



## **CERTIFICATE OF AUTHENTICITY**

**THIS IS TO CERTIFY THAT THE FOLLOWING ELECTRONIC RECORDS ARE TRUE AND ACCURATE REPRODUCTIONS OF THE ORIGINAL RECORDS OF JAMES CITY COUNTY GENERAL SERVICES DEPARTMENT- STORMW ATER DIVISION; WERE SCANNED IN THE REGULAR COURSE OF BUSINESS PURSUANT TO GUIDELINES ESTABLISHED BY THE LIBRARY OF VIRGINIA AND ARCHIVES; AND HA VE BEEN VERIFIED IN THE CUSTODY OF THE INDIVIDUAL LISTED BELOW.**

**BMPNUMBER: MC040**

**DATE VERIFIED: June 24, 2016**

**QUALITY ASSURANCE TECHNICIAN: Charles E. Lovett II**

A handwritten signature in cursive script that reads "Charles E. Lovett II".

**LOCATION: WILLIAMSBURG, VIRGINIA**



# Stormwater Division

## MEMORANDUM

Date: March 30, 2012  
To: Michael J. Gillis, Virginia Correctional Enterprises Document Management Services  
From: Leah Hardenbergh  
PO: 110426  
Re: Files Approved for Scanning

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**General File ID or BMP ID:** MC040  
**PIN:** 4812200002  
**Owner Name (if known):** WILLIAMSBURG CROSSING SHOPPING CENTER CALVIN DAVIS  
**Legal Property Description:** P-2 WILLIAMSBURG CROSSING SHP WAS:(47-2)(1-1E)&(48-1)(1-1B)  
**Site Address:** 5251 JOHN TYLER HGWY

*(For internal use only):*

Box # 24

Agreements (in file as of scan date): N Book or Doc #:

***WILLIAMSBURG CROSSING  
POND #2***

WILLIAMSBURG CROSSING  
POND #2 Summary

Pond #2 has been designed to be a stormwater detention facility. The pond has been designed to release the 10 year storm at a post development rate of 128 cfs. A 48" culvert and a 54" culvert will release 129.15 cfs for the 10 year storm. Total storage required for the 100 year storm is 31,529 cu-ft at peak elevation 73.34 ft. The pond dimensions are as follows:

Elev.	Volume
68	0
70	3,326
72	16,516
74	40,728
74.5	48,491

*What is the basis for this?*

*There is no attenuation for 2 or 10-year storms - needs to be some hydrog. needs to be removed + input into the Pond #1*

WILLIAMSBURG CROSSING  
POND #2

Culvert Designer/Analyzer Report  
multiple

Analysis Component				
Storm Event	Design	Discharge	129.15 cfs	
Peak Discharge Method: User-Specified				
Design Discharge	129.15 cfs	Check Discharge	0.00 cfs	
Tailwater Conditions: Constant Tailwater				
Tailwater Elevation	71.75 ft - 69.06 - Elev 10.42 in Pond #1			
Name	Description	Discharge	HW Elev	Velocity
Culvert-1	1-54 inch Circular	72.68 cfs	72.69 ft	4.92 ft/s
Culvert-2	1-48 inch Circular	56.50 cfs	72.69 ft	4.74 ft/s
Weir	Not Considered	N/A	N/A	N/A
Total	-----	129.18 cfs	72.69 ft	N/A

## Culvert Designer/Analyzer Report multiple

### Component: Culvert-1

Culvert Summary			
Computed Headwater Elevation	72.69 ft	Discharge	72.68 cfs
Inlet Control HW Elev	71.90 ft	Tailwater Elevation	71.75 ft
Outlet Control HW Elev	72.69 ft	Control Type	Outlet Control
Headwater Depth/ Height	1.00		
Grades			
Upstream Invert	68.20 ft	Downstream Invert	67.81 ft
Length	300.00 ft	Constructed Slope	0.001300 ft/ft
Hydraulic Profile			
Profile	M1	Depth, Downstream	3.94 ft
Slope Type	Mild	Normal Depth	3.80 ft
Flow Regime	Subcritical	Critical Depth	2.49 ft
Velocity Downstream	4.92 ft/s	Critical Slope	0.003912 ft/ft
Section			
Section Shape	Circular	Mannings Coefficient	0.013
Section Material	Concrete	Span	4.50 ft
Section Size	54 inch	Rise	4.50 ft
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev	72.69 ft	Upstream Velocity Head	0.38 ft
Ke	0.50	Entrance Loss	0.19 ft
Inlet Control Properties			
Inlet Control HW Elev	71.90 ft	Flow Control	Unsubmerged
Inlet Type	Square edge w/headwall	Area Full	15.9 ft <sup>2</sup>
K	0.00980	HDS 5 Chart	1
M	2.00000	HDS 5 Scale	1
C	0.03980	Equation Form	1
Y	0.67000		

## Culvert Designer/Analyzer Report multiple

### Component: Culvert-2

Culvert Summary			
Computed Headwater Elevation	72.69 ft	Discharge	56.50 cfs
Inlet Control HW Elev	71.98 ft	Tailwater Elevation	71.75 ft
Outlet Control HW Elev	72.69 ft	Control Type	Outlet Control
Headwater Depth/ Height	1.02		
Grades			
Upstream Invert	68.60 ft	Downstream Invert	68.15 ft
Length	300.00 ft	Constructed Slope	0.001500 ft/ft
Hydraulic Profile			
Profile	M1	Depth, Downstream	3.60 ft
Slope Type	Mild	Normal Depth	3.34 ft
Flow Regime	Subcritical	Critical Depth	2.26 ft
Velocity Downstream	4.74 ft/s	Critical Slope	0.004125 ft/ft
Section			
Section Shape	Circular	Mannings Coefficient	0.013
Section Material	Concrete	Span	4.00 ft
Section Size	48 inch	Rise	4.00 ft
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev	72.69 ft	Upstream Velocity Head	0.36 ft
Ke	0.50	Entrance Loss	0.18 ft
Inlet Control Properties			
Inlet Control HW Elev	71.98 ft	Flow Control	Unsubmerged
Inlet Type	Square edge w/headwall	Area Full	12.6 ft <sup>2</sup>
K	0.00980	HDS 5 Chart	1
M	2.00000	HDS 5 Scale	1
C	0.03980	Equation Form	1
Y	0.67000		

TR-55 TABULAR HYDROGRAPH METHOD  
 Type II. Distribution  
 (24 hr. Duration Storm)

Executed: 12-31-1997 17:15:28  
 Watershed file: --> C:\95040-03\WILL .MOP  
 Hydrograph file: --> C:\95040-03\W2IN.HYD

POND #2

>>>> Input Parameters Used to Compute Hydrograph <<<<

Subarea Description	AREA (acres)	CN	Tc (hrs)	* Tt (hrs)	Precip. (in)	Runoff (in)	Ia/p input/used
	30.90	90.0	0.30	0.00	3.36	2.32	I.07 .10

\* Travel time from subarea outfall to composite watershed outfall point.  
 I -- Subarea where user specified interpolation between Ia/p tables.

Total area = 30.90 acres or 0.04828 sq.mi  
 Peak discharge = 76 cfs

>>>> Computer Modifications of Input Parameters <<<<

Subarea Description	Input Values		Rounded Values		Ia/p Interpolated	Ia/p Messages
	Tc (hr)	* Tt (hr)	Tc (hr)	* Tt (hr)	(Yes/No)	
	0.25	0.00	0.30	0.00	No	Computed Ia/p < .1

\* Travel time from subarea outfall to composite watershed outfall point.

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(24 hr. Duration Storm)

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Watershed file: --> C:\95040-03\WILL .MOP  
Hydrograph file: --> C:\95040-03\W2IN.HYD

>>>> Summary of Subarea Times to Peak <<<<

Subarea	Peak Discharge at Composite Outfall (cfs)	Time to Peak at Composite Outfall (hrs)
-----	-----	-----
	76	12.2
-----	-----	-----
Composite Watershed	76	12.2

TR-55 TABULAR HYDROGRAPH METHOD  
 Type II. Distribution  
 (24 hr. Duration Storm)

Executed: 12-31-1997 17:15:28  
 Watershed file: --> C:\95040-03\WILL .MOP  
 Hydrograph file: --> C:\95040-03\W2IN.HYD

-----  
 Composite Hydrograph Summary (cfs)  
 -----

Subarea Description	11.0 hr	11.3 hr	11.6 hr	11.9 hr	12.0 hr	12.1 hr	12.2 hr	12.3 hr	12.4 hr
	2	3	5	13	26	50	76	76	51
Total (cfs)	2	3	5	13	26	50	76	76	51

Subarea Description	12.5 hr	12.6 hr	12.7 hr	12.8 hr	13.0 hr	13.2 hr	13.4 hr	13.6 hr	13.8 hr
	32	22	16	13	9	7	6	6	5
Total (cfs)	32	22	16	13	9	7	6	6	5

Subarea Description	14.0 hr	14.3 hr	14.6 hr	15.0 hr	15.5 hr	16.0 hr	16.5 hr	17.0 hr	17.5 hr
	5	4	4	3	3	3	2	2	2
Total (cfs)	5	4	4	3	3	3	2	2	2

Subarea Description	18.0 hr	19.0 hr	20.0 hr	22.0 hr	26.0 hr
	2	2	1	1	0
Total (cfs)	2	2	1	1	0

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Time (hrs)	Flow (cfs)	Time (hrs)	Flow (cfs)
11.0	2	14.8	4
11.1	2	14.9	3
11.2	3	15.0	3
11.3	3	15.1	3
11.4	4	15.2	3
11.5	4	15.3	3
11.6	5	15.4	3
11.7	8	15.5	3
11.8	10	15.6	3
11.9	13	15.7	3
12.0	26	15.8	3
12.1	50	15.9	3
12.2	76	16.0	3
12.3	76	16.1	3
12.4	51	16.2	3
12.5	32	16.3	2
12.6	22	16.4	2
12.7	16	16.5	2
12.8	13	16.6	2
12.9	11	16.7	2
13.0	9	16.8	2
13.1	8	16.9	2
13.2	7	17.0	2
13.3	6	17.1	2
13.4	6	17.2	2
13.5	6	17.3	2
13.6	6	17.4	2
13.7	6	17.5	2
13.8	5	17.6	2
13.9	5	17.7	2
14.0	5	17.8	2
14.1	5	17.9	2
14.2	4	18.0	2
14.3	4	18.1	2
14.4	4	18.2	2
14.5	4	18.3	2

14.6  
14.7

4  
4

18.4  
18.5

2  
2

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 Hydrograph file: --> C:\95040-03\W2IN.HYD

Time (hrs)	Flow (cfs)	Time (hrs)	Flow (cfs)
18.6	2	22.4	1
18.7	2	22.5	1
18.8	2	22.6	1
18.9	2	22.7	1
19.0	2	22.8	1
19.1	2	22.9	1
19.2	2	23.0	1
19.3	2	23.1	1
19.4	2	23.2	1
19.5	2	23.3	1
19.6	1	23.4	1
19.7	1	23.5	1
19.8	1	23.6	1
19.9	1	23.7	1
20.0	1	23.8	1
20.1	1	23.9	1
20.2	1	24.0	0
20.3	1	24.1	0
20.4	1	24.2	0
20.5	1	24.3	0
20.6	1	24.4	0
20.7	1	24.5	0
20.8	1	24.6	0
20.9	1	24.7	0
21.0	1	24.8	0
21.1	1	24.9	0
21.2	1	25.0	0
21.3	1	25.1	0
21.4	1	25.2	0
21.5	1	25.3	0
21.6	1	25.4	0
21.7	1	25.5	0
21.8	1	25.6	0
21.9	1	25.7	0
22.0	1	25.8	0
22.1	1	25.9	0
22.2	1		
22.3	1		

TR-55 TABULAR HYDROGRAPH METHOD  
 Type II. Distribution  
 (24 hr. Duration Storm)

Executed: 12-31-1997 17:15:28  
 Watershed file: --> C:\95040-03\WILL .MOP  
 Hydrograph file: --> C:\95040-03\W10IN.HYD

>>>> Input Parameters Used to Compute Hydrograph <<<<

Subarea Description	AREA (acres)	CN	Tc (hrs)	* Tt (hrs)	Precip. (in)	Runoff (in)	Ia/p input/used
	30.90	90.0	0.30	0.00	5.04	3.91	I.04 .10

\* Travel time from subarea outfall to composite watershed outfall point.  
 I -- Subarea where user specified interpolation between Ia/p tables.

Total area = 30.90 acres or 0.04828 sq.mi  
 Peak discharge = 128 cfs

>>>> Computer Modifications of Input Parameters <<<<

Subarea Description	Input Values		Rounded Values		Ia/p Interpolated	Ia/p Messages
	Tc (hr)	* Tt (hr)	Tc (hr)	* Tt (hr)	(Yes/No)	
	0.25	0.00	0.30	0.00	No	Computed Ia/p < .1

\* Travel time from subarea outfall to composite watershed outfall point.

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(24 hr. Duration Storm)

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Watershed file: --> C:\95040-03\WILL .MOP  
Hydrograph file: --> C:\95040-03\W10IN.HYD

>>>> Summary of Subarea Times to Peak <<<<

Subarea	Peak Discharge at Composite Outfall (cfs)	Time to Peak at Composite Outfall (hrs)
-----	-----	-----
	128	12.2
-----	-----	-----
Composite Watershed	128	12.2

TR-55 TABULAR HYDROGRAPH METHOD  
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 (24 hr. Duration Storm)

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-----  
 Composite Hydrograph Summary (cfs)  
 -----

Subarea Description	11.0 hr	11.3 hr	11.6 hr	11.9 hr	12.0 hr	12.1 hr	12.2 hr	12.3 hr	12.4 hr
	4	5	8	22	44	84	128	128	87
Total (cfs)	4	5	8	22	44	84	128	128	87

Subarea Description	12.5 hr	12.6 hr	12.7 hr	12.8 hr	13.0 hr	13.2 hr	13.4 hr	13.6 hr	13.8 hr
	53	37	28	22	15	12	11	10	9
Total (cfs)	53	37	28	22	15	12	11	10	9

Subarea Description	14.0 hr	14.3 hr	14.6 hr	15.0 hr	15.5 hr	16.0 hr	16.5 hr	17.0 hr	17.5 hr
	8	7	6	6	5	5	4	4	4
Total (cfs)	8	7	6	6	5	5	4	4	4

Subarea Description	18.0 hr	19.0 hr	20.0 hr	22.0 hr	26.0 hr
	3	3	2	2	0
Total (cfs)	3	3	2	2	0

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 Type II. Distribution  
 (24 hr. Duration Storm)

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 Watershed file: --> C:\95040-03\WILL .MOP  
 Hydrograph file: --> C:\95040-03\W10IN.HYD

Time (hrs)	Flow (cfs)	Time (hrs)	Flow (cfs)
11.0	4	14.8	6
11.1	4	14.9	6
11.2	5	15.0	6
11.3	5	15.1	6
11.4	6	15.2	6
11.5	7	15.3	5
11.6	8	15.4	5
11.7	13	15.5	5
11.8	17	15.6	5
11.9	22	15.7	5
12.0	44	15.8	5
12.1	84	15.9	5
12.2	128	16.0	5
12.3	128	16.1	5
12.4	87	16.2	5
12.5	53	16.3	4
12.6	37	16.4	4
12.7	28	16.5	4
12.8	22	16.6	4
12.9	18	16.7	4
13.0	15	16.8	4
13.1	14	16.9	4
13.2	12	17.0	4
13.3	12	17.1	4
13.4	11	17.2	4
13.5	10	17.3	4
13.6	10	17.4	4
13.7	9	17.5	4
13.8	9	17.6	4
13.9	8	17.7	4
14.0	8	17.8	3
14.1	8	17.9	3
14.2	7	18.0	3
14.3	7	18.1	3
14.4	7	18.2	3
14.5	6	18.3	3

14.6  
14.7

6  
6

18.4  
18.5

3  
3

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 Hydrograph file: --> C:\95040-03\W10IN.HYD

Time (hrs)	Flow (cfs)	Time (hrs)	Flow (cfs)
18.6	3	22.4	2
18.7	3	22.5	2
18.8	3	22.6	2
18.9	3	22.7	2
19.0	3	22.8	2
19.1	3	22.9	2
19.2	3	23.0	2
19.3	3	23.1	1
19.4	3	23.2	1
19.5	2	23.3	1
19.6	2	23.4	1
19.7	2	23.5	1
19.8	2	23.6	1
19.9	2	23.7	1
20.0	2	23.8	1
20.1	2	23.9	1
20.2	2	24.0	1
20.3	2	24.1	1
20.4	2	24.2	1
20.5	2	24.3	1
20.6	2	24.4	1
20.7	2	24.5	1
20.8	2	24.6	1
20.9	2	24.7	1
21.0	2	24.8	1
21.1	2	24.9	1
21.2	2	25.0	0
21.3	2	25.1	0
21.4	2	25.2	0
21.5	2	25.3	0
21.6	2	25.4	0
21.7	2	25.5	0
21.8	2	25.6	0
21.9	2	25.7	0
22.0	2	25.8	0
22.1	2	25.9	0
22.2	2		
22.3	2		

TR-55 TABULAR HYDROGRAPH METHOD  
 Type II. Distribution  
 (24 hr. Duration Storm)

Executed: 12-31-1997 17:15:28  
 Watershed file: --> C:\95040-03\WILL .MOP  
 Hydrograph file: --> C:\95040-03\W100IN.HYD

>>>> Input Parameters Used to Compute Hydrograph <<<<

Subarea Description	AREA (acres)	CN	Tc (hrs)	* Tt (hrs)	Precip. (in)	Runoff (in)	Ia/p input/used
	30.90	90.0	0.30	0.00	7.68	6.49	I.03 .10

\* Travel time from subarea outfall to composite watershed outfall point.  
 I -- Subarea where user specified interpolation between Ia/p tables.

Total area = 30.90 acres or 0.04828 sq.mi  
 Peak discharge = 212 cfs

>>>> Computer Modifications of Input Parameters <<<<

Subarea Description	Input Values		Rounded Values		Ia/p Interpolated	Ia/p Messages
	Tc (hr)	* Tt (hr)	Tc (hr)	* Tt (hr)	(Yes/No)	
	0.25	0.00	0.30	0.00	No	Computed Ia/p < .1

\* Travel time from subarea outfall to composite watershed outfall point.

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(24 hr. Duration Storm)

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Hydrograph file: --> C:\95040-03\W100IN.HYD

>>> Summary of Subarea Times to Peak <<<<

Subarea	Peak Discharge at Composite Outfall (cfs)	Time to Peak at Composite Outfall (hrs)
-----	-----	-----
	212	12.2
-----	-----	-----
Composite Watershed	212	12.2

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 Hydrograph file: --> C:\95040-03\W100IN.HYD

Composite Hydrograph Summary (cfs)

Subarea Description	11.0 hr	11.3 hr	11.6 hr	11.9 hr	12.0 hr	12.1 hr	12.2 hr	12.3 hr	12.4 hr
	6	9	13	37	74	140	212	212	144
Total (cfs)	6	9	13	37	74	140	212	212	144

Subarea Description	12.5 hr	12.6 hr	12.7 hr	12.8 hr	13.0 hr	13.2 hr	13.4 hr	13.6 hr	13.8 hr
	89	61	46	36	25	21	18	16	14
Total (cfs)	89	61	46	36	25	21	18	16	14

Subarea Description	14.0 hr	14.3 hr	14.6 hr	15.0 hr	15.5 hr	16.0 hr	16.5 hr	17.0 hr	17.5 hr
	13	12	10	10	9	8	7	6	6
Total (cfs)	13	12	10	10	9	8	7	6	6

Subarea Description	18.0 hr	19.0 hr	20.0 hr	22.0 hr	26.0 hr
	6	5	4	4	0
Total (cfs)	6	5	4	4	0

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 Hydrograph file: --> C:\95040-03\W100IN.HYD

Time (hrs)	Flow (cfs)	Time (hrs)	Flow (cfs)
11.0	6	14.8	10
11.1	7	14.9	10
11.2	8	15.0	10
11.3	9	15.1	10
11.4	10	15.2	10
11.5	12	15.3	9
11.6	13	15.4	9
11.7	21	15.5	9
11.8	29	15.6	9
11.9	37	15.7	9
12.0	74	15.8	8
12.1	140	15.9	8
12.2	212	16.0	8
12.3	212	16.1	8
12.4	144	16.2	8
12.5	89	16.3	7
12.6	61	16.4	7
12.7	46	16.5	7
12.8	36	16.6	7
12.9	30	16.7	7
13.0	25	16.8	6
13.1	23	16.9	6
13.2	21	17.0	6
13.3	20	17.1	6
13.4	18	17.2	6
13.5	17	17.3	6
13.6	16	17.4	6
13.7	15	17.5	6
13.8	14	17.6	6
13.9	14	17.7	6
14.0	13	17.8	6
14.1	13	17.9	6
14.2	12	18.0	6
14.3	12	18.1	6
14.4	11	18.2	6
14.5	11	18.3	6

14.6  
14.7

10  
10

18.4  
18.5

6  
6

TR-55 TABULAR HYDROGRAPH METHOD  
 Type II. Distribution  
 (24 hr. Duration Storm)

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 Watershed file: --> C:\95040-03\WILL .MOP  
 Hydrograph file: --> C:\95040-03\W100IN.HYD

Time (hrs)	Flow (cfs)	Time (hrs)	Flow (cfs)
18.6	5	22.4	4
18.7	5	22.5	4
18.8	5	22.6	3
18.9	5	22.7	3
19.0	5	22.8	3
19.1	5	22.9	3
19.2	5	23.0	3
19.3	5	23.1	3
19.4	5	23.2	3
19.5	4	23.3	3
19.6	4	23.4	3
19.7	4	23.5	2
19.8	4	23.6	2
19.9	4	23.7	2
20.0	4	23.8	2
20.1	4	23.9	2
20.2	4	24.0	2
20.3	4	24.1	2
20.4	4	24.2	2
20.5	4	24.3	2
20.6	4	24.4	2
20.7	4	24.5	2
20.8	4	24.6	1
20.9	4	24.7	1
21.0	4	24.8	1
21.1	4	24.9	1
21.2	4	25.0	1
21.3	4	25.1	1
21.4	4	25.2	1
21.5	4	25.3	1
21.6	4	25.4	1
21.7	4	25.5	0
21.8	4	25.6	0
21.9	4	25.7	0
22.0	4	25.8	0
22.1	4	25.9	0
22.2	4		
22.3	4		

POND-2 Version: 5.20  
S/N:

WILLIAMSBURG CROSSING  
OFF-SITE DRAINAGE FOR RIVERSIDE

POND#2

CALCULATED 12-31-1997 16:50:56  
DISK FILE: c:\95040-03\WILL .VOL

Planimeter scale: 1 inch = 1 ft.

Elevation (ft)	Planimeter (sq.in.)	Area (sq.ft)	$A1+A2+\text{sqr}(A1*A2)$ (sq.ft)	* Volume (cubic-ft)	Volume Sum (cubic-ft)
68.00	120.00	120	0	0	0
70.00	4,162.00	4,162	4,989	3,326	3,326
72.00	9,376.00	9,376	19,785	13,190	16,516
74.00	15,060.00	15,060	36,319	24,213	40,728
74.50	15,996.00	15,996	46,577	7,763	48,491

\* Incremental volume computed by the Conic Method for Reservoir Volumes.

Outlet Structure File: WILL .STR

POND-2 Version: 5.20

S/N:

Date Executed:

Time Executed:

\*\*\*\*\* COMPOSITE OUTFLOW SUMMARY \*\*\*\*\*

Elevation (ft)	Q (cfs)	Contributing Structures
68.20	0.0	1
68.70	1.9	1 +2
69.20	9.5	1 +2
69.70	23.1	1 +2
70.20	42.0	1 +2
70.70	64.1	1 +2
71.20	89.3	1 +2
71.70	116.3	1 +2
72.20	143.4	1 +2
72.70	171.7	1 +2
73.20	198.6	1 +2
73.70	223.9	1 +2
74.00	236.9	1 +2

Outlet Structure File: WILL .STR

POND-2 Version: 5.20

S/N:

Date Executed:

Time Executed:

Outlet Structure File: c:\95040-03\WILL .STR  
Planimeter Input File: c:\95040-03\WILL .VOL  
Rating Table Output File: c:\95040-03\WILL .PND

Min. Elev.(ft) = 68.2 Max. Elev.(ft) = 74 Incr.(ft) = .5

Additional elevations (ft) to be included in table:

\* \* \* \* \*

\*\*\*\*\*  
SYSTEM CONNECTIVITY  
\*\*\*\*\*

Structure	No.	Q Table	Q Table
CULVERT-CR	1	->	1
CULVERT-CR	2	->	2

Outflow rating table summary was stored in file:  
c:\95040-03\WILL .PND

Outlet Structure File: WILL .STR

POND-2 Version: 5.20

S/N:

Date Executed:

Time Executed:

>>>>> Structure No. 1 <<<<<<  
(Input Data)

CULVERT-CR

Circular Culvert (With Inlet Control)

E1 elev.(ft)?	68.20
E2 elev.(ft)?	74.50
Diam. (ft)?	4.5
Inv. el.(ft)?	68.20
Slope (ft/ft)?	.0013
T1 ratio?	1.07
T2 ratio?	1.2
K Coeff.?	.0098
M Coeff.?	2
c Coeff.?	.0398
Y Coeff.?	.67
Form 1 or 2?	1
Slope factor?	-0.5

Outlet Structure File: WILL .STR .

POND-2 Version: 5.20

S/N:

Date Executed:

Time Executed:

>>>>> Structure No. 2 <<<<<<  
(Input Data)

CULVERT-CR

Circular Culvert (With Inlet Control)

E1 elev.(ft)?	68.60
E2 elev.(ft)?	74.50
Diam. (ft)?	4
Inv. el.(ft)?	68.60
Slope (ft/ft)?	.0015
T1 ratio?	1.07
T2 ratio?	1.2
K Coeff.?	.0098
M Coeff.?	2
c Coeff.?	.0398
Y Coeff.?	0.67
Form 1 or 2?	1
Slope factor?	-0.5

Outlet Structure File: WILL .STR

POND-2 Version: 5.20  
Date Executed:

S/N:  
Time Executed:

Outflow Rating Table for Structure #1  
CULVERT-CR Circular Culvert (With Inlet Control)

\*\*\*\*\* INLET CONTROL ASSUMED \*\*\*\*\*

Elevation (ft)	Q (cfs)	Computation	Messages
68.20	0.0	No headwater	
68.70	1.8	Equ.1: HW =.5	dc=.375 Ac=.632
69.20	7.1	Equ.1: HW =1.0	dc=.746 Ac=1.731
69.70	15.3	Equ.1: HW =1.5	dc=1.107 Ac=3.039
70.20	25.9	Equ.1: HW =2.0	dc=1.454 Ac=4.447
70.70	38.1	Equ.1: HW =2.5	dc=1.776 Ac=5.837
71.20	51.9	Equ.1: HW =3.0	dc=2.086 Ac=7.213
71.70	66.8	Equ.1: HW =3.5	dc=2.379 Ac=8.535
72.20	81.6	Equ.1: HW =4.0	dc=2.644 Ac=9.715
72.70	96.9	Equ.1: HW =4.5	dc=2.89 Ac=10.794
73.20	111.5	Transition: HW =5.0	
73.70	125.9	Submerged: HW =5.5	
74.00	133.1	Submerged: HW =5.8	

Used Unsubmerged Equ. Form (1) for elev. less than 73.02 ft  
Used Submerged Equation for elevations greater than 73.6 ft  
HW=Headwater (ft) dc=Critical depth (ft) Ac=Area (sq.ft) at dc

Transition flows interpolated from the following values:  
E1=73.02 ft; Q1=106.05 cfs; E2=73.6 ft; Q2=123.21 cfs

Outlet Structure File: WILL .STR

POND-2 Version: 5.20  
Date Executed:

S/N:  
Time Executed:

Outflow Rating Table for Structure #2  
CULVERT-CR Circular Culvert (With Inlet Control)

\*\*\*\*\* INLET CONTROL ASSUMED \*\*\*\*\*

Elevation (ft)	Q (cfs)	Computation	Messages
68.20	0.0	E < Inv.El.= 68.6	
68.70	0.1	Equ.1: HW =.1	dc=.075 Ac=.054
69.20	2.5	Equ.1: HW =.6	dc=.454 Ac=.787
69.70	7.8	Equ.1: HW =1.1	dc=.812 Ac=1.828
70.20	16.0	Equ.1: HW =1.6	dc=1.173 Ac=3.073
70.70	25.9	Equ.1: HW =2.1	dc=1.506 Ac=4.326
71.20	37.4	Equ.1: HW =2.6	dc=1.822 Ac=5.57
71.70	49.6	Equ.1: HW =3.1	dc=2.112 Ac=6.731
72.20	61.8	Equ.1: HW =3.6	dc=2.37 Ac=7.755
72.70	74.8	Equ.1: HW =4.1	dc=2.616 Ac=8.709
73.20	87.1	Transition: HW =4.6	
73.70	98.0	Submerged: HW =5.1	
74.00	103.8	Submerged: HW =5.4	

Used Unsubmerged Equ. Form (1) for elev. less than 72.88 ft  
Used Submerged Equation for elevations greater than 73.4 ft  
HW=Headwater (ft) dc=Critical depth (ft) Ac=Area (sq.ft) at dc

Transition flows interpolated from the following values:  
E1=72.88 ft; Q1=79.35 cfs; E2=73.4 ft; Q2=91.93 cfs

\*\*\*\*\*  
 \*  
 \* WILLIAMSBURG CROSSING \*  
 \* OFF-SITE DRAINAGE FOR RIVERSIDE \*  
 \* \*  
 \* \*  
 \* \*  
 \*\*\*\*\*

Inflow Hydrograph: c:\95040-03\W2IN .HYD  
 Rating Table file: c:\95040-03\WILL .PND

----INITIAL CONDITIONS----  
 Elevation = 68.20 ft  
 Outflow = 0.00 cfs  
 Storage = 37 cu-ft

GIVEN POND DATA

INTERMEDIATE ROUTING  
 COMPUTATIONS

ELEVATION (ft)	OUTFLOW (cfs)	STORAGE (cu-ft)	2S/t (cfs)	2S/t + 0 (cfs)
68.20	0.0	37	0.2	0.2
68.70	2.2	310	1.7	3.9
69.20	10.3	980	5.4	15.7
69.70	24.4	2,226	12.4	36.8
70.20	43.1	4,200	23.3	66.4
70.70	66.4	6,780	37.7	104.1
71.20	91.6	9,972	55.4	147.0
71.70	118.3	13,841	76.9	195.2
72.20	146.1	18,442	102.5	248.6
72.70	173.6	23,712	131.7	305.3
73.20	200.7	29,668	164.8	365.5
73.70	225.4	36,352	202.0	427.4
74.00	238.8	40,728	226.3	465.1

Time increment (t) = 0.100 hrs.

\*\*\*\*\* SUMMARY OF ROUTING COMPUTATIONS \*\*\*\*\*

Pond File: c:\95040-03\WILL .PND  
Inflow Hydrograph: c:\95040-03\W2IN .HYD  
Outflow Hydrograph: c:\95040-03\W2OUT .HYD

Starting Pond W.S. Elevation = 68.20 ft

\*\*\*\*\* Summary of Peak Outflow and Peak Elevation \*\*\*\*\*

Peak Inflow = 76.00 cfs  
Peak Outflow = 77.41 cfs  
Peak Elevation = 70.92 ft

*- out have more  
out than in*

\*\*\*\*\* Summary of Approximate Peak Storage \*\*\*\*\*

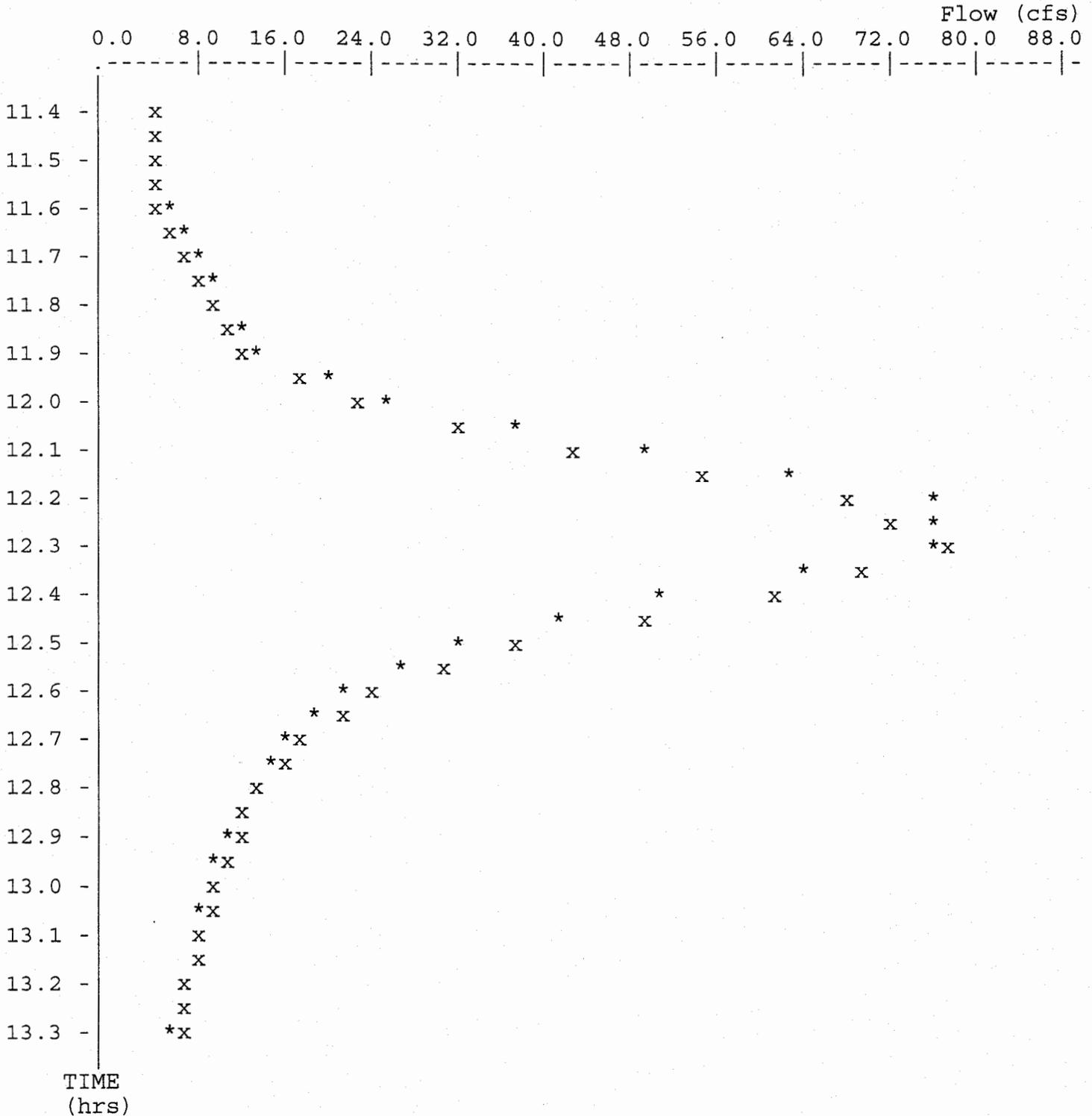
Initial Storage = 37 cu-ft  
Peak Storage From Storm = 8,137 cu-ft  
-----  
Total Storage in Pond = 8,175 cu-ft

Warning: Inflow hydrograph truncated on left side.

Pond File: c:\95040-03\WILL .PND  
 Inflow Hydrograph: c:\95040-03\W2IN .HYD  
 Outflow Hydrograph: c:\95040-03\W2OUT .HYD

EXECUTED: 12-31-1997  
17:06:45

Peak Inflow = 76.00 cfs  
 Peak Outflow = 77.41 cfs  
 Peak Elevation = 70.92 ft



\* File: c:\95040-03\W2IN .HYD Qmax = 76.0 cfs  
 x File: c:\95040-03\W2OUT .HYD Qmax = 77.4 cfs

```
*****
*
* WILLIAMSBURG CROSSING
* OFF-SITE DRAINAGE FOR RIVERSIDE
*
*
*
*****
```

Inflow Hydrograph: c:\95040-03\W10IN .HYD  
 Rating Table file: c:\95040-03\WILL .PND

----INITIAL CONDITIONS----  
 Elevation = 68.20 ft  
 Outflow = 0.00 cfs  
 Storage = 37 cu-ft

GIVEN POND DATA

INTERMEDIATE ROUTING  
 COMPUTATIONS

ELEVATION (ft)	OUTFLOW (cfs)	STORAGE (cu-ft)	2S/t (cfs)	2S/t + 0 (cfs)
68.20	0.0	37	0.2	0.2
68.70	2.2	310	1.7	3.9
69.20	10.3	980	5.4	15.7
69.70	24.4	2,226	12.4	36.8
70.20	43.1	4,200	23.3	66.4
70.70	66.4	6,780	37.7	104.1
71.20	91.6	9,972	55.4	147.0
71.70	118.3	13,841	76.9	195.2
72.20	146.1	18,442	102.5	248.6
72.70	173.6	23,712	131.7	305.3
73.20	200.7	29,668	164.8	365.5
73.70	225.4	36,352	202.0	427.4
74.00	238.8	40,728	226.3	465.1

Time increment (t) = 0.100 hrs.

\*\*\*\*\* SUMMARY OF ROUTING COMPUTATIONS \*\*\*\*\*

Pond File: c:\95040-03\WILL .PND  
Inflow Hydrograph: c:\95040-03\W10IN .HYD  
Outflow Hydrograph: c:\95040-03\W10OUT .HYD

Starting Pond W.S. Elevation = 68.20 ft

\*\*\*\*\* Summary of Peak Outflow and Peak Elevation \*\*\*\*\*

Peak Inflow = 128.00 cfs  
Peak Outflow = 129.15 cfs  
Peak Elevation = 71.90 ft

\*\*\*\*\* Summary of Approximate Peak Storage \*\*\*\*\*

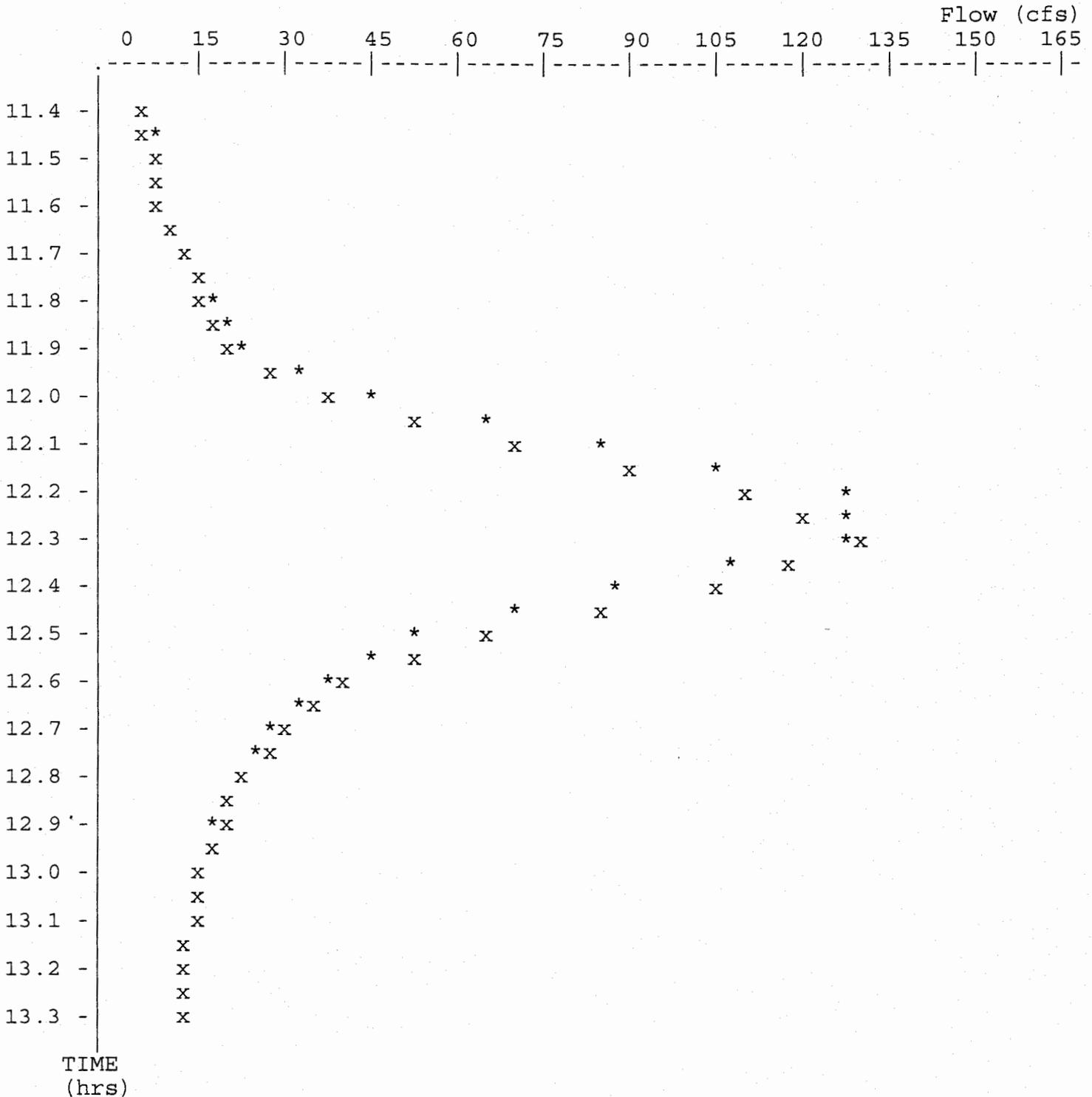
Initial Storage = 37 cu-ft  
Peak Storage From Storm = 15,599 cu-ft  
-----  
Total Storage in Pond = 15,636 cu-ft

Warning: Inflow hydrograph truncated on left side.

Pond File: c:\95040-03\WILL .PND  
 Inflow Hydrograph: c:\95040-03\W10IN .HYD  
 Outflow Hydrograph: c:\95040-03\W10OUT .HYD

EXECUTED: 12-31-1997  
 17:06:45

Peak Inflow = 128.00 cfs  
 Peak Outflow = 129.15 cfs  
 Peak Elevation = 71.90 ft



\* File: c:\95040-03\W10IN .HYD Qmax = 128.0 cfs  
 x File: c:\95040-03\W10OUT .HYD Qmax = 129.1 cfs

```

*****
*
*           WILLIAMSBURG CROSSING
* OFF-SITE DRAINAGE FOR RIVERSIDE
*
*
*
*
*****
  
```

Inflow Hydrograph: c:\95040-03\W100IN .HYD  
 Rating Table file: c:\95040-03\WILL .PND

----INITIAL CONDITIONS----  
 Elevation = 68.20 ft  
 Outflow = 0.00 cfs  
 Storage = 37 cu-ft

GIVEN POND DATA

INTERMEDIATE ROUTING  
 COMPUTATIONS

ELEVATION (ft)	OUTFLOW (cfs)	STORAGE (cu-ft)	2S/t (cfs)	2S/t + 0 (cfs)
68.20	0.0	37	0.2	0.2
68.70	2.2	310	1.7	3.9
69.20	10.3	980	5.4	15.7
69.70	24.4	2,226	12.4	36.8
70.20	43.1	4,200	23.3	66.4
70.70	66.4	6,780	37.7	104.1
71.20	91.6	9,972	55.4	147.0
71.70	118.3	13,841	76.9	195.2
72.20	146.1	18,442	102.5	248.6
72.70	173.6	23,712	131.7	305.3
73.20	200.7	29,668	164.8	365.5
73.70	225.4	36,352	202.0	427.4
74.00	238.8	40,728	226.3	465.1

Time increment (t) = 0.100 hrs.

\*\*\*\*\* SUMMARY OF ROUTING COMPUTATIONS \*\*\*\*\*

Pond File: c:\95040-03\WILL .PND  
Inflow Hydrograph: c:\95040-03\W100IN .HYD  
Outflow Hydrograph: c:\95040-03\W100OUT .HYD

Starting Pond W.S. Elevation = 68.20 ft

\*\*\*\*\* Summary of Peak Outflow and Peak Elevation \*\*\*\*\*

Peak Inflow = 212.00 cfs  
Peak Outflow = 207.58 cfs  
Peak Elevation = 73.34 ft

\*\*\*\*\* Summary of Approximate Peak Storage \*\*\*\*\*

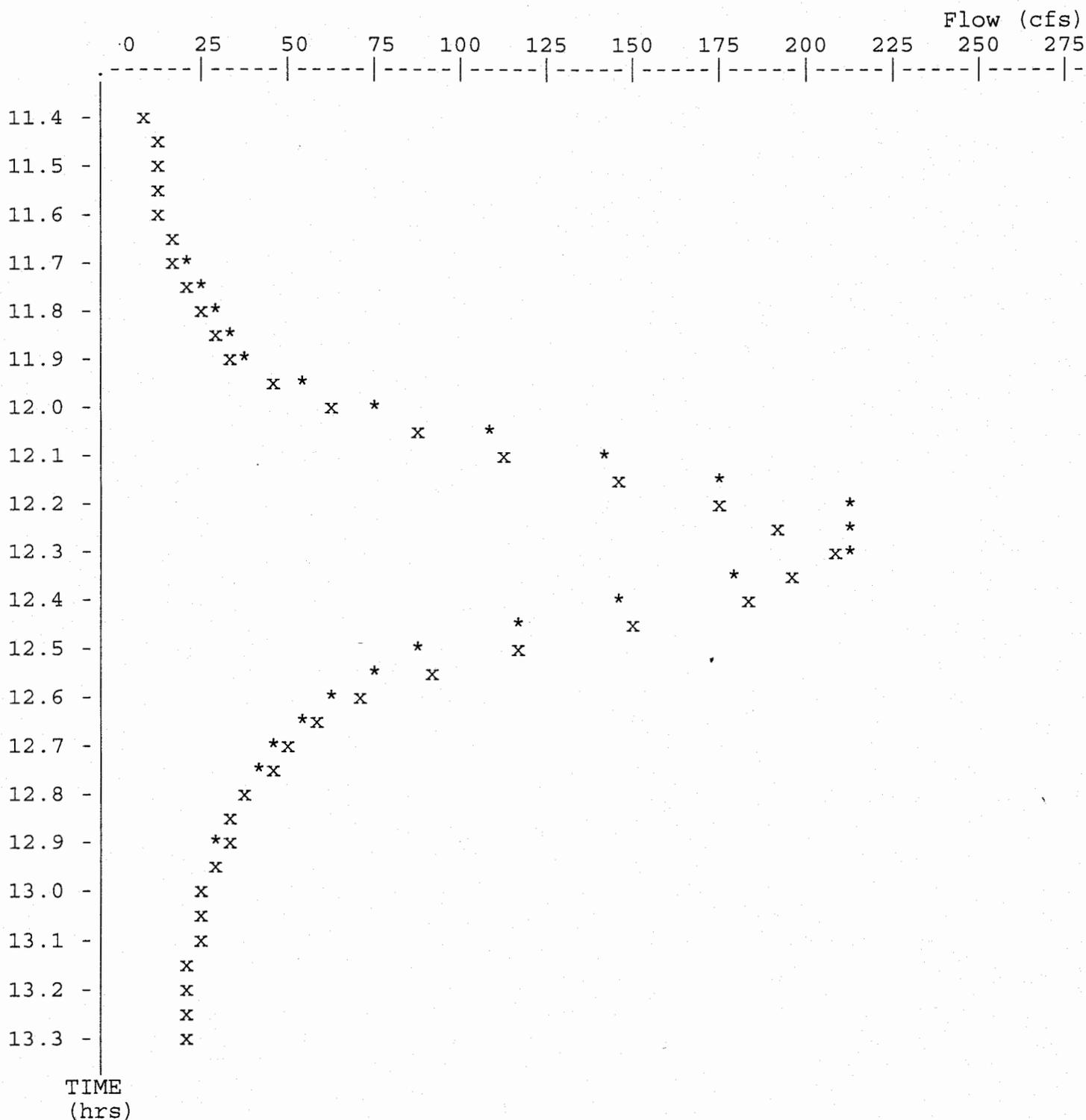
Initial Storage = 37 cu-ft  
Peak Storage From Storm = 31,492 cu-ft  
-----  
Total Storage in Pond = 31,529 cu-ft

Warning: Inflow hydrograph truncated on left side.

Pond File: c:\95040-03\WILL .PND  
 Inflow Hydrograph: c:\95040-03\W100IN .HYD  
 Outflow Hydrograph: c:\95040-03\W100OUT .HYD

EXECUTED: 12-31-1997  
 17:06:45

Peak Inflow = 212.00 cfs  
 Peak Outflow = 207.58 cfs  
 Peak Elevation = 73.34 ft



\* File: c:\95040-03\W100IN .HYD Qmax = 212.0 cfs  
 x File: c:\95040-03\W100OUT .HYD Qmax = 207.6 cfs

# % IMPREVIOUS AREA CALCULATION

PROJECT Williamsburg Crossing - multi family  
 JOB NO. BB079-11F  
 DATE 1/28/95 SHEET      OF       
 DESIGN FORMULA ACI=Q FREQ. 10

INCRB.



## STORM SEWER DESIGN COMPUTATIONS

$$i = \frac{a}{b+t} \quad a = 201. \quad b = 23.9$$

COMPUTED BY \_\_\_\_\_ CHECKED BY \_\_\_\_\_

LANGLEY AND McDONALD  
 ENGINEERS-PLANNERS-SURVEY  
 VIRGINIA BEACH, VIRGINIA

LOCATION		AREA ACRES "A"	RUNOFF COEF. "C"	"A" x "C"		INLET TIME MIN.	RAIN INTEN. INCH	RUNOFF Q CFS	PIPE (DITCH) SIZE	CAPACITY CFS	VELO. FT./ SEC.	LENGTH FEET	SLOPE FT/ FT	FALL FT.	INVERT ELEV.		TIME REMARKS IN PIPE
STREET	POINT			INCR.	ACCUM.										UP	DOWN	
A-1	A-3	0.75	0.45	0.34		S.	6.95	2.36	15"	2.65	2.4	142	0.0017	0.24			0.99
A-2	A-3	0.43	0.60	0.26		S.	6.95	1.81	12"	2.15	3.0	70	0.0036	0.25			0.39
A-3	A-4	0.20	0.75	0.15	0.75	S.	5.99 6.72	1.04 5.04	15"	5.70	5.1	128	0.0078	1.00			0.42
A-4	A-6	0.42	0.70	0.29	1.04	S.	6.41 6.63	2.02 6.90	15"	8.20	7.4	84	0.0131	1.10			0.19
A-5	A-6	0.52	0.65	0.34		S.	6.95	2.36	12"	2.75	3.9	178	0.0060	1.07			0.76
A-6	A-7	0.40	0.80	0.32	1.70	S.	6.60 6.59	2.22 11.20	18"	12.0	7.5	104	0.0130	1.35			0.73
A-7	A-10	0.45	0.75	0.34	2.04	S.	6.83 6.54	2.36 13.34	21"	14.0	6.8	64	0.0086	0.55			0.16
A-8	A-9	0.94	0.60	0.56		S.	6.95	3.89	15"	4.60	4.1	108	0.0050	0.54			0.44
A-9	A-10	0.63	0.80	0.50	1.06	S.	5.44 6.85	3.47 7.26	15"	8.40	7.5	72	0.0165	1.19			0.16
A-10	A-11	-	-	-	3.10	S.	6.99 6.51	- 20.2	27"	22.4	6.2	100	0.0050	0.50			0.27
A-11	A-14	0.47	0.75	0.35	3.45	S.	7.26 6.45	2.43 22.4	27"	24.9	6.9	116	0.0062	0.72			0.28
A-12	A-13	1.17	0.45	0.53		S.	6.95	3.68	15"	4.05	3.7	132	0.0040	0.53			0.59
A-13	A-14	0.31	0.80	0.25	0.78	S.	5.59 6.82	1.74 5.32	15"	6.00	5.4	64	0.0086	0.55			0.20
A-14	A-15	0.25	0.75	0.19	4.42	S.	7.54 6.39	1.32 28.2	30"	32.0	7.3	108	0.0060	0.65			0.25
B-6	A-15	0.36	0.80	0.29	1.75	S.	5.77 6.77	2.02 11.8	27"	13.1	3.7	260	0.0018	0.47			1.17
A-15	A-16	0.28	0.80	0.22	6.39	S.	8.71 6.16	1.53 39.4	48"	46.0	4.1	16	0.0010	0.02			0.06



ADJACENT TO FOOD LION EXP.  
SERVES SOME OUTPARCELS

LANGLEY AND McDONALD  
DRAINAGE CALCULATIONS 10 YEAR STORM  
2 22 1995  
FOR: WILLIAMSBURG CROSSING SHOPPING CENTER

SYSTEM: A - H

a= 201.0 b= 23.90

FROM PNT.	TO PNT.	DRAINAGE AREA AC.	RUNOFF COEF. C	C Y A INCR.	C Y A ACC.	INLET TIM MIN.	INTEN	RUNOFF "Q" INCR.	RUNOFF "Q" ACC.	INVERTS UP	INVERTS DOWN	PIPE LENGTH	SLOPE	DIA	VEL.	CAPACITY	FLOW TIME	MANNING "n"	REMARKS
A	C	2.90	0.90	2.61	2.61	10.00	5.93	15.48	15.48	88.10	87.36	148.00	0.0050	24	4.93	15.99	0.50	0.0130	
C	D	0.68	0.90	0.61	3.22	10.50	5.84	3.58	18.83	87.36	86.44	120.00	0.0077	24	6.00	19.84	0.33	0.0130	
D	E	0.51	0.90	0.46	3.68	10.83	5.79	2.66	21.30	85.44	85.08	120.00	0.0030	30	4.34	22.45	0.46	0.0130	
E	F	0.29	0.90	0.26	3.94	11.29	5.71	1.49	22.51	85.08	84.60	160.00	0.0030	30	4.59	22.45	0.58	0.0130	
F	G	0.01	0.40	0.00	3.95	11.68	5.62	0.02	22.17	84.60	84.36	80.00	0.0030	30	4.52	22.45	0.30	0.0130	
G	H	0.14	0.90	0.13	4.07	12.17	5.57	0.70	22.69	84.36	84.00	120.00	0.0030	30	4.62	22.45	0.43	0.0130	

TAIL WATER ELEV. 86.00

STR. #	PIPE LENGTH	FLOW RATE	PIPE DIA.	MANNING "n"	HYD. SLOPE	VELOCITY	VEL. HEAD	Hoon pipe	Hex out pipe	BEND ANGLE	PIPE SIZE	FLOW RATE	BEND LOSS	LOSS SUM	INVERT SHAPE	C.B. or M.H.	H.G.L.	RIM	RIM T HGL
6	120	22.69	30	0.0130	0.0031	4.62	0.33												
								0.08	0.11	40	30	22.17	0.10	0.30	0.50	1.30	86.56	90.30	3.
5	80	22.17	30	0.0130	0.0029	4.52	0.32												
								0.08	0.11	10	30	22.51	0.03	0.22	0.50	1.30	86.94	91.00	4.
4	160	22.51	30	0.0130	0.0030	4.59	0.33												
								0.08	0.10	85	30	21.30	0.20	0.38	0.50	1.30	87.67	88.80	1.
3	120	21.30	30	0.0130	0.0027	4.34	0.29												
								0.07	0.20	0	24	18.83	0.00	0.27	0.50	1.30	88.17	89.80	1.
2	120	18.83	24	0.0130	0.0069	6.00	0.56												
								0.14	0.13	0	24	15.48	0.00	0.27	0.50	1.30	89.18	91.35	2.
1	148	15.48	24	0.0130	0.0047	4.93	0.38												
								0.13					0.00	0.13	0.50	1.30	89.95	94.60	4.



### Stormwater

Runoff from the proposed development area was analyzed for existing conditions of watershed development and for estimated future development conditions. The purpose was to determine the detention storage volume required to control peak flows from the developed site and to provide adequate sediment trapping and storage.

Site development was assumed to contain no Best Management Practices (BMP's) to control runoff or sediment. Therefore, the calculated flows and storage volumes are maximized values. Use of additional BMP's on the development site would reduce the values shown. Virginia stormwater management criteria was used in defining allowable peak site discharge. According to General Criteria 7<sup>5</sup>, stormwater from a developing site must be discharged to an adequate channel. If the downstream channel is not adequate in terms of flow capacity or resistance to erosion, either: (1) the downstream channel must be improved; (2) on-site storage must be provided to reduce the peak flow to an acceptable level; or (3) a combination of channel improvements and on-site storage must be used to eliminate flooding and scour in the downstream channel. The design storm is the two year storm, because storms below that level are considered to cause the greatest long term damages in the downstream channels. Designing for longer storms will often allow the smaller, more frequent events to pass unimpeded.

### Existing Conditions

The total site comprises 89.3 acres. About 50 acres is wooded and 39 acres is cropland. The farming practices are poor in that contour plowing is not being used. When the site was observed in February,

---

<sup>5</sup>General Criteria for Controlling Erosion and Sediment from Land Disturbing Activities, GC-7: Stormwater Management Criteria for Controlling Off-site Erosion, Virginia Erosion and Sediment Control Handbook, Chapter III, 1980.



1987, gullies were forming in the natural drainage swales crossing the farmland. According to the soil report for the county<sup>6</sup>, the site soil is mostly Kempsville Emporia fine sandy loam, a well drained soil. Slopes on site are moderate, ranging from about 2 percent to about 10 percent. Drainage is generally from northeast to southwest across the site. Two major drainage channels exit the property on the southwestern boundary in the wooded area. Both channels contained low flows when observed in February, 1987. Site elevations ranged from El. 53 ft. mean sea level (MSL) at the southwest boundary to El. 103 ft MSL at the northeast corner (Rt. 199 and Rt. 5 intersection).

The rational formula<sup>7</sup> was used to estimate the peak runoff from the 2 year and 10 year storms. Calculations are shown in the appendix. Overland flow was assumed for the first 200 linear feet (L.F.) of the flow path, and channelized flow was assumed for the remaining 1850 L.F. along the longest flow path. The kinematic wave nomograph was used to estimate the overland flow time, and the Kirpich Chart was used for channel flow time. Parameters used in the analysis are shown in the attached drainage calculations. The total time of concentration for the watershed was then used to define the design rainfall intensity, based on the Richmond, Virginia intensity-duration-frequency curves. The following values are calculated:

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<sup>6</sup>Soil Survey of James City and York Counties and the City of Williamsburg, Virginia, U. S. Department of Agriculture, Soil Conservation Service, April 1985.

<sup>7</sup>Drainage Manual, Virginia Department of Highways and Transportation, last updated December 1986.



Storm Reverence	Time of Concentration	Rainfall Intensity
<u>Interval</u>	<u>(Min.)</u>	<u>(1h./Hr.)</u>
2	48	1.9
10	40	3.0

The runoff coefficient for the wooded area was estimated to be 0.25, and to be 0.7 for the cropland. A high runoff coefficient was used for the cropland due to the poor farming practices being applied. The weighted runoff coefficient for existing conditions was estimated to be 0.45.

Based on the above methods, the two year peak flow is calculated to be 76 cubic feet per second (cfs) and the ten year peak flow is 121 cfs.

#### Proposed Development Conditions

The proposed development plan consists of a 38 acre shopping center in the eastern segment of the site, 30 acres of planned residential development (5 dwelling units (D.U.) per acre), 3.5 acres of residential access roads, and 18 acres of woods and residential open space. Runoff coefficients were selected as follows:

Shopping Center (70% impervious)	: C = 0.80
Residential Areas (5 D.U./acre)	: C = 0.55
Roads	: C = 0.90
Woods and Recreational Areas	: C = 0.25

38  
30  
3.5  
180  
89.5 AC PRIOR TO  
RT. 199 TRAILING 2007  
A-2-8-07

The resultant weighted runoff coefficient is 0.61.

The post-development times of concentration is based on 100 L.F. of overland flow and 1950 L.F. of flow in concrete pipes or lined open channels. The total estimated times of concentration and related rainfall intensities are as follows:



<u>Storm Recurrence Interval (Years)</u>	<u>Time of Concentration (Min.)</u>	<u>Rainfall Intensity (In/Hr)</u>
2	18	3.4
10	15	5.1

The resultant peak runoff flows are 185 cfs for the 2 year storm and 278 cfs for the 10 year storm. these flows represent a significant increase over the pre-development peak flows. The increase is due to the larger percentage of impervious area and to the higher runoff velocities.

#### Stormwater Management

Because of existing development in the areas downstream of the site and the existence of a lake used for fishing, on-site detention is proposed as the stormwater management approach. Preliminary plans are to site a dry basin on the southwest property line as shown on the layout drawing.

To estimate the volume of detention storage required, the SMALL POND computer program, developed by R. J. Houghtalen and J. M. Normann based on State Course C<sup>8</sup>, was used to estimate the required storage volume and size of the outflow device. The program is based on the rational formula, and considers the "long storm effect." That is, a storm longer than the time of concentration storm may required more storage, even though the rainfall intensity for the longer storm is lower. The methods used in the program are described further in Course Manual C, Stormwater Management in Virginia. Calculations are shown in the Appendix.

---

<sup>8</sup>Basic Stormwater Management in Virginia, Training Notebook, Course C, prepared by R. J. Houghtalen and J.M. Normann for the Virginia Division of Soil and Water Conservation, Richmond, Virginia, updated January 1985.



Based on a 2 year storm, a dry basin with a storage volume of 168,500 cubic feet (C.F.) will be adequate to maintain the release rate at the pre-development peak level. In addition, a 42-inch culvert pipe will be adequate for the outflow device. These figures are preliminary, and will be confirmed using detailed stormwater routing calculations in the final design of the site drainage system.

Use of a culvert for a release structure will provide for bypass of low flows in the small existing stream. In addition, since the pond area will only be flooded infrequently, it may be left in a wooded state and clearing of the pond area will not be necessary.

Use of BMP's in the upper watershed in final design may reduce the storage basin size required. Large storms, such as the 10 year storm, will be attenuated by the basin. An emergency spillway will be provided to bypass large flow peaks without damage to the low level detention dam.

#### Sediment Control

To control sediment during construction, a temporary riprap stone dike will be placed around the basin outlet culvert. After construction and stabilization of bare earth in the watershed, the dike will be removed.

Based on the Virginia Erosion and Sediment Control Manual<sup>9</sup>, 67 cubic yards (c.y.) of storage volume is required for each acre of watershed in order to control sediment. For the 89.3 acre watershed, this amounts to 5,983 c.y. The available storage for stormwater management (168,500 c.f.) is equivalent to 6241 c.y., which is more than adequate for sediment control.

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<sup>9</sup>Virginia Erosion and Sediment Control Handbook, Virginia Division of Soil and Water Conservation, Richmond, Virginia, Second Edition, 1980.



**In addition, erosion and sediment control measures will be applied on the site during construction to prevent sediment from moving downstream. Secondary channels from the site will also be provided with erosion control devices.**

87021.00

UNIVERSITY SQUARE

Roadside ditches along perimeter of parking area. Will intercept flow from outparcels prior to development of outparcels

1. Area = 0.74 Acres

$$Q = 0.74 \times 0.4 \times 7.1 = 2.10 \text{ cfs.}$$

Gross lined,  $n = 0.25$

1.0%

$$S.S. = 2:1$$

$$d_n = 1.51 \text{ Ft.}$$

$$A = 4.57 \text{ s.f.}$$

$$V_n = 0.46 \text{ Ft./sec.}$$

2. Area = 1.47 Acres

Ditch divides area into 2 sections

$$Q \text{ in ditches} = 1.47 \div 2 \times 0.4 \times 7.1 = 2.09 \text{ cfs.}$$

Gross lined,  $n = 0.25$

1.0%

$$S.S. = 2:1$$

$$d_n = 1.51 \text{ Ft.}$$

$$A = 4.57 \text{ s.f.}$$

$$V_n = 0.46 \text{ Ft./sec.}$$

3. Area = 1.18 Acres

Ditches divide area into 2 sections

$$Q = 1.18 \div 2 \times 0.4 \times 7.1 = 1.68 \text{ c.f.s.}$$

Gross lined,  $n = 0.25$

1.8%

S.S. = 2:1

$$d_n = 1.25 \text{ ft.}$$

$$A = 3.10 \text{ s.f.}$$

$$V_n = 0.54 \text{ ft/sec}$$

2.5%

SS = 2:1

$$d_n = 1.17 \text{ ft.}$$

$$A = 2.74 \text{ s.f.}$$

$$V_n = 0.61 \text{ ft/sec.}$$

4. Area = 1.07 Acres

$$Q = 1.07 \times 0.4 \times 7.1 = 3.04 \text{ c.f.s.}$$

Gross lined,  $n = 0.25$

1.80%

S.S. = 2:1

$$d_n = 1.56 \text{ ft.}$$

$$A = 4.84 \text{ s.f.}$$

$$V_n = 0.63 \text{ ft/sec.}$$

5. & 6. Area = 1.07 Acres (each)

Ditches divide areas into approx. 2 sections

$$Q = 1.07 \div 2 \times 0.4 \times 7.1 = 1.52 \text{ c.f.s.}$$

Grass lined,  $n = 0.25$

1.0%

$$S_{0.5} = 2:1$$

$$d_n = 1.34 \text{ ft.}$$

$$A = 3.59 \text{ s.f.}$$

$$V_n = 0.42 \text{ Ft./Sec.}$$

Entrance Road

Roadside Ditches

Area = 0.28 Ac

$$(0.28)(2.5)(7.1) = 4.9 \text{ cfs}$$

Pipe size  $\approx 15"$

$$97.5 \quad 15 + 2.25 = 17.25" = 1.44'$$

$$\begin{array}{r} 97.5 \\ - 1.0 \\ \hline \end{array}$$

$$96.5$$

$$\begin{array}{r} 96.5 \\ - 1.44 \\ \hline \end{array}$$

95.06 Approx. Inv.

Try 97.00

Gross lined ditch @ 1.0%

$$1.19 \text{ cfs}$$

$$n = 0.25$$

$$S.S. = 2:1$$

$$d_n = 1.22'$$

Structure #15 of 16

$$Q = 2.20 \text{ c.f.s.}$$

Long. slope = 2%

Normal Depth of Flow = 0.26'

$$\begin{aligned} Q_0/L_0 &= 0.7(\text{csy})^{3/2} \\ &= 0.7(0.26 + 0.17)^{3/2} \\ &= 0.20 \end{aligned}$$

$$L_0 = 2.20 \div 0.2 = 11.0$$

Let  $L = 8'$

$$8/11 = 0.73$$

$$9/4 = 0.65$$

$$Q/Q_0 = 0.8$$

$$0.8 \times 2.2 = 1.76$$

$$\text{Carry over} = 0.44$$

Structure #13 of 14

$$Q = 1.92 + 0.44 (\text{Carry over})$$

$$= 2.36$$

Use  $L = 8'$  (Minimum Standard)



## DEVELOPMENT MANAGEMENT

101-E MOUNTS BAY ROAD, P.O. BOX 8784, WILLIAMSBURG, VIRGINIA 23187-8784  
(757) 253-6671 Fax: (757) 253-6850 E-MAIL: devtman@james-city.va.us

CODE COMPLIANCE  
(757) 253-6626  
codecomp@james-city.va.us

ENVIRONMENTAL DIVISION  
(757) 253-6670  
environ@james-city.va.us

PLANNING  
(757) 253-6685  
planning@james-city.va.us

COUNTY ENGINEER  
(757) 253-6678  
INTEGRATED PEST MANAGEMENT  
(757) 253-2620

May 20, 1998

Mr. Calvin Davis  
University Square Associates  
5251 John Tyler Highway  
Suite 57  
Williamsburg, VA 23185

RE: Kings Way Extended, SP-132-97

Dear Mr. Davis:

There are two issues raised by the Kings Way Extended site plan that I want to present to you for clarification and future reference. The first concerns the status of the right-of-way of Kings Way. The right-of-way (ROW) is currently platted as a public ROW as the original intent was for Kings Way to be dedicated as a public road. However, it is our understanding that Kings Way will never be accepted by the Virginia Department of Transportation (VDOT) into the state secondary road system. Therefore, the existing public ROW will need to be vacated by action of the James City County Board of Supervisors.

The procedure for vacation of a ROW is as follows:

- The property owners must make a written request to the County Attorney's Office stating the reason for the requested vacation and the location of the property to be vacated.
- A non-refundable application fee of \$150 is required with the application.
- The applicant must submit a vacation plat, prepared by a surveyor or engineer, showing the ROW to be vacated. The plat must be signed by all affected property owners as shown on the original plat. If this is not feasible, then a public hearing must be set with the Board of Supervisors to consider an ordinance of vacation. Given the number of separate owners involved, it appears a public hearing will be necessary.

On receipt of the letter, plat and fee, we will initiate the review and vacation process. One other item will need to be addressed as part of the vacation process. As this road will now be privately maintained, a mechanism needs to be established to guarantee long-term maintenance of Kings Way.

The other issue raised by this site plan concerns stormwater management. The County has requested for some time that a Master Stormwater Management Plan be prepared for the entire shopping center. As part of the review process for above site plan, the County has obtained a Master Stormwater Plan that involves construction of two new stormwater management ponds. One facility, referred to as Pond 3, will be built in conjunction with the Riverside Medical project. This facility will receive drainage from the remainder of the site not already controlled by Pond 1, which is

Mr. Calvin Davis  
Page 2  
May 20, 1998

located to the rear of the LaFontaine project. The preliminary design of Pond 3 demonstrates that it will be able to meet both the water quality and quantity requirements for all future development of the site draining to the pond. All onsite drainage will need to be directed to Pond 3 with no increase in flows to the Winston Terrace subdivision. Therefore, the size of the pipe under Route 199, which is 24 inches in diameter, will need to be maintained through (under) the shopping center with no connections allowed for additional surface water flows from the future development. This will protect Winston Terrace from receiving additional stormwater in its already inadequate drainage channels.

The other stormwater facility, referred to as Pond 2, is a dry pond located on the north side of proposed Road A. This pond will be installed at the time of construction of Road A. The intent of the pond is to reduce the flow levels into and out of Pond 1 in order to increase protection of the stream channel downstream of Pond 1, which is currently eroding. While Pond 2 as submitted with the Kings Way site plan will reduce the flows below Pond 1, it is our intent to accomplish further flow reductions through modifications to Pond 2 and possibly Pond 1. These modifications will be designed and implemented as part of the site plan review process for any expansions to the shopping center draining to these facilities. The modifications will most likely involve changes to the outlet structures for one or both ponds in order to maximize stormwater storage and minimize discharge levels.

If you have any questions regarding these matters, please contact me at 253-6673.

Sincerely,



Darryl E. Cook  
Environmental Director

c: ~~h~~ Matt Maxwell, Planning  
Leo Rogers, County Attorney

*This was done  
during the Riverside  
Med. site plan  
process -  
DEC*

Date Record Created:

Created By:

Effective Year\_Declaration of Covenants:

WATERSHED MC

BMP ID NO 040

PLAN NO SP-10-95

TAX PARCEL (48-1)(22-2)

PIN NO 4812200002

CONSTRUCTION DATE 1/1/1999

PROJECT NAME Wmsbg Crossing Shopping Center

FACILITY LOCATION Dry Pond # 2-Phase 2

CITY-STATE Williamsburg, Va. 23185

CURRENT OWNER Williamsburg Crossing LLC

OWNER ADDRESS 620 Village Drive

OWNER ADDRESS 2 Suite E

CITY-STATE-ZIP CODE Virginia Beach, Va. 23454

OWNER PHONE

MAINT AGREEMENT Yes

EMERG ACTION PLAN No

WS\_BMPNO:  
MC040

MAINTENANCE PLAN

SITE AREA acre

No

17.2

LAND USE

Gen Business

old BMP TYP

Dry Pond

JCC BMP CODE

POINT VALUE

SVC DRAIN AREA acres

20

SERVICE AREA DESCRI

Phase 2 Wmbg Cross

IMPERV AREA acres

0.00

RECV STREAM

EXT DET-WQ-CTRL

No

WTR QUAL VOL acre-ft

CHAN PROT CTRL

No

CHAN PROT VOL acre-ft

SW/FLOOD CONTROL

No

GEOTECH REPORT

No

CTRL STRUC DESC

Conc. Weir

CTRL STRUC SIZE inches

OTLT BARRL DESC

Dual RCP

OTLT-BARRL SIZE inch

48

EMERG SPILLWAY

Yes

DESIGN HW ELEV

73.34

PERM POOL ELEV

na

2-YR OUTFLOW cfs

0.00

10-YR OUTFLOW cfs

128.00

REC DRAWING

Yes

CONSTR CERTIF

No

LAST INSP DATE

3/21/2002

Inspected by:

INTERNAL RATING

3

MISC/COMMENTS

Also see MC 038 & 039.

Get Last BMP No

Return to Menu

Other affected parcels:

PIN\_NO2:  PIN\_NO8:

PIN\_NO3:  PIN\_NO9:

PIN\_NO4:

PIN\_NO5:

PIN\_NO6:

PIN\_NO7:

Additional Comments:

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# Williamsburg Crossing Shopping Center sold

September 27, 2012 By [mrwilliamsburg](#) [Leave a Comment](#)

Williamsburg Crossing , which in the past was one of the area's most popular shopping centers was acquired by LNR Partners Inc., a financial services provider for \$5.3 million at a recent auction sale.

The buyer, a commercial real estate developer, was the original note holder for the property. The single-story retail building at 5251 John Tyler Highway was completed in 1990 and totals 150,000 square feet.



The 17.3-acre shopping center is located at the intersection of John Tyler Highway and Route 199. According to James City County tax records, the property's value is assessed at \$6.6 million. It was owned by Williamsburg Crossing LLC; a company created by Calvin Davis

The property included two buildings. it is anchored by a Food Lion grocery store and is also home to Greenwood Christian Academy, Benjamin Moore Paints, a Fantastic

Sams salon, Nails Uptown and others.

LNR Partners, LLC, the note holder began as an operating unit within Lennar Corporation, a national homebuilder (developer of Colonial Heritage). In October 1997, Lennar spun off LNR as a separately traded public company to distinguish it from Lennar's homebuilding business and to maximize the respective values of its commercial property and homebuilding businesses. In February 2005, LNR was taken private .In 2010, LNR was recapitalized by a consortium of investors including Cerberus, Vornado, Oaktree, iStar, and Aozora.

MCO40

COUNTY OF JAMES CITY, VIRGINIA

DECLARATION OF COVENANTS 040006773

INSPECTION/MAINTENANCE OF DRAINAGE SYSTEM

THIS DECLARATION, made this 23rd day of February, 2004, between University Square Associates and all successors in interest, ("COVENANTOR(S),") owner(s) of the following property: Parcels 24 through 29 Williamsburg Crossing Shopping Center project name, Document No., Deed Book 75, Page No. 92; Instrument No. and the County of James City, Virginia ("COUNTY.")

WITNESSETH:

We, the COVENANTOR(S), with full authority to execute deeds, mortgages, other covenants, and all rights, titles and interests in the property described above, do hereby covenant with the COUNTY as follows:

1. The COVENANTOR(S) shall provide maintenance for the drainage system including any runoff control facilities, conveyance systems and associated easements, hereinafter referred to as the "SYSTEM," located on and serving the above-described property to ensure that the SYSTEM is and remains in proper working condition in accordance with approved design standards, and with the law and applicable executive regulations. The SYSTEM shall not include any elements located within any Virginia Department of Transportation rights-of-way.

2. If necessary, the COVENANTOR(S) shall levy regular or special assessments against all present or subsequent owners of property served by the SYSTEM to ensure that the SYSTEM is properly maintained.

3. The COVENANTOR(S) shall provide and maintain perpetual access from public right-of-ways to the SYSTEM for the COUNTY, its agent and its contractor.

4. The COVENANTOR(S) shall grant the COUNTY, its agent and its contractor a right of entry to the SYSTEM for the purpose of inspecting, operating, installing, constructing, reconstructing, maintaining or repairing the SYSTEM.

5. If, after reasonable notice by the COUNTY, the COVENANTOR(S) shall fail to maintain the SYSTEM in accordance with the approved design standards and with the law and applicable executive regulations, the COUNTY may perform all necessary repair or maintenance work, and the COUNTY may assess the COVENANTOR(S) and/or all property served by the SYSTEM for the cost of the work and any applicable penalties.

parcels 24 thru 29  
Williamsburg Crossing

6. The COVENANTOR(S) shall indemnify and save the COUNTY harmless from any and all claims for damages to persons or property arising from the installation, construction, maintenance, repair, operation or use of the SYSTEM.

7. The COVENANTOR(s) shall promptly notify the COUNTY when the COVENANTOR(S) legally transfers any of the COVENANTOR(S)' responsibilities for the SYSTEM. The COVENANTOR(S)' shall supply the COUNTY with a copy of any document of transfer, executed by both parties.

8. The covenants contained herein shall run with the land and shall bind the COVENANTOR(S) and the COVENANTOR(S)' heirs, executors, administrators, successors and assignees, and shall bind all present and subsequent owners of property served by the SYSTEM.

9. This COVENANT shall be recorded in the County Land Records.

IN WITNESS WHEREOF, the COVENANTOR(S) have executed this DECLARATION OF COVENANTS as of the date first above written.

COVENANTOR(S)

By: University Square Associates, II, Inc.  
By: The Commercial Group, Inc.  
Print Name/Title A Virginia Corporation, General Partner

COVENANTOR(S)

Print Name/Title

ATTEST:



ATTEST:

\_\_\_\_\_

COMMONWEALTH OF VIRGINIA  
CITY/COUNTY OF James City

I hereby certify that on this 17th day of February, 2004, before the subscribed, a Notary Public of the State of Virginia, and for the City/County of James City, aforesaid personally appeared Collin Davis and did acknowledge the foregoing instrument to be their Act.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal this 17th day of February, 2004.

[Signature]  
Notary Public

My Commission expires: 9/30/04

Approved as to form:

[Signature]  
County Attorney

This Declaration of Covenants prepared by:

George Nice & Sons, Inc.  
S. Ray Nice, P.E.  
(Print Name)  
Vice President  
(Title)  
143 Skimino Road  
(Address)  
Williamsburg, VA 23188  
(City) (State) (Zip)  
757-565-2885  
(Telephone)

drainage.pre

VIRGINIA: CITY OF WILLIAMSBURG & COUNTY OF JAMES CITY  
This document was admitted to record on 8 March 04  
at 9:39 AM/PM. The taxes imposed by Virginia Code  
Section 58.1-801, 58.1-802 & 58.1-814 have been paid.

STATE TAX LOCAL TAX ADDITIONAL TAX  
\$ \_\_\_\_\_ \$ \_\_\_\_\_ \$ \_\_\_\_\_  
TESTE: BETSY B. WOOLRIDGE, CLERK 3  
BY: Betsy B. Woolridge Clerk

Revised 01/02

090 006663

PREPARED OUT OF STATE

TAX PARCEL 481 22 00022

**GROUND LESSOR ESTOPPEL, CONSENT,  
AND NON-DISTURBANCE AGREEMENT**

THIS GROUND LESSOR ESTOPPEL, CONSENT, AND NON-DISTURBANCE AGREEMENT (the "Agreement"), is entered into as of March 5, 2009, by and among WILLIAMSBURG RIVERSIDE MEDICAL COMPLEX, LLC, a Delaware limited liability company having its principal office at c/o Landmark Healthcare Facilities LLC, 839 North Jefferson Street, Suite 200, Milwaukee, Wisconsin 53202 ("Tenant"); WELLS FARGO BANK NORTHWEST, NATIONAL ASSOCIATION, as Trustee, having an address at MAC U1228-120, 299 S. Main Street, 12th Floor, Salt Lake City, Utah 84111, Attn: Corporate Trust Services (together with its successors and assigns, "Mortgagee") for the benefit of itself and the other "Purchasers" (the "Purchasers"), as defined in the Note Purchase Agreement defined below; and RIVERSIDE HOSPITAL, INC., a non-stock corporation organized under the laws of the Commonwealth of Virginia, having an address of Fountain Plaza One, Suite 1000, 701 Town Center Drive, Newport News, VA 23606 ("Landlord").

**WITNESSETH:**

WHEREAS, Landlord and Tenant have entered into the certain Ground Lease (the "Lease") dated as of November 8, 2007, as amended by that certain First Amendment to Ground Lease dated as of March 5, 2009, with respect to certain property located in Williamsburg, Virginia, more particularly described on Exhibit A attached hereto and made a part hereof for all purposes (the "Leased Premises"); a copy of which has been provided by Landlord and Tenant to Mortgagee; and except as otherwise expressly provided herein or unless the context otherwise requires, the terms that are capitalized herein shall have the meanings specified in the Lease;

WHEREAS, Tenant intends to lease a medical office building and footings, foundations and other improvements relating thereto (the "Improvements") pursuant to the Lease and the Note Purchase Agreement (as defined below) (Tenant's leasehold interest in the Leased Premises and the Improvements, and all of the Tenant's other rights, title and interest under the Lease, are herein referred to as the "Property") and Williamsburg Riverside Medical Complex; LLC will lease the Property to Riverside Healthcare Association, Inc., D/B/A Riverside Health System, a non-stock corporation organized under the laws of the Commonwealth of Virginia, as tenant under that certain Master Lease Agreement dated March 5, 2009 (the "Master Lease").

WHEREAS, Tenant and Mortgagee have entered or are entering into a Note Purchase Agreement dated on or about March 5, 2009 (as amended, modified, supplemented or restated from time to time, the "Note Purchase Agreement"), pursuant to which the Tenant has issued a Note to Mortgagee (the principal, interest, fees and other amounts owing under the Note Purchase Agreement or the other documents executed in connection therewith and all of the Tenant's other obligations thereunder being referred to collectively herein as the "Indebtedness Secured"), evidenced by, among other documents, promissory note (as amended and/or replaced from time to time, the "Note") issued to the Mortgagee pursuant to the terms of the Note Purchase Agreement and secured by a first lien leasehold mortgage on the Property and/or various other collateral security documents dated as of March 5, 2009, as may be amended from time to time (the "Mortgage"; and the Note Purchase Agreement, the Notes, the Mortgage and

FeeEstop\_2579218\_01\_10 (2)  
1904184

RETURN TO:  
CHICAGO TITLE INSURANCE CO.  
830 E. MAIN ST., 16th FLOOR  
RICHMOND, VA 23219

12

1

the other documents now or hereafter executed in connection therewith collectively being referred to herein as the "Note Documents"); and

WHEREAS, the parties are entering into this Agreement to (1) to confirm certain understandings of the parties with respect to the Lease; (2) to confirm that the Mortgagee is a Mortgage Lender under the terms of the Lease and is the only Mortgage Lender so recognized at this time; (3) to provide for the non-disturbance agreement in favor of Mortgagee contemplated by the Lease and (4) to satisfy certain conditions of the Mortgage.

NOW, THEREFORE, in consideration of the mutual promises contained hereinafter and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged and confessed by the parties, Mortgagee, Tenant and Landlord hereby agree as follows:

A. ESTOPPEL CERTIFICATE.

1. Landlord and Tenant hereby represent that, as of the date hereof, the Lease has not been modified, changed, altered, assigned, supplemented or amended in any respect since its respective date of execution other than by that certain First Amendment to Ground Lease dated as of March 5, 2009, and the Lease and this Agreement are the only agreements between Tenant and Landlord affecting or relating to the use, occupancy or ownership of the Property and the Improvements and represent the entire agreement between Landlord and Tenant with respect to the Property and the Improvements.

2. Landlord and Tenant hereby represent that, as of the date hereof, to such party's knowledge, neither Landlord nor Tenant is in default of its obligations under the Lease, and no event has occurred nor does any condition exist that with the giving of notice or the lapse of time, or both, would constitute such a default and the Landlord has no claim against the Tenant and no offset or defense to enforcement of any terms of the Lease and the Landlord has not advanced any funds for or on behalf of the Tenant for which the Landlord has a right to deduct from or offset against future rent payments. The Lease is valid and in full force and effect on the date hereof.

3. Landlord represents and warrants that (a) it is the sole and exclusive owner of the Leased Premises, (b) it has no knowledge of any liens and encumbrances, contractual rights or claims, previous transfers or conveyances, or agreements to transfer or convey, except the Lease and those other matters disclosed on Schedule B-I of the title insurance policy issued in connection with the Note Documents, (c) it has full authority to enter into this Agreement, and (d) it has no knowledge of any transfer, pledge, or assignment of the Lease except for the Mortgage.

4. All Rent and Additional Rent (each as defined in the Lease) and all other charges and obligations of the Tenant under the Lease have been paid in full through March 31, 2009.

5. The Term (as defined in the Lease) of the Lease began on November 8, 2007 and shall end at 11:59 p.m. on April 30, 2034 unless extended pursuant to Section 3.2 of the Lease in which case the Term shall end at 11:59 p.m. on April 30, 2049.

6. The Landlord has no claim or offset against the Tenant in connection with the design or construction of the Improvements.

**B. CONSENT AND AGREEMENT.**

7. Landlord acknowledges that (a) this Agreement constitutes a "Mortgage Notice" advising Landlord of the Mortgagee's leasehold mortgage interest in accordance with Section 7.1.1 of the Lease; (b) Mortgagee will be a "Mortgage Lender" under the terms of the Lease upon the recordation of the Mortgage, and accordingly is entitled to all right and privileges afforded to a first Mortgage Lender under the Lease, and that Landlord has received no other Mortgage Notice in accordance with the Lease and (c) to Landlord's knowledge, the execution, delivery and performance by the Tenant of its obligations under the Mortgage will not violate the provisions of the Lease.

8. Landlord acknowledges that all notices that "Mortgage Lender" is entitled to receive under the terms of the Lease shall be sent to the Mortgagee at its address set forth in Section 15 of this Agreement, served by the delivery method provided in Article XX of the Lease, or at such other address as shall be designated by Mortgagee by notice in writing pursuant to Article XX of the Lease.

9. Tenant has granted or will grant to Mortgagee a lien on and security interest in, inter alia, all assets and personal property owned by Tenant located on the Leased Premises, including, but not limited to, all fixtures, accounts receivable, inventory, goods, machinery and equipment owned by Tenant (the "Pledged Property") as collateral security for the repayment of the Indebtedness Secured. After the occurrence and during the continuance of an Event of Default (as defined in the Mortgage), Mortgagee may, upon ten (10) days' prior written notice to Landlord, enter the Leased Premises and remove such Pledged Property from the Leased Premises; *provided* that Mortgagee repairs any damage to Landlord's property resulting therefrom, and, *provided, further* that Mortgagee shall indemnify and hold harmless Landlord from any injury to person or property resulting from the removal of said Pledged Property by Mortgagee from the Leased Premises. Landlord hereby (a) subordinates each and every right that the Landlord may now or hereafter have under the laws of the Commonwealth of Virginia or by the terms of the Lease or any other lease now in effect or hereafter executed, to obtain a lien on, to levy or distrain upon for rent, or to claim or assert title to or any interest in, any Pledged Property of Tenant that may constitute a part of the leasehold improvements as security for any liability of Tenant that arises, accrues, or is the subject of legal action while the Mortgage is in existence, and (b) disclaims any right or title in Pledged Property now or hereafter constituting collateral for Tenant's indebtedness under the Lease by reason of the installation or affixation thereof to the Property and consents to the installation or affixation thereof to the Property, subject to any terms of the Lease which may require Landlord's prior approval for such installation or affixation. The terms of this Section 9 are solely for the benefit of the Mortgagee and the Purchasers and their respective successors and/or assigns.

10. Landlord and Tenant each agree that Mortgagee shall have the right to perform any of Tenant's covenants or to cure any default by Tenant which is curable by Mortgagee or to exercise any right conferred upon Tenant by the terms of the Lease in accordance with the terms of the Lease. In furtherance thereof, and without limiting any rights granted to Mortgagee by the Lease, each of Landlord and Tenant agrees that it shall deliver to Mortgagee a copy of any Default Notice or other notice delivered to the other party under the Lease, simultaneously with the delivery to such other party, and, Landlord further agrees, whether or not Landlord is otherwise obligated to notify Tenant, to send written notice of any Event of Default by Tenant under the Lease to Mortgagee prior to Landlord's exercise of any rights or remedies under the Lease. Landlord further agrees that, in the event that a copy of any such notice as to an Event of Default by Tenant under the Lease is not delivered to Mortgagee in accordance with this Section 10, Landlord's notice thereof to Tenant shall not be effective.

11. All obligations of the Tenant, as tenant under the Lease, may be performed by any Space Tenant (as defined in the Lease), as tenant under the Master Lease and such performance shall constitute performance by the Tenant.

12. Landlord agrees that it shall not approve any merger of the fee estate and the leasehold estate without the written consent of Mortgagee and Landlord acknowledges and agrees that, except as provided in the Lease, Landlord shall not grant any mortgage on its interest in the Leased Premises.

13. Tenant agrees to each item above amending, overriding or otherwise relating to the terms of the Lease. This Agreement and the certifications set forth above are made with the understanding that Mortgagee, Tenant and their respective successors and assigns will be relying upon them.

**C. OTHER PROVISIONS.**

14. This Agreement shall inure to the benefit of, and be binding upon, the parties hereto and their respective successors and assigns including without limitation any successor holder of the Mortgage. Nothing in this Agreement shall be construed to derogate in any way from any rights granted to Mortgagee under the Lease.

15. Whenever any notice, demand, or request is required or permitted hereunder, such notice, demand, or request shall be made in writing and shall be deemed to have been duly given and to be effective as provided in Article XX of the Lease, addressed as follows:

If to Landlord

Riverside Hospital, Inc.  
Fountain Plaza One, Suite 1000  
701 Town Center Drive  
Newport News, VA 23606

With a copy to:

Riverside Healthcare Association, Inc.  
701 Town Center Drive, Suite 1000  
Newport News, VA 23606

If to Tenant: Williamsburg Riverside Medical Complex, LLC  
839 North Jefferson Street, Suite 200  
Milwaukee, WI 53202  
Phone: (414) 277-0500  
Fax: (414) 277-1055  
Attn: Nicholas F. Checota

With a copy to: David M. Sanders, Esq.  
Reinhart Boerner Van Deuren s.c.  
1000 North Water Street  
P.O. Box 2965  
Milwaukee, WI 53201-2965  
Phone: (414) 298-1000  
Fax: (414) 298-8097

If to Mortgagee: Wells Fargo Bank Northwest, National Association,  
as Trustee  
299 South Main Street  
Salt Lake City, Utah 84111  
Attention: Corporate Trust Department

Each party hereto shall have the right from time to time to designate by written notice to the other parties hereto such other person or persons and such other place within the continental United States as said party may desire written notices to be delivered or sent in accordance herewith. No notice to Landlord, Tenant, or Mortgagee shall be deemed ineffective if not received by a party other than the primary addressee upon whom copy is to be served pursuant to the provisions of this Agreement, as long as the primary addressee received and/or refused notice and the party giving notice used reasonable diligence in its efforts to serve notice upon the other parties other than the primary addressees.

16. In the event that any of the provisions hereof conflict with any of the terms and provisions of the Lease or the Note Documents, the provisions of this Agreement shall control.

17. This Agreement shall continue in full force and effect until payment in full in cash of all sums due or to become due or owed by Tenant to Mortgagee under instruments secured by the Mortgage and the Mortgagee has been discharged of record.

18. This Agreement may not be modified orally or by any course of conduct other than by a written instrument signed by all the parties hereto.

19. This Agreement may be executed in any number of counterparts, each of which shall be deemed an original but all of which shall constitute one and the same instrument.

20. Any party may execute this Agreement by delivering to the other parties a facsimile copy hereof evidencing such party's signature. In any such case the party executing by facsimile

shall promptly thereafter provide a signed original counterpart hereof to the other parties; *provided*, that the non-delivery of such signed counterpart shall not affect the validity of enforceability hereof.

21. The Agreement shall be governed by the laws of the Commonwealth of Virginia.



SIGNATURE PAGE FOR LANDLORD

RIVERSIDE HOSPITAL, INC.

By [Signature]  
Name: Wade D. Parkyn  
Title: CEO

ACKNOWLEDGMENT

STATE OF Virginia )  
City Newport ) ss  
COUNTY OF Newport )

The foregoing instrument was acknowledged before me this 27<sup>th</sup> day of October, 2009, by Wade D. Parkyn, the CEO of RIVERSIDE HOSPITAL, INC., a Virginia non-profit corporation, on behalf of the corporation, who is personally known to me or has produced \_\_\_\_\_ as identification.

[Signature]  
Notary Public # 44101110

Printed Name: Cynthia Jackson

My Commission Expires: 12/31/11

[Seal]

Embossed Hereon is My  
Commonwealth of Virginia Notary Public Seal  
My Commission Expires December 31, 2011  
CYNTHIA JACKSON

Signature Page to Ground Lessor Consent

SIGNATURE PAGE FOR MORTGAGEE

"MORTGAGEE"

WELLS FARGO BANK NORTHWEST, N.A., as  
Trustee

By: [Signature]  
Title: VICE PRESIDENT

STATE OF Utah )  
COUNTY OF Salt Lake ) SS

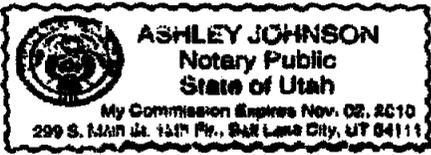
The foregoing instrument was acknowledged before me this 4th day of MARCH, 2009, by Val T. Orton, a VICE PRESIDENT of Wells Fargo Bank Northwest, N.A., a national banking association, who is personally known to me.

[Signature]  
Notary Public

Printed Name: \_\_\_\_\_

My Commission Expires:

[SEAL]



Signature Page to Ground Lessor Consent

**EXHIBIT A – LEGAL DESCRIPTION.**

**Parcel 1:**

ALL that certain piece, parcel or lot of land situate within James City County, Virginia, known and designated as Parcel Twenty-Two (22), containing 736,881 square feet or 16.9165 acres, as shown on that certain plat entitled, "RESUBDIVISION OF PARCEL 20, WILLAMSBURG CROSSING, JAMESTOWN DISTRICT, JAMES CITY COUNTY, VIRGINIA", dated July 30, 1997, made by Langley and McDonald, P.C., Engineers-Surveyors-Planners, a copy of which is recorded in the Clerk's Office, Circuit Court, James City County, Virginia and the City of Williamsburg, Virginia, in Plat Book 67, page 37, and which is more particularly described as follows:

BEGINNING at the northeast corner of the property herein convey which is coterminous with the southeast corner of Parcel 2, the southwest corner of Parcel 13A and the northwest corner of the remaining portion of Residual Parcel 20 as shown on the aforementioned plat, and from the point of beginning this established, thence along the northwesterly boundary of Lot 20, S 39° 14'53" W, a distance of 490.12' to a point; thence along the southwesterly boundary of Lot 20, S 24° 32'26" E, a distance of 632.95' to a point along the northerly property line of a parcel now or formerly Winston Terrace, Section II; thence S 65° 27'34" W, a distance of 349.35' to a point on line of the property now or formerly owned by Yancey, thence N 48° 46'00" W, a distance of 858.73' to a point; thence N 48° 49'53" W, a distance of 60.43' to a point on the southeasterly corner of Parcel 12, Williamsburg Crossing; thence N 50°44'00" E, a distance of 517.51' to a point; thence along a curve to the right with a radius of 655' and an arc length of 514.38' to a point; thence S 13° 04'40" E, a distance of 43.39' to a point; thence S 89° 45'13" E, a distance of 60.00' to a point on the westerly boundary of Parcel 2; thence S 00° 14'53" W a distance of 130.70' to a point; thence S 89° 45'07" a distance of 628.17' to a point; thence S 50° 45'07" E, a distance of 191.09' to the POINT OF BEGINNING.

BEING the same real estate conveyed to Williamsburg Riverside Medical Complex, LLC, a Delaware limited liability company by the following two (2) instruments:

- (a) As to the Buildings, Improvements and Related Facilities, by deed from Riverside Hospital, Inc., a Virginia non-stock corporation, dated November 8, 2007, recorded November 13, 2007, in the Clerk's Office, Circuit Court, James City County, Virginia, as Instrument No. 070031326;
- (b) By Ground Lease from Riverside Hospital, Inc., a Virginia non-stock corporation, as evidenced by Memorandum of Ground Lease dated November 8, 2007, recorded November 13, 2007, in the aforesaid Clerk's Office, as Instrument No. 070031327.

**Parcel 2:**

TOGETHER WITH non-exclusive easements to use Access Roads as set forth in Section 4 and other rights for utilities as set out under 1 (g) of Covenants, Conditions and Restrictions Agreement as attached to Deed recorded as Instrument No. 970014731.

AND ALSO KNOWN AS:

PARCEL 1:

ALL THAT CERTAIN PIECE, PARCEL OR LOT OF LAND SITUATE WITHIN JAMES CITY COUNTY, VIRGINIA, KNOWN & DESIGNATED AS PARCEL TWENTY-TWO (22), CONTAINING 736,881 SQUARE FEET OR 16.9165 ACRES, AS SHOWN ON THAT CERTAIN PLAT ENTITLED, "RESUBDIVISION OF PARCEL 20, WILLIAMSBURG CROSSING, JAMESTOWN DISTRICT, JAMES CITY COUNTY, VIRGINIA" DATED JULY 30, 1997 MADE BY LANGLEY & MCDONALD, P.C., ENGINEERS-SURVEYORS-PLANNERS, A COPY OF WHICH IS RECORDED IN THE CLERK'S OFFICE, CIRCUIT COURT, JAMES CITY COUNTY, VIRGINIA AND THE CITY OF WILLIAMSBURG, VIRGINIA, IN PLAT BOOK 67, PAGE 37, AND WHICH IS MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHEAST CORNER OF THE PROPERTY HEREIN CONVEYED WHICH IS COTERMINOUS WITH THE SOUTHEAST CORNER OF PARCEL 2, THE SOUTHWEST CORNER OF PARCEL 13A AND THE NORTHWEST CORNER OF THE REMAINING PORTION OF RESIDUAL PARCEL 20 AS SHOWN ON THE AFOREMENTIONED PLAT, AND FROM THE POINT OF BEGINNING THIS ESTABLISHED, THENCE ALONG THE NORTHWESTERLY BOUNDARY OF LOT 20, S39°14'53"W, A DISTANCE OF 490.12' TO A POINT; THENCE ALONG THE SOUTHWESTERLY BOUNDARY OF LOT 20, S24°32'26"E, A DISTANCE OF 632.95' TO A POINT ALONG THE NORTHERLY PROPERTY LINE OF A PARCEL NOW OR FORMERLY WINSTON TERRACE, SECTION II; THENCE S65°27'34"W, A DISTANCE OF 349.35' TO A POINT ON LINE OF THE PROPERTY NOW OR FORMERLY OWNED BY YANCEY, THENCE N48°46'00"W, A DISTANCE OF 858.73' TO A POINT; THENCE N48°49'53"W, A DISTANCE OF 60.43' TO A POINT ON THE SOUTHEASTERLY CORNER OF PARCEL 12, WILLIAMSBURG CROSSING; THENCE N50°44'00"E, A DISTANCE OF 517.51' TO A POINT; THENCE ALONG A CURVE TO THE RIGHT WITH A RADIUS OF 655' AND AN ARC LENGTH OF 514.38' TO A POINT; THENCE S13°04'40"E, A DISTANCE OF 43.39' TO A POINT; THENCE S89°45'13"E, A DISTANCE OF 60.00' TO A POINT ON THE WESTERLY BOUNDARY OF PARCEL 2; THENCE S00°14'53"W, A DISTANCE OF 130.70' TO A POINT; THENCE S89°45'07" A DISTANCE OF 628.17' TO A POINT; THENCE S50°45'07"E, A DISTANCE OF 191.09' TO THE POINT OF BEGINNING. BEING THE SAME REAL ESTATE CONVEYED TO RIVERSIDE HOSPITAL, INC., BY DEED FROM UNIVERSITY SQUARE ASSOCIATES, DATED SEPTEMBER 8, 1997, RECORDED SEPTEMBER 10, 1997, IN THE CLERK'S OFFICE, CIRCUIT COURT, JAMES CITY COUNTY, VIRGINIA, AS INSTRUMENT NO. 970014731.

**PARCEL 2:**

**TOGETHER WITH NON-EXCLUSIVE EASEMENTS TO USE ACCESS ROADS AS SET FORTH IN SECTION 4 AND OTHER RIGHTS FOR UTILITIES AS SET OUT UNDER SECTION 1 (G) OF COVENANTS, CONDITIONS AND RESTRICTIONS AGREEMENT AS ATTACHED TO DEED RECORDED AS INSTRUMENT No. 970014731.**

VIRGINIA: CITY OF WILLIAMSBURG & COUNTY OF JAMES CITY  
This document was admitted to record on 16 Mar. 09  
at 11:24 AM/PM. The taxes imposed by Virginia Code  
Section 58.1-801, 58.1-802 & 58.1-814 have been paid.

STATE TAX	LOCAL TAX	ADDITIONAL TAX
\$ _____	\$ _____	\$ _____

TESTE: BETSY B. WOOLRIDGE, CLERK  
BY: Betsy B. Woolridge Clerk

12

**POOR  
QUALITY**

**ORIGINAL(S)  
FOLLOW**

**THIS IS THE BEST  
COPY AVAILABLE**

**VCE DOCUMENT CONVERSION**

080023975

Tax Parcel Identification Number: 481 22 00020

Recordation Tax is exempt pursuant to the Code of Virginia, 1950, as amended, Section 58.1-811(A)(3) and (C)(1).

## UTILITY EASEMENT

THIS DEED OF EASEMENT ("Deed") is made this 17<sup>th</sup> day of ~~September~~ 2008, by and among RIVERSIDE HOSPITAL, INC., a Virginia non-stock corporation, hereinafter referred to as "Grantor", WILLIAMSBURG RIVERSIDE MEDICAL COMPLEX, LLC, a Delaware limited liability company ("WRMC") (to be indexed as Grantor and Grantee); and the JAMES CITY SERVICE AUTHORITY, a political subdivision of the Commonwealth of Virginia, hereinafter referred to as "Grantee."

WITNESSETH: That for and in consideration of the sum of One Dollar (\$1.00) cash in hand paid and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the said Grantor does hereby grant and convey unto the Grantee a perpetual, non-exclusive easements (collectively the "Easement") for the installation, operation and/or maintenance of works and systems for the underground transmission of potable water and the underground collection and transmission of sewage and related services over, upon, across, and under the following described property (the "Easement Area"), to-wit:

All those certain lots, pieces, or parcels of land lying and situate in the Berkeley District of James City County, Virginia, and shown as a "15' WATERLINE EASEMENT", "20' JCSA UTILITY EASEMENT", "15' JCSA UTILITY EASEMENT", and "VARIABLE WIDTH JCSA UTILITY EASEMENT" on that certain plat entitled "MEDICAL OFFICE BUILDING, PROPERTY OF RIVERSIDE HOSPITAL, INC., JAMESTOWN DISTRICT, JAMES CITY COUNTY, VIRGINIA", dated November 27, 2007, prepared by Landmark Design Group, Inc., and recorded simultaneously herewith in the Circuit Court Clerk's Office (the "Clerk's Office") for the City of Williamsburg and County of James City, Virginia, as Instrument Number 080023975.

Prepared by:  
Molly E. Trant, Esquire  
701 Town Center Drive, Suite 1000  
Newport News, VA 23606

Return to:  
JCSA  
101-E Mounts Bay Road  
Williamsburg, VA 23185

Being a portion of the same property conveyed to Grantor by deed dated September 8, 1997, recorded September 10, 1997, in the Clerk's Office, Circuit Court, James City County, Virginia, as Instrument No. 970014731.

The Easement is conveyed subject to the following terms, covenants, restrictions, and conditions:

1. The Easement, rights and privileges herein conveyed to Grantee are made expressly subject to such easements, covenants, restrictions, conditions, reservations, and limitations, if any, of record, and to matters visible upon inspection or that would be disclosed by accurate physical survey of the premises.
2. Grantor may, in its reasonable discretion, upon ninety (90) days notice to Grantee relocate any Easement Area as may be practicable to a new site designated by Grantor, and acceptable to and approved by Grantee, and (so long as WRMC is the lessee of the property on which the Easement Area is located pursuant to that "Ground Lease" as hereinafter defined) approved in writing by WRMC which approval shall not be unreasonably withheld, conditioned or delayed. In the event that any Easement is so relocated, Grantor shall pay all costs for the relocation of Grantee's improvements located within the Easement Area and convey to Grantee an equivalent easement at the new site.
3. Grantor may use the Easement Area for any reasonable purpose not inconsistent with the rights hereby granted, provided such use does not interfere with the safe and efficient construction, operation or maintenance of said facilities, and further provided that such use is not inconsistent with any laws, ordinances or codes pertaining to the construction, operation or maintenance of said facilities. Grantor shall not place any permanent improvements within the Easement without permission of Grantee, or its successors, including but not limited to houses, buildings, pools, sheds, signs or similar permanent structures. Grantor may install curbing and a parking lot, as shown on approved plans, entitled "Riverside Medical Building", prepared by LandMark Design, dated December 12, 2000. Any disturbance of or damage to the curbing or parking lot located in the Easement Area, by the Grantee or its contractor(s) will be restored by the Grantee as nearly as practicable. Grantee will make every effort to protect any improvements made within the easement area but will not be responsible for replacing landscaping, shrubs, and ground cover, should their removal be necessary for the maintenance and operation of the utility lines located within the Easement Area.
4. Except as provided herein, Grantee shall not use the Easement Area in any way that materially interferes with Grantor's use and enjoyment of the Easement Area or Grantor's other property; provided, however, that Grantee shall have the right to keep the Easement Area clear of buildings, structures, trees, shrubs, undergrowth or other obstructions which pose a material threat to the safe and proper operation of Grantee's improvements in the Easement Area. Grantee shall have the right to trim, cut and remove trees, shrubbery or other obstructions which interfere with or threaten the efficient and safe operation, construction and maintenance of said facilities.

5. Except as otherwise provided herein, use of the Easement Area shall be limited to Grantor and Grantee. With the exception of approximately perpendicular crossings, other utility providers desiring to locate utilities within the Easement Area shall obtain prior, written authorization from Grantee. Grantee shall have the right of ingress to and egress from said Easement over the lands of Grantor. Grantee shall exercise such right in such manner as shall not occasion injury and inconvenience to Grantor.

6. Grantor shall have no responsibility for the services provided by Grantee or for the proper functioning of Grantee's improvements located in the Easement Area.

7. Grantee shall not file any mechanic's, laborer's or materialman's lien, or suffer or permit any such lien to be filed against the Grantor's property, or any improvements thereon, or any part thereof by reason of work, labor, services, or materials requested and/or supplies claimed to have been requested by or on behalf of Grantee; and if such lien shall at any time be so filed, within ten (10) days after notice of the filing thereof, Grantee shall cause it to be canceled and discharged of record.

8. The easement rights and privileges established, created and granted by this Agreement shall run with the land and shall bind Grantor, Grantee and their respective successors and assigns; provided, however, that such rights and privileges are not intended, nor shall they be construed as creating any rights in or for the benefit of the general public, or in any person or business entity other than those expressly provided for herein, whether as a third party beneficiary or otherwise. Notwithstanding the foregoing, Grantor and Grantee acknowledge that WRMC, its successors or assigns, shall be entitled to enforce the rights of Grantor under this Deed for so long as WRMC is lessee of the property on which the Easement Area is located pursuant to that certain Ground Lease dated November 7, 2007 by and between Grantor and WRMC (the "Ground Lease"), evidenced by that certain Memorandum of Ground Lease dated November 7, 2007 recorded on November 13, 2007 as Instrument No. 070031327

9. In the event any dispute arises under this instrument and any party resorts to judicial proceedings to enforce any provision hereof, the party substantially prevailing in such proceedings shall be entitled to recover from the other party the costs of such proceedings including reasonable attorneys' fees.

10. Notwithstanding anything to the contrary in the Ground Lease, if Grantor exercises its rights to relocate the Easement Area set forth in section 2 hereon, WRMC shall have no obligation to share in any costs related to such relocation.

WITNESS the following signature and seal:

**[SIGNATURE LOCATED ON THE SUCCEEDING PAGES]**

[SIGNATURE PAGE 1 of 3 TO UTILITY EASEMENT]

RIVERSIDE HOSPITAL, INC.

By: [Signature]  
Name: Wade D. Brughman  
Title: CEO

STATE OF VA  
~~CITY~~ COUNTY OF Newport News, to-wit:

The foregoing was acknowledged before me this 17<sup>th</sup> day of September,  
2006 by Wade D. Brughman as CEO of Riverside Hospital, Inc.

[Signature]  
NOTARY PUBLIC #4101110

My commission expires on: 12/31/11



[SIGNATURE PAGE 3 of 3 TO UTILITY EASEMENT]

JAMES CITY SERVICE AUTHORITY

By: Larry M Foster  
Name: Larry M. Foster  
Title: General Manager

STATE OF Virginia  
CITY/COUNTY OF James City, to-wit:

The foregoing was acknowledged before me this 16<sup>th</sup> day of May, 2008, by Larry M Foster, as General Manager of James City Service Authority

Melanie D. Davis  
NOTARY PUBLIC ID# 7014335

My commission expires on: 12/31/10

1 Large/Small Plat(s) Recorded  
herewith as # 080023975

VIRGINIA: CITY OF WILLIAMSBURG & COUNTY OF JAMES CITY  
This document was admitted to record on 9-24-2008  
at 2:18 PM. The taxes imposed by Virginia Code  
Section 58.1-801, 58.1-802 & 58.1-814 have been paid.

STATE TAX	LOCAL TAX	ADDITIONAL TAX.
\$ _____	\$ _____	\$ _____

TESTE: BETSY B. WOOLRIDGE, CLERK  
BY: Betsy B. Woolridge Clerk