
25 August 2008

DRAWING N°
RID.1

Retail Tenant ID
Dimensional graphics mounted to projecting canopies; ID banners project symmetrically from architectural façade; Final colors/materials/illlumination TBD

artwork

PeRx-U-Up Café → Int.sf:

Gourmet Coffee

Apothecary by Design
↳ Int. sf:

RID A **Retail Tenant ID** Banners/Dimensional Graphics *canopy mounted*
Scale: 1/16" = 1' -0"

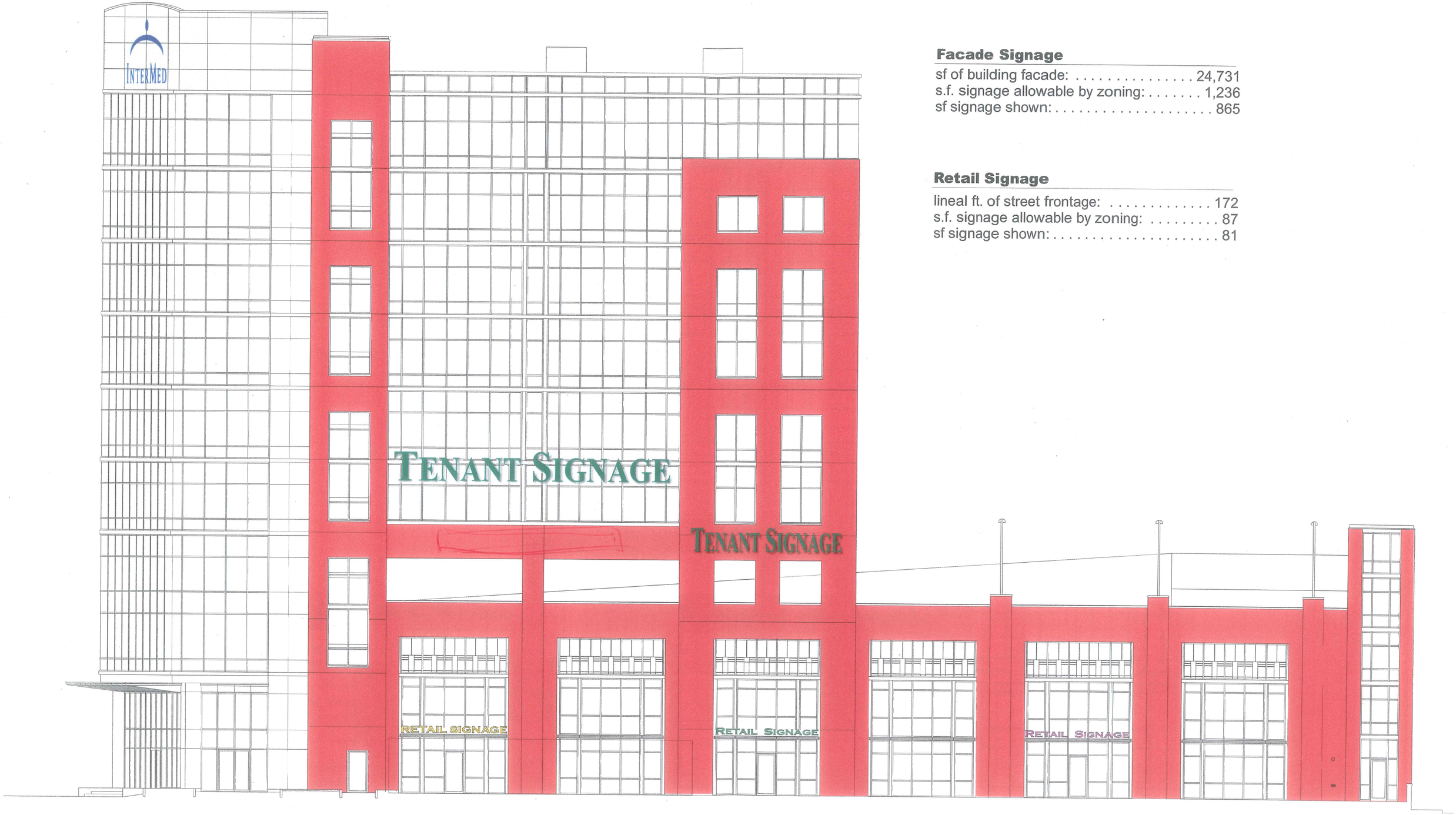
84 MARGINAL WAY
Portland, Maine

ENVIRONMENTAL GRAPHICS
Gamble Design LLC
154 Maplewood Avenue
Portsmouth NH 03801
✆ 603.427.1300

ARCHITECTURE
Harriman Architects + Engineers
66 Pearl Street *Suite 301*
Portland ME 0053
✆ 207.775.0053

DRAWING TITLE
Retail Graphics *Marginal Way*
Dimensional canopy & banner graphics
Scale: as shown
27 August 2008

DRAWING N°
RID.2



Facade Signage

sf of building facade: 24,731
s.f. signage allowable by zoning: 1,236
sf signage shown: 865

Retail Signage

lineal ft. of street frontage: 172
s.f. signage allowable by zoning: 87
sf signage shown: 81

Signage Plan

Marginal Way Elevation