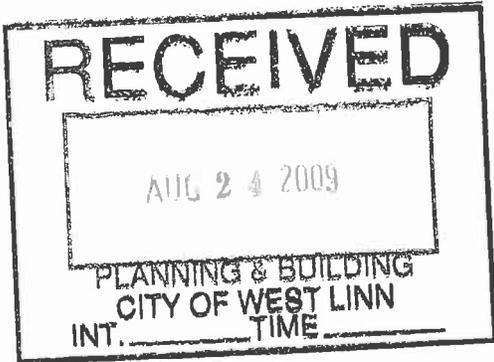


STORM WATER REPORT



FOR: RIVER FALLS PLACE

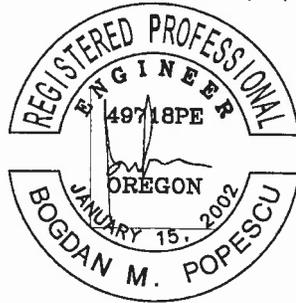
**LOCATED AT:
2170 13th STREET, WEST LINN, OR 97068**

**Prepared for:
Joe and Mike Mitchoff
Premier Property Group
PO Box 82697, Portland OR 97282
503-238-1999**

Prepared by:

BMP Design, LLC.
Bogdan Popescu, P.E.
17701 NE 24th Street
Vancouver, WA 98684
360-936-8426

08/20/09



EXPIRATION DATE 12/31/10

BMP Design LLC # 05-113

REVISION	REVIEW NO.	DATE	BY	COMMENTS
1				
2				

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5. CALCULATIONS HYDROCAD
6. CALCULATIONS FLOW THROUGH PIPES
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1. NARRATIVE

This storm water analyses is prepared for the parcel of land described as:
Lot 15 Parsons addition and portions of tract A and tract B, Block 18, Willamette Tracts,
situated in the SW ¼ SEC 35, T 2S, R 1E, W.M. City of West Linn, Oregon.
The property is located on the West side of 13th street.

The calculations for the storm water are based on the criteria required by the agency
issuing the building permits. City of West Linn has jurisdiction over this property.

The computations in this report reveal the amount of storage necessary for detaining
volumes at different storm water events and water quality.

Existing Conditions

Total Area: 35,161 SF + 9,279 SF = 44,440 SF = 1.02 AC.

Land Cover: trees, grass.

Land Slope: varies:

2% to 36%. From NE to SW (downward toward I 205)

Structures on site: two residences: total Impervious: 2,689 SF + 2,434 SF =
5,123 SF

Soil Type: "D"

CN=80

Time of Concentration: $T_c = 0.42(n \times L)^{0.8} / (I)^{0.4} \times (s)^{0.4}$

Tc 2 yr = 19.50 min

Tc 5 yr = 17.50 min

Tc 10 yr = 16.14 min

Tc 25 yr = 15.0 min

Developed Conditions

Total Area: 44,440 SF = 1.02 AC

Private Road: 8,226 SF = 0.19 AC

Buildings: 9,000 SF = 0.21 AC

Residences (extg): 5,123 SF

Total Impervious Area: 22,349 SF

Total Pervious Area: 22,091 SF

Tc = 5 mins.

Design Frequency, Release rates, Storage Volumes.
24 hours duration.

Summary Table

24-hour storm event	Intensity inches	Q Undev CFS	Q Devel CFS	Storage CF	Actual Release Q CFS
2 YR	2.40	0.18	0.36	217	0.18
5 YR	2.90	0.26	0.47	317	0.25
10 YR	3.40	0.36	0.58	413	0.35
25 YR	3.90	0.46	0.70	490	0.42

The calculations used a 3 orifice system in an 8 inch riser:

IE: 0.00; Diam: 2.80 inch

IE: 0.90; Diam: 3.00 inch

IE: 1.60; Diam: 3.50 inch

Storage system used for calculations purposes:

Diam: 24 inch horizontal pipe; L=400.00 FT.

Required Volume: 1,256 CF

Available storage in Storm water facility (box):

$V = A \times H = (1,443 \text{ SF} \times 1 \text{ ft rock}/3) + 1,443 \times 0.6 \text{ ft} = 1,347 \text{ CF} > 1,256 \text{ CF}$ OK

Freeboard: 0.5 FT

Stormwater Treatment

City of West Linn follows the City of Portland Stormwater Management manual. The City of Portland's pollution prevention (or treatment) standard is a performance standard that requires 70% average annual TSS removal from 90% of the average annual rainfall. Vegetated facilities (such as the one this project proposes) designed using Portland's stormwater manual, generally exceed the LEED stormwater management standard for treatment.. Attached is the Presumptive Approach calc sheet per City of Portland Stormwater management manual.

BES - Presumptive Approach Calculator - Ver 1.0

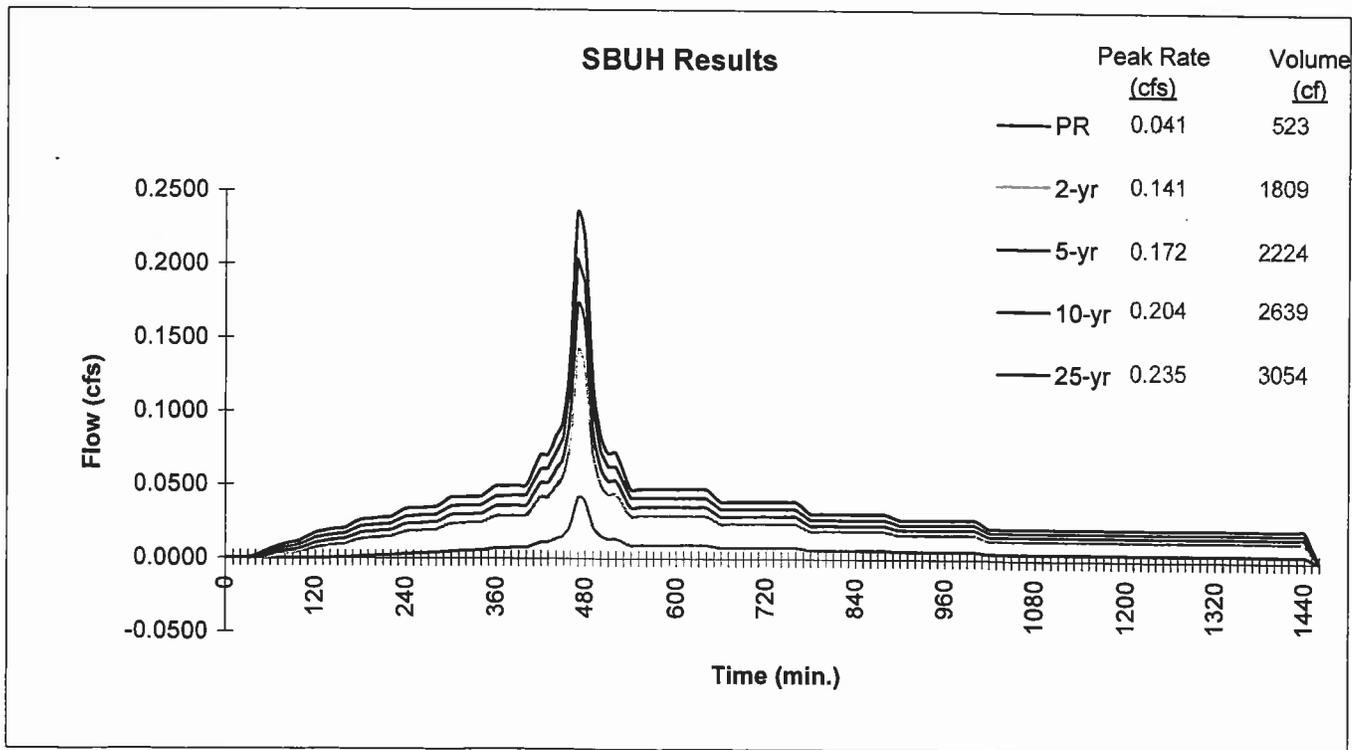
Catchment Data

Project Name: RIVER FALLS PLACE
 Project Address: 2170 13th STREET
WEST LINN, OR
 Designer: BMP DESIGN LLC
 Company: BP

Catchment ID: A
 Date: 08/20/09
 Permit Number: [Permit #]
 Run Time: 7/30/2008 2:30:29 PM

Drainage Catchment Information	
Catchment ID	A
Catchment Area	
Impervious Area	22,091 SF
Impervious Area	0.51 ac
Impervious Area Curve Number, CN_{imp}	98
Time of Concentration, T_c , minutes	5 min.
Site Soils & Infiltration Testing Data	
Infiltration Testing Procedure:	Open Pit Falling Head
Native Soil Field Tested Infiltration Rate (I_{test}):	0.05 in/hr
Bottom of Facility Meets Required Separation From High Groundwater Per BES SWMM Section 1.4:	No
Review Groundwater Depth with BES	
Correction Factor Component	
CF_{test} (ranges from 1 to 3)	2
Design Infiltration Rates	
I_{dsgn} for Native (I_{test} / CF_{test}):	0.03 in/hr
I_{dsgn} for Imported Growing Medium:	2.00 in/hr
Design infiltration rate < 0.5 in/hr	

Execute SBUH Calculations



BES - Presumptive Approach Calculator - Ver 1.0

Facility Design Data

Catchment ID: **A**

SWALE, PLANTER OR BASIN

Run Time: 7/30/2008 2:30:29 PM

Project Name: RIVER FALLS PLACE

Catchment ID: A

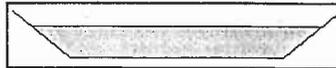
Date: 8/20/2009

Catchment facility will meet Hierarchy Category: 3

Goal Summary:

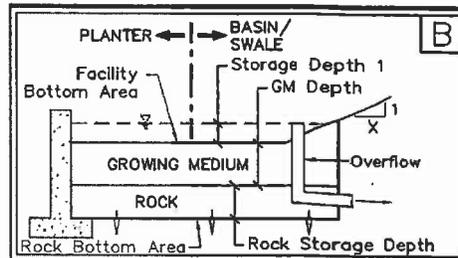
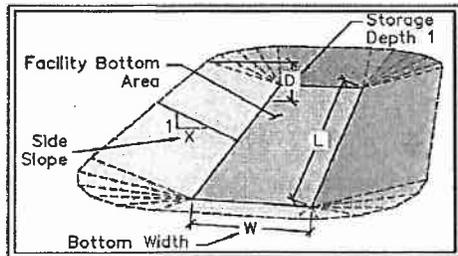
Hierarchy Category	SWMM Requirement	RESULTS box below needs to display...		Facility configurations allowed
		Pollution Reduction as a	10-yr (aka disposal) as a	
1	On-site infiltration with a surface infiltration facility.	PASS	PASS	A or B

Facility Type = Planter



Facility Shape: Rectangle/Square

Facility Configuration: B



DATA FOR ABOVE GRADE STORAGE COMPONENT

Facility Bottom Area = 535 sf
 Bottom Width = 10.0 ft
 Facility Side Slope = 3 to 1
 Storage Depth 1 = 9 in
 Growing Medium Depth = 18 in
 Freeboard Depth = 3 in

Surface Capacity at Depth 1 = 513 cf
 Infiltration Area at 75% Depth1 = 759 SF
 GM Design Infiltration Rate = 2.00 in/hr
 Infiltration Capacity = 0.035 cfs

BELOW GRADE STORAGE

Rock Storage Bottom Area = 834 sf
 Rock Storage Depth = 24 in
 Rock Void Ratio = 0.3

Rock Storage Capacity = 500 cf

Native Design Infiltration Rate = 0.03 in/hr
 Infiltration Capacity = 0.000 cfs

RESULTS		Overflow Volume			
Pollution Reduction	PASS	0 CF	<u>1%</u> Surf. Cap. Used	Run PAC	
			<u>5%</u> Rock Cap. Used		
10-yr	PASS	0 CF	<u>99%</u> Surf. Cap. Used		
			<u>100%</u> Rock Cap. Used		

Disposal occurs in separate approved UIC.
 Refer to Storm Report for more information.

FACILITY	
Total Facility Area Including Freeboard =	952 SF
Sizing Ratio (Total Facility Area / Catchment Area) =	0.043



EXTG



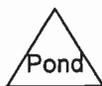
DEVEL PERV



DEV IMPERV



DETENTION PIPE



05-113-WEST LINN

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Area Listing (all nodes)

<u>Area (sq-ft)</u>	<u>CN</u>	<u>Description (subcats)</u>
39,317	80	(UNDEVELOPED)
22,091	80	LANDSCAPE (DEV PERV)
5,123	98	(UNDEVELOPED)
22,349	98	ROOF, DWY (DEV IMPERV)
<hr/>		
88,880		

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Type IA 24-hr 2 YR Rainfall=2.40"

Page 3

Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points

Runoff by SBUH method, Split Pervious/Imperv.

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment DEV IMPERV: DEV IMPERV

Runoff Area=22,349 sf Runoff Depth>2.17"
Tc=5.0 min CN=0/98 Runoff=0.28 cfs 4,037 cf

Subcatchment DEV PERV: DEVEL PERV

Runoff Area=22,091 sf Runoff Depth>0.82"
Tc=5.0 min CN=80/0 Runoff=0.08 cfs 1,506 cf

Subcatchment UNDEVELOPED: EXTG

Runoff Area=44,440 sf Runoff Depth>0.97"
Tc=15.0 min CN=80/98 Runoff=0.18 cfs 3,585 cf

Pond 1P: DETENTION PIPE

Peak Elev=0.79' Storage=447 cf Inflow=0.36 cfs 5,543 cf
Outflow=0.18 cfs 5,541 cf

Total Runoff Area = 88,880 sf Runoff Volume = 9,127 cf Average Runoff Depth = 1.23"
69.09% Pervious Area = 61,408 sf 30.91% Impervious Area = 27,472 sf

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Type IA 24-hr 2 YR Rainfall=2.40"

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Subcatchment DEV IMPERV: DEV IMPERV

Runoff = 0.28 cfs @ 7.88 hrs, Volume= 4,037 cf, Depth> 2.17"

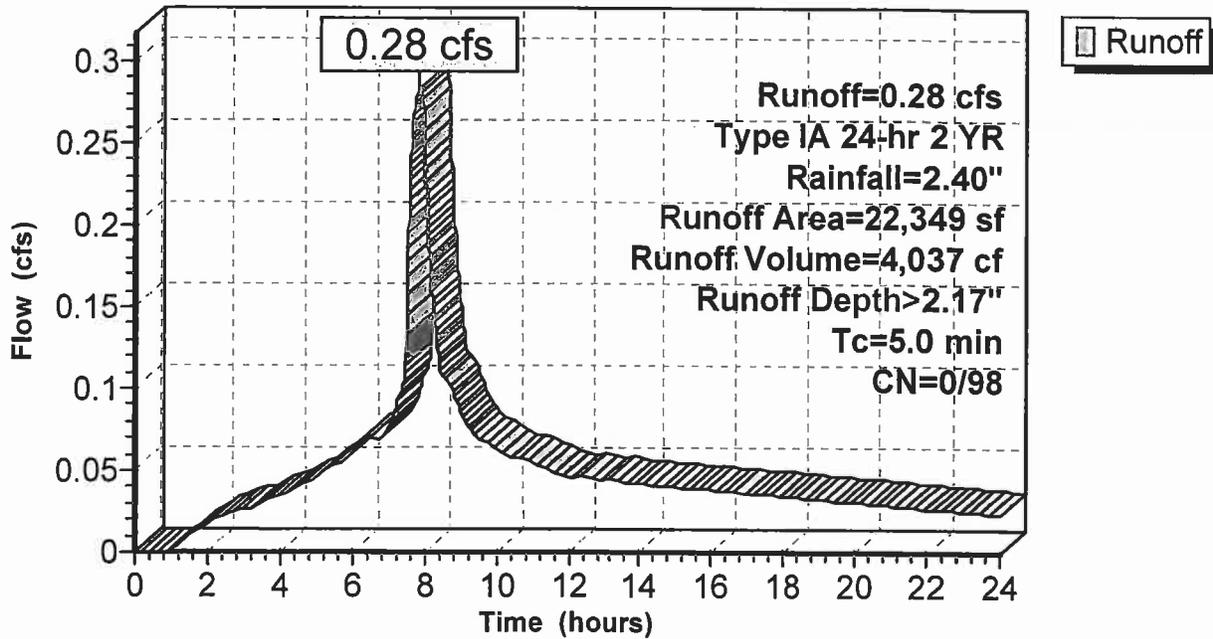
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type IA 24-hr 2 YR Rainfall=2.40"

Area (sf)	CN	Description
22,349	98	ROOF, DWY
22,349	98	Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, ALL

Subcatchment DEV IMPERV: DEV IMPERV

Hydrograph



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Type IA 24-hr 2 YR Rainfall=2.40"

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Subcatchment DEV PERV: DEVEL PERV

Runoff = 0.08 cfs @ 8.00 hrs, Volume= 1,506 cf, Depth> 0.82"

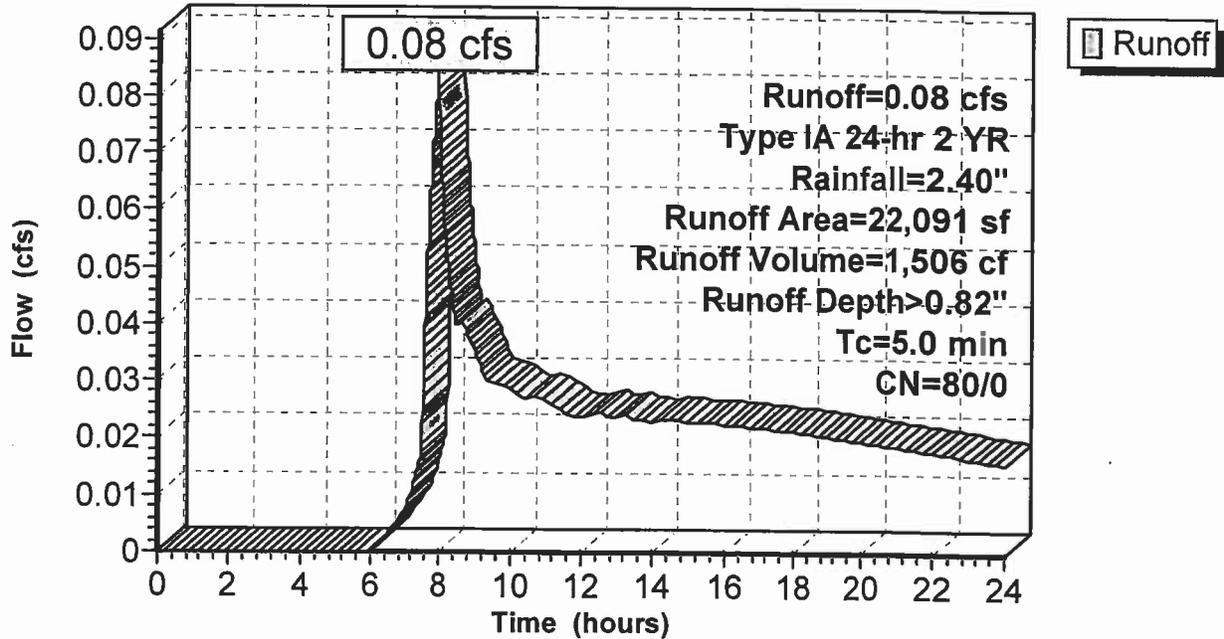
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type IA 24-hr 2 YR Rainfall=2.40"

Area (sf)	CN	Description
22,091	80	LANDSCAPE
22,091	80	Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment DEV PERV: DEVEL PERV

Hydrograph



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Type IA 24-hr 2 YR Rainfall=2.40"

Page 6

Subcatchment UNDEVELOPED: EXTG

Runoff = 0.18 cfs @ 8.01 hrs, Volume= 3,585 cf, Depth> 0.97"

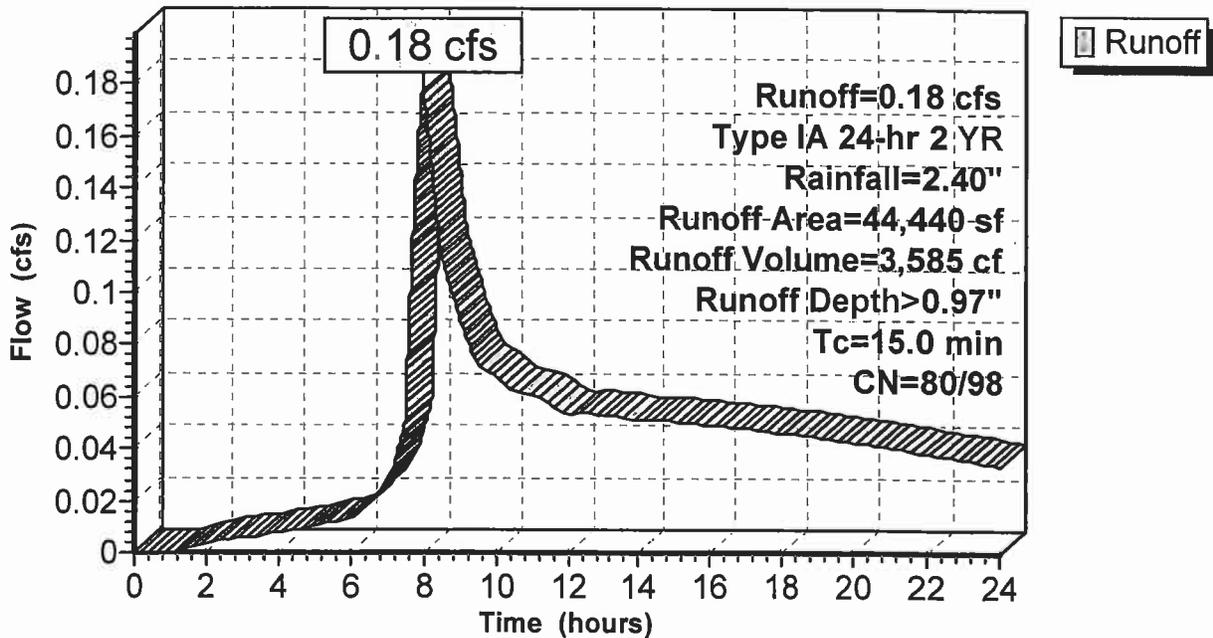
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type IA 24-hr 2 YR Rainfall=2.40"

Area (sf)	CN	Description
39,317	80	
5,123	98	
44,440	82	Weighted Average
39,317	80	Pervious Area
5,123	98	Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0					Direct Entry,

Subcatchment UNDEVELOPED: EXTG

Hydrograph



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Type IA 24-hr 2 YR Rainfall=2.40"

Page 7

Pond 1P: DETENTION PIPE

Inflow Area = 44,440 sf, Inflow Depth > 1.50" for 2 YR event
 Inflow = 0.36 cfs @ 7.92 hrs, Volume= 5,543 cf
 Outflow = 0.18 cfs @ 8.31 hrs, Volume= 5,541 cf, Atten= 49%, Lag= 23.5 min
 Primary = 0.18 cfs @ 8.31 hrs, Volume= 5,541 cf

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Peak Elev= 0.79' @ 8.31 hrs Surf.Area= 779 sf Storage= 447 cf

Plug-Flow detention time= 12.4 min calculated for 5,538 cf (100% of inflow)
 Center-of-Mass det. time= 12.1 min (734.0 - 721.9)

Volume	Invert	Avail.Storage	Storage Description
#1	0.00'	1,257 cf	24.0"D x 400.00'L Horizontal Cylinder S= 0.0001 '/'

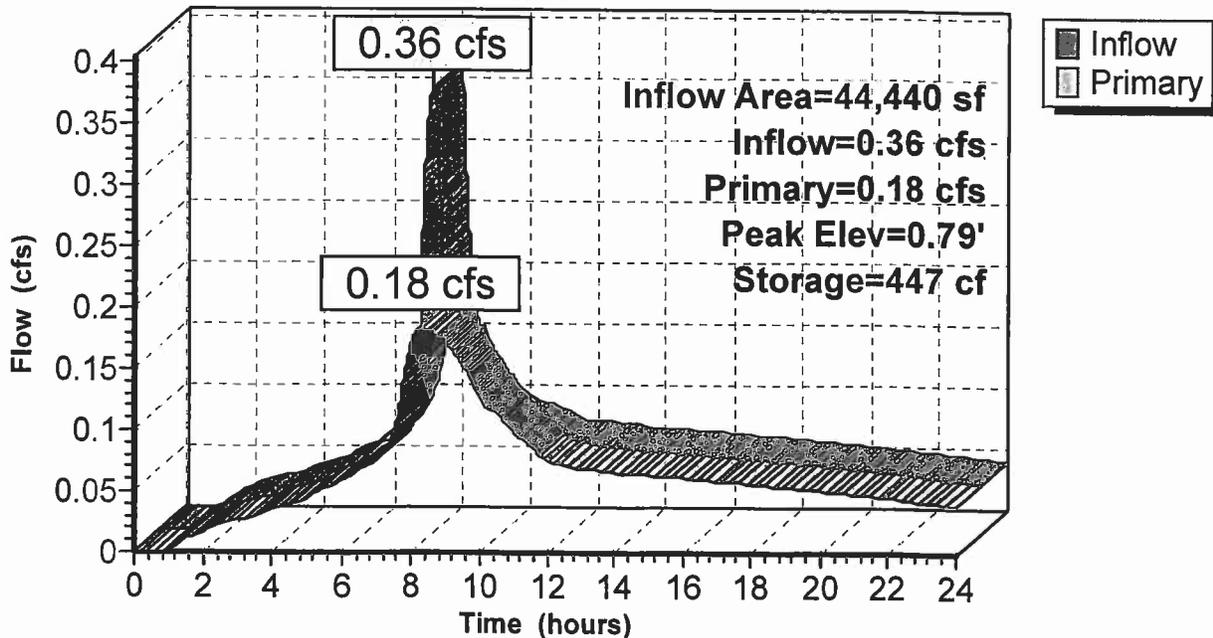
Device	Routing	Invert	Outlet Devices
#1	Primary	0.00'	2.8" Horiz. Orifice/Grate C= 0.600
#2	Primary	0.90'	3.0" Vert. Orifice/Grate C= 0.600
#3	Primary	1.60'	3.5" Vert. Orifice/Grate C= 0.600

Primary OutFlow Max=0.18 cfs @ 8.31 hrs HW=0.79' (Free Discharge)

- 1=Orifice/Grate (Orifice Controls 0.18 cfs @ 4.28 fps)
- 2=Orifice/Grate (Controls 0.00 cfs)
- 3=Orifice/Grate (Controls 0.00 cfs)

Pond 1P: DETENTION PIPE

Hydrograph



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Type IA 24-hr 5 YR Rainfall=2.90"

Page 8

Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points

Runoff by SBUH method, Split Pervious/Imperv.

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment DEV IMPERV: DEV IMPERV

Runoff Area=22,349 sf Runoff Depth>2.66"
Tc=5.0 min CN=0/98 Runoff=0.35 cfs 4,962 cf

Subcatchment DEV PERV: DEVEL PERV

Runoff Area=22,091 sf Runoff Depth>1.17"
Tc=5.0 min CN=80/0 Runoff=0.13 cfs 2,158 cf

Subcatchment UNDEVELOPED: EXTG

Runoff Area=44,440 sf Runoff Depth>1.34"
Tc=15.0 min CN=80/98 Runoff=0.26 cfs 4,951 cf

Pond 1P: DETENTION PIPE

Peak Elev=1.05' Storage=652 cf Inflow=0.47 cfs 7,120 cf
Outflow=0.25 cfs 7,114 cf

Total Runoff Area = 88,880 sf Runoff Volume = 12,071 cf Average Runoff Depth = 1.63"
69.09% Pervious Area = 61,408 sf 30.91% Impervious Area = 27,472 sf

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Type IA 24-hr 5 YR Rainfall=2.90"

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Subcatchment DEV IMPERV: DEV IMPERV

Runoff = 0.35 cfs @ 7.88 hrs, Volume= 4,962 cf, Depth> 2.66"

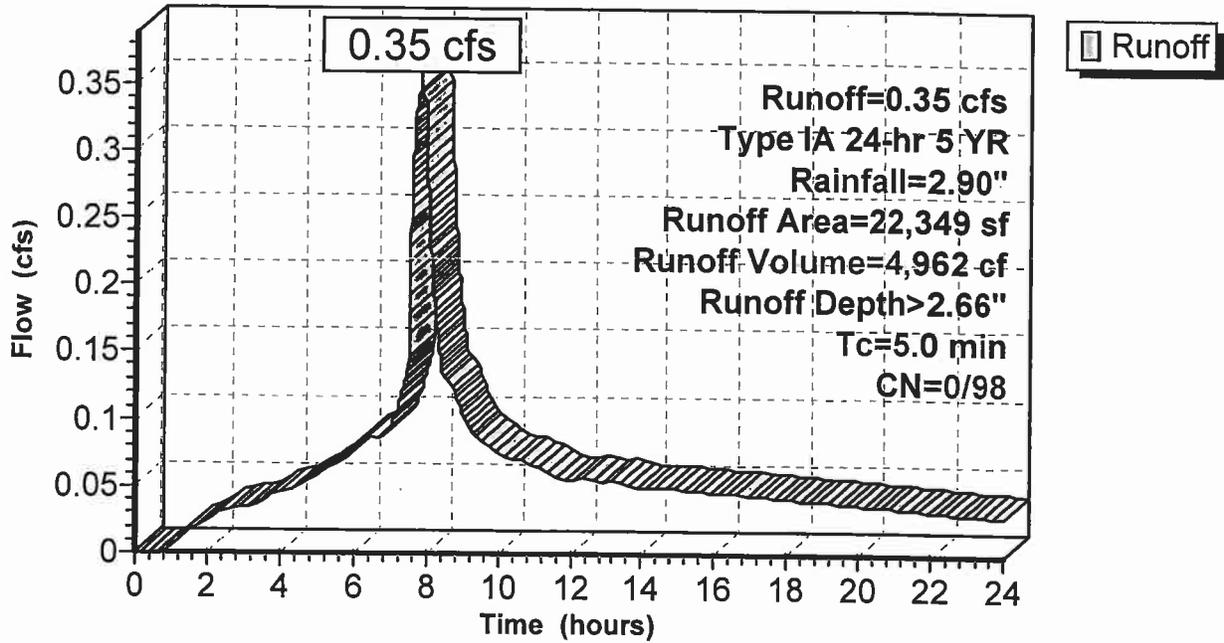
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type IA 24-hr 5 YR Rainfall=2.90"

Area (sf)	CN	Description
22,349	98	ROOF, DWY
22,349	98	Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, ALL

Subcatchment DEV IMPERV: DEV IMPERV

Hydrograph



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Type IA 24-hr 5 YR Rainfall=2.90"

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Subcatchment DEV PERV: DEVEL PERV

Runoff = 0.13 cfs @ 8.00 hrs, Volume= 2,158 cf, Depth> 1.17"

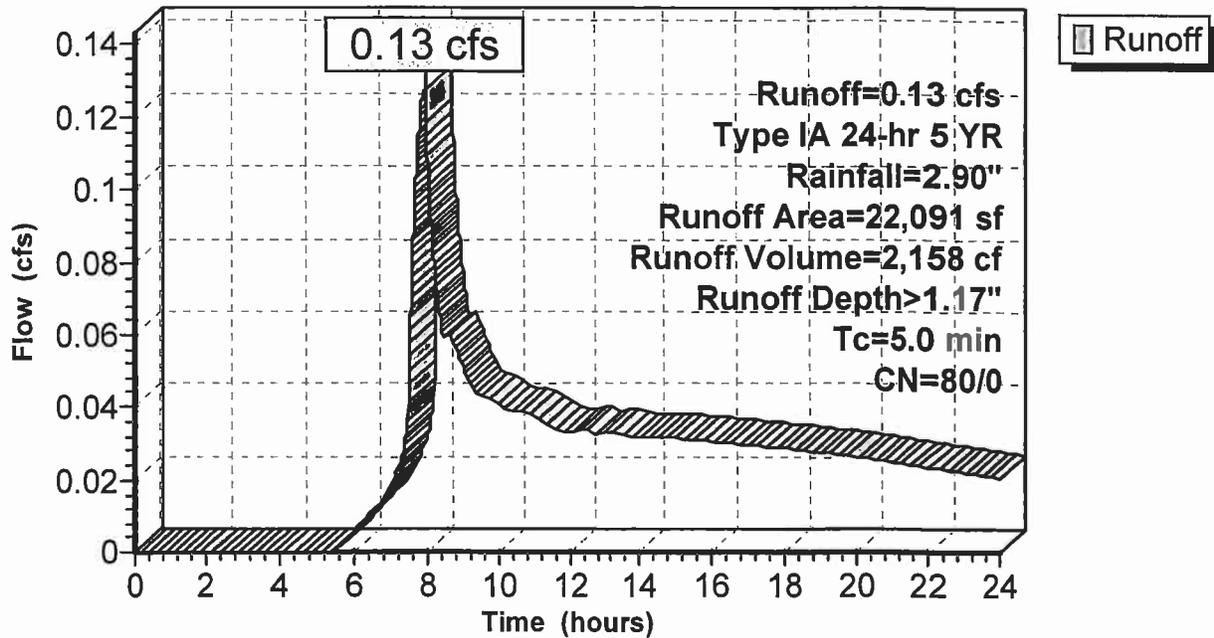
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type IA 24-hr 5 YR Rainfall=2.90"

Area (sf)	CN	Description
22,091	80	LANDSCAPE
22,091	80	Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment DEV PERV: DEVEL PERV

Hydrograph



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Type IA 24-hr 5 YR Rainfall=2.90"

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Subcatchment UNDEVELOPED: EXTG

Runoff = 0.26 cfs @ 8.00 hrs, Volume= 4,951 cf, Depth> 1.34"

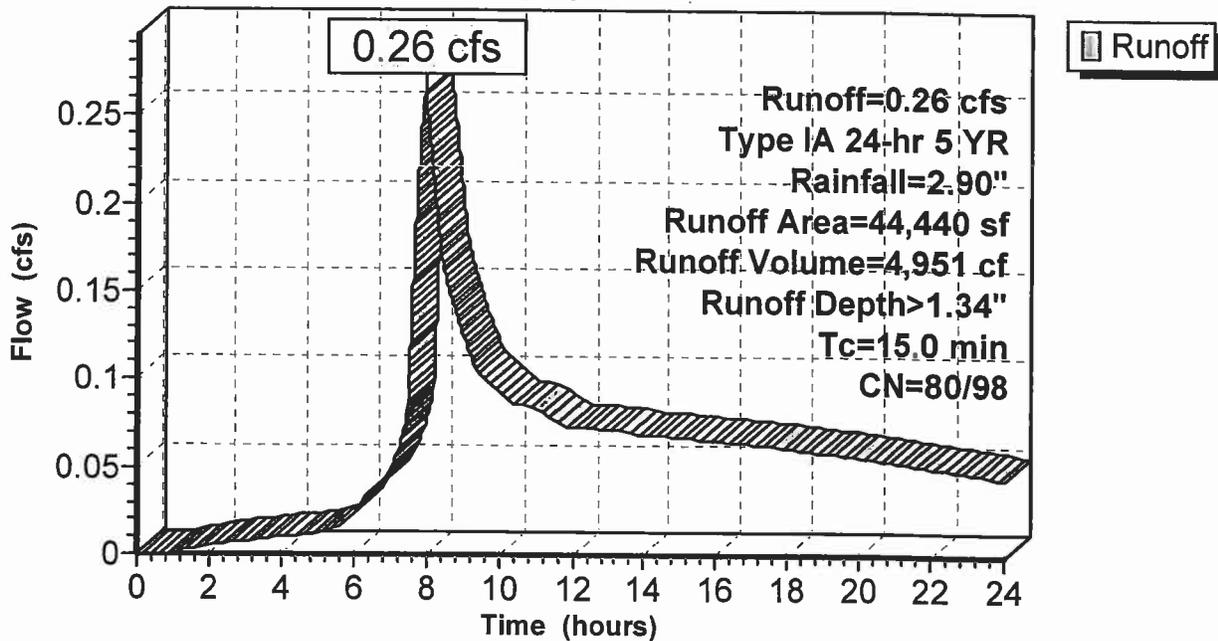
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type IA 24-hr 5 YR Rainfall=2.90"

Area (sf)	CN	Description
39,317	80	
5,123	98	
44,440	82	Weighted Average
39,317	80	Pervious Area
5,123	98	Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0					Direct Entry,

Subcatchment UNDEVELOPED: EXTG

Hydrograph



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Type IA 24-hr 5 YR Rainfall=2.90"

Page 12

Pond 1P: DETENTION PIPE

Inflow Area = 44,440 sf, Inflow Depth > 1.92" for 5 YR event
 Inflow = 0.47 cfs @ 7.92 hrs, Volume= 7,120 cf
 Outflow = 0.25 cfs @ 8.28 hrs, Volume= 7,114 cf, Atten= 46%, Lag= 21.4 min
 Primary = 0.25 cfs @ 8.28 hrs, Volume= 7,114 cf

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Peak Elev= 1.05' @ 8.28 hrs Surf.Area= 800 sf Storage= 652 cf

Plug-Flow detention time= 17.8 min calculated for 7,111 cf (100% of inflow)
 Center-of-Mass det. time= 17.2 min (733.5 - 716.3)

Volume	Invert	Avail.Storage	Storage Description
#1	0.00'	1,257 cf	24.0"D x 400.00'L Horizontal Cylinder S= 0.0001 '/'

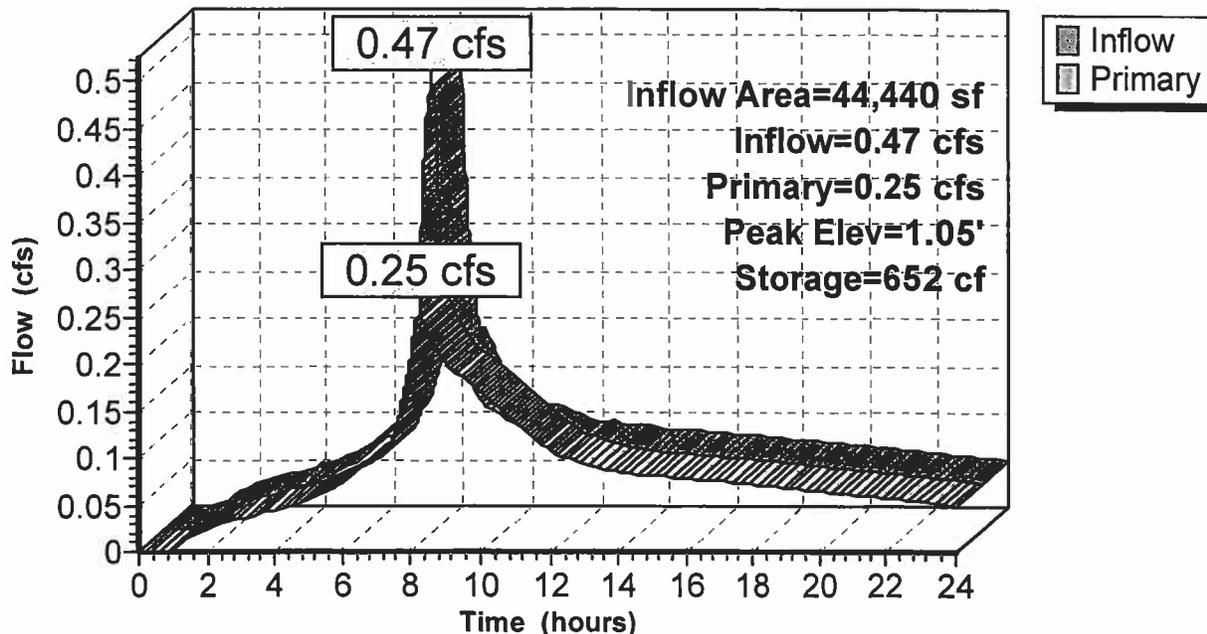
Device	Routing	Invert	Outlet Devices
#1	Primary	0.00'	2.8" Horiz. Orifice/Grate C= 0.600
#2	Primary	0.90'	3.0" Vert. Orifice/Grate C= 0.600
#3	Primary	1.60'	3.5" Vert. Orifice/Grate C= 0.600

Primary OutFlow Max=0.25 cfs @ 8.28 hrs HW=1.05' (Free Discharge)

- 1=Orifice/Grate (Orifice Controls 0.21 cfs @ 4.93 fps)
- 2=Orifice/Grate (Orifice Controls 0.04 cfs @ 1.32 fps)
- 3=Orifice/Grate (Controls 0.00 cfs)

Pond 1P: DETENTION PIPE

Hydrograph



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Type IA 24-hr 10 YR Rainfall=3.40"

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Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points

Runoff by SBUH method, Split Pervious/Imperv.

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment DEV IMPERV: DEV IMPERV

Runoff Area=22,349 sf Runoff Depth>3.16"
Tc=5.0 min CN=0/98 Runoff=0.41 cfs 5,888 cf

Subcatchment DEV PERV: DEVEL PERV

Runoff Area=22,091 sf Runoff Depth>1.55"
Tc=5.0 min CN=80/0 Runoff=0.18 cfs 2,859 cf

Subcatchment UNDEVELOPED: EXTG

Runoff Area=44,440 sf Runoff Depth>1.73"
Tc=15.0 min CN=80/98 Runoff=0.36 cfs 6,406 cf

Pond 1P: DETENTION PIPE

Peak Elev=1.26' Storage=820 cf Inflow=0.58 cfs 8,747 cf
Outflow=0.35 cfs 8,735 cf

Total Runoff Area = 88,880 sf Runoff Volume = 15,153 cf Average Runoff Depth = 2.05"
69.09% Pervious Area = 61,408 sf 30.91% Impervious Area = 27,472 sf

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Type IA 24-hr 10 YR Rainfall=3.40"

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Subcatchment DEV IMPERV: DEV IMPERV

Runoff = 0.41 cfs @ 7.88 hrs, Volume= 5,888 cf, Depth> 3.16"

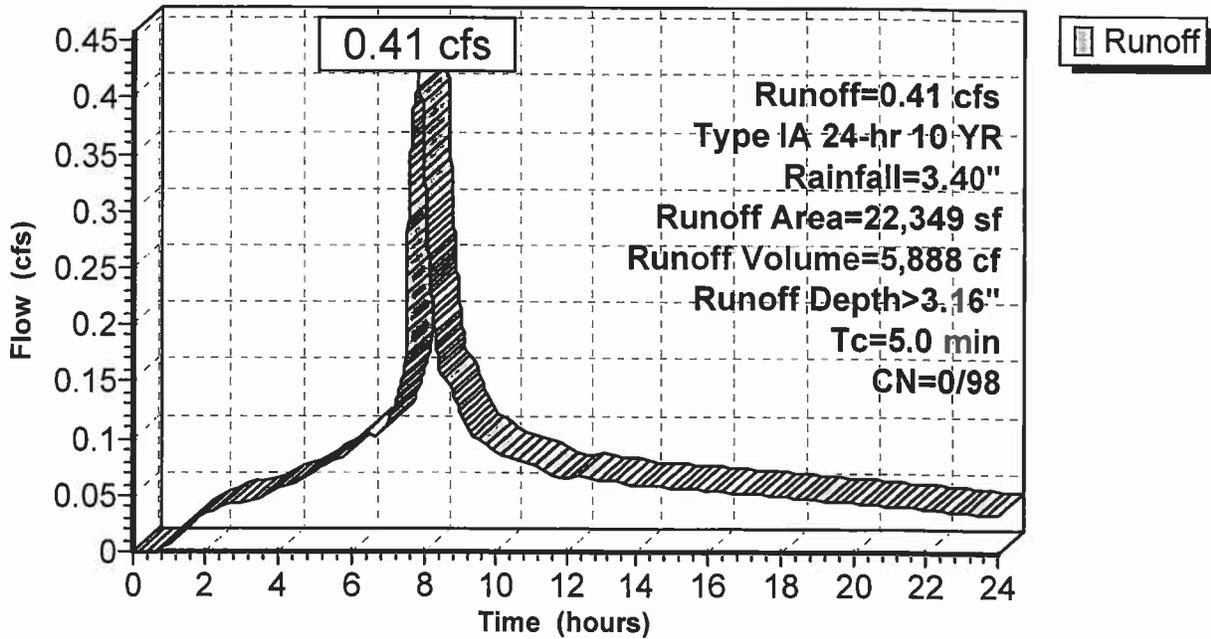
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type IA 24-hr 10 YR Rainfall=3.40"

Area (sf)	CN	Description
22,349	98	ROOF, DWY
22,349	98	Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, ALL

Subcatchment DEV IMPERV: DEV IMPERV

Hydrograph



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Type IA 24-hr 10 YR Rainfall=3.40"

Subcatchment DEV PERV: DEVEL PERV

Runoff = 0.18 cfs @ 7.98 hrs, Volume= 2,859 cf, Depth> 1.55"

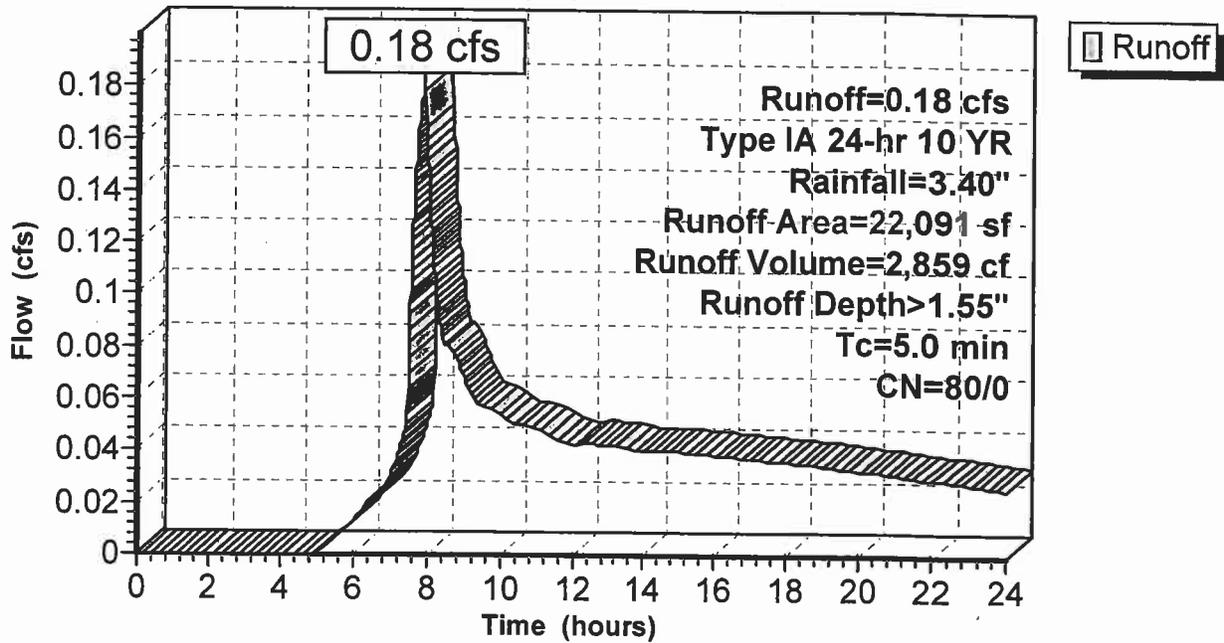
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type IA 24-hr 10 YR Rainfall=3.40"

Area (sf)	CN	Description
22,091	80	LANDSCAPE
22,091	80	Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment DEV PERV: DEVEL PERV

Hydrograph



Subcatchment UNDEVELOPED: EXTG

Runoff = 0.36 cfs @ 8.00 hrs, Volume= 6,406 cf, Depth> 1.73"

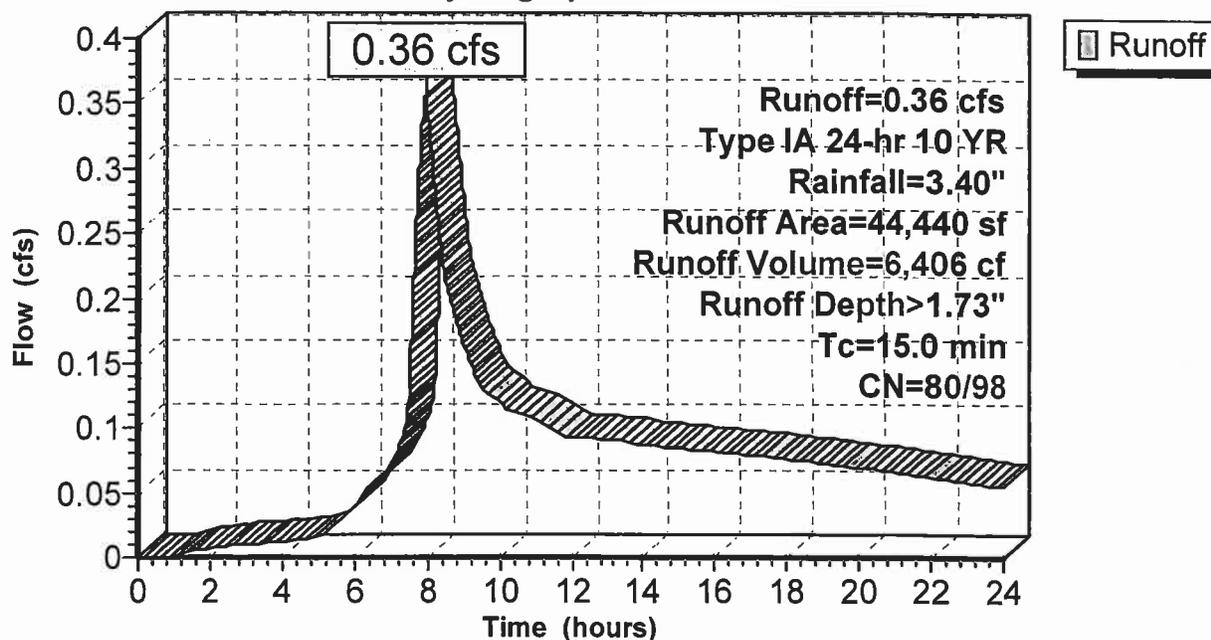
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Type IA 24-hr 10 YR Rainfall=3.40"

Area (sf)	CN	Description
39,317	80	
5,123	98	
44,440	82	Weighted Average
39,317	80	Pervious Area
5,123	98	Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0					Direct Entry,

Subcatchment UNDEVELOPED: EXTG

Hydrograph



05-113-WEST LINN

Prepared by BMP DESIGN LLC

HydroCAD® 8.00 s/n 004874 © 2006 HydroCAD Software Solutions LLC

Type IA 24-hr 10 YR Rainfall=3.40"

Page 17

Pond 1P: DETENTION PIPE

Inflow Area = 44,440 sf, Inflow Depth > 2.36" for 10 YR event
 Inflow = 0.58 cfs @ 7.91 hrs, Volume= 8,747 cf
 Outflow = 0.35 cfs @ 8.21 hrs, Volume= 8,735 cf, Atten= 41%, Lag= 17.7 min
 Primary = 0.35 cfs @ 8.21 hrs, Volume= 8,735 cf

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Peak Elev= 1.26' @ 8.21 hrs Surf.Area= 776 sf Storage= 820 cf

Plug-Flow detention time= 21.4 min calculated for 8,731 cf (100% of inflow)
 Center-of-Mass det. time= 20.3 min (731.7 - 711.4)

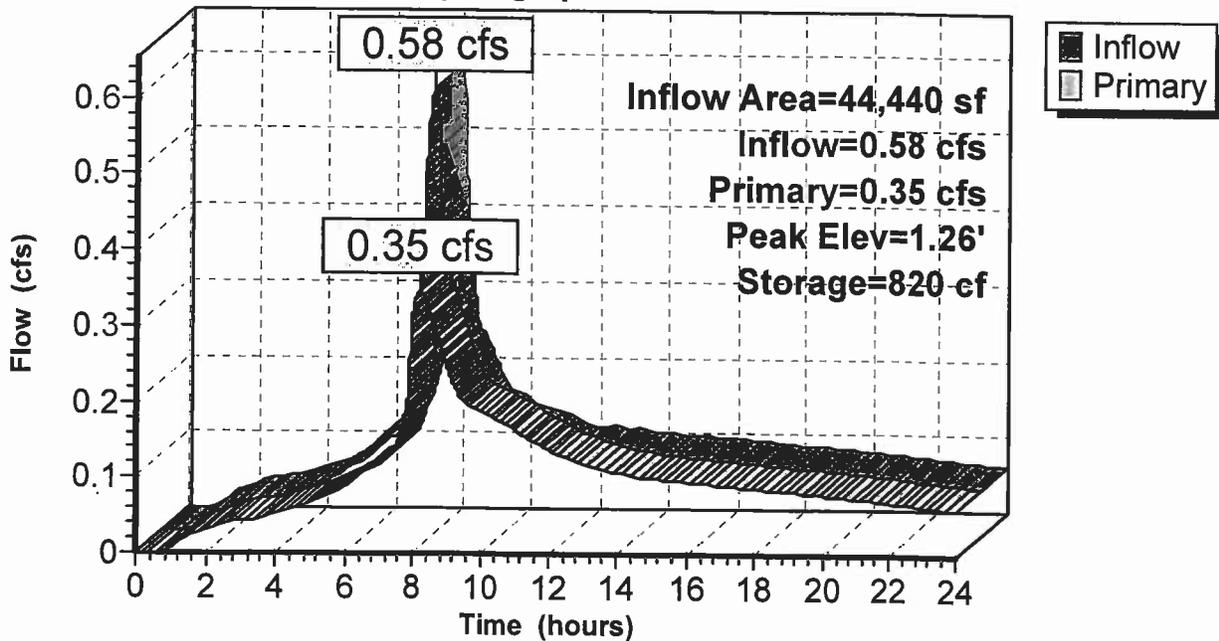
Volume	Invert	Avail.Storage	Storage Description
#1	0.00'	1,257 cf	24.0"D x 400.00'L Horizontal Cylinder S= 0.0001 '/'

Device	Routing	Invert	Outlet Devices
#1	Primary	0.00'	2.8" Horiz. Orifice/Grate C= 0.600
#2	Primary	0.90'	3.0" Vert. Orifice/Grate C= 0.600
#3	Primary	1.60'	3.5" Vert. Orifice/Grate C= 0.600

Primary OutFlow Max=0.35 cfs @ 8.21 hrs HW=1.26' (Free Discharge)
 1=Orifice/Grate (Orifice Controls 0.23 cfs @ 5.41 fps)
 2=Orifice/Grate (Orifice Controls 0.12 cfs @ 2.34 fps)
 3=Orifice/Grate (Controls 0.00 cfs)

Pond 1P: DETENTION PIPE

Hydrograph



05-113-WEST LINN

Prepared by BMP DESIGN LLC

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Type IA 24-hr 25 YR Rainfall=3.90"

Page 18

Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points

Runoff by SBUH method, Split Pervious/Imperv.

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment DEV IMPERV: DEV IMPERV

Runoff Area=22,349 sf Runoff Depth>3.66"

Tc=5.0 min CN=0/98 Runoff=0.47 cfs 6,815 cf

Subcatchment DEV PERV: DEVEL PERV

Runoff Area=22,091 sf Runoff Depth>1.95"

Tc=5.0 min CN=80/0 Runoff=0.23 cfs 3,598 cf

Subcatchment UNDEVELOPED: EXTG

Runoff Area=44,440 sf Runoff Depth>2.14"

Tc=15.0 min CN=80/98 Runoff=0.46 cfs 7,926 cf

Pond 1P: DETENTION PIPE

Peak Elev=1.52' Storage=1,012 cf Inflow=0.70 cfs 10,413 cf

Outflow=0.42 cfs 10,390 cf

Total Runoff Area = 88,880 sf Runoff Volume = 18,339 cf Average Runoff Depth = 2.48"
69.09% Pervious Area = 61,408 sf 30.91% Impervious Area = 27,472 sf

05-113-WEST LINN

Prepared by BMP DESIGN LLC

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Type IA 24-hr 25 YR Rainfall=3.90"

Subcatchment DEV IMPERV: DEV IMPERV

Runoff = 0.47 cfs @ 7.88 hrs, Volume= 6,815 cf, Depth> 3.66"

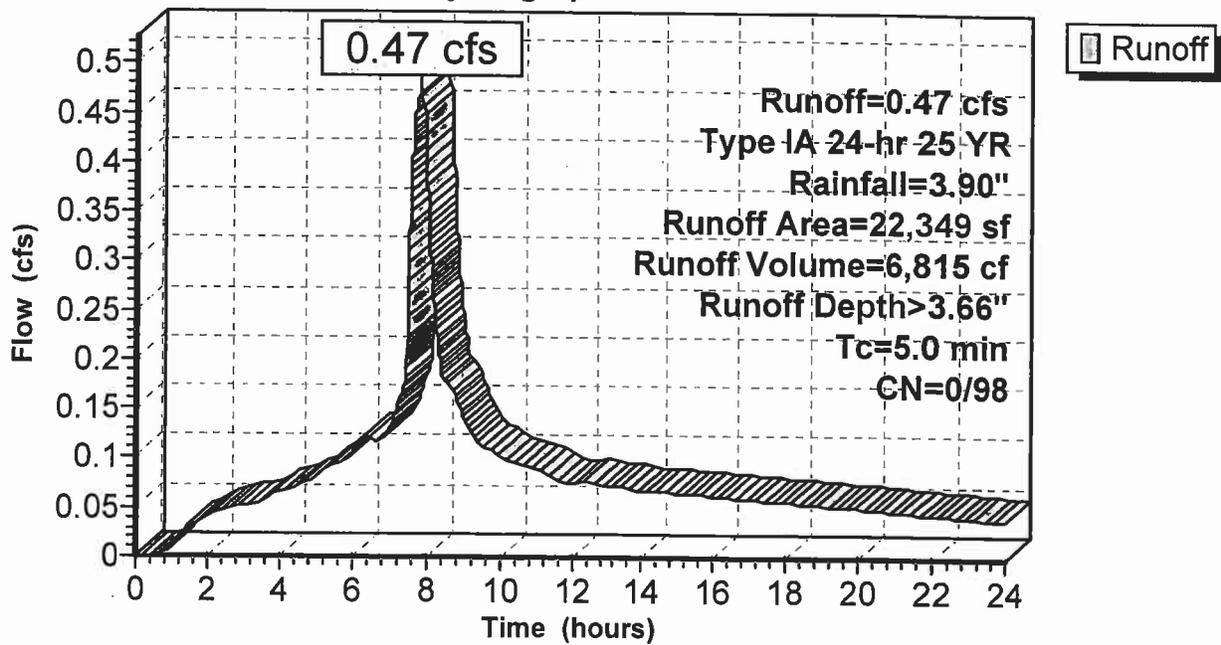
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type IA 24-hr 25 YR Rainfall=3.90"

Area (sf)	CN	Description
22,349	98	ROOF, DWY
22,349	98	Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, ALL

Subcatchment DEV IMPERV: DEV IMPERV

Hydrograph



05-113-WEST LINN

Prepared by BMP DESIGN LLC

HydroCAD® 8.00 s/n 004874 © 2006 HydroCAD Software Solutions LLC

Type IA 24-hr 25 YR Rainfall=3.90"

Page 20

Subcatchment DEV PERV: DEVEL PERV

Runoff = 0.23 cfs @ 7.97 hrs, Volume= 3,598 cf, Depth> 1.95"

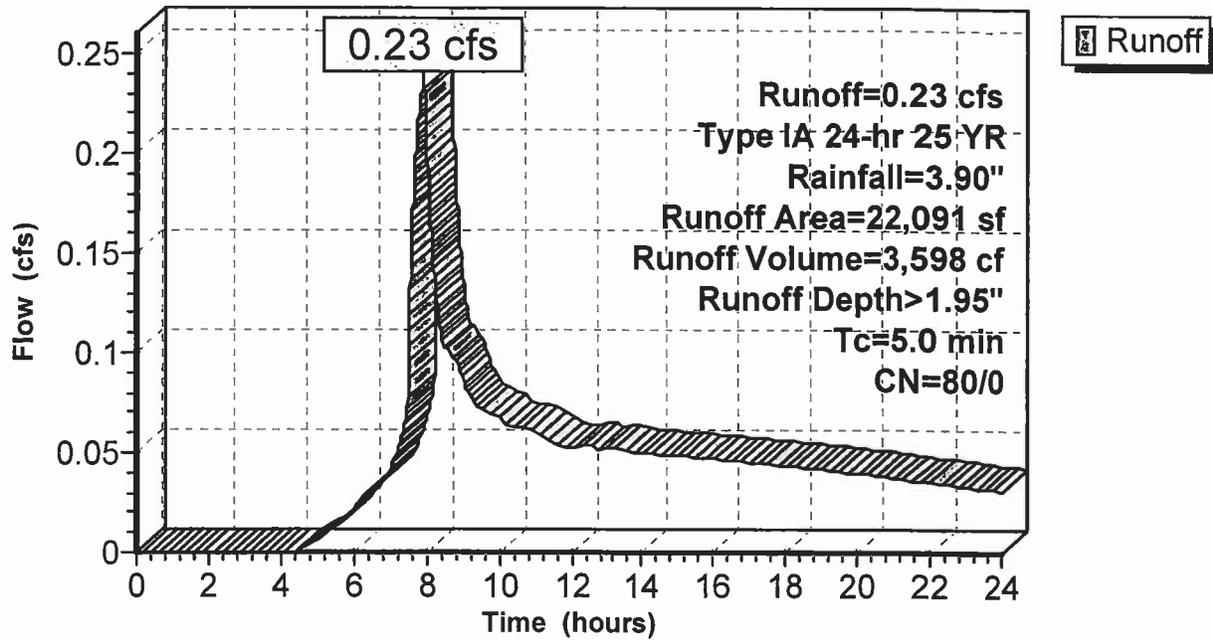
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type IA 24-hr 25 YR Rainfall=3.90"

Area (sf)	CN	Description
22,091	80	LANDSCAPE
22,091	80	Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment DEV PERV: DEVEL PERV

Hydrograph



05-113-WEST LINN

Prepared by BMP DESIGN LLC

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Type IA 24-hr 25 YR Rainfall=3.90"

Page 21

Subcatchment UNDEVELOPED: EXTG

Runoff = 0.46 cfs @ 8.00 hrs, Volume= 7,926 cf, Depth> 2.14"

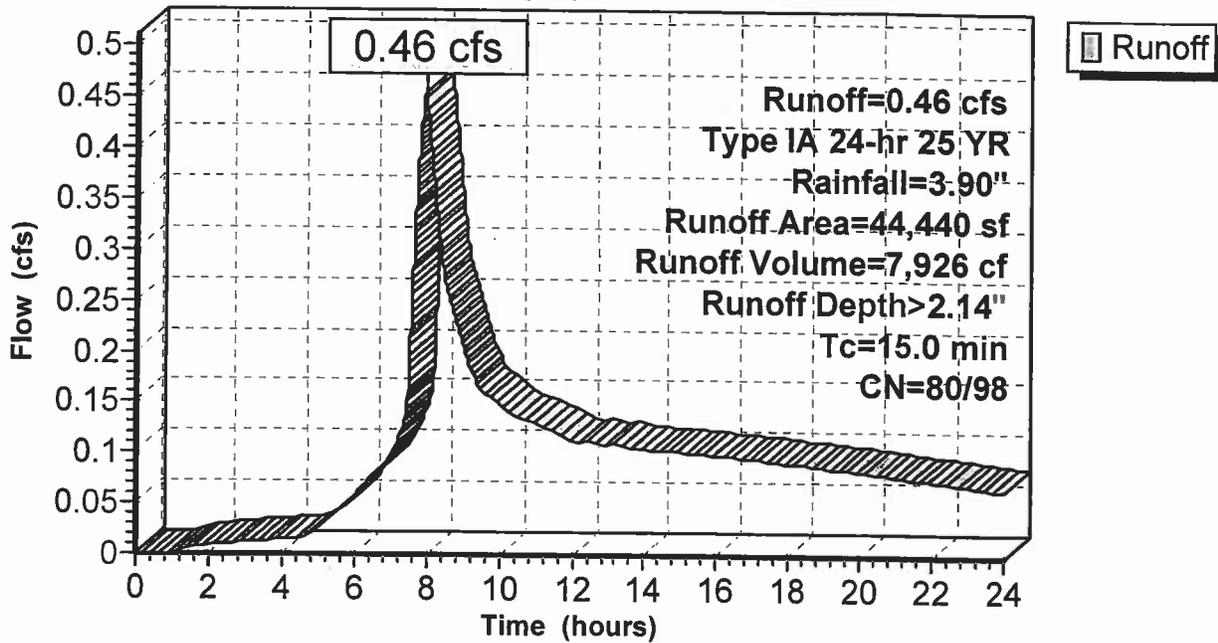
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type IA 24-hr 25 YR Rainfall=3.90"

Area (sf)	CN	Description
39,317	80	
5,123	98	
44,440	82	Weighted Average
39,317	80	Pervious Area
5,123	98	Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0					Direct Entry,

Subcatchment UNDEVELOPED: EXTG

Hydrograph



05-113-WEST LINN

Prepared by BMP DESIGN LLC

HydroCAD® 8.00 s/n 004874 © 2006 HydroCAD Software Solutions LLC

Type IA 24-hr 25 YR Rainfall=3.90"

Page 22

Pond 1P: DETENTION PIPE

Inflow Area = 44,440 sf, Inflow Depth > 2.81" for 25 YR event
 Inflow = 0.70 cfs @ 7.91 hrs, Volume= 10,413 cf
 Outflow = 0.42 cfs @ 8.20 hrs, Volume= 10,390 cf, Atten= 40%, Lag= 17.4 min
 Primary = 0.42 cfs @ 8.20 hrs, Volume= 10,390 cf

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Peak Elev= 1.52' @ 8.20 hrs Surf.Area= 692 sf Storage= 1,012 cf

Plug-Flow detention time= 24.9 min calculated for 10,390 cf (100% of inflow)
 Center-of-Mass det. time= 23.3 min (730.3 - 707.0)

Volume	Invert	Avail.Storage	Storage Description
#1	0.00'	1,257 cf	24.0"D x 400.00'L Horizontal Cylinder S= 0.0001 '/'

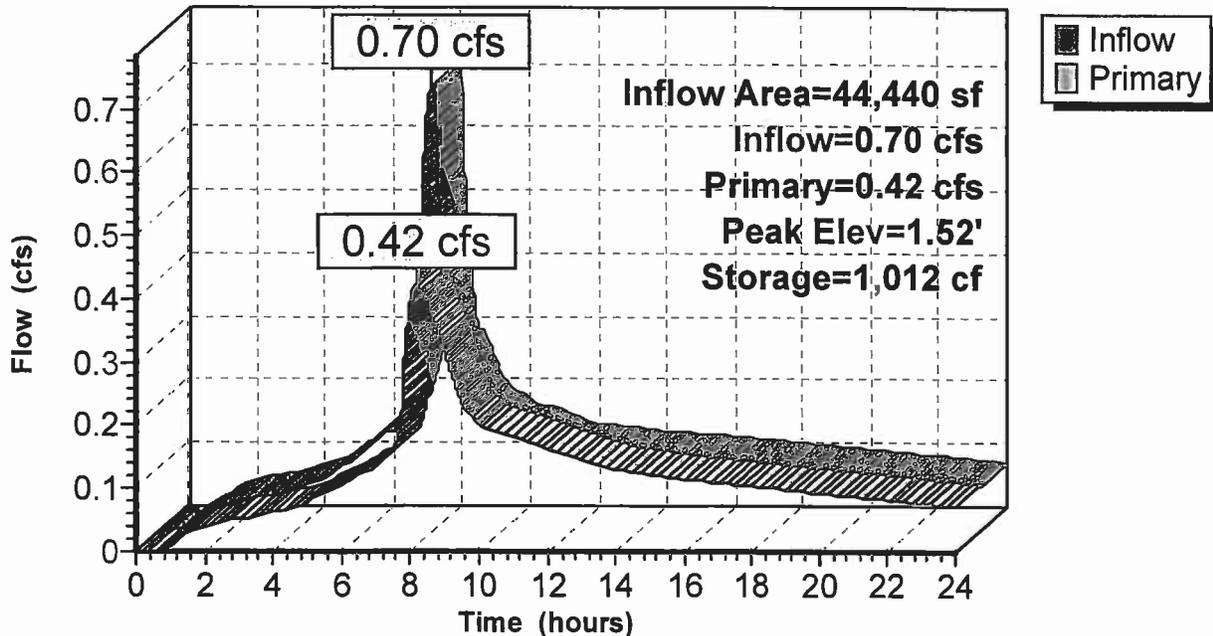
Device	Routing	Invert	Outlet Devices
#1	Primary	0.00'	2.8" Horiz. Orifice/Grate C= 0.600
#2	Primary	0.90'	3.0" Vert. Orifice/Grate C= 0.600
#3	Primary	1.60'	3.5" Vert. Orifice/Grate C= 0.600

Primary OutFlow Max=0.42 cfs @ 8.20 hrs HW=1.52' (Free Discharge)

- 1=Orifice/Grate (Orifice Controls 0.25 cfs @ 5.94 fps)
- 2=Orifice/Grate (Orifice Controls 0.17 cfs @ 3.39 fps)
- 3=Orifice/Grate (Controls 0.00 cfs)

Pond 1P: DETENTION PIPE

Hydrograph



Soil Map—Clackamas County Area, Oregon
(RIVER FALLS PLACE)

7.

122° 39' 31"

122° 39' 10"

45° 21' 9"

45° 21' 8"



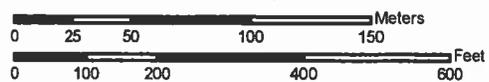
45° 20' 48"

45° 20' 48"

122° 39' 31"



Map Scale: 1:3,000 if printed on A size (8.5" x 11") sheet



122° 39' 10"

Soil Map—Clackamas County Area, Oregon
(RIVER FALLS PLACE)

MAP LEGEND

Area of Interest (AOI)	 Very Stony Spot
 Area of Interest (AOI)	 Wet Spot
Soils	 Other
 Soil Map Units	Special Line Features
Special Point Features	 Gully
 Blowout	 Short Steep Slope
 Borrow Pit	 Other
 Clay Spot	Political Features
 Closed Depression	 Cities
 Gravel Pit	Water Features
 Gravelly Spot	 Oceans
 Landfill	 Streams and Canals
 Lava Flow	Transportation
 Marsh or swamp	 Ralls
 Mine or Quarry	 Interstate Highways
 Miscellaneous Water	 US Routes
 Perennial Water	 Major Roads
 Rock Outcrop	 Local Roads
 Saline Spot	
 Sandy Spot	
 Severely Eroded Spot	
 Sinkhole	
 Slide or Slip	
 Sodic Spot	
 Spoil Area	
 Stony Spot	

MAP INFORMATION

Map Scale: 1:3,000 if printed on A size (8.5" x 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:20,000.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
Coordinate System: UTM Zone 10N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Clackamas County Area, Oregon
Survey Area Data: Version 5, Aug 12, 2009

Date(s) aerial images were photographed: 8/3/2005

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Clackamas County Area, Oregon (OR610)			
Map Unit Symbol	Map Unit Name	Acres In AOI	Percent of AOI
25	Cove silty clay loam	0.9	65.8%
78B	Saum silt loam, 3 to 8 percent slopes	0.5	34.2%
Totals for Area of Interest		1.4	100.0%



Report—Soil Features

Soil Features— Clackamas County Area, Oregon									
Map symbol and soil name	Restrictive Layer				Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
		<i>In</i>	<i>In</i>			<i>In</i>	<i>In</i>		
25—Cove silty clay loam									
Cove		—	—		0	—	Low	Moderate	Moderate
78B—Saum silt loam, 3 to 8 percent slopes									
Saum	Lithic bedrock	40-60	—	Indurated	0	—	Low	Moderate	Moderate

Data Source Information

Soil Survey Area: Clackamas County Area, Oregon
 Survey Area Data: Version 5, Aug 12, 2009



Report—Water Features

Water Features— Clackamas County Area, Oregon										
Map unit symbol and soil name	Hydrologic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
25—Cove silty clay loam										
Cove	D	—	January	0.0-2.0	>6.0	—	—	None	Brief	Occasional
	D	—	February	0.0-2.0	>6.0	—	—	None	Brief	Occasional
	D	—	March	0.0-2.0	>6.0	—	—	None	Brief	Occasional
	D	—	April	0.0-2.0	>6.0	—	—	None	Brief	Occasional
	D	—	December	0.0-2.0	>6.0	—	—	None	Brief	Occasional
78B—Saum silt loam, 3 to 8 percent slopes										
Saum	B	—	Jan-Dec	—	—	—	—	None	—	—

Data Source Information

Soil Survey Area: Clackamas County Area, Oregon

Survey Area Data: Version 5, Aug 12, 2009



10.

Report—Physical Soil Properties

Physical Soil Properties— Clackamas County Area, Oregon														
Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	<i>In</i>	<i>Pct</i>	<i>Pct</i>	<i>Pct</i>	<i>g/cc</i>	<i>micro m/sec</i>	<i>In/In</i>	<i>Pct</i>	<i>Pct</i>					
25—Cove silty clay loam														
Cove	0-7	-17-	-48-	30-35- 40	1.25-1.35	1.40-4.00	0.19-0.21	3.0-5.9	4.0-8.0	.28	.28	5	7	38
	7-60	- 3-	-43-	50-55- 60	1.20-1.30	0.01-0.42	0.14-0.17	6.0-8.9	0.2-5.0	.17	.17			
78B—Saum silt loam, 3 to 8 percent slopes														
Saum	0-8	-24-	-52-	20-24- 27	1.20-1.40	4.00-14.00	0.19-0.21	0.0-2.9	2.0-4.0	.32	.32	3	6	48
	8-26	-17-	-48-	30-35- 40	1.30-1.50	4.00-14.00	0.18-0.20	3.0-5.9	1.0-3.0	.32	.37			
	26-50	- 7-	-51-	35-43- 50	1.30-1.50	1.40-4.00	0.12-0.15	3.0-5.9	0.5-1.0	.24	.32			
	50-54	—	—	—	—	—	—	—	—					

Data Source Information

Soil Survey Area: Clackamas County Area, Oregon

Survey Area Data: Version 5, Aug 12, 2009



11

Report—Engineering Properties

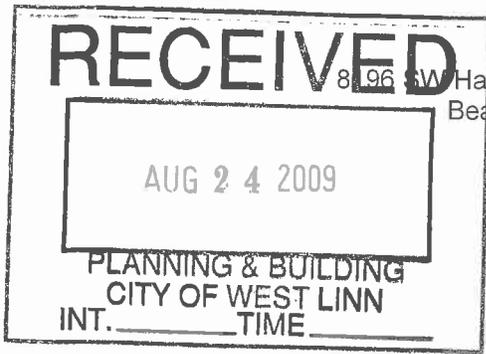
Absence of an entry indicates that the data were not estimated. The asterisk '*' denotes the representative texture; other possible textures follow the dash.

Engineering Properties— Clackamas County Area, Oregon												
Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number—				Liquid limit	Plasticity Index
			Unified	AASHTO	>10 inches	3-10 Inches	4	10	40	200		
	<i>In</i>				<i>Pct</i>	<i>Pct</i>					<i>Pct</i>	
25—Cove silty clay loam												
Cove	0-7	*Silty clay loam	CL	A-6	0	0	100	100	95-100	80-95	30-40	10-20
	7-60	*Silty clay, Clay	CH	A-7	0	0	100	100	90-100	75-95	60-80	40-50
78B—Saum silt loam, 3 to 8 percent slopes												
Saum	0-8	*Silt loam	ML	A-4	0	0	90-95	90-95	80-95	65-85	30-40	5-10
	8-26	*Silty clay loam	ML	A-6, A-7	0	0	80-90	80-90	75-90	75-85	35-45	10-15
	26-50	*Gravelly silty clay loam, Gravelly silty clay, stony silty clay, cobbly silty clay loam, stony silty clay loam	MH	A-7	0-30	10-30	60-80	60-75	55-75	50-70	50-55	15-20
	50-54	*Unweathered bedrock	—	—	—	—	—	—	—	—	—	—

Data Source Information

Soil Survey Area: Clackamas County Area, Oregon

Survey Area Data: Version 5, Aug 12, 2009



8196 SW Hall Boulevard, Suite 232
Beaverton, Oregon 97008
Phone 503.469.1213
Toll free 866.469.1213
Fax 503.469.8553
www.srdllc.com



Transmittal

To: Planning Dept. - West Linn	From: Jeff Caines, AICP – SR Design LLC
Attn: Tom Soppe	Date: August 24, 2009
Address: 22500 Salamo Road West Linn, OR 97068	Job No.: Silver Falls – Design Review
Phone:	CC:

For Your:	<input type="checkbox"/> Review & Comment	<input type="checkbox"/> As Requested	<input type="checkbox"/> Information & File
Via:	<input type="checkbox"/> Mail	<input type="checkbox"/> Messenger	<input type="checkbox"/> Fed-Ex

Number	Copies	Description
1	3	Revised Narratives w/ 11x17 plans
2	3	Full Size Plans
3	3	Storm Report

Comments:

Tom:

Here are three resubmittal applications and full size set of plans for your completeness review. I hope that you find all the information you requested based on the incomplete letter you sent.

If you have any questions or need additional information prior to a completeness letter please feel free to contact me at (503) 686-5999 or jeffcaines@hotmail.com

Jeff

Signed: 

June 12, 2009
(Revised August 25, 2009)

River Falls Design Review

Map # 21E-35CB; Tax Lot 2900
City of West Linn, Oregon

AGENT:

SR Design LLC

Contact: Steve Roper

8196 SW Hall Blvd., Suite 232

Beaverton, OR 97008

Office (503) 619-4321

Fax (503) 469-8553

APPLICANT:

Sericko Resources LLC

Contact: Joe Mitchoff

PO Box 82697

Portland, OR 97282

55.070(C) Neighborhood Meeting Minutes per Sec. 99.038 (5)(d): The applicant has attended a neighborhood meeting on November 12, 2008 to discuss this project. A copy of the minutes are attached.

55.100(A)(1): The project engineer has provided stormwater facility cross sections in the revised site plans. Therefore, this criterion has been met.

55.100 APPROVAL STANDARDS - CLASS II DESIGN REVIEW

The approval authority shall make findings with respect to the following criteria when approving, approving with conditions, or denying a Class II design review application.

A. The provisions of the following chapters shall be met:

7. Chapter 46, Off-Street Parking and Loading. (46.150(A)(1) & (8))

Comment: The specific code sections are addressed below:

46.150 DESIGN AND STANDARDS

The following standards apply to the design and improvement of areas used for vehicle parking, storage, loading, and circulation:

A. Design Standards:

1. "One standard parking space" means a minimum for a parking stall of 8 feet in width and 16 feet in length. These stalls shall be identified as "compact." To accommodate larger cars, 50 percent of the required parking spaces shall have a minimum dimension of 9 feet in width and 18 feet in length (9 x 18). When multi-family parking stalls back onto a main driveway, the stalls shall be 9 x 20.

8. Off-street parking spaces for single and two-family residences shall be improved with an asphalt or concrete surface, or a permeable parking surface designed to reduce surface runoff, to specifications as approved by the Building Official. Other parking facilities for two and single-family homes that are to accommodate additional vehicles, boats, recreational vehicles, and trailers, etc. need not be paved. All parking for multi-family residential development shall be paved with concrete or asphalt. Driveways shall measure at least 20 feet from the back of sidewalk to garage or the end of the parking pad to accommodate cars and sport utility vehicles without the vehicles blocking the public sidewalk.

Comment: The application is requesting an exception to the design requirement of a 20-foot driveway for the garage to the back of sidewalk. The exception is addressed in Chapter 55.170.A & B (below). The application finds that the reduction to an 18-foot driveway will still maintain the integrity of the driveway by allowing vehicles to park safely and allow pedestrians to walk through the development unobstructed.

8. Chapter 48, Access. (48.080(A) & 55.170)

Comment: The project has been redesigned to include a six (6) foot internal pedestrian walkway. This walkway will be connected to the proposed four (4) foot curb tight sidewalk fronting the development. Therefore, this criterion has been met for approval.

Section 55.100.

B. Relationship to the natural and physical environment.

2. All heritage trees, as defined in the Municipal Code, all trees and clusters of trees (cluster is defined as three or more trees with overlapping driplines; however, native oaks need not have an overlapping dripline) that are considered significant by the City Arborist, either individually or in consultation with certified arborists or similarly qualified professionals, based on accepted arboricultural standards including consideration of their size, type, location, health, long term survivability, and/or numbers, shall be protected pursuant to the criteria of subsections 2(a-f) below. In cases where there is a difference of opinion on the significance of a tree or tree cluster, the City Arborist's findings shall prevail. It is important to acknowledge that all trees are not significant and, further, that this code section will not necessarily protect all trees deemed significant.

Comment: The site does to have any heritage trees, oak trees or groupings of three or more. Therefore, the trees located on the site are not subject to the tree protection requirements identified above. All the trees on the site are subject for removal in order to develop the site according to the submitted site plan. The application has submitted a landscape plan to show where new trees will be planted on site to replace any trees that are lost due to the proposed development. It can be assumed that all trees will be removed as part of this development. The application will make every effort to retain as many trees as possible. The application finds that the proposed landscape plan mitigates for any potential tree loss.

6. Architecture

a. The predominant architecture of West Linn identified in the West Linn vision process was contemporary vernacular residential designs emphasizing natural materials: wood with brick and stone detail. Colors are subdued earth tones: greys, brown, off-whites, slate, and greens. Pitched roofs with overhanging eaves, decks, and details like generous multi-light windows with oversized trim are common. Also in evidence are the 1890s Queen Anne style homes of the Willamette neighborhood. Neo-traditional homes of the newer subdivisions feature large front porches with detailed porch supports, dormers, bracketed overhanging eaves, and rear parking for cars. Many of these design elements have already been incorporated in commercial and office architecture.

Comment: The application has submitted architectural drawings and a materials board showing both the type of material as well as the colors. The proposed buildings do have upper floor decks and large windows above the garage which will help deemphasize the front garage. Please refer to the submitted architectural drawings as the materials/color board for further design details.

c. While there has been discussion in Chapter 24 about transition, it is appropriate that new buildings should architecturally transition in terms of bulk and mass to work with, or fit, adjacent existing buildings. This transition can be accomplished by selecting designs that "step down" or "step up" from small to big structures and vice versa (see

figure below). Transitions may also take the form of carrying building patterns and lines (e.g., parapets, windows, etc.) from the existing building to the new one.

Comment: The proposed building do act as a transition between the exiting single family and duplex homes fronting 13th Avenue and the attached dwelling units on Virginia Lane to the west. The building design and size will act as a “step up” to the larger units west of the site. Overall, the spacing of the proposed units to the built environment is consistent to current development styles.

d. Contrasting architecture shall only be permitted when the design is manifestly superior to adjacent architecture in terms of creativity, design, and workmanship, and/or it is adequately separated from other buildings by distance, screening, grade variations, or is part of a development site that is large enough to set its own style of architecture.

Comment: The proposed development is not in an architectural style that can be considered contrasting. The proposed townhomes are designed in a style that is contemporary with today’s building designs. The existing dwelling fronting 13th are older units, however, the proposed style of the townhomes are consistent the built environment. It can be stated that the proposed units are not designed with a Modern, Spanish, or Tuscan style which is a popular style and can be seen in other residential developments. Therefore, this criterion has been met.

e. Human scale is a term that seeks to accommodate the users of the building and the notion that buildings should be designed around the human scale (e.g., his/her size and the average range of their perception). Human scale shall be accommodated in all designs by, for example, multi-light windows that are broken up into numerous panes, intimately scaled entryways, visual breaks (exaggerated eaves, indentations, ledges, parapets, awnings, engaged columns, etc.) in the facades of buildings, both vertically and horizontally.

The human scale is enhanced by bringing the building and its main entrance up to the edge of the sidewalk. It creates a more dramatic and interesting streetscape and improves the "height and width" ratio referenced in this section.

Comment: The residential units do have elements of human scale in the submitted design. For example, the front views of the architectural drawings show that the windows are broken up in smaller panes. The entry way is set back from the front of the façade in order to give a sense of intimacy and privacy. The front door setback allows for the upper level of the dwelling to have a balcony. The application finds that the designs and details of the dwelling units meet the human scale of the intended users. Therefore, this criterion has been met.

f. The main front elevation of commercial and office buildings shall provide at least 60 percent windows or transparency at the pedestrian level to create more interesting streetscape and window shopping opportunities. One side elevation shall provide at least 30 percent transparency. Any additional side or rear elevation, which is visible from a collector road or greater classification, shall also have at least 30 percent transparency. Transparency on other elevations is optional. The transparency is measured in lineal fashion. For example, a 100-foot long building elevation shall have at

least 60 feet (60% of 100) in length of windows. The window height shall be, at minimum, three feet tall. The exception to transparency would be cases where demonstrated functional constraints or topography restrict that elevation from being used. When this exemption is applied to the main front elevation, the square footage of transparency that would ordinarily be required by the above formula shall be installed on the remaining elevations at pedestrian level in addition to any transparency required by a side elevation, and vice versa. The rear of the building is not required to include transparency. The transparency must be flush with the building elevation.

Comment: The proposed development is for a residential use not commercial. Therefore, this criterion does not apply.

g. Variations in depth and roof line are encouraged for all elevations. To vary the otherwise blank wall of most rear elevations, continuous flat elevations of over 100 feet in length should be avoided by indents or variations in the wall. The use of decorative brick, masonry, or stone insets and/or designs is encouraged. Another way to vary or soften this elevation is through terrain variations such as an undulating grass area with trees to provide vertical relief.

Comment: The proposed roof lines are offset in order to give variation in depth. The Material Board shows a color photograph of a typical unit that is already constructed. The width of the four unit townhome is approximately 72-feet therefore the 100-foot rule does not apply in this case. The application finds that though a combination of the varied roof line in addition to the materials and colors to be used, this criterion has been met for approval.

h. Consideration of the micro-climate (e.g., sensitivity to wind, sun angles, shade, etc.) shall be made for building users, pedestrians, and transit users, including features like awnings.

Comment: The buildings will have an eastern facing front and a western facing rear. This will allow each unit to take advantage of passive solar energy. The proposed vegetation on the landscape plan will not impede the sun from permitting the units using passive solar energy. Therefore, this criterion has been met.

i. The Vision Statement identified a strong commitment to developing safe and attractive pedestrian environments with broad sidewalks, canopied with trees and awnings.

Comment: The project has been designed with six foot sidewalk / pathway internal to the development. The western edge of the sidewalk / pathway is tree lined creating an attractive pedestrian environment.

j. Sidewalk cafes, kiosks, vendors, and street furniture are encouraged. However, at least a four foot wide pedestrian accessway must be maintained per Chapter 53, Sidewalk Use.

Comment: The proposed residential development will not incorporate the use of cafes, kiosks, vendors, and street furniture. There will be common open space that the residents will be allowed to use, however the amenities associated with these open spaces will not impede pedestrians walking in and through the site. Therefore, this criterion is not applicable.

7. Transportation Planning Rule (TPR) compliance. The automobile shall be shifted from a dominant role, relative to other modes of transportation, by the following means:

d. Accessways, parking lots, and internal driveways shall accommodate pedestrian circulation and access by specially textured, colored, or clearly defined foot paths at least six feet wide. Paths shall be eight feet wide when abutting parking areas or travel lanes. Paths shall be separated from parking or travel lanes by either landscaping, planters, curbs, bollards, or raised surfaces. Sidewalks in front of storefronts on the arterials and main store entrances on the arterials identified in CDC Section 85.200(A)(3)(e) shall be 12 feet wide to accommodate pedestrians, sidewalk sales, sidewalk cafes, etc. Sidewalks in front of storefronts and main store entrances in commercial/OBC zone development on local streets and collectors shall be eight feet wide.

Comment: The proposed development is proposing six foot sidewalks internal to the site to allow for safe pedestrian access. The driveways will be "One Way" which will give pedestrians a consistent direction of vehicle motion. It is understood that the sidewalk may be specially textured, colored, or clearly defined. It is undetermined which remedy the application will take to clearly identify the internal sidewalk from the driveway.

f. At least one entrance to the building shall be on the main street, or as close as possible to the main street. The entrance shall be designed to identify itself as a main point of ingress/egress.

Comment: The site will have one point of entry on 13th Street as well as the egress on 13th Street. The entry point will be located on the northern side of the project site and the exit will be located on the southern side of the project site. This will minimize vehicular conflicts for residents and guests on the site. Please review the submitted site plan for a graphical detail of the proposed circulation pattern.

g. Where transit service exists, or is expected to exist, there shall be a main entrance within a safe and reasonable distance of the transit stop. A pathway shall be provided to facilitate a direct connection.

Comment: Transit service is available north of the site in Blankenship Road by bus # 154-Willamette. The development has proposed sidewalks to connect to the existing sidewalk on the east side of 13th Street. Therefore, the design of the proposed project meets this criterion.

h. Projects shall bring at least part of the project adjacent to, or near the main street right-of-way in order to enhance the height-to-width ratio along that particular street. (The height-to-width ratio is an architectural term that emphasizes height or vertical dimension of buildings adjacent to streets. The higher and closer the building is, and the narrower the width of the street, the more attractive and intimate the streetscape becomes.) For every one foot in street width, the adjacent building ideally should be one to two feet higher. This ratio is considered ideal in framing and defining the streetscape.

Comment: The project is not located near the main street; rather it is behind the existing dwelling units. In addition, it appears that this criterion is suited more towards commercial or office buildings rather than residential developments.

F. Shared outdoor recreation areas

2. The required recreation space may be provided as follows:

d. In considering the requirements of subsection F, the emphasis shall be on *usable* recreation space. No single area of outdoor recreational space shall encompass an area of less than 250 square feet. All common outdoor recreational space shall be clearly delineated and readily identifiable as such. Small, marginal, and incidental parcels of land are not usable recreation spaces. The location of outdoor recreation space should be integral to the overall design concept of the site and be free of hazards or constraints that would interfere with active recreation.

Comment: The site has two areas that can be considered outdoor usable areas. In order to identify the common open spaces for the residents, a schematic layout of the site showing the common open space areas will be given to each residence as part of their lease agreement. The application finds that signs and fences may cause an issue with vandalism and as such may take away from the sense of community the project is trying to create.

H. Public transit.

1. Provisions for public transit may be required where the site abuts an existing or planned public transit route. The required facilities shall be based on the following:

a. The location of other transit facilities in the area.

The size and type of the proposed development.

The rough proportionality between the impacts from the development and the required facility.

Comment: The site is not abutting an existing or planned public transit route. There is an existing transit route located to the north (#154- Willamette). Since 13th Street is a dead end street and will not be extended, it can be safely assumed that transit will not be extended south to the proposed site. Therefore, no new transit facilities or facility upgrades are proposed.

2. The required facilities shall be limited to such facilities as the following:

a. A waiting shelter with a bench surrounded by a three-sided covered structure, with transparency to allow easy surveillance of approaching buses.

b. A turnout area for loading and unloading designed per regional transit agency standards.

c. Hard-surface paths connecting the development to the waiting and boarding areas.

d. Regional transit agency standards shall, however, prevail if they supersede these standards.

Comment: The site is not abutting an existing or planned public transit route. There is an existing transit route located to the north (#154- Willamette). Since 13th Street is a dead end street and will not be extended, it can be safely assumed that transit will not be extended south to the proposed site. Therefore, no new transit facilities or facility upgrades are proposed.

3. The transit stop shall be located as close as possible to the main entrance to the shopping center, public or office building, or multi-family project. The entrance shall not be more than 200 feet from the transit stop with a clearly identified pedestrian link.

Comment: The site is not abutting an existing or planned public transit route. There is an existing transit route located to the north (#154- Willamette). Since 13th Street is a dead end street and will not be extended, it can be safely assumed that transit will not be extended south to the proposed site. Therefore, no new transit facilities or facility upgrades are proposed.

4. All commercial business centers (over 3 acres) and multi-family projects (over 40 units) may be required to provide for the relocation of transit stops to the front of the site if the existing stop is within 200-400 yards of the site and the exaction is roughly proportional to the impact of the development. The commercial or multi-family project may be required to provide new facilities in those cases where the nearest stop is over 400 yards away. The transit stop shall be built per 8(b) above.

Comment: The site is less than 40 units in size. In addition, there is an existing transit route located to the north (#154- Willamette). Since 13th Street is a dead end street and will not be extended, it can be safely assumed that transit will not be extended south to the proposed site. Therefore, no new transit facilities or facility upgrades are proposed.

5. If a commercial business center or multi-family project is adjacent to an existing or planned public transit, the parking requirement may be reduced by the multiplier of .9 or ten percent. If a commercial center is within 200 feet of a multi-family project, with over 80 units and pedestrian access, the parking requirement may be reduced by ten percent or by a .90 multiplier.

Comment: The site is not abutting an existing or planned public transit route. There is an existing transit route located to the north (#154- Willamette). Since 13th Street is a dead end street and will not be extended, it can be safely assumed that transit will not be extended south to the proposed site. Therefore, no new transit facilities or facility upgrades are proposed.

6. Standards of Section 85.200(D), "Transit Facilities," shall also apply.

Comment: The site is not abutting an existing or planned public transit route. There is an existing transit route located to the north (#154- Willamette). Since 13th Street is a dead end street and will not be extended, it can be safely assumed that transit will not be extended south to the proposed site. Therefore, no new transit facilities or facility upgrades are proposed.

J. Crime prevention and safety/defensible space.

1. Windows shall be located so that areas vulnerable to crime can be surveyed by the occupants.

Comment: All proposed windows are located in areas that both residents and occupants can survey the units. The materials board shows photographs of a typical unit being proposed for this site. In addition, staff will have an opportunity to review the site plans and will be given an opportunity for input on site safety.

2. Interior laundry and service areas shall be located in a way that they can be observed by others.

Comment: Each unit will be equipped with their own laundry facility. The application assumes that this criterion is applied to common laundry facilities. Therefore, this criterion is not applicable.

3. Mail boxes, recycling, and solid waste facilities shall be located in lighted areas having vehicular or pedestrian traffic.

Comment: Each unit will have their own individual garbage and recycling facilities. The mailboxes are currently proposed to be located along 13th Street, across the street from an existing street light. Therefore, this criterion has been met.

4. The exterior lighting levels shall be selected and the angles shall be oriented towards areas vulnerable to crime.

Comment: All of the units will have front facing outdoor lighting. This light should be able to illuminate the driveway areas and street. Back porch lights will also be installed to illuminate the back yards of each dwelling unit. Therefore, this criterion has been met.

5. Light fixtures shall be provided in areas having heavy pedestrian or vehicular traffic and in potentially dangerous areas such as parking lots, stairs, ramps, and abrupt grade changes.

Comment: As stated above, all of the units will have front facing outdoor lighting. This light should be able to illuminate the driveway areas and street. Back porch lights will also be installed to illuminate the back yards of each dwelling unit. Therefore, this criterion has been met.

6. Fixtures shall be placed at a height so that light patterns overlap at a height of seven feet which is sufficient to illuminate a person. All commercial, industrial, residential, and public facility projects undergoing design review shall use low or high pressure sodium bulbs and be able to demonstrate effective shielding so that the light is directed downwards rather than omni-directional. Omni-directional lights of an ornamental nature may be used in general commercial districts only.

Comment: The final style of light will be determined during the building process. However, it can be assured that the lights will be installed at a height of seven feet with directional light so that glare will not be a factor for adjacent neighbors. Staff will have an opportunity to review the final lighting design to ensure compliance with this code provision.

7. Lines of sight shall be reasonably established so that the development site is visible to police and residents.

Comment: The proposed landscaping will not interfere with line of sight issues. The fronts of all of the units will be visible from the common driveway, which the police will have access to if needed. The back patio will remain semi-private with an area of common open space next to the property line. This area can be used in case of an emergency and fire, police or residents need to assist others living in the development.

8. Security fences for utilities (e.g., power transformers, pump stations, pipeline control equipment, etc.) or wireless communication facilities may be up to eight feet tall in order to protect public safety. No variances are required regardless of location.

Comment: The development does not propose security fences for the uses listed above. Therefore, no variances are requested.

K. Provisions for persons with disabilities.

1. The needs of a person with a disability shall be provided for. Accessible routes shall be provided between all buildings and accessible site facilities. The accessible route shall be the most practical direct route between accessible building entries, accessible site facilities, and the accessible entry to the site. An accessible route shall connect to the public right-of-way to at least one on-site or adjacent transit stop (if the area is served by transit). All facilities shall conform to, or exceed, the Americans with Disabilities Act (ADA) standards, including those included in the Uniform Building Code.

Comment: The site will be designed to meet all possible ADA and UBC requirements. Since this is a residential development many ADA and UBC codes may not be applicable. It should be noted that these units are designed with the bed rooms upstairs on the second floor.

55.110 THE SITE ANALYSIS

B. A site analysis on a drawing at a suitable scale (in order of preference 1" = 10' to 1" = 30') which shows:

1. The parcel boundaries, dimensions, and gross area.
3. A slope analysis which identifies portions of the site according to the slope ranges as follows:
 - a. 0-5 percent;
 - b. 5-15 percent;
 - c. 15-25 percent;
 - d. 25-35 percent;
 - e. 35-50 percent;
 - f. 50 percent or more.

Comment: A separate slope analysis sheet has been created to identify slopes of equal to or greater than 25%. These identified areas are classified as either Type I or Type II lands, which can be removed from the gross site area. The majority of the site has a gentle slope as identified by the one foot contours.

10. The location of trees having a six-inch caliper at five feet and where the site is heavily wooded, an aerial photograph at the same scale as the site analysis may be submitted and only those trees that will be affected by the proposed development need be sited accurately; (e.g., construction activity within the dripline of the trees). All significant trees and tree clusters identified by the City Arborist using the criteria of CDC Section 55.100(B)(2) and all

heritage trees, shall be delineated. Trees on non-Type I and II land shall have their "dripline plus 10 feet" protected area calculated per CDC Section 55.100(B)(2) and expressed in square feet, and also as a percentage of total non-Type I and II area.

Comment: All the existing trees and groupings of trees have been identified on the existing conditions (sheet 1) and site plan (sheet 2). As stated elsewhere, all the trees on the site are subject for removal in order to develop the site as submitted. A landscape plan has been submitted with this application in order to show the location of the new trees to be planted on the site. The application finds that the trees shown on the landscape plan will mitigate the trees being removed.

13. Identify Type I and II lands in map form. Provide a table which identifies square footage of Type I and II lands also as percentage of total site square footage.

Comment: A separate Slope Analysis sheet has been submitted to identify the areas with slopes greater than 25%. These areas, totally 1,334 sf, are subtracted from the gross site area. Please refer to the slope analysis sheet to identify the geographical location of all slope areas over 25%.

55.120 THE SITE PLAN

F. The location, dimensions, and names of all:

1. Existing and platted streets and other public ways and easements on adjacent property and on the site;

Comment: The revised site plan (sheet 2) has identified all abutting streets and easements.

G. The location, dimensions and setback distances of all:

1. Existing structures, improvements, and utility facilities on adjoining properties;

Comment: The revised site plan (sheet 2) has identified all structures, improvements, and utility facilities on adjoining properties.

L. The location of mail boxes

Comment: The proposed mailboxes are identified on the revised site plan (sheet 2). The proposed mailboxes will be located between the two exiting dwelling units. The final location of the mail boxes will be determined by the Postmaster and the Building Official.

[Skip to Main Content](#)



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[Home](#) > [Resident](#) > [Neighborhood Associations](#) > [Willamette](#) > [Minutes](#) > **2008-11-12**

CIT

The meeting was called to order at 7pm by president, Beth Kieres. After introductions, the minutes of the October 8 meeting were read, amended, and approved.

Attendance: Beth Kieres, Elizabeth Rocchia, Gwendolyn Rose, Greg Smith, Hans Thyngenson, Joe Mitchoff, Jerry Offer, Danny Schreiber, Linda Neace, Rae Henry and Buffalo Zoebel.

Treasurer's report

Balance: The treasurer reported a balance of \$2708.33 in our account.

Activity: Expenses which previously would have been reimbursed by the city of West Linn are now drawn directly from the city's account at the Pacific West Bank with a bankcard held by Beth Kieres. There were food expenses totaling 155.99 for the group that built the Centennial Path in Willamette Park on October 4th. This was the last withdrawal.

Guest Presentations

Parks & Recreation Presentation: Jerry Offer, Parks Board Member spoke about the restroom replacement at 12th Street and Volpp Avenue and the pool area improvement. Design diagrams were shown and the restroom will resemble the restrooms near the boat ramp. The pool is proposed to become 2 pools with a connecting stream. This satisfies and corrects the concerns of the county health department that affect the existing pool. The Park board meeting will be November 20, 2008 with a final review in December by the Planning Commission. Project is scheduled to begin in January 2009 and finish by Memorial Day weekend 2009. Date for final review needs to be confirmed and announced. Handicapped access is incorporated into the design.

Fields Bridge Park is in need of restrooms. Currently proposed as a general fund project the Parks Board will work to propose funding through System Development Fund (SDF). The Youth Baseball Association has set aside funding to create a concession area under the same structural roof as the restrooms. A motion was made to support the development of permanent restrooms. Unanimously approved. As the new bridge over the Tualatin is constructed the county will grade a path under the bridge to cross Willamette Falls Drive. Another park issue; WL Parks Dept has learned that Clackamas County needs to move a historic log cabin. The WNA expressed enthusiasm at the prospects of getting an historic log cabin for the Fields Bridge Park (? Used for bathrooms and/or gallery, gifts, community event room). The location discussed was at the corner of Dollar and WFD on the current school district property vs replacing the old house in the park.

Neighborhood Resource Network: Greg Smith presented suggestions to network the current resources for neighbors going through difficult economic circumstances. Included in the discussion was: West Linn Food Pantry at the Willamette United Methodist Church. Hours for the pantry are 3:00 to 7:00 pm Thursdays. Holiday closures: Thursday, November 27; Thursday, December 18 open for bread only; Thursday, December 25; Thursday, January 1. Holiday food boxes, (reserved by request form) available for pick up on Saturday, December 20, from 10 a.m. to 3 p.m. Contact for the West Linn Food Pantry is Shauna Shroyer.

CU

Development of a resources web site. It is noted that we need to consider a consultation with Kirsten Wyatt, the West Linn Volunteer Coordinator, for further development of the idea. Danny Schreiber offered to design a site similar to the Centennial site. Resources and suggestions include bartering automotive mechanic services, creating more community gardens, vegetable and food co-ops, a ride board, food preservation classes.

CA

Other community events supporting giving and receiving. Friday morning, 6:30 to 8:00 a.m., the Willamette Christian Church makes a breakfast for any to attend and it is donation based. At Bull's-eye Coffee Shop a "knit in" is held on Fridays and the created shawls are donated. The WL area residents may not be aware of the community resource known as "21 1" Beth Kieres plans to present more information on this service. A donation site for food collection for the WL Food Pantry on December 13th ,during the Holiday Parade was considered. Sites suggested were in front of Bull's-eye Coffee or in front of the church. WNA recommended that a site be chosen and published in the West Linn Tidings, arrangements still need to be set.

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Proposed Site Development: Joe Mitchoff presented a plan for the development of his property on 13th Street behind Albertsons. Joe Mitchoff Requested audio recording of his presentation, the group agreed. Joe described the 2 fourplexes proposed for the site to be added behind the current single family home and duplex on the property. General dimensions: 8, 2 BR, 2 BA 1,200 to 1,300sf town homes. 6 feet between buildings offset angled from each other. Interior sprinkler systems included in safety design. Landscaping upgrades will be created. Storm water planters, as opposed to a pond with the required fencing, is preferred as an aesthetic upgrade and for maintenance ease. Arbor Cove has storm water planters and they are considered an enhancement to landscape. Joe reported that a community submittal needs to be made by citizens to the West Linn Planning Commission in favor of the planters because the PC requested a pond . Noise abatement is naturally occurring as the slope of the site is lower than I-205, directly behind the property.

Proposed Site Development: Buffalo Zoebel informed about an item to be on the December 3, 2008 Planning Commission agenda. Blain Schutlzer requested a hearing for zone change from R-10 to R-7. Property is known as 1095 Dollar located on the SW corner of Dollar and Ostman. It was mentioned that the zone change from single to multiple dwelling would set or continue a precedence of zoning. This change was not supported by some members but other members felt they needed more information to make a decision.

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Committee Reports

Centennial Committee Report: Danny Schreiber spoke about the last event of the Centennial Committee and the web site produced for the event. The construction of a similar site for the resources page was offered.

Planning Commission/City updates: WNA is waiting to hear about Planning Commission meeting agendas dealing with the Holiday Inn Express proposed on Willamette Falls Drive. The Holiday Inn Express was tabled for this WNA meeting until more information is available after the meetings with the city reconvene.

WE
C

New Business

Discussion regarding the current fire station on Willamette Falls Drive: Beth Kieres reported a recent conversation with Charles Awalt who consults on the Historic Review Board of West Linn. Charles advised WNA that the fire station was to go before the PC in the next week and was slated to be torn down for the new station. He suggested that the WNA could propose the current station to be designated as a historic building. This would prevent the teardown and protect the building for other City use—allowing the fire department to move (possibly) to the vacant location on 8th street. He proposed uses for the building could include a gift shop, community room, and Willamette Meteorite Gallery. The WNA discussed the issue at the meeting and concluded that they did not favor this action. The building did not appear to have visible historic significance—aside from the bell—which is being saved. Maintaining the appearance of the current building did not appeal to the group since the design is much newer than the historic buildings of town. The group actually favored adopting the log cabin from Clackamas County and possibly housing a gift shop or Meteorite Museum in it at Fields Bridge Park. In all the group felt this idea would better serve the community for those purposes and be more historically accurate to the period of the town.

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Planter clean-up: November 15, 2008 was the last of the year.

Meeting adjourned: 9:11 p.m. November 12, 2008

FO

Next meeting December 10, 2008, 7pm, at Pacific West Bank in Willamette Marketplace.

(

Respectfully submitted,
Gwendolyn Rose, Beth Kieres and Elizabeth Rocchia
Willamette Neighborhood Association

< 2008-10-08 up 2008-12-10 >

Printer-friendly version

EM
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OWNER/DEVELOPER:

PREMIER PROPERTY GROUP
 JOE & MIKE MITCHOFF
 P.O. BOX 82697
 PORTLAND, OR 97282
 PH: 503-238-1999
 FAX: 503-238-1999

CIVIL ENGINEER:

BMP DESIGN, LLC
 17701 NE 24th ST.
 VANCOUVER, WA 98684
 ATTN: BOGDAN POPESCU P.E.
 PH: 360-936-8426
 FAX: 360-253-6054

VIRGINIA LANE
 TOWNHOUSES

PARSONS
 ADDITION

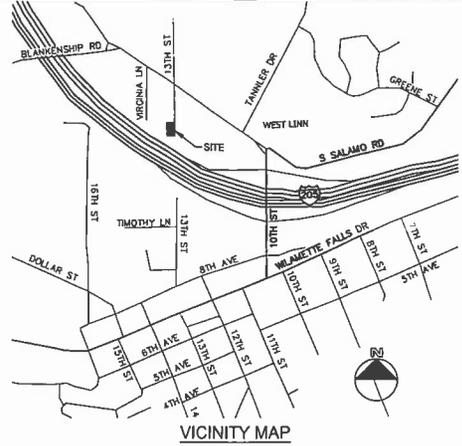
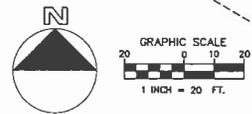
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 PLANNING & BUILDING
 CITY OF WEST LINN
 INT. TIME

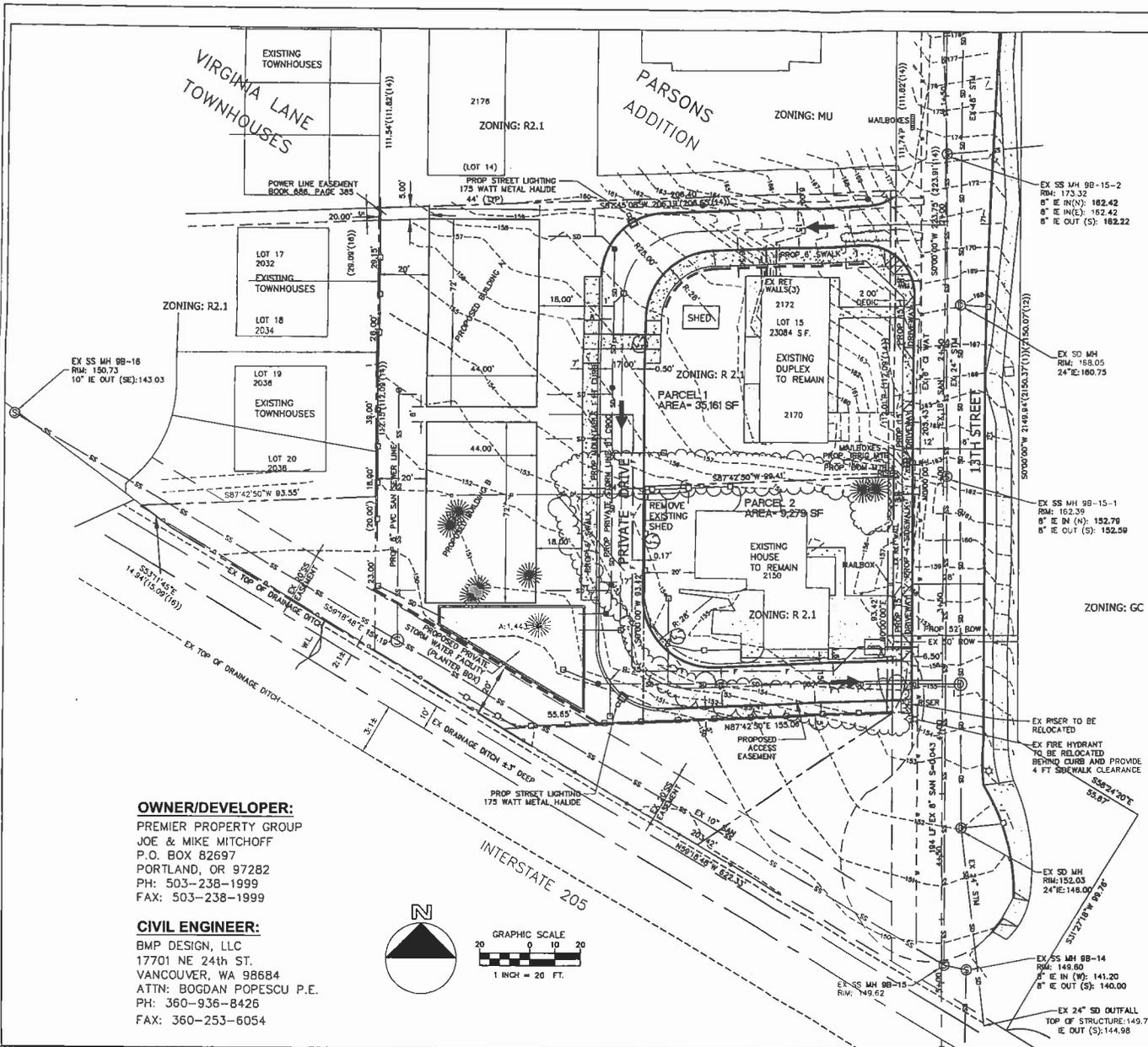
NOTE:
 ALL OBSTRUCTIONS ALONG FUTURE SIDEWALK ON 13TH ST.
 (E: PH LAMPS, RISERS, ETC) SHALL BE RELOCATED TO
 PROVIDE A MINIMUM 4 FT SIDEWALK CLEARANCE.

STEEP SLOPES NOTE:
 TYPE I AND B LANDS (STEEP SLOPES)
 SURFACE AREA: 1,334.0 SF

SHEET INDEX

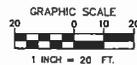
1. EXISTING CONDITIONS PLAN
2. PROPOSED SITE PLAN
3. PRIVATE STREET PROFILE
4. GRADING PLAN
5. UTILITY PLAN





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LEGEND	
EXTG. CURB LINE	
EXTG. CONTOUR LINE (1 FT INTERVAL)	
EXTG. EDGE OF PAVEMENT	
EXTG. TREE	
EXTG. LOT LINE	
PROP. GOOD NEIGHBOR FENCE	
EXTG. FENCE LINE	
EXTG. WATER METER	
EXTG. FIRE HYDRANT	
EXTG. STORM LINE	
EXTG. SANITARY LINE	
EXTG. SANITARY MANHOLE	
EXTG. STORM DRAIN MANHOLE	
EXTG. STORM INLET	
EXTG. LIGHT POLE	
TREE LINE	
PROP. RETAINING WALL	
PROPOSED ACCESS EASEMENT	
EXTG. AC SURFACE	
EXISTING CONC. SURFACE	

ABBREVIATIONS			
ROW	RIGHT-OF-WAY	PROP	PROPOSED
EX	EXISTING	DI	DUCTILE IRON
DWY	DRIVEWAY	SD	STORM DRAIN
PL	PROPERTY LINE	C	CUTTER
CL	CENTER LINE	AC	ASPHALT CONCRETE
CONC	CONCRETE	CTRL	CONTROL
SS	SANITARY SEWER	EOP	EDGE OF PAVEMENT
GO	CLEAN OUT	WM	WATER METER
WV	WATER VALVE	MH	MANHOLE
IE	INVERT ELEVATION	SW	SIDEWALK
TW	TOP OF WALL ELEV.	BW	BOTTOM WALL ELEV AT GROUND LEVEL

THE ENGINEERING CONTRACTOR MANAGER:
 BOGDAN M. POPESCU, P.E.
 17701 NE 24th Street, Vancouver, WA 98684
 PH: 360-936-8426
 WWW.BMPDESIGN.COM

REGISTERED PROFESSIONAL ENGINEER
 STATE OF OREGON
 LICENSE NO. 15,360
 BOGDAN M. POPESCU

EXPIRATION DATE 12/31/10

SITE PLAN
 PROJECT NAME: WEST LINN - RIVER FALLS PLACE
 2170 13th ST., WEST LINN, OREGON 97068

REVISION/DATE	DESCRIPTION
11/27/06	09/19/08
07/15/07	08/01/09
02/13/08	08/12/09
09/15/08	

PRELIMINARY, SUBJECT TO REVISIONS AND REVISIONS, NOT FOR CONSTRUCTION
 SHEET **2** OF **5**
 PROJ # 05113
 05113-BASE.DWG

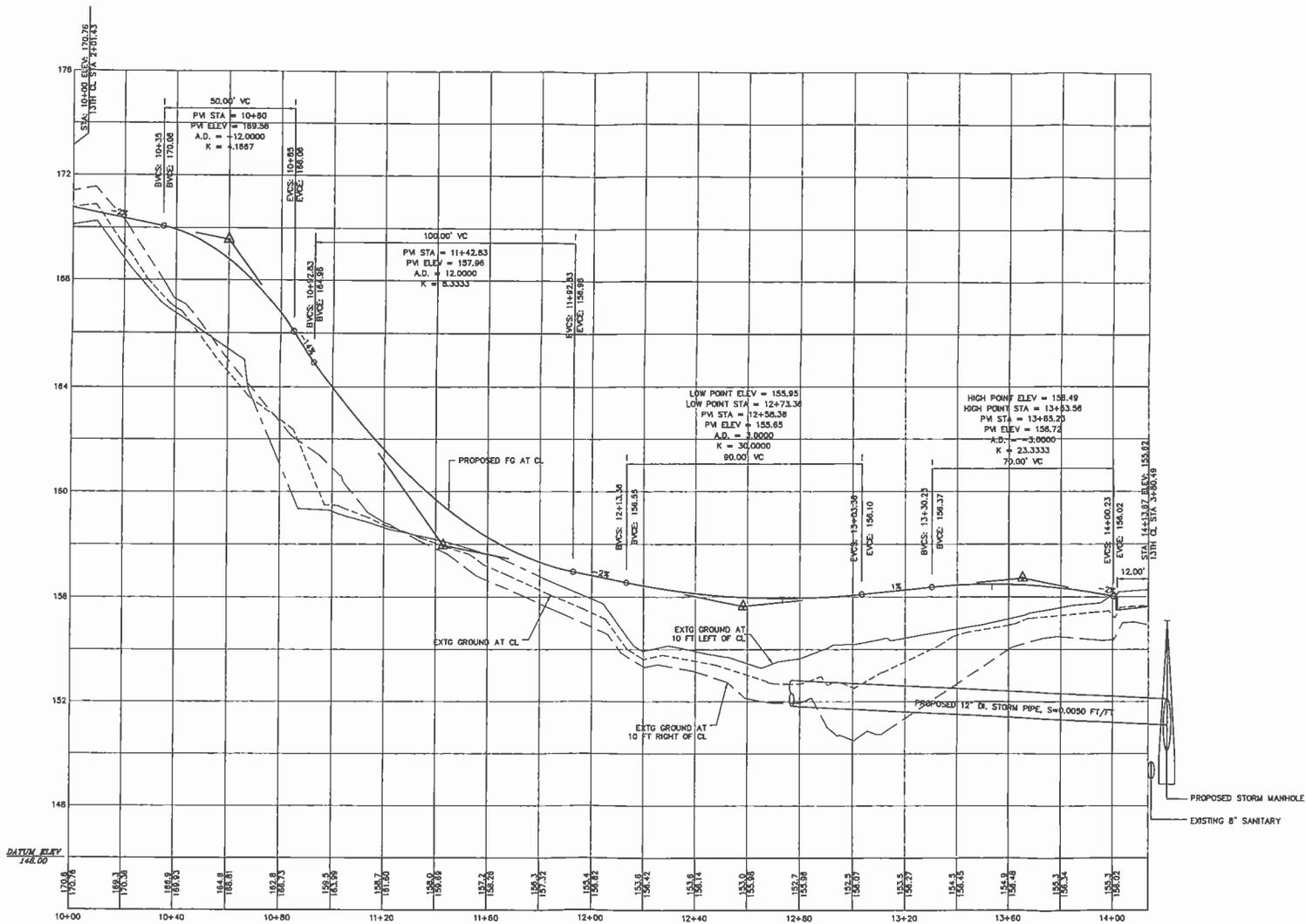
08/15/09

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PRIVATE STREET PROFILE

SCALE: 1 INCH = 20 FT. HORIZ.
 1 INCH = 2 FT. VERTIC.

PRELIMINARY. SUBJECT TO REVIEWS AND REVISIONS. NOT FOR CONSTRUCTION

PROJECT NAME: WEST LINN - RIVER FALLS PLACE
 PRIVATE ROAD PROFILE
 2170 13TH ST. WEST LINN, OREGON 97068

NO.	DATE	DESCRIPTION
1	11/27/06	08/19/08
2	02/15/07	05/07/09
3	02/13/08	08/15/09
4	09/05/08	

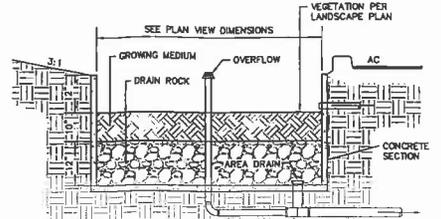
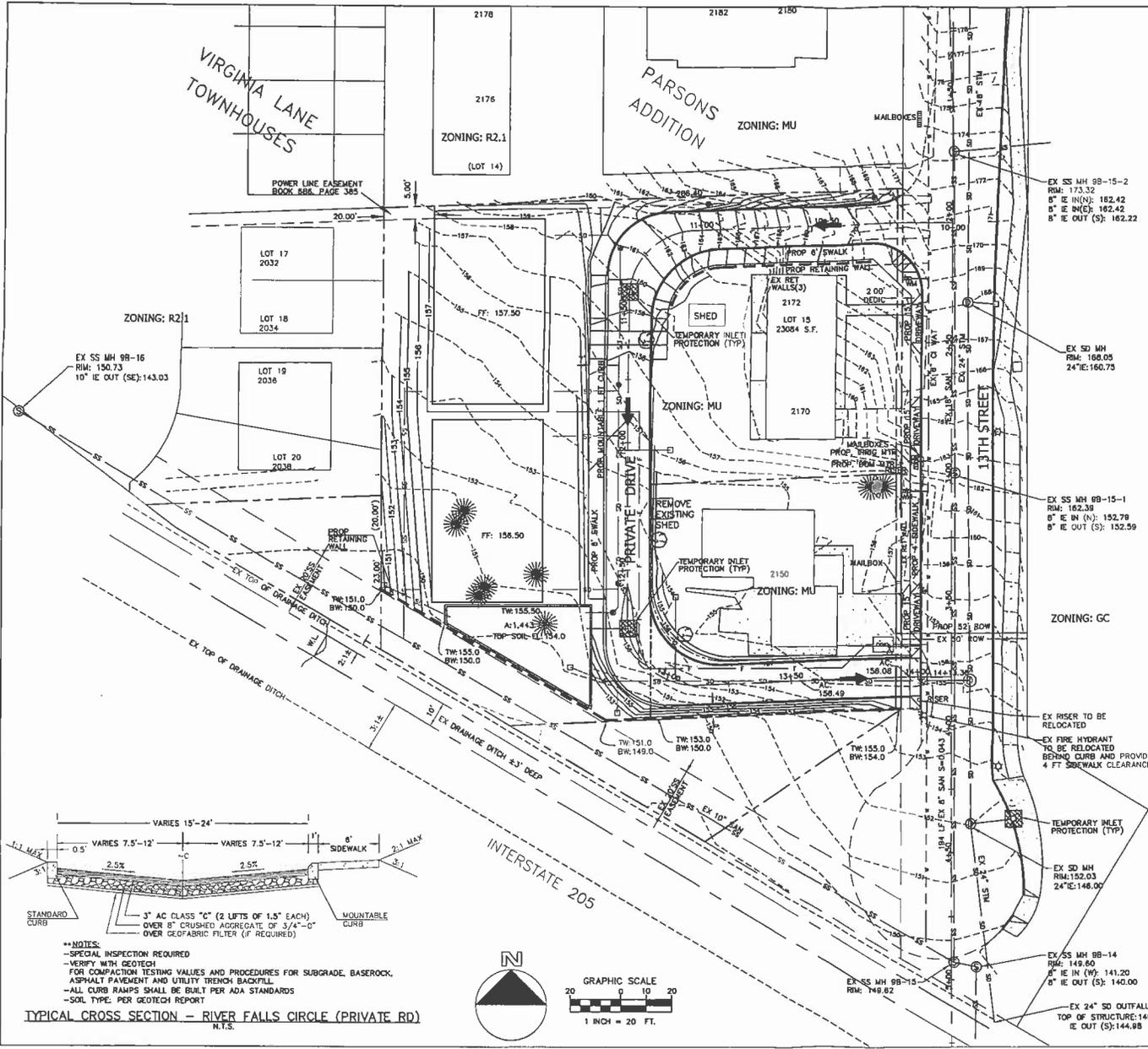
REVISION/DRAWN BY: [Signature]

PROJ # 05113
 05113-BASE.DWG

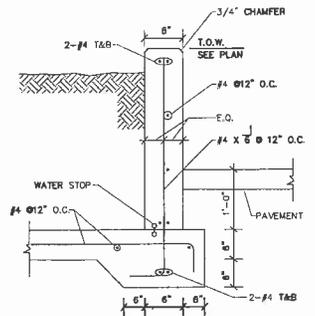
08/15/09

REGISTERED PROFESSIONAL ENGINEER
 BOGDAN M. POPESCU
 EXPIRATION DATE: 12/31/10

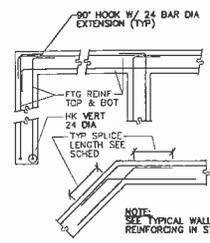
BMP DESIGN, LLC
 17701 NE 24th ST. VANCOUVER, WA 98684
 PH: 360-936-8426
 WWW.BMPDESIGN.COM



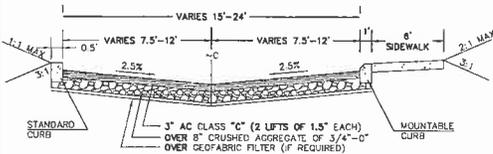
SECTION STORM WATER FACILITY
N.T.S.



DRAINAGE BOX TYP SECTION
N.T.S.



REIN AT CORNERS & INTER SECTIONS
N.T.S.



****NOTES****
 -SPECIAL INSPECTION REQUIRED
 -VERIFY WITH GEOTECH
 FOR COMPACTION TESTING VALUES AND PROCEDURES FOR SUBGRADE, BASECOURSE, ASPHALT PAVEMENT AND UTILITY TRENCH BACKFILL.
 -ALL CURB RAMPS SHALL BE BUILT PER ADA STANDARDS
 -SOIL TYPE: PER GEOTECH REPORT

TYPICAL CROSS SECTION - RIVER FALLS CIRCLE (PRIVATE RD)
 N.T.S.

DESIGNED AND DRAWN BY: [Signature]

DATE: 08/15/09

PROJECT NAME: WEST LINN - RIVER FALLS PLACE
 GRADING & EROSION CONTROL PLAN
 2170 13TH ST. WEST LINN, OREGON 97068

PRELIMINARY. SUBJECT TO REVISIONS AND REMOVALS. NOT FOR CONSTRUCTION.

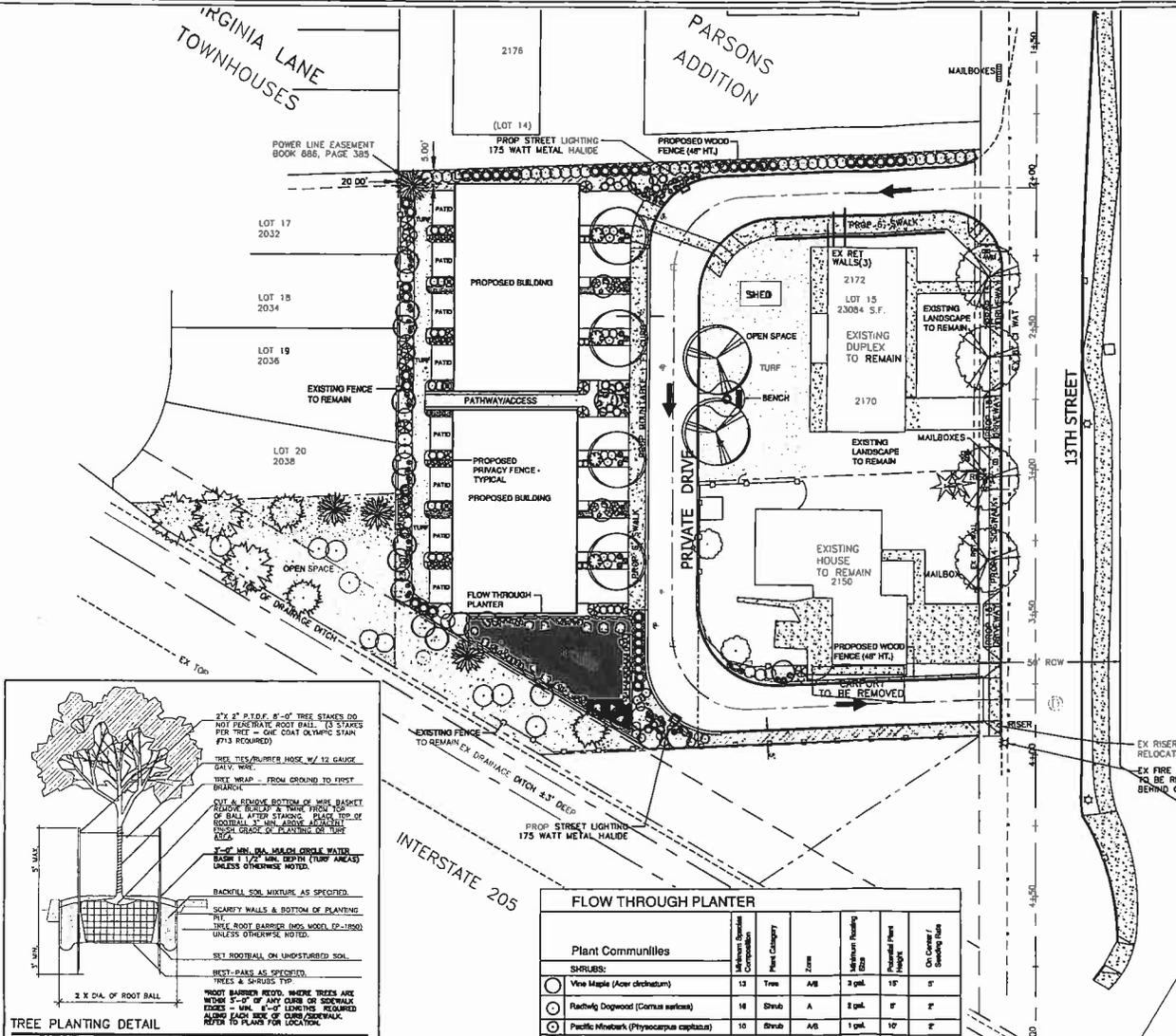
REVISION/DATE DESCRIPTION

4	5
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PROJ # 05113
 05113-BASE.DWG

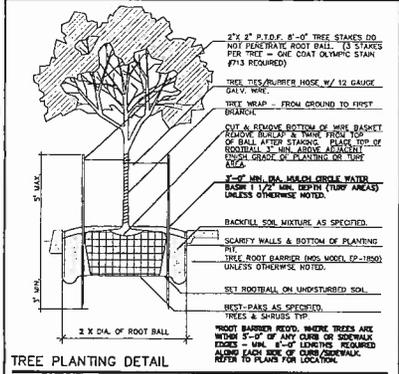
IRGINIA LANE
TOWNHOUSES

PARSONS
ADDITION



PLANT MATERIALS LISTING:

BOTANICAL NAME COMMON NAME					
SYM	TREES	QTY.	SIZE	CONDITION	REMARKS
○	<i>Acer glabrum</i> Vine Maple	21	5-8"	B&B	Multi-Stem
○	<i>Acer fraxinifolium</i> 'Warstead' Pacific Sunset Maple	4	2" Cal.	B&B	
○	<i>Coloceras demerense</i> Innocent Cadee	3	6-7"	B&B	
○	<i>Cornus lucida</i> Kousa Dogwood	7	2" Cal.	B&B	
○	<i>Cycneroperylon laetlandii</i> 'Naylor's Blue' Naylor's Blue Cypress	4	6-7"	B&B	
○	<i>Juniperus verticalis</i> 'Spiracel' Spiracel Juniper	6	5-8"	B&B	
○	<i>Prunus a. glandulata</i> Yankee Cherry	2	2" Cal.	B&B	
○	<i>Pinus ponderosa</i> Ponderosa Pine	3	6-7"	B&B	
○	<i>Pyrus calleryana</i> 'Chantrelle' Chantrelle Pear	4	2" Cal.	B&B	
SYM	SHRUBS	QTY.	SIZE	CONDITION	REMARKS
⊗	<i>Andromeda pallida</i> Box Rosemary	15	1 Gal.	Can	
⊗	<i>Berberis thunbergii</i> 'Royal Burgundy' Royal Burgundy Barberry	16	1 Gal.	Can	
⊗	<i>Berberis thunbergii</i> 'Rose Glow' Rose Glow Barberry	36	1 Gal.	Can	
⊗	<i>Chamaecyparis obtusa</i> 'Nana Gracilis' Dwarf Gracilis Hinoki Cypress	5	24-36"	B&B	
○	<i>Cornus arvensis</i> Rustling Dogwood	2	5 Gal.	Can	
○	<i>Cornus arvensis</i> 'Eclaire' Eclaire Dogwood	26	1 Gal.	Can	
○	<i>Thuja occidentalis</i> 'Emerald n Gold' Emerald n Gold Thuja	25	1 Gal.	Can	
○	<i>Thuja occidentalis</i> 'Compacta' Compact Weeping Euonymus	8	5 Gal.	Can	
○	<i>Mahonia aquifolium</i> 'Compacta' Compact Oregon Grape	4	1 Gal.	Can	
○	<i>Wandooa amplexicaulis</i> 'Compacta' Compact Heavenly Bamboo	3	2 Gal.	B&B	
○	<i>Wandooa amplexicaulis</i> 'Harbour Dwarf' Harbour Dwarf Heavenly Bamboo	11	1 Gal.	B&B	
○	<i>Platanus japonica</i> 'Valley Pine' Valley Pine Platanus	4	1 Gal.	Can	
○	<i>Rhododendron variegatum</i> Soden Boden	8	12-15"	B&B	
○	<i>Sarcococca pauciflora</i> Fragrant Sarcococca	6	2 Gal.	Can	
○	<i>Platanus fraxinifolia</i> 'Spring Bouquet' Spring Bouquet Viburnum	45	5 Gal.	Can	
SYM	GRASSES	QTY.	SIZE	CONDITION	REMARKS
⊗	<i>Carex lasiocarpa</i> Lasiocarpa Sedge	9	1 Gal.	Can	10-12"
⊗	<i>Festuca ovina glauca</i> Blue Fescue	30	1 Gal.	Can	10-12"
⊗	<i>Impatiens nigriflora</i> 'Rubra' Scarlet Blood Grass	48	1 Gal.	Can	10-12"
SYM	GROUND COVER	QTY.	SIZE	CONDITION	REMARKS
⊗	Turf as Specified	100%			
⊗	Native Seed Mix	100%			
⊗	<i>Fragaria chiloensis</i> Beach Strawberry	85	4"	Pets	30' c/c
SYM	LEGEND				
○	Landscape Boulder - Grey Boulder - Varsity w/ Owner	14	2-3 cu ft.		
○	Indicates Existing Trees to Remain				
* TEMPORARY AUTOMATIC IRRIGATION SYSTEM WILL BE PROVIDED.					
APPROXIMATE LANDSCAPE AREA					
TOTAL LANDSCAPE AREA: 15,100 sq. ft.					
NON-LANDSCAPE AREA: 17,450 sq. ft.					



INTERSTATE 205

FLOW THROUGH PLANTER

Plant Communities	Minimum Stock Comparison	Plant Category	Zone	Minimum Spacing (ft.)	Planted Area (sq. ft.)	On Corner / Spacing (ft.)
SHRUBS:						
○ Vine Maple (<i>Acer glabrum</i>)	13	Tree	AVB	2 gal.	10'	5'
○ Rustling Dogwood (<i>Cornus arvensis</i>)	16	Shrub	A	2 gal.	8'	2'
○ Pacific Ninebark (<i>Physocarpus opulifolius</i>)	10	Shrub	AVB	1 gal.	10'	2'
○ Douglas Spirea (<i>Spiraea douglasii</i>)	14	Shrub	AVB	1 gal.	7'	2'
Total:	53					
HERBACEOUS PLANTS:						
⊗ Dense Sedge (<i>Carex densa</i>)	570	Grass	A	1 gal.	84"	12"
⊗ Slough Sedge (<i>Carex obovata</i>)	577	Grass	A	1 gal.	4"	12"
⊗ Tufted Hair Grass (<i>Deschampsia cespitosa</i>)	530	Grass	A	1 gal.	36"	12"
⊗ Siberian Iris (<i>Iris sibirica</i>)	80	Herb	A	1 gal.	36"	12"
⊗ Slender Rush (<i>Juncus tenuis</i>)	150	Grass	A	1 gal.	36"	12"
Total:	1027					

- NOTES**
1. BAB STOCK MAY BE SUBSTITUTED WITH CONTAINER STOCK OF EQUAL GRADE.
 2. CONTAINER STOCK MAY BE SUBSTITUTED WITH BAB STOCK OF EQUAL GRADE.
 3. PLANT MATERIAL SHALL CONFORM WITH AMERICAN STANDARDS FOR NURSERY STOCK, AND IRL 1, 1998 EDITION.
 4. ALL TREES SHALL BE BRANCHED.
 5. MOUND ALL PLANTING BEDS WITH 2" MIN. LAYER OF SPECIFIED MULCH.
 6. IN THE EVENT OF A DISCREPANCY BETWEEN THIS MATERIAL LISTING AND THE DRAWINGS, THE DRAWINGS SHALL GOVERN THE PLANT SPECIES AND QUANTITIES REQUIRED.
 7. IN THE EVENT OF QUESTION ON LACK OF CLARITY ON DRAWINGS, LANDSCAPE CONTRACTOR IS TO CALL LANDSCAPE ARCHITECT BEFORE PROCEEDING.
 8. LANDSCAPE CONTRACTOR IS TO NOTIFY LANDSCAPE ARCHITECT PRIOR TO INSTALLATION OF PLANT MATERIAL.

MEARS
REGISTERED
LANDSCAPE ARCHITECTURE & PLANNING
11880 SW 13th Place, Suite 100, Tigard, Oregon 97153
Phone: 503.901.4510 Fax: 503.901.4668

REGISTERED
S40
TROY MEARS
LANDSCAPE ARCHITECT

RIVER FALLS PLACE
PLANTING PLAN
2170 13TH STREET
WEST LINN, OREGON

REVISIONS

NO.	DATE	DESCRIPTION
1	08/08	ISSUED FOR PERMITS

SHEET NAME:
PLANTING PLAN

DRAWN BY: JZM
CHECKED BY: JZM
ISSUE DATE: 08/08
JOB NO.: 0915

SHEET:
L1.1
of 1

