

OPERATIONS AND MAINTENANCE MANUAL FOR BMP at

Johnson County Recycle Center

0 North Graham Road, Franklin, IN

**Prepared:
April 11, 2024**

Prepared by:



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TABLE OF CONTENTS

BMP OWNER/CONTACT INFORMATION.....	3
BMP LOCATION AND DESCRIPTION	3
MAINTENANCE AND INSPECTION GUIDELINES	3
ROUTINE MAINTENANCE	4
REMEDIAL MAINTENANCE	4
BMP INSPECTION	5
STATEMENT OF COMPLIANCE	6
APPENDIX A	8
BMP SITE DRAWINGS	8
APPENDIX B.....	12
STORMWATER EASEMENTS	12
APPENDIX C.....	15
MAINTENANCE PLAN AND INSPECTION FORMS	15

This document was prepared by Gregory J. Ilko, CrossRoad Engineers, P.C., 115 N. 17th Avenue, Beech Grove, IN 46107.

I affirm, Gregory J. Ilko, under the penalty of perjury, that I have taken care to redact each Social Security number in this document, unless required by law.

BMP Owner/Contact Information

Mr. Kevin Walls
Johnson County Solid Waste District
0 N. Graham Road
Franklin, IN 46131
Phone: (317) 346-4306
Email: kwalls@co.johnson.in.us

The BMP Owner is responsible for all costs associated with the maintenance and inspection of all BMPs as required by the City of Franklin.

BMP Location and Description

The Post-Construction BMP for this development is a wet detention pond located at North Graham Road, which is located north of Linville Way and on the west side of Graham Road in the City of Franklin, Indiana.

The wet detention pond provides water quantity and quality treatment for the site. The detention pond will collect all surface water from impervious areas via a storm sewer system. The detention pond will allow for additional sedimentation to settle out and further reduce the amount of sediment leaving the site. Per the City of Franklin Subdivision Control Ordinance, it requires that all paved areas are to be routed through a water quality detention system. The water quality detention system shall be designed to detain, for over 24 hours after peak runoff, at least 20% of the volume of runoff from either a 1¼" rainfall depth storm or ½" of direct runoff, whichever is greater. Storm sewer infrastructure including manholes, inlets, and storm sewer pipe convey runoff from the development to the pond. An overall site drawing, BMP layout drawing, and BMP details can be found in **Appendix A** of this manual.

The detention pond is contained within stormwater easements with maintenance access from the new drive access on the north side of the property. See **Appendix B** for the easement exhibits.

The following operations and maintenance information shall be utilized to properly inspect and maintain the detention pond and storm sewer infrastructure.

Maintenance and Inspection Guidelines

Maintenance and inspection as described below is the responsibility of the BMP owner. Any additional procedures deemed necessary by annual City inspections shall be incorporated into these guidelines.

Routine Maintenance

The owner shall be responsible for the following minimum operations for maintaining the BMPs, in addition to maintaining and updating the BMP Operations and Maintenance Manual per the City of Franklin requirements:

Storm Sewer Infrastructure

- Remove trash and debris from inlet castings
- Remove trash and debris from inside of any storm structures
- Remove sediment deposits from structures and pipes when accumulated depth reaches 1/4 of pipe diameter
- Remove debris from inlet and outlet structures

Swales and Ditches

- Mow and maintain vegetation to a maximum height of 5 inches
- Maintain swales with uniform slopes and unobstructed by buildings and fences
- Remove trash and debris from swales
- Grade and reseed eroded areas

Detention Pond, Pond Outfall, and Emergency Spillway

- Remove debris from outlet control structure, pond outfall, and emergency spillway
- Remove debris from outlet pipe for the pond on site
- Inspect outfall and emergency spillway for erosion, regrade, and replace riprap as necessary
- Remove floatables via netting
- Remove sediment accumulation when the water depth from normal pool is less than 10 feet
- Mowing and/or trimming vegetation from detention pond side slopes
- Remove debris from inlet and outlet structures
- Remove invasive vegetation from all side slopes
- Remove woody vegetation from embankment

Remedial Maintenance

The owner shall be responsible for correcting and/or replacing any portions of the BMP and/or storm sewer infrastructure in unsatisfactory condition. This includes, but is not limited to:

- Replacing end sections at all pond inlets and outlets
- Replacing any portion of damaged storm sewer or underdrain pipes
- Replacing any portion of damaged storm sewer from the outlet pipe for the pond on site
- Grading and reseeding eroded areas of the detention facility
- Replacing riprap as necessary at the pond emergency spillway and pipe inlet locations

BMP Inspection

Annual inspections of permanent BMPs shall be performed by the City. Routine inspections are the responsibility of the BMP owner. These inspections shall be accomplished as scheduled below:

MAINTENANCE ITEM	INSPECTION SCHEDULE
Embankment and Emergency Spillway	Annually and After Major Storms
Storm Inlets, Pipes, and Swales	Monthly and After Major Storms
Pond Outlet and Principal Spillway	Annually
Permanent Pool	Monthly
Miscellaneous	Monthly
Pond Sediment Removal	Biannually

The approved maintenance plan and inspection forms provided in **Appendix C** shall be used as guidance for performing maintenance and inspections activities. These forms shall be completed and retained by the BMP owner and produced upon request by the City.

The City shall be notified of any changes in BMP ownership, major repairs, or BMP failure in writing within 30 days. Notification shall be addressed to:

*City of Franklin
Department of Public Works
796 S State Street
Franklin, IN 46131*

In the event that the City finds a BMP in need of maintenance or repair, the City will notify the BMP owner of the necessary maintenance or repairs and give the landowner a timeframe for completing the maintenance or repairs. If the maintenance or repairs are not completed within the designated timeframe, the City shall perform the repairs or maintenance and bill the landowner for the actual costs for the work.

The BMP Owner shall be responsible for all costs associated with the maintenance and inspection of the BMP and all fees required by the City of Franklin.

Statement of Compliance

I hereby certify that I am the President and duly authorized agent of
(title)

JCSW, and that I have read the preceding manual and shall comply
(company/agency)
with all terms and requirements stated herein.

I understand that this BMP O&M Manual has been created per requirements of the City of Franklin Subdivision Control Ordinance and coordination with the City of Franklin Engineering Department.

I recognize that it shall be the right of the City and authorized representatives to enter the property containing the BMP for maintenance and inspection purposes, and that this access shall be granted without hindrances by means of the utility and drainage easement previously described in this manual.

Kevin M. Walls

(printed name)



(signature)

4-9-24

(date)

ACKNOWLEDGMENT

State of Indiana, County of Johnson, SS:

Before me, the undersigned Notary Public in and for said County, personally appeared Kevin M. Walls, President of UCSW, and acknowledged the execution of the foregoing Manual on this 9th day of April, 2024 and stated that he/she is the party authorized by the said company/agency to execute the foregoing Manual.

Witness my hand and seal this said last named date.

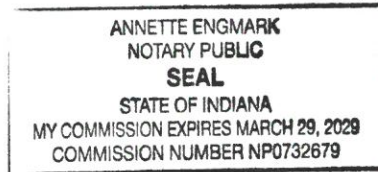
My Commission Expires

March 29, 2029

Johnson
County of Residence

Annette Engmark
Notary Public

Annette Engmark
Printed Name



APPENDIX A

BMP Site Drawings

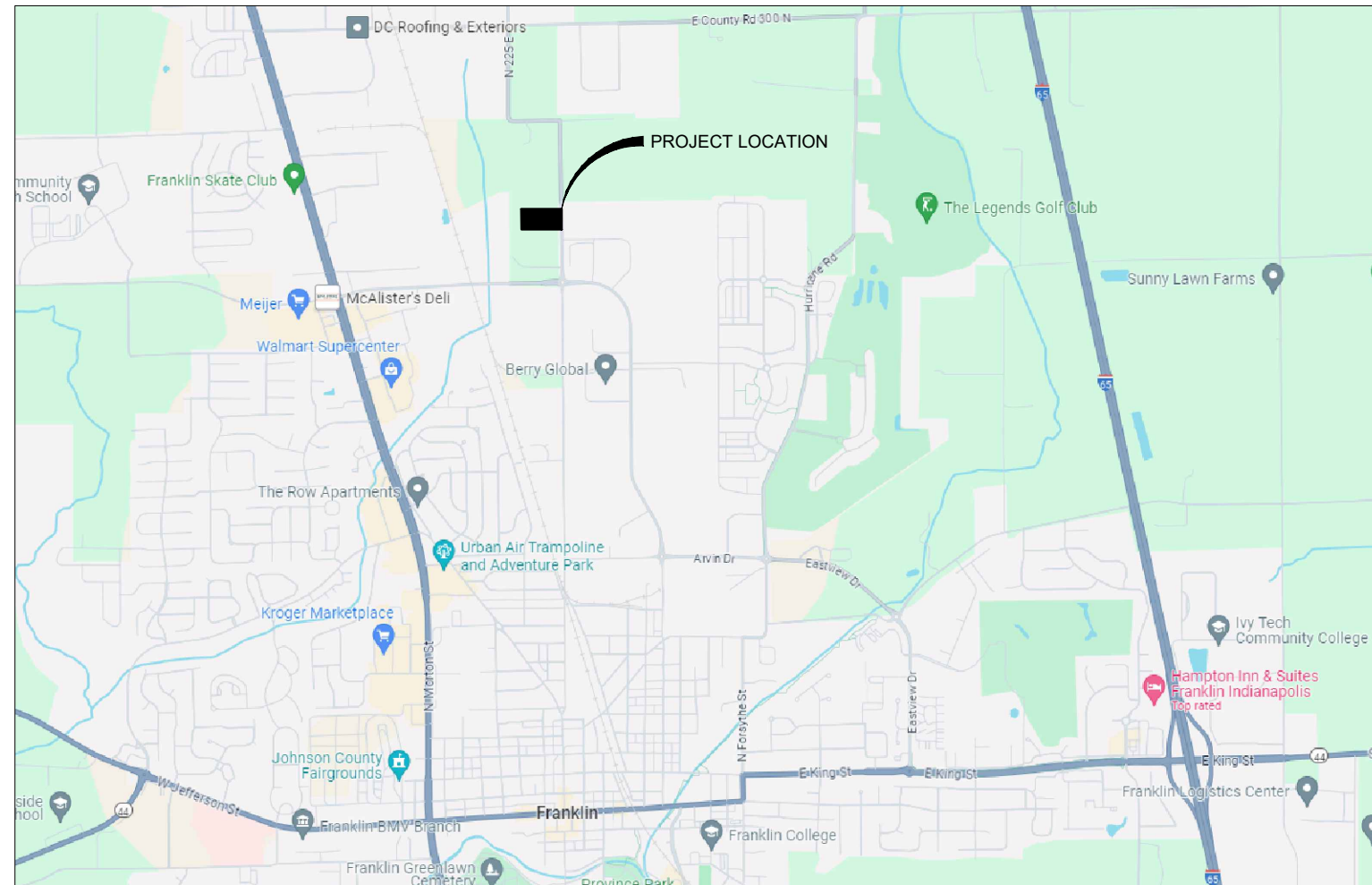
EXHIBIT 1 - LOCATION AND VICINITY MAPS

JOHNSON COUNTY RECYCLE CENTER

GRAHAM ROAD, FRANKLIN, IN



LOCATION MAP
NOT TO SCALE

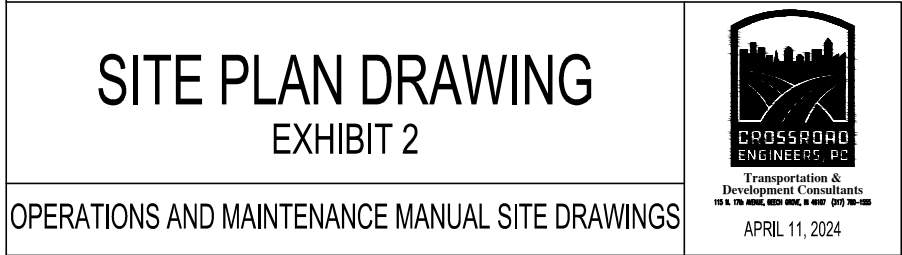


VICINITY MAP
NOT TO SCALE

PREPARED BY:



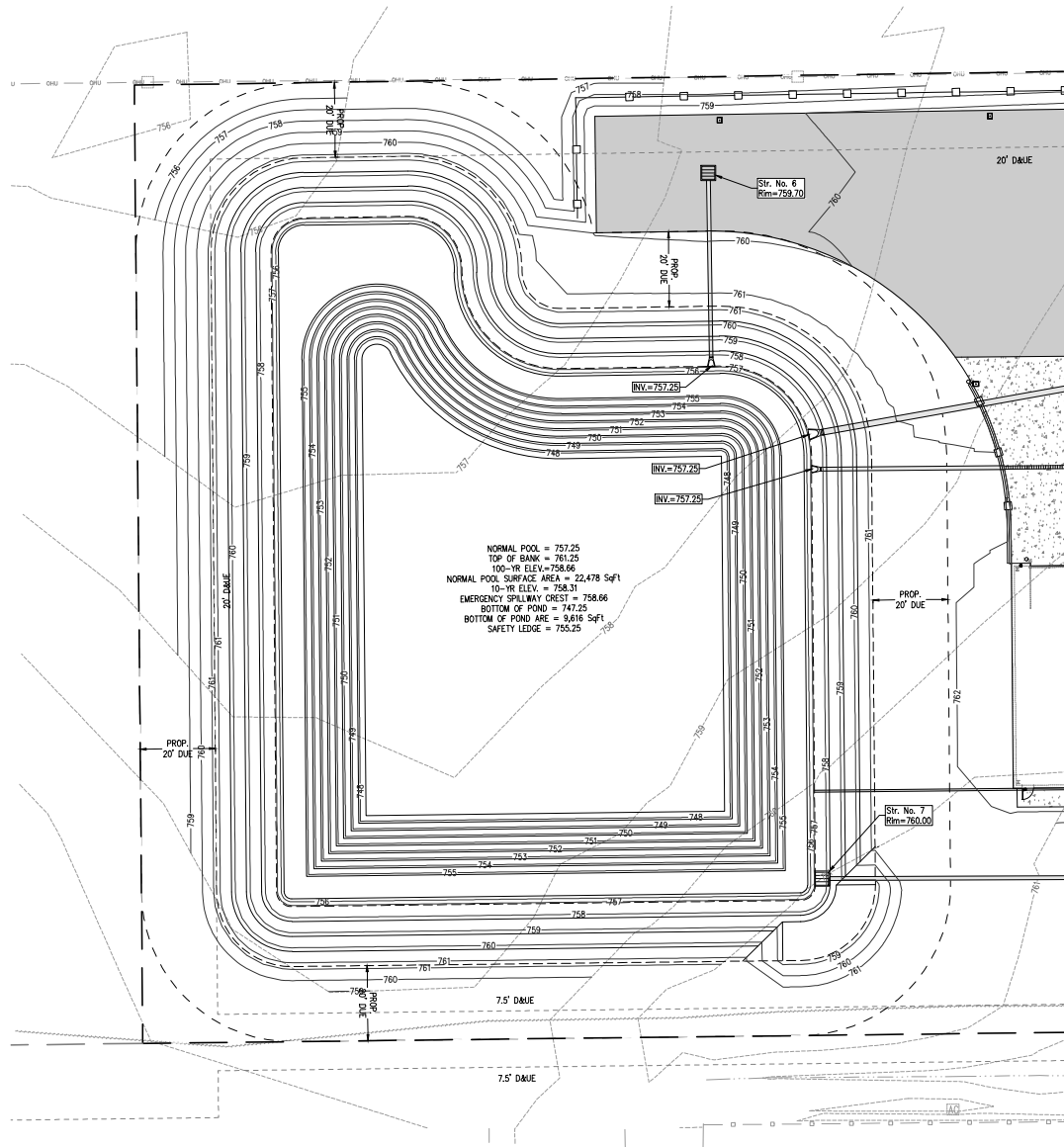
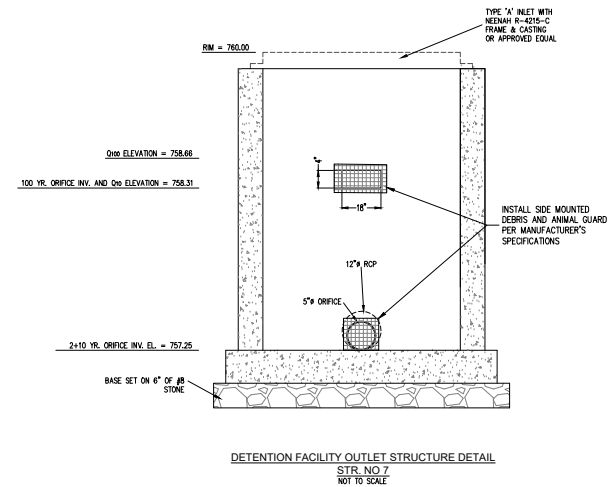
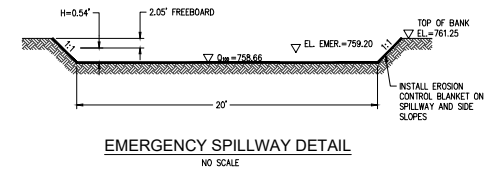
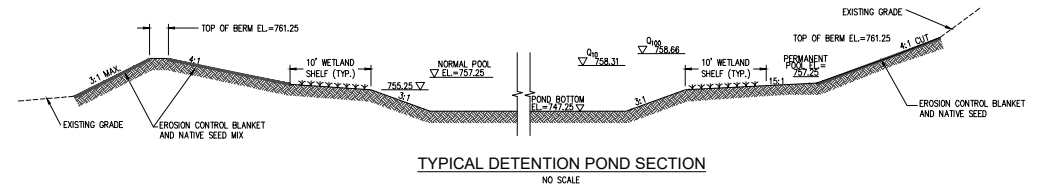
Transportation &
Development Consultants
115 N. 17th Avenue, Beech Grove, IN 46107 (317) 780-1555
APRIL 2, 2024



OPERATIONS AND MAINTENANCE MANUAL SITE DRAWINGS



APRIL 11, 2024



DRAINAGE DRAWING

EXHIBIT 3

OPERATIONS AND MAINTENANCE MANUAL SITE DRAWINGS



Transportation &
Development Consultants
115 N. 17th Avenue, Suite 200, Waco, TX 76707 (817) 780-1555

APRIL 11, 2024

APPENDIX B

Stormwater Easements

EXHIBIT "A"

DRAINAGE AND UTILITY EASEMENT

PART OF SECTION 2, TOWNSHIP 12 NORTH, RANGE 4 EAST, JOHNSON COUNTY, INDIANA, DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHEAST CORNER LOT NUMBERED ONE IN THE LINVILLE COMMERCIAL MINOR SUBDIVISION AS RECORDED IN PLAT CABINET E, SLIDE 359B AND AS INSTRUMENT NO. 2019-000197 IN THE OFFICE OF THE RECORDER OF JOHNSON COUNTY, INDIANA; THENCE NORTH 00 DEGREES 30 MINUTES 12 SECONDS WEST, ALONG THE WEST LINE OF SAID LOT NUMBERED ONE, A DISTANCE OF 40.13 FEET TO THE **PLACE OF BEGINNING**; THENCE CONTINUING ALONG SAID WEST LINE, NORTH 00 DEGREES 30 MINUTES 12 SECONDS WEST, A DISTANCE OF 170.41 FEET TO THE POINT OF CURVATURE OF A CURVE TO THE RIGHT; THENCE NORTHERLY 70.42 FEET ALONG SAID CURVE HAVING A RADIUS OF 45.00 FEET AND SUBTENDED BY A LONG CHORD HAVING A BEARING OF NORTH 44 DEGREES 19 MINUTES 37 SECONDS EAST AND A LENGTH OF 63.45 FEET; THENCE NORTH 89 DEGREES 09 MINUTES 26 SECONDS EAST, A DISTANCE OF 27.76 FEET TO THE POINT OF CURVATURE OF A CURVE TO THE RIGHT; THENCE SOUTHERLY 69.65 FEET ALONG SAID CURVE HAVING A RADIUS OF 50.00 FEET AND SUBTENDED BY A LONG CHORD HAVING A BEARING OF SOUTH 50 DEGREES 56 MINUTES 20 SECONDS EAST AND A LENGTH OF 64.15 FEET; THENCE NORTH 89 DEGREES 07 MINUTES 02 SECONDS EAST, A DISTANCE OF 33.11 FEET TO THE POINT OF CURVATURE OF A CURVE TO THE RIGHT; THENCE SOUTHERLY 94.63 FEET ALONG SAID CURVE HAVING A RADIUS OF 60.00 FEET AND SUBTENDED BY A LONG CHORD HAVING A BEARING OF SOUTH 45 DEGREES 42 MINUTES 04 SECONDS EAST AND A LENGTH OF 85.12 FEET; THENCE SOUTH 00 DEGREES 31 MINUTES 09 SECONDS EAST, A DISTANCE OF 114.51 FEET TO THE POINT OF CURVATURE OF A CURVE TO THE RIGHT; THENCE SOUTHERLY 62.72 FEET ALONG SAID CURVE HAVING A RADIUS OF 40.00 FEET AND SUBTENDED BY A LONG CHORD HAVING A BEARING OF SOUTH 44 DEGREES 23 MINUTES 51 SECONDS WEST AND A LENGTH OF 56.49 FEET; THENCE SOUTH 89 DEGREES 18 MINUTES 52 SECONDS WEST, A DISTANCE OF 135.49 FEET TO THE POINT OF CURVATURE OF A CURVE TO THE RIGHT; THENCE NORTHERLY 62.96 FEET ALONG SAID CURVE HAVING A RADIUS OF 40.00 FEET AND SUBTENDED BY A LONG CHORD HAVING A BEARING OF NORTH 45 DEGREES 35 MINUTES 40 SECONDS WEST AND A LENGTH OF 56.66 FEET TO THE **PLACE OF BEGINNING**.

CONTAINING 0.359 ACRES, MORE OR LESS.

I, GEORGE W. CHARLES, II, A REGISTERED LAND SURVEYOR IN THE STATE OF INDIANA, DO HEREBY CERTIFY THAT THIS DESCRIPTION IS BASED ON INSTRUMENT NO. 2023-000852 - LOT NUMBERED ONE IN THE LINVILLE COMMERCIAL MINOR SUBDIVISION AS RECORDED IN PLAT CABINET E, SLIDE 359B AND AS INSTRUMENT NO. 2019-000197 IN THE OFFICE OF THE RECORDER OF JOHNSON COUNTY, INDIANA. NO FIELDWORK WAS PERFORMED AND THEREFORE, THIS DESCRIPTION IS SUBJECT TO ANY OVERLAPS, GAPS OR INCONSISTENCIES THAT A FIELD SURVEY MIGHT REVEAL.



A handwritten signature in black ink that reads "G. W. Charles II".

GEORGE W. CHARLES, II
INDIANA LAND SURVEYOR
NO. LS 20800117

PREPARED BY:



COUNTY: JOHNSON
SECTION: 2
TOWNSHIP: 12 NORTH
RANGE: 4 EAST

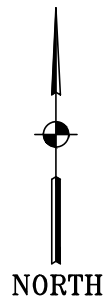
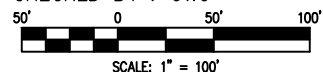
EXHIBIT "B"

DRAINAGE AND UTILITY EASEMENT

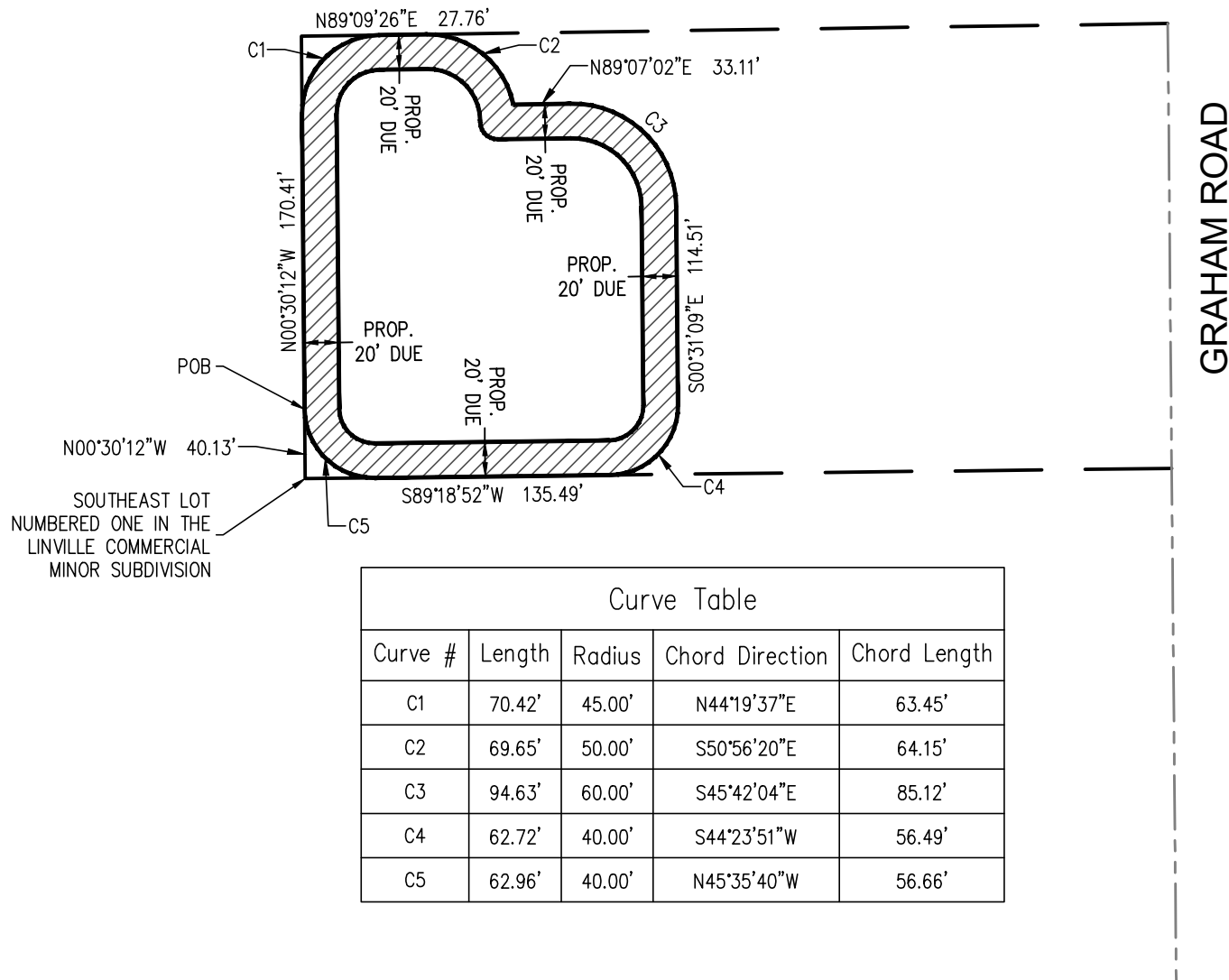
OWNER: JOHNSON COUNTY SOIL WASTE MANAGEMENT DISTRICT

DRAWN BY : LMC 04-08-24

CHECKED BY : GWC



HATCHED AREA IS THE
APPROXIMATE DRAINAGE AND UTILITY EASEMENT



Curve Table

Curve #	Length	Radius	Chord Direction	Chord Length
C1	70.42'	45.00'	N44°19'37"E	63.45'
C2	69.65'	50.00'	S50°56'20"E	64.15'
C3	94.63'	60.00'	S45°42'04"E	85.12'
C4	62.72'	40.00'	S44°23'51"W	56.49'
C5	62.96'	40.00'	N45°35'40"W	56.66'



NO FIELDWORK WAS PERFORMED AND THEREFORE, THIS DESCRIPTION IS SUBJECT TO ANY OVERLAPS, GAPS OR INCONSISTENCIES THAT A FIELD SURVEY MIGHT REVEAL. THIS PLOT IS BASED ON INSTRUMENT NO. 2023-000852 - LOT NUMBERED ONE IN THE LINVILLE COMMERCIAL MINOR SUBDIVISION AS RECORDED IN PLAT CABINET E, SLIDE 359B AND AS INSTRUMENT NO. 2019-000197 IN THE OFFICE OF THE RECORDER OF JOHNSON COUNTY, INDIANA.

G. W. Charles II

GEORGE W. CHARLES, II
INDIANA LAND SURVEYOR
NO. LS 20800117

04-08-24
DATE

PREPARED BY:



APPENDIX C

Maintenance Plan and Inspection Forms

Stormwater Infrastructure Operation, Maintenance, and Management Inspection Checklist for BMP Owners

Project: _____ Owner Change since last Inspection? ☐ Y

Owner Name, Address, Phone: _____

Number: _____

Location: _____

Site Status: _____

Date: _____

Time: _____

Inspector: _____

Maintenance Item	Satisfactory/ Unsatisfactory	Comments
Storm Inlets and Pipes (Inspect Monthly and After Major Storms)		
1. Inlet castings clear of trash/debris		
2. Inlet structures clear of trash/debris		
3. Sediment deposits in structures and pipes (max. accumulated depth 1/4 of pipe diameter)		
Drainage Swales (Inspect Monthly and After Major Storms)		
1. Mow and maintain vegetation (max. height 5 inches)		
2. Uniform swale slopes maintained		
3. Flowline unobstructed by buildings/fences		
4. Grade and reseed eroded areas		

Additional Comments:

Actions to be taken:

Timeframe:
