

PRELIMINARY
DRAINAGE REPORT

FOR

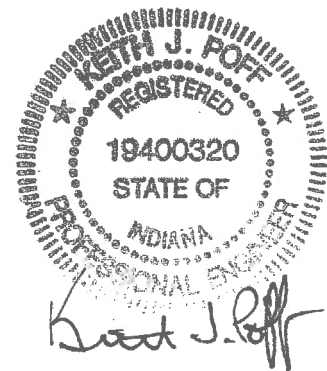
Arlington Heights

Kansas Rd.
Vanderburgh County, Indiana

for

Bauer Homes, Inc.

Report by:
SITECON, Inc.
10335 Hedden Road, Suite 2
Evansville, IN 47725
(812) 868-0877
February 27, 2007



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ARLINGTON HEIGHTS
SUBDIVISION

Preliminary Drainage Plan

Project Name and Location

Arlington Heights
Kansas Rd.
Center Township, Section 26, T 5 S, R 10 W
Vanderburgh County, Indiana

Developer Name and Address

Bauer Homes, Inc.
Al Bauer, Owner
3816 Morgan Ave.
Evansville, IN 47715

Drainage Plan Preparer

SITECON, Inc.
10335 Hedden Road, Suite 2
Evansville, IN 47725
(812) 868-0877

Site Location:

The subject property is a 20.78-acre site located on Kansas Road. The property is part of the E 1/2 of the NW ¼ of Section 26 in Center Township in Vanderburgh County. The project plans to provide access on its north and west sides. The north side will access Kansas Road where there is approximately 444 feet of frontage along Kansas Rd. To the west the project will connect with Furlong Drive. The subject site currently has three existing barns and one existing residence. The property is primarily cultivated row crops with some areas in lawn and a small wooded area on the east side.

Existing Site Conditions:

The subject site is steep sloping grassy terrain. The property lies on the west side of a large hill and drains to the west, northwest, and southwest out of small valleys. There is also a small watershed that is collected in the southern roadside ditch for Kansas Rd. The northern valley along with the Kansas Road's southern ditch flows west thru Five Oaks Subdivision II, and have a combined watershed area of approximately 18.39-acres to the point where the flow lines exit the site to the west. The central valley has a watershed of about 8.28-acres. The stormwater flows west in sheet flow partly thru a ditch at the southern boundary of Five Oaks Subdivision II, and partly thru the rear yard of an adjoining residential parcel. The southern watershed is more of a slope than a valley and flows in sheet flow southwesterly. Upon exiting there are two flow paths that the water can take one to the west in a 12' D.E. at the southern boundary of Five Oaks Subdivision and another to the south thru a wooded flow path then across a cultivated field.

No portion of the property is shown to be within the 100-year flood zone (Zone A) as said property plots by scale on the Flood Insurance Rate Map (FIRM) Community Panel Number 180256 0015 C, dated August 5, 1991.

According to the Soil Survey of Vanderburgh County, Indiana, issued June 1976, the site consists of Hosmer silt loams (HoB2, HoC3), Iva silt loam (Iv), and Wakeland silt loam (Wa).

Analysis Procedure:

The Rational Method, valid for watershed areas up to 200 acres, was used for computations of storm water runoff. The post development controlled peak release rate of storm water runoff during a twenty-five (25) year return period storm from the developed project was designed to not exceed the peak release rate during a ten (10) year return period storm in its pre-developed condition.

Proposed Design:

Kansas Road's southern roadside ditch will remain the same with the exception of an added 25-yr entrance culvert, and a slight reduction in the contributing watershed due to street capture of stormwater within the project. The northern watershed will be captured

in the stormwater conveyance system and detained in a retention basin at the northern end of lots 13-15. This water will then be piped thru appropriate drainage easements in lot 15 of Five Oaks II and released into the flow path designated to accept the large upstream valley. The central watershed will be captured in a dry detention basin on the west edge of lots 17-19. The construction of this basin will eliminate lot 18, and this change will be recognized later in the design process. The outfall system for the central basin will release into 14' D. & U.G.P.U.E. located at the southern boundary of Five Oaks II. The southern watershed will also be captured in the stormwater conveyance system, but it will be detained in a retention basin at the southwest corner of lot 29. This water will be released into the flow line to the south where a more defined channel is located and will better accept the concentrated flow.

The site's stormwater will be conveyed through the streets, storm pipes and rear yard swales whereupon it will flow into the three detention basins. All stormwater on the site, with the exception of the rear and or side yard runoff for lots 1, 3, 4, 5, & 62 will be detained in these retention basins before re-entering the existing drainage ways.

The site drainage system will be Reinforced Concrete Pipe (RCP).

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Developed Watershed Basins Exhibit
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SUB-BASIN DRAINAGE CALCULATIONS - UNDEVELOPED FLOW FOR A 10 YEAR STORM

Siteon, Inc. Project: 10-07-75

Job Name/Basin #:	North Basin #:		757,841 Total SF	17.40 AC
Structures	4 Total	2,867 SF	11,468 Total SF	0.26 AC
Drives	3 Total	2,333 SF	6,999 Total SF	0.16 AC
Pavement	0 Width (ft)	0 L (ft)	0 Total SF	0.00 AC
Patios	0 Total	120 SF	0 Total SF	0.00 AC
Sidewalks	0 Width (ft)		0 Total SF	0.00 AC
Impervious surfaces	C=0.92			
Terr 1 (0-2%) lawn	C=0.12	7,980 SF	7,980 Total SF	0.18 AC
Terr 2 (2-5%) lawn	C=0.24	31,920 SF	31,920 Total SF	0.73 AC
Terr 3 (5-10%) lawn	C=0.36	683,352 SF	683,352 Total SF	15.69 AC
Terr 4 (0-2%) woods	C=0.12	0 SF	0 Total SF	0.00 AC
Terr 5 (2-5%) woods	C=0.24	0 SF	0 Total SF	0.00 AC
Terr 6 (5-10%) woods	C=0.36	0 SF	0 Total SF	0.00 AC
Terr 7 (0-2%) cult	C=0.20	0 SF	0 Total SF	0.00 AC
Terr 8 (2-5%) cult	C=0.35	0 SF	0 Total SF	0.00 AC
Terr 9 (5-10%) cult	C=0.50	0 SF	0 Total SF	0.00 AC
Terr 10-Lakes	C=1.00	16,122 SF	16,122 Total SF	0.37 AC
	Wtd C =	0.38	757,841 Check	
	Wtd N =	0.38		
	High Pt El=	491.00 ft		
	Inlet El=	407.50 ft		
	Length=	1454.00 ft		
	Slope=	0.0574		
	tc=	30.86 min		
0 1	Is 5<tc<10?	i10=	0.00 in/hr	
0 1	Is 10<tc<15?	i10=	0.00 in/hr	
0 1	Is 15<tc<30?	i10=	0.00 in/hr	
1 1	Is 30<tc<60?	i10=	3.19 in/hr	
	Q10=	21.04 cfs	Date:	02/27/07

SUB-BASIN DRAINAGE CALCULATIONS - UNDEVELOPED FLOW FOR A 10 YEAR STORM

Siteon, Inc. Project: 10-07-75

Job Name/Basin #:	Central Basin	360,828 Total SF	8.28 AC
Structures	1 Total	500 SF	100 %
Drives	0 Total	0 SF	0 Total SF
Pavement	0 Width (ft)	0 L (ft)	0 Total SF
Patios	0 Total	120 SF	0 Total SF
Sidewalks	0 Width (ft)		0 Total SF
Impervious surfaces	C=0.92		

Terr 1 (0-2%) lawn	C=0.12	0 SF	0 Total SF	0.00 AC
Terr 2 (2-5%) lawn	C=0.24	0 SF	0 Total SF	0.00 AC
Terr 3 (5-10%) lawn	C=0.36	278,328 SF	278,328 Total SF	6.39 AC
Terr 4 (0-2%) woods	C=0.12	0 SF	0 Total SF	0.00 AC
Terr 5 (2-5%) woods	C=0.24	0 SF	0 Total SF	0.00 AC
Terr 6 (5-10%) woods	C=0.36	82,000 SF	82,000 Total SF	1.88 AC
Terr 7 (0-2%) cult	C=0.20	0 SF	0 Total SF	0.00 AC
Terr 8 (2-5%) cult	C=0.35	0 SF	0 Total SF	0.00 AC
Terr 9 (5-10%) cult	C=0.50	0 SF	0 Total SF	0.00 AC
Terr 10-Lakes	C=1.00	0 SF	0 Total SF	0.00 AC

Wtd C = 0.36
Wtd N = 0.44
High Pt El = 491.00 ft
Inlet El = 409.00 ft
Length = 1084.00 ft
Slope = 0.0756
tc = 27.07 min

360,828 Check

0 1	Is 5<tc<10?	i10=	0.00 in/hr
0 1	Is 10<tc<15?	i10=	0.00 in/hr
1 1	Is 15<tc<30?	i10=	3.48 in/hr
1 0	Is 30<tc<60?	i10=	0.00 in/hr

Q10= 10.40 cfs

Date: 02/27/07

SUB-BASIN DRAINAGE CALCULATIONS - UNDEVELOPED FLOW FOR A 10 YEAR STORM

Siteon, Inc. Project: 10-07-75

Job Name/Basin #:	South Basin		391,449 Total SF	8.99 AC
Structures	0 Total	0 SF	0 Total SF	0.00 AC
Drives	0 Total	0 SF	0 Total SF	0.00 AC
Pavement	0 Width (ft)	0 L (ft)	0 Total SF	0.00 AC
Patios	0 Total	120 SF	0 Total SF	0.00 AC
Sidewalks	0 Width (ft)		0 Total SF	0.00 AC
Impervious surfaces	C=0.92			
Terr 1 (0-2%) lawn	C=0.12	0 SF	0 Total SF	0.00 AC
Terr 2 (2-5%) lawn	C=0.24	0 SF	0 Total SF	0.00 AC
Terr 3 (5-10%) lawn	C=0.36	268,169 SF	268,169 Total SF	6.16 AC
Terr 4 (0-2%) woods	C=0.12	0 SF	0 Total SF	0.00 AC
Terr 5 (2-5%) woods	C=0.24	0 SF	0 Total SF	0.00 AC
Terr 6 (5-10%) woods	C=0.36	123,280 SF	123,280 Total SF	2.83 AC
Terr 7 (0-2%) cult	C=0.20	0 SF	0 Total SF	0.00 AC
Terr 8 (2-5%) cult	C=0.35	0 SF	0 Total SF	0.00 AC
Terr 9 (5-10%) cult	C=0.50	0 SF	0 Total SF	0.00 AC
Terr 10-Lakes	C=1.00	0 SF	0 Total SF	0.00 AC
	Wt'd C =	0.36	391,449 Check	
	Wt'd N =	0.46		
	High Pt El=	486.00 ft		
	Inlet El=	402.00 ft		
	Length=	1152.00 ft		
	Slope=	0.0729		
	tc=	28.61 min		
0 1	Is 5<tc<10?	i10=	0.00 in/hr	
0 1	Is 10<tc<15?	i10=	0.00 in/hr	
1 1	Is 15<tc<30?	i10=	3.35 in/hr	
1 0	Is 30<tc<60?	i10=	0.00 in/hr	
	Q10=	10.82 cfs	Date:	02/27/07

DEVELOPED CALCULATIONS FLOW FOR A 25 YEAR STORM

Sitecon, Inc. Project: 10-07-75

Job Name/Basin #:	Arlington Heights	Basin OS-1	447,824 Total SF	10.28 AC
Exist. Impervious surfaces (2-5%) C=0.94				
Structures	0 Total	3,000 SF	0 Total SF	0.00 AC
Drives	0 Total	720 SF	0 Total SF	0.00 AC
Pavement	24 Width (ft)	0 L (ft)	0 Total SF	0.00 AC
			0 TOTAL	0.00 AC
Proposed Impervious surfaces (2-5%) C=0.94				
Structures	0 Total	3,400 SF	0 Total SF	0.00 AC
Drives	0 Total	780 SF	0 Total SF	0.00 AC
Pavement	0 L (ft)	14.5 Width (ft)	0 Total SF	0.00 AC
Patios	0 Total	200 SF	0 Total SF	0.00 AC
Sidewalks	0 Width (ft)		0 Total SF	0.00 AC
			0 TOTAL	0.00 AC
Exist cultivated fields:				
0-2% slope	C=0.20	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.35	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.50	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.65	0 SF	0 Total SF	0.00 AC
			0 TOTAL	0.00 AC
For lawn areas:				
0-2% slope	C=0.15	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.25	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.40	447,824 SF	447,824 Total SF	10.28 AC
10+% slope	C=0.55	0 SF	0 Total SF	0.00 AC
			447,824 TOTAL	10.28 AC
For woodland areas:				
0-2% slope	C=0.12	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.24	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.36	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.48	0 SF	0 Total SF	0.00 AC
			0 TOTAL	0.00 AC

Check 447,824 GT

W'd C = 0.40
 W'd N = 0.40
 High Pt El 483.00 ft
 Inlet El 415.50 ft
 Length 994.00 ft
 Slope 0.0679
 tc 25.36 min

0 1	Is 5<tc<10?	i 25=	0.00 in/hr
0 1	Is 10<tc<15?	i 25=	0.00 in/hr
1 1	Is 15<tc<30?	i 25=	4.07 in/hr
1 0	Is 30<tc<60?	i 25=	0.00 in/hr

Q25= 16.76 cfs

Date: 2/27/2007

DEVELOPED CALCULATIONS FLOW FOR A 25 YEAR STORM

Sitecon, Inc. Project: 10-07-75

Job Name/Basin #: Arlington Heights Basin OS-2 114,086 Total SF 2.62 AC

Exist. Impervious surfaces (2-5%) C=0.94			
Structures	0 Total	3,000 SF	0 Total SF 0.00 AC
Drives	0 Total	720 SF	0 Total SF 0.00 AC
Pavement	24 Width (ft)	0 L (ft)	0 Total SF 0.00 AC
			<hr/>
			0 TOTAL 0.00 AC

Proposed Impervious surfaces (2-5%) C=0.94			
Structures	0 Total	3,400 SF	0 Total SF 0.00 AC
Drives	0 Total	780 SF	0 Total SF 0.00 AC
Pavement	0 L (ft)	14.5 Width (ft)	0 Total SF 0.00 AC
Patios	0 Total	200 SF	0 Total SF 0.00 AC
Sidewalks	0 Width (ft)		0 Total SF 0.00 AC
			<hr/>
			0 TOTAL 0.00 AC

Exist cultivated fields:			
0-2% slope	C=0.20	0 SF	0 Total SF 0.00 AC
2-5% slope	C=0.35	0 SF	0 Total SF 0.00 AC
5-10% slope	C=0.50	0 SF	0 Total SF 0.00 AC
10+% slope	C=0.65	0 SF	0 Total SF 0.00 AC
			<hr/>
			0 TOTAL 0.00 AC

For lawn areas:			
0-2% slope	C=0.15	0 SF	0 Total SF 0.00 AC
2-5% slope	C=0.25	0 SF	0 Total SF 0.00 AC
5-10% slope	C=0.40	114,086 SF	114,086 Total SF 2.62 AC
10+% slope	C=0.55	0 SF	0 Total SF 0.00 AC
			<hr/>
			114,086 TOTAL 2.62 AC

For woodland areas:			
0-2% slope	C=0.12	0 SF	0 Total SF 0.00 AC
2-5% slope	C=0.24	0 SF	0 Total SF 0.00 AC
5-10% slope	C=0.36	0 SF	0 Total SF 0.00 AC
10+% slope	C=0.48	0 SF	0 Total SF 0.00 AC
			<hr/>
			0 TOTAL 0.00 AC

Check 114,086 GT

Wt'd C =	0.40
Wt'd N =	0.40
High Pt El	491.00 ft
Inlet El	448.00 ft
Length	438.00 ft
Slope	0.0982
tc	15.87 min

0 1	Is 5<tc<10?	i 25=	0.00 in/hr
0 1	Is 10<tc<15?	i 25=	0.00 in/hr
1 1	Is 15<tc<30?	i 25=	4.95 in/hr
1 0	Is 30<tc<60?	i 25=	0.00 in/hr

Q25= 5.19 cfs

Date: 2/27/2007

DEVELOPED CALCULATIONS FLOW FOR A 25 YEAR STORM

Sitecon, Inc. Project: 10-07-75

Job Name/Basin #:	Arlington Heights	Basin OS-3	67,661 Total SF	1.55 AC
Exist. Impervious surfaces (2-5%) C=0.94				
Structures	0 Total	3,000 SF	0 Total SF	0.00 AC
Drives	0 Total	720 SF	0 Total SF	0.00 AC
Pavement	24 Width (ft)	0 L (ft)	0 Total SF	0.00 AC
			0 TOTAL	0.00 AC
Proposed Impervious surfaces (2-5%) C=0.94				
Structures	0 Total	3,400 SF	0 Total SF	0.00 AC
Drives	0 Total	780 SF	0 Total SF	0.00 AC
Pavement	0 L (ft)	14.5 Width (ft)	0 Total SF	0.00 AC
Patios	0 Total	200 SF	0 Total SF	0.00 AC
Sidewalks	0 Width (ft)		0 Total SF	0.00 AC
			0 TOTAL	0.00 AC
Exist cultivated fields:				
0-2% slope	C=0.20	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.35	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.50	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.65	0 SF	0 Total SF	0.00 AC
			0 TOTAL	0.00 AC
For lawn areas:				
0-2% slope	C=0.15	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.25	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.40	67,661 SF	67,661 Total SF	1.55 AC
10+% slope	C=0.55	0 SF	0 Total SF	0.00 AC
			67,661 TOTAL	1.55 AC
For woodland areas:				
0-2% slope	C=0.12	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.24	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.36	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.48	0 SF	0 Total SF	0.00 AC
			0 TOTAL	0.00 AC

Check 67,661 GT

Wt'd C = 0.40
 Wt'd N = 0.40
 High Pt El 486.00 ft
 Inlet El 421.00 ft
 Length 695.00 ft
 Slope 0.0935
 tc 19.91 min

0 1	Is 5<tc<10?	i 25=	0.00 in/hr
0 1	Is 10<tc<15?	i 25=	0.00 in/hr
1 1	Is 15<tc<30?	i 25=	4.58 in/hr
1 0	Is 30<tc<60?	i 25=	0.00 in/hr

Q25= 2.84 cfs

Date: 2/27/2007

SUB-BASIN DRAINAGE CALCULATIONS - DEVELOPED BASIN COEFFICIENT

Siteon, Inc. Project: 10-07-75

Job Name/Basin #:	Arlington Heights North Basin		757,841 Total SF	17.40 AC
Exist. Impervious surfaces (2-5%) C=0.94				
Structures	1 Total	3,000 SF	3,000 Total SF	0.07 AC
Pavement	0 Width (ft.)	0 Lft	0 Total SF	0.00 AC
Stone	0 Total	583 SF	0 Total SF	0.00 AC
			<hr/>	
			3,000 TOTAL	0.07 AC
Proposed Impervious surfaces (2-5%) C=0.94				
Structures	26 Total	2,500 SF	65,000 Total SF	1.49 AC
Drives	26 Total	740 SF	19,240 Total SF	0.44 AC
Pavement	29 Width (ft)	1,253 L (ft)	36,337 Total SF	0.83 AC
Patios	26 Total	200 SF	5,200 Total SF	0.12 AC
Sidewalks	0 Width (ft)		0 Total SF	0.00 AC
			<hr/>	
			125,777 TOTAL	2.89 AC
Exist cultivated fields:				
0-2% slope	C=0.20	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.35	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.50	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.65	0 SF	0 Total SF	0.00 AC
			<hr/>	
			0 TOTAL	0.00 AC
For lawn areas:				
0-2% slope	C=0.15	144,881 SF	144,881 Total SF	3.33 AC
2-5% slope	C=0.25	36,220 SF	36,220 Total SF	0.83 AC
5-10% slope	C=0.40	447,963 SF	447,963 Total SF	10.28 AC
10+% slope	C=0.55	0 SF	0 Total SF	0.00 AC
			<hr/>	
			629,064 TOTAL	14.44 AC
For woodland areas:				
0-2% slope	C=0.12	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.24	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.36	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.48	0 SF	0 Total SF	0.00 AC
			<hr/>	
			0 TOTAL	0.00 AC

Check 757,841 GT

Wtd C = 0.44

Date: 02/27/07

SUB-BASIN DRAINAGE CALCULATIONS - DEVELOPED BASIN COEFFICIENT

Siteon, Inc. Project: 10-07-75

Job Name/Basin #:	Arlington Heights CENTRAL Basin		391,449 Total SF	8.99 AC
Exist. Impervious surfaces (2-5%) C=0.94				
Structures	0 Total	0 SF	0 Total SF	0.00 AC
Pavement	0 Width (ft.)	0 Lft	0 Total SF	0.00 AC
Stone	0 Total	0 SF	0 Total SF	0.00 AC
			<hr/>	
			0 TOTAL	0.00 AC
Proposed Impervious surfaces (2-5%) C=0.94				
Structures	20 Total	2,500 SF	50,000 Total SF	1.15 AC
Drives	20 Total	740 SF	14,800 Total SF	0.34 AC
Pavement	29 Width (ft)	920 L (ft)	26,680 Total SF	0.61 AC
Patios	20 Total	200 SF	4,000 Total SF	0.09 AC
Sidewalks	0 Width (ft)		0 Total SF	0.00 AC
			<hr/>	
			95,480 TOTAL	2.19 AC
Exist cultivated fields:				
0-2% slope	C=0.20	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.35	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.50	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.65	0 SF	0 Total SF	0.00 AC
			<hr/>	
			0 TOTAL	0.00 AC
For lawn areas:				
0-2% slope	C=0.15	145,433 SF	145,433 Total SF	3.34 AC
2-5% slope	C=0.25	36,358 SF	36,358 Total SF	0.83 AC
5-10% slope	C=0.40	114,178 SF	114,178 Total SF	2.62 AC
10+% slope	C=0.55	0 SF	0 Total SF	0.00 AC
			<hr/>	
			295,969 TOTAL	6.79 AC
For woodland areas:				
0-2% slope	C=0.12	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.24	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.36	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.48	0 SF	0 Total SF	0.00 AC
			<hr/>	
			0 TOTAL	0.00 AC

Check 391,449 GT

Wtd C = 0.42

Date: 02/27/07

SUB-BASIN DRAINAGE CALCULATIONS - DEVELOPED BASIN COEFFICIENT

Siteon, Inc. Project: 10-07-75

Job Name/Basin #:	Arlington Heights South Basin		391,449 Total SF	8.99 AC
Exist. Impervious surfaces (2-5%) C=0.94				
Structures	0 Total	0 SF	0 Total SF	0.00 AC
Pavement	0 Width (ft.)	0 Lft	0 Total SF	0.00 AC
Stone	0 Total	0 SF	0 Total SF	0.00 AC
			<hr/>	
			0 TOTAL	0.00 AC
Proposed Impervious surfaces (2-5%) C=0.94				
Structures	32 Total	2,500 SF	80,000 Total SF	1.84 AC
Drives	32 Total	740 SF	23,680 Total SF	0.54 AC
Pavement	29 Width (ft)	1,061 L (ft)	30,769 Total SF	0.71 AC
Patios	32 Total	200 SF	6,400 Total SF	0.15 AC
Sidewalks	0 Width (ft)		0 Total SF	0.00 AC
			<hr/>	
			140,849 TOTAL	3.23 AC
Exist cultivated fields:				
0-2% slope	C=0.20	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.35	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.50	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.65	0 SF	0 Total SF	0.00 AC
			<hr/>	
			0 TOTAL	0.00 AC
For lawn areas:				
0-2% slope	C=0.15	173,755 SF	173,755 Total SF	3.99 AC
2-5% slope	C=0.25	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.40	67,192 SF	67,192 Total SF	1.54 AC
10+% slope	C=0.55	9,653 SF	9,653 Total SF	0.22 AC
			<hr/>	
			250,600 TOTAL	5.75 AC
For woodland areas:				
0-2% slope	C=0.12	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.24	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.36	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.48	0 SF	0 Total SF	0.00 AC
			<hr/>	
			0 TOTAL	0.00 AC

Check 391,449 GT

Wtd C = 0.49

Date: 02/27/07

**Vanderburgh County Drainage Board
Form 800**

Computation Sheet for Detention Storage Using the Rational Method

Project: Arlington Heights South **Date:** 02/27/07

Detention Facility Design Return Period 25 years

Release Rate Return Period 10 years

Watershed Area 8.99 acres
 Undeveloped Time of Concentration 28.61 minutes
 Undeveloped Rainfall Intensity (iu) 3.35 inches/hour
 Weighted Undeveloped Runoff Coefficient (Cu) 0.36
 Undeveloped Runoff Rate (O=Cu x iu x Au) 10.84 cfs
 Developed Runoff Coefficient (Cd) 0.49

Storm Duration td	Rainfall Intensity id	Inflow Rate I(td) Cd x id x Ad	Outflow Rate O Cu x iu x Au	Storage Rate (I x td) - O	Required Storage [(I(td)-O)x[td/12]
min	inches/hr	cfs	cfs	cfs	acre-ft
5	7.208	31.75	10.84	20.91	0.1452
10	5.925	26.10	10.84	15.26	0.2119
15	5.033	22.17	10.84	11.33	0.2360
20	4.571	20.14	10.84	9.29	0.2582
25	4.108	18.10	10.84	7.25	0.2519
30	3.646	16.06	10.84	5.22	0.2175
40	3.123	13.76	10.84	2.92	0.1620
50	2.601	11.46	10.84	0.62	0.0428
60	2.078	9.15	10.84	-1.69	-0.1407
90	1.578	6.95	10.84	-3.89	-0.4863

Required Storage = 0.2582 x 43,560 sf/ac = 11,247 cubic feet

CENTRAL BASIN OUTFALL
 INLET CONTROL
 NOMOGRAPH FOR PROJECTING CONCRETE PIPE
 (Socket End)

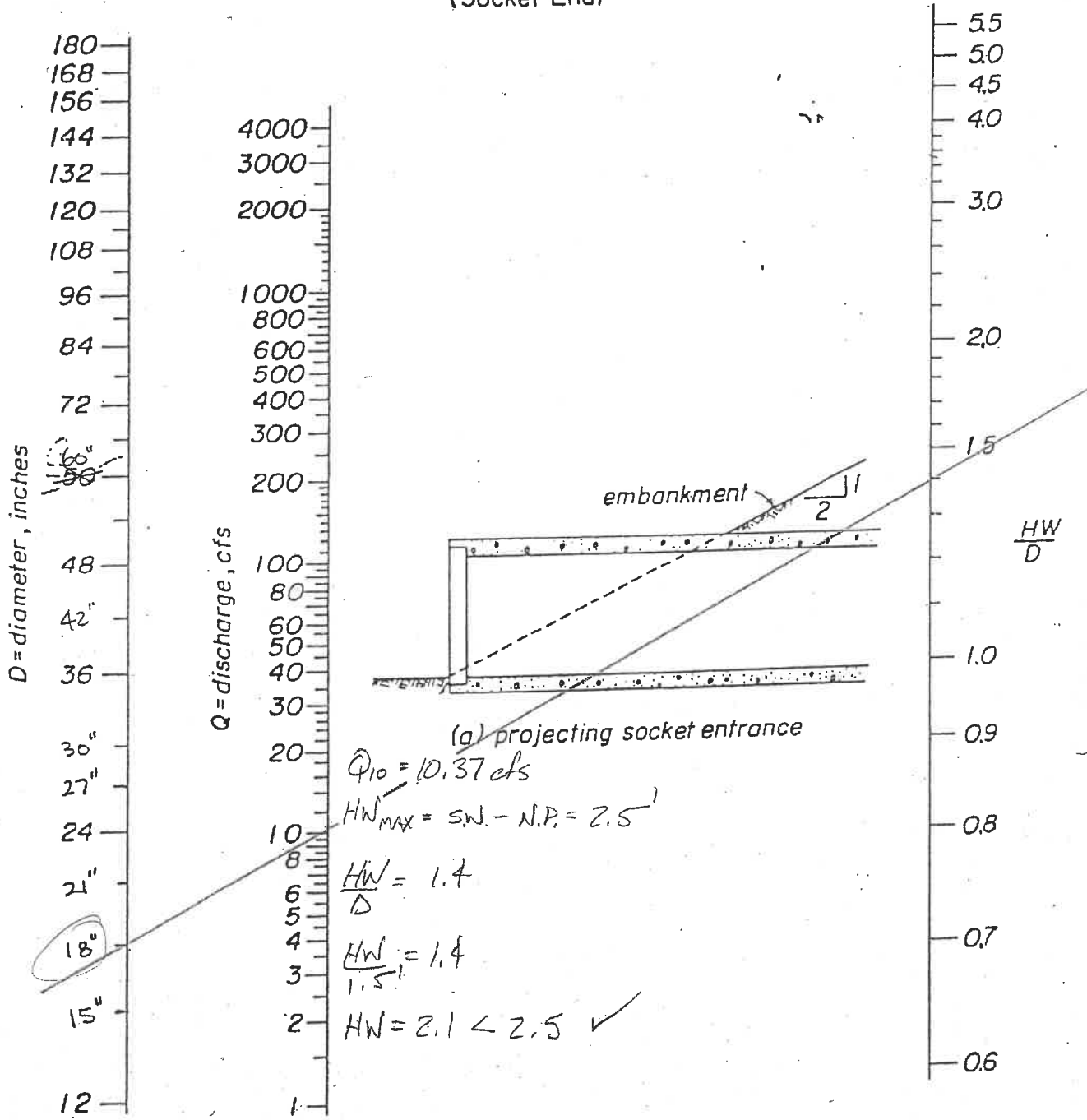


Fig. B-1

SOUTH BASIN OUTFALL
INLET CONTROL
NOMOGRAPH FOR PROJECTING CONCRETE PIPE
(Socket End)

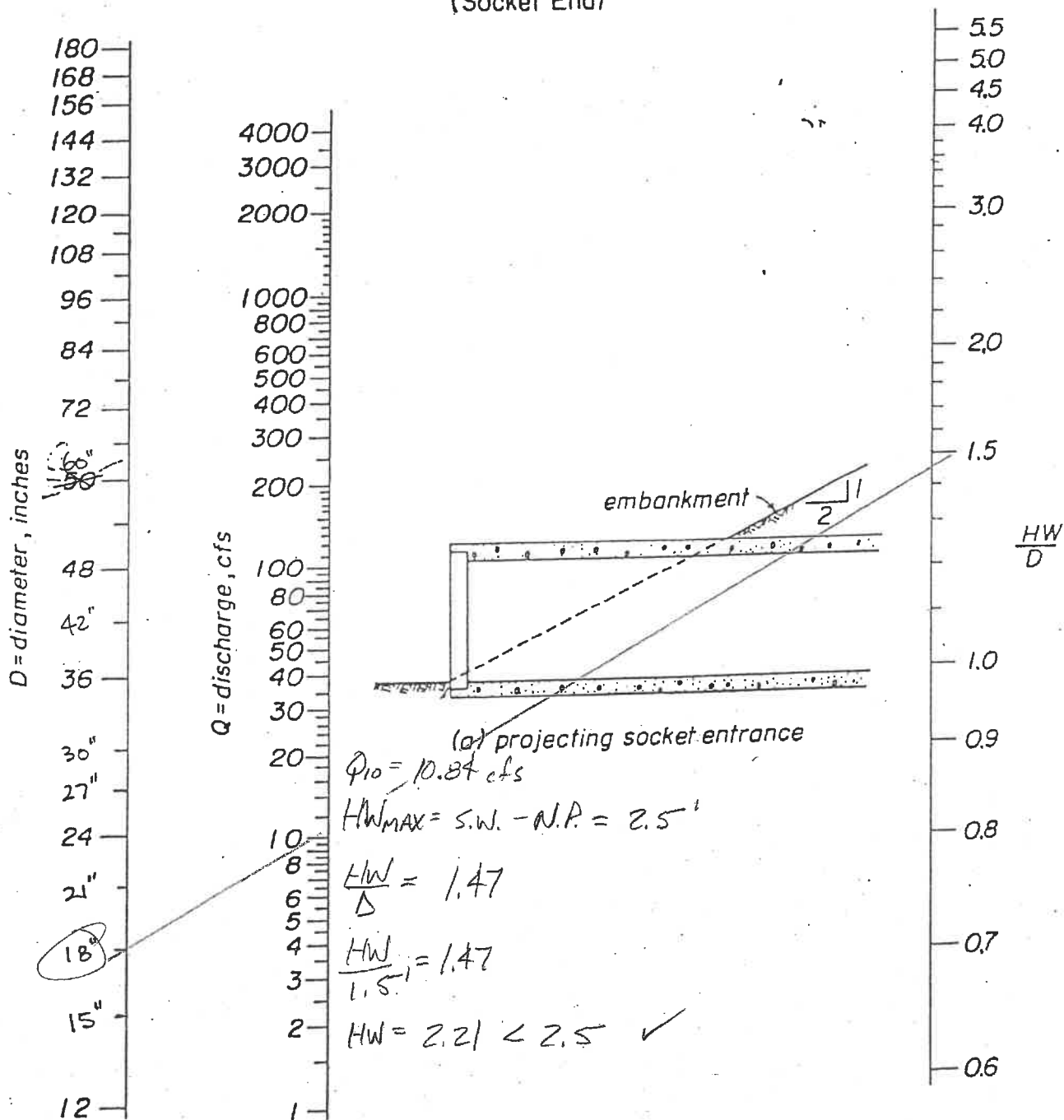


Fig. B-1

**TABLE 1
DETENTION VOLUME REQUIREMENTS**

Sitecon, Inc Project: 010-07-75

Date: 02-26-07

	10 year Undev. Release Rate	Required Storage 25 year	Restricted	Available Storage
North Basin	21.09 cfs	16,827 cf	cf	22,556 cf

Retention Volume >>

408.5	Storage Pool Elevation (spillway elev.)
- 406.00	Normal Pool Elevation
<u>2.5</u>	feet (D)

10,985	Storage Pool Area (SP)
+ 7,060	Normal Pool Area (NP)
<u>18,045</u>	sq. ft.

Volume=(1/2x(SP+NP))xD= 22,556 cu. ft. available

	10 year Undev. Release Rate	Required Storage 25 year	Restricted	Available Storage
Central Basin	10.37 cfs	6,682 cf	cf	8,614 cf

Retention Volume >>

411.5	Storage Pool Elevation (spillway elev.)
- 409.50	Normal Pool Elevation
<u>2</u>	feet (D)

6,183	Storage Pool Area (SP)
+ 2,431	Normal Pool Area (NP)
<u>8,614</u>	sq. ft.

Volume=(1/2x(SP+NP))xD= 8,614 cu. ft. available

	10 year Undev. Release Rate	Required Storage 25 year	Restricted	Available Storage
South Basin	10.84 cfs	11,247 cf	cf	16,444 cf

Retention Volume >>

405.5	Storage Pool Elevation (spillway elev.)
- 403.00	Normal Pool Elevation
<u>2.5</u>	feet (D)

8,157	Storage Pool Area (SP)
+ 4,998	Normal Pool Area (NP)
<u>13,155</u>	sq. ft.

Volume=(1/2x(SP+NP))xD= 16,444 cu. ft. available

DEVELOPED CALCULATIONS FLOW FOR A 25 YEAR STORM

Sitecon, Inc. Project: 10-07-75

Job Name/Basin #: Arlington Heights Basin A-1 471,165 Total SF 10.82 AC

Exist. Impervious surfaces (2-5%) C=0.94			
Structures	0 Total	3,000 SF	0 Total SF 0.00 AC
Drives	0 Total	720 SF	0 Total SF 0.00 AC
Pavement	24 Width (ft)	0 L (ft)	0 Total SF 0.00 AC
			<hr/>
			0 TOTAL 0.00 AC

Proposed Impervious surfaces (2-5%) C=0.94			
Structures	0 Total	3,400 SF	0 Total SF 0.00 AC
Drives	0 Total	780 SF	0 Total SF 0.00 AC
Pavement	0 L (ft)	14.5 Width (ft)	0 Total SF 0.00 AC
Patios	0 Total	200 SF	0 Total SF 0.00 AC
Sidewalks	0 Width (ft)		0 Total SF 0.00 AC
			<hr/>
			0 TOTAL 0.00 AC

Exist cultivated fields:			
0-2% slope	C=0.20	0 SF	0 Total SF 0.00 AC
2-5% slope	C=0.35	0 SF	0 Total SF 0.00 AC
5-10% slope	C=0.50	0 SF	0 Total SF 0.00 AC
10+% slope	C=0.65	0 SF	0 Total SF 0.00 AC
			<hr/>
			0 TOTAL 0.00 AC

For lawn areas:			
0-2% slope	C=0.15	0 SF	0 Total SF 0.00 AC
2-5% slope	C=0.25	0 SF	0 Total SF 0.00 AC
5-10% slope	C=0.40	471,165 SF	471,165 Total SF 10.82 AC
10+% slope	C=0.55	0 SF	0 Total SF 0.00 AC
			<hr/>
			471,165 TOTAL 10.82 AC

For woodland areas:			
0-2% slope	C=0.12	0 SF	0 Total SF 0.00 AC
2-5% slope	C=0.24	0 SF	0 Total SF 0.00 AC
5-10% slope	C=0.36	0 SF	0 Total SF 0.00 AC
10+% slope	C=0.48	0 SF	0 Total SF 0.00 AC
			<hr/>
			0 TOTAL 0.00 AC

Check 471,165 GT

Wt'd C =	0.40
Wt'd N =	0.40
High Pt El	483.00 ft
Inlet El	415.00 ft
Length	995.00 ft
Slope	0.0683
tc	25.34 min

0 1	Is 5<tc<10?	i 25=	0.00 in/hr
0 1	Is 10<tc<15?	i 25=	0.00 in/hr
1 1	Is 15<tc<30?	i 25=	4.08 in/hr
1 0	Is 30<tc<60?	i 25=	0.00 in/hr

Q25= 17.64 cfs

Date: 2/27/2007

DEVELOPED CALCULATIONS FLOW FOR A 25 YEAR STORM

Sitecon, Inc. Project: 10-07-75

Job Name/Basin #:	Arlington Heights	Basin A-2	61,540 Total SF	1.41 AC
Exist. Impervious surfaces (2-5%) C=0.94				
Structures	0 Total	3,000 SF	0 Total SF	0.00 AC
Drives	0 Total	720 SF	0 Total SF	0.00 AC
Pavement	24 Width (ft)	0 L (ft)	0 Total SF	0.00 AC
			0 TOTAL	0.00 AC
Proposed Impervious surfaces (2-5%) C=0.94				
Structures	7.5 Total	2,500 SF	18,750 Total SF	0.43 AC
Drives	7.5 Total	780 SF	5,850 Total SF	0.13 AC
Pavement	450 L (ft)	14.5 Width (ft)	6,525 Total SF	0.15 AC
Patios	7.5 Total	200 SF	1,500 Total SF	0.03 AC
Sidewalks	0 Width (ft)		0 Total SF	0.00 AC
			32,625 TOTAL	0.75 AC
Exist cultivated fields:				
0-2% slope	C=0.20	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.35	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.50	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.65	0 SF	0 Total SF	0.00 AC
			0 TOTAL	0.00 AC
For lawn areas:				
0-2% slope	C=0.15	20,703 SF	20,703 Total SF	0.48 AC
2-5% slope	C=0.25	8,212 SF	8,212 Total SF	0.19 AC
5-10% slope	C=0.40	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.55	0 SF	0 Total SF	0.00 AC
			28,915 TOTAL	0.66 AC
For woodland areas:				
0-2% slope	C=0.12	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.24	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.36	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.48	0 SF	0 Total SF	0.00 AC
			0 TOTAL	0.00 AC

Check 61,540 GT

Wt'd C = 0.58
Wt'd N = 0.20
High Pt El 436.00 ft
Inlet El 414.30 ft
Length 463.00 ft
Slope 0.0469
tc 13.96 min

0	1	Is 5<tc<10?	i 25=	0.00 in/hr
1	1	Is 10<tc<15?	i 25=	5.22 in/hr
1	0	Is 15<tc<30?	i 25=	0.00 in/hr
1	0	Is 30<tc<60?	i 25=	0.00 in/hr

Q25= 4.29 cfs

Date: 2/27/2007

DEVELOPED CALCULATIONS FLOW FOR A 25 YEAR STORM

Sitecon, Inc. Project: 10-07-75

Job Name/Basin #: Arlington Heights Basin A-3 7,885 Total SF 0.18 AC

Exist. Impervious surfaces (2-5%) C=0.94				
Structures	0 Total	3,000 SF	0 Total SF	0.00 AC
Drives	0 Total	720 SF	0 Total SF	0.00 AC
Pavement	24 Width (ft)	0 L (ft)	0 Total SF	0.00 AC
			<hr/>	
			0 TOTAL	0.00 AC

Proposed Impervious surfaces (2-5%) C=0.94				
Structures	0.3 Total	2,500 SF	750 Total SF	0.02 AC
Drives	0.5 Total	780 SF	390 Total SF	0.01 AC
Pavement	220 L (ft)	14.5 Width (ft)	3,190 Total SF	0.07 AC
Patios	0 Total	200 SF	0 Total SF	0.00 AC
Sidewalks	0 Width (ft)		0 Total SF	0.00 AC
			<hr/>	
			4,330 TOTAL	0.10 AC

Exist cultivated fields:				
0-2% slope	C=0.20	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.35	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.50	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.65	0 SF	0 Total SF	0.00 AC
			<hr/>	
			0 TOTAL	0.00 AC

For lawn areas:				
0-2% slope	C=0.15	3,555 SF	3,555 Total SF	0.08 AC
2-5% slope	C=0.25	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.40	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.55	0 SF	0 Total SF	0.00 AC
			<hr/>	
			3,555 TOTAL	0.08 AC

For woodland areas:				
0-2% slope	C=0.12	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.24	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.36	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.48	0 SF	0 Total SF	0.00 AC
			<hr/>	
			0 TOTAL	0.00 AC

Check 7,885 GT

Wt'd C =	0.58
Wt'd N =	0.19
High Pt El	436.00 ft
Inlet El	414.30 ft
Length	463.00 ft
Slope	0.0469
tc	13.72 min

0 1	Is 5<tc<10?	i 25=	0.00 in/hr
1 1	Is 10<tc<15?	i 25=	5.26 in/hr
1 0	Is 15<tc<30?	i 25=	0.00 in/hr
1 0	Is 30<tc<60?	i 25=	0.00 in/hr

Q25= 0.56 cfs

Date: 2/27/2007

DEVELOPED CALCULATIONS FLOW FOR A 25 YEAR STORM

Sitecon, Inc. Project: 10-07-75

Job Name/Basin #:	Arlington Heights	Basin A-4	12,079 Total SF	0.28 AC
Exist. Impervious surfaces (2-5%) C=0.94				
Structures	0 Total	3,000 SF	0 Total SF	0.00 AC
Drives	0 Total	720 SF	0 Total SF	0.00 AC
Pavement	24 Width (ft)	0 L (ft)	0 Total SF	0.00 AC
			0 TOTAL	0.00 AC
Proposed Impervious surfaces (2-5%) C=0.94				
Structures	0.5 Total	2,500 SF	1,250 Total SF	0.03 AC
Drives	0.5 Total	780 SF	390 Total SF	0.01 AC
Pavement	310 L (ft)	14.5 Width (ft)	4,495 Total SF	0.10 AC
Patios	1 Total	200 SF	200 Total SF	0.00 AC
Sidewalks	0 Width (ft)		0 Total SF	0.00 AC
			6,335 TOTAL	0.15 AC
Exist cultivated fields:				
0-2% slope	C=0.20	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.35	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.50	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.65	0 SF	0 Total SF	0.00 AC
			0 TOTAL	0.00 AC
For lawn areas:				
0-2% slope	C=0.15	5,744 SF	5,744 Total SF	0.13 AC
2-5% slope	C=0.25	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.40	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.55	0 SF	0 Total SF	0.00 AC
			5,744 TOTAL	0.13 AC
For woodland areas:				
0-2% slope	C=0.12	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.24	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.36	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.48	0 SF	0 Total SF	0.00 AC
			0 TOTAL	0.00 AC

Check 12,079 GT

Wt'd C = 0.56
 Wt'd N = 0.20
 High Pt El 425.00 ft
 Inlet El 414.30 ft
 Length 280.00 ft
 Slope 0.0382
 tc 11.63 min

0 1	Is 5<tc<10?	i 25=	0.00 in/hr
1 1	Is 10<tc<15?	i 25=	5.63 in/hr
1 0	Is 15<tc<30?	i 25=	0.00 in/hr
1 0	Is 30<tc<60?	i 25=	0.00 in/hr

Q25= 0.88 cfs

Date: 2/27/2007

DEVELOPED CALCULATIONS FLOW FOR A 25 YEAR STORM

Sitecon, Inc. Project: 10-07-75

Job Name/Basin #:	Arlington Heights	Basin A-5	36,769 Total SF	0.84 AC
Exist. Impervious surfaces (2-5%) C=0.94				
Structures	0 Total	3,000 SF	0 Total SF	0.00 AC
Drives	0 Total	720 SF	0 Total SF	0.00 AC
Pavement	24 Width (ft)	0 L (ft)	0 Total SF	0.00 AC
			0 TOTAL	0.00 AC
Proposed Impervious surfaces (2-5%) C=0.94				
Structures	4.5 Total	2,500 SF	11,250 Total SF	0.26 AC
Drives	7 Total	780 SF	5,460 Total SF	0.13 AC
Pavement	180 L (ft)	12 Width (ft)	2,160 Total SF	0.05 AC
Patios	1.5 Total	200 SF	300 Total SF	0.01 AC
Sidewalks	0 Width (ft)		0 Total SF	0.00 AC
			19,170 TOTAL	0.44 AC
Exist cultivated fields:				
0-2% slope	C=0.20	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.35	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.50	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.65	0 SF	0 Total SF	0.00 AC
			0 TOTAL	0.00 AC
For lawn areas:				
0-2% slope	C=0.15	17,599 SF	17,599 Total SF	0.40 AC
2-5% slope	C=0.25	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.40	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.55	0 SF	0 Total SF	0.00 AC
			17,599 TOTAL	0.40 AC
For woodland areas:				
0-2% slope	C=0.12	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.24	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.36	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.48	0 SF	0 Total SF	0.00 AC
			0 TOTAL	0.00 AC

Check 36,769 GT

Wtd C = 0.56
Wtd N = 0.20
High Pt El 415.50 ft
Inlet El 412.50 ft
Length 270.00 ft
Slope 0.0111
tc 15.30 min

0 1	Is 5<tc<10?	i 25=	0.00 in/hr
0 1	Is 10<tc<15?	i 25=	0.00 in/hr
1 1	Is 15<tc<30?	i 25=	5.01 in/hr
1 0	Is 30<tc<60?	i 25=	0.00 in/hr

Q25= 2.37 cfs

Date: 2/27/2007

DEVELOPED CALCULATIONS FLOW FOR A 25 YEAR STORM

Sitecon, Inc. Project: 10-07-75

Job Name/Basin #:	Arlington Heights	Basin A-6	16,775 Total SF	0.39 AC
Exist. Impervious surfaces (2-5%) C=0.94				
Structures	0 Total	3,000 SF	0 Total SF	0.00 AC
Drives	0 Total	720 SF	0 Total SF	0.00 AC
Pavement	24 Width (ft)	0 L (ft)	0 Total SF	0.00 AC
			0 TOTAL	0.00 AC
Proposed Impervious surfaces (2-5%) C=0.94				
Structures	2 Total	2,500 SF	5,000 Total SF	0.11 AC
Drives	0 Total	780 SF	0 Total SF	0.00 AC
Pavement	0 L (ft)	12 Width (ft)	0 Total SF	0.00 AC
Patios	4 Total	200 SF	800 Total SF	0.02 AC
Sidewalks	0 Width (ft)		0 Total SF	0.00 AC
			5,800 TOTAL	0.13 AC
Exist cultivated fields:				
0-2% slope	C=0.20	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.35	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.50	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.65	0 SF	0 Total SF	0.00 AC
			0 TOTAL	0.00 AC
For lawn areas:				
0-2% slope	C=0.15	10,975 SF	10,975 Total SF	0.25 AC
2-5% slope	C=0.25	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.40	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.55	0 SF	0 Total SF	0.00 AC
			10,975 TOTAL	0.25 AC
For woodland areas:				
0-2% slope	C=0.12	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.24	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.36	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.48	0 SF	0 Total SF	0.00 AC
			0 TOTAL	0.00 AC

Check 16,775 GT

Wt'd C = 0.42
 Wt'd N = 0.27
 High Pt El 415.50 ft
 Inlet El 411.00 ft
 Length 193.00 ft
 Slope 0.0233
 tc 12.57 min

0 1	Is 5<tc<10?	i 25=	0.00 in/hr
1 1	Is 10<tc<15?	i 25=	5.47 in/hr
1 0	Is 15<tc<30?	i 25=	0.00 in/hr
1 0	Is 30<tc<60?	i 25=	0.00 in/hr

Q25= 0.89 cfs

Date: 2/27/2007

25

DEVELOPED CALCULATIONS FLOW FOR A 25 YEAR STORM

Sitecon, Inc. Project: 10-07-75

Job Name/Basin #:	Arlington Heights	Basin A-7	41,027 Total SF	0.94 AC
Exist. Impervious surfaces (2-5%) C=0.94				
Structures	1 Total	3,500 SF	3,500 Total SF	0.08 AC
Drives	1 Total	720 SF	720 Total SF	0.02 AC
Pavement	24 Width (ft)	0 L (ft)	0 Total SF	0.00 AC
			4,220 TOTAL	0.10 AC
Proposed Impervious surfaces (2-5%) C=0.94				
Structures	1 Total	2,500 SF	2,500 Total SF	0.06 AC
Drives	1 Total	780 SF	780 Total SF	0.02 AC
Pavement	260 L (ft)	14.5 Width (ft)	3,770 Total SF	0.09 AC
Patios	1.5 Total	200 SF	300 Total SF	0.01 AC
Sidewalks	0 Width (ft)		0 Total SF	0.00 AC
			7,350 TOTAL	0.17 AC
Exist cultivated fields:				
0-2% slope	C=0.20	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.35	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.50	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.65	0 SF	0 Total SF	0.00 AC
			0 TOTAL	0.00 AC
For lawn areas:				
0-2% slope	C=0.15	26,511 SF	26,511 Total SF	0.61 AC
2-5% slope	C=0.25	2,946 SF	2,946 Total SF	0.07 AC
5-10% slope	C=0.40	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.55	0 SF	0 Total SF	0.00 AC
			29,457 TOTAL	0.68 AC
For woodland areas:				
0-2% slope	C=0.12	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.24	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.36	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.48	0 SF	0 Total SF	0.00 AC
			0 TOTAL	0.00 AC

Check 41,027 GT

Wt'd C = 0.38
 Wt'd N = 0.29
 High Pt El 437.00 ft
 Inlet El 414.00 ft
 Length 465.00 ft
 Slope 0.0495
 tc 16.56 min

0 1	Is 5<tc<10?	i 25=	0.00 in/hr
0 1	Is 10<tc<15?	i 25=	0.00 in/hr
1 1	Is 15<tc<30?	i 25=	4.89 in/hr
1 0	Is 30<tc<60?	i 25=	0.00 in/hr

Q25= 1.75 cfs

Date: 2/27/2007

DEVELOPED CALCULATIONS FLOW FOR A 25 YEAR STORM

Sitecon, Inc. Project: 10-07-75

Job Name/Basin #:	Arlington Heights	Basin A-8	18,051 Total SF	0.41 AC
Exist. Impervious surfaces (2-5%) C=0.94				
Structures	0 Total	3,500 SF	0 Total SF	0.00 AC
Drives	0 Total	720 SF	0 Total SF	0.00 AC
Pavement	24 Width (ft)	0 L (ft)	0 Total SF	0.00 AC
			0 TOTAL	0.00 AC
Proposed Impervious surfaces (2-5%) C=0.94				
Structures	2 Total	2,500 SF	5,000 Total SF	0.11 AC
Drives	3.5 Total	780 SF	2,730 Total SF	0.06 AC
Pavement	260 L (ft)	14.5 Width (ft)	3,770 Total SF	0.09 AC
Patios	0 Total	200 SF	0 Total SF	0.00 AC
Sidewalks	0 Width (ft)		0 Total SF	0.00 AC
			11,500 TOTAL	0.26 AC
Exist cultivated fields:				
0-2% slope	C=0.20	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.35	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.50	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.65	0 SF	0 Total SF	0.00 AC
			0 TOTAL	0.00 AC
For lawn areas:				
0-2% slope	C=0.15	6,551 SF	6,551 Total SF	0.15 AC
2-5% slope	C=0.25	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.40	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.55	0 SF	0 Total SF	0.00 AC
			6,551 TOTAL	0.15 AC
For woodland areas:				
0-2% slope	C=0.12	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.24	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.36	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.48	0 SF	0 Total SF	0.00 AC
			0 TOTAL	0.00 AC

Check 18,051 GT

Wt'd C = 0.65
 Wt'd N = 0.16
 High Pt El 424.00 ft
 Inlet El 414.00 ft
 Length 308.00 ft
 Slope 0.0325
 tc 11.30 min

0 1	Is 5<tc<10?	i 25=	0.00 in/hr
1 1	Is 10<tc<15?	i 25=	5.69 in/hr
1 0	Is 15<tc<30?	i 25=	0.00 in/hr
1 0	Is 30<tc<60?	i 25=	0.00 in/hr

Q25= 1.54 cfs

Date: 2/27/2007

DEVELOPED CALCULATIONS FLOW FOR A 25 YEAR STORM

Sitecon, Inc. Project: 10-07-75

Job Name/Basin #: Arlington Heights Basin A-9 9,183 Total SF 0.21 AC

Exist. Impervious surfaces (2-5%) C=0.94			
Structures	0 Total	3,500 SF	0 Total SF 0.00 AC
Drives	0 Total	720 SF	0 Total SF 0.00 AC
Pavement	24 Width (ft)	0 L (ft)	0 Total SF 0.00 AC
			<hr/>
			0 TOTAL 0.00 AC

Proposed Impervious surfaces (2-5%) C=0.94			
Structures	1.5 Total	2,500 SF	3,750 Total SF 0.09 AC
Drives	0 Total	780 SF	0 Total SF 0.00 AC
Pavement	0 L (ft)	14.5 Width (ft)	0 Total SF 0.00 AC
Patios	2.5 Total	200 SF	500 Total SF 0.01 AC
Sidewalks	0 Width (ft)		0 Total SF 0.00 AC
			<hr/>
			4,250 TOTAL 0.10 AC

Exist cultivated fields:			
0-2% slope	C=0.20	0 SF	0 Total SF 0.00 AC
2-5% slope	C=0.35	0 SF	0 Total SF 0.00 AC
5-10% slope	C=0.50	0 SF	0 Total SF 0.00 AC
10+% slope	C=0.65	0 SF	0 Total SF 0.00 AC
			<hr/>
			0 TOTAL 0.00 AC

For lawn areas:			
0-2% slope	C=0.15	4,933 SF	4,933 Total SF 0.11 AC
2-5% slope	C=0.25	0 SF	0 Total SF 0.00 AC
5-10% slope	C=0.40	0 SF	0 Total SF 0.00 AC
10+% slope	C=0.55	0 SF	0 Total SF 0.00 AC
			<hr/>
			4,933 TOTAL 0.11 AC

For woodland areas:			
0-2% slope	C=0.12	0 SF	0 Total SF 0.00 AC
2-5% slope	C=0.24	0 SF	0 Total SF 0.00 AC
5-10% slope	C=0.36	0 SF	0 Total SF 0.00 AC
10+% slope	C=0.48	0 SF	0 Total SF 0.00 AC
			<hr/>
			0 TOTAL 0.00 AC

Check 9,183 GT

Wt'd C =	0.52
Wt'd N =	0.22
High Pt El	413.50 ft
Inlet El	410.00 ft
Length	130.00 ft
Slope	0.0269
tc	9.29 min

1 1	Is 5<tc<10?	i 25=	6.11 in/hr
1 0	Is 10<tc<15?	i 25=	0.00 in/hr
1 0	Is 15<tc<30?	i 25=	0.00 in/hr
1 0	Is 30<tc<60?	i 25=	0.00 in/hr

Q25= 0.66 cfs

Date: 2/27/2007

DEVELOPED CALCULATIONS FLOW FOR A 25 YEAR STORM

Sitecon, Inc. Project: 10-07-75

Job Name/Basin #:	Arlington Heights	Basin B-1	20,941 Total SF	0.48 AC
Exist. Impervious surfaces (2-5%) C=0.94				
Structures	0 Total	3,500 SF	0 Total SF	0.00 AC
Drives	0 Total	720 SF	0 Total SF	0.00 AC
Pavement	24 Width (ft)	0 L (ft)	0 Total SF	0.00 AC
			0 TOTAL	0.00 AC
Proposed Impervious surfaces (2-5%) C=0.94				
Structures	1.75 Total	2,500 SF	4,375 Total SF	0.10 AC
Drives	2.5 Total	780 SF	1,950 Total SF	0.04 AC
Pavement	297 L (ft)	14.5 Width (ft)	4,307 Total SF	0.10 AC
Patios	0.5 Total	200 SF	100 Total SF	0.00 AC
Sidewalks	0 Width (ft)		0 Total SF	0.00 AC
			10,732 TOTAL	0.25 AC
Exist cultivated fields:				
0-2% slope	C=0.20	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.35	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.50	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.65	0 SF	0 Total SF	0.00 AC
			0 TOTAL	0.00 AC
For lawn areas:				
0-2% slope	C=0.15	9,189 SF	9,189 Total SF	0.21 AC
2-5% slope	C=0.25	1,021 SF	1,021 Total SF	0.02 AC
5-10% slope	C=0.40	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.55	0 SF	0 Total SF	0.00 AC
			10,210 TOTAL	0.23 AC
For woodland areas:				
0-2% slope	C=0.12	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.24	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.36	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.48	0 SF	0 Total SF	0.00 AC
			0 TOTAL	0.00 AC

Check 20,941 GT

Wt'd C = 0.56
 Wt'd N = 0.21
 High Pt El 420.00 ft
 Inlet El 410.00 ft
 Length 347.00 ft
 Slope 0.0288
 tc 13.88 min

0 1	Is 5<tc<10?	i 25=	0.00 in/hr
1 1	Is 10<tc<15?	i 25=	5.23 in/hr
1 0	Is 15<tc<30?	i 25=	0.00 in/hr
1 0	Is 30<tc<60?	i 25=	0.00 in/hr

Q25= 1.41 cfs

Date: 2/27/2007

DEVELOPED CALCULATIONS FLOW FOR A 25 YEAR STORM

Sitecon, Inc. Project: 10-07-75

Job Name/Basin #:	Arlington Heights	Basin B-2	17,352 Total SF	0.40 AC
Exist. Impervious surfaces (2-5%) C=0.94				
Structures	0 Total	3,500 SF	0 Total SF	0.00 AC
Drives	0 Total	720 SF	0 Total SF	0.00 AC
Pavement	24 Width (ft)	0 L (ft)	0 Total SF	0.00 AC
			0 TOTAL	0.00 AC
Proposed Impervious surfaces (2-5%) C=0.94				
Structures	1.5 Total	2,500 SF	3,750 Total SF	0.09 AC
Drives	3 Total	780 SF	2,340 Total SF	0.05 AC
Pavement	257 L (ft)	14.5 Width (ft)	3,727 Total SF	0.09 AC
Patios	0 Total	200 SF	0 Total SF	0.00 AC
Sidewalks	0 Width (ft)		0 Total SF	0.00 AC
			9,817 TOTAL	0.23 AC
Exist cultivated fields:				
0-2% slope	C=0.20	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.35	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.50	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.65	0 SF	0 Total SF	0.00 AC
			0 TOTAL	0.00 AC
For lawn areas:				
0-2% slope	C=0.15	7,536 SF	7,536 Total SF	0.17 AC
2-5% slope	C=0.25	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.40	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.55	0 SF	0 Total SF	0.00 AC
			7,536 TOTAL	0.17 AC
For woodland areas:				
0-2% slope	C=0.12	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.24	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.36	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.48	0 SF	0 Total SF	0.00 AC
			0 TOTAL	0.00 AC

Check 17,352 GT

Wt'd C = 0.60
 Wt'd N = 0.19
 High Pt El 415.00 ft
 Inlet El 410.00 ft
 Length 284.00 ft
 Slope 0.0176
 tc 13.51 min

0 1	Is 5<tc<10?	i 25=	0.00 in/hr
1 1	Is 10<tc<15?	i 25=	5.30 in/hr
1 0	Is 15<tc<30?	i 25=	0.00 in/hr
1 0	Is 30<tc<60?	i 25=	0.00 in/hr

Q25= 1.26 cfs

Date: 2/27/2007

DEVELOPED CALCULATIONS FLOW FOR A 25 YEAR STORM

Sitecon, Inc. Project: 10-07-75

Job Name/Basin #: Arlington Heights Basin C-1 46,895 Total SF 1.08 AC

Exist. Impervious surfaces (2-5%) C=0.94			
Structures	0 Total	3,500 SF	0 Total SF 0.00 AC
Drives	0 Total	720 SF	0 Total SF 0.00 AC
Pavement	24 Width (ft)	0 L (ft)	0 Total SF 0.00 AC
			0 TOTAL 0.00 AC

Proposed Impervious surfaces (2-5%) C=0.94			
Structures	5.5 Total	2,500 SF	13,750 Total SF 0.32 AC
Drives	6 Total	780 SF	4,680 Total SF 0.11 AC
Pavement	282 L (ft)	14.5 Width (ft)	4,089 Total SF 0.09 AC
Patios	5 Total	200 SF	1,000 Total SF 0.02 AC
Sidewalks	0 Width (ft)		0 Total SF 0.00 AC
			23,519 TOTAL 0.54 AC

Exist cultivated fields:			
0-2% slope	C=0.20	15,662 SF	15,662 Total SF 0.36 AC
2-5% slope	C=0.35	7,714 SF	7,714 Total SF 0.18 AC
5-10% slope	C=0.50	0 SF	0 Total SF 0.00 AC
10+% slope	C=0.65	0 SF	0 Total SF 0.00 AC
			23,376 TOTAL 0.54 AC

For lawn areas:			
0-2% slope	C=0.15	0 SF	0 Total SF 0.00 AC
2-5% slope	C=0.25	0 SF	0 Total SF 0.00 AC
5-10% slope	C=0.40	0 SF	0 Total SF 0.00 AC
10+% slope	C=0.55	0 SF	0 Total SF 0.00 AC
			0 TOTAL 0.00 AC

For woodland areas:			
0-2% slope	C=0.12	0 SF	0 Total SF 0.00 AC
2-5% slope	C=0.24	0 SF	0 Total SF 0.00 AC
5-10% slope	C=0.36	0 SF	0 Total SF 0.00 AC
10+% slope	C=0.48	0 SF	0 Total SF 0.00 AC
			0 TOTAL 0.00 AC

Check 46,895 GT

Wt'd C =	0.60
Wt'd N =	0.11
High Pt El	444.00 ft
Inlet El	424.00 ft
Length	430.00 ft
Slope	0.0465
tc	10.24 min

0 1	Is 5<tc<10?	i 25=	0.00 in/hr
1 1	Is 10<tc<15?	i 25=	5.88 in/hr
1 0	Is 15<tc<30?	i 25=	0.00 in/hr
1 0	Is 30<tc<60?	i 25=	0.00 in/hr

Q25= 3.77 cfs

Date: 2/27/2007

DEVELOPED CALCULATIONS FLOW FOR A 25 YEAR STORM

Sitecon, Inc. Project: 10-07-75

Job Name/Basin #:	Arlington Heights	Basin C-2	18,125 Total SF	0.42 AC
Exist. Impervious surfaces (2-5%) C=0.94				
Structures	0 Total	3,500 SF	0 Total SF	0.00 AC
Drives	0 Total	720 SF	0 Total SF	0.00 AC
Pavement	24 Width (ft)	0 L (ft)	0 Total SF	0.00 AC
			0 TOTAL	0.00 AC
Proposed Impervious surfaces (2-5%) C=0.94				
Structures	1.5 Total	2,500 SF	3,750 Total SF	0.09 AC
Drives	3.5 Total	780 SF	2,730 Total SF	0.06 AC
Pavement	282 L (ft)	14.5 Width (ft)	4,089 Total SF	0.09 AC
Patios	0 Total	200 SF	0 Total SF	0.00 AC
Sidewalks	0 Width (ft)		0 Total SF	0.00 AC
			10,569 TOTAL	0.24 AC
Exist cultivated fields:				
0-2% slope	C=0.20	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.35	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.50	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.65	0 SF	0 Total SF	0.00 AC
			0 TOTAL	0.00 AC
For lawn areas:				
0-2% slope	C=0.15	6,800 SF	6,800 Total SF	0.16 AC
2-5% slope	C=0.25	756 SF	756 Total SF	0.02 AC
5-10% slope	C=0.40	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.55	0 SF	0 Total SF	0.00 AC
			7,556 TOTAL	0.17 AC
For woodland areas:				
0-2% slope	C=0.12	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.24	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.36	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.48	0 SF	0 Total SF	0.00 AC
			0 TOTAL	0.00 AC

Check 18,125 GT

Wt'd C = 0.61
 Wt'd N = 0.18
 High Pt El 431.00 ft
 Inlet El 424.00 ft
 Length 318.00 ft
 Slope 0.0220
 tc 13.29 min

0	1	Is 5<tc<10?	i 25=	0.00 in/hr
1	1	Is 10<tc<15?	i 25=	5.34 in/hr
1	0	Is 15<tc<30?	i 25=	0.00 in/hr
1	0	Is 30<tc<60?	i 25=	0.00 in/hr

Q25= 1.37 cfs

Date: 2/27/2007

DEVELOPED CALCULATIONS FLOW FOR A 25 YEAR STORM

Sitecon, Inc. Project: 10-07-75

Job Name/Basin #:	Arlington Heights	Basin C-3	20,074 Total SF	0.46 AC
Exist. Impervious surfaces (2-5%) C=0.94				
Structures	0 Total	3,500 SF	0 Total SF	0.00 AC
Drives	0 Total	720 SF	0 Total SF	0.00 AC
Pavement	24 Width (ft)	0 L (ft)	0 Total SF	0.00 AC
			0 TOTAL	0.00 AC
Proposed Impervious surfaces (2-5%) C=0.94				
Structures	1.25 Total	2,500 SF	3,125 Total SF	0.07 AC
Drives	0 Total	780 SF	0 Total SF	0.00 AC
Pavement	0 L (ft)	14.5 Width (ft)	0 Total SF	0.00 AC
Patios	2.5 Total	200 SF	500 Total SF	0.01 AC
Sidewalks	0 Width (ft)		0 Total SF	0.00 AC
			3,625 TOTAL	0.08 AC
Exist cultivated fields:				
0-2% slope	C=0.20	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.35	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.50	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.65	0 SF	0 Total SF	0.00 AC
			0 TOTAL	0.00 AC
For lawn areas:				
0-2% slope	C=0.15	9,198 SF	9,198 Total SF	0.21 AC
2-5% slope	C=0.25	7,251 SF	7,251 Total SF	0.17 AC
5-10% slope	C=0.40	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.55	0 SF	0 Total SF	0.00 AC
			16,449 TOTAL	0.38 AC
For woodland areas:				
0-2% slope	C=0.12	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.24	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.36	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.48	0 SF	0 Total SF	0.00 AC
			0 TOTAL	0.00 AC

Check 20,074 GT

W'd C = 0.33
W'd N = 0.33
High Pt El 431.00 ft
Inlet El 418.00 ft
Length 271.00 ft
Slope 0.0480
tc 13.73 min

0 1	Is 5<tc<10?	i 25=	0.00 in/hr
1 1	Is 10<tc<15?	i 25=	5.26 in/hr
1 0	Is 15<tc<30?	i 25=	0.00 in/hr
1 0	Is 30<tc<60?	i 25=	0.00 in/hr

Q25= 0.80 cfs

Date: 2/27/2007

DEVELOPED CALCULATIONS FLOW FOR A 25 YEAR STORM

Sitecon, Inc. Project: 10-07-75

Job Name/Basin #:	Arlington Heights	Basin C-4	36,198 Total SF	0.83 AC
Exist. Impervious surfaces (2-5%) C=0.94				
Structures	0 Total	3,500 SF	0 Total SF	0.00 AC
Drives	0 Total	720 SF	0 Total SF	0.00 AC
Pavement	24 Width (ft)	0 L (ft)	0 Total SF	0.00 AC
			0 TOTAL	0.00 AC
Proposed Impervious surfaces (2-5%) C=0.94				
Structures	3.5 Total	2,500 SF	8,750 Total SF	0.20 AC
Drives	3.5 Total	780 SF	2,730 Total SF	0.06 AC
Pavement	510 L (ft)	14.5 Width (ft)	7,395 Total SF	0.17 AC
Patios	3.5 Total	200 SF	700 Total SF	0.02 AC
Sidewalks	0 Width (ft)		0 Total SF	0.00 AC
			19,575 TOTAL	0.45 AC
Exist cultivated fields:				
0-2% slope	C=0.20	10,881 SF	10,881 Total SF	0.25 AC
2-5% slope	C=0.35	5,742 SF	5,742 Total SF	0.13 AC
5-10% slope	C=0.50	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.65	0 SF	0 Total SF	0.00 AC
			16,623 TOTAL	0.38 AC
For lawn areas:				
0-2% slope	C=0.15	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.25	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.40	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.55	0 SF	0 Total SF	0.00 AC
			0 TOTAL	0.00 AC
For woodland areas:				
0-2% slope	C=0.12	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.24	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.36	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.48	0 SF	0 Total SF	0.00 AC
			0 TOTAL	0.00 AC

Check 36,198 GT

Wtd C = 0.62
Wtd N = 0.10
High Pt El 426.00 ft
Inlet El 413.00 ft
Length 321.00 ft
Slope 0.0405
tc 8.94 min

1 1	Is 5<tc<10?	i 25=	6.20 in/hr
1 0	Is 10<tc<15?	i 25=	0.00 in/hr
1 0	Is 15<tc<30?	i 25=	0.00 in/hr
1 0	Is 30<tc<60?	i 25=	0.00 in/hr

Q25= 3.21 cfs

Date: 2/27/2007

DEVELOPED CALCULATIONS FLOW FOR A 25 YEAR STORM

Sitecon, Inc. Project: 10-07-75

Job Name/Basin #: Arlington Heights Basin C-5 163,034 Total SF 3.74 AC

Exist. Impervious surfaces (2-5%) C=0.94			
Structures	0 Total	3,500 SF	0 Total SF 0.00 AC
Drives	0 Total	720 SF	0 Total SF 0.00 AC
Pavement	24 Width (ft)	0 L (ft)	0 Total SF 0.00 AC
			<hr/>
			0 TOTAL 0.00 AC

Proposed Impervious surfaces (2-5%) C=0.94			
Structures	2.75 Total	2,500 SF	6,875 Total SF 0.16 AC
Drives	0 Total	780 SF	0 Total SF 0.00 AC
Pavement	0 L (ft)	14.5 Width (ft)	0 Total SF 0.00 AC
Patios	6.5 Total	200 SF	1,300 Total SF 0.03 AC
Sidewalks	0 Width (ft)		0 Total SF 0.00 AC
			<hr/>
			8,175 TOTAL 0.19 AC

Exist cultivated fields:			
0-2% slope	C=0.20	0 SF	0 Total SF 0.00 AC
2-5% slope	C=0.35	0 SF	0 Total SF 0.00 AC
5-10% slope	C=0.50	0 SF	0 Total SF 0.00 AC
10+% slope	C=0.65	0 SF	0 Total SF 0.00 AC
			<hr/>
			0 TOTAL 0.00 AC

For lawn areas:			
0-2% slope	C=0.15	5,507 SF	5,507 Total SF 0.13 AC
2-5% slope	C=0.25	35,266 SF	35,266 Total SF 0.81 AC
5-10% slope	C=0.40	114,086 SF	114,086 Total SF 2.62 AC
10+% slope	C=0.55	0 SF	0 Total SF 0.00 AC
			<hr/>
			154,859 TOTAL 3.56 AC

For woodland areas:			
0-2% slope	C=0.12	0 SF	0 Total SF 0.00 AC
2-5% slope	C=0.24	0 SF	0 Total SF 0.00 AC
5-10% slope	C=0.36	0 SF	0 Total SF 0.00 AC
10+% slope	C=0.48	0 SF	0 Total SF 0.00 AC
			<hr/>
			0 TOTAL 0.00 AC

Check 163,034 GT

Wfd C = 0.39
 Wfd N = 0.38
 High Pt El = 491.00 ft
 Inlet El = 416.50 ft
 Length = 1,381.00 ft
 Slope = 0.0539
 tc = 30.50 min

0 1	Is 5<tc<10?	i 25=	0.00 in/hr
0 1	Is 10<tc<15?	i 25=	0.00 in/hr
0 1	Is 15<tc<30?	i 25=	0.00 in/hr
1 1	Is 30<tc<60?	i 25=	3.62 in/hr

Q25= 5.23 cfs

Date: 2/27/2007

DEVELOPED CALCULATIONS FLOW FOR A 25 YEAR STORM

Sitecon, Inc. Project: 10-07-75

Job Name/Basin #: Arlington Heights Basin C-6 25,734 Total SF 0.59 AC

Exist. Impervious surfaces (2-5%) C=0.94			
Structures	0 Total	3,500 SF	0 Total SF 0.00 AC
Drives	0 Total	720 SF	0 Total SF 0.00 AC
Pavement	24 Width (ft)	0 L (ft)	0 Total SF 0.00 AC
			<hr/>
			0 TOTAL 0.00 AC

Proposed Impervious surfaces (2-5%) C=0.94			
Structures	2 Total	2,500 SF	5,000 Total SF 0.11 AC
Drives	3.5 Total	780 SF	2,730 Total SF 0.06 AC
Pavement	432 L (ft)	14.5 Width (ft)	6,264 Total SF 0.14 AC
Patios	0 Total	200 SF	0 Total SF 0.00 AC
Sidewalks	0 Width (ft)		0 Total SF 0.00 AC
			<hr/>
			13,994 TOTAL 0.32 AC

Exist cultivated fields:			
0-2% slope	C=0.20	0 SF	0 Total SF 0.00 AC
2-5% slope	C=0.35	0 SF	0 Total SF 0.00 AC
5-10% slope	C=0.50	0 SF	0 Total SF 0.00 AC
10+% slope	C=0.65	0 SF	0 Total SF 0.00 AC
			<hr/>
			0 TOTAL 0.00 AC

For lawn areas:			
0-2% slope	C=0.15	1,865 SF	1,865 Total SF 0.04 AC
2-5% slope	C=0.25	9,875 SF	9,875 Total SF 0.23 AC
5-10% slope	C=0.40	0 SF	0 Total SF 0.00 AC
10+% slope	C=0.55	0 SF	0 Total SF 0.00 AC
			<hr/>
			11,740 TOTAL 0.27 AC

For woodland areas:			
0-2% slope	C=0.12	0 SF	0 Total SF 0.00 AC
2-5% slope	C=0.24	0 SF	0 Total SF 0.00 AC
5-10% slope	C=0.36	0 SF	0 Total SF 0.00 AC
10+% slope	C=0.48	0 SF	0 Total SF 0.00 AC
			<hr/>
			0 TOTAL 0.00 AC

Check 25,734 GT

Wt'd C =	0.62
Wt'd N =	0.19
High Pt El	425.00 ft
Inlet El	413.00 ft
Length	312.00 ft
Slope	0.0385
tc	12.01 min

0	1	Is 5<tc<10?	i 25=	0.00 in/hr
1	1	Is 10<tc<15?	i 25=	5.57 in/hr
1	0	Is 15<tc<30?	i 25=	0.00 in/hr
1	0	Is 30<tc<60?	i 25=	0.00 in/hr

Q25= 2.03 cfs

Date: 2/27/2007

DEVELOPED CALCULATIONS FLOW FOR A 25 YEAR STORM

Sitecon, Inc. Project: 10-07-75

Job Name/Basin #: Arlington Heights Basin C-7 30,103 Total SF 0.69 AC

Exist. Impervious surfaces (2-5%) C=0.94

Structures	0 Total	3,500 SF	0 Total SF	0.00 AC
Drives	0 Total	720 SF	0 Total SF	0.00 AC
Pavement	24 Width (ft)	0 L (ft)	0 Total SF	0.00 AC
			0 TOTAL	0.00 AC

Proposed Impervious surfaces (2-5%) C=0.94

Structures	2.75 Total	2,500 SF	6,875 Total SF	0.16 AC
Drives	6 Total	780 SF	4,680 Total SF	0.11 AC
Pavement	404 L (ft)	14.5 Width (ft)	5,858 Total SF	0.13 AC
Patios	0 Total	200 SF	0 Total SF	0.00 AC
Sidewalks	0 Width (ft)		0 Total SF	0.00 AC
			17,413 TOTAL	0.40 AC

Exist cultivated fields:

0-2% slope	C=0.20	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.35	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.50	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.65	0 SF	0 Total SF	0.00 AC
			0 TOTAL	0.00 AC

For lawn areas:

0-2% slope	C=0.15	9,267 SF	9,267 Total SF	0.21 AC
2-5% slope	C=0.25	3,423 SF	3,423 Total SF	0.08 AC
5-10% slope	C=0.40	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.55	0 SF	0 Total SF	0.00 AC
			12,690 TOTAL	0.29 AC

For woodland areas:

0-2% slope	C=0.12	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.24	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.36	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.48	0 SF	0 Total SF	0.00 AC
			0 TOTAL	0.00 AC

Check 30,103 GT

Wt'd C = 0.62
 Wt'd N = 0.18
 High Pt El 421.00 ft
 Inlet El 412.75 ft
 Length 332.00 ft
 Slope 0.0248
 tc 13.24 min

0 1	Is 5<tc<10?	i 25=	0.00 in/hr
1 1	Is 10<tc<15?	i 25=	5.35 in/hr
1 0	Is 15<tc<30?	i 25=	0.00 in/hr
1 0	Is 30<tc<60?	i 25=	0.00 in/hr

Q25= 2.28 cfs

Date: 2/27/2007

DEVELOPED CALCULATIONS FLOW FOR A 25 YEAR STORM

Sitecon, Inc. Project: 10-07-75

Job Name/Basin #: Arlington Heights Basin D-1 60,715 Total SF 1.39 AC

Exist. Impervious surfaces (2-5%) C=0.94

Structures	0 Total	3,500 SF	0 Total SF	0.00 AC
Drives	0 Total	720 SF	0 Total SF	0.00 AC
Pavement	24 Width (ft)	0 L (ft)	0 Total SF	0.00 AC
			0 TOTAL	0.00 AC

Proposed Impervious surfaces (2-5%) C=0.94

Structures	6.5 Total	2,500 SF	16,250 Total SF	0.37 AC
Drives	8 Total	780 SF	6,240 Total SF	0.14 AC
Pavement	400 L (ft)	14.5 Width (ft)	5,800 Total SF	0.13 AC
Patios	6 Total	200 SF	1,200 Total SF	0.03 AC
Sidewalks	0 Width (ft)		0 Total SF	0.00 AC
			29,490 TOTAL	0.68 AC

Exist cultivated fields:

0-2% slope	C=0.20	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.35	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.50	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.65	0 SF	0 Total SF	0.00 AC
			0 TOTAL	0.00 AC

For lawn areas:

0-2% slope	C=0.15	3,770 SF	3,770 Total SF	0.09 AC
2-5% slope	C=0.25	27,455 SF	27,455 Total SF	0.63 AC
5-10% slope	C=0.40	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.55	0 SF	0 Total SF	0.00 AC
			31,225 TOTAL	0.72 AC

For woodland areas:

0-2% slope	C=0.12	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.24	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.36	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.48	0 SF	0 Total SF	0.00 AC
			0 TOTAL	0.00 AC

Check 60,715 GT

Wt'd C = 0.58
 Wt'd N = 0.22
 High Pt El 444.00 ft
 Inlet El 416.50 ft
 Length 544.00 ft
 Slope 0.0506
 tc 15.36 min

0 1	Is 5<tc<10?	i 25=	0.00 in/hr
0 1	Is 10<tc<15?	i 25=	0.00 in/hr
1 1	Is 15<tc<30?	i 25=	5.00 in/hr
1 0	Is 30<tc<60?	i 25=	0.00 in/hr

Q25= 4.03 cfs

Date: 2/27/2007

DEVELOPED CALCULATIONS FLOW FOR A 25 YEAR STORM

Sitecon, Inc. Project: 10-07-75

Job Name/Basin #: Arlington Heights Basin D-2 29,051 Total SF 0.67 AC

Exist. Impervious surfaces (2-5%) C=0.94

Structures	0 Total	3,500 SF	0 Total SF	0.00 AC
Drives	0 Total	720 SF	0 Total SF	0.00 AC
Pavement	24 Width (ft)	0 L (ft)	0 Total SF	0.00 AC
			0 TOTAL	0.00 AC

Proposed Impervious surfaces (2-5%) C=0.94

Structures	2.75 Total	2,500 SF	6,875 Total SF	0.16 AC
Drives	5.5 Total	780 SF	4,290 Total SF	0.10 AC
Pavement	400 L (ft)	14.5 Width (ft)	5,800 Total SF	0.13 AC
Patios	0 Total	200 SF	0 Total SF	0.00 AC
Sidewalks	0 Width (ft)		0 Total SF	0.00 AC
			16,965 TOTAL	0.39 AC

Exist cultivated fields:

0-2% slope	C=0.20	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.35	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.50	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.65	0 SF	0 Total SF	0.00 AC
			0 TOTAL	0.00 AC

For lawn areas:

0-2% slope	C=0.15	4,321 SF	4,321 Total SF	0.10 AC
2-5% slope	C=0.25	7,765 SF	7,765 Total SF	0.18 AC
5-10% slope	C=0.40	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.55	0 SF	0 Total SF	0.00 AC
			12,086 TOTAL	0.28 AC

For woodland areas:

0-2% slope	C=0.12	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.24	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.36	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.48	0 SF	0 Total SF	0.00 AC
			0 TOTAL	0.00 AC

Check 29,051 GT

Wt'd C = 0.64
 Wt'd N = 0.18
 High Pt El 431.00 ft
 Inlet El 416.50 ft
 Length 427.00 ft
 Slope 0.0340
 tc 13.77 min

0 1	Is 5<tc<10?	i 25=	0.00 in/hr
1 1	Is 10<tc<15?	i 25=	5.25 in/hr
1 0	Is 15<tc<30?	i 25=	0.00 in/hr
1 0	Is 30<tc<60?	i 25=	0.00 in/hr

Q25= 2.23 cfs

Date: 2/27/2007

DEVELOPED CALCULATIONS FLOW FOR A 25 YEAR STORM

Sitecon, Inc. Project: 10-07-75

Job Name/Basin #:	Arlington Heights	Basin D-3	35,239 Total SF	0.81 AC
Exist. Impervious surfaces (2-5%) C=0.94				
Structures	0 Total	3,500 SF	0 Total SF	0.00 AC
Drives	0 Total	720 SF	0 Total SF	0.00 AC
Pavement	24 Width (ft)	0 L (ft)	0 Total SF	0.00 AC
			0 TOTAL	0.00 AC
Proposed Impervious surfaces (2-5%) C=0.94				
Structures	4.75 Total	2,500 SF	11,875 Total SF	0.27 AC
Drives	0 Total	780 SF	0 Total SF	0.00 AC
Pavement	0 L (ft)	14.5 Width (ft)	0 Total SF	0.00 AC
Patios	4.75 Total	200 SF	950 Total SF	0.02 AC
Sidewalks	0 Width (ft)		0 Total SF	0.00 AC
			12,825 TOTAL	0.29 AC
Exist cultivated fields:				
0-2% slope	C=0.20	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.35	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.50	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.65	0 SF	0 Total SF	0.00 AC
			0 TOTAL	0.00 AC
For lawn areas:				
0-2% slope	C=0.15	7,324 SF	7,324 Total SF	0.17 AC
2-5% slope	C=0.25	15,090 SF	15,090 Total SF	0.35 AC
5-10% slope	C=0.40	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.55	0 SF	0 Total SF	0.00 AC
			22,414 TOTAL	0.51 AC
For woodland areas:				
0-2% slope	C=0.12	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.24	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.36	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.48	0 SF	0 Total SF	0.00 AC
			0 TOTAL	0.00 AC

Check 35,239 GT

Wt'd C = 0.48
 Wt'd N = 0.26
 High Pt El 431.00 ft
 Inlet El 414.00 ft
 Length 398.00 ft
 Slope 0.0427
 tc 15.12 min

0 1	Is 5<tc<10?	i 25=	0.00 in/hr
0 1	Is 10<tc<15?	i 25=	0.00 in/hr
1 1	Is 15<tc<30?	i 25=	5.02 in/hr
1 0	Is 30<tc<60?	i 25=	0.00 in/hr

Q25= 1.95 cfs

Date: 2/27/2007

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DEVELOPED CALCULATIONS FLOW FOR A 25 YEAR STORM

Sitecon, Inc. Project: 10-07-75

Job Name/Basin #: Arlington Heights Basin D-4 47,313 Total SF 1.09 AC

Exist. Impervious surfaces (2-5%) C=0.94				
Structures	0 Total	3,500 SF	0 Total SF	0.00 AC
Drives	0 Total	720 SF	0 Total SF	0.00 AC
Pavement	24 Width (ft)	0 L (ft)	0 Total SF	0.00 AC
			0 TOTAL	0.00 AC

Proposed Impervious surfaces (2-5%) C=0.94				
Structures	5.5 Total	2,500 SF	13,750 Total SF	0.32 AC
Drives	5.5 Total	780 SF	4,290 Total SF	0.10 AC
Pavement	631 L (ft)	14.5 Width (ft)	9,150 Total SF	0.21 AC
Patios	5.5 Total	200 SF	1,100 Total SF	0.03 AC
Sidewalks	0 Width (ft)		0 Total SF	0.00 AC
			28,290 TOTAL	0.65 AC

Exist cultivated fields:				
0-2% slope	C=0.20	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.35	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.50	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.65	0 SF	0 Total SF	0.00 AC
			0 TOTAL	0.00 AC

For lawn areas:				
0-2% slope	C=0.15	8,773 SF	8,773 Total SF	0.20 AC
2-5% slope	C=0.25	10,251 SF	10,251 Total SF	0.24 AC
5-10% slope	C=0.40	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.55	0 SF	0 Total SF	0.00 AC
			19,024 TOTAL	0.44 AC

For woodland areas:				
0-2% slope	C=0.12	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.24	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.36	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.48	0 SF	0 Total SF	0.00 AC
			0 TOTAL	0.00 AC

Check 47,313 GT

W'd C =	0.64
W'd N =	0.17
High Pt El	426.00 ft
Inlet El	408.50 ft
Length	440.00 ft
Slope	0.0398
tc	13.27 min

0 1	Is 5<tc<10?	i 25=	0.00 in/hr
1 1	Is 10<tc<15?	i 25=	5.34 in/hr
1 0	Is 15<tc<30?	i 25=	0.00 in/hr
1 0	Is 30<tc<60?	i 25=	0.00 in/hr

Q25= 3.74 cfs

Date: 2/27/2007

DEVELOPED CALCULATIONS FLOW FOR A 25 YEAR STORM

Sitecon, Inc. Project: 10-07-75

Job Name/Basin #:	Arlington Heights	Basin D-5	54,775 Total SF	1.26 AC
Exist. Impervious surfaces (2-5%) C=0.94				
Structures	0 Total	3,500 SF	0 Total SF	0.00 AC
Drives	0 Total	720 SF	0 Total SF	0.00 AC
Pavement	24 Width (ft)	0 L (ft)	0 Total SF	0.00 AC
			0 TOTAL	0.00 AC
Proposed Impervious surfaces (2-5%) C=0.94				
Structures	5 Total	2,500 SF	12,500 Total SF	0.29 AC
Drives	10 Total	780 SF	7,800 Total SF	0.18 AC
Pavement	631 L (ft)	14.5 Width (ft)	9,150 Total SF	0.21 AC
Patios	0 Total	200 SF	0 Total SF	0.00 AC
Sidewalks	0 Width (ft)		0 Total SF	0.00 AC
			29,450 TOTAL	0.68 AC
Exist cultivated fields:				
0-2% slope	C=0.20	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.35	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.50	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.65	0 SF	0 Total SF	0.00 AC
			0 TOTAL	0.00 AC
For lawn areas:				
0-2% slope	C=0.15	18,256 SF	18,256 Total SF	0.42 AC
2-5% slope	C=0.25	7,070 SF	7,070 Total SF	0.16 AC
5-10% slope	C=0.40	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.55	0 SF	0 Total SF	0.00 AC
			25,326 TOTAL	0.58 AC
For woodland areas:				
0-2% slope	C=0.12	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.24	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.36	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.48	0 SF	0 Total SF	0.00 AC
			0 TOTAL	0.00 AC

Check 54,775 GT

Wtd C = 0.59
Wtd N = 0.20
High Pt El 421.00 ft
Inlet El 408.00 ft
Length 463.00 ft
Slope 0.0281
tc 15.62 min

0	1	Is 5<tc<10?	i 25=	0.00 in/hr
0	1	Is 10<tc<15?	i 25=	0.00 in/hr
1	1	Is 15<tc<30?	i 25=	4.98 in/hr
1	0	Is 30<tc<60?	i 25=	0.00 in/hr

Q25= 3.68 cfs

Date: 2/27/2007

Basin Number	Upstream Manhole	Downstream Manhole	Pipe Length (ft)	A (Acres)	C	A°C	Sum A°C	Inlet Time to (min)	t cum. (min)	i (in/hr)	Q (cfs)	Pipe Diameter (in)	Pipe Slope (%)	Pipe Capacity (cfs)	Pipe Capacity Check	Velocity (ft/s)	Travel Time (min)	Rim Elevation (Upstream)	Rim Elevation (Downstream)	Invert Elevation (Upstream)	Invert Elevation (Downstream)	Invert Elevation (Upstream)	Invert Elevation (Downstream)	Pipe Cover (Upstream)	Pipe Cover (Downstream)	Pipe Type
																		19	20	21	22	23	24	23	24	
A-1	500	501	142.5	10.82	0.40	4.33	4.33	25.34	25.34	4.08	17.66	18	2.14	18.15	O.K.	10.27	0.23	414.50	415.00	411.95	411.95	ES	ES	1.35	1.35	RCP
A-2	501	502	55.8	1.41	0.58	0.82	5.15	13.96	25.57	4.06	20.89	21	2.06	26.87	O.K.	11.17	0.08	414.80	414.30	411.75	410.60	1.30	1.30	1.95	1.95	RCP
A-3	502	503	24.0	0.18	0.58	0.10	5.25	13.72	23.65	4.05	21.26	21	1.53	23.16	O.K.	9.63	0.04	414.30	410.60	410.23	410.23	1.95	1.95	2.32	2.32	RCP
A-4	503	504	176.7	0.26	0.58	0.16	5.41	13.96	25.70	4.04	21.87	21	1.37	21.92	O.K.	9.11	0.32	414.30	410.23	407.81	407.81	2.32	2.32	2.94	2.94	RCP
A-5	504	505	107.2	0.84	0.56	0.47	5.88	15.30	26.00	4.02	23.65	24	0.79	23.77	O.K.	7.57	0.24	412.50	411.00	406.76	406.76	2.89	2.89	2.24	2.24	RCP
A-6	505	508	77.4	0.89	0.42	0.16	6.05	12.67	26.30	3.98	24.13	24	0.82	24.22	O.K.	7.71	0.17	411.00	410.00	406.75	406.13	2.24	2.24	1.87	1.87	RCP
A-7	506	507	20.0	0.34	0.36	0.36	0.36	16.56	16.56	4.89	1.75	12	0.84	2.97	O.K.	3.78	0.13	414.00	411.50	411.36	411.36	1.50	1.50	1.64	1.64	RCP
A-8	507	508	141.7	0.41	0.65	0.27	0.62	11.30	16.69	4.88	3.04	12	2.84	7.08	O.K.	9.02	0.26	414.00	410.00	407.34	407.34	1.64	1.64	1.66	1.66	RCP
A-9	508	509	27.3	0.21	0.52	0.11	6.78	9.29	26.30	3.99	27.05	30	0.49	33.97	O.K.	6.92	0.07	410.00	406.00	406.00	406.00	1.37	1.37	ES	ES	RCP
B-1	510	511	29.0	0.48	0.56	0.27	0.27	13.88	13.88	5.23	1.41	12	0.84	3.85	O.K.	4.90	0.10	410.00	410.00	407.50	407.50	1.50	1.50	1.74	1.74	RCP
B-2	511	512	111.4	0.40	0.60	0.24	0.51	13.51	14.01	5.21	2.65	12	0.84	3.85	O.K.	4.90	0.38	410.00	410.00	407.36	406.32	1.74	1.74	2.88	2.88	RCP
B-3	512	513	37.4				0.51		14.39	5.20	2.65	12	0.84	3.85	O.K.	4.90	0.13	410.00	ES	406.32	406.01	2.88	2.88	ES	ES	RCP
C-1	514	515	29.0	1.08	0.60	0.65	0.65	10.24	10.24	5.88	3.81	12	1.00	4.20	O.K.	5.35	0.09	424.00	424.00	421.50	421.50	1.50	1.50	1.79	1.79	RCP
C-2	515	516	114.7	0.42	0.61	0.26	0.90	13.29	13.29	5.34	4.83	12	4.80	9.21	O.K.	11.72	0.16	424.00	418.00	421.21	415.70	1.79	1.79	1.30	1.30	RCP
C-3	516	517	133.5	0.46	0.33	0.15	1.06	13.73	13.73	5.26	5.55	12	3.90	8.29	O.K.	10.56	0.21	418.00	413.00	415.70	410.50	1.30	1.30	1.50	1.50	RCP
C-4	517	519	43.6	0.33	0.62	0.51	1.57	8.94	13.94	5.22	8.20	21	0.20	8.37	O.K.	3.48	0.21	413.00	413.00	409.90	409.81	1.35	1.35	1.44	1.44	RCP
C-5	518	519	122.7	3.74	0.39	1.46	1.46	30.50	30.50	3.62	5.28	12	2.93	7.19	O.K.	9.16	0.22	416.50	413.00	410.41	410.41	1.50	1.50	1.59	1.59	RCP
C-6	519	520	36.3	0.59	0.62	0.37	3.40	12.01	30.72	3.61	12.26	24	0.21	12.26	O.K.	3.90	0.16	413.00	412.75	409.71	409.63	1.29	1.29	1.12	1.12	RCP
C-7	520	521	40.7	0.59	0.62	0.43	3.82	13.24	30.88	3.60	13.76	24	0.27	13.90	O.K.	4.42	0.15	412.75	ES	409.63	409.52	1.12	1.12	ES	ES	RCP
D-1	522	523	29.0	1.39	0.58	0.81	0.81	15.36	15.36	5.09	4.03	12	1.00	4.20	O.K.	5.35	0.09	416.50	416.50	413.71	413.71	1.50	1.50	1.79	1.79	RCP
D-2	523	524	116.7	0.67	0.64	0.43	1.24	13.77	15.45	4.99	6.16	12	2.16	6.18	O.K.	7.86	0.25	416.50	414.00	411.19	411.19	1.79	1.79	1.81	1.81	RCP
D-3	524	525	133.5	0.81	0.49	0.39	1.62	15.12	15.70	4.97	8.07	12	3.85	8.25	O.K.	10.50	0.21	414.00	408.50	411.19	406.05	1.81	1.81	1.45	1.45	RCP
D-4	525	526	57.2	1.39	0.64	0.70	2.32	13.27	15.92	4.96	11.49	18	0.86	11.51	O.K.	6.51	0.15	408.50	408.00	405.16	405.16	1.34	1.34	ES	ES	RCP
D-5	526	527	58.5	1.26	0.59	0.74	3.06	15.62		4.98	15.26	18	1.96	17.46	O.K.	9.88	0.10	403.00	ES	405.16	404.00	1.34	1.34	ES	ES	RCP
N. O. F.	530	531	62.4								21.09	18	3.67	23.77	O.K.	13.45	0.08	ES	405.50	403.71	403.71	ES	ES	1.29	1.29	RCP
N. O. F.	531	532	57.9								21.09	18	3.67	23.77	O.K.	13.45	0.07	405.50	404.40	403.71	403.71	1.29	1.29	1.32	1.32	RCP
N. O. F.	532	533	16.0								21.09	18	3.67	23.77	O.K.	13.45	0.02	464.40	ES	401.56	400.99	1.32	1.32	ES	ES	RCP

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DEVELOPED CALCULATIONS FLOW FOR A 25 YEAR STORM

Sitecon, Inc. Project: 001-07-108

Job Name/Basin #:	Arlington Heights	Basin Ent. Culvert	20,153 Total SF	0.46 AC
Exist. Impervious surfaces (2-5%) C=0.94				
Structures	0 Total	3,000 SF	0 Total SF	0.00 AC
Drives	0 Total	150 SF	0 Total SF	0.00 AC
Pavement	10 Width (ft)	784 L (ft)	7,840 Total SF	0.18 AC
			7,840 TOTAL	0.18 AC
Proposed Impervious surfaces (2-5%) C=0.94				
Structures	0 Total	3,400 SF	0 Total SF	0.00 AC
Drives	0 Total	780 SF	0 Total SF	0.00 AC
Pavement	0 L (ft)	14.5 Width (ft)	0 Total SF	0.00 AC
Patios	0 Total	200 SF	0 Total SF	0.00 AC
Sidewalks	0 Width (ft)		0 Total SF	0.00 AC
			0 TOTAL	0.00 AC
Exist cultivated fields:				
0-2% slope	C=0.20	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.35	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.50	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.65	0 SF	0 Total SF	0.00 AC
			0 TOTAL	0.00 AC
For lawn areas:				
0-2% slope	C=0.15	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.25	4,256 SF	4,256 Total SF	0.10 AC
5-10% slope	C=0.40	8,057 SF	8,057 Total SF	0.18 AC
10+% slope	C=0.55	0 SF	0 Total SF	0.00 AC
			12,313 TOTAL	0.28 AC
For woodland areas:				
0-2% slope	C=0.12	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.24	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.36	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.48	0 SF	0 Total SF	0.00 AC
			0 TOTAL	0.00 AC

Check 20,153 GT

Wt'd C = 0.58
 Wt'd N = 0.25
 High Pt El 435.00 ft
 Inlet El 418.00 ft
 Length 808.00 ft
 Slope 0.0210
 tc 24.40 min

0 1	Is 5<tc<10?	i 25=	0.00 in/hr
0 1	Is 10<tc<15?	i 25=	0.00 in/hr
1 1	Is 15<tc<30?	i 25=	4.16 in/hr
1 0	Is 30<tc<60?	i 25=	0.00 in/hr

Q25= 1.11 cfs

Date: 2/27/2007

KANSAS RD ENTRANCE CULVERT

INLET CONTROL

NOMOGRAPH FOR PROJECTING CONCRETE PIPE (Socket End)

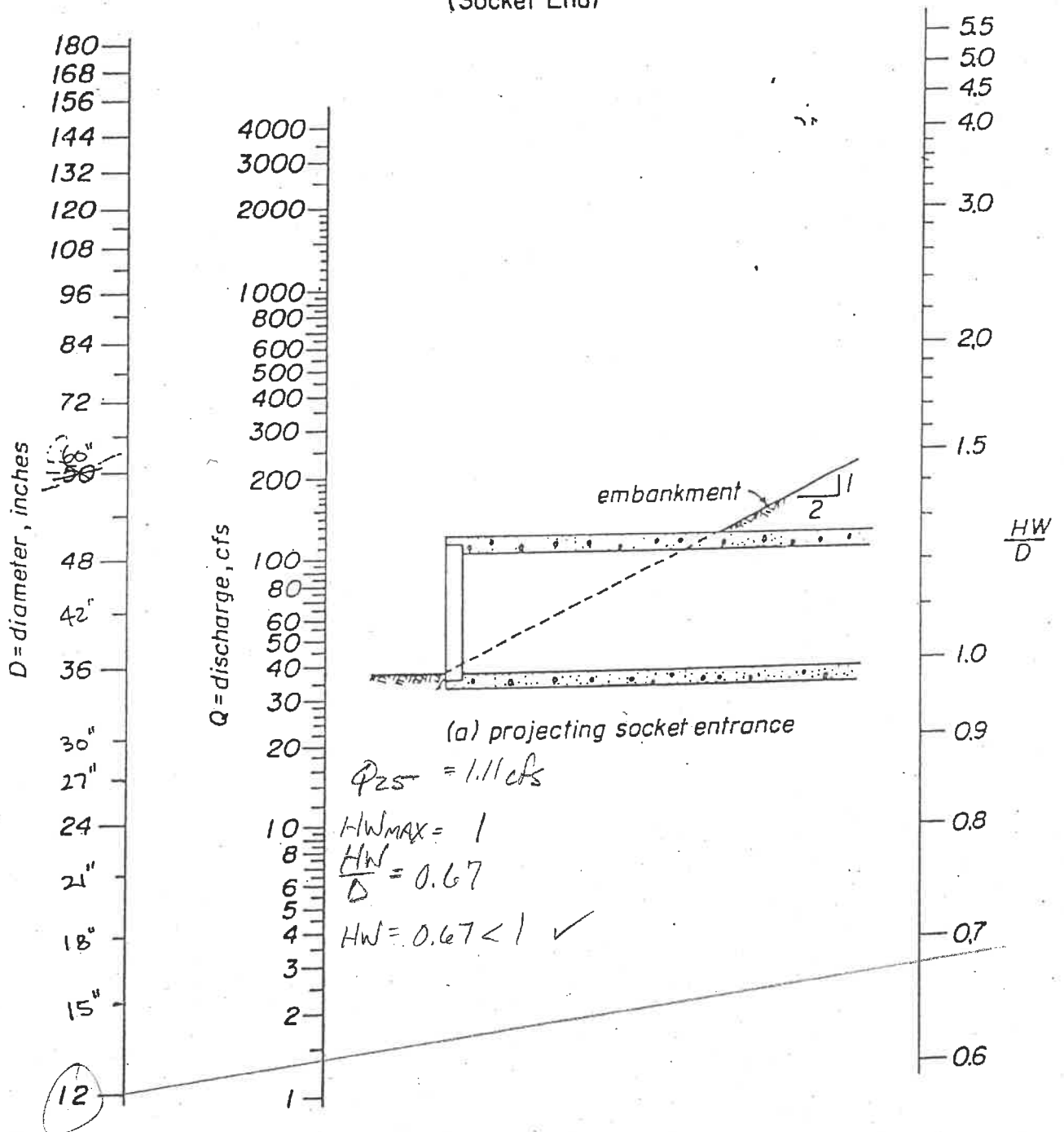


Fig. B-1

Arlington Heights

Typical Section "A"

Man Made Channels -- English Units

Civil Tools for Windows

(02-27-2007, 12:49:59)

Flow Depth = 1.000 ft
Flowrate = 54.796 cfs
Channel Bottom Width = 1.000 ft
Channel Side Slope = 4.000 ft/ft
Channel Slope = 1.00000 ft/ft
Channel Roughness = 0.090
Wetted Area = 5.00 sf
Wetted Perimeter = 9.25 ft
Velocity = 10.96 fps
Froude No. = 2.59
Flow = Super-Critical

Arlington Heights

Typical Section "B"

Man Made Channels -- English Units

Civil Tools for Windows
(02-27-2007, 12:48:56)

Flow Depth = 1.000 ft
Flowrate = 83.113 cfs
Channel Bottom Width = 2.000 ft
Channel Side Slope = 3.000 ft/ft
Channel Slope = 2.00000 ft/ft
Channel Roughness = 0.090
Wetted Area = 5.00 sf
Wetted Perimeter = 8.32 ft
Velocity = 16.62 fps
Froude No. = 3.71
Flow = Super-Critical