# APPLICATION FOR DEVELOPMENT / PRELIMINARY PLAT APPROVAL

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1. Name of Applicant Richmond HOUSE OF Prayer INC
Address 330 Myle Shed Lane
Phone
2. Name of Surveyor or Engineer Dwayne Wheatley
Address 500 Recycle Drive
Phone
3. Name of Subdivision
4. Location Description Mule Shed Lone
(in addition, please attach a copy of legal description)
5. Proposed Use_Church
6. Proposed Land Use Designation
7. Proposed Land Use Changes
8. Number of LotsSmallest lot: NoSq FtArea of Tract
9. Number of Acres 11.58 gcres +/-
10. Do you propose deed restrictions(yes/no)
11. What type of sewage disposal is proposed?
12. List all proposed improvements and utilities:
Section Number Item
a
b
c

X

d.	
e.	 

13. Waivers requested from plat or design requirements:

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1

Section Number	Item			
a				
b				
c				
d				
e				

14. List other materials submitted with this application

a.	copies
b.	fee
c.	
d.	
e.	

Signature of Applicant

Signature of Engineer/Surveyor

Date\_\_\_\_\_

Fee\_\_\_\_\_



#### FOR OFFICIAL USE ONLY

1. X

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Date Received	Received by				
Date of Meeting of Planning Commis	ssion				
Action by Planning Commission:					
Status: Approved					
Rejected, reason(s) for rejection					
Date Chairperson Sign	ature				



### APPENDIX D

#### PLAT REQUIREMENTS CHECKLIST

This checklist will be used for preparing any of the three (3) types of plats (Minor, Preliminary, and Final). The following information shall be included (unless accompanied by a written request for waiver) for any of the plats in which the block does not have an "N/A" inside it. Please place an "X" in the corresponding box in the respective column (M - Minor, P - Preliminary, and F - Final) to the right to show that you have included that item on the plat. Upon completion, please sign and date the appropriate spaces at the end and include this checklist along with your application upon submission to the Administrative Official.

- Name of subdivision, date, label, type of plat, graphic A. scale, north arrow, acreage to be divided, purpose of plat.
- Name, address and telephone number of property owner, B. sub-divider (if other than owner), and developer.
- Name, address, and seal of the registered professional C. engineer or land surveyor responsible for preparation of

the plan and supplementary plans.

- D. Names of adjacent property owners of record and abutting subdivisions and streets.
- E. Vicinity sketch map, at a scale of two thousand (2,000) feet per inch or greater, showing the subject property and surrounding land within one-half (1/2) mile, and including existing roads with at least one intersection of common reference, scale, north arrow, and an outline of the subject property. Boundary lines and streets in adjacent developments shall be shown, along with how they will connect with streets in the proposed subdivision to assure the most advantageous development. Existing and prepared shopping facilities, schools, and parks should be designated.











- F. The proposed subdivision shall be shown at a scale of not less than one hundred (100) feet per inch (except where sheet size is prohibitive). Boundaries of the tract will be drawn showing approximate bearings and distances.
- G. The plat will show physical features, including streams, wooded areas, existing structures, ponds, and sink holes.
- H. Existing topographic contours at an interval of not greater than ten (10) feet shall be shown for the subject property. Where topographic conditions warrant, a contour interval of five (5) feet may be required. Contours shall be shown on all plats.
- I. Obtain, and submit with the plat, a properly signed State Highway Encroachment Permit, if the property fronts on a state high-

way.

J. Location, dimensions, and names of existing streets, railroads, easements, municipal boundaries, or other public properties,

and significant features shall be shown within and adjacent to

the plat for a minimum distance of two hundred (200) feet.

K. Location of existing sewers, fire hydrants, water mains, storm drains, and power transmission lines with capacities

(as applicable).

L. Location, right-of-way, and pavement width of proposed streets, fire hydrants, and utility and drainage easements laid out according to sound planning principles. All streets and private drives that will enter onto a county road shall require the review and signature of the County Road Supervisor.

















- M. Radii of streets, points of curvature, lengths of arcs.
- N. Street names selected so as not to duplicate any other within the County.
- O. Layout of proposed parcels of land including dimensions of lot lines, lot numbers, and front, side, and rear building setback lines may be written in on the deed. Lot or parcels shall be laid out according to sound planning principles.
- P. Designation and acreage of all parcels and areas to be used for non-residential purposes, including parcels reserved or dedicated

for public use and utility installations. All such parcels shall be assigned parcel numbers.

Q. Location of monuments and pins, which shall be placed at the intersection of property lines, the intersection of street center lines, changes in street direction, and the intersections and

angles of the subdivision boundary.

- R. Note indicating the lot number and area in square feet of the smallest lot in the subdivision.
- S. Subdivision plats being submitted for industrial or commercial development shall include additional information as required by the Planning Commission.













M F P Τ. Floodplain Development. Chapter 151 of the Kentucky Revised Statutes requires approval from the Kentucky Division of Water & the Madison County Administration prior to any construction or other activity in or along a stream that could in any way obstruct flood flows. This construction activity includes, but is not limited to; construction or reconstruction of any dam, embankment, levee, dike, bridge, fill or other obstruction in the floodplain of any stream in the Commonwealth; residential and non-residential structures and remodeling of the same, including mobile and manufactured homes and historic structures. No new residential structures may be constructed in a floodway. Nothing can be placed in a floodway that will cause any rise is Base Flood Elevations. Engineering Analysis is required.

### SUPPLEMENTARY PLAT REQUIREMENTS

The following items of supplementary information shall be submitted with, and

considered as part of, the plat (as applicable)

- A. Copy of completed subdivision application form.
- B. Description of physiographic characteristics, including soil types, slope, permeability rates, ground water, depth to bedrock, sinkholes, flood frequency.
- C. Statement of deed restrictions and protective covenants, if any.
- D. Typical street-cross sections showing roadbed construction, curbs, gutters, sidewalks, and relationship of underground utilities.
- E. Plans for showing provisions for domestic water supply. The water system shall include a statement that there is adequate water supply and pressure to support the proposed development.













- F. Drainage/Soil Erosion Control Plan. The developer shall indicate (on a supplemental attachment) the plan for controlling drainage and soil erosion both during and upon completion of development. The location and specifications of such controls as silt fences, staked by hay bales, detention ponds, etc. shall be shown. The drainage plan shall include contours, location and size of culverts, retention/detention ponds, and other drainage structures, and calculations of runoff estimates before and after development. The plans will show certification of approval by a representative from the local Natural Resources Conservation Service office. Erosion control measures will be emplaced in conjunction with initial site preparation activities.
- G. Certification on plat showing that streets and utilities have been approved by the appropriate agencies and conform to general requirements and minimum standards of design. Property fronting on a state or federal highway must receive approval from the State Highway Department of Transportation for ingress and egress. Property fronting on a county road must receive approval from the County Road Supervisor for ingress and egress. Street light may be required.
- H. Certification on plat of title showing that the applicant is the owner, and a statement by such owner dedicating streets.

rights-of-way, and any other sites for public use. See

appropriate form.

- I. Copy of site evaluation application from County Health Officer. A plan for sanitary sewage disposal will be shown. Certification on plat by the County Health Officer when individual sewage disposal or water systems are to be installed.
- J. Certification on plat surveyor or engineer as to the accuracy or survey and plat. See appropriate form.

# M P F











- K. Certification that the sub-divider has complied with one of the following alternatives:
  - 1. All the improvements have been installed in accordance with the requirements of these regulations,

or

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- 2. A security bond, certified check, or irrevocable letter of credit has been posted with the Administrative Official in sufficient amount to assure such completion of all required improvements. Sufficient amount is determined by the developer's engineer.
- L. Certification on plat by the Chairman of the Planning Commission that the plat has been approved for recording in the office of the County Clerk.
- M. Certification on plat by the County Clerk that the plat is accepted for filing and recording.

I hereby certify that I have addressed all of the applicable minimum requirements for the subdivision of land, I further understand if all items are not properly addressed, this plat will not be reviewed by the Planning Commission.

reel Signature Date

# M P F







# APPLICATION FOR DEVELOPMENT / PRELIMINARY PLAT APPROVAL

Name of Applicant \_\_\_\_Kentucky Lodging and Development Inc.
Address \_\_\_\_1738 Cumberland Falls Hwy, Corbin, KY 40701
Phone \_\_\_\_859-734-0560

2. Name of Surveyor or Engineer Will Stevens

Address 2038 Danville Road, Harrodsburg, KY 40330

Phone 859-734-0560

3. Name of Subdivision Kentucky Lodging and Development Inc.

4. Location Description 4050 Irvine Road, Waco, KY 40385

(in addition, please attach a copy of legal description)

5. Proposed Use Dollar General Retail Store

6. Proposed Land Use Designation\_General Business

7. Proposed Land Use Changes N/A

8. Number of Lots\_\_\_\_Smallest lot: No.\_\_\_\_Sq Ft.\_\_\_Area of Tract\_\_\_\_

9. Number of Acres 2.336 acres

10. Do you propose deed restrictions N/A (yes/no)

11. What type of sewage disposal is proposed? On-site Sanitary Sewer

12. List all proposed improvements and utilities:

	Section Number		Item
a.	N/A	2	
b.	N/A		
с.	N/A		

d.	N/A	
е.	N/A	-

13. Waivers requested from plat or design requirements:

	Section Number	Item
a	4.06(G)	20' Landscape Buffer
b	4.06(G)(A)	12' Vehicular Use Buffer
c	4.06(G)(A)(2)	Hedge
d	4.09	
e		

14. List other materials submitted with this application

a.	Development Plan
b.	Consolidation Plat
с.	Stormwater Report
d.	BMP Plan

James AMmpio

e.

Signature of Applicant

Ville &

Signature of Engineer/Surveyor

Date\_\_\_\_10/24/2024

Fee\_\_\_\_\_

#### FOR OFFICIAL USE ONLY

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Date Received	Received by		
Date of Meeting of Planning Commission			
Action by Planning Commission:			
Status: Approved			
Rejected, reason(s) for rejection			
	×		
Date Chairpe	rson Signature		

## APPENDIX D

A.

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C.

D.

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- M
  P
  F

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  Image: Imag
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ph (859) 734-0560 fx (859) 734-0561 www.vantageky.com

2038 Danville Road Harrodsburg, Kentucky 40330

October 28, 2024

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Mr. Bert Thomas Madison County Planning & Building Codes

Re: Dollar General Store 4050 Irvine Road (KY HWY 52) Waco, KY 40385 Stormwater Management Plan

Mr. Thomas:

The attached report summarizes the drainage and proposed stormwater facilities to be constructed to control runoff from the Dollar General Store located at 4050 Irvine Road (KY HWY 52), Waco, KY 40385.



Z:\Projects\241 KY Lodging\354 Waco\misc\HydroCAD\241354 Waco Stormwater Report.doc

#### Dollar General Site

The proposed building and parking lot will add impervious surface to the existing lot which was formerly used for an Equine Stable. To offset increased runoff from the proposed improvements, the proposed stormwater detention basin is structured to control the increased runoff, reducing peak flows to pre-development levels.

The proposed stormwater detention basin will include a new embankment and outlet structure. The runoff from the proposed building rooftop and parking lot will be directed into a detention basins via storm inlets and culverts.

#### Water Quantity Control

A hydrologic model of the existing and proposed stormwater runoff conditions was established using SCS Runoff Methods and HydroCAD modeling software. The watershed was evaluated to the downstream limits of the site.

The peak discharge for the design storm events are summarized as follows:

Peak Discharge					
Storm Event	Existing Conditions	Proposed Conditions			
25-year 24-hour	8.44 cfs	8.08 cfs			
100-year 24-hour	11.79 cfs	10.79 cfs			

Based on these results, the proposed stormwater detention basin sufficiently attenuate the peak discharge for the design storm events.

#### **Detention Pond Emergency Spillway**

The proposed development has been designed to handle peak flow during a 100-year storm allowing stormwater to flow over the emergency spillway. Further, a scenario was modeled in which all outlets within the detention pond were blocked with the exception of the emergency spillway. In this scenario, the emergency spillway adequately handled the peak flow during a 100-year storm without overtopping the dam.

Enclosed, please find reports produced from our stormwater analysis in HydroCAD and a development plan. If you require any additional information regarding these improvements, please contact me. Sincerely,

Will Stevens, PE, PLS Vantage Engineering

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# Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	25-Year	NOAA 24-hr	B	Default	24.00	1	5.04	2
	100-Year	NOAA 24-hr	B	Default	24.00	1	6.35	2

## Summary for Subcatchment 1E: Existing Ground

Runoff = 7.36 cfs @ 12.17 hrs, Volume= 0.481 af, Depth= 2.84"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs NOAA 24-hr B 25-Year Rainfall=5.04"

	A	rea (sf)	CN E	<b>Description</b>			
	88,601		79 Pasture/grassland/range, Fair, HSG C				
		88,601			ervious Are		
(	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description	
	5.7	53	0.0234	0.15		Sheet Flow,	
	3.7	260	0.0286	1.18		Grass: Short n= 0.150 P2= 3.00" <b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps	
	9.4	313	Total				

# Subcatchment 1E: Existing Ground



241354 Waco	NOAA 24-hr B
Prepared by Vantage Engineering PLC	
HydroCAD® 10.10-4a s/n 11395 © 2020 HydroCAD Software Solutio	ns LLC

#### Summary for Subcatchment 2E: Existing Ground

[49] Hint: Tc<2dt may require smaller dt

Runoff = 1.68 cfs @ 12.10 hrs, Volume= 0.088 af, Depth= 2.84"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs NOAA 24-hr B 25-Year Rainfall=5.04"

	А	rea (sf)	CN D	escription			
	16,134 79 Pasture/grassland/range, Fair, HSG C						
		16,134	1	00.00% Pe	ervious Are	a	
	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description	
-	2.2	24	0.0519	0.18	······	Sheet Flow,	
	1.2	122	0.0630	1.76		Grass: Short n= 0.150 P2= 3.00" Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps	
	3.4	146	Total				

#### Subcatchment 2E: Existing Ground



241354 Waco	NOAA 2
Prepared by Vantage Engineering PLC	
HydroCAD® 10.10-4a s/n 11395 © 2020 Hydr	oCAD Software Solutions LLC

## Summary for Subcatchment 3S: Building

[49] Hint: Tc<2dt may require smaller dt

Runoff = 1.67 cfs @ 12.08 hrs, Volume= 0.099 af, Depth= 4.80"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs NOAA 24-hr B 25-Year Rainfall=5.04"

_	A	rea (sf)	CN E	Description		
		10,770	98 F	Roofs, HSG	G C	
	10,770 100.00% Impervious Ar					vrea
	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
	1.3	77	0.0100	0.96		Sheet Flow,
	1.0	270	0.0100	4.54	3.56	Smooth surfaces n= 0.011 P2= 3.00" <b>Pipe Channel,</b> 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25'
_	2.3	347	Total			n= 0.013 Corrugated PE, smooth interior

#### Subcatchment 3S: Building



241354 Waco	NOAA 24-h
Prepared by Vantage Engineering PLC	
HydroCAD® 10.10-4a s/n 11395 © 2020 HydroCAD Software Solution	ns LLC

#### A 24-hr B 25-Year Rainfall=5.04" Printed 10/30/2024 C Page 7

#### Summary for Subcatchment 4S: Parking

[49] Hint: Tc<2dt may require smaller dt

Runoff = 3.13 cfs @ 12.07 hrs, Volume= 0.187 af, Depth= 4.80"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs NOAA 24-hr B 25-Year Rainfall=5.04"

	A	rea (sf)	CN [	Description		
20,327 98 Paved parking, HSG C					ing, HSG C	)
20,327 100.00% Impervious Area					npervious A	rea
	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
	0.2	11	0.0200	0.86		Sheet Flow,
	0.4	50	0.0110	2.13		Smooth surfaces n= 0.011 P2= 3.00" <b>Shallow Concentrated Flow,</b> Paved Kv= 20.3 fps
	0.7	227	0.0100	5.26	6.46	
_	10	200	Tatal			

1.3 288 Total

Subcatchment 4S: Parking



#### Summary for Subcatchment 5S: Pond Area

[49] Hint: Tc<2dt may require smaller dt

Runoff = 1.16 cfs @ 12.09 hrs, Volume= 0.058 af, Depth= 2.40"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs NOAA 24-hr B 25-Year Rainfall=5.04"

_	A	rea (sf)	CN D	escription			
	12,685 74 Pasture/grassland/range, Good, HSG C						
	12,685 100.00% Pervious Are					a	
	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description	
	0.8	18	0.3300	0.36		Sheet Flow,	
	2.0	120	0.0200	0.99		Grass: Short n= 0.150 P2= 3.00" <b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps	
	2.8	138	Total				

#### Subcatchment 5S: Pond Area


241354 Waco	NOAA 24-hr B	25-Year Rainfall=5.04"
Prepared by Vantage Engineering PLC		Printed 10/30/2024
HydroCAD® 10.10-4a s/n 11395 © 2020 HydroCAD Software Solution	ons LLC	Page 9

### Summary for Subcatchment 6S: Undetained Entrance

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.50 cfs @ 12.05 hrs, Volume= 0.030 af, Depth= 4.80"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs NOAA 24-hr B 25-Year Rainfall=5.04"

	A	rea (sf)	CN E	Description							
		3,281	98 F	98 Paved parking, HSG C							
		3,281	1	00.00% In	npervious A	Area					
	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description					
1	0.1	7	0.0410	1.04		Sheet Flow,					
	0.4	98	0.0415	4.14		Smooth surfaces n= 0.011 P2= 3.00" <b>Shallow Concentrated Flow,</b> Paved Kv= 20.3 fps					
	0.5	105	Total								

### Subcatchment 6S: Undetained Entrance



241354 Waco	NOAA 24-h
Prepared by Vantage Engineering PLC	
HydroCAD® 10.10-4a s/n 11395 © 2020 HydroCAD Software Solutio	ns LLC

# Summary for Subcatchment 7S: Undetained Ground (East Entrance)

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.07 cfs @ 12.05 hrs, Volume= 0.003 af, Depth= 2.40"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs NOAA 24-hr B 25-Year Rainfall=5.04"

A	Area (sf)	CN I	Description							
	736	74 I	74 Pasture/grassland/range, Good, HSG C							
	736	100.00% Pervious Area								
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description					
0.3	34	0.0850	2.04		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps					

#### Subcatchment 7S: Undetained Ground (East Entrance)



241354 Waco	NOAA 24-hr B	25-Year Rainfall=5.04"
Prepared by Vantage Engineering PLC		Printed 10/30/2024
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## Summary for Subcatchment 8S: Undetained Ground (North)

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.34 cfs @ 12.08 hrs, Volume= 0.016 af, Depth= 2.40"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs NOAA 24-hr B 25-Year Rainfall=5.04"

	Area (sf)	CN	Description							
	3,580	74	74 Pasture/grassland/range, Good, HSG C							
	3,580		100.00% Pervious Area							
To (min)	0	Slope (ft/ft)	,	Capacity (cfs)	Description					
1.9	145	0.0345	5 1.30		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps					

## Subcatchment 8S: Undetained Ground (North)



241354 Waco	NOAA 2
Prepared by Vantage Engineering PLC	
HydroCAD® 10.10-4a s/n 11395 © 2020 HydroCAD Software Solution	ons LLC

## Summary for Subcatchment 9S: Undetained Ground (South)

[49] Hint: Tc<2dt may require smaller dt

Runoff = 3.47 cfs @ 12.12 hrs, Volume= 0.197 af, Depth= 2.40"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs NOAA 24-hr B 25-Year Rainfall=5.04"

A	rea (sf)	CN I	Description						
	42,917	74 I	74 Pasture/grassland/range, Good, HSG C						
	42,917		100.00% Pervious Area						
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description				
5.2	375	0.0290	1.19		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps				

# Subcatchment 9S: Undetained Ground (South)



241354 Waco	NOAA 24-hr B	25-Year Rainfall=5.04"
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### Summary for Subcatchment 10S: Undetained Ground (West)

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.84 cfs @ 12.07 hrs, Volume= 0.042 af, Depth= 2.40"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs NOAA 24-hr B 25-Year Rainfall=5.04"

A	Area (sf)	CN E	Description		
	9,192	74 F	asture/gra	ssland/ran	ge, Good, HSG C
	9,192	1	00.00% Pe	ervious Are	а
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	11	0.0940	0.20		Sheet Flow,
0.3	52	0.1254	2.48		Grass: Short n= 0.150 P2= 3.00" <b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
1.2	63	Total			

### Subcatchment 10S: Undetained Ground (West)



241354 Waco	NOAA 24	-hr B	25-Year Ra	infall=5.04"
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#### Summary for Subcatchment 11S: Undetained Ground (Spillway)

[49] Hint: Tc<2dt may require smaller dt

Runoff 0.11 cfs @ 12.05 hrs, Volume= 0.006 af, Depth= 2.40"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs NOAA 24-hr B 25-Year Rainfall=5.04"

A	rea (sf)	CN E	CN Description							
	1,255	74 F	74 Pasture/grassland/range, Good, HSG C							
	1,255	1	100.00% Pervious Area							
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description					
0.2	27	0.0890	2.09		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps					

#### Subcatchment 11S: Undetained Ground (Spillway)



NOAA 24-hr B 25-Year Rainfall=5.04" 241354 Waco Printed 10/30/2024 Prepared by Vantage Engineering PLC HydroCAD® 10.10-4a s/n 11395 © 2020 HydroCAD Software Solutions LLC

#### Summary for Pond 1P: Detention Pond

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Inflow Area	a =	1.005 ac, 71.03% Impervious, Inflow Depth = 4.11" for 25-Year event
Inflow	=	5.92 cfs @ 12.08 hrs, Volume= 0.344 af
Outflow	=	3.20 cfs @ 12.15 hrs, Volume= 0.344 af, Atten= 46%, Lag= 4.6 min
Primary	=	3.20 cfs @ 12.15 hrs, Volume= 0.344 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs Peak Elev= 902.17' @ 12.15 hrs Surf.Area= 2,230 sf Storage= 2,390 cf

0

Plug-Flow detention time= 12.3 min calculated for 0.343 af (100% of inflow) Center-of-Mass det. time= 12.3 min (769.4 - 757.0)

Volume	lnv	ert Avail.Sto	rage Storage	Description			
#1	900.	75' 11,80	64 cf Custon	n Stage Data (Pr	rismatic)Listed below (Recalc)		
Elevatio (fee		Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)			
900.7	75	0	0	0			
901.0	00	1,535	192	192			
902.0		2,120	1,828	2,019			
903.0		2,765	2,443	4,462			
904.0		3,474	3,120	7,581			
905.0		4,243	3,859	11,440			
905.1	10	4,243	424	11,864			
Device	Routing	Invert	Outlet Device	es			
#1	Primary	900.75'	12.0" Round	d Culvert			
#2			Inlet / Outlet n= 0.013 Co 8.0' long x 3 Head (feet) ( 2.50 3.00 3. Coef. (Englis)	Invert= 900.75' / rrugated PE, smo <b>3.0' breadth Bro</b> 0.20 0.40 0.60 ( 50 4.00 4.50	form to fill, Ke= 0.700 898.32' S= 0.0261 '/' Cc= 0.900 both interior, Flow Area= 0.79 sf ad-Crested Rectangular Weir 0.80 1.00 1.20 1.40 1.60 1.80 2.00 68 2.67 2.65 2.64 2.64 2.68 2.68 32		
Primary	Primary OutFlow Max=3 19 cfs @ 12 15 hrs HW=902 17' (Free Discharge)						

**Primary OutFlow** Max=3.19 cfs @ 12.15 hrs HW=902.17' (Free Discharge)

-1=Culvert (Inlet Controls 3.19 cfs @ 4.07 fps)

-2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

NOAA 24-hr B 25-Year Rainfall=5.04" 241354 Waco Prepared by Vantage Engineering PLC HydroCAD® 10.10-4a s/n 11395 © 2020 HydroCAD Software Solutions LLC

Hydrograph Inflow Primary 5.92 cfs Inflow Area=1.005 ac Peak Elev=902.17' Storage=2,390 cf 3.20

#### **Pond 1P: Detention Pond**

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0-0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 Time (hours)

<b>241354 Waco</b> No	OAA 24-hr B	25-Year Rainfall=5.04"
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# Summary for Link 1L: Existing

Inflow Are	a =	2.404 ac,	0.00% Impervious,	Inflow Depth =	2.84"	for 25-Year event
Inflow	=	8.44 cfs @	12.15 hrs, Volume	= 0.568	af	
Primary	=	8.44 cfs @	12.15 hrs, Volume	= 0.568	af, Atte	en= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs

0



Link 1L: Existing

241354 Waco	NOA
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## Summary for Link 2L: Proposed Link

Inflow Are	ea =	2.405 ac, 32.82% Impervious, Inflow Depth = 3.19" for 25-Year event
Inflow	=	8.08 cfs @ 12.11 hrs, Volume= 0.638 af
Primary	=	8.08 cfs @ 12.11 hrs, Volume= 0.638 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs



# Link 2L: Proposed Link

#### Summary for Subcatchment 1E: Existing Ground

Runoff = 10.28 cfs @ 12.17 hrs, Volume= 0.677 af, Depth= 3.99"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs NOAA 24-hr B 100-Year Rainfall=6.35"

A	rea (sf)	CN E	escription						
	88,601	79 F	79 Pasture/grassland/range, Fair, HSG C						
	88,601	1	00.00% Pe	ervious Are	a				
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description				
 5.7	53	0.0234	0.15		Sheet Flow,				
3.7	260	0.0286	1.18		Grass: Short n= 0.150 P2= 3.00" Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps				
9.4	313	Total							

#### Subcatchment 1E: Existing Ground



241354 Waco	NOAA 24-hr B	100-Year Ra	infall=6.35"
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# Summary for Subcatchment 2E: Existing Ground

[49] Hint: Tc<2dt may require smaller dt

Runoff = 2.33 cfs @ 12.10 hrs, Volume= 0.123 af, Depth= 3.99"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs NOAA 24-hr B 100-Year Rainfall=6.35"

_	A	rea (sf)	CN D	escription							
		16,134	79 P	/9 Pasture/grassland/range, Fair, HSG C							
-		16,134	1	00.00% P	ervious Are	a					
	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description					
	2.2	24	0.0519	0.18		Sheet Flow,					
	1.2	122	0.0630	1.76		Grass: Short n= 0.150 P2= 3.00" Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps					
1	3.4	146	Total								

# Subcatchment 2E: Existing Ground



241354 Waco	NOAA 24-hr B	100-Year Rainfall=6.35"
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# Summary for Subcatchment 3S: Building

21

[49] Hint: Tc<2dt may require smaller dt

0

Runoff 2.11 cfs @ 12.08 hrs, Volume= 0.126 af, Depth= 6.11"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs NOAA 24-hr B 100-Year Rainfall=6.35"

A	rea (sf)	CN E	Description	1					
	10,770	98 F	98 Roofs, HSG C						
	10,770	1	00.00% In	npervious A	rea				
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description				
1.3	77	0.0100	0.96		Sheet Flow,				
1.0	270	0.0100	4.54	3.56	Smooth surfaces n= 0.011 P2= 3.00" <b>Pipe Channel,</b> 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior				
2.3	347	Total							

# Subcatchment 3S: Building



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#### Summary for Subcatchment 4S: Parking

[49] Hint: Tc<2dt may require smaller dt

Runoff = 3.95 cfs @ 12.07 hrs, Volume= 0.238 af, Depth= 6.11"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs NOAA 24-hr B 100-Year Rainfall=6.35"

	Area (sf)	CN [	Description		
	20,327	98 F	Paved park	ing, HSG C	)
	20,327	-	100.00% In	npervious A	vrea
T (mir		Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.	2 11	0.0200	0.86	·	Sheet Flow, Smooth surfaces n= 0.011 P2= 3.00"
0.	4 50	0.0110	2.13		Shallow Concentrated Flow, Paved Kv= 20.3 fps
0.	7 227	0.0100	5.26	6.46	<b>Pipe Channel,</b> 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.013 Corrugated PE, smooth interior
- 1	2 200	Total			,

1.3 288 Total

#### Subcatchment 4S: Parking



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## Summary for Subcatchment 5S: Pond Area

[49] Hint: Tc<2dt may require smaller dt

0

Runoff = 1.67 cfs @ 12.09 hrs, Volume= 0.084 af, Depth= 3.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs NOAA 24-hr B 100-Year Rainfall=6.35"

	A	rea (sf)	CN D	escription			
	12,685 74 Pasture/grassland/range, Good, HSG C						
	12,685 100.00% Pervious Area						
	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description	
_	0.8	18	0.3300	0.36		Sheet Flow,	
	2.0	120	0.0200	0.99		Grass: Short n= 0.150 P2= 3.00" <b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps	
_	2.8	138	Total				

### Subcatchment 5S: Pond Area



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## Summary for Subcatchment 6S: Undetained Entrance

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.64 cfs @ 12.05 hrs, Volume= 0.038 af, Depth= 6.11"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs NOAA 24-hr B 100-Year Rainfall=6.35"

	A	rea (sf)	CN D	escription		
		3,281	98 P	aved park	ing, HSG C	
	3,281 100.00% Impervious Area					
	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
-	0.1	7	0.0410	1.04		Sheet Flow,
	0.4	98	0.0415	4.14		Smooth surfaces n= 0.011 P2= 3.00" <b>Shallow Concentrated Flow,</b> Paved Kv= 20.3 fps
-	0.5	105	Total			

#### Subcatchment 6S: Undetained Entrance



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# Summary for Subcatchment 7S: Undetained Ground (East Entrance)

.35" 024

[49] Hint: Tc<2dt may require smaller dt

 $\cap$ 

Runoff 0.10 cfs @ 12.05 hrs, Volume= 0.005 af, Depth= 3.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs NOAA 24-hr B 100-Year Rainfall=6.35"

A	rea (sf)	CN	Description				
	736 74 Pasture/grassland/range, Good, HSG C						
736 100.00% Pervious Area							
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description		
0.3	34	0.0850	2.04		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps		

## Subcatchment 7S: Undetained Ground (East Entrance)



## Summary for Subcatchment 8S: Undetained Ground (North)

[49] Hint: Tc<2dt may require smaller dt

0.49 cfs @ 12.08 hrs, Volume= 0.024 af, Depth= 3.48" Runoff

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs NOAA 24-hr B 100-Year Rainfall=6.35"

A	rea (sf)	CN E	Description				
	3,580	74 Pasture/grassland/range, Good, HSG C					
	3,580 100.00% Pervious Area						
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description		
1.9	145	0.0345	1.30		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps		

#### Subcatchment 8S: Undetained Ground (North)



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#### Summary for Subcatchment 9S: Undetained Ground (South)

[49] Hint: Tc<2dt may require smaller dt

1

Runoff = 5.03 cfs @ 12.12 hrs, Volume= 0.286 af, Depth= 3.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs NOAA 24-hr B 100-Year Rainfall=6.35"

A	rea (sf)	) CN	Description					
	42,917	74	74 Pasture/grassland/range, Good, HSG C					
	42,917 100.00% Pervious Area							
Tc (min)	Length (feet)	and the second se		Capacity (cfs)	Description			
5.2	375	5 0.0290	) 1.19		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps			

## Subcatchment 9S: Undetained Ground (South)



241354 Waco	NOAA 24-hr B	100-Year Rai	'nfall=6.35"
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### Summary for Subcatchment 10S: Undetained Ground (West)

35"

[49] Hint: Tc<2dt may require smaller dt

Runoff 1.21 cfs @ 12.07 hrs, Volume= 0.061 af, Depth= 3.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs NOAA 24-hr B 100-Year Rainfall=6.35"

	A	rea (sf)	CN D	Description				
	9,192 74 Pasture/grassland/range, Good, HSG C							
	9,192 100.00% Pervious Area							
	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description		
-	0.9	11	0.0940	0.20		Sheet Flow,		
	0.3	52	0.1254	2.48		Grass: Short n= 0.150 P2= 3.00" Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps		
	1.2	63	Total					

## Subcatchment 10S: Undetained Ground (West)



241354 Waco	NOAA 24-hr B	100-Year Rainfall=6.35"
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#### Summary for Subcatchment 11S: Undetained Ground (Spillway)

[49] Hint: Tc<2dt may require smaller dt

0

Runoff = 0.17 cfs @ 12.05 hrs, Volume= 0.008 af, Depth= 3.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs NOAA 24-hr B 100-Year Rainfall=6.35"

_	Ai	rea (sf)	CN I	Description		·						
		1,255	74 I	74 Pasture/grassland/range, Good, HSG C								
		1,255		100.00% P	ervious Are	a						
_	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description						
	0.2	27	0.0890	2.09		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps						

# Subcatchment 11S: Undetained Ground (Spillway)



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#### NOAA 24-hr B 100-Year Rainfall=6.35" Printed 10/30/2024 Page 30

#### Summary for Pond 1P: Detention Pond

Inflow Area =		1.005 ac, 71.03% Impervious, Inflow Depth = 5.35" for 100-Year event	
Inflow	=	7.68 cfs @ 12.08 hrs, Volume= 0.448 af	
Outflow	=	3.80 cfs @ 12.16 hrs, Volume= 0.448 af, Atten= 51%, Lag= 5.0 min	
Primary	=	3.80 cfs @ 12.16 hrs, Volume= 0.448 af	

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs Peak Elev= 902.54' @ 12.16 hrs Surf.Area= 2,471 sf Storage= 3,270 cf

Plug-Flow detention time= 12.6 min calculated for 0.447 af (100% of inflow) Center-of-Mass det. time= 12.7 min (766.7 - 754.1)

Volume	Inve	ert Avail.Sto	rage Storage	e Description					
#1	900.7	5' 11,80	64 cf Custon	m Stage Data (Prismatic)Listed below (Recalc)					
Elevatio		Surf.Area	Inc.Store	Cum.Store					
(fee		(sq-ft)	(cubic-feet)	(cubic-feet)					
900.7		0	0	0					
901.0		1,535	192	192					
902.0		2,120	1,828	2,019					
903.0	00	2,765	2,443	4,462					
904.0	00	3,474	3,120	7,581					
905.0	00	4,243	3,859	11,440					
905.1	10	4,243	424	11,864					
Device	Routing	Invert	Outlet Device	ces					
#1	Primary	900.75'	12.0" Round	nd Culvert					
	-		L= 93.0' CP	PP, mitered to conform to fill, Ke= 0.700					
			Inlet / Outlet	t Invert= 900.75' / 898.32' S= 0.0261 '/' Cc= 0.900					
			n= 0.013 Co	orrugated PE, smooth interior, Flow Area= 0.79 sf					
#2	Primary	904.60'		3.0' breadth Broad-Crested Rectangular Weir					
	j			0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00					
			· /	3.50 4.00 4.50					
				sh) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68					
			, .	2.92 2.97 3.07 3.32					
			2.72 2.01 2.						
Drimon	Drimany OutFlow Max-3 78 of @ 12 16 hrs. HW-002 53' (Free Discharge)								

Primary OutFlow Max=3.78 cfs @ 12.16 hrs HW=902.53' (Free Discharge) -1=Culvert (Inlet Controls 3.78 cfs @ 4.81 fps)

-2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

NOAA 24-hr B 100-Year Rainfall=6.35" 241354 Waco Prepared by Vantage Engineering PLC HydroCAD® 10.10-4a s/n 11395 © 2020 HydroCAD Software Solutions LLC



#### **Pond 1P: Detention Pond**

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241354 Waco	NOAA 24-hr B	100-Year Rainfall=6.35"
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Inflow Area =		2.404 ac,	0.00% Impervious, Inflo	ow Depth = 3.99"	for 100-Year event
Inflow	=	11.79 cfs @	12.15 hrs, Volume=	0.800 af	
Primary	=	11.79 cfs @	12.15 hrs, Volume=	0.800 af, Atte	en= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs



Link 1L: Existing

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Inflow Are	a =	2.405 ac, 32.82% Impervious, Inflow Depth = 4.34" for 100-Year event
Inflow	=	10.79 cfs @ 12.10 hrs. Volume= 0.871 af
Primary	=	10.79 cfs @ 12.10 hrs, Volume= 0.871 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs



## Link 2L: Proposed Link

Q

1



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# Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC	
 1	100-Year	NOAA 24-hr	В	Default	24.00	1	6.35	2	

# Summary for Subcatchment 3S: Building

[49] Hint: Tc<2dt may require smaller dt

Runoff = 2.11 cfs @ 12.08 hrs, Volume= 0.126 af, Depth= 6.11"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs NOAA 24-hr B 100-Year Rainfall=6.35"

	A	rea (sf)	CN [	Description		
		10,770	98 F	Roofs, HSG	GC	
	10,770 100.00% Impervious Are					irea
(mi	Гc n)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1	.3	77	0.0100	0.96		Sheet Flow,
1	.0	270	0.0100	4.54	3.56	Smooth surfaces n= 0.011 P2= 3.00" <b>Pipe Channel,</b> 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25'
2	.3	347	Total			n= 0.013 Corrugated PE, smooth interior

### Subcatchment 3S: Building



#### Summary for Subcatchment 4S: Parking

[49] Hint: Tc<2dt may require smaller dt

5 0

1

Runoff = 3.95 cfs @ 12.07 hrs, Volume= 0.238 af, Depth= 6.11"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs NOAA 24-hr B 100-Year Rainfall=6.35"

	A	rea (sf)	CN I	Description		·		
		20,327	98 I	Paved park	ing, HSG C	2		
20,327				100.00% In	npervious A	pervious Area		
	Tc (min)	Length (feet)			Capacity (cfs)	Description		
-	0.2	11	0.0200	0.86		Sheet Flow,		
	0.4	50	0.0110	2.13		Smooth surfaces n= 0.011 P2= 3.00" <b>Shallow Concentrated Flow,</b> Paved Kv= 20.3 fps		
	0.7	227	0.0100	5.26	6.46	<b>Pipe Channel,</b> 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.013 Corrugated PE, smooth interior		
	1 2	200	Total					

1.3 288 Total

#### Subcatchment 4S: Parking



#### Summary for Subcatchment 5S: Pond Area

[49] Hint: Tc<2dt may require smaller dt

Runoff = 1.67 cfs @ 12.09 hrs, Volume= 0.084 af, Depth= 3.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs NOAA 24-hr B 100-Year Rainfall=6.35"

_	A	rea (sf)	CN D	escription			
12,685 74 Pasture/grassland/range, Good, HSG C							
		12,685	1	00.00% Pe	ervious Are	a	
	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description	
	0.8	18	0.3300	0.36		Sheet Flow,	
	2.0	120	0.0200	0.99		Grass: Short n= 0.150 P2= 3.00" <b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps	
	2.8	138	Total				

#### Subcatchment 5S: Pond Area



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# Summary for Pond 1P: Detention Pond

Inflow Are	ea =	1.005 ac, 71.03% Impervious, Inflow Depth = 5.35" for 100-Year event
Inflow	=	
Outflow	=	2.70 cfs @ 12.21 hrs, Volume= 0.223 af, Atten= 65%, Lag= 7.9 min
Primary	=	2.70 cfs @ 12.21 hrs, Volume= 0.223 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs Peak Elev= 904.86' @ 12.21 hrs Surf.Area= 4,138 sf Storage= 10,868 cf

Plug-Flow detention time= 241.1 min calculated for 0.223 af (50% of inflow) Center-of-Mass det. time= 127.0 min (881.1 - 754.1)

Volume	Inve	ert Avail.St	orage		Description		_
#1	900.7	5' 11,8	864 cf	Custom	Stage Data (Pi	r <b>ismatic)</b> Listed below (Recalc)	
Elevatio (fee 900.7 901.0 902.0 903.0 904.0 905.0 905.0	(†) (75 ()00 ()00 ()00 ()00 ()00	Surf.Area (sq-ft) 0 1,535 2,120 2,765 3,474 4,243 4,243		.Store <u>c-feet)</u> 192 1,828 2,443 3,120 3,859 424	Cum.Store (cubic-feet) 0 192 2,019 4,462 7,581 11,440 11,864		
905.10 <u>Device Routing</u> #1 Primary		<u>Inver</u> 904.60	' <b>8.0'</b> Hea 2.50 Coe	d (feet) 0 3.00 3.4 f. (English	<b>.0' breadth Bro</b> 0.20 0.40 0.60 50 4.00 4.50	<b>ad-Crested Rectangular Weir</b> 0.80 1.00 1.20 1.40 1.60 1.80 2.00 68 2.67 2.65 2.64 2.64 2.68 2.68 3.32	-

Primary OutFlow Max=2.65 cfs @ 12.21 hrs HW=904.86' (Free Discharge) —1=Broad-Crested Rectangular Weir (Weir Controls 2.65 cfs @ 1.27 fps) 8

6

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2

Flow (cfs)

Hydrograph InflowPrimary 7.68 cfs Inflow Area=1.005 ac Peak Elev=904.86' Storage=10,868 cf 2.70

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 Time (hours)

Pond 1P: Detention Pond

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