ATTACHMENT B

City of Portland
Portland International Jetport
Phase I Parking Garage
City of Portland Major Site Plan Application
Response to Comments

March 9 2001

Prepared for:

City of Portland
Department of Waterfront and Transportation
Portland International Jetport
Westbrook Street
Portland, ME 04102

Prepared by:

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Dufresne-Henry
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March 9, 2001

Mr. Richard Knowland, Senior Planner
City of Portland
Planning and Urban Development
389 Congress Street
Portland, Maine 04101

RE: Portland International Jetport - Phase I Parking Garage Improvements
Planning Board Submittal - Response to Comments

Dear Rick:

We received comments prepared by the City of Portland Planning Department and Steve Bushey of DeLuca-Hoffman regarding our February 20, 2001 and February 27, 2001 submittals in reference to the Phase I Parking Garage Improvements at the Portland International Jetport. The following responses are offered in an effort to address the comments received.

City of Portland Comments of February 27, 2001

- **An impervious surface calculation for the entire Jetport property has not been submitted. As discussed previously, this is critical information for the zoning administration to determine whether the Jetport meets this standard.**

  An impervious surface calculation for the airport land within the AB zone using the airport property line was prepared by Paul Bradbury, Facilities Engineer and found to be 46%. A copy of the calculation is provided as Attachment A.

- **Site plan does not show fire hydrants along the loop road. This remains a concern.**

  Hydrants are located at the intersection of the new loop road and Westbrook Street (relocated existing hydrant), at the intersection of the new loop road and the existing access road (existing hydrant). In addition, a hydrant has been added along the loop road past the proposed parking management building. These hydrants are shown on the attached Utility Relocation Plan Sheet C1-8.

- **Drafting error regarding the surface parking lot west of the existing parking garage as discussed on the phone.**

  The drafting error regarding the surface parking lot is noted and corrected on the attached General Layout Plan Sheet C1-3.

- **Lighting photometric values superimposed on a site plan have not been submitted. Internal parking garage lighting fixture catalog cut has not been submitted.**

  A photometric plan was submitted on February 27, 2001. The internal parking garage lighting fixture information is provided as Attachment B.

- **Site plan should indicate typical dimensions of parking spaces, driveways, and aisles for all parking lots.**

  Typical dimensions are shown on the attached General Layout Plan Sheet C1-3.

- **Surface material of various islands (grass, black top, pavers) such as at the end of Westbrook Street, should be shown on the plan.**

  Surface material of various islands is shown on the attached General Layout Plan Sheet C1-3.

- **Sidewalk and crosswalk comments. See attached sketch. Also the interior walkway from the easterly side of the parking garage should be shown.**

  A crosswalk has been added to the Landscaping Plan Sheet L1-1 as shown on the provided sketch. The attached Pedestrian Movement Plan Sheet A-PF1 shows the interior walkway from the easterly side of the parking garage.

- **Add the site plan notes shown on the attached "site plan and subdivision notes" to the site plan.**

  The site plan and subdivision notes have been added to the General Layout Plan Sheet C1-3.

- **Is there a need to have something higher than a curb along the driveway that is adjacent to the detention basin?**

  As we discussed on Monday, March 5, 2001, the detention basin has been eliminated in this location. Therefore there is no need for higher curbing.

- **Retaining wall material along the roadway. Catalog cut of the wall material and the height of the wall is needed.**

  The retaining wall will be constructed of cast-in- place concrete and is similar to the retaining wall shown in the artist rendering along the parking garage lower level entrance roadway previously submitted.

- **On the off-site temporary parking lot...site plan should show surface material; dimensions of aisles and parking spaces; pole height of lighting fixtures; photometric values superimposed on the site plan. How long will this parking lot be used for? As discussed, we really need a plan that shows the entire parcel not just the parking lot.**

  The Temporary Parking Lot Layout Plan Sheet T-2 has been revised to include typical dimensions. The pavement section includes 2-inches of pavement, 6-inches of crushed

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gravel and 12-inches of subbase gravel. The pole heights were provided in our previous submittal of February 20, 2001 on Plan Sheet T-5, Electrical Details and is 24 feet high from finished grade. A photometric plan is provided in the attached plans.

A Standard Boundary Survey is provided in Attachment C along with a location map. At a minimum the temporary parking lot will be utilized until the proposed Parking garage is complete and operational or approximately 18 months.

- **Material sample for the taxi building should be made available for the public hearing. Obviously this needs to be done for the parking garage as well.**

The proposed parking management building will be constructed of split faced block with a smooth face color accent block. Material samples of the parking garage and the taxi building will be available for the public hearing on March 13, 2001.

- **Documentation of Right, Title or Interest that the city has for the sliver of land adjacent to the Alamo property.**

Deed descriptions and plans for the property required to construction the proposed project are provided in Attachment D.

- **What other state or federal approvals are needed? Please list and the status of the permit review process.**

DeLuca-Hoffman, Inc., is obtaining all necessary permits and approvals on behalf of the Jetport. Currently the Jetport has a Planning Permit for the multi-year projects including the Phase I Parking Garage improvements. A modification to this permit is required now that the details are known on the proposed project. The necessary project plans along with the stormwater analysis for the proposed Phase I Parking Garage and the Temporary Parking lot have been forwarded to DeLuca-Hoffman. DeLuca-Hoffman will be coordinating with the Maine Department of Environmental Protection to modify the existing permit.

A separate Army Corps of Engineers permit regarding wetland impacts and mitigation is expected to be issued in mid to late March of 2001.

In addition, the Phase I Parking Garage is being constructed in compliance with applicable Federal Aviation Regulations (FAR Part 77 - Objects Affecting Navigable Airspace, Control Tower Line of Sight, FAA Form 7460-1 - Notice to Proposed Construction Alteration). The FAA form was completed and submitted to the FAA on January 9, 2001.

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City of Portland Comments of March 2, 2001

- **The pedestrian movement plan shows circulation along the westerly side of the new parking garage through the existing parking garage. This doesn't seem to be consistent with sheet A-PF. Is the circulation along this area intended to be inside, outside the building or both?**

  Circulation is intended to be inside the building. Sheet A-PF has been revised to include the pedestrian movement to the existing garage on the westerly side.

- **On the pedestrian movement plan, there is a sidewalk along the face of the existing terminal building. Heading westerly, the dots go past the existing sidewalk to the loop road intersection. Is the sidewalk going to be extended to the loop road intersection? Also, shouldn't the cross walk be at a right angle to the street rather that the curving cross walk shown on the plan?**

  The crosswalk has been revised to be perpendicular to the terminal access road and is shown on the Landscaping Plan Sheet L1-1, the Pedestrian Movement Plan Sheet A-PF1, and the General Layout Plan Sheet C1-3. The Jetport is planning a new sidewalk on the south side of the terminal access road not part of this contract. Therefore, pedestrian movement is across the terminal access road onto a sidewalk that leads to the face of the terminal building. This eliminates the need for pedestrians to cross traffic to the terminal building since there is no traffic coming from the west entrance to the terminal access road.

- **With respect to the lighting plan, the photometrics are difficult to read, so I really don't have any comment, at this point. Lighting should be one of key elements covered in your planning board presentation. Also, I didn't see the fixture specs for the internal parking garage lighting fixtures.**

  Information regarding the internal fixtures to the Parking Garage is provided as Attachment B. We plan to cover the photometric plan and its significance at the Public Hearing.

Steve Bushey Comments of March 2, 2001

Snow Storage:

- **What is the size of the fixed snow melter and where will it be located? Has there been any investigation into a portable snow melter?**

  Both stationary and portable snow melters are being investigated at this time. Should a stationary snow melter be chosen, it will be located on the roof deck of the proposed parking garage.

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Signage:

- **Is additional signage required at the east end of the terminal for vehicles going straight to the meeting/arriving area?**

  A sign is proposed to be located near the entrance to the meeting/arrival area. In discussing this with the Signage Consultant, we feel that the users will be able to see the directional signage in its proposed location. The sign will be visible before reaching the decision point on turning onto the new loop road.

- **Is signage required at the Westbrook Street/Loop Road intersection for vehicles traveling north?**

  Additional signage is not required for the Westbrook Street area. We reviewed the requirements with Design Clark, the signage Consultant, and feel the signage as presented is consistent with the intended traffic flow. Businesses along Westbrook Street will be clearly visible from the new loop road. The signage in this area will continue to emphasize the airport exit to prevent people thinking that Westbrook Street is an airport exit means.

Curbing:

- **It is still difficult to determine what areas are curbed. There is no curbing on the legend. Will Type 1 or Type 5 granite curb be used in the parking lots?**

  All curb will be Type 1 granite with 7-inch reveal. Granite curb will be placed along the loop road and parking area. The construction drawings will clearly indicate where curbing will be installed. At the scale (1"=40') used for the Planning Board documents, the curbing line work does not show well. The construction drawings will be prepared at 20 scale to make the curb more visible.

Pedestrian Route:

- **Does the lease to Northeast Aviation have to be modified to accommodate the sidewalk this close to the building?**

  The lease to Northeast Aviation is being modified to accommodate the sidewalk.

Phasing Plan:

- **As commented, the Phasing Plan was difficult to follow. At the very least, there should be a pre-bid conference to fully explain the phasing.**

  As is common for all construction projects, a pre-bid conference will take place. Since phasing is a critical aspect of the project, it will be fully explained at the pre-bid

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conference with further coordination taking place with the selected contractor.

Storm Drain:

- **The Type C combination drain does not conform to the City Standards. Since there are several cut areas, we recommend a 6" underdrain on each side of the road connected to the catch basins. The catch basins would be connected to a manhole on the trunk line. This is standard City of Portland design.**

  The Type C combination drain was discussed with the City's Engineer, Anthony Lombardo on March 5, 2001. Mr Lombardo agrees that the Type C combination drain (a Maine Department of Transportation standard) accomplishes the same effect as a separate under drain system along the roadway. He is not requiring that the design be revised to meet the City's standard for Public roadways. However, 6-inch underdrain will be placed under the roadway where the Type C combination drain is not located as shown on the Site Grading Plan Sheet C1-6.

Catch Basins:

- **Upper parking lot is draining approximately 1 acre of pavement to DH-29. Why not grade to DH-A and DH-C and change their tops from solid to a catch basin?**

  We have reviewed the drainage and have made minor revisions to the grading to address this comment. DH-A and DH-C have been changed to catch basins. This is shown on the attached Site Grading Plan Sheet C1-6.

- **Some of the existing parking lots require underdrain due to the high water table. Since portions of the parking lots are in cut sections, underdrain should be investigated.**

  Noted. The storm drains proposed in the parking lot will be combination drains. In addition, 6-inch underdrain piping has been added in various locations as shown on the Site Grading Plan Sheet C1-6.

- **In general, the catch basins in the parking lots should be reviewed along with the grading plan. The type of grate will determine the quantity of stormwater it will accept without flooding.**

  Catch basin grates were reviewed during the stormwater design to ensure sufficient capacity without flooding.

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- **The parking lots with straight shed sections should be graded to have a defined path to the catch basins. Will all of the existing parking lots be reconstructed? The plans show using the existing grade in some areas.**

  The parking lots have been graded to have a defined path to the catch basins as shown on the Site Grading Plan Sheet C1-6. The parking lots will be reconstructed in areas where work is taking place such as regrading and utility trenching.

Pavement Sections:

- **What is the pavement section for the parking lot?**

  The pavement section for the surface parking lots consist of 4-inches of pavement, 6-inches crushed gravel and 12-inches of subbase gravel. The temporary parking lot pavement section consists of 2-inches of pavement 6-inches crushed gravel and 12-inches of subbase gravel.

Miscellaneous:

- **All striping on the roadway should be thermoplastic. Striping within the parking lots may be paint.**

  Noted. Striping within the temporary parking lot will be painted.

- **The gravity storm drain will be very deep in close proximity to the Fire Department building. Has a route east of the terminal building and through the apron in front of the air traffic control tower been considered?**

  The gravity storm drain alignment has been reviewed and at this time appears to have the least impact with respect to interference with other utilities, parking, accessibility to the Control Tower, and future planned projects.

Steve Bushey Comments of March 5, 2001

- **I have seen a preliminary plan for the proposed temporary parking that is planned by the City's snow dump site off Congress Street. The plan allowed a parking area for some 400-500 spaces with some preliminary grading. I have not reviewed the plan in any detail therefore I am unable to provide any significant comments regarding the permitting, stormwater management or erosion control measures for the temporary parking area. I look forward to additional data being provided from the Jetport's engineer for the temporary parking facility.**

  A stormwater analysis has been conducted and is provided as a separate document. The Temporary Parking Lot Erosion and Sedimentation Control Plan sheet T-6 parking lot is attached.

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In addition to the above information, we are also enclosing the following:

Planning Board Packages

- 12 copies of the February 16, 2001 submittal
- 12 copies of the February 27, 2001 submittal
- 12 copies of this submittal w/o plans (plans included in reduced sets)
- 12 sets of reduced final planning board plans
- 12 copies of the revised Signage Plans (provided as Attachment E)
- 12 copies of the Stormwater Analysis for the Temporary Parking Lot (provided as a separate bound document)

Planning Department Staff:

- 7 copies of this submittal with full size revised plan sheets (2 copies of which will be hand delivered to Anthony Lombardo, City Engineer and Steve Bushey, DeLuca-Hoffman by Dufresne-Henry)
- 7 copies of the revised Signage Plans (provided as Attachment E)
- 7 copies of the Stormwater Analysis for the Temporary Parking Lot (provided as a separately bound document)

Stormwater under both present and future development conditions discharges to City of South Portland property. Therefore, the Stormwater Analysis has been forwarded to Ed Reidman, South Portland City Engineer for review and comment. A letter of transmittal to Mr. Reidman is provided as Attachment F.

We believe the above information addresses the comments received and will allow the project to be approved. If you have any questions, regarding the above information, please contact Valerie Giguere or me.

Very truly yours,

DUFRESNE-HENRY, INC.

Jeffrey D. Preble, P.E.
Senior Project Manager

cc: Paul Bradbury, P.E. Portland International Jetport
Mickey Krockmalic, Domenech, Hicks & Krockmalnic

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Portland International Jetport - Phase I Parking Garage Improvements
Planning Board Application - Response to Comments

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List of Attachments

Attachment A	Impervious Surface Calculation
Attachment B	Internal Lighting Fixture Information
Attachment C	Standard Boundary Survey - Temporary Parking Lot
Attachment D	Deed Descriptions
Attachment E	Revised Signage Plans
Attachment F	Letter of Transmittal to Ed Reidman, City of South Portland

Note: Stormwater Analysis for the Temporary Parking Lot is provided as a separate document.

Portland International Jetport - Phase I Parking Garage Improvements
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List of Final Plan Sheets

CIVIL SITE

L1-1	Landscaping Plan (includes pedestrian walkways)
L1-3	Landscaping Plan Jetport Drive
C1-1	Overall Site Plan
C1-2	Existing Site Plan
C1-3	General Layout Plan
C1-4	Construction Phasing Plan
C1-5	Construction Phasing Plan
C1-6	Grading Plan
C1-8	Utility Relocation Plan
C1-9	Gravity Sewer Plan
C1-10	Gravity Sewer Profile
C1-11	Miscellaneous Civil Details
C1-12	Water Details
C1-13	Wastewater Pump Station Plan, Section & Details

ROADWAY

C1-14	Roadway Plan-Horizontal Alignment
C1-16	Roadway Profile - Loop Road
C1-17	Profiles - Entrances & Exits
C1-32	Roadway Notes, Typical Sections & Details
C1-51	Erosion and Sedimentation Control Plan
C1-52	Erosion and Sedimentation Control Details
C1-53	Stormwater Pre-Development Plan
C1-54	Stormwater Post-Development Plan
C1-55	Stormwater Details

ELECTRICAL

E1-4	Site Lighting Layout
E1-6	Existing Simulated Light Levels
E1-7	Proposed Simulated Light Levels
E1-8	Site Lighting Details

ARCHITECTURAL

A1-1	First (CRF) Level Floor Plan
A1-2	Second (Ground) Level Floor Plan
A1-3	Third Level Floor Plan
A1-4	Fourth level Floor Plan

Portland International Jetport - Phase I Parking Garage Improvements
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A1-5	Fifth Level Floor Plan
A1-6	Sixth (Roof) Level Floor Plan
A3-1	North and South Building Elevations
A3-2	East and West Building Elevations
A6-1	APCOA Building

TEMPORARY PARKING LOT

T-1	Existing Site Plan
T-2	Proposed Parking Lot Layout Plan
T-3	Grading Plan
T-4	Electrical Site Plan
T-5	Electrical Details
T-6	Erosion and Sedimentation Control Plan
T-7	Stormwater Analysis
T-8	Proposed Simulated Lighting Levels

OTHER

A-PF	Pedestrian Movement Plan
A-PF1	Pedestrian Movement Plan
TF-1	Traffic Flow Diagram

ATTACHMENT A

Impervious Surface Calculation

Impervious Area Calculation	Quantity Acres
Total Jetport Property in City of Portland AB Zone	**270**
Impervious Area	78.5
	20.3
	24.3
	1.2
	0.4
Total Impervious	**124.7**
Ratio: Impervious/Total Area	**46%**

ATTACHMENT B

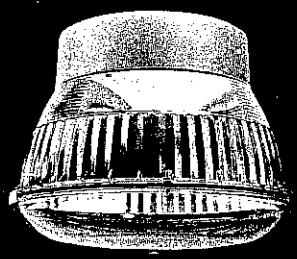
Internal Lighting Fixture Information

PARKING STRUCTURE
PGL
SERIES

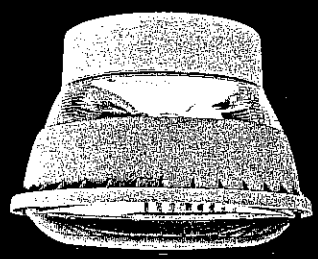
PGL4 / PGL1HP

PARKING GARAGE LUMINAIRES

100 - 200 WATT H.I.D.
85 WATT I.F.



PGL4



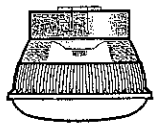
PGL1HP

KIM LIGHTING

Luminaire Ordering Information

PGL4 / PGL1HP

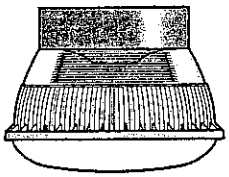
PGL4
85 to 200 Watt
PGL1HP
85 to 200 Watt



Ordering Example:

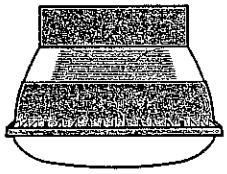
Fixture	Electrical Module	Options		
PGL4 /	**175MH277** /	**DL** /	**L** /	**PB2** / **QS**
1	2	3-10		

1 Fixture:



PGL4

Contemporary Garage Luminaire. Die-cast aluminum ballast housing with Platinum Silver Super TGIC powder coat paint over chromate conversion coating, one piece clear optical housing. Downlight optical reflector visible through optical housing material.



PGL1HP

Classic Garage Luminaire. Die-cast aluminum ballast housing with Light Gray Super TGIC powder coat paint over chromate conversion coating, one piece clear optical housing with Light Gray center band. Downlight optical reflector concealed behind painted band.

2 Electrical Module:

HPS = High Pressure Sodium

MH = Metal Halide

IF = Induction Fluorescent

Lamp Watts	Lamp Type	Line Volts
150	**HPS**	**277**

Lamp Mode (Lamps by others)	Electrical Mode Cat. No.	Line Volts	Input Watts	Max. Input Amps
100 Watt Clear	**100HPS120**	120	130	2.20
High Pressure Sodium	**100HPS208**	208	130	1.27
E-17 Medium Base	**100HPS240**	240	130	1.10
	100HPS277	277	130	0.85
ANSI Code S-54	**100HPS347**	347	130	0.70
150 Watt Clear	**150HPS120**	120	188	2.80
High Pressure Sodium	**150HPS208**	208	188	1.60
E-17 Medium Base	**150HPS240**	240	188	1.40
	150HPS277	277	188	1.25
ANSI Code S-55	**150HPS347**	347	188	0.92
100 Watt Clear	**100MH120**	120	129	2.60
Metal Halide	**100MH208**	208	129	1.50
ED-17 Medium Base	**100MH240**	240	129	1.30
	100MH277	277	129	1.15
ANSI Code M-90	**100MH347**	347	129	0.90
150 Watt Clear	**150MH120**	120	185	3.65
Metal Halide	**150MH208**	208	185	2.10
ED-17 Medium Base	**150MH240**	240	185	1.80
	150MH277	277	185	1.58
ANSI Code M-102	**150MH347**	347	185	1.25
175 Watt Clear	**175MH120**	120	215	1.80
Metal Halide	**175MH208**	208	215	1.04
ED-17 Medium Base	**175MH240**	240	215	0.90
	175MH277	277	215	0.78
ANSI Code M-57	**175MH347**	347	215	0.65
200 Watt Clear	**200MH120**	120	215	2.00
Metal Halide	**200MH208**	208	215	1.20
ED-17 Medium Base	**200MH240**	240	215	1.00
	200MH277	277	215	0.90
ANSI Code M-136	**200MH347**	347	215	0.70
85 Watt	**85IF120**	120	86	0.72
Induction Fluorescent	**85IF208**	208	86	0.42
	85IF240	240	86	0.36
	85IF277	277	90	0.35

ATTACHMENT C

Standard Boundary Survey - Temporary Parking Lot

STANDARD BOUNDARY SURVEY FOR THE CITY OF PORTLAND

PORTLAND INTERNATIONAL JETPORT

PORTLAND, SOUTH PORTLAND

MAINE

Dufresne-Henry, Inc.
22 Free Street
P.O. Box 9706
Portland, Maine 04104-5006
TEL. (207) 775-1121 FAX (207) 775-1434

No.	Description	Date	By

Client No.	815008
Proj. Manager	DCD
Prof. Designer	PJM
Drawn By	RBB/MRS
Checked By	PJM
Scale	1" = 200'
Approved	PJM
Date	10/30/97

Sheet of

D 815008.DWG

G:\Temp Drafting\Pmperon.dwg Wed Jul 19 11:02:02 2000

PWS 22-55
N 297,938.91
E 2,906,302.25
8" x 10" 30" TALL MARKED "N" & "D"

PWS 22-56
△ N 297,907.57
E 2,905,618.02

CONGRESS STREET 66' ROW SEE NOTE 7

n/f PORTLAND WATER DISTRICT BK. 2441, PG. 133, 136

PORTLAND WATER DISTRICT EASEMENT, BK. 4514, PG. 130

COLONEL WESTBROOK INDUSTRIAL PARK SEE NOTE 4B

n/f JORDAN REALTY CO. BK. 6419, PG. 261

n/f W. H. NICHOLS CO. BK. 2990, PG. 627

CITY OF PORTLAND AVIGATION EASEMENT BK. 2990, PG. 627

n/f ALLIED OF WESTBROOK BK. 4904, PG. 110

n/f S. B. HOLDINGS, INC. BK. 10737, PG. 225

CITY OF PORTLAND AVIGATION EASEMENT BK. 2990, PG. 627

DETAIL 1
1"=1'

DETAIL 4
1"=30'

DETAIL 3
1" = 10'

SEE DETAIL 1

SEE DETAIL 4

SEE DETAIL 2

SEE DETAIL 3

LAND OF THE CITY OF PORTLAND
88.26 ACRES
BK. 2457, PG. 262

REMAINS OF WIRE FENCE SEE NOTE 9

EASTERLY LINE OF LAND LEASED BY PWD.

30' WIDE PWD EASEMENT BK. 4493, PG. 349

n/f PORTLAND WATER DISTRICT, BK. 2393, PG. 121

CITY OF WESTBROOK
CITY OF PORTLAND
SEE NOTE 3a

CITY OF PORTLAND
CITY OF SOUTH PORTLAND
SEE NOTE 3e

n/f GREEN MEADOWS GOLF CLUB BK. 9838, PG. 24 SEE NOTE 4c

REMAINS OF WIRE FENCE

REMAINS OF WIRE FENCE

LONG CREEK

n/f MAINE TURNPIKE AUTHORITY BK. 1870, PG. 34 SEE CCRD PLAN BK. 32, PG. 48

MAINE TURNPIKE

SEE NOTE 4D AND 4E

SOUTH BOUND

NORTH BOUND

CITY OF PORTLAND EASEMENT FOR CONSISTENT USE OVER PWD LAND. SEE BK. 2457, PG. 262

LAND OF THE CITY OF PORTLAND 4.10 ACRES BK. 2457, PG. 262

40' WIDE PIPELINE EASEMENT TO NORTHERN UTILITIES, INC. 3056/224

40' WIDE PIPELINE EASEMENT TO NORTHERN UTILITIES, INC. 3057/798

40' WIDE PIPELINE EASEMENT TO NORTHERN UTILITIES, INC. 3047/71

40' WIDE PIPELINE EASEMENT TO NORTHERN UTILITIES, INC. 3057/798

n/f HARRY H. HARMON & GEORGE M. HUTCHINS BK. 2931, PG. 239 SEE NOTE 6A

CITY OF PORTLAND AVIGATION EASEMENT BK. 3010, PG. 683

n/f BALLARD OIL & EQUIPMENT CO. BK. 3002, PG. 279

LAND OF THE CITY OF PORTLAND SEE CONDEMNATION IN PORTLAND CITY CLERKS RECORDS, VOL. 72, PG. 256

60' WIDE PORTLAND PIPELINE CORP. EASEMENT BK. 2889 PG. 575

JOHNSON ROAD 66' ROW SEE NOTE 8

EXTENDED RUNWAY CENTERLINE

℄ SOCONY VACUUM OIL, INC. PIPELINE EASEMENT, WIDTH UNSPECIFIED BK. 1891, PG. 137

FOUND SQUARE NUT AT CENTERLINE END RUNWAY 11

CONG. 52
N 298,045.23
E 2,909,310.24

CONG. 56
N 295,487.60
E 2,908,856.21

CONG. 57
N 294,509.44
E 2,908,363.33

GRID MAG

GRAPHIC SCALE
200 0 100 200 400
1 inch = 200 feet

LEGEND	
AIRPORT PROPERTY LINE	
ABUTTOR PROPERTY LINE	
AVIGATION EASEMENT LINE	
EASEMENT LINE	
TOWN LINE	
ROW LINE	
FOUND IRON ROD (SIZE AS NOTED)	◑
FOUND IRON PIPE (SIZE AS NOTED)	○
FOUND CONCRETE MONUMENT (SIZE AS NOTED)	◈
FOUND STONE MONUMENT (SIZE AS NOTED)	◨
SET 5/8" REBAR WITH PLASTIC CAP MARKED "PAUL J. MILLER PLS #2082"	●
SET 4" x 4" GRANITE MONUMENT	■
FOUND STATE PLANE CONTROL STATION	△
PARENTHESIS DENOTES RECORD DISTANCE	(283.30)

1. THIS SURVEY IS BASED ON THE MAINE STATE PLANE COORDINATE SYSTEM, NAD 83, WEST ZONE, AS DETERMINED FROM TWO OR MORE MDOT CONTROL STATIONS AS SHOWN HEREON. THE BASIS OF BEARING FOR THIS SURVEY IS GRID NORTH, NAD 83.

2. EXCEPTIONS TO THE STATE BOARD OF REGISTRATION FOR PROFESSIONAL LAND SURVEYORS' STANDARDS OF PRACTICE FOR A "STANDARD BOUNDARY SURVEY" ARE AS FOLLOWS:

A. A WRITTEN DESCRIPTION OF THE PARCEL WAS NOT PREPARED.

B. A WRITTEN SURVEY REPORT WAS NOT PREPARED.

3. REFERENCE IS MADE TO THE FOLLOWING PLANS ON FILE AT THE CITY OF PORTLAND PUBLIC WORKS DEPARTMENT:

A. PORTLAND MUNICIPAL AIRPORT, PROPERTY ACQUISITION PLAN, EXHIBIT "A", DATED MAY 14, 1955, AND AMENDED THROUGH MAY 23, 1986, BY SEELYE, STEVENSON, VALUE & KNECHT, PLAN NO. 637/3.

B. PROPERTY ACQUISITION PLAN, DATED MAY 18, 1965, PLAN NO. 605/8

C. PROPERTY ACQUISITION – 1968 PROJECT, PORTLAND MUNICIPAL AIRPORT, EXHIBIT "A", DATED NOVEMBER 15, 1966, AND AMENDED THROUGH SEPTEMBER 5, 1967, PLAN NO. 614/3.

D. PROPERTY ACQUISITION PLAN, EXHIBIT "A", 1969 PROJECT, PLAN NO. 182/19A.

E. TOWN LINE BETWEEN PORTLAND AND SOUTH PORTLAND, DATED JANUARY 15, 1940, PLAN NO. 410/71

F. TOWN LINE BETWEEN PORTLAND AND WESTBROOK, DATED JANUARY 15, 1948, PLAN NO. 471/45

4. REFERENCE IS MADE TO THE FOLLOWING PLANS ON FILE AT THE CUMBERLAND COUNTY REGISTRY OF DEEDS:

A. A PLAN OF MR. ELI WEBB'S FARM, WESTBROOK, DATED 1862, BY JAMES JOHNSON.

B. REVISED PLAN OF COLONEL WESTBROOK INDUSTRIAL PARK, WESTBROOK, MAINE, DATED MAY, 1953, BY SEBAGO TECHNICS, PLAN BOOK 136, PAGE 36.

C. FINAL SUBDIVISION PLAT FOR PHASE I OF SABLE OAKS DEVELOPMENT, DATED JANUARY 15, 1986, BY HTA OEST ASSOCIATES, INC., PLAN BOOK 159, PAGE 84.

D. MAINE TURNPIKE, SECTION 1, PROPERTY PLAN, DATED OCTOBER, 1946, PLAN BOOK 32, PAGES 25, 26.

E. MAINE TURNPIKE, SECTION 2, PROPERTY PLAN, DATED JULY, 1954, PLAN BOOK 41, PAGE 85.

5. REFERENCE IS MADE TO THE FOLLOWING PLANS ON FILE AT THE OFFICE OF THE PORTLAND WATER DISTRICT:

A. SOUTHERN FEEDER, PORTLAND–SOUTH PORTLAND, H.U.D. PROJECT NO. WS–1–20–0003, DATED FEBRUARY 8, 1967, SHEETS # 4 AND 5 OF 47.

B. PLAN OF LAND OF FINKS, PLAN NO. 2383–121.

C. PLAN OF FRANK CUMMINGS ESTATE, PORTLAND, PLAN NO. 2411–133.

D. SURVEY OF WATERLINE FOR PORTLAND SLUDGE FACILITY, PLAN NO. 4483/349.

6. REFERENCE IS MADE TO THE FOLLOWING PLANS:

A. STANDARD BOUNDARY SURVEY OF STROUDWATER ESTATES, CONGRESS STREET, PORTLAND , MAINE, REVISED MAY 27, 1988, BY ALBERTI, LAROCHELLE & HODSON.

B. PORTLAND INTERNATIONAL JETPORT, EXHIBIT "A", PORTLAND, MAINE, DATED AUGUST 24, 1990, REVISED THROUGH JANUARY 20, 1995, BY DUFRESNE–HENRY, INC.

7. REFERENCE IS MADE TO THE PETITION OF THE MUNICIPAL OFFICERS OF THE CITY OF PORTLAND TO THE CUMBERLAND COUNTY COMMISSIONERS, DATED SEPTEMBER 1, 1911, ON FILE IN THE CUMBERLAND COUNTY COMMISSIONERS RECORDS, VOLUME 18, PAGE 229.

8. REFERENCE IS MADE TO THE PETITION FOR THE RELOCATION OF JOHNSON ROAD, DATED MARCH, 1812, ON FILE IN THE CUMBERLAND COUNTY COMMISSIONERS RECORDS, VOLUME 3, PAGE 612.

9. THE REMAINS OF OLD WIRE FENCE WAS FOUND ALONG THIS LINE. THE DEED OF ELI WEBB TO HENRY STEVENS DATED JUNE 28, 1853 AND RECORDED IN THE CCRD IN BOOK 321, PAGE 128 (IN THE TITLE CHAIN OF COLONEL WESTBROOK INDUSTRIAL PARK) CALLS FOR A WIRE FENCE ON THIS LINE. THE ORIGINAL CREATION OF THIS LINE CAN BE FOUND IN THE DEED OF SAM WALDO TO WILLIAM PORTERFIELD DATED OCTOBER 2, 1747 AND RECORDED IN THE YORK COUNTY REGISTRY OF DEEDS IN BOOK 26, PAGE 250 (ALSO SEE PLAN IN BOOK 28, PAGE 52). THIS DEED DOES NOT CALL FOR A FENCE. THE PROPERTY LINE SHOWN ON THIS PLAN IS BASED ON THE TWO TOWN LINE MONUMENTS FOUND.

THIS SURVEY CONFORMS TO THE STATE BOARD OF LICENSURE FOR PROFESSIONAL LAND SURVEYORS STANDARDS OF PRACTICE FOR A "STANDARD BOUNDARY SURVEY", CATEGORY 1, CONDITION II. SEE NOTE 2 FOR EXCEPTIONS.

DATE

DETAIL 2
NOT TO SCALE

FOUND IRON PIPE LYING DOWN BURIED 6"

ANGLE POINT IN WATER MAIN

CENTERLINE PWD LAND

MAINE TURNPIKE

300' ROW

WATER MARKER POST

Δ = 01°32'25"
R = 5579.65'
T = 75.01'
L = 150.01'
C = 150.00'
CB = N 17°08'31" E

ATTACHMENT D

Deed Descriptions

01045

Suggested Deed Description
Area "A"

A certain lot or parcel of land situated on the westerly side, but not adjacent to, Westbrook Street in the City of Portland, County of Cumberland, State of Maine, being a portion of the premises depicted on a plan of land titled "Site Plan of Thrifty Car Rental", dated through March 19, 1996 by Sebago Technics, Inc., said parcel being more particularly bounded and described as follows:

Beginning at a capped 5/8 inch iron rebar found at the southwesterly corner of parcel herein described at the northeasterly corner of land now or formerly of the City of Portland as shown on said plan;

Thence N 08°-54'-54" W, by and along said City of Portland, a distance of 50.00 feet to a point;

Thence S 33°-05'-10" E, passing through land of the Grantor, a distance of 15.00 feet to a point;

Thence S 83°-28'-06" E, passing through land of the Grantor, a distance of 54.58 feet to a point in the northerly line of said City of Portland, said point lies S 60°-44'-36" W, 34.00 feet from a capped 5/8 inch iron rebar found on the westerly side of said Westbrook Street;

Thence S 60°-44'-36" W, by and along said City of Portland, a distance of 62.65 feet to the point of beginning.

Meaning and intending to describe a certain parcel of land containing 2,338 square feet, more or less, being a portion of the premises depicted on a plan of land titled "Site Plan of Thrifty Car Rental", dated through March 19, 1996 by Sebago Technics, Inc.

Together with a construction easement over lands of said Toye being described as follows:

Beginning at a point on the easterly side of land now or formerly of the City of Portland, said point lies N 08°-54'-54" W, 55.0 feet from a capped 5/8 inch iron rebar, said rebar being the point of beginning of the above described parcel;

Thence S 83°-28'-06" E, passing through land of the Grantor, a distance of 88.19 feet to a point in the northerly line of said City of Portland;

Thence S 60°-44'-36" W, by and along said City of Portland, a distance of 28.0 feet to a point;

Thence N 83°-28'-06" W, by and along the above described lot, a distance of 54.58 feet to an angle point;

Thence N 33°-05'-10" W, by and along said above described lot, a distance of 15.0 feet to a point on the easterly line of said City of Portland;

Thence N 08°-54'-54" W, by and along said City of Portland, a distance of 5.0 feet to the point of beginning.

The above described property being a portion of the premises described in a deed to Thomas A. Toye III, recorded in Book 10097, Page 17.

Bearings referenced herein are based upon Grid North NAD 1983 Maine West Zone.

DCS:jc
March 8, 2001

3-08-01

01045

Suggested Deed Description
Area "B"

A certain lot or parcel of land situated on the westerly side, but not adjacent to, Westbrook Street in the City of Portland, County of Cumberland, State of Maine, being a portion of the premises depicted on a plan of land titled "Standard Boundary Survey of Apex, Inc. Property" dated March 1, 1995 by Sebago Technics, Inc., said parcel being more particularly bounded and described as follows:

Beginning at a point in the easterly side of land now or formerly of the City of Portland by deed recorded at the Cumberland County Registry of Deeds in Book 9492, Page 231, said point lies S 38°-07'-03" E, 227.77 feet from a capped 5/8 inch rebar;

Thence S 64°-05'-33" E, passing through land of the Grantor, a distance of 38.40 feet to a point;

Thence S 52°-10'-08" E, passing through land of the Grantor, 46.00 feet to a point in the northwesterly line of land now or formerly of Thomas A. Toye III by deed recorded at said Registry in Book 6290, Page 027;

Thence S 50°-07'-57" W, by and along said Toye, a distance of 28.0 feet to a capped 5/8 inch rebar;

Thence N 38°-07'-03" W, by and along said City of Portland, a distance of 80.0 feet to the point of beginning.

Meaning and intending to describe a parcel of land containing 1,302 square feet, more or less, being a portion of the premises depicted on a plan of land titled "Standard Boundary Survey of Apex, Inc. Property" dated March 1, 1995 by Sebago Technics, Inc.

The above described property being a portion of the premises described in a deed to Toye Realty Holdings, LLC, recorded in Book 14717, Page 316.

Bearings referenced herein are based upon Grid North NAD 1983 Maine West Zone.

DCS:jc
March 8, 2001

3-08-01

01045

Suggested Deed Description
Area "C"

A certain lot or parcel of land situated on the westerly side, but not adjacent to, Westbrook Street in the City of Portland, County of Cumberland, State of Maine, being a portion of the premises depicted on a plan of land titled "Site Plan of Thrifty Car Rental", dated through March 19, 1996 by Sebago Technics, Inc., said parcel being more particularly bounded and described as follows:

Beginning at a capped 5/8 inch rebar at the southeasterly corner of land now or formerly of the City of Portland by deed recorded at the Cumberland County Registry of Deeds in Book 9492, Page 231;

Thence N 50°-07'-57" E, by and along land now or formerly of Toye Realty Holdings, LLC by deed recorded at said Registry in Book 14717, Page 316, a distance of 66.12 feet to a point;

Thence S 22°-44'-38" E, passing through land of the Grantor, a distance of 44.78 feet to a point;

Thence N 82°-30'-50" E, passing through land of the Grantor, a distance of 56.51 feet to a point;

Thence S 69°-17'-47" E, passing through land of the Grantor, a distance of 4.58 feet to a point in the northerly line of land now or formerly of the City of Portland by deed recorded at said Registry in Book 3009, Page 666;

Thence S 81°-02'-29" W, by and along said City of Portland, a distance of 150.0 feet to a point in the southeasterly line of said City of Portland (Book 9492, Page 231);

Thence N 50°-07'-57" E, by and along said City of Portland (Book 9492, Page 231), a distance of 25.79 feet to the point of beginning.

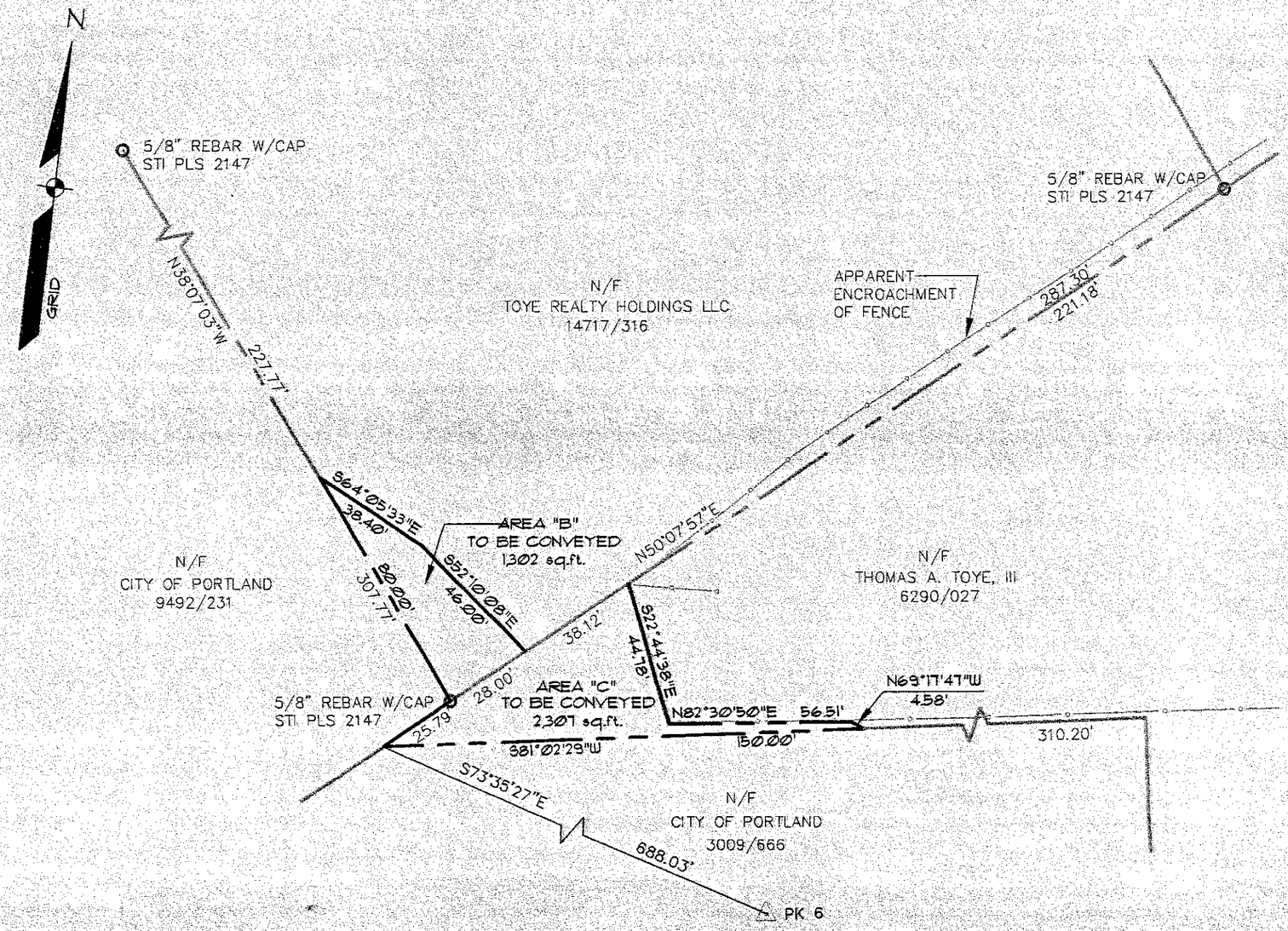
Meaning and intending to describe a certain parcel of land containing 2,307 square feet, more or less, being a portion of the premises depicted on a plan of land titled "Site Plan of Thrifty Car Rental", dated through March 19, 1996 by Sebago Technics, Inc.

The above described property being a portion of the premises described in a deed to Thomas A. Toye III, by deed recorded in Book 6290, Page 27.

Bearings referenced herein are based upon Grid North NAD 1983 Maine West Zone.

DCS:jc
March 8, 2001

3-08-01



GENERAL NOTES

1. THE RECORD OWNER OF THE PROPERTY IS TOYE REALTY HOLDINGS LLC BY DEED RECORDED AT THE CUMBERLAND COUNTY REGISTRY OF DEEDS IN BOOK 14717 PAGE 316 AND THOMAS A. TOYE, III BY DEED RECORDED AT SAID REGISTRY IN BOOK 6290 PAGE 027.
2. THE PURPOSE OF THIS PLAN IS TO DEPICT A PROPOSED CONVEYANCE TO AN ABUTTER. THE AFOREMENTIONED ABUTTER BEING THE CITY OF PORTLAND
3. PLAN REFERENCES:
   A) PHASE I PARKING GARAGE PORTLAND INTERNATIONAL JETPORT GENERAL LAYOUT PLAN DATED DECEMBER 15, 2000 BY DUFRESNE–HENRY.
   B) SITE PLAN OF THRIFTY CAR RENTAL DATED THROUGH MARCH 19, 1996 BY SEBAGO TECHNICS, INC.
   C) STANDARD BOUNDARY SURVEY OF APEX, INC. PROPERTY DATED MARCH 1, 1995 BY SEBAGO TECHNICS, INC.
4. THIS PLAN IS BASED UPON A STANDARD BOUNDARY SURVEY PERFORMED IN CONFORMANCE WITH THE STATE OF MAINE BOARD OF LICENSURE FOR PROFESSIONAL LAND SURVEYORS CATEGORY I, CONDITION II WITH THE EXCEPTIONS THAT NO UPDATED RESEARCH HAS BEEN PERFORMED, NO REPORT OF SURVEY HAS BEEN PREPARED AND NO NEW MONUMENTATION HAS BEEN PROPOSED.
5. THIS PLAN IS SUBJECT TO CHANGE UPON RECEIPT AND REVIEW OF A TITLE COMMITMENT.

LEGEND

EXISTING	DESCRIPTION	PROPOSED
— — —	PROPERTY/ROW	— — —
o	IRON PIPE/ROD	
C1/L1	CURVE/LINE NO.	C1 / L1
—o—	CHAIN LINK FENCE	
△	PK BY OTHERS	

Sebago Technics
Engineering & Planning for the Future
One Chabot Street
Westbrook, Me 04098–1339
Tel (207) 856–0277

SURVEY PLOT PLAN

OF:

LAND TO BE CONVEYED

WESTBROOK STREET
PORTLAND, MAINE
FOR:

DUFRESNE–HENRY, INC.

CONSULTING ENGINEERS
PORTLAND, ME 04101

DESIGN BY:	
DRAWN BY:	DCS
CHECKED BY:	DED
DATE:	3–07–01
SCALE:	1"=40'
FIELD BK:	245&487
PROJ. NO:	01045EC
DRAWING:	01045EC1
SHEET	OF

3-08-01

ATTACHMENT E

Revised Signage Plans

Design:Clark

8336 Foxworth Trail
Powell, Tennessee 37849
T. 865.947.5926
F. 865.947.6118
E. DsgnClark@aol.com

Facsimile

Date: 8 March 2001
Name: Mr. Jeffrey D. Preble, P.E.
Firm: Dufresne-Henry
Fax Number: 207.775.6434
Total Pages: 3

Subject: PWM - Phase I Parking Garage - Signage and Wayfinding Graphics

Regarding: Temporary Signs for Temporary Parking

Dear Jeff:

Per our discussions this morning, find the two drawings that follow:

1. SK-03 - sign drawing indicating construction and graphic layout (note: the panel is 12" taller than the previously submitted sign), and

2. SK-03b - schematic sign location drawing based on the fax you sent this morning.

Following the receipt of comments from you, I will forward full size copy of SK-03 to you for your use...

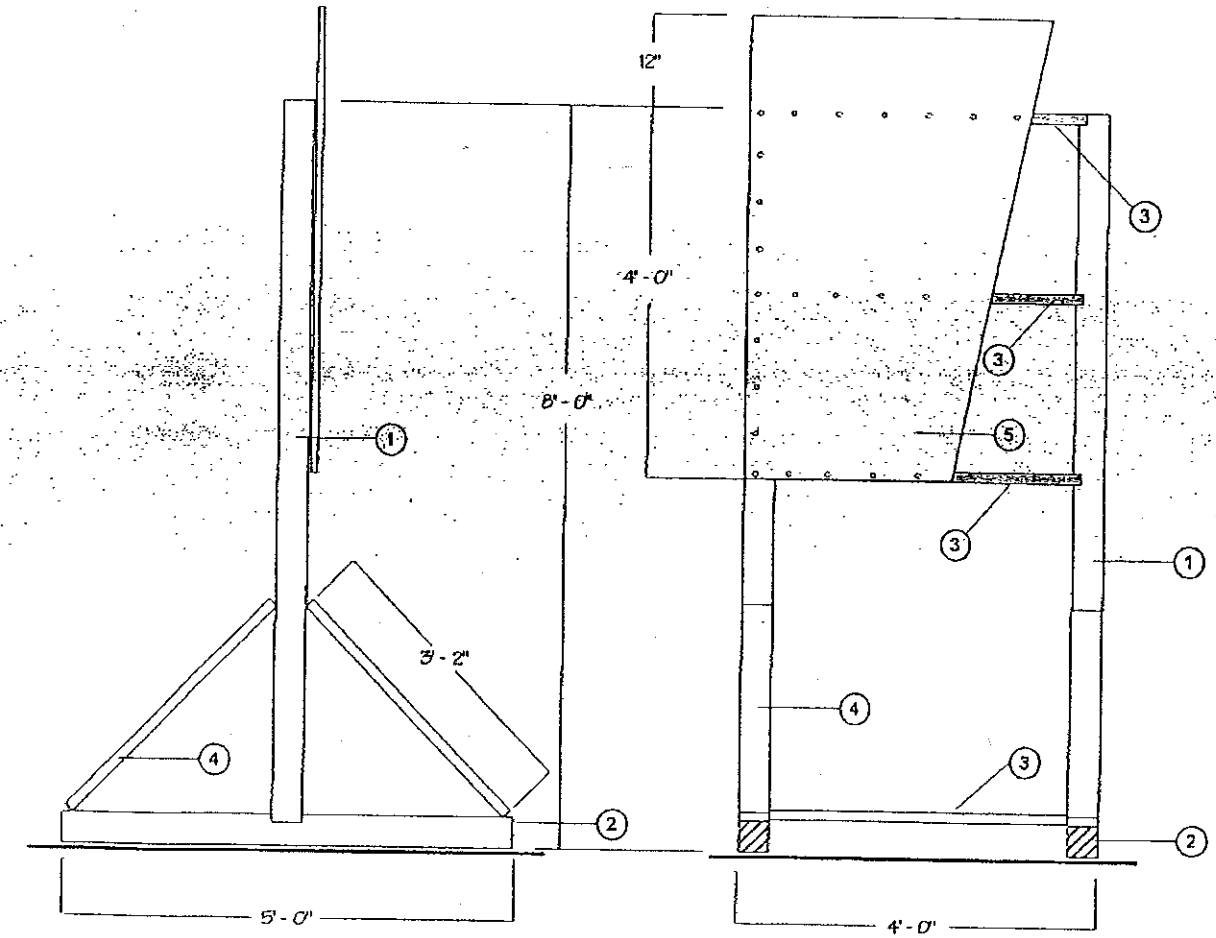
Donald M. Clark, Graphic Designer

ccfax: Ms. Andrea Clemon / DHK (f. 617.267.1990) w/drawings

Please Note: This transmission contains information which is confidential or privileged, and is intended for the use of the individual or organization named above. If you are not that individual, be aware that any disclosure, reproduction, distribution or use of the contents of this material is prohibited by law. If you have received this transmission in error, please call me, at the number shown above, so that I can arrange for the retrieval of the material at no cost to you.

Design:Clark

Portland International Jetport
Signage and Graphics
Drawing Name: Temporary Roadway Directional
Scale: 3/4" = 1' - 0"
Date: 03.09.01
SK-03



Side Elevation

Elevation

Note: for stability in windy conditions, provide several CMU blocks and/or sandbags on "skids" to serve as weight anchors...

General Notes

1. 4" x 4" x 7' - 9" painted pressure-treated clear wood post, let-into "skid" 1' as shown (Typical 2).

2. 4" x 4" x 5' - 0" painted pressure-treated clear wood "skid" (Typical 2).

3. 2" x 4" x 3' - 6" painted pressure-treated clear wood horizontal supports, let-into vertical post 1" as shown (Typical 4)

4. 2" x 4" x 3' - 2" painted pressure-treated clear wood diagonal support (Typical 4)

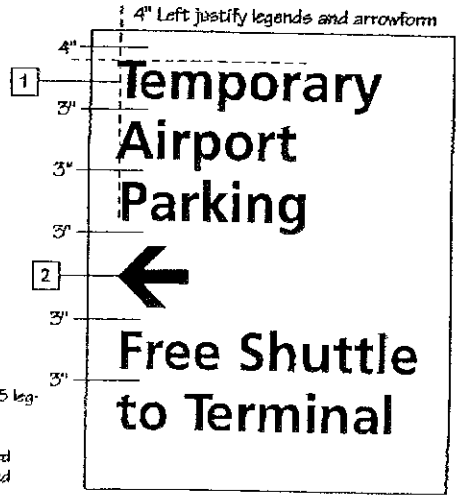
Note: all connections are to be "toe-nailed", using galvanized nails.

5. 48" x 60" x 3/8" painted marine-grade plywood, with galvanized nails into post and supports @ 6" o.c.

Graphic Notes

1. 5" on 3" surface installed reflective PSV Frutiger 65 legends, left justified as shown.

2. 8" surface installed reflective PSV Project Standard Arrowform; rotate as required, see contractor provided message schedule.

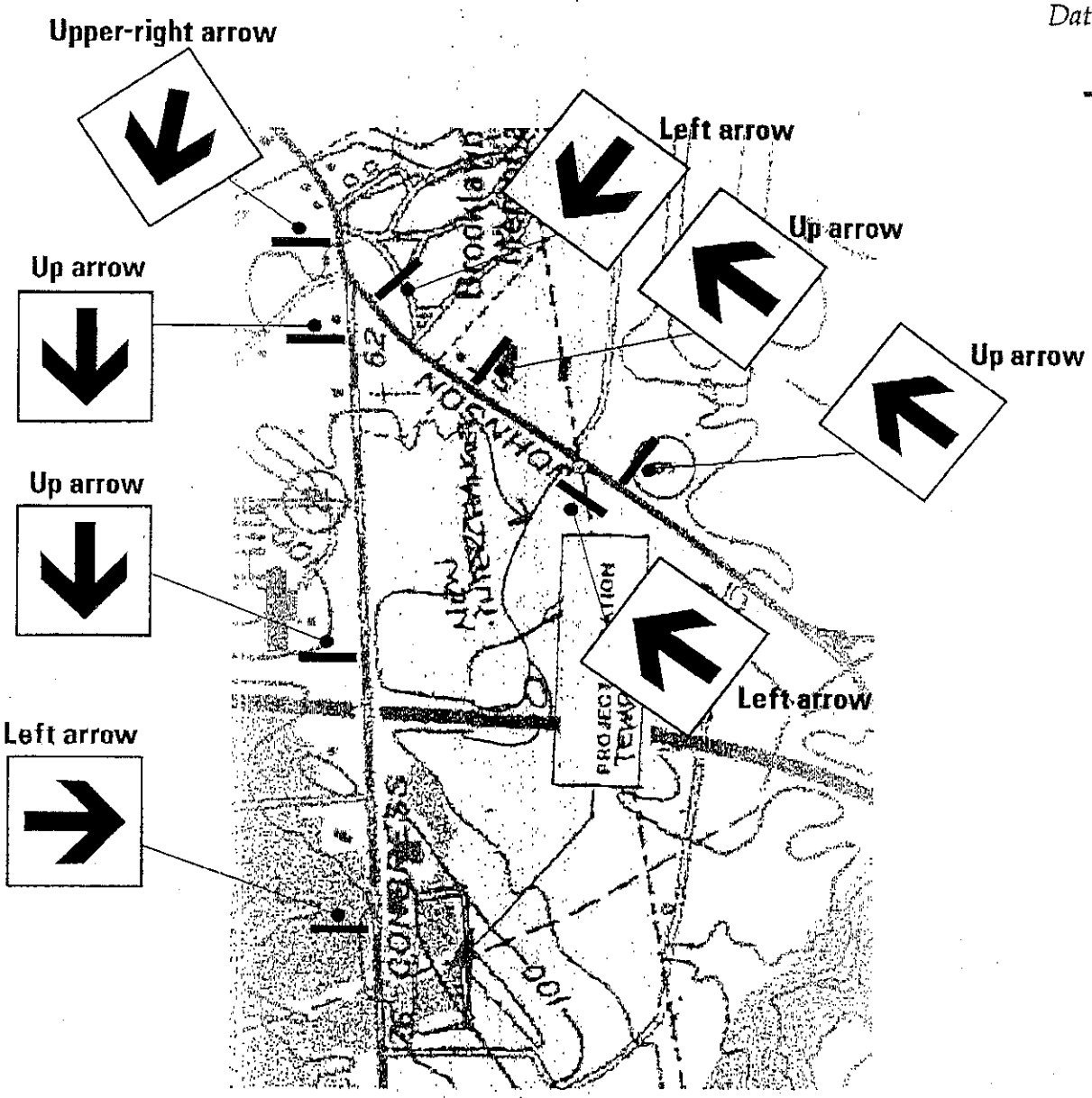


Typical Graphic Layout

Design:Clark

Portland International Jetport
Signage and Graphics
Drawing Name: Temporary Roadway Directional Location
Scale: none
Date: 03.09.01

SK-03b

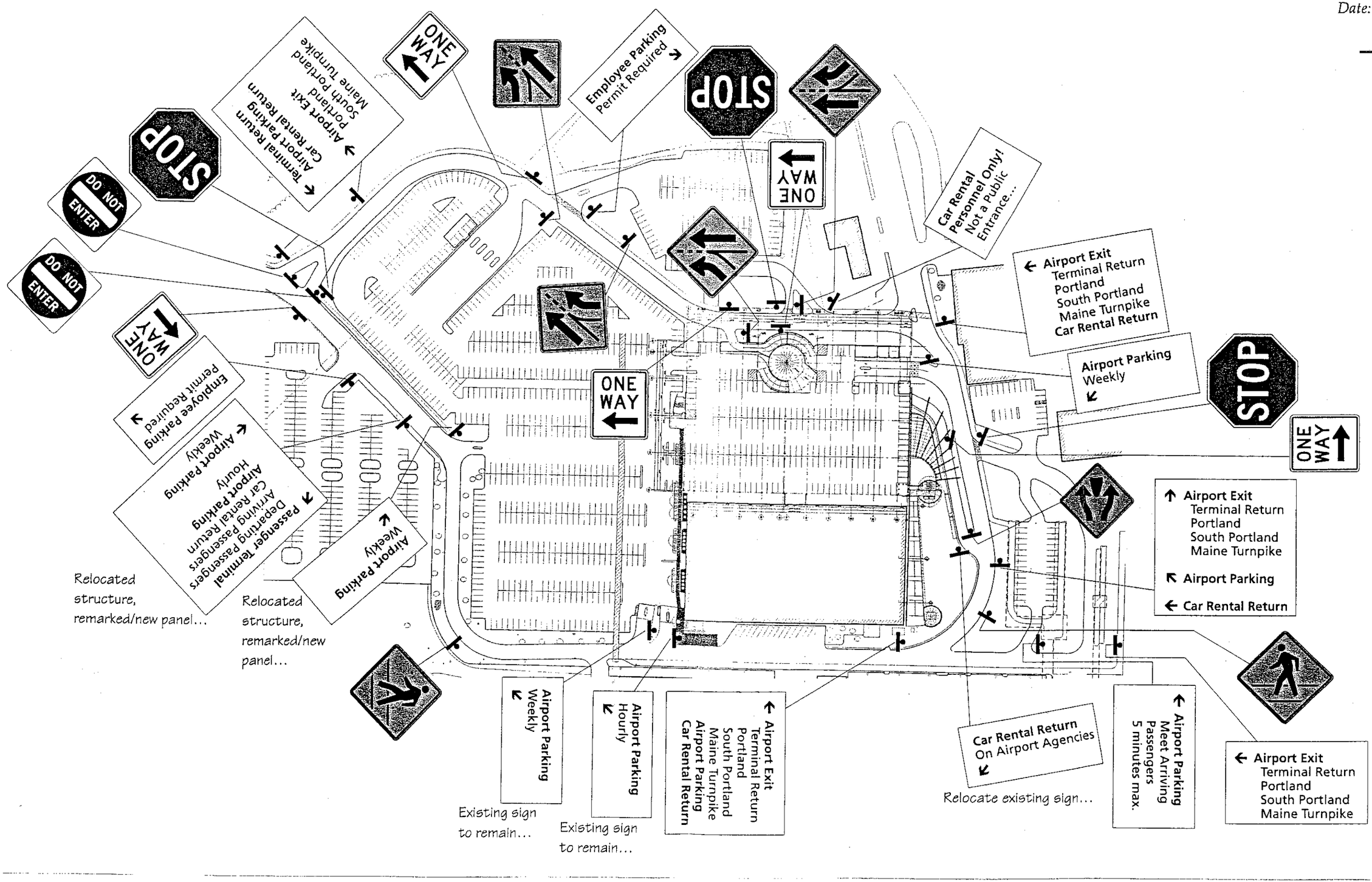


Note: arrow indication refers to orientation for the arrow shown on SK-03.

Design:Clark

Portland International Jetport
Signage and Graphics
Drawing Name: Sign Location Plan
Scale: none
Date: 02.07.01

SL-01



LETTER OF TRANSMITTAL

Dufresne-Henry, Inc.
22 Free Street
Portland, Maine 04101-3900
tel: (207)-775-3211 fax: (207)-775-6434
E-mail: vgiguere@dufresne-henry.com

Dufresne-Henry, Inc.
Consulting Engineers

	Date: March 9, 2001	**Job No.:**8190016.01
To: Mr. Ed Reidman, P.E., City Engineer	**Attention: Ed Reidman, City Engineer**	
City of South Portland	**RE: Portland Jetport Parking Garage - Temporary Parking Lot**	
25 Cottage Road		
South Portland, Me 04106		

We are sending you the following items **Under separate cover**

	Attached		**Under separate cover**_____		
	Shop Drawings		**Prints**		**Plans**
	Copy of Letter		**Change Order**		**Samples**
	Attached		**Other**		**Specifications**

Copies	Date	No.	Description
2	3/9/01		Stormwater Analysis - Temporary Parking Lot

THESE ARE TRANSMITTED as checked below

	For approval		**Approved as submitted**		**Resubmit**		**Copies for approval**
	For your use		**Approved as noted**		**Submit**		**Copies for distribution**
	As requested		**Returned for corrections**		**Return**		**Corrected prints**
	For review and comment		**For bids due** 19				**Prints returned after loan to us**

Remarks

Ed:

As we discussed, we have attached two (2) copies of the stormwater analysis for the Phase 1 Parking Garage Temporary Parking Lot for your review.

If you have any questions, please contact me.

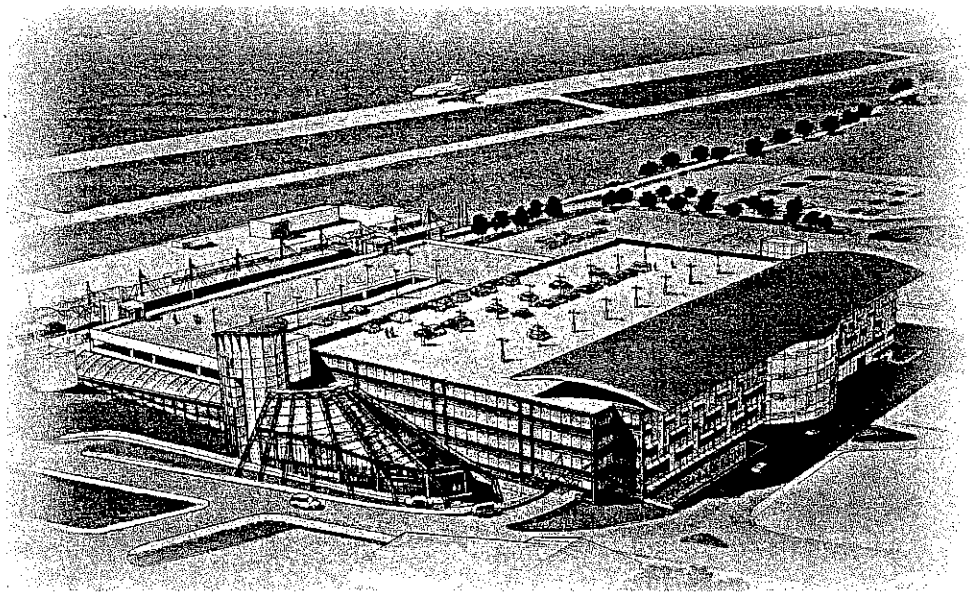
Valerie Giguere, P.E., Project Engineer

COPY TO: Paul Bradbury, Jeff Preble ***SIGNED:*** Valerie Giguere

City of Portland
Portland International Jetport
Temporary Parking Lot
Stormwater Analysis

March 2001

Prepared for:
City of Portland
Department of Waterfront and Transportation
Portland International Jetport
Westbrook Street
Portland, ME 04102



Dufresne-Henry

Portland International Jetport
Temporary Parking Lot

Stormwater Management

Table of Contents

Attachments

Plan Sheets (Attached Separately)

Portland International Jetport
Temporary Parking Lot

STORMWATER MANAGEMENT

1.0 INTRODUCTION

The proposed Temporary Parking Lot is being proposed as part of the Phase I Parking Garage project at the Portland International Jetport. The temporary parking lot will be located on Outer Congress Street as shown on the location map provided in Attachment A. In addition, a Standard Boundary Survey of the property is also provided in Attachment A. The temporary parking lot will serve as an off-site parking area to accommodate the loss of parking during construction of the Phase 1 Parking Improvements at the Portland Jetport.

The Phase I Parking Improvement project is anticipated to start construction in the spring of 2001 and is scheduled to be completed in the year 2002. The project will be constructed in two separate construction contracts. The temporary parking lot will be constructed during the first contract to ensure that off-site parking is in place prior to construction of the proposed parking garage.

2.0 EXISTING CONDITIONS

Currently the existing ground cover at the proposed temporary parking lot consists of brush with a grass mix. Bare soil was evident to some locations. However, the extent could not be identified due to snow cover. For the purposes of the analysis, the ground cover was considered to be brush with a grass mix for the entire site. The proposed temporary parking lot will involve construction of new impervious area at the proposed site location. Due to the construction of additional impervious area present development stormwater runoff conditions and future development stormwater conditions were evaluated. This drainage analysis is intended to determine the impacts to stormwater discharge and water quality that will be created by the new construction.

Dufresne-Henry has determined that the runoff generated within the project area discharges to a natural drainage way. Stormwater then flows to a culvert located on City of South Portland property and is then conveyed under an existing gravel road to a natural drainage way. Stormwater is conveyed by the natural drainage way to Long Creek.

3.0 METHODOLOGY

In order to compare present and future stormwater characteristics of the site, computer modeling using Hydrocad software was employed. The program incorporates the methodology outlined in the U.S. Natural Resources Conservation Service's (NRCS) Technical Release Number 20 (TR-20). The peak runoff rates for the 2, 10 and 25-year, 24-hour storm events were calculated. Based on Appendix D-3 in the *"Stormwater Management for Maine: Best Management Practices,"* November 1995, the one-day precipitation values for the Portland International Jetport site for the 2, 10 and 25-year storms 3.18, 4.37, and 5.08 inches respectively. Since the proposed project is located in Cumberland County, a Type III distribution was utilized throughout this study.

4.0 SOILS

The soil types were identified using the Cumberland County Medium Intensity Soil Survey published by the NCRS. Soil types were analyzed based on hydrologic grouping for the purpose of curve number calculations. The NCRS Medium Intensity Soil Survey identifies the soils within the project area as Hollis fine sandy loam, which is characterized by slow runoff and moderately rapid permeability. The SCS Technical Release 55 classifies this type of soil as belonging to hydrologic group 'C/D.'

5.0 ASSUMPTIONS

In order to estimate the amounts of stormwater runoff generated from the project area, the following assumptions were made:

1. Topography for the site was provided by aerial photography.

2. Field observations were made in order to determine the cover types for the project site in the present development condition.

6.0 STUDY APPROACH

In order to analyze the impact of the proposed development on the site's stormwater runoff characteristics, the temporary parking lot site was evaluated as a single watershed area as shown on the attached Plan Sheet T-8. The discharge analysis point is the same for both the present development and the post development conditions and is considered to be a culvert located on City of South Portland property.

7.0 PRESENT DEVELOPMENT CONDITIONS

The following section details the evaluation of the impacted watershed under the present development condition. Under present development conditions, the watershed area is treated as a single subcatchment identified as subcatchment 1. Calculations for the present development conditions are included in Attachment B. Stormwater routing is shown on the attached plan sheet T-8.

7.1 Present Development Condition (Subcatchment 1)

The total drainage area contributing to subcatchment 1 in the present development condition is approximately 14.5 acres. The watershed includes a combination of brush with grass mix, wetland, gravel drives and a portion of a paved drive. The stormwater routing is described below.

Paved Drive

Stormwater from ½ of the paved drive sheet flows across the pavement to a road side ditch. This ditch conveys the stormwater to the natural drainage swale to the southeast of the property. The natural drainage swale outlets to a culvert located on City of South Portland property which conveys the stormwater under a gravel road to another natural drainage way. The stormwater is then conveyed to Long Creek.

Gravel Drive

Stormwater from ½ of the gravel drive sheet flows across the pavement to a road side ditch. This ditch conveys the stormwater to the natural drainage swale to the southeast of the property. The natural drainage swale outlets to a culvert located on City of South Portland property which conveys the stormwater under a gravel road to another natural drainage way. The stormwater is then conveyed to Long Creek.

Remaining Drainage Area

Stormwater from the remaining drainage area generally sheet flows across the site and discharges to a natural drainage swale located at the southeast portion of the property. The natural drainage swale outlets to a culvert located on City of South Portland property which conveys the stormwater under a gravel road to another natural drainage way. The stormwater is then conveyed to Long Creek.

The peak runoff rates for the present development conditions during the 2, 10, and 25-year storm events are 17.42, 31.54, and 40.52 cfs respectively.

8.0 FUTURE DEVELOPMENT CONDITIONS

The following section details the evaluation of the impacted watershed under the future development condition. Under future development conditions, the watershed area is treated as a single subcatchment identified as subcatchment 2. Calculations for the future development conditions are included in Attachment C. Stormwater routing is shown on the attached plan sheet T-8.

8.1 Future Development Condition (Subcatchment 2)

The total drainage area contributing to subcatchment 1 in the present development condition is approximately 14.5 acres. The watershed includes a combination of the new temporary paved parking lot, brush with grass mix, wetland, gravel drives and a portion of a paved drive. Stormwater routing from each area is described below.

Portland International Jetport
Temporary Parking Lot

STORMWATER MANAGEMENT

New Temporary Parking Lot

Stormwater from the temporary parking area sheet flows across the parking lot to a new vegetated swale along the south and east sides of the parking lot. This vegetated swale conveys the stormwater to a low spot at the southeast corner of the parking area where stormwater is conveyed to catch basins. Stormwater is then conveyed by storm drain piping to a stormwater quality treatment unit. Stormwater is discharged from the stormwater quality treatment unit to a stone apron and sheet flows across vegetated terrain prior to being discharged to the natural drainage way. The natural drainage way outlets to a culvert located on City of South Portland property which conveys the stormwater under a gravel road to another natural drainage way. The stormwater is then conveyed to Long Creek.

Paved Drive

Stormwater from ½ of the paved drive sheet flows across the pavement to a road side ditch. This ditch conveys the stormwater to the natural drainage swale to the southeast of the property. The natural drainage swale outlets to a culvert located on City of South Portland property which conveys the stormwater under a gravel road to another natural drainage way. The stormwater is then conveyed to Long Creek.

Gravel Drive

Stormwater from ½ of the gravel drive sheet flows across the pavement to a road side ditch. This ditch conveys the stormwater to the natural drainage swale to the southeast of the property. The natural drainage swale outlets to a culvert located on City of South Portland property which conveys the stormwater under a gravel road to another natural drainage way. The stormwater is then conveyed to Long Creek.

Remaining Drainage Area

Stormwater from the remaining drainage area generally sheet flows across the site and discharges to a natural drainage swale located at the southeast portion of the property. The natural drainage swale outlets to a culvert located on City of South Portland property which conveys the stormwater under a gravel road to another natural drainage way. The stormwater is then conveyed to Long Creek.

The peak runoff rates for the future development conditions during the 2, 10, and 25-year storm events are 21.10, 35.45, and 44.33 cfs respectively.

9.0 STORMWATER QUALITY ANALYSIS

9.1 Method of Evaluation

According to Maine Department of Environmental Protection (MDEP) standards, stormwater quality standards must be met if a project includes 20,000 square feet or more of impervious area, or 5 acres or more of disturbed area in the direct watershed of a waterbody most at risk from new development. The proposed project while not in the direct watershed of a waterbody most at risk from new development does include more than 20,000 square feet of impervious area. Therefore, the project must meet the sliding scale total suspended solids (TSS) standard set by the MDEP.

9.2 Stormwater Quality Analysis

The percent impervious area involved in the proposed project out of the total drainage area is 27%. Therefore, the required TSS removal is 40% based on the sliding scale figure provided as Attachment D. To achieve the TSS removal, a combination of vegetated swales and a stormwater quality treatment unit is proposed. The calculations for the stormwater quality unit sizing are included in Attachment E.

9.3 Basic Stabilization

During the construction of the proposed improvements, the basic stabilization measures standard will be met. Erosion and sediment control will be provided in accordance with standards outlined in the *"Maine Erosion and Sediment Control Handbook for Construction: Best Management Practices"* (Cumberland County SWCD and Maine DEP, 1991). The Erosion and Sedimentation Control Plan Sheet T-6 and Erosion and Sedimentation Control Notes and Details Plan Sheet T-7 are attached.

10.0 SUMMARY AND CONCLUSIONS

The proposed project is not expected to impact stormwater discharge or water quality. A comparison of the present and future development conditions is shown in the Table below. Under future development conditions, an increase in peak runoff will result for the 2, 10 and 25-year storm events.

Storm Event	Present Development Peak Runoff Rate, cfs	Future Development Peak Runoff Rate, cfs	Difference in Peak Runoff Rate, cfs
2 year	17.42	21.10	3.68
10 year	31.54	35.45	3.91
25 year	40.52	44.33	3.81

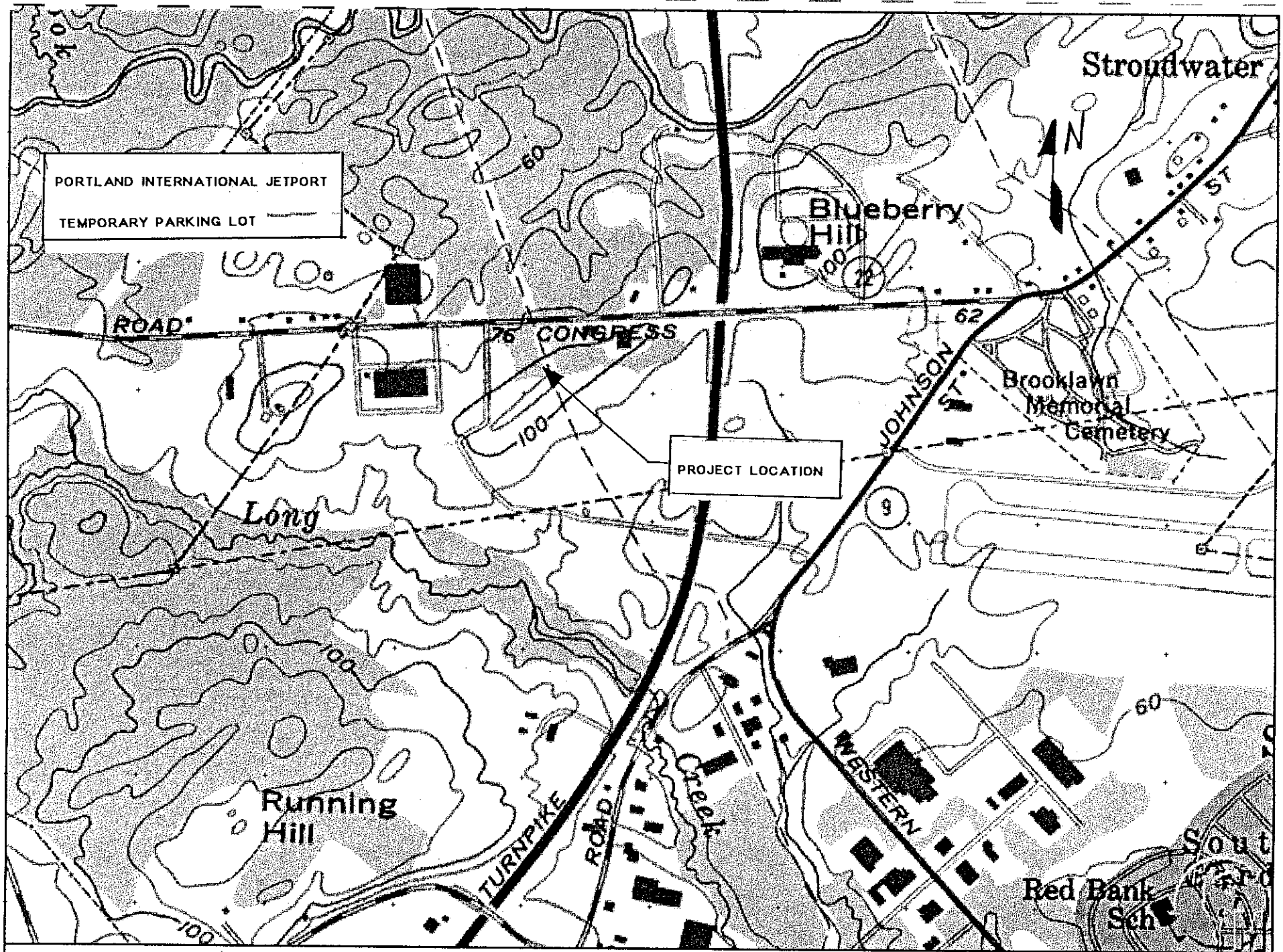
As discussed previously, the stormwater runoff leaves the project site via a culvert located on City of South Portland property and ultimately discharges to Long Creek also located in South Portland.

Based on the DeLuca-Hoffman Site Location and Development Permit Application to the City of Portland regarding the Snow Dump on Outer Congress Street, a study was conducted by the Maine Department of Transportation in 1993 to size a culvert for the Maine Mall Road crossing Long Creek (the ultimate discharge point of the proposed temporary parking area). The DeLuca-Hoffman Permit application also indicated that during a recent storm in 1996 which was possibly as large as the 500 year storm event, stormwater was adequately conveyed through the drainage course below the Snow Dump site.

The proposed temporary parking lot is located on property adjacent to the Snow Dump and shares the same downstream drainage course. Therefore, based on the above information, it anticipated that there would be no significant impact to the downstream drainage course during the 2, 10 and 25-year storm events under future development conditions.

ATTACHMENT A

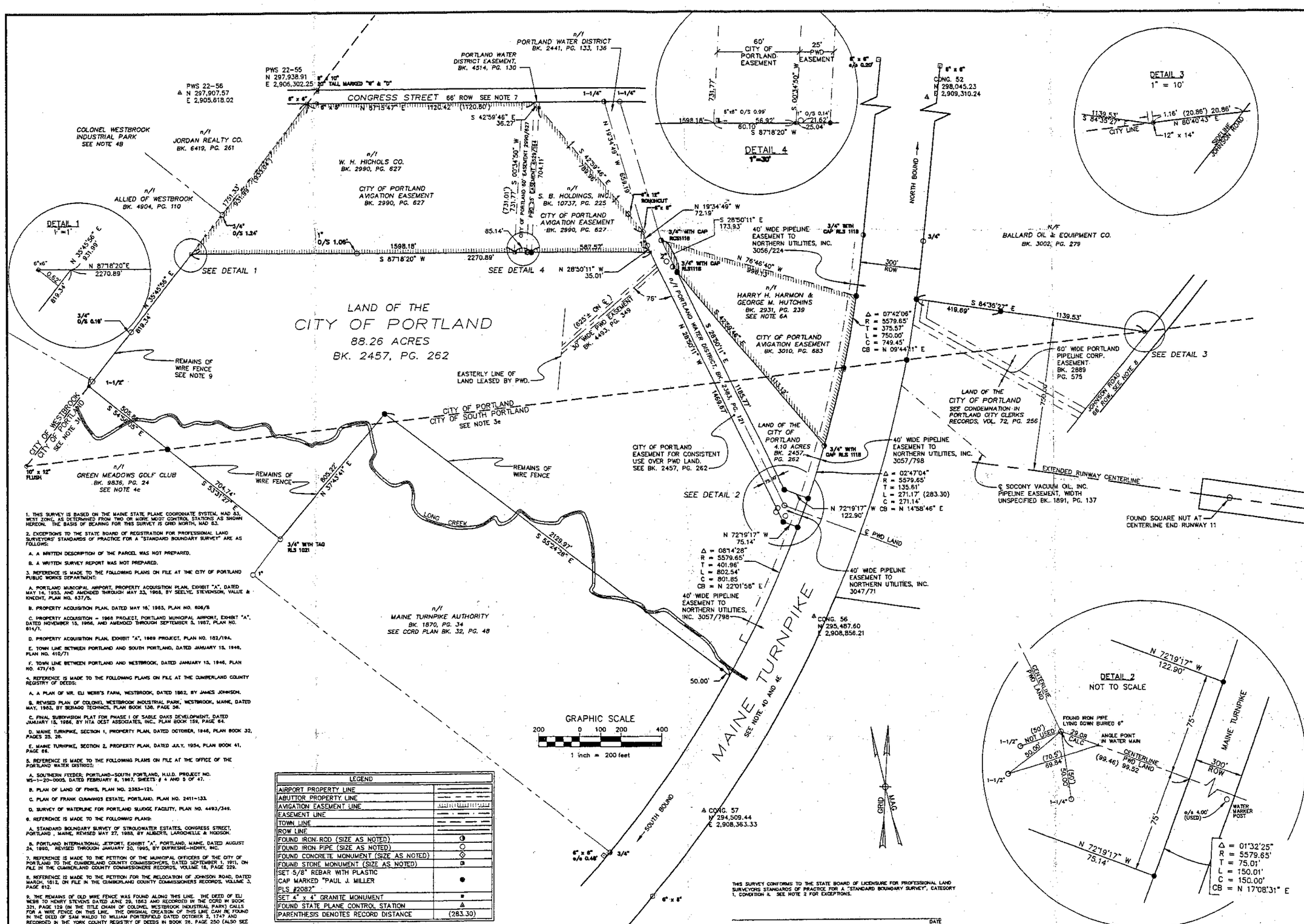
Location Map/Standard Boundary Survey



Name: PORTLAND WEST
Date: 2/27/101
Scale: 1 inch equals 1000 feet

Location: 043° 38' 50.1" N 070° 20' 02.9" W

Copyright (C) 1997 Maptech, Inc.



1. THIS SURVEY IS BASED ON THE MAINE STATE PLANE COORDINATE SYSTEM, NAD 83, WEST ZONE, AS DETERMINED FROM TWO OR MORE MDOT CONTROL STATIONS AS SHOWN HEREON. THE BASIS OF BEARING FOR THIS SURVEY IS GRID NORTH, NAD 83.

2. EXCEPTIONS TO THE STATE BOARD OF REGISTRATION FOR PROFESSIONAL LAND SURVEYORS' STANDARDS OF PRACTICE FOR A "STANDARD BOUNDARY SURVEY" ARE AS FOLLOWS:

A. A WRITTEN DESCRIPTION OF THE PARCEL WAS NOT PREPARED.

B. A WRITTEN SURVEY REPORT WAS NOT PREPARED.

3. REFERENCE IS MADE TO THE FOLLOWING PLANS ON FILE AT THE CITY OF PORTLAND PUBLIC WORKS DEPARTMENT:

A. PORTLAND MUNICIPAL AIRPORT, PROPERTY ACQUISITION PLAN, EXHIBIT "A", DATED MAY 14, 1935, AND AMENDED THROUGH MAY 23, 1968, BY SEELYE STEVENSON, VALUE & KNECHT, PLAN NO. 637/8.

B. PROPERTY ACQUISITION PLAN, DATED MAY 16, 1965, PLAN NO. 606/8

C. PROPERTY ACQUISITION - 1968 PROJECT, PORTLAND MUNICIPAL AIRPORT, EXHIBIT "A", DATED NOVEMBER 15, 1966, AND AMENDED THROUGH SEPTEMBER 5, 1967, PLAN NO. 614/1.

D. PROPERTY ACQUISITION PLAN, EXHIBIT "A", 1969 PROJECT, PLAN NO. 102/19A.

E. TOWN LINE BETWEEN PORTLAND AND SOUTH PORTLAND, DATED JANUARY 15, 1946, PLAN NO. 410/71

F. TOWN LINE BETWEEN PORTLAND AND WESTBROOK, DATED JANUARY 15, 1946, PLAN NO. 471/45

4. REFERENCE IS MADE TO THE FOLLOWING PLANS ON FILE AT THE CUMBERLAND COUNTY REGISTRY OF DEEDS:

A. A PLAN OF MR. ELI WEBB'S FARM, WESTBROOK, DATED 1862, BY JAMES JOHNSON.

B. REVISED PLAN OF COLONEL WESTBROOK INDUSTRIAL PARK, WESTBROOK, MAINE, DATED MAY, 1963, BY SEBAGO TECHNICS, PLAN BOOK 136, PAGE 38.

C. FINAL SUBDIVISION PLAT FOR PHASE I OF SABLE OAKS DEVELOPMENT, DATED JANUARY 15, 1986, BY HTA OEST ASSOCIATES, INC., PLAN BOOK 159, PAGE 64.

D. MAINE TURNPIKE, SECTION 1, PROPERTY PLAN, DATED OCTOBER, 1946, PLAN BOOK 32, PAGES 25, 26.

E. MAINE TURNPIKE, SECTION 2, PROPERTY PLAN, DATED JULY, 1954, PLAN BOOK 41, PAGE 66.

5. REFERENCE IS MADE TO THE FOLLOWING PLANS ON FILE AT THE OFFICE OF THE PORTLAND WATER DISTRICT:

A. SOUTHERN FEEDER, PORTLAND-SOUTH PORTLAND, H.U.D. PROJECT NO. WS-1-20-0005, DATED FEBRUARY 8, 1967, SHEETS 4 & 5 OF 47.

B. PLAN OF LAND OF FINKS, PLAN NO. 2383-121.

C. PLAN OF FRANK CUMMINGS ESTATE, PORTLAND, PLAN NO. 2411-133.

D. SURVEY OF WATERLINE FOR PORTLAND SLUDGE FACILITY, PLAN NO. 4493/349.

6. REFERENCE IS MADE TO THE FOLLOWING PLANS:

A. STANDARD BOUNDARY SURVEY OF STROUDWATER ESTATES, CONGRESS STREET, PORTLAND, MAINE, REVISED MAY 27, 1988, BY ALBERTI, LAROCHELLE & HODSON.

B. PORTLAND INTERNATIONAL JETPORT, EXHIBIT "A", PORTLAND, MAINE, DATED AUGUST 24, 1990, REVISED THROUGH JANUARY 20, 1995, BY DUFRESNE-HENRY, INC.

7. REFERENCE IS MADE TO THE PETITION OF THE MUNICIPAL OFFICERS OF THE CITY OF PORTLAND TO THE CUMBERLAND COUNTY COMMISSIONERS, DATED SEPTEMBER 1, 1911, ON FILE IN THE CUMBERLAND COUNTY COMMISSIONERS RECORDS, VOLUME 18, PAGE 229.

8. REFERENCE IS MADE TO THE PETITION FOR THE RELOCATION OF JOHNSON ROAD, DATED MARCH, 1812, ON FILE IN THE CUMBERLAND COUNTY COMMISSIONERS RECORDS, VOLUME 3, PAGE 612.

9. THE REMAINS OF OLD WIRE FENCE WAS FOUND ALONG THIS LINE. THE DEED OF ELI WEBB TO HENRY STEVENS DATED JUNE 29, 1863 AND RECORDED IN THE CORD IN BOOK 321, PAGE 139 (IN THE TITLE CHAIN OF COLONEL WESTBROOK INDUSTRIAL PARK) CALLS FOR A WIRE FENCE ON THIS LINE. THE ORIGINAL CREATION OF THIS LINE CAN BE FOUND IN THE DEED OF SAM WALDO TO WILLIAM PORTERFIELD DATED OCTOBER 2, 1747 AND RECORDED IN THE YORK COUNTY REGISTRY OF DEEDS IN BOOK 28, PAGE 250 (ALSO SEE PLAN IN BOOK 28, PAGE 52). THIS DEED DOES NOT CALL FOR A FENCE. THE PROPERTY LINE SHOWN ON THIS PLAN IS BASED ON THE TWO TOWN LINE MONUMENTS FOUND.

LEGEND	
AIRPORT PROPERTY LINE	
ABUTTOR PROPERTY LINE	
AVIGATION EASEMENT LINE	
EASEMENT LINE	
TOWN LINE	
ROW LINE	
FOUND IRON ROD (SIZE AS NOTED)	◑
FOUND IRON PIPE (SIZE AS NOTED)	○
FOUND CONCRETE MONUMENT (SIZE AS NOTED)	◇
FOUND STONE MONUMENT (SIZE AS NOTED)	▭
SET 5/8" REBAR WITH PLASTIC CAP MARKED "PAUL J. MILLER PLS #2082"	●
SET 4" x 4" GRANITE MONUMENT	■
FOUND STATE PLANE CONTROL STATION	△
PARENTHESIS DENOTES RECORD DISTANCE	(283.30)

THIS SURVEY CONFORMS TO THE STATE BOARD OF LICENSURE FOR PROFESSIONAL LAND SURVEYORS STANDARDS OF PRACTICE FOR A "STANDARD BOUNDARY SURVEY", CATEGORY 1, CONDITION A. SEE NOTE 2 FOR EXCEPTIONS.

DATE

Dufresne-Henry, Inc.
22 Free Street
Portland, Maine
04101-3900
TEL. (207) 775-3211 FAX (207) 775-4434

Rev.	Description	By	Date

MAINE

PORTLAND INTERNATIONAL JETPORT

STANDARD BOUNDARY SURVEY FOR THE CITY OF PORTLAND

PORTLAND, SOUTH PORTLAND

Client No.	815008
Proj. Manager	DCD
Proj. Designer	PJM
Drawn By	RBB/MRS
Checked By	PJM
Scale	1" = 200'
Approved	PJM
Date	10/30/97

Sheet of

D 815008.DWG

G:\Temp Drafting\Pwmap.dwg Wed Jul 19 11:02:02 2000

NOTE: REDUCED PLAN

ATTACHMENT B

Present Development Conditions Calculations

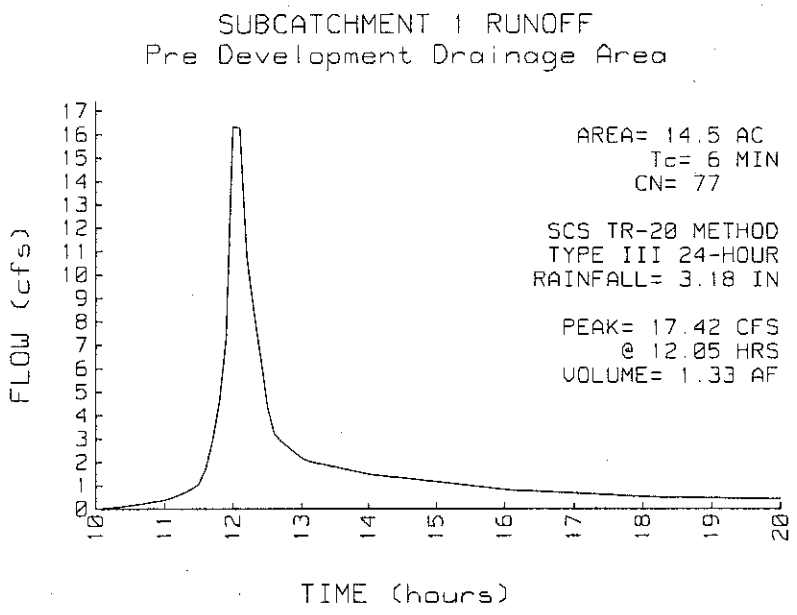
SUBCATCHMENT 1 **Pre Development Drainage Area**

PEAK= 17.42 CFS @ 12.05 HRS, VOLUME= 1.33 AF

ACRES	CN	
.12	93	Impervious, D Soils
.22	91	Impervious, gravel, D Soils
12.75	77	Brush, with grass mix, D soils
1.41	77	Wetland, brush cover, D soils
14.50	77	

SCS TR-20 METHOD
TYPE III 24-HOUR
RAINFALL= 3.18 IN > 2 YEAR
SPAN= 10-20 HRS, dt=.1 HRS

Method	Comment	Tc (min)
SHALLOW CONCENTRATED/UPLAND FLOW	**Pre Development Drainage Area**	6.0
Short Grass Pasture Kv=7 L=750' s=.088 '/' V=2.08 fps		



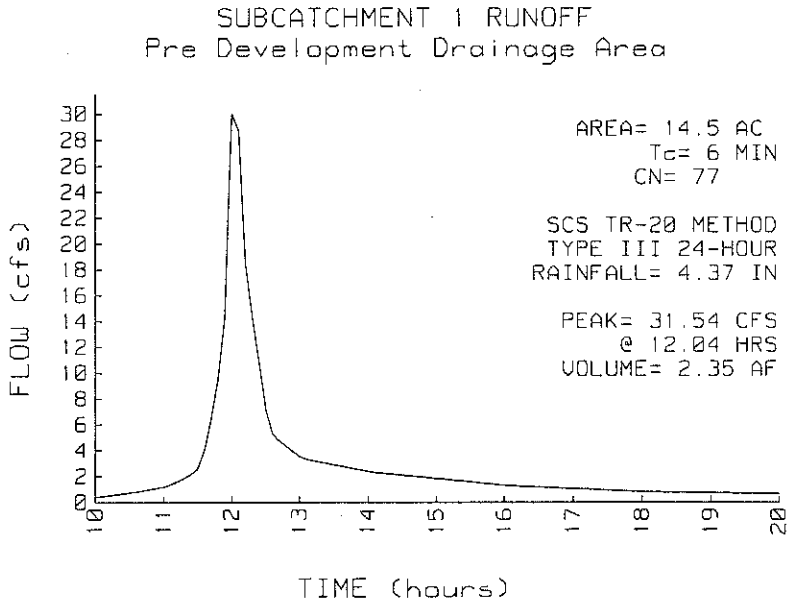
SUBCATCHMENT 1 **Pre Development Drainage Area**

PEAK= 31.54 CFS @ 12.04 HRS, VOLUME= 2.35 AF

ACRES	CN	
.12	93	Impervious, D Soils
.22	91	Impervious, gravel, D Soils
12.75	77	Brush, with grass mix, D soils
1.41	77	Wetland, brush cover, D soils
14.50	77	

SCS TR-20 METHOD
TYPE III 24-HOUR
RAINFALL= 4.37 IN = 10 YEAR
SPAN= 10-20 HRS, dt=.1 HRS

Method	Comment	Tc (min)
SHALLOW CONCENTRATED/UPLAND FLOW	**Pre Development Drainage Area**	6.0
Short Grass Pasture Kv=7 L=750' s=.088 '/' V=2.08 fps		



25 YEAR

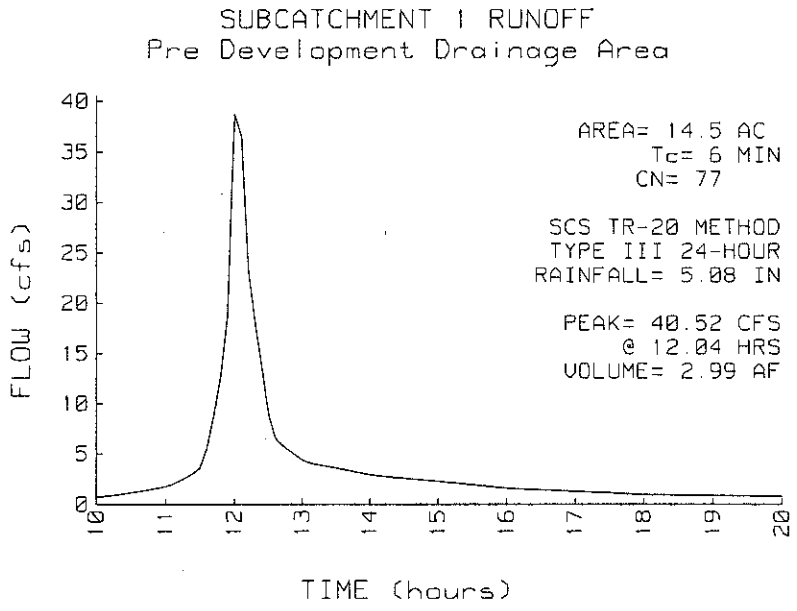
SUBCATCHMENT 1 **Pre Development Drainage Area**

PEAK= 40.52 CFS @ 12.04 HRS, VOLUME= 2.99 AF

ACRES	CN	
.12	93	Impervious, D Soils
.22	91	Impervious, gravel, D Soils
12.75	77	Brush, with grass mix, D soils
1.41	77	Wetland, brush cover, D soils
14.50	77	

SCS TR-20 METHOD
TYPE III 24-HOUR
RAINFALL= 5.08 IN ~ 25 YEAR
SPAN= 10-20 HRS, dt=.1 HRS

Method	Comment	Tc (min)
SHALLOW CONCENTRATED/UPLAND FLOW	**Pre Development Drainage Area**	6.0
Short Grass Pasture Kv=7 L=750' s=.088 '/' V=2.08 fps		



ATTACHMENT C

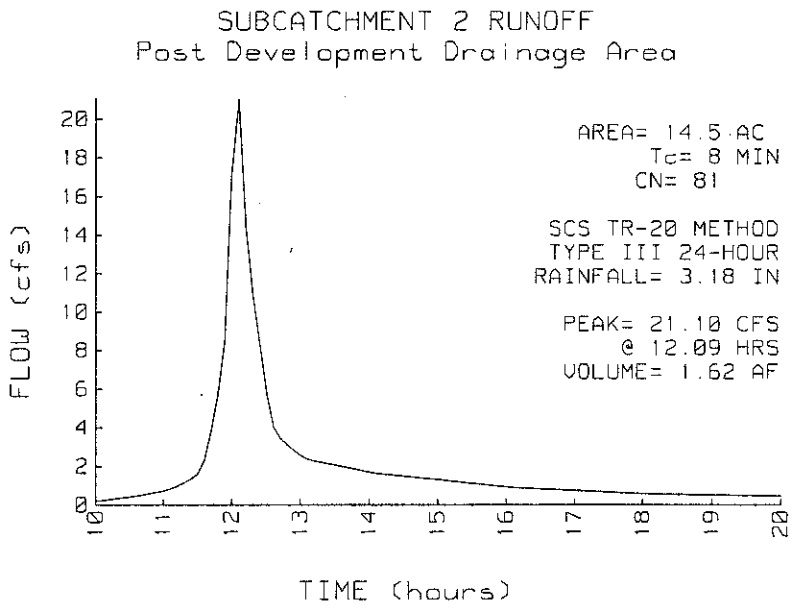
Future Development Calculations

SUBCATCHMENT 2 **Post Development Drainage Area**

PEAK= 21.10 CFS @ 12.09 HRS, VOLUME= 1.62 AF

ACRES	CN		SCS TR-20 METHOD
.12	93	Impervious	TYPE III 24-HOUR
.22	91	Gravel	RAINFALL= 3.18 IN = 2 YEAR
3.40	93	Impervious, parking lot, D Soils	SPAN= 10-20 HRS, dt=.1 HRS
7.43	77	Brush, with grass mix, D soils	
1.41	77	Brush cover, D soils	
1.92	78	vegetated swale, D soils	
14.50	81		

Method	Comment	Tc (min)
SHALLOW CONCENTRATED/UPLAND FLOW	**Segment 1 - Parking Lot**	1.3
Paved Kv=20.3282 L=300' s=.035 '/' V=3.8 fps		
CHANNEL FLOW	**Segment 2 - Swale adjacent to pa**	2.1
a=12 sq-ft Pw=41.2' r=.291'		
s=.025 '/' n=.024 V=4.3 fps L=548' Capacity=51.6 cfs		
SHALLOW CONCENTRATED/UPLAND FLOW	**Segment 3 - Remaining Area**	4.6
Short Grass Pasture Kv=7 L=500' s=.068 '/' V=1.83 fps		
	Total Length= 1348 ft Total Tc=	8.0



SUBCATCHMENT 2 **Post Development Drainage Area**

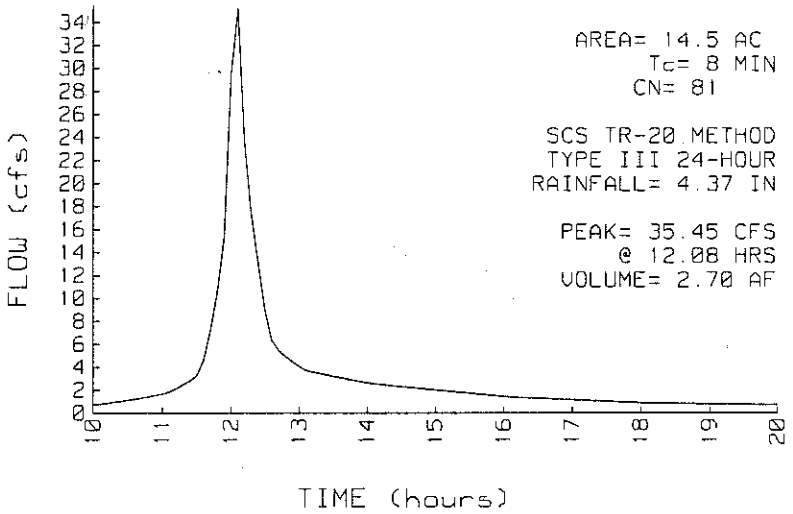
PEAK= 35.45 CFS @ 12.08 HRS, VOLUME= 2.70 AF

ACRES	CN	
.12	93	Impervious
.22	91	Gravel
3.40	93	Impervious,, parking lot, D Soils
7.43	77	Brush, with grass mix, D soils
1.41	77	Brush cover, D soils
1.92	78	vegetated swale, D soils
14.50	81	

SCS TR-20 METHOD
TYPE III 24-HOUR
RAINFALL= 4.37 IN = 10 YEAR
SPAN= 10-20 HRS, dt=.1 HRS

Method	Comment	Tc (min)
SHALLOW CONCENTRATED/UPLAND FLOW	**Segment 1 - Parking Lot**	1.3
Paved Kv=20.3282 L=300' s=.035 '/' V=3.8 fps		
CHANNEL FLOW	**Segment 2 - Swale adjacent to pa**	2.1
a=12 sq-ft Pw=41.2' r=.291'		
s=.025 '/' n=.024 V=4.3 fps L=548' Capacity=51.6 cfs		
SHALLOW CONCENTRATED/UPLAND FLOW	**Segment 3 - Remaining Area**	4.6
Short Grass Pasture Kv=7 L=500' s=.068 '/' V=1.83 fps		
	Total Length= 1348 ft Total Tc=	8.0

SUBCATCHMENT 2 RUNOFF
Post Development Drainage Area



25 YEAR

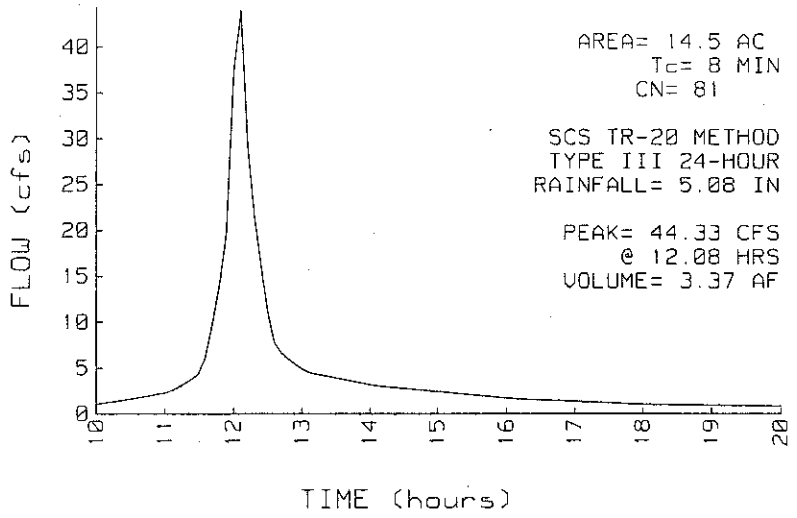
SUBCATCHMENT 2 **Post Development Drainage Area**

PEAK= 44.33 CFS @ 12.08 HRS, VOLUME= 3.37 AF

ACRES	CN		
.12	93	Impervious	SCS TR-20 METHOD
.22	91	Gravel	TYPE III 24-HOUR
3.40	93	Impervious, parking lot, D Soils	RAINFALL= 5.08 IN = 25 YEAR
7.43	77	Brush, with grass mix, D soils	SPAN= 10-20 HRS, dt=.1 HRS
1.41	77	Brush cover, D soils	
1.92	78	vegetated swale, D soils	
14.50	81		

Method	Comment	Tc (min)
SHALLOW CONCENTRATED/UPLAND FLOW	**Segment 1 - Parking Lot**	1.3
Paved Kv=20.3282 L=300' s=.035 '/' V=3.8 fps		
CHANNEL FLOW	**Segment 2 - Swale adjacent to pa**	2.1
a=12 sq-ft Pw=41.2' r=.291'		
s=.025 '/' n=.024 V=4.3 fps L=548' Capacity=51.6 cfs		
SHALLOW CONCENTRATED/UPLAND FLOW	**Segment 3 - Remaining Area**	4.6
Short Grass Pasture Kv=7 L=500' s=.068 '/' V=1.83 fps		
	Total Length= 1348 ft Total Tc=	8.0

SUBCATCHMENT 2 RUNOFF
Post Development Drainage Area



ATTACHMENT D

Sliding Scale Figure

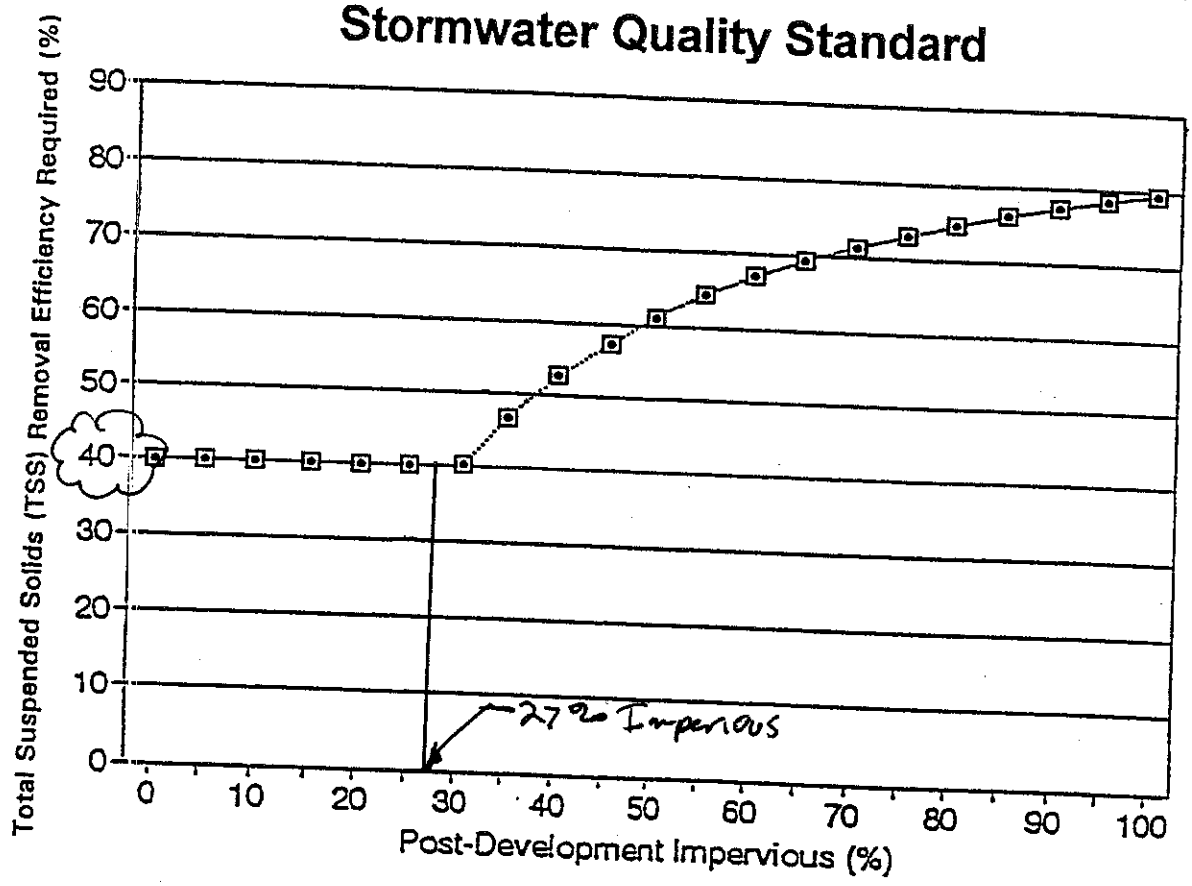


Figure 5.1.

For the purposes of this manual, ***impervious surface*** is fully defined as a hard surface area which either prevents or retards the entry of water into the soil mantle as under natural conditions prior to development, and/or a hard surface area which causes water to run off the surface in greater quantities or at an increased rate of flow from the flow present under natural conditions prior to development. Common impervious areas include, but are not limited to, rooftops, walkways, patios, driveways, parking lots or storage areas, concrete or asphalt paving, gravel roads, packed earthen materials, and oiled, macadam, or other surfaces which similarly impede the natural infiltration of stormwater.

This BMP manual is not regulatory. However, the practices described in this manual are designed to ensure that stormwater runoff from a development site not adversely affect the physical, biological, and chemical properties of the receiving water or of associated aquatic habitats. As such, use of this manual may assist compliance with applicable statutes, regulations, and ordinances. Other equivalent techniques of stormwater treatment, of course, will also assist with compliance.

Alternatively, the criterion of reducing post development TSS loadings to predevelopment levels may be applied. This criterion is not intended to be used as an alternative to achieving adequate control where existing high sediment loadings are the result of poor management of "developed" sites such as farmlands where appropriate erosion control components of a USDA conservation management plan are not being used, or sites where land disturbed by previous development (e.g., gravel pits or log yards) was not permanently stabilized (EPA, 1993.)

ATTACHMENT E

Stormwater Quality Unit Sizing

STORMWATER QUALITY UNIT

SUBCATCHMENT 3 **Area contributing to Vortech's unit**

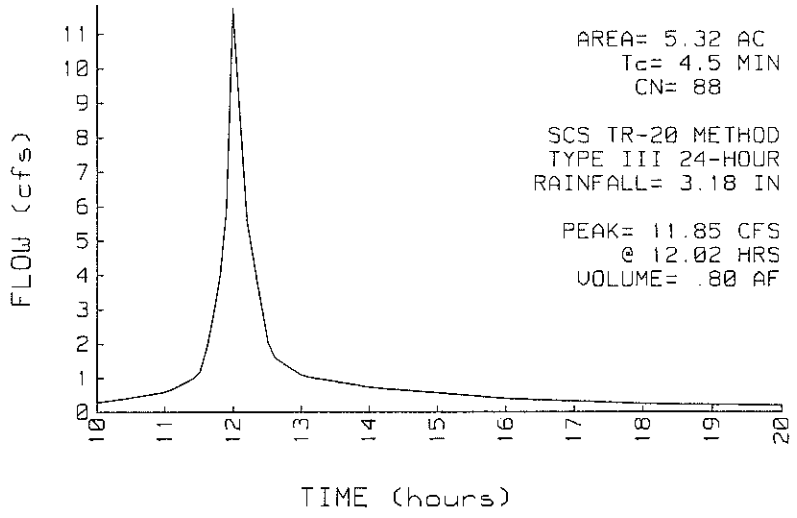
PEAK= 11.85 CFS @ 12.02 HRS, VOLUME= .80 AF

ACRES	CN	
3.40	93	Parking Lot
1.92	78	vegetated swale, D soils
5.32	88	

SCS TR-20 METHOD
TYPE III 24-HOUR
RAINFALL= 3.18 IN ≈ 2 year Storm
SPAN= 10-20 HRS, dt=.1 HRS

Method	Comment	Tc (min)
SHALLOW CONCENTRATED/UPLAND FLOW	**Parking Lot**	2.4
Paved Kv=20.3282 L=548' s=.035 '/' V=3.8 fps		
CHANNEL FLOW	**Segment ID:**	2.1
a=12 sq-ft Pw=41.2' r=.291'		
s=.025 '/' n=.024 V=4.3 fps L=548' Capacity=51.6 cfs		
	Total Length= 1096 ft Total Tc=	4.5

SUBCATCHMENT 3 RUNOFF
Area contributing to Vortech's unit



STORMWATER QUALITY UNIT

SUBCATCHMENT 3 **Area contributing to Vortech's unit**

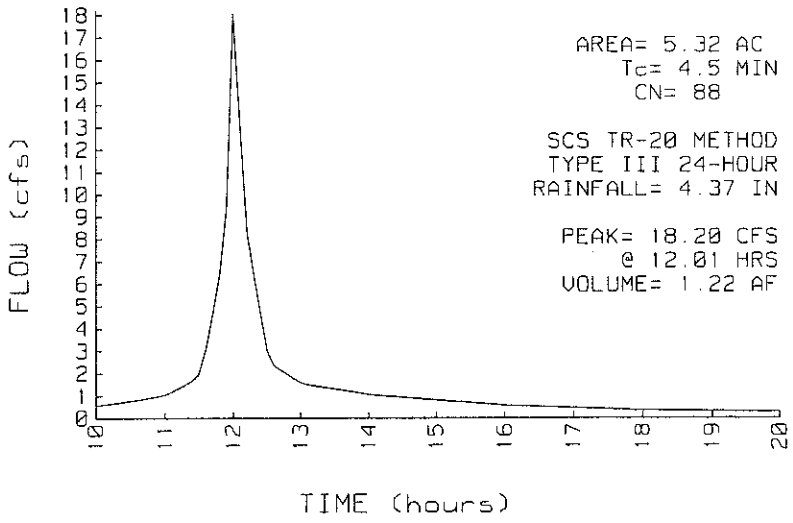
PEAK= 18.20 CFS @ 12.01 HRS, VOLUME= 1.22 AF

ACRES	CN	
3.40	93	Parking Lot
1.92	78	vegetated swale, D soils
5.32	88	

SCS TR-20 METHOD
TYPE III 24-HOUR
RAINFALL= 4.37 IN =10 year 6 hour
SPAN= 10-20 HRS, dt=.1 HRS

Method	Comment	Tc (min)
SHALLOW CONCENTRATED/UPLAND FLOW	**Parking Lot**	2.4
Paved Kv=20.3282 L=548' s=.035 '/' V=3.8 fps		
CHANNEL FLOW	**Segment ID:**	2.1
a=12 sq-ft Pw=41.2' r=.291'		
s=.025 '/' n=.024 V=4.3 fps L=548' Capacity=51.6 cfs		
	Total Length= 1096 ft Total Tc=	4.5

SUBCATCHMENT 3 RUNOFF
Area contributing to Vortech's unit



STORMWATER QUALITY UNITS 25 YEAR

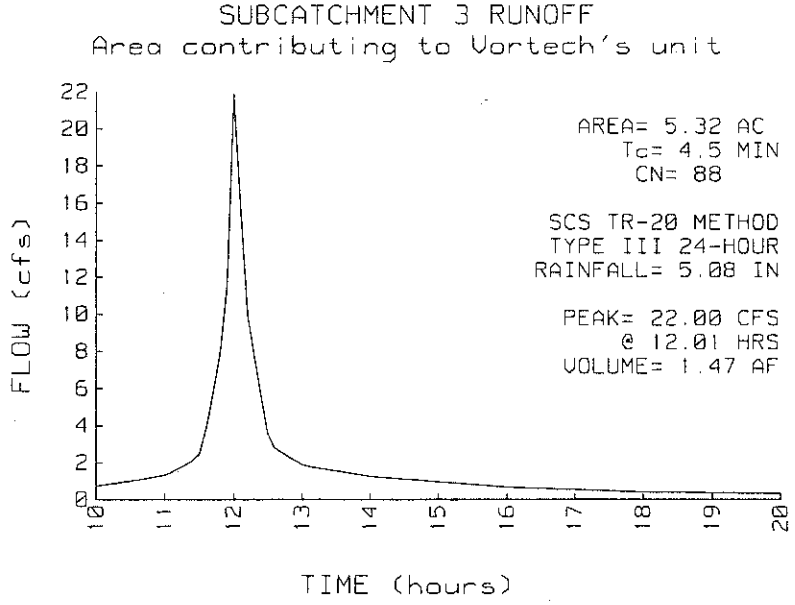
SUBCATCHMENT 3 **Area contributing to Vortech's unit**

PEAK= 22.00 CFS @ 12.01 HRS, VOLUME= 1.47 AF

ACRES	CN	
3.40	93	Parking Lot
1.92	78	vegetated swale, D soils
5.32	88	

SCS TR-20 METHOD
TYPE III 24-HOUR
RAINFALL= 5.08 IN = 25 year storm
SPAN= 10-20 HRS, dt=.1 HRS

Method	Comment	Tc (min)
SHALLOW CONCENTRATED/UPLAND FLOW	**Parking Lot**	2.4
Paved Kv=20.3282 L=548' s=.035 '/' V=3.8 fps		
CHANNEL FLOW	**Segment ID:**	2.1
a=12 sq-ft Pw=41.2' r=.291'		
s=.025 '/' n=.024 V=4.3 fps L=548' Capacity=51.6 cfs		
	Total Length= 1096 ft Total Tc=	4.5



DUFRESNE-HENRY, INC.

PREPARED BY VNG DATE 3/6/01 PROJECT NO. 8190016.01
CALCULATIONS CHECKED BY DATE SHEET NO. 1 OF 2
ASSUMPTIONS / METHODS CHECKED BY DATE
SUBJECT PORTLAND JETPORT TEMPORARY PARKING LOT

VORTECHS MODEL 11000 SIZING CALCULATIONS

1. The appropriate offline Vortechs system should operate at no greater than 24% of the system treatment capacity during the 2-month storm. Given that the design storm, Q_{25} equals 22.0 cfs, the 2-month storm is determined using ratios provided in Technical Bulletin No. 3 as follows:

$$\frac{\text{25-YEAR STORM}}{8} \approx \text{2-Month Storm} \Rightarrow \frac{22.0\ cfs}{8} = 2.75\ cfs$$

$$2.75\ cfs \approx \text{2-MONTH STORM}$$

2. Therefore, the 2-Month Storm storm operating rate as a percentage of the treatment capacity is calculated as follows:

$$\frac{\text{2-MONTH STORM}}{\text{Vortechs 11000 Treatment Capacity}} = \frac{2.75\ cfs}{17.50}$$

$$= 15.7\% < 24\% \text{ OKV}$$

NOTE: IT IS OUR UNDERSTANDING THAT VORTECHS SYSTEMS DESIGNED FOR THE 25 YEAR STORM AND ACHIEVE 80% TSS REMOVAL ARE GIVEN A 50% CREDIT FROM MDEP

$$50\%\ TSS > 40\%\ TSS\ Removal\ Required$$

Vortechs™
STORMWATER TREATMENT SYSTEM

MAINTENANCE

The Vortechs System requires minimal routine maintenance. However, it is important that the system be inspected at regular intervals and cleaned when necessary to ensure optimum performance. The rate at which the system collects pollutants will depend more heavily on site activities than the size of the unit, e.g., heavy winter sanding will cause the grit chamber to fill more quickly but regular sweeping will slow accumulation.

Inspection

Inspection is the key to effective maintenance and it is easily performed. In the first year of operation, frequent inspections of the accumulated sediment volume within the aluminum grit chamber are necessary to establish an appropriate maintenance plan. Vortechnics recommends seasonal inspections during the first year. Inspections should be performed more often in the winter months in climates where sanding operations may lead to rapid accumulations, or in equipment washdown areas. After the first year, the inspection schedule should be reviewed and modified according to experience. It is very useful to keep a record of each inspection. A simple form for doing so is provided.

The Vortechs System only needs to be cleaned when inspection reveals that it is nearly full; specifically, when sediment depth has accumulated to within six inches of the dry-weather water level. This determination can be made by taking 2 measurements with a stadia rod or similar measuring device: one measurement is the distance from the manhole opening to the top of the sediment pile and the other is the distance from the manhole opening to the water surface. If the difference between the two measurements is less than six inches the system should be cleaned out. Note: to avoid underestimating the volume of sediment in the chamber, the measuring device must be lowered to the top of the sediment pile carefully. Finer, silty particles at the top of the pile typically offer less resistance to the end of the rod than larger particles toward the bottom of the pile.

In Vortechs installations where the risk of large petroleum spills is small, liquid contaminants may not accumulate as quickly as sediment. However, an oil or gasoline spill should be cleaned out immediately. Oil or gas that accumulates on a more routine basis should be removed when an appreciable layer has been captured.

Cleaning

Cleanout of the Vortechs System with a vacuum truck is generally the most effective and convenient method. Cleanout should not occur within 6 hours of a rain event to allow the entire collection system to drain down. Properly maintained Vortechs Systems will only require evacuation of the grit chamber portion of the system, in which case only the manhole cover nearest to the system inlet need be opened to remove water and contaminants. However, all chambers should be checked to ensure the integrity of the system. In installations where a "clamshell" is being utilized for solids removal, prior to removing the grit, absorbent pads or

pillows can be placed in the oil chamber to remove floating contaminants. Once this is done, sediment may then be easily removed with the clamshell.

In some cases, it may be necessary to pump out all chambers. An important maintenance feature built into Vortechs Systems is that floatables remain trapped after a cleaning. A pocket of water between the grit chamber and the outlet panel keeps the bottom of the baffle submerged, so that all floatables remain trapped when the system begins to fill up again. Therefore, in the event of cleaning other chambers it is imperative that the grit chamber be drained first. Manhole covers should be securely seated following cleaning activities, to ensure that surface runoff does not leak into the unit from above.

Vortechs™
STORMWATER TREATMENT SYSTEM

Inspection & Maintenance Log

Model:			Location:		
Date	**Water Depth to Sediment**[1]	**Floatable Layer Thickness**[2] (approx)	**Maintenance Performed**	**Maintenance Personnel**	**Comments**

1. The water depth to sediment is determined by taking two measurements with a stadia rod: one measurement is the distance from the manhole opening to the top of the sediment pile and the other is the distance from the manhole opening to the water surface. If the difference between the two measurements is less than six inches the system should be cleaned out.

2. The system should be cleaned out if the floating layer of trapped debris is 3-6" in depth.

Vortechs™
STORMWATER TREATMENT SYSTEM

Inspection & Maintenance Log

Model: 5000			Location: Anywhere		
Date	**Water Depth to Sediment[1]**	**Floatable Layer Thickness [2] (approx)**	**Maintenance Performed**	**Maintenance Personnel**	**Comments**
4/10/96	30"	0"	N/A	B. Johnson	Installed
8/15/96	26"	sheen	None	S. Riley	
11/15/96	22"	sheen	None	B. Johnson	
1/15/97	16"	sheen	None	B. Johnson	
2/15/97	7"	1"	Clean-out scheduled	S. Riley	3 snowstorms
2/18/97	30"	0"	System cleaned w/ Vactor truck	S. Riley	Cleaned
3/15/97	28"	Sheen		S. Riley	swept parking lot
4/15/97	27"	0.5"	Placed oil-absorbent material in system	B. Johnson	
5/16/97	23"	0"	Replaced oil-absorbent material w/new	B. Johnson	

1. The water depth to sediment is determined by taking two measurements with a stadia rod: one measurement is the distance from the manhole opening to the top of the sediment pile and the other is the distance from the manhole opening to the water surface. If the difference between the two measurements is less than six inches the system should be cleaned out.

2. The system should be cleaned out if the floating layer of trapped debris is 3-6" in depth.

ATTACHMENT F

Miscellaneous Calculations

DUFRESNE-HENRY, INC.

PREPARED BY VNG DATE 3/6/01 PROJECT NO. 819.00016.01

CALCULATIONS CHECKED BY _____ DATE _____ SHEET NO. 1 OF 5

ASSUMPTIONS / METHODS CHECKED BY _____ DATE _____

SUBJECT PORTLAND JETPORT TEMPORARY PARKING LOT

1. SIZE PIPE OUTLET PROTECTION

SIZE PIPE OUTLET PROTECTION FOR 50 YEAR STORM EVENT

Q_{50} = 25.0 cfs (see attached sheet 2 of 5)

RIPRAP REQUIREMENTS (see attached Sheet 3,4,5 of 5)

SUBCATCHMENT 3 **Area contributing to Vortech's unit**

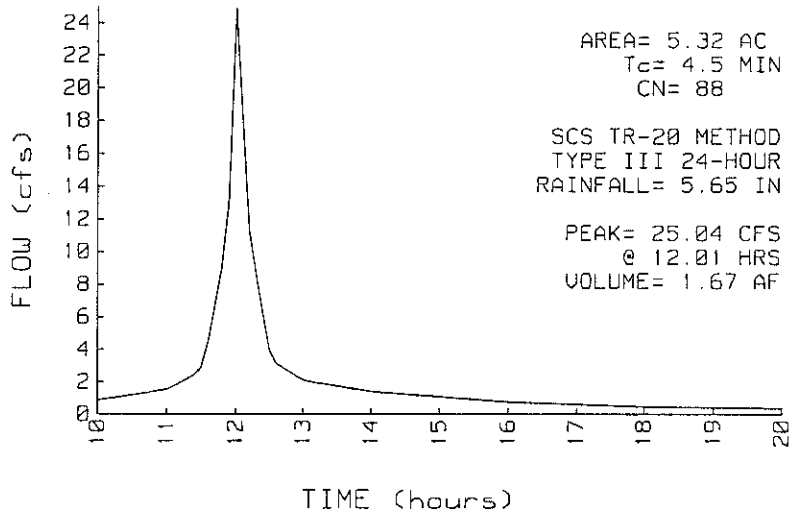
PEAK= 25.04 CFS @ 12.01 HRS, VOLUME= 1.67 AF

ACRES	CN	
3.40	93	Parking Lot
1.92	78	vegetated swale, D soils
5.32	88	

SCS TR-20 METHOD
TYPE III 24-HOUR
RAINFALL= 5.65 IN = 50 YEAR
SPAN= 10-20 HRS, dt=.1 HRS

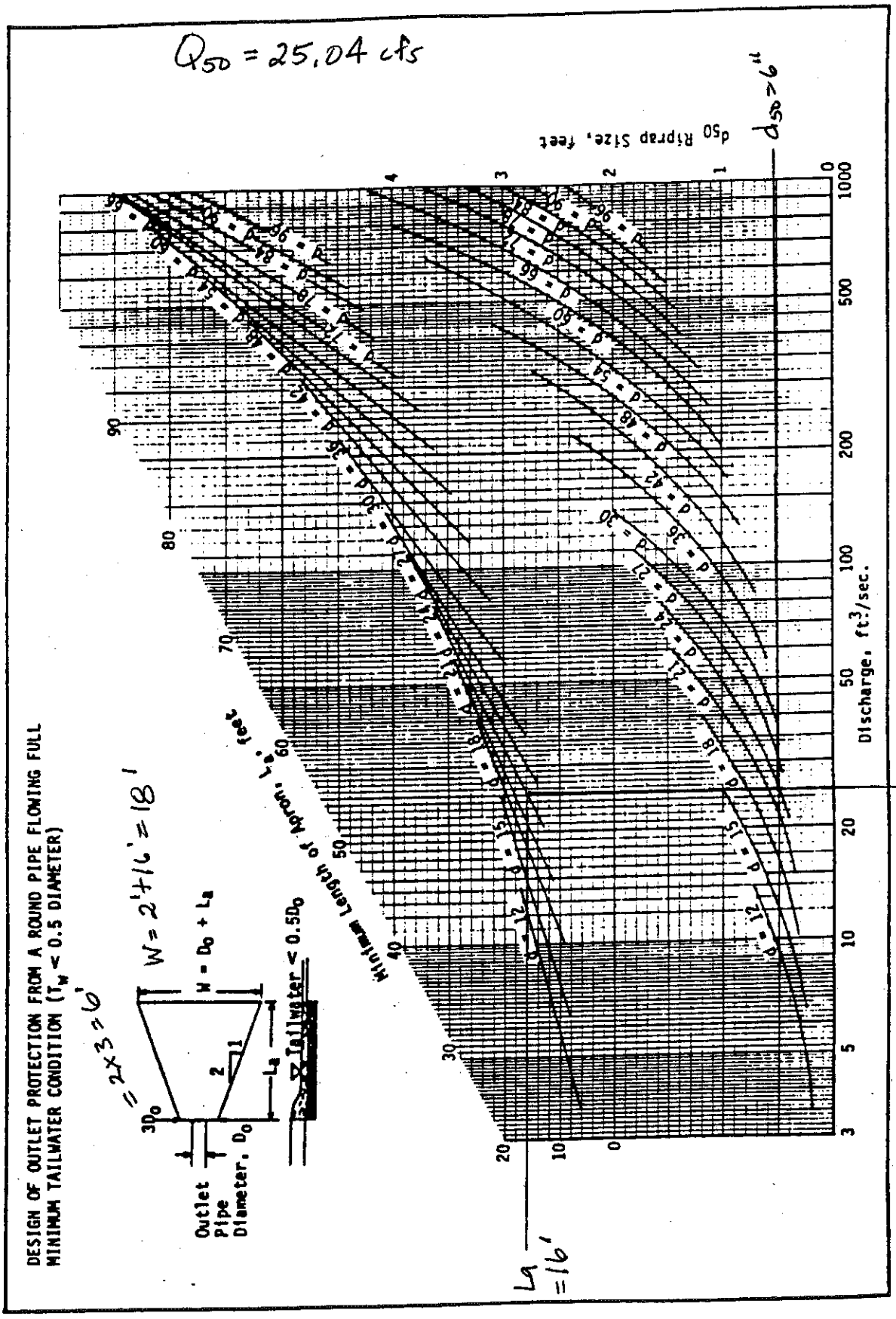
Method	Comment	Tc (min)
SHALLOW CONCENTRATED/UPLAND FLOW	**Parking Lot**	2.4
Paved Kv=20.3282 L=548' s=.035 '/' V=3.8 fps		
CHANNEL FLOW	**Segment ID:**	2.1
a=12 sq-ft Pw=41.2' r=.291'		
s=.025 '/' n=.024 V=4.3 fps L=548' Capacity=51.6 cfs		
	Total Length= 1096 ft Total Tc=	4.5

SUBCATCHMENT 3 RUNOFF
Area contributing to Vortech's unit



PORTLAND JETPORT TEMPORARY PARKING SHEET 3 OF 5

Figure 32.1 MINIMUM TAILWATER CONDITION (USDA Soil Conservation Service)



DUFRESNE-HENRY, INC.

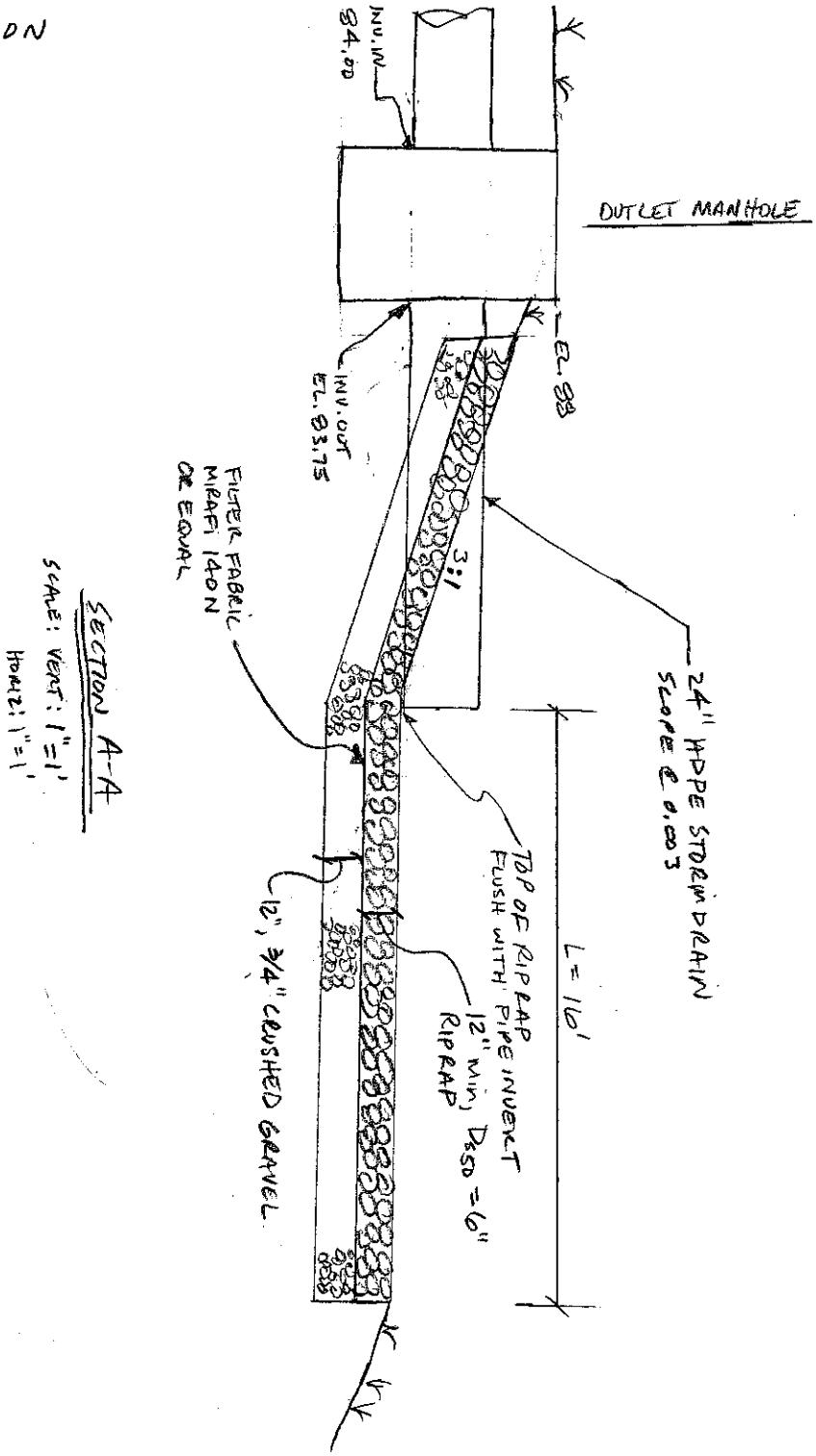
PREPARED BY VNG DATE 3/6/01 PROJECT NO. 8190016.05

CALCULATIONS CHECKED BY _____ DATE _____ SHEET NO. 5 OF 5

ASSUMPTIONS / METHODS CHECKED BY _____ DATE _____

SUBJECT PORTLAND JETPORT TEMPORARY PARKING LOT

PIPE OUTLET PROTECTION



SECTION A-A

SCALE: VERT: 1"=1'
HORIZ: 1"=1'

DUFRESNE-HENRY, INC.

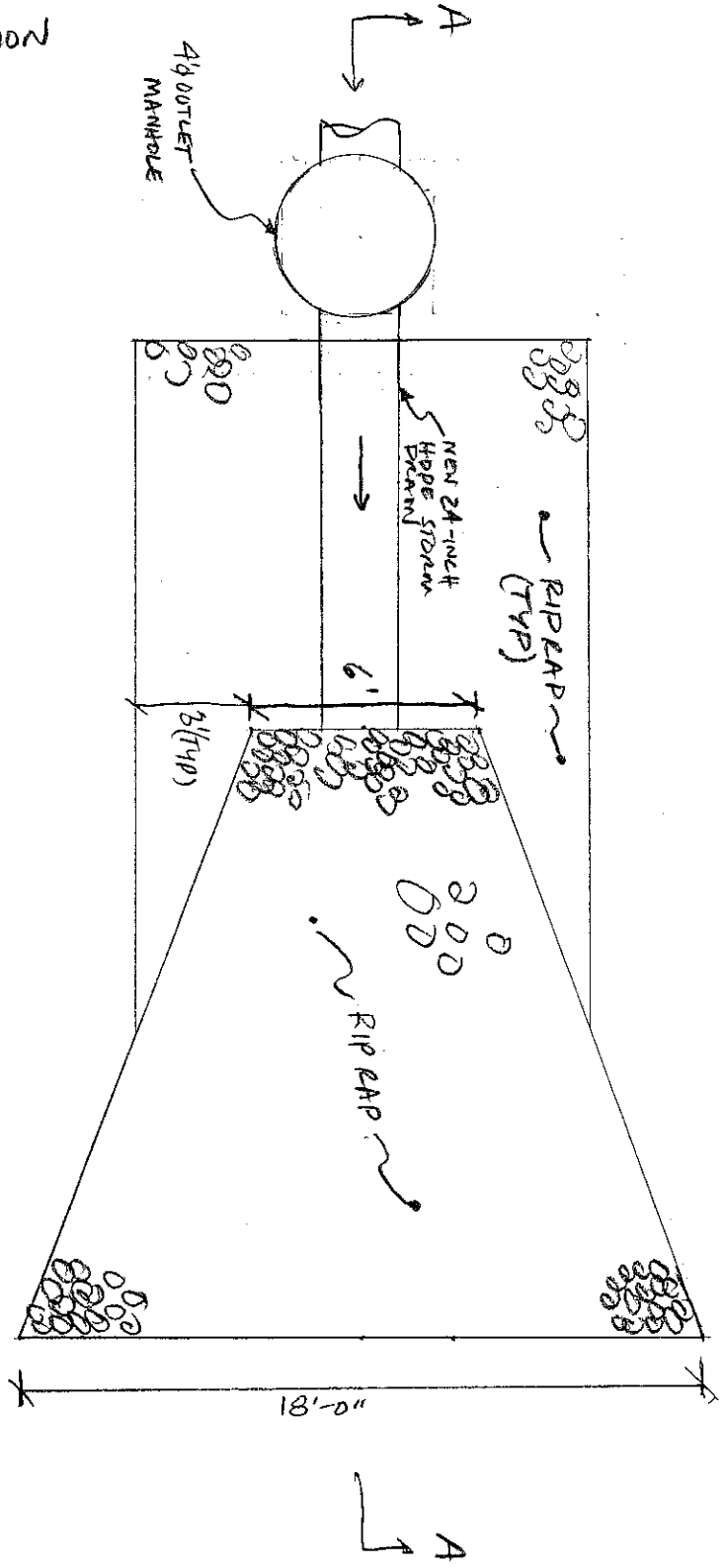
PREPARED BY VNG DATE 3/6/01 PROJECT NO. 8190016.01

CALCULATIONS CHECKED BY DATE SHEET NO. 4 OF 5

ASSUMPTIONS / METHODS CHECKED BY DATE

SUBJECT PORTLAND JETPORT TEMPORARY PARKING LOT

PIPE OUTLET PROTECTION



Dufresne-Henry

22 Free Street . Portland, Maine 04101-3900 . Tel: 207.775.3211 . Fax: 207.775.6434 . E-mail: dhmaine@agate.net

February 27, 2001

Mr. Richard Knowland, Senior Planner
City of Portland
Planning and Urban Development
389 Congress Street
Portland, Maine 04101

RE: Portland International Jetport - Phase I Parking Garage Improvements
Planning Board Submittal - Additional Information

Dear Rick:

As discussed with our office, we are providing 7 copies of additional information regarding the Portland Jetport Phase I Parking Garage Improvements. The additional information consists of the following:

- Revised Landscaping Plan
- Surface Lot Pedestrian Movement Diagram
- New Parking Garage Pedestrian Movement Diagram
- Photometric Plan, Lighting Details, and Fixture Information

If you have any questions or comments regarding the above information, please contact us.

Very truly yours,

DUFRESNE-HENRY, INC.

Jeffrey D. Preble, P.E.
Senior Project Manager

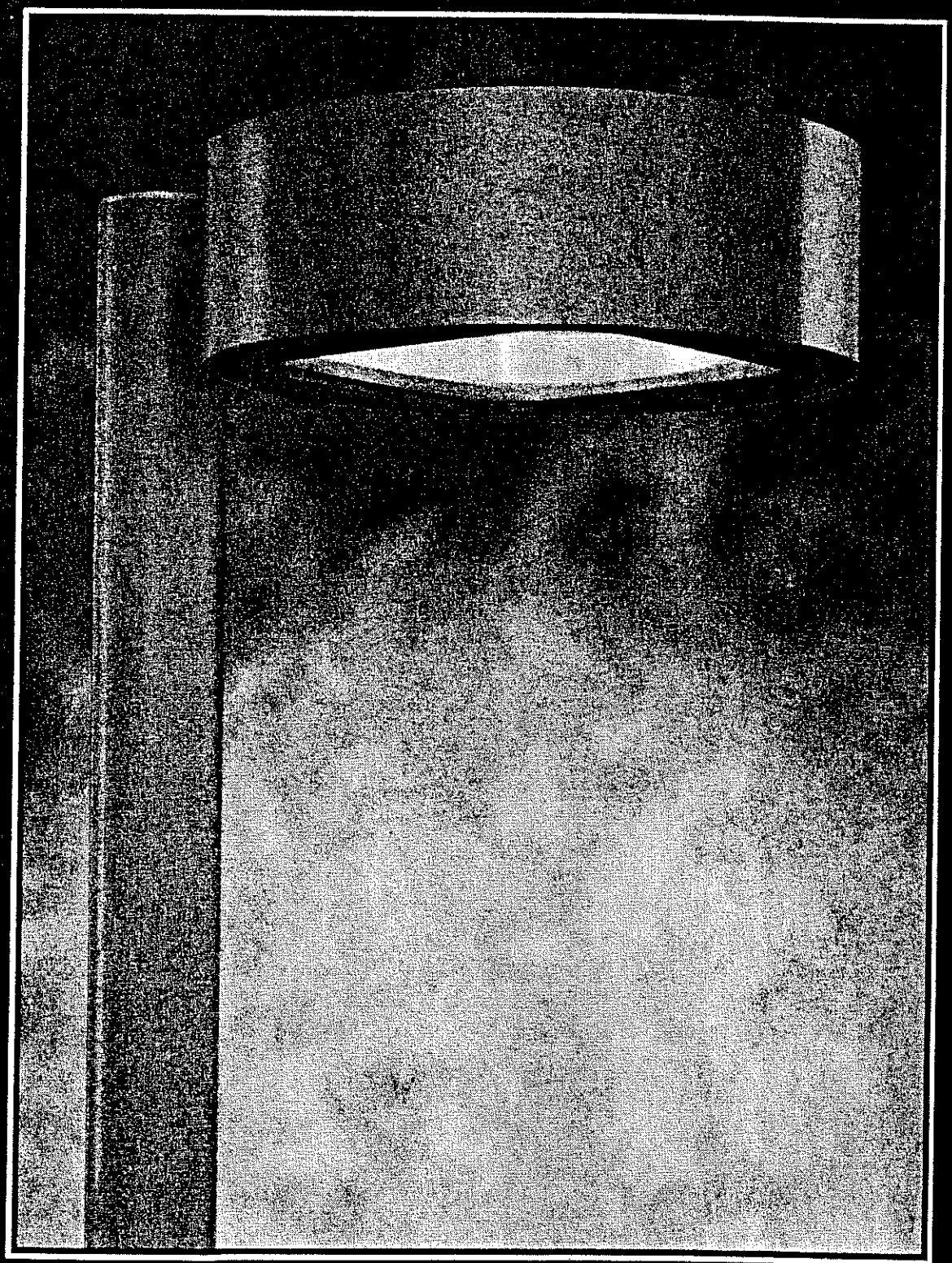
cc: Paul Bradbury, P.E. Portland International Jetport
Jeff Shultes, Portland International Jetport
Mickey Krockmalic, Domenech, Hicks & Krockmalnic

\\Upreble\projects\8190016.01 Jetport Parking Garage\Planning Board Submittal\Response to Comments Planning Board Submittal\Rick Knowland 2-27-01.wpd

PROPOSED FIXTURE - NEW LOOP ROAD

(Sterner)

STERNERO



humboldt

1. Series Code
HM

2. Luminaire Mounting
A — Arm Mount
Yoke Mount Pole Fitters
B — 4.5" O.D. with 0.125" to 0.156" wall
C — 4.5" O.D. with 0.188" to 0.250" wall
D — 5.0" O.D. with 0.125" to 0.188" wall
E — 3.0" O.D. pole top *(external)*
F — Custom Fitter *(consult factory)*

3. Luminaire Size
21
25

4. Diffuser Code
A — Clear Glass

5. Luminaire Arrangement
10 — Single
28 — Two at 180°
29 — Two at 90°
32 — Three at 120°
39 — Three at 90°
49 — Four at 90°

6. Reflector Option Code
1H — Type I Horizontal
2H — Type II Horizontal
3H — Type III Horizontal
5H — Type V Horizontal
FH — Forward Distribution (Horz.)
2D — Type IID Multi-Facet (horz.)
3D — Type IIID Multi-Facet (horz.)

berkley

1. Series Code
BK

2. Luminaire Mounting
A — Arm Mount
Yoke Mount Pole Fitters
B — 4.5" O.D. with 0.125" to 0.156" wall
C — 4.5" O.D. with 0.188" to 0.250" wall
D — 5.0" O.D. with 0.125" to 0.188" wall
E — 3.0" O.D. pole top *(external)*
F — Custom Fitter *(consult factory)*

3. Luminaire Size
21
25

4. Diffuser Code
A — Clear Glass

5. Luminaire Arrangement
10 — Single
28 — Two at 180°
29 — Two at 90°
32 — Three at 120°
39 — Three at 90°
49 — Four at 90°

6. Reflector Option Code
1H — Type I Horizontal
2H — Type II Horizontal
3H — Type III Horizontal
5H — Type V Horizontal
FH — Forward Distribution (Horz.)
2D — Type IID Multi-Facet (horz.)
3D — Type IIID Multi-Facet (horz.)

franklin III

1. Series Code
FT

2. Luminaire Mounting
A — Arm Mount
Yoke Mount Pole Fitters
B — 4.5" O.D. with 0.125" to 0.156" wall
C — 4.5" O.D. with 0.188" to 0.250" wall
D — 5.0" O.D. with 0.125" to 0.188" wall
E — 3.0" O.D. pole top *(external)*
F — Custom Fitter *(consult factory)*

3. Luminaire Size
21
25

4. Diffuser Code
A — Clear Glass

5. Luminaire Arrangement
10 — Single
28 — Two at 180°
29 — Two at 90°
32 — Three at 120°
39 — Three at 90°
49 — Four at 90°

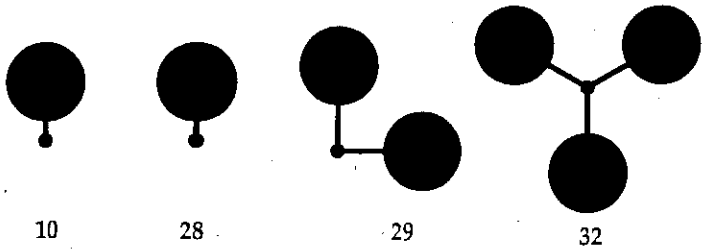
6. Reflector Option Code
1H — Type I Horizontal
2H — Type II Horizontal
3H — Type III Horizontal
5H — Type V Horizontal
FH — Forward Distribution (Horz.)
2D — Type IID Multi-Facet (horz.)
3D — Type IIID Multi-Facet (horz.)

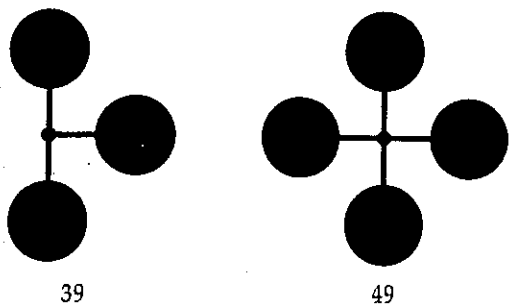
11. Luminaire Finish Code
See finish information on page 22.

12. Pole or Bracket Code
Cross reference Luminaire Size (step 2) and arrangement (step 4) with the wind load rating table on the individual luminaires feature page to select the appropriate pole or bracket from page 23.

Luminaire Finish	Pole or Bracket Options	Pole Finish	Pole Options
C	RSA15-B	C	N

Luminaire Arrangements

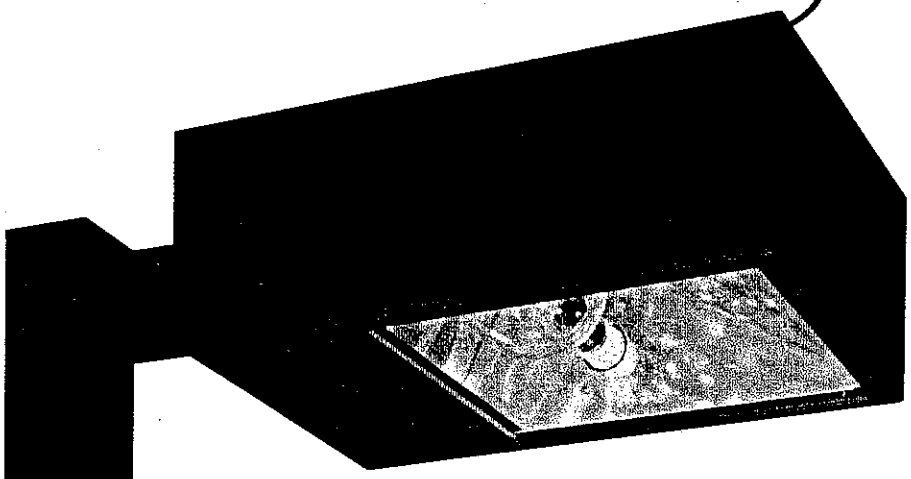


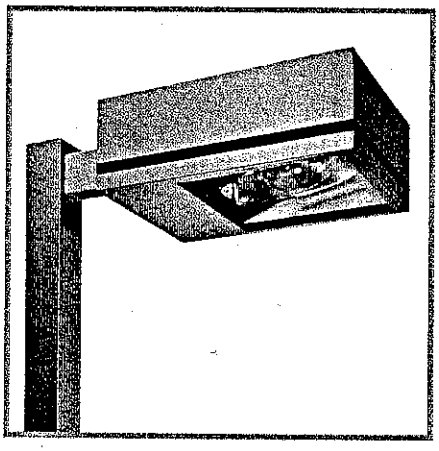


PROPOSED FIXTURE - SURFACE PARKING LOT

(Spaulding Lighting)

Cordova II, III





Applications:
- Parking areas
- Roadways
- Auto Dealerships
- Fast Food Lots
- Entrances
- School campuses

Construction Features

Housing
- One piece aluminum, die formed and machine welded
- Optional embossed decorative band (EDB) 1" wide, same color as housing. Color striping is available

Mounting
- Extruded 10" aluminum arm with mounting hardware
- Cast wall bracket with fixture mounting hardware

Door Assembly
- Formed aluminum
- Captive screws
- Continuous gasket

Optical Assembly
- Flat clear tempered glass lens
- CVII - hydroformed, anodized aluminum reflector for type III asymmetric distribution

FULL CUTOFF

LUMINAIRE ORDERING GUIDE

Example:

CVIII - PM - M1000 - IV - 277 - EDB - LTG - BCS

Model	Mounting	Lamp Type Watts	Reflector	Voltage	Options	Color	Optional Stripe Color (for EDB)
CVII CVIII U.L. & CSA Listed	**PM:** arm mount std 10" arm **WB:** wall bracket	S400 S1000 M400 M1000	**III:** asymmetric for CVII **IV:** forward throw for CVIII	120 208 240 277 347 480 MT: multi-tap	**PE:** photoelectric cell 120-277v up to 400W **PR:** photo receptacle (less cell) **SF:** single fuse **DF:** double fuse **VG:** polycarbonate vandal guard **CS:** house side cutoff shield **EDB:** embossed decorative band **QZ:** quartz standby **4RPA:** round pole adaptor for 4" O.D. pole **5RPA:** round pole adaptor for 5" O.D. pole **SIGN::** Backlit signature panel (available in CV III only)	**DBZ:** dark bronze **BGE:** beige **RRN:** rocket red **SGB:** black **SWT:** white **FGP:** forest green **TBP:** teal blue **RBP:** royal blue **CMB:** burgundy **LTG:** lite gray	**WCS:** white **BCS:** black **OCS:** other

Refer to Poles/Brackets Section for ordering information.

Fixture EPA - 2.9

- CVIII - formed, anodized aluminum reflector for type IV forward throw distribution, field rotatable in 90° increments

Lampholder

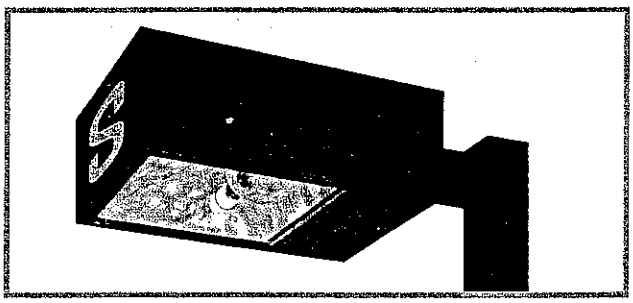
- Enclosed mogul porcelain socket
- HPS sockets are pulse rated

Ballast

- High power factor, starting rated to -20°F
- Metal Halide: constant wattage autotransformer type
- High Pressure Sodium: constant wattage autotransformer type with electronic starter

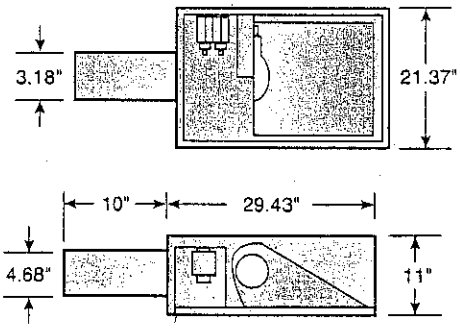
Finish

- Baked on polyester paint available in 10 standard colors
- Consult factory for custom finishes

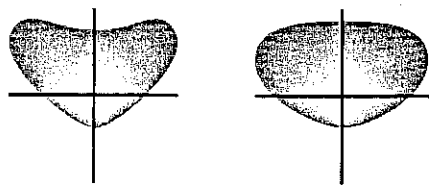


Signature Option CV III

DIMENSIONS

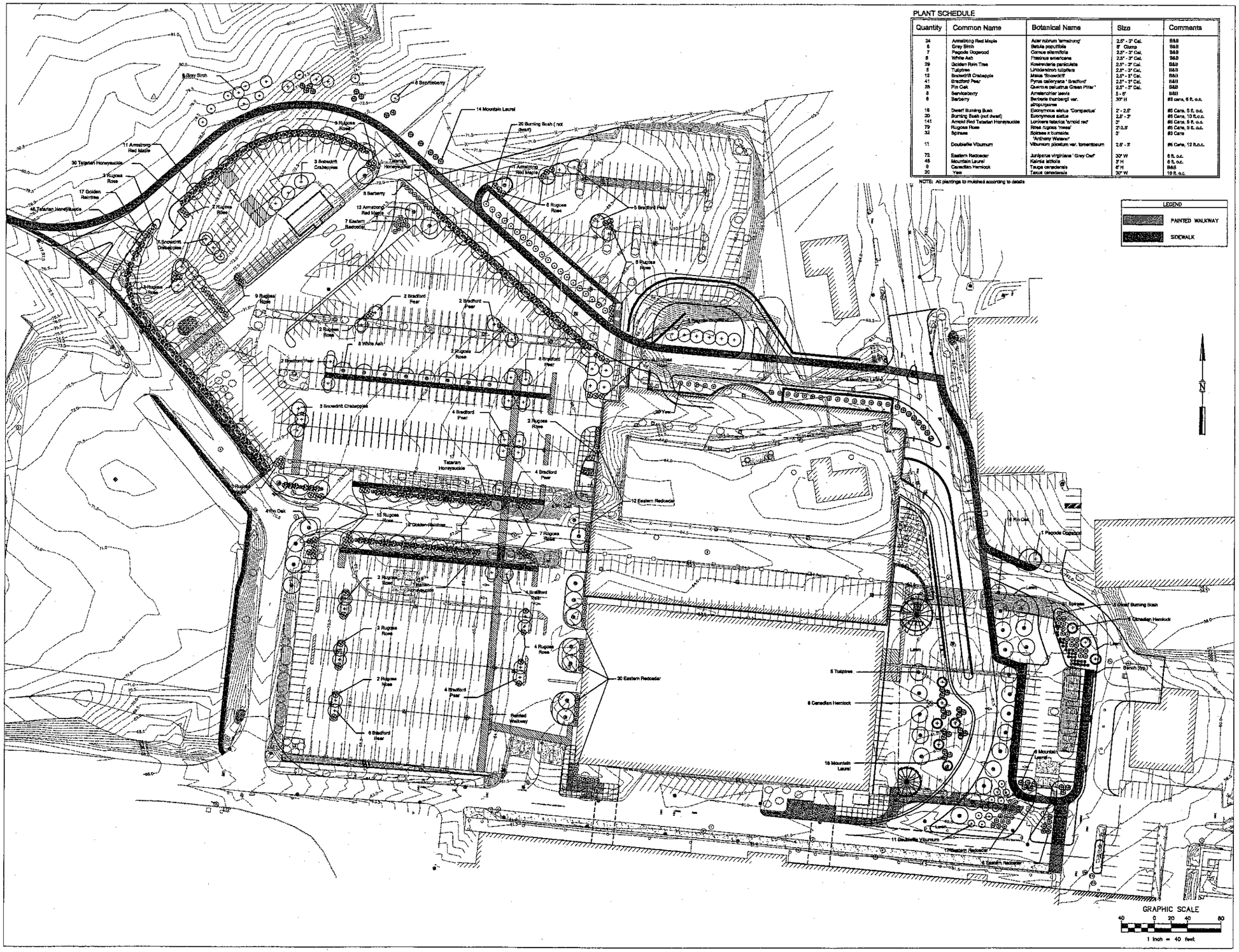


DISTRIBUTION PATTERNS



III
asymmetric

IV
forward throw



DOMENECH HICKS & KROCKMALNIC ARCHITECTS
155 Massachusetts Ave.
Boston, MA 02115
617-267-6408
Fax 617-267-1990
Dufresne-Henry

CITY OF PORTLAND
PORTLAND, MAINE

DEPARTMENT OF WATERFRONT AND TRANSPORTATION

PHASE I
PARKING GARAGE

PORTLAND INTERNATIONAL JETPORT

PORTLAND, MAINE

No.	Date	Revision
1	06-19-01	PLANNING BOARD SUBMISSION

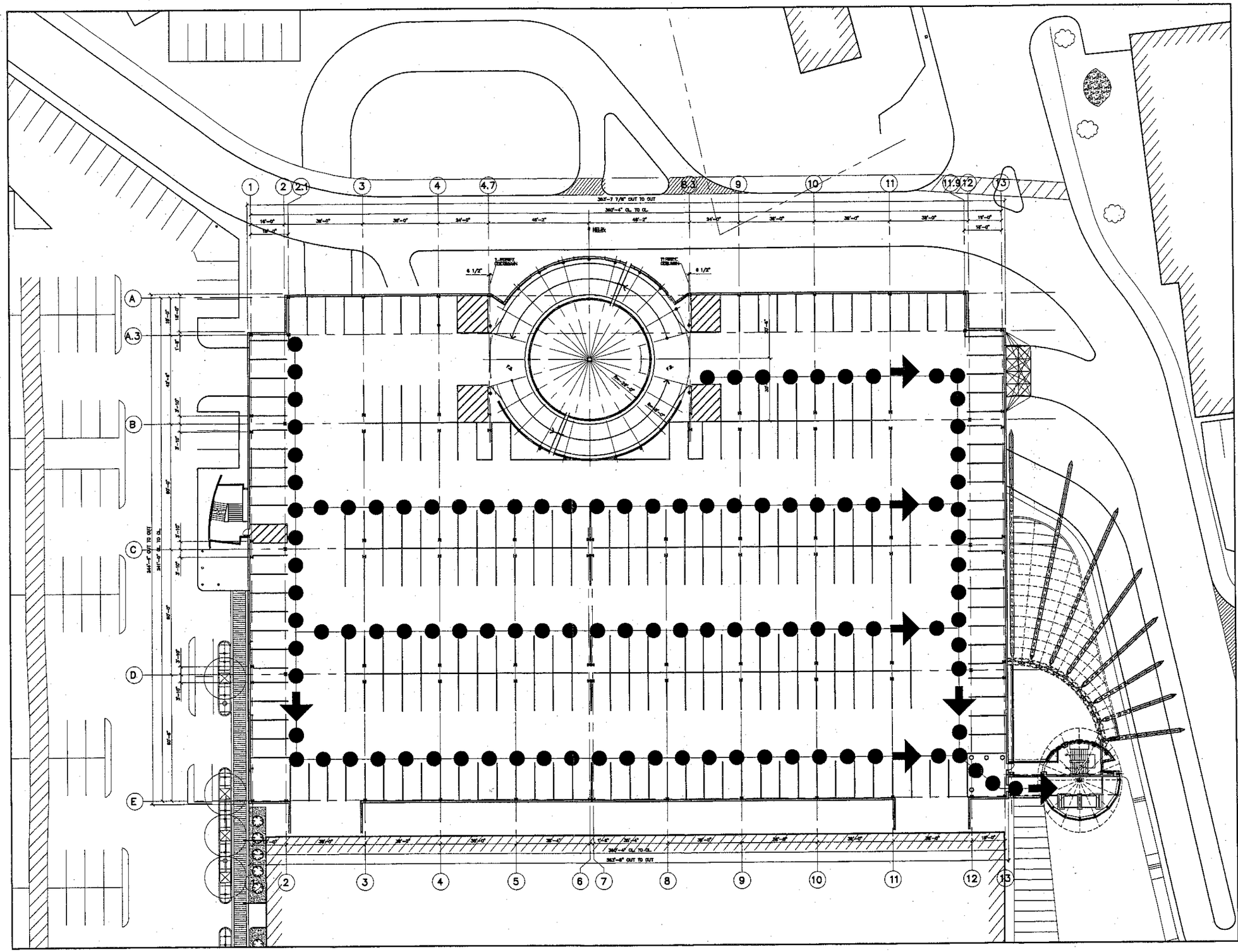
Title: LANDSCAPING PLAN

Scale: 1" = 40'
File Name: L1-1
Drawn By: DS
Checked By: JDF
Job No.: 5390206.01
Date: 01-02-2001

Drawing No.: L1-1

1/16"=1' 5 0 10 20 30 40ft
1/8"=1' 5 0 5 10 15 20ft
1/4"=1' 2 0 2 4 6 8 10ft
1/2"=1' 1 0 1 2 3 4 5ft
3/4"=1' 1 0 1 2 3ft
1"=1' 1 0 1 2ft
1 1/2"=1' 0 1 2ft
3"=1' 0 1ft

If size, it has been reduced. Graphic scales must be adjusted accordingly.



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DEPARTMENT OF WATERFRONT AND TRANSPORTATION

PHASE I
PARKING GARAGE

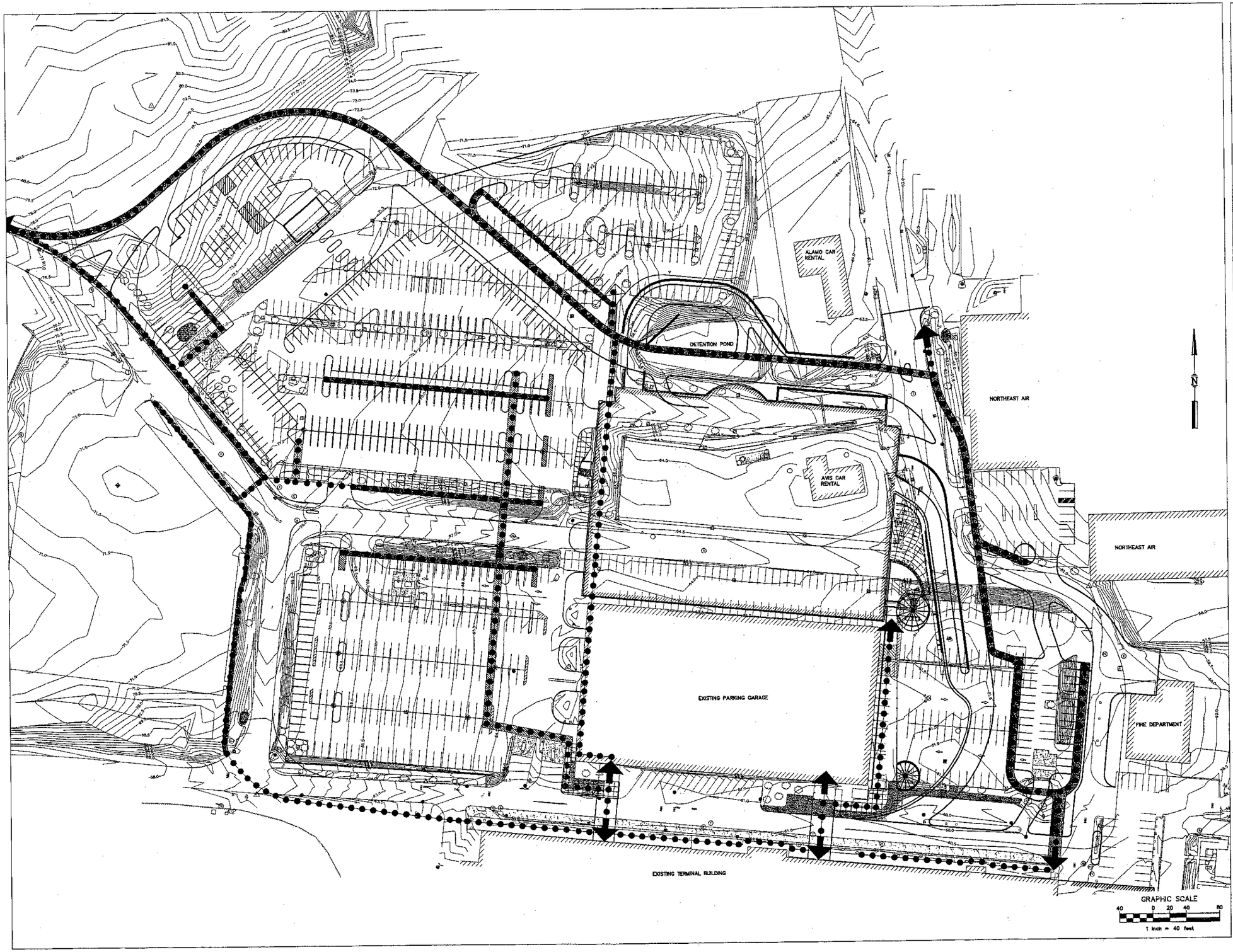
PORTLAND INTERNATIONAL JETPORT

PORTLAND, MAINE

No.	Date	Remarks

Title
PEDESTRIAN TRAFFIC TYPICAL FLOOR PLAN

Scale 1/16"=1'-0"
File Name A-PF
Drawn By ARC
Checked By
Job No. 2002.00
Date 02/26/01
Drawing No. A-PF



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Boston, MA 02115
617-267-6408
Fax 617-267-1990

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CITY OF PORTLAND
PORTLAND, MAINE

DEPARTMENT OF WATERFRONT AND TRANSPORTATION

PHASE I
PARKING GARAGE

PORTLAND INTERNATIONAL JETPORT

PORTLAND, MAINE

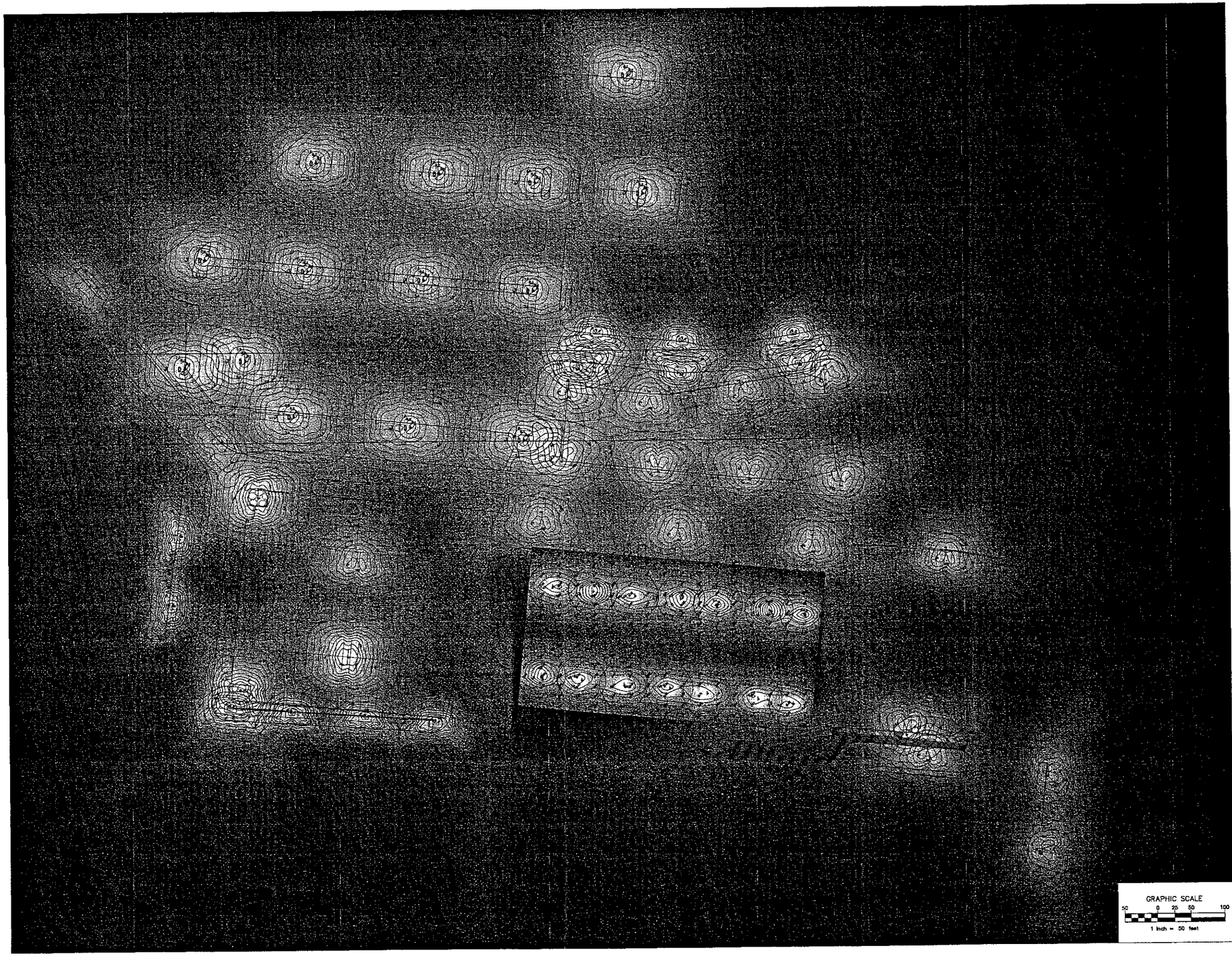
No.	Date	Revision
1	02-12-01	PLANNING BOARD SUBMISSION

Title: PEDESTRIAN MOVEMENT

Scale: 1" = 40'

File Name: EXHIBIT
Drawn By: MPG
Checked By: JEP
Job No.: 8190016.91
Date: 01-02-2001

Drawing No.: EXHIBIT



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155 Massachusetts Ave.
Boston, MA 02115
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CITY OF PORTLAND
PORTLAND, MAINE

DEPARTMENT OF
WATERFRONT AND
TRANSPORTATION

PHASE I
PARKING GARAGE

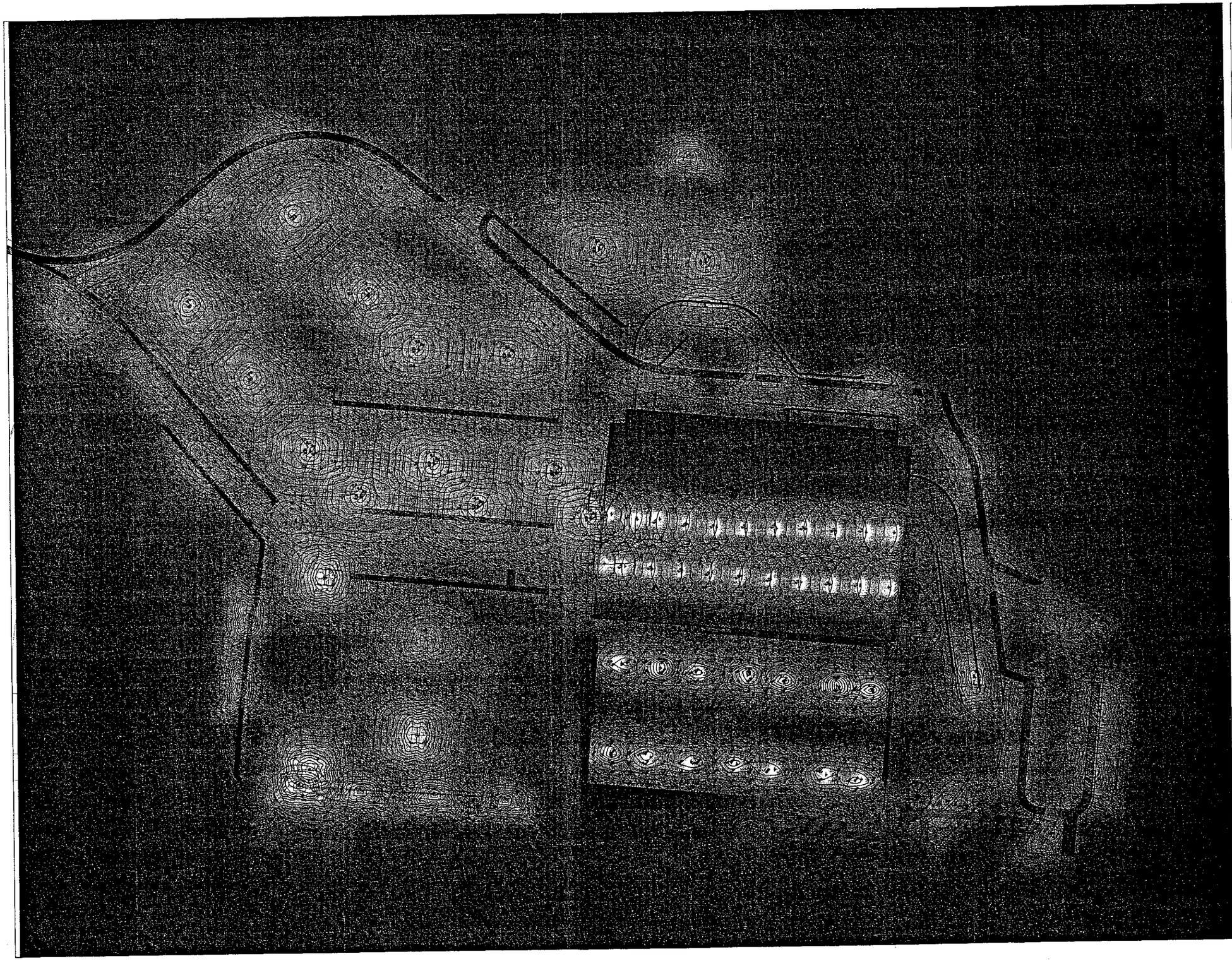
PORTLAND
INTERNATIONAL
JETPORT

PORTLAND, MAINE

No.	Date	Remarks

Title
EXISTING SIMULATED
LIGHTING LEVELS

Scale: 1" = 40'	
File Name: E1-6	
Drawn By: WH	
Checked By: JSP	Drawing No. E1-6
Job No.: 819005.01	
Date: 02-26-01	



DOMENECH
HICKS &
KROCKMALNIC
ARCHITECTS

155 Massachusetts Ave.
Boston, MA 02115
617-267-6408
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DH
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CITY OF PORTLAND
PORTLAND, MAINE

DEPARTMENT OF
WATERFRONT AND
TRANSPORTATION

PHASE I
PARKING GARAGE

PORTLAND
INTERNATIONAL
JETPORT

PORTLAND, MAINE

No.	Date	Revision

Title:
PROPOSED SIMULATED
LIGHTING LEVELS

Scale: 1" = 40'

File Name:

Drawn By: MH

Checked By: MH

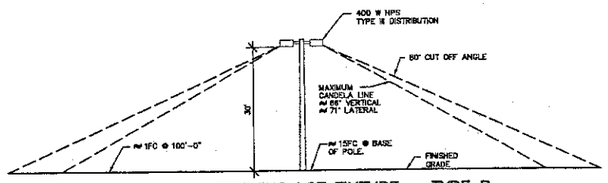
Job No.: 0190016.01

Date: 02-26-01

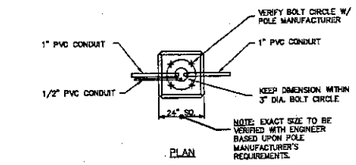
Drawing No.: E1-7

ELECTRICAL NOTES:

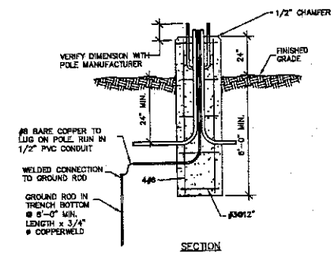
REPRESENTATION OF ILLUMINATION	TAKEN FROM IES (ILLUMINATION ENGINEERING GUIDELINES)
	FOOTCANDLES
STARLIGHT	0.0002
MOONLIGHT	0.02
STREET LIGHTING	0.9 – 1.8
DAYLIGHT	
@ NORTH WINDOW	50 – 200
OFFICE LIGHTING	70 – 150
RECOMMENDED FOOTCANDLES (IES)	
PARKING LOT	
SELF PARKING	1 FC
ACTIVE BLDG. ENTRANCE	5 FC



TYPICAL PARKING LOT FIXTURE – TYPE B
NOT TO SCALE

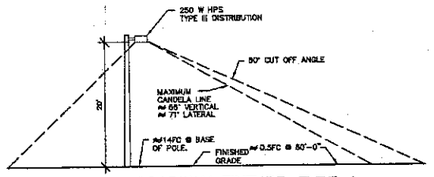


PLAN



SECTION

FIXTURE TYPE B STANDARD POLE BASE DETAIL
NOT TO SCALE



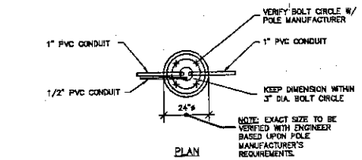
TYPICAL ROADWAY FIXTURE–TYPE A
NOT TO SCALE

LIGHTING FIXTURE SCHEDULE

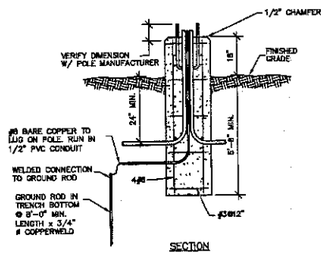
MARK	MANUFACTURER	CATALOG NUMBER	TYPE	COLOR	MOUNTING	VOLTAGE	LAMPS	REMARKS	TOTAL WATTS
*A	STERNER	PTA21A10SH-277V-AJP	CUT OFF	LTBRNZ	POLE	277	(1) 250W HPS	25' TAPERED STEEL POLE	310
*(**)B	BPAULDING	CV111-P8-277-PE-DB2	CUT OFF	DKBRNZ	POLE	277	(2) 400W HPS	30' SQUARE STRAIGHT STEEL POLE	920
*C	STERNER	PTA21A20SH-277V-AJP	CUT OFF	LTBRNZ	POLE	277	(2) 250W HPS	30' TAPERED STEEL POLE	620

* FIXTURES WERE CHOSEN TO MATCH EXISTING FIXTURES THAT ARE REMAINING. ANY SUBSTITUTION MUST MATCH EXISTING IN COLOR SHAPE AND PERFORMANCE.

** TWO FIXTURES PER POLE 180° APART. PHOTOCELL ON ONE FIXTURE.



PLAN



SECTION

FIXTURE TYPE A & C
STANDARD POLE BASE DETAIL
NOT TO SCALE

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Dufresne-Henry

CITY OF PORTLAND
PORTLAND, MAINE

DEPARTMENT OF WATERFRONT AND TRANSPORTATION

PHASE I
PARKING GARAGE

PORTLAND INTERNATIONAL JETPORT

PORTLAND, MAINE

No.	Date	Revision

Title: SITE LIGHTING DETAILS

Scale: NTS
File Name: E1-8
Drawn By: LMK
Checked By: ZEF
Job No.: 819006.01
Date: 12/27/01
Drawing No.: E1-8

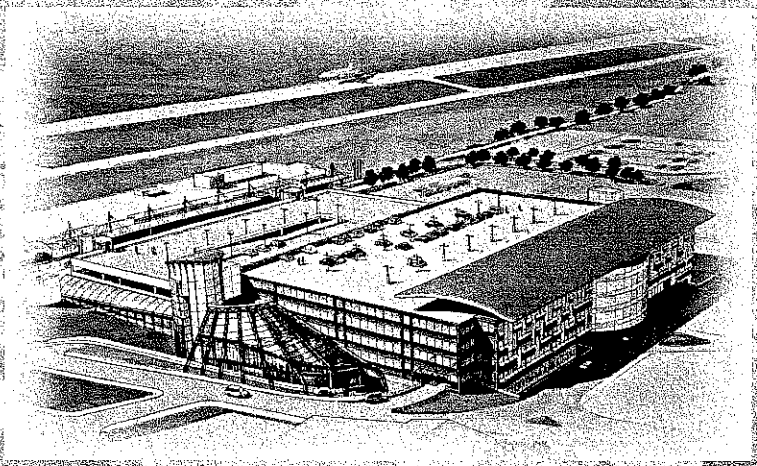
ATTACHMENT C

City of Portland
Portland International Jetport
Phase I Parking Garage
City of Portland Major Site Plan Application
Response to Comments

February 2001

Prepared for:

City of Portland
Department of Waterfront and Transportation
Portland International Jetport
Westbrook Street
Portland, ME 04102



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February 16, 2001

Mr. Richard Knowland, Senior Planner
City of Portland
Planning and Urban Development
389 Congress Street
Portland, Maine 04101

RE: Portland International Jetport - Phase I Parking Garage Improvements
Planning Board Submittal - Response to Comments

Dear Rick:

We received comments prepared by DeLuca-Hoffman regarding the Portland Jetport Phase I Parking Garage Improvements January 9, 2001 Planning Board Application on January 30, 2001. We were also provided additional comments at our February 3, 2001 meeting that DeLuca-Hoffman attended and our February 5, 2001 meeting with the City Arborist. In addition, comments were received during telephone conversations between you and our office on February 7, 2001. Dufresne-Henry offers the following responses in an effort to address the comments received.

<u>DeLuca-Hoffman comments of January 30, 2001</u>

1. **The following items were observed by Mike DeLuca and I as we reviewed the Parking layout.**

   - **The exit out of the parking garage is not at 90 degrees but at an angle.**

     The exit out of the parking garage was intentionally not placed at a 90 degree angle due to the short distance between the exit and the loop road. This issue was discussed at our February 3, 2001 meeting. All parties agreed that the design as proposed was acceptable.

   - **There will be lost parking at Northeast Air. Is this being replaced elsewhere?**

     Based on our discussions with Jetport personnel, parking will most likely be made available to Northeast Air in the parking area north of the proposed garage.

   - **How will coordination between lots for the various users i.e. employees, passengers, visitors etc. be coordinated? Where is the employee parking?**

     Signage will be provided to direct passengers and visitors, etc. to the various parking areas. Currently the employee parking lot is located on the west side of the terminal access road.

- **How does a pedestrian leave the northerly parking lot, except near the entrance? Better pedestrian access directly to the terminal is suggested.**

  The northern parking lot has been reconfigured. Pedestrians leave the northern parking lot via stairs to the loop road cross walk. A handicap access ramp will be provided in the construction documents. After crossing the loop road, a designated pedestrian pathway is provided to the terminal building. Plan sheet L1-1, Landscaping Plan has been revised to better define pedestrian movement and is attached.

- **Has a photometric plan been provided for the proposed lights in the parking lots?**

  A photometric plan will be provided prior to the Public Hearing on February 27, 2001.

- **Where will snow storage be accommodated within the lots?**

  Currently snow is trucked off. Upon completion of the proposed project, snow will be melted utilizing a fixed snow melter. The melted snow will be discharged to the stormwater drainage system.

- **A plan outlining the various signage provisions for the jetport should be provided. This may include temporary during construction as well as permanent. I have been commented to several times by visitors to the area that directional signage at the Jetport is poor.**

  Signage plans for both surface lots, overall loop road movement proposed parking garage are provided as Attachment A.

- **It is difficult to identify where curbing and other surface features are being provided.**

  Drawing line weights and work have been revised to better indicate proposed features. Vertical granite curbing will be installed along the new loop road and in the surface parking areas.

2. **The following comments are provided regarding the loop road.**

- **Has the engineer considered super elevating portions of the loop road around the corners?**

  Based on the proximity of the loop road to entrances and exits in conjunction with the speed of the roadway (20-25 mph urban collector), superelevation is not warranted. The design meets the minimum AASHTO standards for not requiring superelevation. This was agreed upon by all parties during our February 3, 2001 meeting.

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- **The loop road will have some steep slopes and apparently will require retaining wall at several locations. These should be considered for appearance etc.**

  An artist's rendering showing an example of the proposed retaining wall appearance is provided as Attachment B. This rendering was reviewed at our February 3, 2001 meeting. It was agreed by all parties that the appearance of the retaining walls is acceptable.

- **At Road station 105+00 the road is very close to the building; what protection will be provided? Sidewalk?**

  The required clear zone from the roadway curb is 18 inches. A vertical faced curb is located at the edge of the traveled way. There is a 3 foot esplanade between the curb and the sidewalk, and then a 5 foot sidewalk located beside the building. The building is not located within the roadway clear zone. The sidewalk is protected by the vertical faced curb.

- **What are the pedestrian routes to the terminal from the far parking lots?**

  Plan sheet L1-1, Landscaping Plan has been revised to better show pedestrian routes from the parking lots to the terminal building and is attached.

- **The grades at the match between the loop roads and the main road should be reviewed.**

  The proposed grade changes at all match lines are within all local and state minimum standards.

3. **The following comments are provided regarding the phasing.**

   - **Signage for the various phases and permanently should be evaluated.**

     Temporary and permanent signage is addressed in Attachment A.

   - **A plan showing the overall scope with the entire jetport may be beneficial for planning and the Board.**

     The overall scope of the project is shown on sheet C1-1, Overall Site Plan and was included in our January 9, 2001 Planning Board Application.

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- **Two sheets outlining Phase 1 road and utilities and then Phase 2 road and utilities would be anticipated for the final plans.**

  The phasing of the project is clearly described on plan sheets C1-9, Construction Phasing Plan and C1-10, Construction Phasing Plan and was included in our January 9, 2001 Planning Board Application.

- **The phasing plan is difficult to follow. More detail and coordination with the jetport would be anticipated for the final plans.**

  The construction phasing plans provided in our January 9, 2001 Planning Board Application has been discussed at length with the Jetport. Plan sheets C1-9, Construction Phasing Plan and C1-10, Construction Phasing Plan describe the phasing in detail by color coding the separate contracts and showing the extent of each phase. Construction documents will include phase by phase drawings rather than showing all phases on one drawing.

4. **The following comments are provided regarding the drainage.**

- **The engineer should provide additional conclusions regarding the gravity system versus the stormwater pump station. Avoiding a stormwater pump station is obviously recommended if possible.**

  The gravity system has been evaluated regarding stormwater impacts and is provided in Attachment C.

  It is the intention of the Jetport to install the gravity stormwater system rather than the stormwater pump station system for maintenance reasons. A layout plan of the preliminary alignment is included in Attachment C.

- **The City of Portland typically requires a storm drain system consisting of catch basins connected to a trunk line with manholes rather than having catch basins connected in series. The Public Works Department should review and comment since this issue could have a significant consequence on the drainage system layout.**

  The storm drain system has been laid out to accommodate using underdrain/storm drain piping under the edge of the road. Accordingly, the structure have been placed at the changes in direction to achieve this.

- **The applicant should review the need for underdrain along the loop road.**

  A combined underdrain/stormdrain system is being provided along the loop road.

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