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STORMWATER MANAGEMENT REPORT

1207-1211 Kennedy Boulevard, Bayonne, NJ
Block: 24 Lots: 2&3

December 2020

Prepared by:

Carl A. Jenne, P.E.
NJ License No.: 26287

Date: 12/21/2020

I. SUMMARY

This Storm Water Management Report addresses the Stormwater Management requirements for the Multi-Family Dwelling at 1209-1211 Kennedy Boulevard in Bayonne, NJ. The property is located at the northwest corner of Kennedy Boulevard and West 54th Street with a 75' frontage on Kennedy Boulevard and a 100' frontage on 54th Street and a total area of 7,500 sq. ft. (0.172 acres).

PRE-DEVELOPED SITE – The pre-development site contains an open lot where buildings have been previously removed and a driveway/parking area. Site stormwater flows uncontrolled to 54th Street and Kennedy Boulevard..

The site is 35% impervious (NRCS Soil Survey classifies the existing soil as "Urban Land" for an HSG "D").

POST-DEVELOPED SITE – The proposed building roof comprises 6,870 SF with sidewalk/driveway area at 30 SF and landscaped planters accounting for 600 SF of the site for 92% impervious coverage.

Stormwater from the building roof will be collected by an internal storm drain system and directed to a storage/detention system lying underneath the garage floor. Outflow from the detention basin will flow thru a 6" SDR35 pipe connecting to the existing 12" pipe in West 54th Street.

STORMWATER CALCULATIONS – The underground detention system has been designed to reduce the post-developed 2-, 10- and 100-year storms to a level no greater than 50%, 75% and 80%, respectively, of the pre-developed condition. Per the Bayonne Redevelopment Standards for this property.

In order to evaluate how the system functions during storm events the HydroCAD computer program was utilized for these calculations (see appendix).

Existing Conditions - Existing condition runoff for the entire site was calculated for the 2-, 10- and 100-year using the NRCS method with a Type II Region D rainfall distribution, per NRCS/NJDEP standards (labelled as "NOAA Region D" in the computer output) and the NRCS recommended 24hr Rainfall Frequency Data for Hudson County, NJ.

Proposed Conditions – Proposed condition runoff from the roof area was routed through the proposed storage/detention basin and then added to the runoff from the landscaped and sidewalk area to obtain the total stormwater runoff from the site.

The storage/detention basin is comprised of:

Storage –

- Reinforced Concrete Tank with inside dimensions of 10'x30'x3.5' with a bottom elevation of 94,00'.

- The total available storage area is reduced by the 3'x3' Outlet control structure cast within the overall tank dimensions.

Outlet Control Structure:

- 3'x3' (inside dimensions) section of tank separated from the tank by a 6" wall extending 3.20' above the tank bottom.
- 2.5" low flow orifice within the baffle wall @ Elev. 94.00
- 4' broad crested weir comprising the length of baffle wall @ Elev 97.20 (0.3' minimum distance below the top of tank elevation (bottom of floor slab).

A summary of the stormwater calculations for all storms analyzed is as follows:

Design Storm (Years)	Existing Runoff (cfs)	Proposed Runoff ** (cfs)	Required Minimum % of Existing Flow	Actual % of Existing Flow
2	0.37	0.18	50.6%	48.6%
10	0.62	0.25	40.3%	40.3%
100	1.11	0.76	68.5%	68.5%

Other information for the 100-year design storms:

- 100-yr storm peak elevation = 97.31 (below inner top of tank elevation of 98.00)
- With the low flow orifice blocked, the 100-year storm elevation will reach elevation 97.41 which is less than the top of tank elevation of 99.0' (See Appendix).

Water Quality Criteria:

NJ Water Quality Storm Rainfall Intensity (I):	1.25 inches/2hours		
Storm Duration (Td):	2 hours		
Average I:		0.625	1.25-inches/2-hr
Total Area of Site:		0..1721	Acres (10,000 SF)
Time of Concentration		10	Minutes (from HYDROCAD Model)
Avg "C" (Proposed):		0..97	
Water Quality Storm Q = CIA	0.97*0.625*1721 =	0.1042	cfs

Elevation for 0.104 cfs (from HydroCAD printout) = 94.47 < 97.20 Primary spillway - **the proposed system meets the NJDEP Water Quality Criteria.**

Check Capacity of Detention System Outflow Pipe:

- Capacity (n=0.013):
  6" SDR35 @ 2% = (1.486/n*A*R^2/3) * S^1/2 =
  6.58*(0.02)^0.5 = 0.93 cfs which is more than all storm outflows –**OK**
- Equivalent Full Capacity MGD = [093 cfs] / [1.547 MGD/cfs] = 0.602 MGD

- Velocity (Full) = Q/A = 0.93/0.196 = 4.74 fps < 10fps maximum **OK**

- Minimum Slope for 6" PVC/SDR = 0.15% < 4% Slope **OK**

APPENDICES

Pre- and Post-Developed Conditions Map

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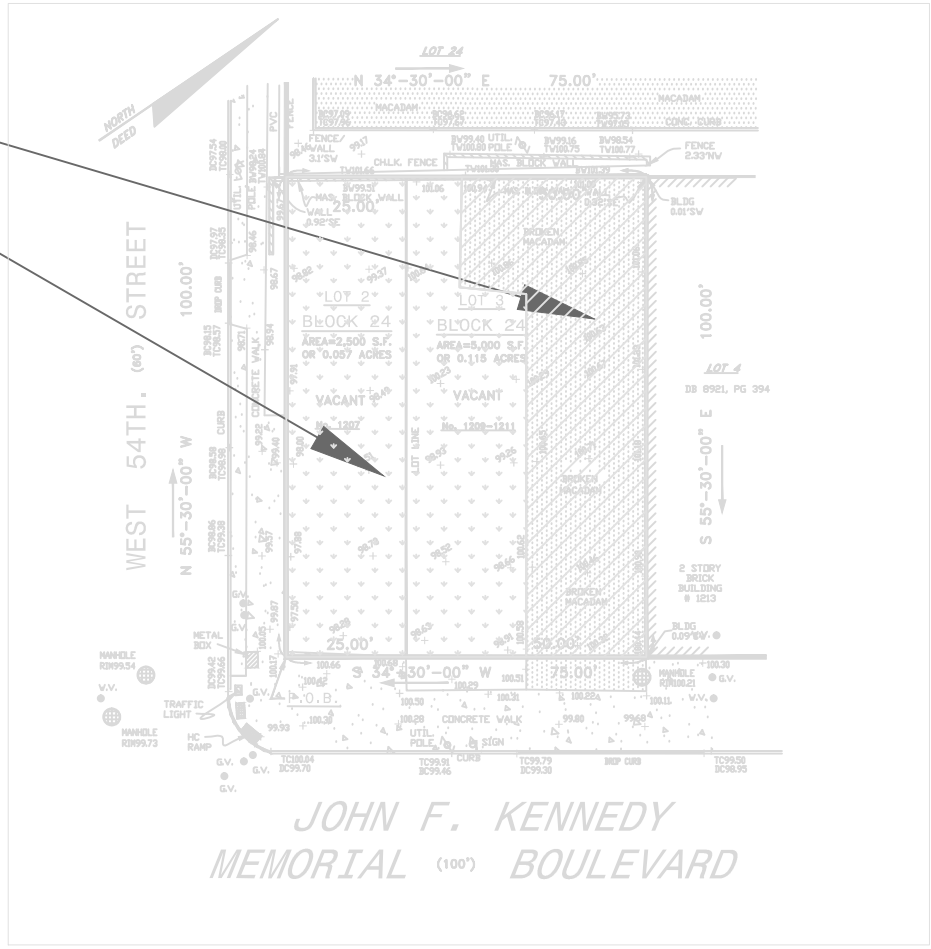
Pervious Lot Area - 4,672 SF

Impervious Macadam - 2,828 SF

TOTAL = 7,500 SF



GRAPHIC SCALE

40' 20' 0' 40' 80'

SCALE: 1"=40'

PRE-DEVELOPMENT DRAINAGE AREA PLAN

1207-11 John F. Kennedy Blvd., Bayonne, New Jersey

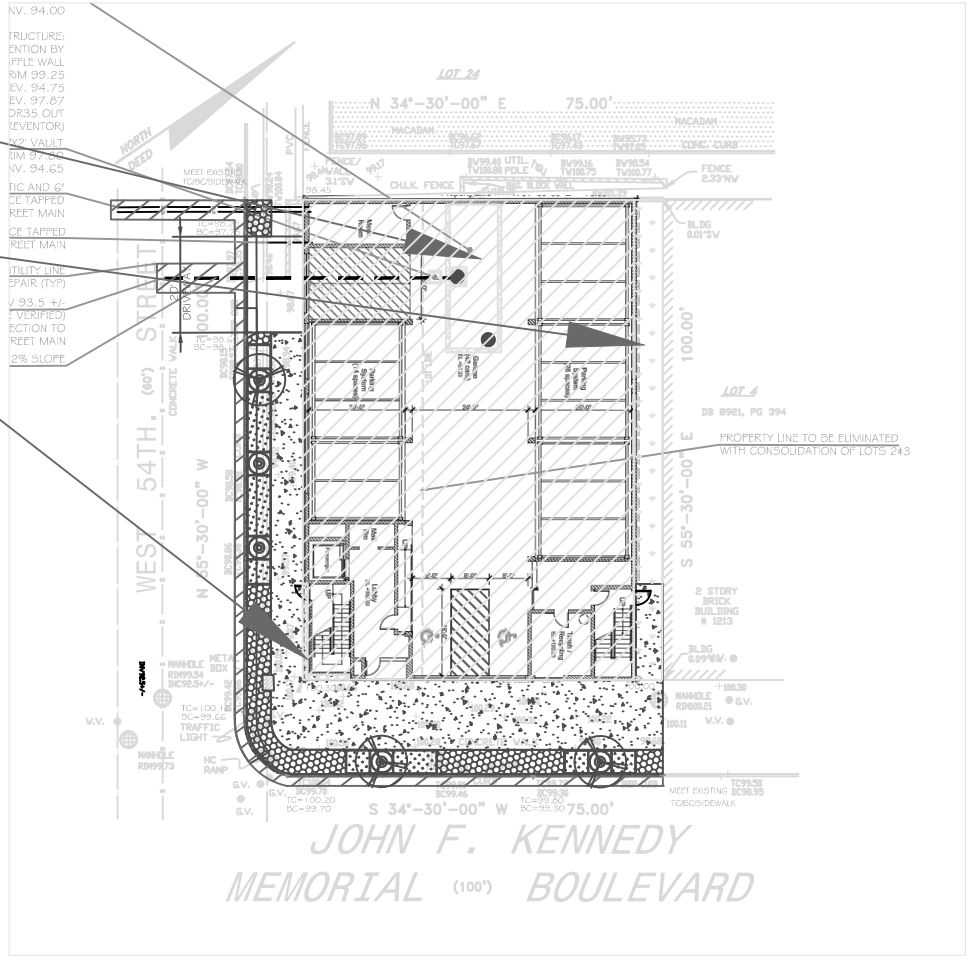
Jenne Associates, LLC

Impervious Building Roof - 6,870 SF

Pervious Yard Area - 600 SF

Impervious Sidewalk - 30 SF

TOTAL = 7,500 SF



GRAPHIC SCALE

40' 20' 0' 40' 80'

SCALE: 1"=40'

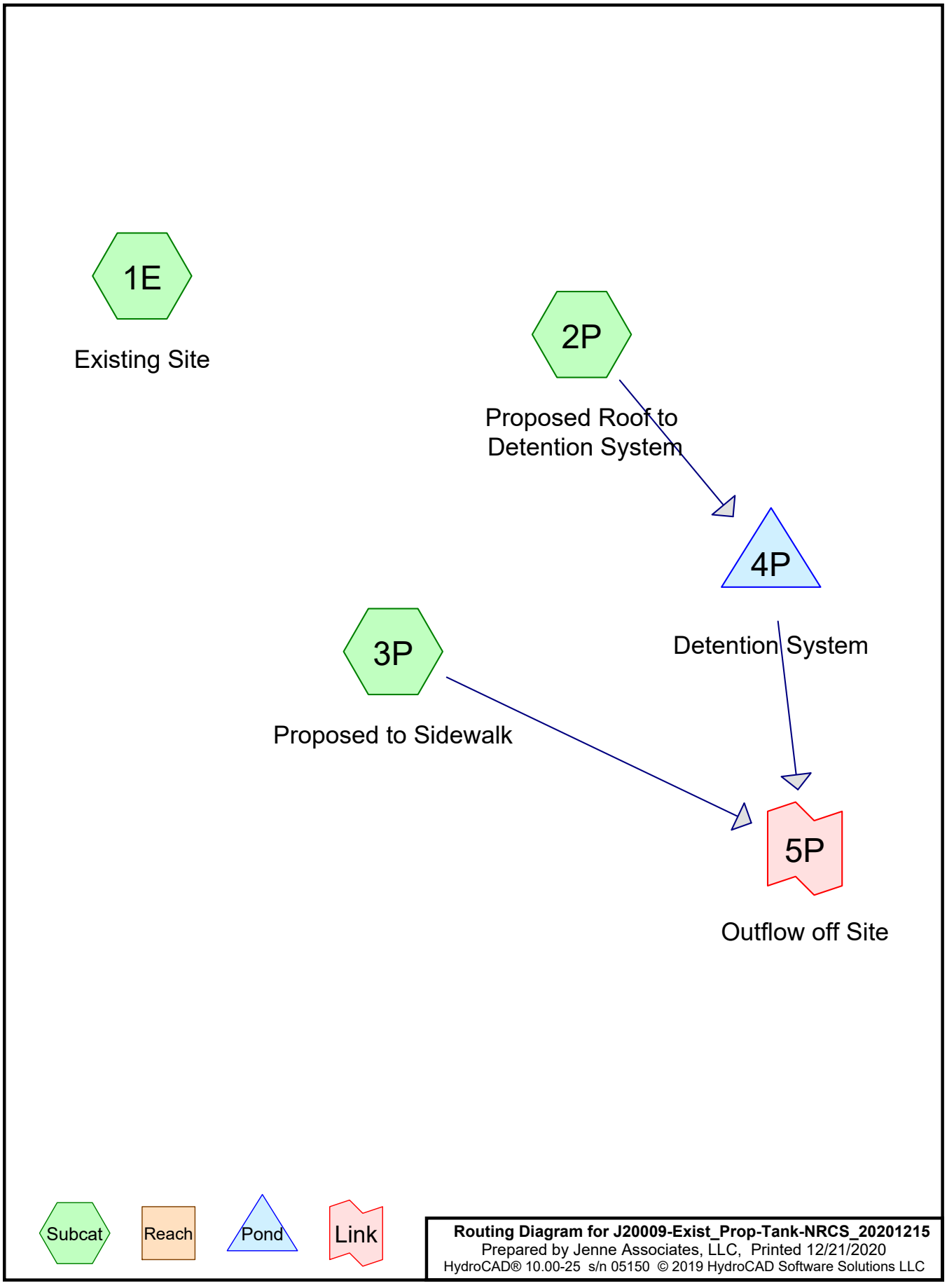
POST-DEVELOPMENT DRAINAGE AREA PLAN

1207-11 John F. Kennedy Blvd., Bayonne, New Jersey

Jenne Associates, LLC

Hydrocad Computer Printouts

JENNE ASSOCIATES, LLC
Consulting Engineers



Routing Diagram for J20009-Exist_Prop-Tank-NRCS_20201215
Prepared by Jenne Associates, LLC, Printed 12/21/2020

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.001	98	Front Sidewalk (3P)
0.107	84	Open Space - Fair HSG "D" (1E)
0.065	98	Pavement (1E)
0.158	98	Proposed Building (2P)
0.014	80	Side Yard Turf - Good Condition HSG "D" (3P)
0.344	**93**	**TOTAL AREA**

Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1E: Existing Site Runoff Area=7,500 sf 37.71% Impervious Runoff Depth=2.18"
Tc=10.0 min CN=89 Runoff=0.37 cfs 0.031 af

Subcatchment 2P: Proposed Roof to Runoff Area=6,870 sf 100.00% Impervious Runoff Depth=3.08"
Tc=10.0 min CN=98 Runoff=0.42 cfs 0.040 af

Subcatchment 3P: Proposed to Sidewalk Runoff Area=630 sf 4.76% Impervious Runoff Depth=1.56"
Tc=10.0 min CN=81 Runoff=0.02 cfs 0.002 af

Pond 4P: Detention System Peak Elev=95.21' Storage=343 cf Inflow=0.42 cfs 0.040 af
Outflow=0.17 cfs 0.040 af

Link 5P: Outflow off Site Inflow=0.18 cfs 0.042 af
Primary=0.18 cfs 0.042 af

Total Runoff Area = 0.344 ac Runoff Volume = 0.074 af Average Runoff Depth = 2.57"
35.15% Pervious = 0.121 ac 64.85% Impervious = 0.223 ac

Summary for Subcatchment 1E: Existing Site

Runoff = 0.37 cfs @ 12.17 hrs, Volume= 0.031 af, Depth= 2.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-Year Rainfall=3.31"

	Area (sf)	CN	Description
*	4,672	84	Open Space - Fair HSG "D"
*	2,828	98	Pavement
	7,500	89	Weighted Average
	4,672		62.29% Pervious Area
	2,828		37.71% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry, Min. Per Ordinance 33-10.22.d.1**

Summary for Subcatchment 2P: Proposed Roof to Detention System

Runoff = 0.42 cfs @ 12.17 hrs, Volume= 0.040 af, Depth= 3.08"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-Year Rainfall=3.31"

	Area (sf)	CN	Description
*	6,870	98	Proposed Building
	6,870		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry, Min. Per Ordinance 33-10.22.d.1**

Summary for Subcatchment 3P: Proposed to Sidewalk

Runoff = 0.02 cfs @ 12.18 hrs, Volume= 0.002 af, Depth= 1.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-Year Rainfall=3.31"

	Area (sf)	CN	Description
*	600	80	Side Yard Turf - Good Condition HSG "D"
*	30	98	Front Sidewalk
	630	81	Weighted Average
	600		95.24% Pervious Area
	30		4.76% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry, Min. Per Ordinance 33-10.22.d.1**

Summary for Pond 4P: Detention System

Inflow Area = 0.158 ac,100.00% Impervious, Inflow Depth = 3.08" for 2-Year event
Inflow = 0.42 cfs @ 12.17 hrs, Volume= 0.040 af
Outflow = 0.17 cfs @ 12.37 hrs, Volume= 0.040 af, Atten= 59%, Lag= 12.4 min
Primary = 0.17 cfs @ 12.37 hrs, Volume= 0.040 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs / 2
Peak Elev= 95.21' @ 12.37 hrs Surf.Area= 300 sf Storage= 343 cf

Plug-Flow detention time= 28.3 min calculated for 0.040 af (100% of inflow)
Center-of-Mass det. time= 28.6 min (789.9 - 761.3)

Volume	Invert	Avail.Storage	Storage Description
#1	94.00'	994 cf	**10.00'W x 30.00'L x 3.50'H Overall Tank** 1,050 cf Overall - 56 cf Embedded = 994 cf
#2	94.00'	0 cf	**Outlet (embedded in overall - no storage) (Prismatic)** Listed below (Recalc 56 cf Overall x 0.0% Voids
		994 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
94.00	16	0	0
97.50	16	56	56

Device	Routing	Invert	Outlet Devices
#1	Primary	94.00'	**2.5" Vert. Orifice/Grate** C= 0.600
#2	Primary	97.20'	**4.0' long x 0.5' breadth Primary Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=0.17 cfs @ 12.37 hrs HW=95.21' (Free Discharge)
1=Orifice/Grate (Orifice Controls 0.17 cfs @ 5.05 fps)
2=Primary Weir (Controls 0.00 cfs)

Summary for Link 5P: Outflow off Site

Inflow Area = 0.172 ac, 92.00% Impervious, Inflow Depth > 2.95" for 2-Year event
Inflow = 0.18 cfs @ 12.31 hrs, Volume= 0.042 af
Primary = 0.18 cfs @ 12.31 hrs, Volume= 0.042 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1E: Existing Site Runoff Area=7,500 sf 37.71% Impervious Runoff Depth=3.79"
Tc=10.0 min CN=89 Runoff=0.62 cfs 0.054 af

Subcatchment 2P: Proposed Roof to Runoff Area=6,870 sf 100.00% Impervious Runoff Depth=4.78"
Tc=10.0 min CN=98 Runoff=0.64 cfs 0.063 af

Subcatchment 3P: Proposed to Sidewalk Runoff Area=630 sf 4.76% Impervious Runoff Depth=3.00"
Tc=10.0 min CN=81 Runoff=0.04 cfs 0.004 af

Pond 4P: Detention System Peak Elev=96.05' Storage=582 cf Inflow=0.64 cfs 0.063 af
Outflow=0.23 cfs 0.063 af

Link 5P: Outflow off Site Inflow=0.25 cfs 0.066 af
Primary=0.25 cfs 0.066 af

Total Runoff Area = 0.344 ac Runoff Volume = 0.121 af Average Runoff Depth = 4.21"
35.15% Pervious = 0.121 ac 64.85% Impervious = 0.223 ac

Summary for Subcatchment 1E: Existing Site

Runoff = 0.62 cfs @ 12.17 hrs, Volume= 0.054 af, Depth= 3.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 10-Year Rainfall=5.02"

	Area (sf)	CN	Description
*	4,672	84	Open Space - Fair HSG "D"
*	2,828	98	Pavement
	7,500	89	Weighted Average
	4,672		62.29% Pervious Area
	2,828		37.71% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry, Min. Per Ordinance 33-10.22.d.1**

Summary for Subcatchment 2P: Proposed Roof to Detention System

Runoff = 0.64 cfs @ 12.17 hrs, Volume= 0.063 af, Depth= 4.78"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 10-Year Rainfall=5.02"

	Area (sf)	CN	Description
*	6,870	98	Proposed Building
	6,870		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry, Min. Per Ordinance 33-10.22.d.1**

Summary for Subcatchment 3P: Proposed to Sidewalk

Runoff = 0.04 cfs @ 12.17 hrs, Volume= 0.004 af, Depth= 3.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 10-Year Rainfall=5.02"

	Area (sf)	CN	Description
*	600	80	Side Yard Turf - Good Condition HSG "D"
*	30	98	Front Sidewalk
	630	81	Weighted Average
	600		95.24% Pervious Area
	30		4.76% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry, Min. Per Ordinance 33-10.22.d.1**

Summary for Pond 4P: Detention System

Inflow Area = 0.158 ac,100.00% Impervious, Inflow Depth = 4.78" for 10-Year event
Inflow = 0.64 cfs @ 12.17 hrs, Volume= 0.063 af
Outflow = 0.23 cfs @ 12.41 hrs, Volume= 0.063 af, Atten= 65%, Lag= 14.6 min
Primary = 0.23 cfs @ 12.41 hrs, Volume= 0.063 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs / 2
Peak Elev= 96.05' @ 12.41 hrs Surf.Area= 300 sf Storage= 582 cf

Plug-Flow detention time= 29.6 min calculated for 0.063 af (100% of inflow)
Center-of-Mass det. time= 29.8 min (782.8 - 752.9)

Volume	Invert	Avail.Storage	Storage Description
#1	94.00'	994 cf	**10.00'W x 30.00'L x 3.50'H Overall Tank** 1,050 cf Overall - 56 cf Embedded = 994 cf
#2	94.00'	0 cf	**Outlet (embedded in overall - no storage) (Prismatic)** Listed below (Recalc 56 cf Overall x 0.0% Voids
		994 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
94.00	16	0	0
97.50	16	56	56

Device	Routing	Invert	Outlet Devices
#1	Primary	94.00'	**2.5" Vert. Orifice/Grate** C= 0.600
#2	Primary	97.20'	**4.0' long x 0.5' breadth Primary Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=0.23 cfs @ 12.41 hrs HW=96.05' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 0.23 cfs @ 6.71 fps)
└**2=Primary Weir** (Controls 0.00 cfs)

Summary for Link 5P: Outflow off Site

Inflow Area = 0.172 ac, 92.00% Impervious, Inflow Depth > 4.63" for 10-Year event
Inflow = 0.25 cfs @ 12.28 hrs, Volume= 0.066 af
Primary = 0.25 cfs @ 12.28 hrs, Volume= 0.066 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1E: Existing Site Runoff Area=7,500 sf 37.71% Impervious Runoff Depth=6.99"
Tc=10.0 min CN=89 Runoff=1.11 cfs 0.100 af

Subcatchment 2P: Proposed Roof to Runoff Area=6,870 sf 100.00% Impervious Runoff Depth=8.07"
Tc=10.0 min CN=98 Runoff=1.07 cfs 0.106 af

Subcatchment 3P: Proposed to Sidewalk Runoff Area=630 sf 4.76% Impervious Runoff Depth=6.04"
Tc=10.0 min CN=81 Runoff=0.08 cfs 0.007 af

Pond 4P: Detention System Peak Elev=97.31' Storage=939 cf Inflow=1.07 cfs 0.106 af
Outflow=0.68 cfs 0.106 af

Link 5P: Outflow off Site Inflow=0.76 cfs 0.114 af
Primary=0.76 cfs 0.114 af

Total Runoff Area = 0.344 ac Runoff Volume = 0.214 af Average Runoff Depth = 7.45"
35.15% Pervious = 0.121 ac 64.85% Impervious = 0.223 ac

Summary for Subcatchment 1E: Existing Site

Runoff = 1.11 cfs @ 12.17 hrs, Volume= 0.100 af, Depth= 6.99"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 100-Year Rainfall=8.31"

	Area (sf)	CN	Description
*	4,672	84	Open Space - Fair HSG "D"
*	2,828	98	Pavement
	7,500	89	Weighted Average
	4,672		62.29% Pervious Area
	2,828		37.71% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry, Min. Per Ordinance 33-10.22.d.1**

Summary for Subcatchment 2P: Proposed Roof to Detention System

Runoff = 1.07 cfs @ 12.17 hrs, Volume= 0.106 af, Depth= 8.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 100-Year Rainfall=8.31"

	Area (sf)	CN	Description
*	6,870	98	Proposed Building
	6,870		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry, Min. Per Ordinance 33-10.22.d.1**

Summary for Subcatchment 3P: Proposed to Sidewalk

Runoff = 0.08 cfs @ 12.17 hrs, Volume= 0.007 af, Depth= 6.04"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 100-Year Rainfall=8.31"

	Area (sf)	CN	Description
*	600	80	Side Yard Turf - Good Condition HSG "D"
*	30	98	Front Sidewalk
	630	81	Weighted Average
	600		95.24% Pervious Area
	30		4.76% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry, Min. Per Ordinance 33-10.22.d.1**

Summary for Pond 4P: Detention System

Inflow Area = 0.158 ac,100.00% Impervious, Inflow Depth = 8.07" for 100-Year event
Inflow = 1.07 cfs @ 12.17 hrs, Volume= 0.106 af
Outflow = 0.68 cfs @ 12.28 hrs, Volume= 0.106 af, Atten= 36%, Lag= 6.7 min
Primary = 0.68 cfs @ 12.28 hrs, Volume= 0.106 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs / 2
Peak Elev= 97.31' @ 12.28 hrs Surf.Area= 300 sf Storage= 939 cf

Plug-Flow detention time= 29.5 min calculated for 0.106 af (100% of inflow)
Center-of-Mass det. time= 31.2 min (776.4 - 745.2)

Volume	Invert	Avail.Storage	Storage Description
#1	94.00'	994 cf	**10.00'W x 30.00'L x 3.50'H Overall Tank** 1,050 cf Overall - 56 cf Embedded = 994 cf
#2	94.00'	0 cf	**Outlet (embedded in overall - no storage) (Prismatic)** Listed below (Recalc 56 cf Overall x 0.0% Voids
		994 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
94.00	16	0	0
97.50	16	56	56

Device	Routing	Invert	Outlet Devices
#1	Primary	94.00'	**2.5" Vert. Orifice/Grate** C= 0.600
#2	Primary	97.20'	**4.0' long x 0.5' breadth Primary Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=0.66 cfs @ 12.28 hrs HW=97.30' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 0.29 cfs @ 8.61 fps)
└**2=Primary Weir** (Weir Controls 0.37 cfs @ 0.90 fps)

Summary for Link 5P: Outflow off Site

Inflow Area = 0.172 ac, 92.00% Impervious, Inflow Depth = 7.92" for 100-Year event
Inflow = 0.76 cfs @ 12.27 hrs, Volume= 0.114 af
Primary = 0.76 cfs @ 12.27 hrs, Volume= 0.114 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Stage-Discharge for Pond 4P: Detention System

Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)
94.00	0.00	95.06	0.16	96.12	0.23	97.18	0.29
94.02	0.00	95.08	0.16	96.14	0.23	97.20	0.29
94.04	0.00	95.10	0.16	96.16	0.24	97.22	0.32
94.06	0.01	95.12	0.17	96.18	0.24	97.24	0.38
94.08	0.01	95.14	0.17	96.20	0.24	97.26	0.46
94.10	0.02	95.16	0.17	96.22	0.24	97.28	0.55
94.12	0.02	95.18	0.17	96.24	0.24	97.30	0.65
94.14	0.03	95.20	0.17	96.26	0.24	97.32	0.76
94.16	0.04	95.22	0.17	96.28	0.24	97.34	0.88
94.18	0.05	95.24	0.17	96.30	0.24	97.36	1.01
94.20	0.05	95.26	0.18	96.32	0.24	97.38	1.15
94.22	0.06	95.28	0.18	96.34	0.25	97.40	1.30
94.24	0.06	95.30	0.18	96.36	0.25	97.42	1.46
94.26	0.06	95.32	0.18	96.38	0.25	97.44	1.63
94.28	0.07	95.34	0.18	96.40	0.25	97.46	1.80
94.30	0.07	95.36	0.18	96.42	0.25	97.48	1.99
94.32	0.08	95.38	0.19	96.44	0.25	97.50	**2.18**
94.34	0.08	95.40	0.19	96.46	0.25		
94.36	0.08	95.42	0.19	96.48	0.25		
94.38	0.09	95.44	0.19	96.50	0.25		
94.40	0.09	95.46	0.19	96.52	0.26		
94.42	0.09	95.48	0.19	96.54	0.26		
94.44	0.10	95.50	0.19	96.56	0.26		
94.46	0.10	95.52	0.20	96.58	0.26		
94.48	0.10	95.54	0.20	96.60	0.26		
94.50	0.10	95.56	0.20	96.62	0.26		
94.52	0.11	95.58	0.20	96.64	0.26		
94.54	0.11	95.60	0.20	96.66	0.26		
94.56	0.11	95.62	0.20	96.68	0.26		
94.58	0.11	95.64	0.20	96.70	0.26		
94.60	0.12	95.66	0.20	96.72	0.27		
94.62	0.12	95.68	0.21	96.74	0.27		
94.64	0.12	95.70	0.21	96.76	0.27		
94.66	0.12	95.72	0.21	96.78	0.27		
94.68	0.12	95.74	0.21	96.80	0.27		
94.70	0.13	95.76	0.21	96.82	0.27		
94.72	0.13	95.78	0.21	96.84	0.27		
94.74	0.13	95.80	0.21	96.86	0.27		
94.76	0.13	95.82	0.22	96.88	0.27		
94.78	0.13	95.84	0.22	96.90	0.27		
94.80	0.14	95.86	0.22	96.92	0.28		
94.82	0.14	95.88	0.22	96.94	0.28		
94.84	0.14	95.90	0.22	96.96	0.28		
94.86	0.14	95.92	0.22	96.98	0.28		
94.88	0.14	95.94	0.22	97.00	0.28		
94.90	0.15	95.96	0.22	97.02	0.28		
94.92	0.15	95.98	0.22	97.04	0.28		
94.94	0.15	96.00	0.23	97.06	0.28		
94.96	0.15	96.02	0.23	97.08	0.28		
94.98	0.15	96.04	0.23	97.10	0.28		
95.00	0.16	96.06	0.23	97.12	0.29		
95.02	0.16	96.08	0.23	97.14	0.29		
95.04	0.16	96.10	0.23	97.16	0.29		