

SEBAGO TECHNICS, INC.

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LETTER OF TRANSMITTAL

HAND DELIVERED

Phone (207) 856-0277 FAX (207) 856-2206

DATE <i>4-25-95</i>	JOB NO. <i>94242</i>
ATTENTION <i>Rick Knowland</i>	
RE: <i>Supervale - Portland</i>	

TO *City of Portland*
389 Congress Street
Portland, ME 04101

WE ARE SENDING YOU Attached Under separate cover via _____ the following items:

- Shop drawings Prints Plans Samples Specifications
 Copy of letter Change order _____

COPIES	DATE	NO.	DESCRIPTION
<i>6</i>	<i>4-25</i>	<i>2</i>	<i>Revised site plans</i>

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

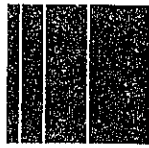
REMARKS *Rick, we made the changes we discussed consisting of:*
1. Limit of disturbance & preservation of existing vegetation
2. E+S Narrative to plans
3. Detail of silt fencing.
Please call if you require additional information. Thank you.

COPY TO _____

RECYCLED PAPER:
Contents: 40% Pre-Consumer • 10% Post-Consumer

SIGNED: *Shawn [Signature]*

If enclosures are not as noted, kindly notify us at once.



SebagoTechnics
Engineering & Planning for the Future

April 17, 1995
94242

Alex Jaegerman, Chief Planner
Planning and Urban Development
City of Portland
389 Congress Street
Portland, ME 04101

Minor Site Plan Application - Supervalu, 56 Milliken Street

Dear Mr. Jaegerman:

On behalf of Supervalu - Maine Division, we are pleased to submit seven (7) copies of the enclosed site plans along with a \$300.00 application fee. Supervalu is proposing to increase its truck parking capacity with a 100' x 190' paved parking area to accommodate an additional 15 tractor trailer trucks. The parking area will be located along the easterly limits of the existing parking, extending towards the detention pond located near the Riverside Industrial Parkway/Milliken Street intersection. As described on the site plan, the work will include:

1. A paved tractor trailer parking expansion of 19,000± square feet to adequately accommodate 15 trucks.
2. Proposed pavement to match existing grade at edge of existing pavement.
3. Loam and seeding to all disturbed areas along edge of expansion limits, including erosion and sediment control measures as described in the Erosion and Sediment Control Plan included with this application.

Enclosed with the site plans are seven (7) copies of the stormwater calculations and Erosion and Sedimentation Control Plan included as part of this application.

If you require any additional information or have any questions, please call.

Sincerely,

SEBAGO TECHNICS, INC.

Shawn M. Frank, P.E.
Project Manager

SMF:dlf/jc
Enc.

**Stormwater Management Plan
Proposed Supervalu Expansion
(Truck Parking Expansion)
Portland, Maine**

Introduction

Enclosed is the Stormwater Management Plan for the proposed Supervalu Expansion off Milliken Street within the Riverside Industrial Parkway in Portland, Maine. The existing site consists of a shipping/receiving building with offices and associated parking for trailers and employees. The remainder of the site consists of grassed fields and wooded areas. At this time, the 1994 approved warehouse facility expansion is almost complete. However, for analysis purposes, the stormwater management plan examines the pre-developed conditions as pre-1975 site conditions. The post-developed condition examines the site in its current condition, including the 1994 proposed expansion and the proposed truck parking expansion described in this application.

Methodology

The stormwater runoff analysis was developed in accordance with methodology outlined in the "HydroCad" Stormwater Modeling system. The 2-year, 10-year and 25-year, 24-hour storm events were used for analysis.

Soils

Soil information was based on the U.S.D.A. Cumberland County Medium Intensity Soil Maps and on site observations by a certified soil scientist from Sebago Technics, Inc.

Present Conditions

For analysis purposes the present condition was considered to be the site prior to 1975. At that time there was an existing building with associated parking areas and access drives. Some expansions have occurred from 1975 to date and have been considered in the proposed condition analysis. The existing on-site area was divided into five separate watersheds. The watersheds are described below:

WS I

Watershed I is located in the northern portion of the site. A drainageway runs east to west through the watershed to a 24 inch culvert under the Riverside Industrial Parkway. The topography is mostly flat with steeper slopes along the banks of the stream. Vegetation consists primarily of woods and grass. The watershed also includes approximately half the existing building and most of the associated parking area. The study point is the outlet of the 24 inch culvert under Riverside Industrial Parkway.

WS II

Watershed II is located in the southern portion of the site. A small stream runs east to west through the watershed to a 24 inch culvert under Milliken Street. The topography is mostly flat with steeper slopes along the banks of the stream. Vegetation consists primarily of woods and grass. The watershed also includes approximately half the existing building and the access drives. The study point is the 24 inch culvert under Milliken Street.

WS III

Watershed III is located in the southwest corner of the site along the access drives. This watershed is comprised primarily of the runoff from the access drive and drains to a catch basin that outlets through a culvert under Milliken Street. The topography is mostly a medium slope with vegetation primarily grass. The study point is the culvert under Milliken Street.

WS IV

Watershed IV is located in the western portion of the site along Milliken Street. The topography is mostly a medium slope draining to the road ditch along Milliken Street and down to a catch basin that outlets through a culvert under Milliken Street. Vegetation consists primarily of grass and wooded areas. The study point is the culvert under Milliken Street.

WS V

Watershed V is located in the northwestern corner of the property adjacent to the intersection of Milliken Street and the Riverside Industrial Parkway. The topography is mostly a medium slope draining to a catch basin that outlets through a culvert under the Riverside Industrial Parkway. Vegetation consists primarily of grass. The study point is the culvert under the Parkway.

Developed Conditions

In the developed condition, the site remained divided into primarily the same five watersheds. For analysis, the same study points were used. The major change in the developed condition is the amount of impervious area. For analysis purposes, an on-site point of the outlet of the 24 inch R.C.P. under the Riverside Industrial Parkway from Watershed I was considered to be the "total" study point for pre and post-developed comparison as flows from all watersheds eventually contribute to this point. The calculated peak rate of runoff for Watershed V will be over detained such that the combined peak rate of runoff for all the watersheds at the "total" study point is slightly more than the present condition for the 2 year storm event and less than the present condition for the 10 and 25 year 24- hour storm event. The watersheds are described below:

WS I

Due to proposed grading, Watershed I decreases slightly in size. Peak runoff increases from the present condition due to in the change in land cover from primarily woods and grass to more impervious area.

WS II

Watershed II decreases slightly in size due to the proposed grading. The peak runoff increases from the present condition due to the change in land cover from grass and woods to more impervious area.

WS III

Watershed III increases slightly in size due to the proposed grading. Impervious area also increases from the present condition increasing the calculated peak rate of runoff from the watershed.

WS IV

Due to the proposed grading, Watershed IV decreases slightly in size. Peak rates of runoff decreases from the present condition due to the decrease in watershed area.

WS V

Watershed V increases in size from the present condition. The proposed paved 15 truck parking spaces are located within this watershed. As a result, peak runoff also increases from the present condition due to the increase in impervious area. Watershed V also includes a stormwater detention basin. The detention basin will serve to over detain the stormwater from this watershed such that the combined flow at the "total" study point, described as Reach 6 in the HydroCAD computer printouts, is decreased or less than that of the present condition. The detention basin will also maintain a shallow wet pond to provide a degree of treatment to the runoff.

Results and Summary

The following table summarizes the peak rates of runoff generated in each watershed during the 2-year, 10-year and 25-year storm events in the pre-developed and post-developed conditions described earlier in this report.

Watershed Runoff Summary					
Watershed	Condition	Area (Ac.)	Peak 24-Hour Runoff Rates (cfs)		
			2-Year	10-Year	25-Year
I	Pre	14.30	10.0	23.6	30.6
	Post	13.52	12.1	26.0	32.9
II	Pre	10.94	3.9	8.8	11.3
	Post	10.21	4.6	9.5	11.9
III	Pre	0.56	0.6	1.2	1.5
	Post	0.63	1.0	2.1	2.6
IV	Pre	2.26	1.5	3.8	4.9
	Post	1.82	1.2	2.9	3.7
V	Pre	2.40	1.9	4.5	5.8
	Post	4.28	4.4	8.3	10.1

As indicated in the preceding summary table, runoff rates increased slightly due to the development of the site. A detention pond has been provided along the intersection of Riverside Industrial Parkway and Milliken Street to control runoff rates at the "total" study point, Reach 6, to equal or less than pre-developed flow rates. The following table summarizes the peak runoff rates outletting each watershed into the respective Reaches or receiving channels:

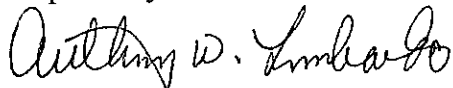
Receiving Channel Summary				
Reach #	Condition	Peak 24-Hour Runoff Rates (cfs)		
		2-Year	10-Year	25-Year
1	Pre	3.9	8.8	11.3
	Post	4.5	9.4	11.8
2	Pre	3.9	8.9	11.4
	Post	4.6	9.6	12.0
3	Pre	4.2	9.4	12.1
	Post	4.9	10.1	12.7
4	Pre	4.2	9.4	12.1
	Post	4.9	10.1	12.7
5	Pre	4.4	10.1	13.3
	Post	5.4	13.2	16.7
6	Pre	13.7	32.3	39.1
"Total" Study Point	Post	14.3	29.6	39.5

As the above table indicates, slight increases occur in the peak runoff rates entering into each receiving channel. However, the increase in flow rates during the 2-year, 10-year and 25-year storm events never increases by more than 5%. Therefore, no significant downstream impacts will be anticipated due to the proposed development.

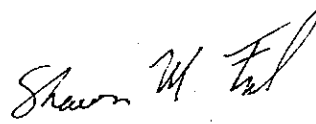
Conclusions

A proposed system of catch basins and subsurface storm drains will divert a portion of the paved parking areas to a proposed detention basin contained within Watershed V. This pond will also provide a degree of treatment to the runoff by maintaining a perpetual two foot pool. The pond will actually over-detain the runoff from Watershed V, such that a combined peak outflow from all five watersheds will be either very near or just below pre-1975 rates. The outlet structure will be a multiple-staged orifice device to control outfall for the 2, 10 and 25 year storm events. With the installation of the basin and outlet structure, no significant downstream impacts are anticipated due to the development of this site.

Prepared by:



Anthony W. Lombardo
Civil Engineer



Shawn M. Frank.
Professional Engineer

AWL/SMF:dlf/jc
April 17, 1995