



Stormwater Board Agenda

When: 9-2-2025 Time: 4:30pm

Where: Commissioners Conference Room, at the Pine View Government Center

Members

Frank Loop President Term: January 1, 2025 – December 31, 2028	John Brinkworth III Vice President Term: January 1, 2025 – December 31, 2028	Al Knable Member Term: January 1, 2023 – December 31, 2026	Jason Sharp Member Term: January 1, 2025 - December 31, 2028
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Welcome:

Program Maintenance :

Approval of Minutes – August 2025

Daily Maintenance Reports / Claims (Chris) – August 2025

Old Business:

Erosion Control (Heritage) – August Summary Report

Pebble Creek Subdivision (Horacio) – Open Sealed Quotes

New Business:

Stormwater Design Manual (OHM) - Update

Stormwater Awareness Week (Chris) – September 8th – 13th, 2025

Public Comment:

ADA Notice: Floyd County, will upon request, provide appropriate aids and services leading to effective communications for qualified persons with disabilities so that they can participate equally in Floyd County's public meetings.

For special accommodations for a meeting contact the Commissioners Administrative Assistant Suzanna Worrall at

812-948-5466 or sworrall@floydcounty.in.gov at least two (2) business days prior to the scheduled meeting or event to request an accommodation.

Floyd County Storm Water Board Minutes

Held: August 5, 2025

4:30 P.M.

Welcome:

Present: Commissioners Jason Sharp and Frank Loop, County Surveyor John Brinkworth III, Storm Water Coordinator Chris Moore, Director of Building & Development Nick Creevy, County Engineer Horacio Urieta, Attorney Rick Fox and Secretary Karalynn Flora.

Program Maintenance:

Approval of Minutes –July 1, 2025

Mr. Sharp made a motion to approve the minutes of June 3, 2025 as presented, seconded by Mr. Brinkworth. Motion carried 3-0, 1 absent.

Daily Maintenance Reports / Claims- July 2025

Mr. Moore presented work orders to show projects completed, in the month of June, by the Road Department to maintain Storm Water infrastructure. Mr. Moore presented to the board a list of claims for July that need approval from the board.

Mr. Sharp made a motion to approve the claims for July as submitted, Seconded by Mr. Brinkworth. Motion Carried 3-0, 1 absent.

Old Business:

Erosion Control report – July Summary Report – Casey DeYoung, Heritage Engineering

Mr. DeYoung stated that there are 32 active sites, 17 were compliant, 7 show signs of offsite sedimentation and 8 were dormant. Mr. Loop asked if there were any sites that need extra attention, to which Mr. DeYoung replied The Springs of Old Georgetown because the constant rain made it harder for them to perform their corrective actions. (The Report is on file with the minutes)

Review of SFR's- Rate Approval- Kristen Hewes, Stantec and John Damico, ERC

Ms. Hewes and Mr. Damico presented to the board a budget for 2025 and 2026, as well as a projected budget for 2027 for the Storm Water Department. They also provided an estimated income projection for the rates of \$41 or \$45 and with or without the CPI yearly growth of 3%. Mr. Fox stated that they are not able to and a CPI growth factor into the ordinance and sited Georgetown Sewer company to illustrate his opinion. Mr. Loop advised the board to take this matter under advisement, so that the board members could review the material and so Mr. Fox could create a calendar schedule.

Pebble Creek Subdivision – Solution options and cost estimate – Horacio Urieta

Mr. Urieta presented to the board which option he found most effective from the cost estimates he provided at the previous meeting. His finding was that option 3, Surface mill and pave a road section, would be the best and fastest solution to this roadway drainage issue. Mr. Moore asked the board for a direction and Mr. Sharp made a motion to approve option 3, Seconded by Mr. Brinkworth. Motion Carried 3-0, 1 absent.

New Business:

ORSANCO River Sweep - September 13, 2025 – Chris Moore

Mr. Moore stated that the annual Ohio River sweep would be Saturday September 13 at the New Albany amphitheater from 9am to noon. He also stated that this is a joint activity between Clarksville and Jeffersonville to promote Storm Water Awareness.

Public Comment:

Joseph (PJ) Moore stated that he was appreciative to Mr. Creevy for help cutting down on extra lighting from construction near his home. He also said Storm Water is leaving thousands of dollars on the table by not collecting fees when construction begins.

Dale Mann thanked the board for thinking about agriculture. He also stated that when the move to make agriculture a flat rate was first talked about, two dollars was enough to offset agriculture and if contractors followed the ordinances that the cost of Storm Water should be decreasing.

Chris Moore Stated that the cost of Storm Water should not be going down each yeah because water erosion is constant and Storm Water infrastructure requires reoccurring maintenance that costs money. He also said that that the amount developers are paying was doubled in the November ordinance update, but growth in Floyd County is only expected to be 1.5% and that Storm Water would be losing 6% by making agriculture a flat rate.

Adjournment:

With there being no other business, a motion was made by Mr. Sharp to Adjourn, seconded by Mr. Loop. Motion carried. Meeting adjourned at 5:06 P.M. The next regular meeting of the board on September 2, 2025 at 4:30P.M, unless otherwise notified.

Frank Loop, President

John Brinkworth, Vice-President

Al Knable, Member

Jason Sharp, Member

Attest: _____
Karalynn Flora, Clerk

REGISTER OF CLAIMS FOR STORMWATER

8/5/2025

DATE FILED	CLAIM/INV #	VENDOR	FUND NO.	AMOUNT ALLOWED	DISCRPTION
8/20/2025	18002-80	Heritage Engineering	1197	\$ 8,296.34	Professional Services
Total				\$ 8,296.34	
President					

Work Order		Monday, August 4, 2025									
Project Name		Ditching - 8620 Starlight									
Type		Maintenance- Ditch									
Manpower		TD/L	Operator	Light Operator	Working Total						
Number of Employees		3	1	0							
Hours Worked		8	8	0							
Subtotal		\$ 511.20	\$ 184.08	\$ -							
Total Including Fringe		\$ 623.4084	\$ 224.4856	\$ -	\$ 847.89						
Equipment		Dump Truck	Backhoe	Pumper							
Number of Equipment		3	1	0							
Equipment Hours		8	8	0							
Total		\$ 1,578.00	\$ 351.28	\$ -	\$ 1,929.28						
Supervisor		Superintendent	Crew Leader	Crew Leader							
Hours Worked		1	1	0							
Subtotal		\$ 42.09	\$ 28.05	\$ 0							
Total		\$ 51.33	\$ 34.21	\$ -	\$ 85.54						
Equipment		Pick Up	Pick Up	Pick Up							
Number of Equipment		1	1	0							
Equipment Hours		1	1	0							
Total		\$ 20.57	\$ 20.57	\$ -	\$ 41.14						
Material											
Invoice Number(s)											
Administrative		Administrative	None	Engineer	Engineer In Training	Planning Tech					Working Total
Administrative Staff		Administrative									
Hours Worked		1	0	0	0	0					
Subtotal		\$ 22.43	\$ 0	\$ 0	\$ 0	\$ 0					
Total with Fringe		\$ 27.35	\$ -	\$ -	\$ -	\$ -					\$ 27.35
Equipment		None	None	None	None	None					
Number of Equipment		0	0	0	0	0					
Equipment Hours		0	0	0	0	0					
Total		\$ -	\$ -	\$ -	\$ -	\$ -					\$ -
Total											\$ 27.35

Work Order		Monday, August 4, 2025									
Project Name		Bridge Deck - 6910 Grantline									
Type		Maintenance - Structures									
Manpower		TD/L	Operator	Light Operator	Working Total						
Number of Employees		4	0	0							
Hours Worked		8	0	0							
Subtotal		\$ 681.60	\$ -	\$ -	\$ 831.21						
Total Including Fringe		\$ 831.2112	\$ -	\$ -	\$ 831.21						
Equipment		Dump Truck	Backhoe	Pumper							
Number of Equipment		2	0	0							
Equipment Hours		8	0	0							
Total		\$ 1,052.00	\$ -	\$ -	\$ 1,052.00						
Supervisor		Superintendent	Crew Leader	Crew Leader							
Hours Worked		1	1	0							
Subtotal		\$ 42.09	\$ 28.05	\$ 0	\$ 85.54						
Total		\$ 51.33	\$ 34.21	\$ -	\$ 85.54						
Equipment		Pick Up	Pick Up	Pick Up							
Number of Equipment		1	1	0							
Equipment Hours		1	1	0							
Total		\$ 20.57	\$ 20.57	\$ -	\$ 41.14						
Total					\$ 2,009.89						
Material											
Invoice Number(s)											
Administrative		Administrative	None	Engineer	Engineer In Training	Planning Tech	Working Total				
Administrative Staff		Administrative	None	0	0	0					
Hours Worked		1	0	0	0	0					
Subtotal		\$ 22.43	\$ -	\$ -	\$ -	\$ -	\$ 27.35				
Total with Fringe		\$ 27.35	\$ -	\$ -	\$ -	\$ -	\$ 27.35				
Equipment		None	None	None	None	None					
Number of Equipment		0	0	0	0	0					
Equipment Hours		0	0	0	0	0					
Total		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -				
Total							\$ 27.35				

Work Order		Tuesday, August 5, 2025									
Project Name		Ditches Smith Creek									
Type		Maintenance- Ditch									
Manpower		TD/L	Operator	Light Operator	Working Total						
Number of Employees		3	1	0							
Hours Worked		8	8	0							
Subtotal		\$ 511.20	\$ 184.08	\$ -							
Total Including Fringe		\$ 623.4084	\$ 224.4856	\$ -	\$ 847.89						
Equipment		Dump Truck	Backhoe	Pumper							
Number of Equipment		3	1	0							
Equipment Hours		8	8	0							
Total		\$ 1,578.00	\$ 351.28	\$ -	\$ 1,929.28						
Supervisor		Superintendent	Crew Leader	Crew Leader							
Hours Worked		1	1	0							
Subtotal		\$ 42.09	\$ 28.05	\$ 0							
Total		\$ 51.33	\$ 34.21	\$ -	\$ 85.54						
Equipment		Pick Up	Pick Up	Pick Up							
Number of Equipment		1	1	0							
Equipment Hours		1	1	0							
Total		\$ 20.57	\$ 20.57	\$ -	\$ 41.14						
Material											
Invoice Number(s)											
Administrative		Administrative	None	Engineer	Engineer In Training	Planning Tech	Working Total				
Administrative Staff		Administrative									
Hours Worked		1	0	0	0	0					
Subtotal		\$ 22.43	\$ 0	\$ 0	\$ 0	\$ 0					
Total with Fringe		\$ 27.35	\$ -	\$ -	\$ -	\$ -	\$ 27.35				
Equipment		None	None	None	None	None					
Number of Equipment		0	0	0	0	0					
Equipment Hours		0	0	0	0	0					
Total		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -				
Total							\$ 27.35				

Work Order		Tuesday, August 5, 2025									
Project Name		Ditch Tunnel Hill/Clear Drainage Louisway									
Type		Maintenance- Ditch									
Manpower		TD/L	Operator	Light Operator	Working Total						
Number of Employees		3	1	0							
Hours Worked		8	8	0							
Subtotal		\$ 511.20	\$ 184.08	\$ -							
Total Including Fringe		\$ 623.4084	\$ 224.4856	\$ -	\$ 847.89						
Equipment		Dump Truck	Backhoe	Pumper							
Number of Equipment		3	1	0							
Equipment Hours		8	8	0							
Total		\$ 1,578.00	\$ 351.28	\$ -	\$ 1,929.28						
Supervisor		Superintendent	Crew Leader	Crew Leader							
Hours Worked		1	1	0							
Subtotal		\$ 42.09	\$ 28.05	\$ 0							
Total		\$ 51.33	\$ 34.21	\$ -	\$ 85.54						
Equipment		Pick Up	Pick Up	Pick Up							
Number of Equipment		1	1	0							
Equipment Hours		1	1	0							
Total		\$ 20.57	\$ 20.57	\$ -	\$ 41.14						
Material					\$ 2,903.85						
Invoice Number(s)											
Administrative		Administrative	None	Engineer	Engineer In Training	Planning Tech	Working Total				
Administrative Staff		Administrative	None	Engineer	Engineer In Training	Planning Tech					
Hours Worked		1	0	0	0	0					
Subtotal		\$ 22.43	\$ 0	\$ 0	\$ 0	\$ 0					
Total with Fringe		\$ 27.35	\$ -	\$ -	\$ -	\$ -	\$ 27.35				
Equipment		None	None	None	None	None					
Number of Equipment		0	0	0	0	0					
Equipment Hours		0	0	0	0	0					
Total		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -				
Total							\$ 27.35				

Work Order		Wednesday, August 6, 2025									
Project Name		Bridge 101-Grantline Road									
Type		Maintenance -Structures									
Manpower		TD/L	Operator	Light Operator	Working Total						
Number of Employees		3	0	0							
Hours Worked		8	0	0							
Subtotal		\$ 511.20	\$ -	\$ -	\$ 623.41						
Total Including Fringe		\$ 623.4084	\$ -	\$ -							
Equipment		Dump Truck	Backhoe	Pumper	Working Total						
Number of Equipment		2	0	0							
Equipment Hours		8	0	0							
Total		\$ 1,052.00	\$ -	\$ -	\$ 1,052.00						
Supervisor		Superintendent	Crew Leader	Crew Leader	Working Total						
Hours Worked		1	1	0							
Subtotal		\$ 42.09	\$ 28.05	\$ 0							
Total		\$ 51.33	\$ 34.21	\$ -	\$ 85.54						
Equipment		Pick Up	Pick Up	Pick Up	Working Total						
Number of Equipment		1	1	0							
Equipment Hours		1	1	0							
Total		\$ 20.57	\$ 20.57	\$ -	\$ 41.14						
Material					\$ 1,802.08						
Invoice Number(s)											
Administrative		Administrative	None	Engineer	Engineer In Training	Planning Tech	Working Total				
Administrative Staff		Administrative	None	0	0	0					
Hours Worked		1	0	0	0	0					
Subtotal		\$ 22.43	\$ -	\$ -	\$ -	\$ -	\$ 27.35				
Total with Fringe		\$ 27.35	\$ -	\$ -	\$ -	\$ -					
Equipment		None	None	None	None	None	Working Total				
Number of Equipment		0	0	0	0	0					
Equipment Hours		0	0	0	0	0					
Total		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -				
Total							\$ 27.35				

Work Order		Monday, August 11, 2025									
Project Name		Finish Open Culverts Blunk Knob									
Type		Maintenance - Pipe									
Manpower		TD/L	Operator	Light Operator	Working Total						
Number of Employees		3	1	0							
Hours Worked		8	8	0							
Subtotal		\$ 511.20	\$ 184.08	\$ -							
Total Including Fringe		\$ 623.4084	\$ 224.4856	\$ -	\$ 847.89						
Equipment		Dump Truck	Backhoe	Pumper							
Number of Equipment		3	1	0							
Equipment Hours		8	8	0							
Total		\$ 1,578.00	\$ 351.28	\$ -	\$ 1,929.28						
Supervisor		Superintendent	Crew Leader	Crew Leader							
Hours Worked		1	1	0							
Subtotal		\$ 42.09	\$ 28.05	\$ 0							
Total		\$ 51.33	\$ 34.21	\$ -	\$ 85.54						
Equipment		Pick Up	Pick Up	Pick Up							
Number of Equipment		1	1	0							
Equipment Hours		1	1	0							
Total		\$ 20.57	\$ 20.57	\$ -	\$ 41.14						
Material											
Invoice Number(s)											
Administrative		Administrative	None	Engineer	Engineer In Training	Planning Tech	Working Total				
Administrative Staff		Administrative									
Hours Worked		1	0	0	0	0					
Subtotal		\$ 22.43	\$ 0	\$ 0	\$ 0	\$ 0					
Total with Fringe		\$ 27.35	\$ -	\$ -	\$ -	\$ -	\$ 27.35				
Equipment		None	None	None	None	None					
Number of Equipment		0	0	0	0	0					
Equipment Hours		0	0	0	0	0					
Total		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -				
Total							\$ 27.35				

Work Order		Tuesday, August 12, 2025									
Project Name		Check Basins in Jefferson Gardens									
Type		Maintenance - Structures									
Manpower	TD/L	Operator	Light Operator	Working Total							
	Number of Employees	1	0								
	Hours Worked	4	0								
	Subtotal	\$ 85.20	\$ 92.04	\$ -	\$ 216.14						
Total Including Fringe		\$ 103.9014	\$ 112.2428	\$ -							
Equipment	Pumper	Backhoe	Pumper								
	Number of Equipment	1	0	0							
	Equipment Hours	4	0	0							
	Total	\$ 263.00	\$ -	\$ -	\$ 263.00						
Supervisor	Superintendent	Crew Leader	Crew Leader								
	Hours Worked	1	1	0							
	Subtotal	\$ 42.09	\$ 28.05	\$ 0							
	Total	\$ 51.33	\$ 34.21	\$ -	\$ 85.54						
Equipment	Pick Up	Pick Up	Pick Up								
	Number of Equipment	1	1	0							
	Equipment Hours	1	1	0							
	Total	\$ 20.57	\$ 20.57	\$ -	\$ 41.14						
Material											
Invoice Number(s)											
Administrative		Administrative	None	Engineer	Engineer In Training	Planning Tech	Working Total				
Administrative Staff	Administrative	1	0	0	0	0					
	Hours Worked	22.43	0	0	0	0					
	Subtotal	\$ 27.35	\$ -	\$ -	\$ -	\$ -	\$ 27.35				
	Total with Fringe	\$ 27.35	\$ -	\$ -	\$ -	\$ -					
Equipment	None	None	None	None	None	None					
	Number of Equipment	0	0	0	0	0					
	Equipment Hours	0	0	0	0	0					
	Total	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -				
Total											

Work Order		Wednesday, August 13, 2025									
Project Name		Replace Driveway Culvert 3401 Paoli Pike									
Type		New Pipe Installation									
Manpower		TD/L	Operator	Light Operator	Working Total						
Number of Employees		1	1	0							
Hours Worked		8	8	0							
Subtotal		\$ 170.40	\$ 184.08	\$ -	\$ 432.29						
Total Including Fringe		\$ 207.8028	\$ 224.4856	\$ -							
Equipment		Pumper	Backhoe	Pumper							
Number of Equipment		1	0	0							
Equipment Hours		8	0	0							
Total		\$ 526.00	\$ -	\$ -	\$ 526.00						
Supervisor		Superintendent	Crew Leader	Crew Leader							
Hours Worked		1	1	0							
Subtotal		\$ 42.09	\$ 28.05	\$ 0							
Total		\$ 51.33	\$ 34.21	\$ -	\$ 85.54						
Equipment		Pick Up	Pick Up	Pick Up							
Number of Equipment		1	1	0							
Equipment Hours		1	1	0							
Total		\$ 20.57	\$ 20.57	\$ -	\$ 41.14						
Material											
Invoice Number(s)											
Administrative		Administrative	None	Engineer	Engineer In Training	Planning Tech	Working Total				
Administrative Staff		Administrative	None	0	0	0					
Hours Worked		1	0	0	0	0					
Subtotal		\$ 22.43	\$ -	\$ -	\$ -	\$ -	\$ 27.35				
Total with Fringe		\$ 27.35	\$ -	\$ -	\$ -	\$ -					
Equipment		None	None	None	None	None					
Number of Equipment		0	0	0	0	0					
Equipment Hours		0	0	0	0	0					
Total		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -				
Total							\$ 27.35				

Tuesday, August 19, 2025									
Work Order									
Project Name		Culvert Quarry Road							
Type		New Pipe Installation							
Manpower		TD/L		Operator		Light Operator		Working Total	
Number of Employees		5		1		0			
Hours Worked		8		8		0			
Subtotal		\$ 852.00		\$ 184.08		\$ -			
Total Including Fringe		\$ 1,039.0140		\$ 224.4856		\$ -		\$ 1,263.50	
Equipment		Dump Truck		Backhoe		Pumper			
Number of Equipment		3		1		0			
Equipment Hours		8		8		0			
Total		\$ 1,578.00		\$ 351.28		\$ -		\$ 1,929.28	
Supervisor		Superintendent		Crew Leader		Crew Leader			
Hours Worked		1		1		0			
Subtotal		42.09		28.05		0			
Total		\$ 51.33		\$ 34.21		\$ -		\$ 85.54	
Equipment		Pick Up		Pick Up		Pick Up			
Number of Equipment		1		1		0			
Equipment Hours		1		1		0			
Total		\$ 20.57		\$ 20.57		\$ -		\$ 41.14	
Total								\$ 3,319.46	
Material									
Invoice Number(s)									
Administrative		Administrative		None		Engineer		Engineer In Training	
Administrative Staff		Administrative		None		0		Planning Tech	
Hours Worked		1		0		0		0	
Subtotal		22.43		0		0		0	
Total with Fringe		\$ 27.35		\$ -		\$ -		\$ -	
Equipment		None		None		None		None	
Number of Equipment		0		0		0		0	
Equipment Hours		0		0		0		0	
Total		\$ -		\$ -		\$ -		\$ -	
Total								\$ 27.35	

Work Order		Tuesday, August 19, 2025									
Project Name		Set Forms on Quarry Road/Catch Basin 3305 Cobblers									
Type		Maintenance -Structures									
Manpower		TD/L	Operator	Light Operator	Working Total						
Number of Employees		4	0	0							
Hours Worked		8	0	0							
Subtotal		\$ 681.60	\$ -	\$ -	\$ 831.21						
Total Including Fringe		\$ 831.2112	\$ -	\$ -	\$ 831.21						
Equipment		Dump Truck	Backhoe	Pumper							
Number of Equipment		2	0	0							
Equipment Hours		8	0	0							
Total		\$ 1,052.00	\$ -	\$ -	\$ 1,052.00						
Supervisor		Superintendent	Crew Leader	Crew Leader							
Hours Worked		1	1	0							
Subtotal		\$ 42.09	\$ 28.05	\$ 0	\$ 85.54						
Total		\$ 51.33	\$ 34.21	\$ -	\$ 85.54						
Equipment		Pick Up	Pick Up	Pick Up							
Number of Equipment		1	1	0							
Equipment Hours		1	1	0							
Total		\$ 20.57	\$ 20.57	\$ -	\$ 41.14						
Material					\$ 2,009.89						
Invoice Number(s)											
Administrative		Administrative	None	Engineer	Engineer In Training	Planning Tech	Working Total				
Administrative Staff		Administrative	None	0	0	0					
Hours Worked		1	0	0	0	0					
Subtotal		\$ 22.43	\$ -	\$ -	\$ -	\$ -					
Total with Fringe		\$ 27.35	\$ -	\$ -	\$ -	\$ 27.35					
Equipment		None	None	None	None	None					
Number of Equipment		0	0	0	0	0					
Equipment Hours		0	0	0	0	0					
Total		\$ -	\$ -	\$ -	\$ -	\$ -					
Total							\$ 27.35				

Work Order	Project Name	Type
	Culvert Quarry Road Finish	New Pipe Installation

Manpower									
TD/L		Operator		Light Operator		Working Total			
Number of Employees		1		0					
Hours Worked		8		0					
Subtotal		\$ 681.60		\$ -		\$ 1,055.70			
Total Including Fringe		\$ 831.2112		\$ -		\$ 1,055.70			
Equipment									
Dump Truck		Backhoe		Pumper					
Number of Equipment		4		0					
Equipment Hours		8		0					
Total		\$ 2,104.00		\$ -		\$ 2,455.28			
Supervisor									
Superintendent		Crew Leader		Crew Leader					
Hours Worked		1		0					
Subtotal		42.09		0					
Total		\$ 51.33		\$ -		\$ 85.54			
Equipment									
Pick Up		Pick Up		Pick Up					
Number of Equipment		1		0					
Equipment Hours		1		0					
Total		\$ 20.57		\$ -		\$ 41.14			
Total						\$ 3,637.65			
Material									
Invoice Number(s)									
Administrative									
Administrative		None		Engineer		Engineer In Training		Planning Tech	
Hours Worked		1		0		0		0	
Subtotal		22.43		0		0		0	
Total with Fringe		\$ 27.35		\$ -		\$ -		\$ -	
Equipment									
None		None		None		None		None	
Number of Equipment		0		0		0		0	
Equipment Hours		0		0		0		0	
Total		\$ -		\$ -		\$ -		\$ -	
Total								\$ 27.35	

Work Order		Wednesday, August 27, 2025									
Project Name		Culvert 5408 E McCarthy Knob									
Type		New Pipe Installation									
Manpower		TD/L		Operator		Light Operator		Working Total			
Number of Employees		3		1		0					
Hours Worked		8		8		0					
Subtotal		\$ 511.20		\$ 184.08		\$ -					
Total Including Fringe		\$ 623.4084		\$ 224.4856		\$ -		\$ 847.89			
Equipment		Dump Truck		Backhoe		Pumper					
Number of Equipment		3		1		0					
Equipment Hours		8		8		0					
Total		\$ 1,578.00		\$ 351.28		\$ -		\$ 1,929.28			
Supervisor		Superintendent		Crew Leader		Crew Leader					
Hours Worked		1		1		0					
Subtotal		42.09		28.05		0					
Total		\$ 51.33		\$ 34.21		\$ -		\$ 85.54			
Equipment		Pick Up		Pick Up		Pick Up					
Number of Equipment		1		1		0					
Equipment Hours		1		1		0					
Total		\$ 20.57		\$ 20.57		\$ -		\$ 41.14			
Material											
Invoice Number(s)											
Administrative		Administrative		None		Engineer		Engineer In Training		Planning Tech	
Hours Worked		1		0		0		0		0	
Subtotal		22.43		0		0		0		0	
Total with Fringe		\$ 27.35		\$ -		\$ -		\$ -		\$ -	
Equipment		None		None		None		None		None	
Number of Equipment		0		0		0		0		0	
Equipment Hours		0		0		0		0		0	
Total		\$ -		\$ -		\$ -		\$ -		\$ -	
Working Total											
Total										\$ 27.35	

Thursday, August 28, 2025

Work Order		Thursday, August 28, 2025									
Project Name		Culvert Quarry Road Dig Out									
Type		New Pipe Installation									
Manpower		TD/L		Operator		Light Operator		Working Total			
Number of Employees		3		1		0					
Hours Worked		8		8		0					
Subtotal		\$ 511.20		\$ 184.08		\$ -					
Total Including Fringe		\$ 623.4084		\$ 224.4856		\$ -		\$ 847.89			
Equipment		Dump Truck		Backhoe		Pumper					
Number of Equipment		3		1		0					
Equipment Hours		8		8		0					
Total		\$ 1,578.00		\$ 351.28		\$ -		\$ 1,929.28			
Supervisor		Superintendent		Crew Leader		Crew Leader					
Hours Worked		1		1		0					
Subtotal		42.09		28.05		0					
Total		\$ 51.33		\$ 34.21		\$ -		\$ 85.54			
Equipment		Pick Up		Pick Up		Pick Up					
Number of Equipment		1		1		0					
Equipment Hours		1		1		0					
Total		\$ 20.57		\$ 20.57		\$ -		\$ 41.14			
Total								\$ 2,903.85			
Material											
Invoice Number(s)											
Administrative		Administrative									
Administrative Staff		Administrative									
Hours Worked		1		0		0		0		0	
Subtotal		22.43		0		0		0		0	
Total with Fringe		\$ 27.35		\$ -		\$ -		\$ -		\$ 27.35	
Equipment		None									
Number of Equipment		0		0		0		0		0	
Equipment Hours		0		0		0		0		0	
Total		\$ -		\$ -		\$ -		\$ -		\$ -	
Total										\$ 27.35	

EPSC Site Review Inspections**August 2025****Summary Report**

Date of Inspections: August 6, 2025/August 14, 2025/August 15, 2025

Date of Follow-up Inspections: August 26, 2025

Performed by: Kevin Patterson, Albert North, Garrett Peevey

Assembled by: Kevin Patterson

1. Anderson Avenue Extension (Anderson Avenue & Wabash Ave.)

Inspected 8-14-25

- a) Site is compliant.

2. Bridlewood (Payne Koehler Road & Chapel Lane)

Inspected 8-14-25/ Follow-up 8-26-25

- a) Site is compliant.

3. Chambord (Paoli Pike and Old Hill RD)

Inspected 7-15-25

- a) Site is dormant. Next inspection October.

4. Chicken House Deli (Highway 111)

Inspected 8-15-25

- a) Site is compliant.

5. Cottonwood Commons (Corydon Ridge Rd.)***

Inspected 8-6-25

- a) Perimeter control needs repair.

6. Eastridge Borrow Site 1 and 2 (Highway 111)

Inspected 8-15-25

- a) Site is compliant.

7. Eastridge Fill Site (Highway 111)

Inspected 8-15-25

- a) Site is compliant.

Sites with evidence of off-site sedimentation

*** Sites with a high probability of off-site sedimentation

8. Galena Commons (6779 US 150)

Inspected 8-15-25

- a) a) Site is compliant.

9. Gateway Village (4915 Old Georgetown Road)

Inspected 8-6-25

- a) Site is compliant.

10. Glades of Autumn Grove (Kenzig Road)

Inspected 8-14-25/ Follow-up 8-26-25

- a) Breached Silt fence along stream. See reports dated 7-08-25, 7-28-25

11. Glenwood Farms (Grant Line RD and Dub Knob RD)

Inspected 7-15-25

- a) Site is dormant. Next inspection October.

12. Greywoods (Schrieber Rd.)

Inspected 7-8-25

- a) Site is dormant. Next inspection October.

13. Grove Subdivision (St. Joseph Road)

Inspected 8-14-25

- a) Site is compliant.

14. Henriott Meadows (Henriott Road & Winstewart Road)

Inspected 8-15-25/ Follow-up 8-26/25

- a) Unprotected catch basin.

15. High Pointe (Old Hill Road)

Inspected 7-15-25

- a) Site is dormant. Next inspection October.

16. Highlands (Old Vincennes Road and Schreiber Road)

Inspected 8-15-25

- a) Site is compliant.

17. Kamer Crossing (Kamer Miller Road and Highland Oaks Drive)

Inspected 8-14-25

- a) Site is compliant.

Sites with evidence of off-site sedimentation

*** Sites with a high probability of off-site sedimentation

18. Knob Hill Multi-Family Development (North side of SR 64 just West of Oaks RD)***

Inspected 8-6-25/ Follow-up 8-26-25

- a) Perimeter control needs repairs.

19. Knob Hill Subdivision (North side of SR 64 just West of Oaks RD)

Inspected 8-6-25/ Follow-up 8-26-25

- a) Unprotected catch basins.

20. Legacy Springs (Corydon Ridge & Old Salem on right – Legacy Springs Blvd)

Inspected 7-15-25

- a) Site is dormant. Next inspection October.

21. Poplar Woods (Old Salem Road and Yenowine Lane)

Inspected 8-15-25

- a) Site is Compliant.

22. Riley Commons (Schrieber Rd.)

Inspected 7-8-25

- a) Site is dormant. Next inspection October.

23. Riley's Excavating, LLC Site (State Road 62)

Inspected 7-17-25

- a) Site is dormant. Next inspection October.

24. St. Joseph Road Residential Assisted Living (St. Joseph Road)

Inspected 8-15-25

- a) Site is compliant.

25. Springs of Old Georgetown (Old Georgetown Road & Yenowine Lane)

Inspected 8-15-25/ Follow-up 8-26-25

- a) Site is compliant.

26. The Timbers (On Edwardsville Galena RD about a mile North of Frank Ott RD)

Inspected 8-6-25/ Follow-up 8-26-25

- a) Site is compliant.

27. Villages at Autumn Grove (Kenzig Road)

Inspected 8-14-25/ Follow-up 8-26-25

- a) Unprotected catch basin.

Sites with evidence of off-site sedimentation

*** Sites with a high probability of off-site sedimentation

28. Villages of Valley View (Lawrence Banet Road)

Inspected 8-6-25/ Follow-up 8-26-25

- a) Unprotected catch basin.

29. Villas of Floyds Knobs (SW Side of Vincennes RD 1320 ft West of SR 150 – Tuscany Drive)

Inspected 8-15-25

- a) Site is compliant.

30. Westfield Springs (Alonzo Smith Road & Frank Ott Road)***

Inspected 8-15-25

- a) Perimeter control on needed new construction.

31. Woods of Skyline (Skyline DR & Skyline CT)

Inspected 7-8-25

- a) Site is Dormant. Next inspection October.

Sites with evidence of off-site sedimentation

*** Sites with a high probability of off-site sedimentation

TABLE OF CONTENTS

CHAPTER 1 INTRODUCTION

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CHAPTER 1 INTRODUCTION EXHIBITS

<u>EXHIBIT</u>	<u>TITLE</u>	<u>PAGE</u>
1-1	DESIGN MANUAL COMMENT FORM	1-3

CHAPTER 10

STORMWATER FACILITIES DESIGN

10.1 PURPOSE

This chapter establishes the minimum standards for the planning and design of drainage systems and stormwater management facilities within Floyd County.

The criteria in this section shall apply to all drainage facility designs in both the local and through drainage systems except where facilities have significant and immediate impact upon State or Federal property or highways. In those cases, the most restrictive of State, Federal or Floyd County standards shall govern.

As-built drawings are required for all projects within, or draining to, the MS4 area or when requested by Development Review for sites outside of the MS4 area.

While it is expected that a project will be built in accordance with the accepted construction plans, it is understood that unforeseen site conditions may require deviations. Therefore, as-built drawings are required to be submitted for all site drainage and shall clearly demonstrate the construction of drainage features as designed and in accordance with Floyd County Floodplain Management Ordinance and the Floyd County Stormwater Ordinance.

As-built drawings shall verify critical public safety elements and document all modifications/changes to the original plans as described below.

As-built drawings are typically a red-lined copy of the original, accepted grading plans, unless otherwise allowed by Floyd County.

As-Built Drawing Requirements:

Surveyor's and Engineer's Statements of Substantial Compliance are required on the cover sheet only and as follows:

Registered Indiana Professional Land Surveyor: A registered land surveyor in the State of Indiana shall certify the construction of drainage and stormwater infrastructure with the following statement:

"A field survey was conducted by (Surveyor), on (Dates). Unless explicitly marked, constructed condition should not be assumed. I, (Surveyor), hereby state that in my professional opinion the information shown on these plans accurately represents the improvements constructed."

Registered Indiana Professional Engineer: The P.E. responsible for the project shall certify the construction of drainage and stormwater infrastructure with the following statement:

"Based upon review of and reliance on the field survey data and other pertinent data provided by (Name of Firm(s) or Surveyor), on (Date), and a final site investigation conducted on (Date), I hereby state that to the best of my knowledge, information and belief, it is my professional opinion that the facilities shown in these drawings were constructed in substantial compliance with the accepted Drainage Report and/or Construction Drawings and the Engineer's intent. This statement is based only on a review of the field survey data and a final site investigation."

The As-Built drawings are a standalone document and shall provide an exact rendering of the construction as it appears in the field. Any modifications to the original plans, whether minor or major, shall be included. The changes shall be color coded, bubbled, clouded, or outlined and they shall be explained clearly in writing. Any deviation from the plans shall be specified, whether the change was in design, location, or the materials used. Minute details like materials used shall be documented if they differ from those indicated in the original plans. The intended but unused materials shall be crossed out to acknowledge the changes that emerged during the construction process. If necessary, additional sheets may be added to clearly show all required information.

The verification of public safety elements (i.e., detention/retention pond volume, stormwater conveyance structure capacity, etc.) shall be based on a field survey prepared by an Indiana licensed surveyor.

As-Built Drawings for Storm Sewer shall verify the material, size and longitudinal grade of all storm sewer pipes and culverts. Elevations are required for all pipes, inlets, riprap, headwalls, and all other storm drainage infrastructure shown on the accepted plans.

As-Built Drawings for Open Channels shall verify all drainageway grades/slopes, channel cross-sections and horizontal and vertical information for all grade control structures.

As-Built Drawings for Detention / Water Quality Facilities shall verify horizontal/vertical information of all facilities including pipe or channel inlets, low flow or trickle channels, outlet structures, emergency overflow spillways, and water surface elevations (WQCV and 100-yr storm event). Provide spot elevations for critical stormwater infrastructure locations (spillways, top of ponds, outlet structures, etc.). A stage/storage table of the surveyed pond may be required if topography (1' contours) significantly differs from the original plans.

10.2 HYDROLOGY FOR STORMWATER FACILITIES DESIGN

10.2.1 General

This section describes the recommended procedures for calculating runoff generated from a project site. Correct utilization of these procedures should result in the best available estimation of pre-project condition and post-project condition runoff. The procedure will also provide the consistency of results necessary when applied to project sites throughout Floyd County.

It is assumed that practicing Engineers involved with preparing drainage plans have adequate knowledge of the recommended procedures. There is, therefore, no attempt in this Design Manual to provide step-by-step calculation methodologies.

The runoff calculation procedures to be utilized depend upon characteristics of the watershed being analyzed as follows:

- a. If the total tributary area to an existing or proposed stormwater facility on the project site is 50 acres or less, and no storage design is required, the method of runoff calculation shall be the **Rational Method** as described in Section 10.2.3.1 **Floyd County will allow the Modified Rational Method for design of storage facilities for systems with less than or equal to a ten-acre watershed (or with a drainage area of less than ten acres).**
- b. If the total project drainage area is greater than 50 acres, or storage design is required, a discharge hydrograph must be calculated using the **NRCS Method** or another method that has been approved by Floyd County.
- c. **The Rational Method may be used to design through drainage channels if the drainage area of the channel is 50 acres or less; otherwise, the channel shall be designed by NRCS runoff calculation methodology or another method that has been approved by Floyd County.**

Note: See Exhibit 10-1 for guidance in selecting the appropriate method.

10.2.2 Design Storm

10.2.2.1 Frequency/Return Period

The selection of a design storm is the basis for all runoff calculations and facility design for a project site. The facility-specific requirements and associated check frequencies are found in Section 10.3.

Localized restrictions may be placed on some areas, based upon the hydrologic and hydraulic models developed for the area. Design criteria in such cases shall be established by Floyd County during the Preliminary Plan Review Process. **The elevation of the 100-year pre- and post-development discharge shall be checked for all drainage system designs to assure conformance with the guidelines Floyd County Floodplain Management Ordinance.** In areas of the County not covered by a FEMA Flood Insurance Study, the Design Engineer must determine the pre-development 100-year Flood elevations and flood inundation area. The inundation area for the 100-year post-development discharge shall be conveyed within the limits of the proposed drainage easement.

10.2.3 Runoff Calculation Methods (Design Flow)

10.2.3.1 Rational Method

10.2.3.1.1 General

The Rational Method is the recommended runoff calculation procedure for project sites where:

- a. The total drainage area is 50 acres or less.
- b. Floyd County may allow the Modified Rational Method for the design of storage facilities for systems with less than a ten-acre watershed (or with a drainage area of less than ten acres).

10.2.3.1.2 Calculation

- a. The Rational Method shall be performed as follows:

$$Q = C \times I \times A$$

Where:

Q = Peak runoff (cu. ft. per sec.)

C = Runoff coefficient

I = Rainfall intensity (inches/hour)

A = Contributing area (acres)

- b. Rainfall Intensity-Duration Curves, Exhibit 10-2, shall be utilized in the Rational Method to determine rainfall depths and storm intensities for Floyd County.
- c. The time of concentration (duration), T_c , shall be determined by calculating the time for a particle of water to travel from the most hydrological remote point of the project area to the point of interest. An acceptable method to derive time of concentration is **the TR-55 (Technical Release - 55, available from the NRCS). The minimum T_c shall not be less than 5 minutes to any given inlet or analysis point.** Manning's Equation should be used to estimate any in-pipe or channel travel.
- d. The runoff coefficient, C, must represent a composite of the surface condition tributary to the point under consideration.

To determine the appropriate C-Factor, the hydrologic soil group, described in Exhibit 10-4, and land use for each surface condition must be obtained. Exhibit 10-5 then combines this information with surface slope to provide the correct C-Factor for that area. The C-Factors given may be used directly when the drainage area is homogeneous. When it is not, an appropriately weighted C-Factor must be determined and reviewed by Floyd County.

For areas where no hydrologic soil group information can be obtained, or is listed as "Urban," the C-Factor should be the values for soil group C.

If the project site conditions differ significantly from those used as the basis for the C-Factor figures, the Design Engineer must develop a specific composite C-Factor for the area. To determine the composite C-Factor for the entire project site, a weighted average must be calculated based upon the percentages of the areas with different C-Factors. (NOTE: Land use regulations in Floyd County permit the use of higher percentages of impervious surface than may be reflected in the coefficients from Exhibit 10-5. The Design Engineer should select or calculate runoff coefficients, which reflect actual proposed designs. For subdivisions, the Design Engineer should accommodate the maximum imperviousness permitted under land use guidelines.)

- e. To calculate flowrates in series, (i.e., in ditch or storm sewer design) the $C \cdot A$ term shall be summed for all contributing drainage areas. The intensity shall be selected from the time of concentration to that point. The T_c selected shall be the larger of these two: 1) T_c for the subject inlet or analysis point based on overland flow to said inlet/analysis point and 2) the T_c from the previous in-line inlet or analysis point plus the travel time from the previous inlet or analysis point.

10.2.3.2 Natural Resource Conservation Service (NRCS) Methods

10.2.3.2.1 General

The NRCS Methods are required for runoff calculation procedures for project sites where:

- 10. The total project drainage area is greater than 50 acres or;

- b. Detention/Storage design is required unless there is prior approval by Floyd County to utilize the Modified Rational Method for detention design for projects with watersheds and/or drainage areas less than ten acres.

When these project conditions exist, the Design Engineer should confer with Floyd County to determine if there is a hydrologic or hydraulic model available for the area. If a model exists, site calculations must be performed and correlated with this data.

If models do not exist, the Design Engineer must use the NRCS Methodology in model preparation.

10.2.3.2.2 Methods

The NRCS Methods also include the TR-20 and TR-55 Methods. Detailed descriptions, example calculations, and worksheets for these methods are available in:

- a. Project Formulation - Hydrology, Technical Release No. 20 User's Manual.
- b. Urban Hydrology for Small Watersheds, Technical Release No. 55; and
- c. A Guide to Hydrologic Analysis Using NRCS Methods.

10.2.3.2.3 Curve Number

The curve number is like the Rational Method C-Factor in that it is based on the surface conditions of the project site. The correct CN can be determined from Exhibit 10-6.

Maps depicting the NRCS Hydrologic Soil Groups and existing land use for each watershed are available through the NRCS. Projected land use should be determined using project specific data and local zoning data. This information may be used to determine the appropriate surface condition factors for use in runoff calculations as described in this Section.

10.2.3.2.4 Antecedent Runoff Condition

The index of runoff potential before a storm event is termed the Antecedent Runoff Condition (ARC). The ARC is an attempt to account for the variation in CN at a particular site for various storm conditions. The CNs in Exhibit 10-6 are for average ARC, which are used primarily for design applications. Please refer to the NRCS National Engineering Handbook, Section 4 – Hydrology (NEH-4, NRCS) for a detailed discussion of storm-to-storm variations and upper and lower CN limits. ARC will normally be involved only in calibration.

10.2.3.2.5 Directly Connected Impervious Areas

Directly connected impervious areas should be considered where applicable in NRCS runoff calculations. The Design Engineer shall select or calculate curve numbers, which reflect actual proposed designs. For subdivisions, the Design Engineer shall accommodate the maximum imperviousness permitted under land use guidelines.

10.2.3.2.6 Rainfall Duration

The minimum design storm duration for planning and design is dependent upon the runoff method used.

- a. The NRCS Method will utilize the **NRCS Type II, 24-hour rainfall distribution**. Critical storm analysis shall be performed when warranted as determined by Floyd County.

10.2.3.2.7 Rainfall Depth

The latest rainfall depths outlined by the National Oceanic and Atmospheric Administration (NOAA) for “JEFFERSONVILLE” station shall be utilized for Floyd County for use by the NRCS methods.

10.2.3.2.8 Rainfall Distribution

Synthetic rainfall distributions shall be used for design storm generation. When critical storm analyses are not required, the distributions shall match the NRCS Type II curve as published in NRCS Technical Report 55, with 5-minute time steps.

In some cases, Floyd County may require a critical storm analysis to determine the rainfall duration and distribution that produces the worst runoff conditions for a specific site. A critical storm analysis is necessary for design of drainage plans and storm water quality best management practices. Since the NRCS Type II distribution represents a 24-hour duration storm only, it is not applicable to the critical storm analysis. This analysis will be based on dimensionless Huff Distributions.

10.2.3.2.9 Surface Condition Data

Maps depicting the NRCS Hydrologic Soil Groups and existing land use for each watershed in Floyd County are available through the NRCS Web Soil Survey at <http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm>. Projected land use should be determined using project specific data and local zoning data. This information may be used to determine the appropriate surface condition factors for use in runoff calculations as described in this Section.

10.3 HYDRAULICS FOR STORMWATER FACILITIES DESIGN

This section contains the technical criteria required for the design of stormwater facilities. The Design Engineer must make adequate reference to other chapters of this manual and the Floyd County web page for additional design guidelines.

10.3.1 General Guidelines

10.3.1.1 Design Flows

- a. Design flows must be calculated by the appropriate method described in Section 10.2. **At a minimum, the facility must have the capacity to transport the 10-year post-development discharge** except in unusual cases, such as retrofit projects. **The water surface profile and through system capacity shall be checked for the 100-year post-development discharge. All systems must be capable of passing the 100-year design flow within the drainage easement with adequate freeboard.** Additional facility-specific requirements are found in following portions of this Section.

10.3.1.2 Allowable Pipe Materials

- a. Pipe material will be selected from the products identified in the City of Indianapolis Stormwater Specifications Manual at <https://www.indy.gov/activity/public-works-specifications-and-manuals>. CMP is not allowed.

10.3.1.3 Roughness Coefficients “n” (See Exhibit 10-7)

- a. Concrete (Pipe or Finished): 0.013
- b. Plastic (Smooth Interior Wall): 0.011
- c. Sod: 0.030
- d. Placed Riprap: 0.030
- e. Dumped Riprap: 0.035
- f. Gabions: 0.028
- g. Coefficients for other approved materials shall be source documented for review.

10.3.1.4 General Pipe Design Requirements

- a. Minimum velocity shall be 2 feet per second at design flow or 3 feet per second at full flow; whichever requires the greater slope. Maximum design velocity is to not be greater than 10 feet per second. Regardless of velocity, the minimum slope for all pipes is 0.3%.
- b. Minimum pipe size shall be 12 inches except that driveway entrance pipe may be 10 inches with prior approval by Floyd County. Smaller pipe sizes may be approved by Floyd County for detention basin outlets on a case-by-case basis. Such pipes shall not be smaller than 6 inches.
- c. Maximum manhole spacing is 400' regardless of pipe diameter.
- d. All pipes are to have end treatments. Design of end treatments shall consider traffic and public safety.

- e. Stubs for storm sewers when required shall be a minimum of 3-feet long measured from the outside of the manhole or surface inlet for PVC and PE pipe or one length of pipe for concrete pipe.
- f. Submerged pipes are not desirable but may be approved by Floyd County on a case-by-case basis.
- g. Public drainage systems should be designed and constructed such that drainage structures are located a maximum of ten feet from the property line and within a Drainage Easement. It is good practice to locate an inlet along the drainage system to accommodate positive lot drainage.
- h. Outlet locations shall be placed to allow sufficient room for velocity dissipation measures to promote laminar flow.
- i. The maximum change in direction of flow, in a stormwater structure or channel bend, is 90 degrees.

10.3.1.5 General Design Requirements

Stormwater conveyance infrastructure must be sized to not exceed the capacity of downstream Floyd County owned infrastructure

10.3.2 Storm Sewers

10.3.2.1 Design Methodology/Design Storm

The Design Engineer may refer to the Indiana Storm Water Quality Manual for design methodology for storm sewers. The exception being that **all storm sewer systems will be designed for the 10-year event. The 100-year discharge elevation must be checked to ensure the system does not surcharge out of any inlets and/or manholes.** Manning's Equation is recommended to calculate pipe flow and velocity. The storm sewer hydraulic grade line shall be at least 1.0 foot below ground.

Ensure that the energy grade line (EGL) is a minimum of 0.5 feet below the grate and rim elevation of inlets and manholes to prevent water from rising and causing overflows or blockages. The ground surface or building drain elevation, whichever is lower, at all points for the design event. For the 100-year event, the hydraulic grade line may not rise higher than the ground line or building drain elevation, whichever is lower. Where the storm sewer hydraulic grade line exceeds the pipe crown, it must be shown on the Profile Drawing.

Losses at all inlets, junction structures and bends are to be considered. Pipes on grades greater than or equal to 20% shall have anchors at each pipe joint. The Design Engineer shall check to ensure that all pipes have sufficient cover and that all structures, inlets, and manholes have sufficient dimension to receive pipes, bells, frames, and grates.

10.3.3 Culverts

10.3.3.1 Design Methodology/Design Storm

A method as described in the INDOT Design Manual Chapter 203 Hydraulics and Drainage Design, along with the maximum allowable headwater and general requirements below, shall be used to design culverts. The design method utilized must be submitted for review.

10.3.3.2 Maximum Allowable Headwater

The most stringent requirement of the following will apply:

- a. Cul-de-sacs, alleys, local streets, and collectors: Use the subgrade elevation of the adjacent roadway for the 10-year discharge.
- b. Major and minor arterials: Use 12-inches below the shoulder elevation of the adjacent roadway for the 100-year discharge
- c. Headwater for the 10-year discharge shall not exceed 1.2 times the structure rise except as specifically approved on a case-by-case basis. For pipes 30" in diameter and larger, the headwater shall not exceed 1.0 times the structure rise except as specifically approved on a case-by-case basis.
- d. If a culvert has a drainage area greater than one square mile or is in a regulated floodway the 100-year storm headwater depth shall not be greater than 1.0 times the structure rise except as specifically approved on a case-by-case basis.

10.3.3.3 General

- a. Downstream channel must receive appropriate protection or energy dissipation if the design outlet discharge may cause erosive conditions.

- b. Traffic and public safety must be considered in the design of culvert end treatments. This may include extending the culvert beyond the right-of-way limits, installing catch basins to intercept roadside swales, and installing guardrails. Designs must conform to meet the requirements of the agency responsible for road maintenance and safety.
- c. **Do not install trash racks over culvert entrances larger than 18". This prevents creating hydraulic impingement drowning hazards.**
- d. Non-roadway culverts must be made of HDPE. Use of alternate materials must be approved by the Floyd County engineer or the Floyd County Stormwater Board.

10.3.4 Trenchless Pipe Installation

Trenchless pipe installation for storm sewers and culverts is described in Chapter 8 of this manual.

10.3.5 Conventional Channels and Ditches

This section describes the technical criteria necessary to design stormwater channels and ditches using conventional design procedures. These procedures shall be applied to roadside and rear yard ditches and highly urbanized channels. Disturbance to Waters of the United States (as defined by the USACE) must be reviewed and permitted by the USACE. Concurrence from the USACE and/or IDNR must be presented to Floyd County prior to Floyd County approval. .

10.3.5.1 Design Methodology/Design Storm

Manning's Equation is recommended, except in cases where backwater conditions are significant. All calculations must be submitted for review. Software programs utilized must be approved by Floyd County.

- a. Design Storm
 - 1. **Channels and ditches should be capable of conveying the 10-year storm flow within their banks.** Through drainage systems shall generally be designed to collect and transport the post-development rate of runoff for the 100-year design storm with adequate freeboard. **In all cases, the 100-year discharge elevation must be checked to ensure that adjacent structures do not suffer flood damage.**

Floyd County Stormwater Awareness Week

September 8 thru September 13, 2025

Monday, September 8, 2025

1. Canvassing the county to put up Stormwater Awareness Week signs!
(Partnership with Floyd County Parks Department)

Tuesday, September 9, 2025

1. Mapping Culverts and Catch Basins (using Arc Field Maps to map infrastructure).

Wednesday, September 10, 2025

1. Canvassing select neighborhoods with Stormwater information flyer.

Thursday, September 11, 2025

1. Highlight Prescription Pill Drop Off sites
(Social Media blitz and Signage at sites.)

Friday, September 12, 2025

1. Stormwater Awareness Day at the Car Wash. Go to any Jacobi Gas Station in Floyd County will receive \$1.00 off any Car Wash.
(Partnership with Jacobi's Gas Station and Floyd County Stormwater Department.)

Saturday, September 13, 2025

1. ORSANCO 2025 Ohio River Sweep New Albany Amphitheater. 9a.m. until Noon.
(Partnership with Floyd County Soil and Water Conservation District, SWAC and the Floyd County Stormwater Department)



SATURDAY, SEPT. 13

9 a.m. to Noon

RAIN or SHINE!



Ohio River SWEEP 2025

**WANT TO HELP CLEAN UP LOCAL
SECTIONS OF THE OHIO RIVER?**

PICK A MEET-UP LOCATION:

- Amphitheatre (New Albany)
- Ashland Park (Clarksville)



**Friends of Ohio River Greenway,
OHM Advisors and Orsanco invite
you to join us on the riverbank!**

Gloves and trash bags will be provided.
We'll also give away a limited number of
River Sweep T-shirts.

All participants must complete a volunteer
waiver, and children under age 18 need a
parent's signature as well.

Are you a student needing service hours?
This event qualifies!

*Scan the QR Code to complete
your volunteer waiver and learn
more about the river sweep,
history and safety guidelines.*



Or visit [friendsofthegreenway.org/
ohio-river-sweep](https://friendsofthegreenway.org/ohio-river-sweep)

To volunteer, please contact:

Jeffersonville
Ed Siewert
Stormwater/ MS4 Coordinator
502-741-7781-Cell
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