



# CONCEPTUAL CLOSURE PLAN FOR WASTE STORAGE PONDS

C & H Hog Farms Facility  
Mount Judea, Arkansas  
AFIN 51-00164

September 2019



Presented to:

Arkansas Energy and Environment  
Division of Environmental Quality

5301 Northshore Drive  
North Little Rock, AR 72118

Prepared by:

**Harbor**

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CONCEPTUAL

September 27, 2019

Colby Ungerank, Engineer  
Office Water Quality, Permits Branch  
Division of Environmental Quality  
5301 Northshore Drive  
North Little Rock, Arkansas 72118

Re: Conceptual Closure Plan for C & H Hog Farms Waste Storage Ponds  
Mount Judea, Arkansas  
AFIN 51-00164

Dear Mr. Ungerank:

Harbor Environmental and Safety (Harbor) has completed and enclosed with this letter the Conceptual Closure Plan for the C & H Hog Farms Waste Storage Ponds near Mount Judea, Arkansas. This Conceptual Closure Plan has been prepared in accordance with DEQ Waste Storage Pond Closure Guidelines.

Thank you for your review of this Conceptual Closure Plan. Should you have any questions or require additional information, please do not hesitate to contact me at 501.663.8800 or [arike@harborenv.com](mailto:arike@harborenv.com).

Sincerely,

HARBOR ENVIRONMENTAL AND SAFETY



Andrew Rike, P.E.  
Principal

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ATTACHMENT 1 - Conceptual Drawings

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## 1.0 Introduction

The C & H Hog Farms facility (Facility) is located near Mount Judea in Newton County, Arkansas on HC 41, approximately 1.0 mile west of the Intersection of Highway 74 and Highway 123. The Facility is a Concentrated Animal Feeding Operation (CAFO) for hogs with two (2) earthen waste storage ponds.

This Facility and the State of Arkansas (State) have entered into an agreement such that CAFO activities at the facility will terminate. Per the agreement, the State Division of Environmental Quality (DEQ) has responsibility for activities required to close the liquid animal waste storage ponds. The facility site is to incorporate a conservation easement that will permanently prohibit CAFO operation on the property. This conservation easement has been signed and is to be formally recorded with the County.

The facility's storage ponds consist of two (2) earthen waste storage ponds, Pond 1 and Pond 2. Pond 1 has an area of 16,999 square feet and an available storage volume of 621,186 gallons. Pond 2 has an area of 34,618 square feet and an available storage volume of 1,728,440 gallons. Waste from the CAFO operation flows to Pond 1, thence via a spillway, flows to Pond 2. Currently, liquid and solids from both ponds are pumped directly into land application equipment, and the waste is then land applied according the facility Comprehensive Nutrient Management Plan (CNMP).

Per Reg. 5.701 of Chapter 7, Facility Closure, Arkansas Pollution Control and Ecology Commission (APCEC) Regulation 5, Liquid Animal Waste Management Systems:

Should a permitted confined animal operation using a liquid waste management system cease operation, the permittee shall submit to the Department a closure plan for the liquid waste system storage/treatment structure(s) within sixty (60) days of the final day of operation for Department review and approval. Within ten (10) days of completion of closure activities, the permittee must submit certification that the facility was closed in accordance with the approved plan. The closure plan and closure certification shall be prepared by the United States Department of Agriculture Natural Resource Conservation Service, an Arkansas Natural Resources Commission water quality technician, the University of Arkansas Cooperative Extension Service or a professional engineer registered in the State of Arkansas.

Per the agreement, the DEQ has directed the development of the Closure Plan and will ensure closure pond activities will be completed in lieu of the permittee. The closure will be initiated following actions taken by the facility to cease operations, to conduct a final washdown, and to manage waste generated. Per DEQ's Waste Storage Pond Closure Guidelines, a closure plan must contain the following information:

- A. Permittee name, type of permit and permit number.
- B. Facility location, type of facility and county.
- C. Type and size of waste storage structure to be closed (pond, concrete tank, etc.)
- D. Quality and quantity of waste contained in waste storage structure.
- E. Method of waste disposal.
- F. Final status of waste storage structure (i.e. destroyed, removed, remain in place, convert to fresh water pond, etc.).

For earthen ponds and ponds converted to fresh water ponds, a minimum of six (6) inches of soil must be removed from the bottom and inside levees of the pond. The disposal of this waste must be addressed in the closure plan.

If remaining waste will be land applied in-state, the following additional information is required:

- A. Legal description and identification of proposed waste application site.
- B. Permit status of proposed waste application site
- C. Solids content (%) of waste.
- D. Plant Available Nitrogen (PAN) of waste.
- E. Waste application rate.
- F. Cover crop at waste application site and the corresponding nutrient uptake rate.
- G. Total number of acres required for disposal of remaining waste.
- H. Arkansas Phosphorus Index (API) in the nutrient surplus area.

Any waste disposal methods other than land application must be described in sufficient detail and include the final destination of the waste.

This plan is written for the final closure of the waste storage ponds and has been certified by a professional engineer registered in the State of Arkansas. The volumes of waste used in this closure plan are based on maximum potential volumes. Actual volumes of wastes disposed of will be stated in the final Closure Certification. All disposal will be performed in accordance with the DEQ's current regulations that incorporate Arkansas NRCS conservation practice standards. This plan will document the procedures for closure of the ponds.

## 2.0 Closure Overview

The closure process for the facility is summarized as follows:

1. Accumulated fluids in the pits after depopulation and final washdown will be removed and disposed of at an approved disposal facility, which will either be a permitted, licensed, or approved land application site or a permitted wastewater treatment facility.
2. Accumulated solids and a minimum of 6 inches of soils removed from the bottom and inside levees of the ponds will be removed and disposed of at an approved disposal facility, which will either be a permitted, licensed, or approved land application site or a permitted Class 1 Landfill.
3. The ponds will be filled, graded, and vegetated.
4. Vegetative cover will be established on disturbed soils to minimize erosion.
5. The Closure Certification will be submitted to DEQ upon completion of closure activities.

## 3.0 Fluid Disposal

A sample of the fluids will be collected, analyzed, and submitted for approval of disposal method. The fluids are to be removed by a licensed contractor and delivered to a permitted, licensed, or approved land application site or permitted wastewater treatment facility. If a more economical solution is identified before the fluids are removed, DEQ will be notified of the change and the required approval of that solution will be requested. No fluids will be land applied within the Buffalo River watershed. Temporary storage tanks may be installed at the ponds and/or the disposal facility to facilitate the closure operation.

## 4.0 Solids & Liner Disposal

The accumulated solids will be removed by a licensed contractor and delivered to a permitted, licensed, or approved land application site or permitted Class 1 Landfill. If a more economical solution is identified before the solids and pond soils are removed, DEQ will be notified of the change and the required approval of that solution will be requested. No solids will be land applied within the Buffalo River watershed. If stockpiling of solids is required during closure operations, it will be conducted such that stormwater runoff will not be adversely impacted.

## 5.0 Earthen Waste Storage Pond Closures

After all fluids, solids, and soils are removed, the earthen waste storage ponds are to be demolished by filling and grading the site with a uniform or terraced slope from beyond the west of the ponds on the high side to beyond the toe of the slope of the ponds to the east. This will prevent any accumulation of water.

Upon completion of the earthwork, all disturbed areas are to be filled, graded, and vegetated in accordance with APCEC Regulations 2, 5, 6, and 8, federal stormwater regulations contained in 40 CFR 122, 125, and 450, and the Arkansas Construction Stormwater General Permit ARR150000. Options for erosion control devices for achieving stabilized vegetation may include but not be limited to interceptor swales, diversion dikes, soil roughening, erosion control blankets, turf reinforcement mats, trench and staked sediment retention fiber rolls, hydroseed, hydrostraw bonded fiber matrix, silt fence, and rock check dams.

The preliminary grading plan and grading profile views are included as Attachment 1 of this document.

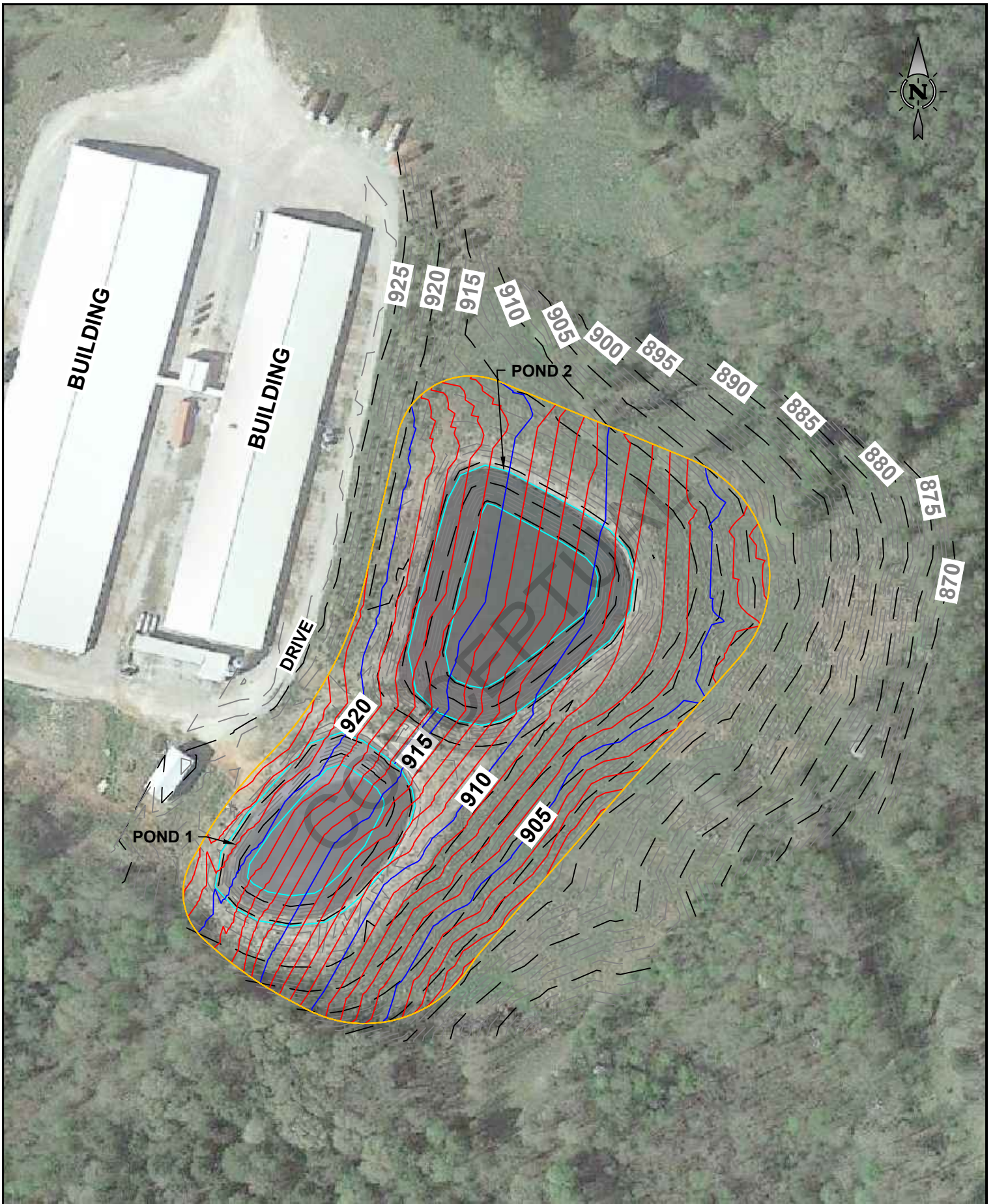
## 6.0 Closure Certification

Inspection and monitoring by a Professional Engineer or his designated inspector will be performed during the closure process to ensure that activities are conducted in a manner consistent with this plan. Upon completion of closure activities, a Professional Engineer's certification that the basins were closed in accordance with the approved plan will be provided to DEQ. The certification will include a summary report of the closure process and any "as-built" drawings and other pertinent information if needed.



ATTACHMENT 1  
CONCEPTUAL SITE PLAN, GRADING PLAN,  
AND PROFILE VIEWS

CONCEPTUAL

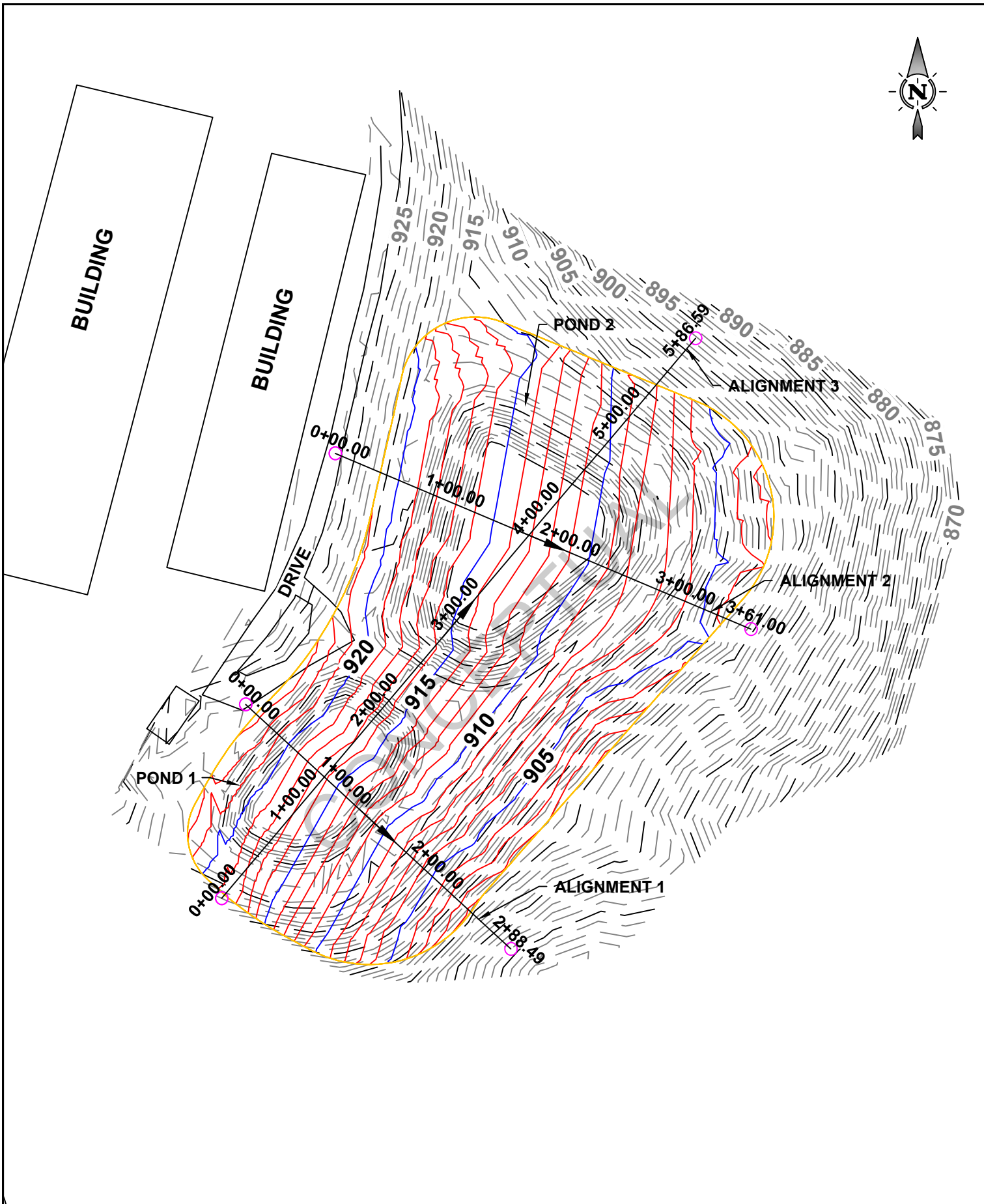


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**C&H POND CLOSURE  
 CONCEPTUAL SITE PLAN**

NO	REVISION DESCRIPTION	DATE	Drafter
1	ORIGINAL	9-23-19	HV
			Date
			9-23-19
			Scale
			1"=100'
			<b>C-1</b>



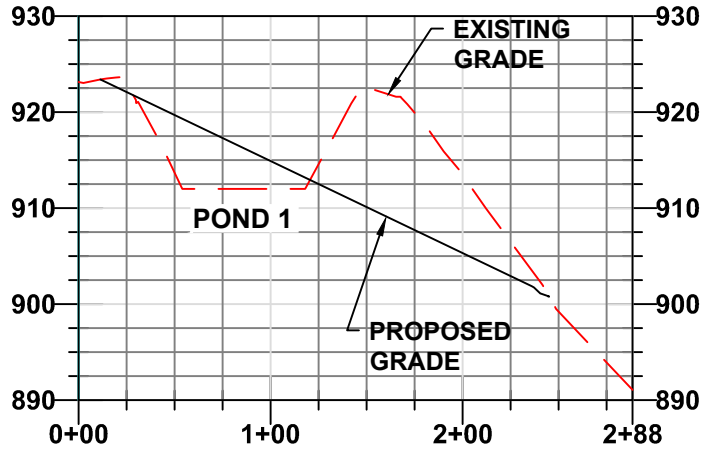


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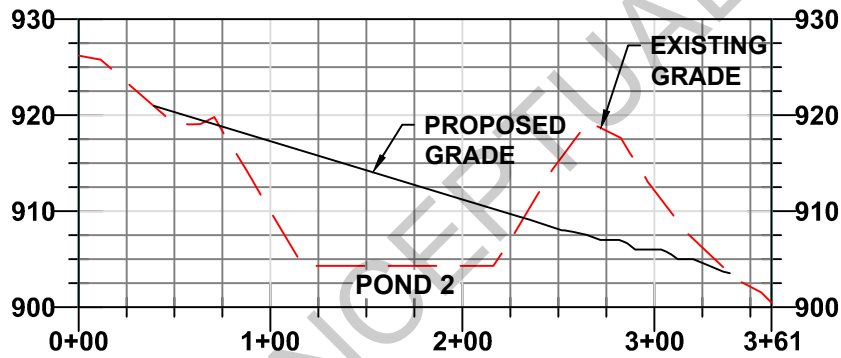
**C&H POND CLOSURE  
 CONCEPTUAL GRADING PLAN**

NO	REVISION DESCRIPTION	DATE	Drafter
1	ORIGINAL	9-23-19	HV
			Date
			9-23-19
			Scale
			1"=100'
			<b>C-2</b>

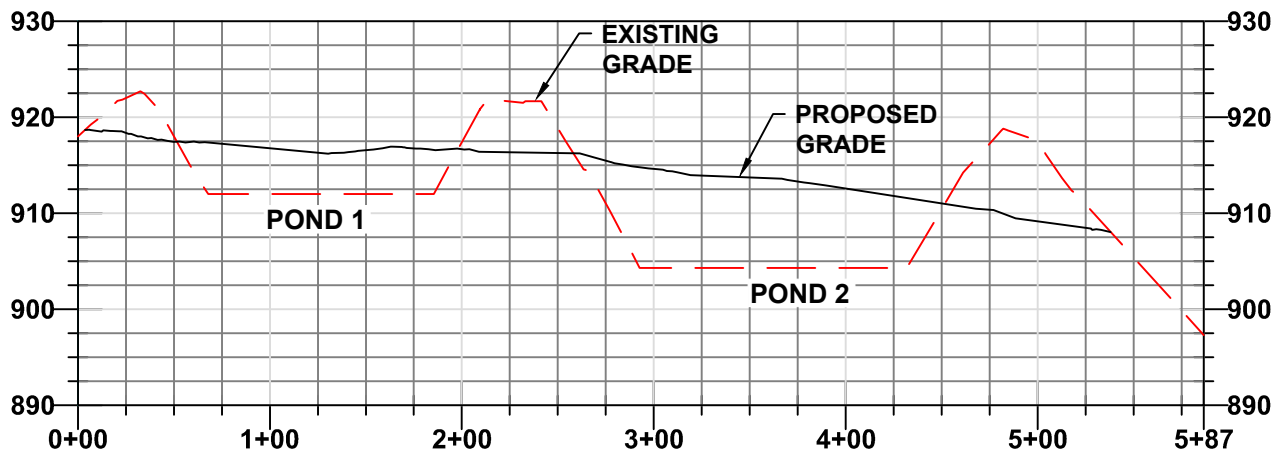
### Alignment - 1



### Alignment - 2



### Alignment - 3



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## C&H POND CLOSURE CONCEPTUAL PROFILE VIEWS

NO	REVISION DESCRIPTION	DATE	Drafter
1	ORIGINAL	9-23-19	HV
			Date 9-23-19
			Scale 1"=100'
			<b>C-3</b>