**PLANNING & DEVELOPMENT**
500 West Fourth Street
Davenport, Iowa 52801-1106
E-mail: planning@scottcountyiowa.com
Office: (563) 326-8643 Fax: (563) 326-8257

Timothy Huey
Director

To: Mahesh Sharma, County Administrator

From: Timothy Huey, Planning Director

Date: December 5, 2016

**Re: Public hearing on the Construction Permit Application of Grandview Farms, Inc. at 12090 240th Street & 11872 240th Street in Scott County, legally described as part of the SW ¼ of the SW ¼ of Section 7, T79N, R3E (Sheridan Township) and the SE¼ of the SE¼ of Section 12, T79N, R2E (Hickory Grove Township)**

On November 28th, the above referenced application was submitted to Scott County prior to submission to the Iowa Department of Natural Resources (IDNR). The IDNR notified Scott County it had received the application on November 30th. Scott County has 30 days from the date the IDNR notifies the County that it has received the application to submit comments and a recommendation on that application. Notice of the receipt of this application, as well as notice of a public hearing to be held on the application at the December 15th Board meeting, are to be published in two area newspapers (*North Scott Press*, *Quad City Times*) on December 7, 2016 as required by the IDNR. A public hearing is not required by the IDNR rules, but the Board of Supervisors has the option to hold such hearings. The Board has held a public hearing on all such applications. The Board will need to act on a recommendation at the Board meeting on December 29th so that the Board's recommendation can be submitted to and received by the IDNR by the January 3rd deadline.

This request is for the expansion of an existing hog confinement operation situated in Sheridan and Hickory Grove Townships that requires compliance with the standards of the Master Matrix.

The Health Department and Planning and Development staff will review of this request for compliance with the Master Matrix and CAFO standards. The Health Department will also review the manure management plan.

In addition to publishing public notice, staff has also mailed notice of the public hearing to property owners within 500 feet of the property. Staff will include any written comments and a summary of any verbal comments received at the public hearing with the Board's recommendation to the IDNR.

Staff will be accompanying the IDNR inspector from the Washington, Iowa DNR District Office on his inspection. Staff will report on that inspection and will also be ready to make a recommendation to the Board at the Committee of the Whole meeting on Tuesday, December 27th following review of the application and the site inspection visit.

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**NOTICE OF PUBLIC HEARING TO BE HELD BY THE SCOTT COUNTY BOARD OF SUPERVISORS FOR THE REVIEW OF AN APPLICATION FOR A STATE CONSTRUCTION PERMIT FOR THE EXPANSION OF AN EXISTING CONFINED ANIMAL FEEDING OPERATION**

Public Notice is hereby given that the Scott County Board of Supervisors will hold a public hearing on **Thursday, December 15, 2016**, in the Board Room in the Scott County Administrative Center, 600 West 4th Street, Davenport, Iowa, during their regular meeting which starts promptly at **5:00 P.M.**

The Scott County Board of Supervisors will review and hear public comments on the State of Iowa Construction Permit application of Grandview Farms, Inc in the SW ¼ of the SW ¼ of Section 7, T79N, R3E (Sheridan Township) and the SE¼ of the SE¼ of Section 12, T79N, R2E (Hickory Grove Township) for the expansion of an existing confined animal feeding operation. The address of the subject property is 12090 240th Street & 11872 240th Street, Eldridge, Iowa 52748.

The existing confined animal feeding operation has an Animal Unit Capacity (AUC) of 5,142. The proposed expansion would increase the capacity by 2,234 AUC, bringing the total to 7,376 AUC. The expansion would include the construction of five (5) new structures: one (1) 146' x 291' farrowing barn, two (2) 101' x 276' gestation barns, one (1) 101' x 276' gilt breeding/gestation barn, and one (1) 61' x 242' gilt development barn. The new buildings would be constructed as formed manure storage structures with 8' deep concrete pits below the slatted floors.

A copy of the application is on file with the Scott County Planning and Development Department and is available for review prior to the hearing during normal working hours 8:00 AM to 4:30 PM, Monday through Friday. If you have questions or want further information please call or write the Planning and Development Department, County Courthouse Annex, 500 West Fourth Street, Davenport, Iowa 52801, 563-326-8643, or attend the hearing.

Written, faxed or emailed comments for the Board of Supervisors may be delivered or sent to the Scott County Planning and Development Department in advance of the public hearing. All comments will be forwarded to the Iowa Department of Natural Resources. The fax number for Scott County Planning and Development is 563-326-8257 and the email address is planning@scottcountyiowa.com

Timothy Huey
Director

**PLANNING & DEVELOPMENT**
500 West Fourth Street
Davenport, Iowa 52801-1106
E-mail: planning@scottcountyiowa.com
Office: (563) 326-8643 Fax: (563) 326-8257

**PUBLIC NOTICE TO ALLOW FOR REVIEW AND COMMENT ON AN APPLICATION FOR A STATE CONSTRUCTION PERMIT FOR THE EXPANSION OF AN EXISTING ANIMAL CONFINEMENT FEEDING OPERATION**

The Scott County Board of Supervisors have on file an application for a State of Iowa construction permit that has been submitted to the Iowa Department of Natural Resources for the expansion of an existing animal (hog) confinement feeding operation in Scott County.

| | |
|---|---|
| Name of Applicant: | Grandview Farms, Inc. |
| Address | 12090 240th Street & 11872 240th Street<br>Eldridge, Iowa 52748 |
| Location of operation | SW¼ of SW¼ of Section 7, T79N, R3E (Sheridan Township) &<br>SE¼ of SE¼ of Section 12, T79N, R2E (Hickory Grove Township) |
| Description of application | The existing confined animal feeding operation has an Animal Unit Capacity (AUC) of 5,142. The proposed expansion would increase the capacity by 2,234 AUC, bringing the total to 7,376 AUC. The expansion would include the construction of five (5) new structures: one (1) 146' x 291' farrowing barn, two (2) 101' x 276' gestation barns, one (1) 101' x 276' gilt breeding/gestation barn, and one (1) 61' x 242' gilt development barn. The new buildings would be constructed as formed manure storage structures with 8' deep concrete pits below the slatted floors. |
| Examination: | The application for a State Construction Permit and associated manure management plan is on file with the Scott County Planning and Development Department located at 500 West 4th Street, Davenport, Iowa and is available for review by the public during normal working hours 8 AM to 4:30 PM, Monday through Friday. |
| Comments: | Written, faxed or emailed comments for the Board of Supervisors may be delivered or sent to the Scott County Planning and Development Department until Thursday, December 22, 2016 at 4:00 PM. All comments will be forwarded to the Iowa Department of Natural Resources. The fax number for Planning and Development is 563-326-8257 and the email address is planning@scottcountyiowa.com |
| Additional Information: | Timothy Huey, Planning and Development Director<br>500 West 4th Street<br>Davenport, Iowa 52801<br>563-326-8643 |

Iowa Department of Natural Resources
1900 North Grand Ave.
Gateway N Mall, Suite E17
Spencer, Iowa 51301

# FAX SHEET

**DELIVER TO:** Scott County Auditor **PHONE:** 1-563-326-8643

**FAX NUMBER:** 1-563-326-8257

**FROM:** Iowa DNR, Paul Petitti

**NUMBER OF PAGES (including this cover sheet):** 5

**MESSAGE:** **This is a Courtesy Reminder; Iowa law requires that your board of supervisors publish a notice in the newspaper and submit the board's master matrix scoring and recommendation for the construction permit application of the confinement feeding operation, as explained in the attached letter. Please take note of the deadlines. If you have any questions, please call.**

**Our Fax Number is: 712/262-2901**

**Any problems with transmission call: 712/262-4177**

revised 11/2015(cmg)

542-1352.4

Fields of Opportunities

# STATE OF IOWA

TERRY E. BRANSTAD, GOVERNOR
KIM REYNOLDS, LT. GOVERNOR

DEPARTMENT OF NATURAL RESOURCES
CHUCK GIPP, DIRECTOR

November 30, 2016

Scott County Board of Supervisors
c/o County Auditor
Via facsimile and email

**REF: Public Notice, Matrix Evaluation and County's Recommendation Required**
**DNR's Facility ID No. 59556**

Dear Board of Supervisors:

The DNR has received a construction permit application for a confinement feeding operation:
Facility name: **Grandview Farms-Sow Site**
Date received by the DNR: 11/30/2016

Under Iowa law, for this application the County is required to complete the following actions:

1. Publish a public notice (see example on page following this letter) in a newspaper having a general circulation in the county no later than 12/14/2016 (within 14 days of DNR's receipt of the application) and furnish proof of publication to the DNR:

   Note: A public hearing is not required, but it is optional. However, if the board chooses to have a public hearing, it is recommended to include in the notice the date, time and place for the hearing.

2. Score the applicant's Master Matrix and submit the board's scoring and recommendation regarding this application. A sample cover letter is attached. The county must submit to the DNR all of the following:

   A) A recommendation to approve or to disapprove the application.
   B) The Boards scoring of the Matrix, including all supporting calculations.
   C) Proof of publication of Public Notice.

## Your recommendation and Matrix score must be received by the DNR no later than 01/03/2017 (30 days after DNR received the application).

NOTE: If the County does not submit the Matrix score and recommendation by the deadline, the DNR will not consider any subsequent County's scoring of the Matrix or recommendation until the next time the County is eligible to adopt a construction evaluation resolution.

3. The board may submit comments or may forward comments from the public, which must be **received** by DNR no later than 01/03/2017. Comments received after that date due will not be considered. Comments may include but are not limited to the following:

   a. The existence of an object or location not included in the application that benefits from a separation distance requirement as provided in section 459.202 or 459.204 or 459.310 of the Code of Iowa.
   b. The suitability of soils and the hydrology of the site where construction of a confinement feeding operation structure is proposed.
   c. The availability of land for the application of manure originating from the confinement feeding operation.
   d. Whether the construction of a proposed confinement feeding operation structure will impede drainage through established tile lines, laterals, or other improvements which are constructed to facilitate the drainage of land not owned by the person applying for the construction permit.

4. The proof of publication, County's recommendation, a copy of the Matrix as scored by the board and any public comments must be **received** by IDNR no later than 01/03/2017. To ensure timely submittal, we recommend that you also **fax or scan and email** proof of publication, County's recommendation and a copy of the Matrix as scored by the board to:

Send to:

☒ Iowa DNR
Field Office #3
1900 N Grand Ave
Gateway North, Suite E17
Spencer, IA 51301
Attn: Paul Petitti

Paul.Petitti@dnr.iowa.gov
712/262-4177

☐ Iowa DNR
Field Office #2
2300 15th St SW
Mason City, IA 50401
Attn: Cindy Garza

Cindy.Garza@dnr.iowa.gov
641/424-4073

If you have any questions about this process, please contact Paul or Cindy.

Sincerely,

**Field Services and Compliance Bureau**

Paul Petitti

Paul Petitti

# PUBLIC NOTICE

*(This section is to be completed by the applicant)*

**The Scott County Board of Supervisors, has received a construction permit application for a confinement feeding operation, more specifically described as follows:**

**Name of Applicant: Thomas Dittmer**
**Location of the proposed construction: Section 7 of Sheridan Township.**
**Type of confinement feeding operation structure‡ proposed: Five new deep pit swine confinement buildings at an existing swine confinement facility.**

**Animal Unit Capacity of the Confinement Operation after Construction: 7376 animal units.(10776 head of gestating swine, 2344 head of farrowing swine, 24 head of swine boars, 5170 head of swine gilts and 500 head of nursery swine)**

*(This section is to be completed by the county)*

**Examination: The application is on file at the County _____ Office and is available for public inspection during the following days: _____ and hours: _____ am to _____pm.**
**Comments: Written comments may be filed at the County _____ Office, until the following deadline: _____.**

‡ A confinement feeding operation structure = a confinement building with a below the floor concrete pit; confinement building with an earthen basin or anaerobic lagoon; aboveground steel tank, etc. (see definition in footnote 1, page 1 of this application form).

**Letterhead for County Board of Supervisors**
**Address, town, Iowa**
**COURTHOUSE: # FAX: #**
**Supervisors**

_____ County Master Matrix Scoring & Recommendation

The _____County Board of Supervisors have reviewed the Master Matrix and Construction Permit Application for _____

Public Notice was published on __/__/___ and the proof of publication is attached.

Matrix as scored by _____County =_____ points. **Passing / Failing** (Circle One)

If the County scored matrix is different than submitted then the County scored matrix is attached with justifications ☐

Supplemental letters or documentation is being sent to DNR ☐

Upon review and inspection of construction site and documents provided, we the _____ County Board of Supervisors recommend the permit application be **Approved / Disapproved** (Circle One)

**Comments or Reason for Disapproval:**

Signed: _____ Date: _____

Chairman

# IOWA MASTER MATRIX SUPPLEMENT

## Grandview Farms Sow Farm
## SCOTT COUNTY

**November 2016**

This document will provide documentation, design information along with operation and maintenance (O&M) plans for items in the Master Matrix where points were gained.

Table 1. Summary table of matrix questions receiving points

| Question # | Description | Actual |
|---|---|---|
| | **Site Separation Distances** | |
| 2 | public use area | >2 miles (Donahue) |
| 3 | school, church, business | >2 miles (Donahue) |
| 4 | Closest water source > 500' | ~3010' to east |
| 5 | Proposed structure to thoroughfare >300ft | ~600' |
| 6 | critical public area | >2 miles (Donahue) |
| 8 | drainage wells, sinkholes, major water sources | >5 miles (Wapsi) |
| 10 | high quality/protected waters | >5 miles (Wapsi) |
| 12 | covered manure storage | design / O&M, CDS |
| 16 | compost enhancement | design / O & M |
| 17 | formed manure storage structure | design / O&M, CDS |
| 19 | Truck turnaround | design / O&M |
| 20 | No administrative orders | personal statement |
| 22 | Homestead Tax Exemption | personal statement |
| 23 | Family Farm tax credit | personal statement |
| 25 | Feed and water systems | design / O&M |
| 26 | Inject manure | see MMP |
| | **Land Application Separation Distances** | |
| 32 | school, church, business | >200' |
| 35 | HQW or PWA | 2900' (Wapsi) |
| 40 | Emergency action plan | see attachment |
| | | |
| | | |
| | | |
| | | |

12. Covered Manure Storage
This facility has deep pits for manure storage which are formed manure storages structures directly beneath a floor where animals are housed in a confinement feeding operation. The design is based upon the attached building drawings and specs from the builder. The structure will be maintained to ensure its structural integrity for its useful life.

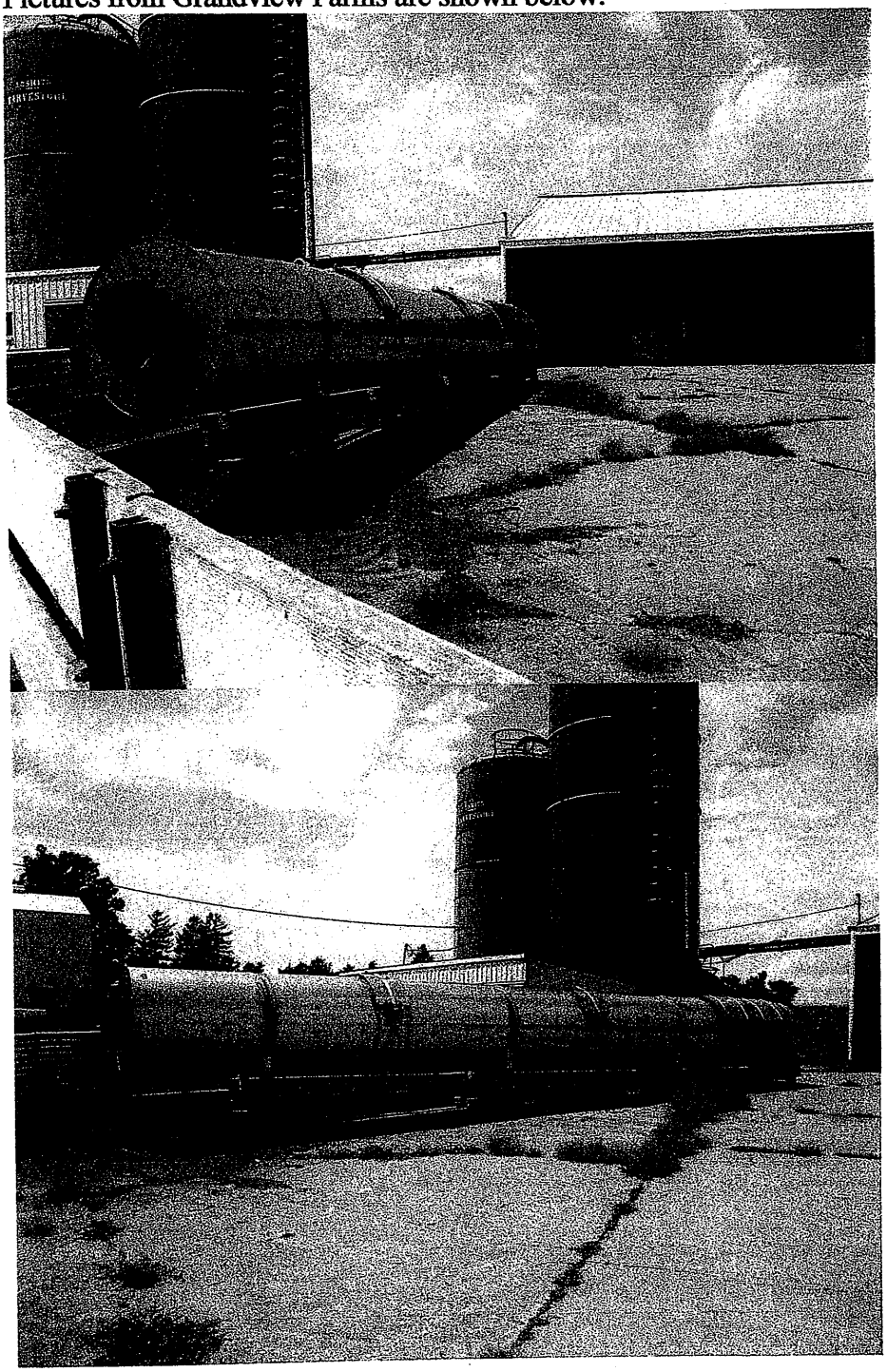
16. Compost Enhancement
This farm composts all mortalities and afterbirth. The larger sized mortalities are composted in the "Biovator"; a rotating enclosed vessel. The finished compost material that leaves the Biovator is stockpiled under roof until land application in the spring and fall. The small mortalities and afterbirth is composted under roof with wood shavings and finished compost from the Biovator. The entire compost system is housed on site to allow for optimal management. A roofed composting structure that was manually managed was decommissioned and torn down. The Biovator will be used for the material once composted there. The Biovator will also be roofed over for increased security and improved overall management of the compost product.

Design: The device is a stationary composting vessel. The composting vessel consists of a slowly rotating steel drum that has steel paddles mounted on the inside walls. The paddles are mounted in a spiral shaped pattern with varying spacings to allow material to move in one direction at a certain speed inside the vessel. The vessel has loading, inspection and discharge openings. The loading openings are used for loading carcasses and bulking material. The vessel is supported on side nylon rollers and front pillow block. Nylon rollers are supported by a steel skid. The vessel rotates at a speed of 3 revolutions per hour (or 20 minutes per revolution approximately). Additional information on the design of the Biovator is in the manual provided.
The procedures, operation and maintenance manual for the Biovator is attached. The Biovator design can be found in the operation manual provided.

Operation: This farm composts all mortalities and afterbirth. The larger sized mortalities are composted in the "Biovator"; a rotating enclosed vessel. The finished compost material that leaves the Biovator is stockpiled under roof until land application in the spring and fall. The small mortalities and afterbirth is composted under roof with wood shavings and finished compost from the Biovator. The compost is held in a roofed shed with 6 bays that are approximately 6'wide by 20' deep. The entire compost system is housed on site to allow for optimal management. Additional information on the operation of the Biovator is in the manual provided.

Maintenance: As needed the Biovator mechanics will be checked and repaired to maintain optimum operation. Compost material will be moved away from the Biovator so to not impede operation. Other maintenance activities will be performed as described in the manual provided.

Pictures from Grandview Farms are shown below.



17. Formed Manure Storage Structure

The deep pit manure storage is designed to be below floor storage. The concrete design for the structure will adhere to the specs outlined in the building plans to insure the integrity of the structure.

- The storage structure will be measured for manure volume monthly to monitor the amount of manure being produced.
- The volume of manure will be recorded and records maintained on site.
- A visual inspection of the outer above ground perimeter will be made on a semi-annual basis to check for any structural challenges to the storage structure.
- The perimeter tile outside of the storage structure will be monitored monthly over 3 years to determine the average amount of water present.
- The drainage tile outside of the storage structure will be visually checked on a monthly basis to monitor for potential manure contamination by checking color.
- A sample of the water will be taken during the monthly check if the depth is significantly higher than average (1.5 times the average for the month).
- Foreign materials will not be added to the manure storage structure purposefully.
- Durable lids and caution signs will be used to cover the manure pumpouts located along the sides of the structure.
- Proper fit and placement of lids will be checked monthly.

19. Truck Turnaround

The truck turnaround is designed as shown on the site plan. It has a diameter of at least 120 ft to allow for safe truck turnaround. The turnaround is located over 300 ft from the thoroughfare and therefore creates a safer environment for the truck driver and others on the road.

- When there has been significant snowfall, the snow will be removed from the drive and turnaround to allow for safe entrance and exit of trucks.
- The structure of the turnaround will be maintained with aggregate 2" to 5" thick.

20. I have no history of Administrative Orders in the last five years related to environmental and worker protection.

23. I can lawfully claim a Family Farm Tax Credit for agricultural land where the proposed confinement operation is to be located pursuant to Iowa Code chapter 425A.

25. Feed and Water Systems

The feed and water systems to be used in this facility are intended to reduce feed and water wastage which could impact the manure storage. The feeders are dry feeders and the waterers are cup waterers.

- Feeders and waterers will be checked daily for proper operation.
- If the feeder or waterer is not in proper operation and is causing wasted feed or water it will be addressed appropriately by repair or adjustment.
- Measurement of manure volume in the storage pit will be used to track if there is an irregular amount of waste occurring.

I believe the statements here to be true and agree to adhere to the specifications.

Grandview Farms Inc Tom Dittmer

Tom Dittmer of Grandview Farms, Inc.

**Daily Checks**

Feeders: _____ Checked and working appropriately
_____ Checked and adjustments made

Waterers: _____ Checked and working appropriately
_____ Checked and adjustments made

**Monthly Checks**

Date _____
Manure Depth _____
Drain Tile: Is water present? YES or NO
Approximate depth? _____ inches
Pumpout lids: Condition? GOOD FAIR NEEDS ATTENTION

**Semi-annual Check**

The outer above ground perimeter of manure storage:

_____ Normal as built
_____ Normal aging no problems
_____ Evidence of potential problems**
_____ Manure leakage**

**If either of these situations should occur, an engineer will be contacted to inspect for potential structural integrity issues. If there is evidence of manure leakage, DNR will be contacted.

# APPENDIX C MASTER MATRIX

## Proposed Site Characteristics

**The following scoring criteria apply to the site of the proposed confinement feeding operation. Mark one score under each criterion selected by the applicant. The proposed site must obtain a minimum overall score of 440 and a score of 53.38 in the "air" subcategory, a score of 67.75 in the "water" subcategory and a score of 101.13 in the "community impacts" subcategory.**

1. Additional separation distance, above minimum requirements, from proposed confinement structure to the closest:
   * Residence not owned by the owner of the confinement feeding operation,
   * Hospital,
   * Nursing home, or
   * Licensed or registered child care facility.

| | Score | Air | Water | Community |
|---|---|---|---|---|
| 250 feet to 500 feet | 25 | 16.25 | | 8.75 |
| 501 feet to 750 feet | 45 | 29.25 | | 17.50 |
| 751 feet to 1,000 feet | 65 | 42.25 | | 22.75 |
| 1,001 feet to 1,250 feet | 85 | 55.25 | | 29.75 |
| 1,251 feet or more | 100 | 65.00 | | 35.00 |

(A) Refer to the construction permit application package to determine the animal unit capacity (or animal weight capacity if an expansion) of the proposed confinement feeding operation. Then refer to Table 6 of 567–Chapter 65 to determine minimum required separation distances.
(B) The department will award points only for the single building, of the four listed above, closest to the proposed confinement feeding operation.
(C) "Licensed child care center" – a facility licensed by the department of human services providing child care or preschool services for seven or more children, except when the facility is registered as a child care home.
(D) "Registered child development homes" - child care providers certify that they comply with rules adopted by the department of human services. This process is voluntary for providers caring for five or fewer children and mandatory for providers caring for six or more children.
(E) A full listing of licensed and registered child care facilities is available at county offices of the department of human services.

2. Additional separation distance, above minimum requirements, from proposed confinement structure to the closest public use area.

| | Score | Air | Water | Community |
|---|---|---|---|---|
| 250 feet to 500 feet | 5 | 2.00 | | 3.00 |
| 501 feet to 750 feet | 10 | 4.00 | | 6.00 |
| 751 feet to 1,000 feet | 15 | 6.00 | | 9.00 |
| 1,001 feet to 1,250 feet | 20 | 8.00 | | 12.00 |
| 1,251 feet to 1,500 | 25 | 10.00 | | 15.00 |
| 1,501 feet or more | 30 | 12.00 | | 18.00 |

(A) Refer to the construction permit application package to determine the animal unit capacity (or animal weight capacity if an expansion) of the proposed confinement feeding operation. Then refer to Table 6 of 567–Chapter 65 to determine minimum required separation distances.
(B) "Public use area" - a portion of land owned by the United States, the state, or a political subdivision with facilities which attract the public to congregate and remain in the area for significant periods of time. Facilities include, but are not limited to, picnic grounds, campgrounds, cemeteries, lodges, shelter houses, playground equipment, lakes as listed in Table 2 of 567–Chapter 65, and swimming beaches. It does not include a highway, road right-of-way, parking areas, recreational trails or other areas where the public passes through, but does not congregate or remain in the area for significant periods of time.

3. Additional separation distance, above minimum requirements, from proposed confinement structure to the closest:
   * Educational institution,
   * Religious institution, or
   * Commercial enterprise.

| | Score | Air | Water | Community |
|---|---|---|---|---|
| 250 feet to 500 feet | 5 | 2.00 | | 3.00 |

| | | | | | |
|---|---|---|---|---|---|
| | 501 feet to 750 feet | 10 | 4.00 | | 6.00 |
| | 751 feet to 1,000 feet | 15 | 6.00 | | 9.00 |
| | 1,001 feet to 1,250 feet | 20 | 8.00 | | 12.00 |
| | 1,251 feet to 1,500 | 25 | 10.00 | | 15.00 |
| → | 1,501 feet or more | 30 | 12.00 | | 18.00 |

(A) Refer to the construction permit application package to determine the animal unit capacity (or animal weight capacity if an expansion) of the proposed confinement feeding operation. Then refer to Table 6 of 567--Chapter 65 to determine minimum required separation distances.
(B) The department will award points only for the single building, of the three listed above, closest to the proposed confinement feeding operation.
(C) "Educational institution" - a building in which an organized course of study or training is offered to students enrolled in kindergarten through grade 12 and served by local school districts, accredited or approved nonpublic schools, area educational agencies, community colleges, institutions of higher education under the control of the state board of regents, and accredited independent colleges and universities.
(D) "Religious institution" - a building in which an active congregation is devoted to worship.
(E) "Commercial enterprise" - a building which is used as a part of a business that manufactures goods, delivers services, or sells goods or services, which is customarily and regularly used by the general public during the entire calendar year and which is connected to electric, water, and sewer systems. A commercial enterprise does not include a farm operation.

**4.** Additional separation distance, above minimum requirement of 500 feet, from proposed confinement structure to the closest water source.

| | Score | Air | Water | Community |
|---|---|---|---|---|
| 250 feet to 500 feet | 5 | | 5.00 | |
| 501 feet to 750 feet | 10 | | 10.00 | |
| 751 feet to 1,000 feet | 15 | | 15.00 | |
| 1,001 feet to 1,250 feet | 20 | | 20.00 | |
| 1,251 feet to 1,500 | 25 | | 25.00 | |
| → 1,501 feet or more | 30 | | 30.00 | |

"Water source" - a lake, river, reservoir, creek, stream, ditch, or other body of water or channel having definite banks and a bed with water flow, except lakes or ponds without an outlet to which only one landowner is riparian.

**5.** Separation distance of 300 feet or more from the proposed confinement structure to the nearest thoroughfare.

| | Score | Air | Water | Community |
|---|---|---|---|---|
| → 300 feet or more | 30 | 9.00 | | 21.00 |

(A) "Thoroughfare" - a road, street, bridge, or highway open to the public and constructed or maintained by the state or a political subdivision.
(B) The 300-foot distance includes the 100-foot minimum setback plus additional 200 feet.

**6.** Additional separation distance, above minimum requirements, from proposed confinement structure to the closest critical public area.

| | Score | Air | Water | Community |
|---|---|---|---|---|
| → 500 feet or more | 10 | 4.00 | | 6.00 |

(A) All critical public areas as defined in 567--65.1(455B), are public use areas, and therefore subject to public use area minimum separation distances.
(B) Refer to the construction permit application package to determine the animal unit capacity (or animal weight capacity if an expansion) of the proposed confinement feeding operation. Then refer to Table 6 of 567--Chapter 65 to determine minimum required separation distances.

**7.** Proposed confinement structure is at least two times the minimum required separation distance from all private and public water wells.

| | Score | Air | Water | Community |
|---|---|---|---|---|
| Two times the minimum separation distance | 30 | | 24.00 | 6.00 |

Refer to Table 6 of 567--Chapter 65 for minimum required separation distances to wells.

**8.** Additional separation distance, above the minimum requirement of 1,000 feet, from proposed confinement structure to the closest:

* Agricultural drainage well,
* Known sinkhole, or
* Major water source.

| | Score | Air | Water | Community |
|---|---|---|---|---|
| 250 feet to 500 feet | 5 | 0.50 | 2.50 | 2.00 |
| 501 feet to 750 feet | 10 | 1.00 | 5.00 | 4.00 |
| 751 feet to 1,000 feet | 15 | 1.50 | 7.50 | 6.00 |
| 1,001 feet to 1,250 feet | 20 | 2.00 | 10.00 | 8.00 |
| 1,251 feet to 1,500 feet | 25 | 2.50 | 12.50 | 10.00 |
| 1,501 feet to 1,750 feet | 30 | 3.00 | 15.00 | 12.00 |
| 1,751 feet to 2,000 feet | 35 | 3.50 | 17.50 | 14.00 |
| 2,001 feet to 2,250 feet | 40 | 4.00 | 20.00 | 16.00 |
| 2,251 feet to 2,500 feet | 45 | 4.50 | 22.50 | 18.00 |
| 2,501 feet or more | 50 | 5.00 | 25.00 | 20.00 |

(A) The department will award points only for the single item, of the three listed above, that is closest to the proposed confinement feeding operation.
(B) "Agricultural drainage wells" - include surface intakes, cisterns and wellheads of agricultural drainage wells.
(C) "Major water source" - a lake, reservoir, river or stream located within the territorial limits of the state, or any marginal river area adjacent to the state which can support a floating vessel capable of carrying one or more persons during a total of a six-month period in one out of ten years, excluding periods of flooding. Major water sources in the state are listed in Tables 1 and 2 in 567–Chapter 65.

9. Distance between the proposed confinement structure and the nearest confinement facility that has a submitted department manure management plan.

| | Score | Air | Water | Community |
|---|---|---|---|---|
| Three-quarter of a mile or more (3,960 feet) | 25 | 7.50 | 7.50 | 10.00 |

Confinement facilities include swine, poultry, and dairy and beef cattle.

10. Separation distance from proposed confinement structure to closest:
* High quality (HQ) waters,
* High quality resource (HQR) waters, or
* Protected water areas (PWA)

is at least two times the minimum required separation distance

| | Score | Air | Water | Community |
|---|---|---|---|---|
| Two times the minimum separation distance | 30 | | 22.50 | 7.50 |

(A) The department will award points only for the single item, of the three listed above, closest to the proposed confinement feeding operation.
(B) HQ waters are identified in 567–Chapter 61.
(C) HQR waters are identified in 567–Chapter 61.
(D) A listing of PWAs is available at: http://www.iowadnr.gov/Recreation/CanoeingKayaking/StreamCare/ProtectedWaterAreas.aspx

11. Air quality modeling results demonstrating an annoyance level less than 2 percent of the time for residences within two times the minimum separation distance.

| | Score | Air | Water | Community |
|---|---|---|---|---|
| University of Minnesota OFFSET model results demonstrating an annoyance level less than 2 percent of the time | 10 | 6.00 | | 4.00e |

(A) OFFSET can be found at http://www.extension.umn.edu/agriculture/manure-management-and-air-quality/feedlots-and-manure-storage/offset-odor-from-feedlots/. For more information, contact Dr. Larry Jacobson, University of Minnesota, (612) 625-8288, jacob007@tc.umn.edu.
(B) A residence that has a signed waiver for the minimum separation distance cannot be included in the model.
(C) Only the OFFSET model is acceptable until the department recognizes other air quality models.

12. Liquid manure storage structure is covered.

| | Score | Air | Water | Community |
|---|---|---|---|---|
| Covered liquid manure storage | 30 | 27.00 | | 3.00 |

(A) "Covered" - organic or inorganic material, placed upon an animal feeding operation structure used to store manure, which significantly reduces the exchange of gases between the stored manure and the outside air.

Organic materials include, but are not limited to, a layer of chopped straw, other crop residue, or a naturally occurring crust on the surface of the stored manure. Inorganic materials include, but are not limited to, wood, steel, aluminum, rubber, plastic, or Styrofoam. The materials shall shield at least 90 percent of the surface area of the stored manure from the outside air. Cover shall include an organic or inorganic material which current scientific research shows reduces detectable odor by at least 75 percent. A formed manure storage structure directly beneath a floor where animals are housed in a confinement feeding operation is deemed to be covered.

(B) The design, operation and maintenance plan for the manure cover must be in the construction permit application and made a condition in the approved construction permit.

**13.** Construction permit application contains design, construction, operation and maintenance plan for emergency containment area at manure storage structure pump-out area.

| | Score | Air | Water | Community |
|---|---|---|---|---|
| Emergency containment area | 20 | | 18.00 | 2.00 |

(A) The emergency containment area must be able to contain at least 5 percent of the total volume capacity of the manure storage structure.

(B) The emergency containment area must be constructed on soils that are fine-grained and have low permeability.

(C) If manure is spilled into the emergency containment area, the spill must be reported to the department within six hours of onset or discovery.

(D) The design, construction, operation and maintenance plan for the emergency containment area must be in the construction permit application and made a condition in the approved construction permit.

**14.** Installation of a filter(s) designed to reduce odors from confinement building(s) exhaust fan(s).

| | Score | Air | Water | Community |
|---|---|---|---|---|
| Installation of filter(s) | 10 | 8.00 | | 2.00 |

The design, operation and maintenance plan for the filter(s) must be in the construction permit application and made a condition in the approved construction permit.

**15.** Utilization of landscaping around confinement structure.

| | Score | Air | Water | Community |
|---|---|---|---|---|
| Utilization of Landscaping | 20 | 10.00 | | 10.00 |

The design, operation and maintenance plan for the landscaping must be in the construction permit application and made a condition in the approved construction permit. The design should contain at least three rows of trees and shrubs, of both fast and slow-growing species that are well suited for the site.

**16** Enhancement, above minimum requirements, of structures used in stockpiling and composting activities, such as an impermeable pad and a roof or cover.

| | Score | Air | Water | Community |
|---|---|---|---|---|
| Stockpile and compost facility enhancements | 30 | 9.00 | 18.00 | 3.00 |

(A) The design, operation and maintenance plan for the stockpile or compost structure enhancements must be in the construction permit application and made a condition in the approved construction permit.

(B) The stockpile or compost structures must be located on land adjacent or contiguous to the confinement building.

**17** Proposed manure storage structure is formed

| | Score | Air | Water | Community |
|---|---|---|---|---|
| Formed manure storage structure | 30 | | 27.00 | 3.00 |

(A) "Formed manure storage structure" -a covered or uncovered impoundment used to store manure from an animal feeding operation, which has walls and a floor constructed of concrete, concrete block, wood, steel, or similar materials. Similar materials may include, but are not limited to, plastic, rubber, fiberglass, or other synthetic materials. Materials used in a formed manure storage structure shall have the structural integrity to withstand expected internal and external load pressures.

(B) The design, operation and maintenance plan for the formed manure storage structure must be in the construction permit application and made a condition in the approved construction permit.

**18.** Manure storage structure is aerated to meet departmental standards as an aerobic structure, if aeration is not already required by the department.

| | Score | Air | Water | Community |
|---|---|---|---|---|
| Aerated manure storage structure | 10 | 8.00 | | 2.00 |

(A) Aerobic structure - an animal feeding operation structure other than an egg wash water storage structure which relies on aerobic bacterial action which is maintained by the utilization of air or oxygen and which includes

aeration equipment to digest organic matter. Aeration equipment shall be used and shall be capable of providing oxygen at a rate sufficient to maintain an average of 2 milligrams per liter dissolved oxygen concentration in the upper 30 percent of the depth of manure in the structure at all times.

(B) The design, operation and maintenance plan for the aeration equipment must be in the construction permit application and made a condition in the approved construction permit.

**19** Proposed confinement site has a suitable truck turnaround area so that semitrailers do not have to back into the facility from the road

| | Score | Air | Water | Community |
|---|---|---|---|---|
| Truck turnaround | 20 | | | 20.00 |

(A) The design, operation and maintenance plan for the truck turn around area must be in the construction permit application and made a condition in the approved construction permit.

(B) The turnaround area should be at least 120 feet in diameter and be adequately surfaced for traffic in inclement weather.

**20** Construction permit applicant's animal feeding operation environmental and worker protection violation history for the last five years at all facilities in which the applicant has an interest.

| | Score | Air | Water | Community |
|---|---|---|---|---|
| No history of Administrative Orders in last five years | 30 | | | 30.00 |

(A) "Interest" - means ownership of a confinement feeding operation as a sole proprietor or a 10 percent or more ownership interest held by a person in a confinement feeding operation as a joint tenant, tenant in common, shareholder, partner, member, beneficiary or other equity interest holder. Ownership interest is an interest when it is held either directly, indirectly through a spouse or dependent child, or both.

(B) An environmental violation is a final Administrative Order (AO) from the department of natural resources or final court ruling against the construction permit applicant for environmental violations related to an animal feeding operation. A Notice of Violation (NOV) does not constitute a violation.

**21.** Construction permit applicant waives the right to claim a Pollution Control Tax Exemption for the life of the proposed confinement feeding operation structure.

| | Score | Air | Water | Community |
|---|---|---|---|---|
| Permanent waiver of Pollution Control Tax Exemption | 5 | | | 5.00 |

(A) Waiver of Pollution Control Tax Exemption is limited to the proposed structure(s) in the construction permit application.

(B) The department and county assessor will maintain a record of this waiver, and it must be in the construction permit application and made a condition in the approved construction permit.

**22** Construction permit applicant can lawfully claim a Homestead Tax Exemption on the site where the proposed confinement structure is to be constructed

- OR -

the construction permit applicant is the closest resident to the proposed confinement structure.

| | Score | Air | Water | Community |
|---|---|---|---|---|
| Site qualifies for Homestead Tax Exemption or permit applicant is closest resident to proposed structure | 25 | | | 25.00 |

(A) Proof of Homestead Tax Exemption is required as part of the construction permit application.

(B) Applicant includes persons who have ownership interests. "Interest" - means ownership of a confinement feeding operation as a sole proprietor or a 10 percent or more ownership interest held by a person in a confinement feeding operation as a joint tenant, tenant in common, shareholder, partner, member, beneficiary or other equity interest holder. Ownership interest is an interest when it is held either directly, indirectly through a spouse or dependent child, or both.

**23** Construction permit applicant can lawfully claim a Family Farm Tax Credit for agricultural land where the proposed confinement feeding operation is to be located pursuant to Iowa Code chapter 425A.

| | Score | Air | Water | Community |
|---|---|---|---|---|
| Family Farm Tax Credit qualification | 25 | | | 25.00 |

Applicant includes persons who have ownership interests. "Interest" - means ownership of a confinement feeding operation as a sole proprietor or a 10 percent or more ownership interest held by a person in a confinement feeding operation as a joint tenant, tenant in common, shareholder, partner, member, beneficiary or other equity interest holder. Ownership interest is an interest when it is held either directly, indirectly through a spouse or dependent child, or both.

**24.** Facility size.

| | Score | Air | Water | Community |
|---|---|---|---|---|
| 1 to 2,000 animal unit capacity | 20 | | | 20.00 |
| 2,001 to 3,000 animal unit capacity | 10 | | | 10.00 |
| 3,001 animal unit capacity or more | 0 | | | 0.00 |

(A) Refer to the construction permit application package to determine the animal unit capacity of the proposed confinement structure at the completion of construction.
(B) If the proposed structure is part of an expansion, animal unit capacity (or animal weight capacity) must include all animals confined in adjacent confinement structures.
(C) Two or more animal feeding operations under common ownership or management are deemed to be a single animal feeding operation if they are adjacent or utilize a common area or system for manure disposal. In addition, for purposes of determining whether two or more confinement feeding operations are adjacent, all of the following must apply:
  (a) At least one confinement feeding operation structure must be constructed on and after May 21, 1998.
  (b) A confinement feeding operation structure which is part of one confinement feeding operation is separated by less than a minimum required distance from a confinement feeding operation structure which is part of the other confinement feeding operation. The minimum required distance shall be as follows:
    (1) 1,250 feet for confinement feeding operations having a combined animal unit capacity of less than 1,000 animal units.
    (2) 2,500 feet for confinement feeding operations having a combined animal unit capacity of 1,000 animal units or more.

**25** Construction permit application includes livestock feeding and watering systems that significantly reduce manure volume.

| | Score | Air | Water | Community |
|---|---|---|---|---|
| Wet/dry feeders or other feeding and watering systems that significantly reduce manure volume | 25 | | 12.50 | 12.50 |

The design, operation and maintenance plan for the feeding system must be in the construction permit application and made a condition in the approved construction permit.

## Proposed Site Operation and Manure Management Practices

**The following scoring criteria apply to the operation and manure management characteristics of the proposed confinement feeding operation. Mark <u>one</u> score under each criterion that best reflects the characteristics of the submitted manure management plan.**

**26.** Liquid or dry manure (choose only one subsection from subsections "a" - "e" and mark one score in that subsection).

| | | Score | Air | Water | Community |
|---|---|---|---|---|---|
| a. | Bulk dry manure is sold under Iowa Code Chapter 200A and surface-applied | 15 | | 15.00 | |
| | Bulk dry manure is sold under Iowa Code Chapter 200A and incorporated on the same date it is land-applied | 30 | 12.00 | 12.00 | 6.00 |
| b. | Dry manure is composted and land-applied under the requirements of an approved department manure management plan | 10 | 4.00 | 4.00 | 2.00 |
| | Dry manure is composted and sold so that no manure is applied under the requirements of an approved department manure management plan | 30 | 12.00 | 12.00 | 6.00 |
| c. | Methane digester is used to generate energy from manure and remaining manure is surface-applied under the requirements of an approved department manure management plan | 10 | 3.00 | 3.00 | 4.00 |
| | After methane digestion is complete, manure is injected or incorporated on the same date it is land-applied under the requirements of an approved department manure management plan | 30 | 12.00 | 12.00 | 6.00 |
| d. | Dry manure is completely burned to generate energy and no | 30 | 9.00 | 9.00 | 12.00 |

| | | | | | |
|---|---|---|---|---|---|
| | remaining manure is applied under the requirements of an approved department manure management plan | | | | |
| | Some dry manure is burned to generate energy, but remaining manure is land-applied and incorporated on the same date it is land applied | 30 | 12.00 | 12.00 | 6.00 |
| e. | Injection or incorporation of manure on the same date it is land-applied | 30 | 12.00 | 12.00 | 6.00 |

(A) Choose only ONE line from subsection "a", "b," "c," "d," or "e" above and mark only one score in that subsection.
(B) The injection or incorporation of manure must be in the construction permit application and made a condition in the approved construction permit.
(C) If an emergency arises and injection or incorporation is not feasible, prior to land application of manure the applicant must receive a written approval for an emergency waiver from a department field office to surface-apply manure.
(D) Requirements pertaining to the sale of bulk dry manure under pursuant to Iowa Code chapter 200A must be incorporated into the construction permit application and made a condition of the approved construction permit.
(E) The design, operation and maintenance plan for utilization of manure as an energy source must be in the construction permit application and made a condition in the approved construction permit.
(F) The design, operation and maintenance plan for composting facilities must be in the construction permit application and made a condition in the approved construction permit.

**27.** Land application of manure is based on a two-year crop rotation phosphorus uptake level.

| | Score | Air | Water | Community |
|---|---|---|---|---|
| Two-year phosphorus crop uptake application rate | 10 | | 10.00 | |

(A) Land application of manure cannot exceed phosphorus crop usage levels for a two-year crop rotation cycle.
(B) The phosphorus uptake application rates must be in the construction permit application and made a condition in the approved construction permit.

**28.** Land application of manure to farmland that has USDA Natural Resources Conservation Service (NRCS) approved buffer strips contiguous to all water sources traversing or adjacent to the fields listed in the manure management plan.

| | Score | Air | Water | Community |
|---|---|---|---|---|
| Manure application on farmland with buffer strips | 10 | | 8.00 | 2.00 |

(A) The department may request NRCS maintenance agreements to ensure proper design, installation and maintenance of filter strips. If a filter strip is present but not designed by NRCS, it must meet NRCS standard specifications.
(B) The application field does not need to be owned by the confinement facility owner to receive points.
(C) On current and future manure management plans, the requirement for buffer strips on all land application areas must be in the construction permit application and made a condition in the approved construction permit.

**29.** Land application of manure does not occur on highly erodible land (HEL), as classified by the USDA NRCS.

| | Score | Air | Water | Community |
|---|---|---|---|---|
| No manure application on HEL farmland | 10 | | 10.00 | |

Manure application on non-HEL farmland must be in the construction permit application and made a condition in the approved construction permit.

**30.** Additional separation distance, above minimum requirements (0 or 750 feet, see below), for the land application of manure to the closest:

* Residence not owned by the owner of the confinement feeding operation,
* Hospital,
* Nursing home, or
* Licensed or registered child care facility.

| | Score | Air | Water | Community |
|---|---|---|---|---|
| Additional separation distance of 200 feet | 5 | 3.25 | | 1.75 |
| Additional separation distance of 500 feet | 10 | 6.50 | | 3.50 |

(A) The department will award points only for the single building, of the four listed above, closest to the proposed confinement feeding operation.
(B) Minimum separation distance for land application of manure injected or incorporated on the same date as application: 0 feet.

(C) Minimum separation distance for land application of manure broadcast on soil surface: 750 feet.
(D) The additional separation distances must be in the construction permit application and made a condition in the approved construction permit.
(E) "Licensed child care center" – a facility licensed by the department of human services providing child care or preschool services for seven or more children, except when the facility is registered as a child care home.
(F) "Registered child development homes" - child care providers certify that they comply with rules adopted by the department of human services. This process is voluntary for providers caring for five or fewer children and mandatory for providers caring for six or more children.
(G) A full listing of licensed and registered child care facilities is available at county offices of the Department of Human Services

**31.** Additional separation distance, above minimum requirements (0 or 750 feet, see below), for land application of manure to closest public use area.

| | Score | Air | Water | Community |
|---|---|---|---|---|
| Additional separation distance of 200 feet | 5 | 2.00 | | 3.00 |

(A) "Public use area" - a portion of land owned by the United States, the state, or a political subdivision with facilities which attract the public to congregate and remain in the area for significant periods of time. Facilities include, but are not limited to, picnic grounds, campgrounds, cemeteries, lodges, shelter houses, playground equipment, lakes as listed in Table 2 in 567–Chapter 65, and swimming beaches. It does not include a highway, road right-of-way, parking areas, recreational trails or other areas where the public passes through, but does not congregate or remain in the area for significant periods of time.
(B) Minimum separation distance for land application of manure injected or incorporated on the same date as application: 0 feet.
(C) Minimum separation distance for land application of manure broadcast on soil surface: 750 feet.
(D) The additional separation distances must be in the construction permit application and made a condition in the approved construction permit.

**32** Additional separation distance, above minimum requirements (0 or 750 feet, see below), for the land application of manure to the closest:

* Educational institution,
* Religious institution, or
* Commercial enterprise.

| | Score | Air | Water | Community |
|---|---|---|---|---|
| Additional separation distance of 200 feet | 5 | 2.00 | | 3.00 |

(A) Minimum separation distance for land application of manure broadcast on soil surface: 750 feet.
(B) Minimum separation distance for land application of manure injected or incorporated on same date as application: 0 feet.
(C) The additional separation distances must be in the construction permit application and made a condition in the approved construction permit.
(D) "Educational institution" - a building in which an organized course of study or training is offered to students enrolled in kindergarten through grade 12 and served by local school districts, accredited or approved nonpublic schools, area educational agencies, community colleges, institutions of higher education under the control of the state board of regents, and accredited independent colleges and universities.
(E) "Religious institution" - a building in which an active congregation is devoted to worship.
(F) "Commercial enterprise" - a building which is used as a part of a business that manufactures goods, delivers services, or sells goods or services, which is customarily and regularly used by the general public during the entire calendar year and which is connected to electric, water, and sewer systems. A commercial enterprise does not include a farm operation.

**33.** Additional separation distance of 50 feet, above minimum requirements (0 or 200 feet, see below), for the land application of manure to the closest private drinking water well or public drinking water well - OR well is properly closed under supervision of county health officials.

| | Score | Air | Water | Community |
|---|---|---|---|---|
| Additional separation distance of 50 feet or well is properly closed | 10 | | 8.00 | 2.00 |

(A) Minimum separation distance for land application of manure injected or incorporated on the same date as application or 50-foot vegetation buffer exists around well and manure is not applied to the buffer: 0 feet.
(B) Minimum separation distance for land application of manure broadcast on soil surface: 200 feet.
(C) If applicant chooses to close the well; the well closure must be incorporated into the construction permit application and made a condition in the approved construction permit.

**34.** Additional separation distance, above minimum requirements, for the land application of manure to the closest:

* Agricultural drainage well,
* Known sinkhole,
* Major water source, or
* Water source

| | Score | Air | Water | Community |
|---|---|---|---|---|
| Additional separation distance of 200 feet | 5 | 0.50 | 2.50 | 2.00 |
| Additional separation distance of 400 feet | 10 | 1.00 | 5.00 | 4.00 |

(A) "Agricultural drainage wells" - include surface intakes, cisterns and wellheads of agricultural drainage wells.
(B) "Major water source" - a lake, reservoir, river or stream located within the territorial limits of the state, or any marginal river area adjacent to the state, which can support a floating vessel capable of carrying one or more persons during a total of a six-month period in one out of ten years, excluding periods of flooding. Major water sources in the state are listed in Tables 1 and 2 in 567–Chapter 65.
(C) "Water source" - a lake, river, reservoir, creek, stream, ditch, or other body of water or channel having definite banks and a bed with water flow, except lakes or ponds without an outlet to which only one landowner is riparian.
(D) The additional separation distances must be in the construction permit application and made a condition in the approved construction permit.

**35.** Additional separation distance above minimum requirements, for the land application of manure, to the closest:

* High quality (HQ) water,
* High quality resource (HQR) water, or
* Protected water area (PWA).

| | Score | Air | Water | Community |
|---|---|---|---|---|
| Additional separation distance of 200 feet | 5 | | 3.75 | 1.25 |
| Additional separation distance of 400 feet | 10 | | 7.50 | 2.50 |

(A) HQ waters are identified in 567–Chapter 61.
(B) HQR waters are identified in 567–Chapter 61.
(C) A listing of PWAs is available at: http://www.iowadnr.gov/Recreation/CanoeingKayaking/StreamCare/ProtectedWaterAreas.aspx.

**36.** Demonstrated community support.

| | Score | Air | Water | Community |
|---|---|---|---|---|
| Written approval of 100% of the property owners within a one mile radius | 20 | | | 20.00 |

**37.** Worker safety and protection plan is submitted with the construction permit application.

| | Score | Air | Water | Community |
|---|---|---|---|---|
| Submission of worker safety and protection plan | 10 | | | 10.00 |

(A) The worker safety and protection plan must be in the construction permit application and made a condition in the approved construction permit.
(B) The worker safety and protection plan and subsequent records must be kept on site with the manure management plan records.

**38.** Applicant signs a waiver of confidentiality allowing public to view confidential manure management plan land application records

| | Score | Air | Water | Community |
|---|---|---|---|---|
| Manure management plan confidentiality waiver | 5 | | | 5.00 |

The waiver of confidentiality must be in the construction permit application and made a condition in the approved construction permit. The applicant may limit public inspection to reasonable times and places.

**39.** Added economic value based on quality job development (number of full time equivalent (FTE) positions), and salary equal to or above Iowa department of workforce development median (45-2093)
-OR-
the proposed structure increases commercial property tax base in the county.

| | Score | Air | Water | Community |
|---|---|---|---|---|
| Economic value to local community | 10 | | | 10.00 |

The Iowa Department of Workforce Development regional profiles are available at http://www.iowaworkforce.org/centers/regionalsites.htm. Select the appropriate region and then select "Regional Profile."

**40.** Construction permit application contains an emergency action plan.

| | Score | Air | Water | Community |
|---|---|---|---|---|
| Emergency action plan | 5 | | 2.50 | 2.50 |

(A) Iowa State University Extension publication PM 1859 lists the components of an emergency action plan. The emergency action plan submitted should parallel the components listed in the publication.
(B) The posting and implementation of an emergency action plan must be in the construction permit application and made a condition in the approved construction permit.
(C) The emergency action plan and subsequent records must be kept on site with the manure management plan records.

**41.** Construction permit application contains a closure plan.

| | Score | Air | Water | Community |
|---|---|---|---|---|
| Closure Plan | 5 | | 2.50 | 2.50 |

(A) The closure plan must be in the construction permit application and made a condition in the approved construction permit.
(B) The closure plan must be kept on site with the manure management plan records.

**42.** Adoption and implementation of an environmental management system (EMS) recognized by the department.

| | Score | Air | Water | Community |
|---|---|---|---|---|
| EMS | 15 | 4.50 | 4.50 | 6.00 |

(A) The EMS must be in the construction permit application and made a condition in the approved construction permit.
(B) The EMS must be recognized by the department as an acceptable EMS for use with confinement operations.

**43.** Adoption and implementation of NRCS approved Comprehensive Nutrient Management Plan (CNMP).

| | Score | Air | Water | Community |
|---|---|---|---|---|
| CNMP | 10 | 3.00 | 3.00 | 4.00 |

The implementation and continuation of a CNMP must be in the construction permit application and made a condition in the approved construction permit.

**44.** Groundwater monitoring wells installed near manure storage structure, and applicant agrees to provide data to the department.

| | Score | Air | Water | Community |
|---|---|---|---|---|
| Groundwater monitoring | 15 | | 10.50 | 4.50 |

(A) Monitoring well location, sampling and data submission must meet department requirements.
(B) The design, operation and maintenance plan for the groundwater monitoring wells, and data transfer to the department, must be in the construction permit application and made a condition in the approved construction permit.

| | Total Score | Air | Water | Community |
|---|---|---|---|---|
| | 880 | 213.50 | 271.00 | 404.50 |
| Score to pass | 440 | 53.38 | 67.75 | 101.13 |

Grandview Farms, Inc.
Master Matrix Points

| TOTAL | Air | Water | Community |
|---|---|---|---|
| 475 | 92 | 157 | 226 |

GRANDVIEW FARMS
EST. 1917

# Emergency Action Plan

## Site Information

| Site Name | Premise ID | Owner | Phone |
|---|---|---|---|
| Home Sow Farm | 00DUPDF | Tom Dittmer | 563.320.1542 |

| Unit Address |
|---|
| 12090 240th St. / 11872 240th St.<br>Eldridge, IA 52748<br>**4 miles straight west of Eldridge, IA on the north side of 240th St.** |

## Important Contacts

| | |
|---|---|
| Rescue/Ambulance | 911 |
| Fire Department | 911 |
| Police/Sheriff | 911 |
| Hospital | Genesis: 563.421.1000 |
| Doctor | Dr. Jason Davis: 563.386.3111 |
| Insurance - Property | Dave Oetting – Naught Naught: 660.424.7091 |
| Insurance - Medical | Shane Brisker – State Farm: 563.343.7401 |
| Veterinarian | Mark Brinkman DVM: 319.430.3423 |
| Poison Control | 1.800.222.1222 |
| State EPA | Region 7: 1.800.223.0425 |
| County Engineer | Scott County, Iowa: 563.326.8640 |
| Earth Moving | Kevin Englebrecht: 563.529.8653 |
| Hauling | Corey Englebrecht: 563.529.1164 |
| Equipment | Mike DeCap: 563.370.3361 |
| Manure Transfer | Dave Book – GVF: 563-320.7343 |
| Manure Pumping | Joe Hildebrand – EI Pumping: 563.590.4618 |
| Electrical | Devan Warner - Central City Electric: 563.370.5460 |
| Power Company | Alliant Energy: 1.800.255.4268 |
| Ventilation | Randy Shumaker – Custom Builders: 563.357.3682 |
| Plumbing | Mark Latta – Latta Well & Pump: 563.506.0429 |
| Heating | Tony Howell – River Valley Co-op: 563.370.0641 |
| Feed | Mike Wagner – River Valley Co-op: 319.480.3387 |
| Animal Transport | Mike DeCap/Ben Dittmer: 563.370.3361/563.320.5589 |
| Mortality Disposal | Jeff Frantz/Ben Dittmer: 563.210.6192/563.320.5589 |
| Compliance Hotline | Joni Dittmer: 563.320.4395 |

# Emergency Action Plans

***Emergency action plans provide detailed information on what to do if you have an accident or emergency at your livestock facility, such as a manure spill. While Emergency Action Plans are not required, it is a good idea to keep a copy of the plan with your manure management plan or records, production records, or somewhere that is easily located by you, family members, or employees. A well-designed and implemented emergency action plan can reduce the severity of emergencies, the risk to humans and animals, the economic losses, and the potential of environmental pollution.***

This fact sheet is designed to address emergency action plans in the event of a manure leak or spill. In addition to developing an emergency action plan to address manure management, you might consider developing additional plans to address mass animal mortalities; weather-related emergencies; or electrical, plumbing, or other mechanical failures.

**An emergency action plan should contain four items:**

1) a plan of action to prevent the release of manure or prevent environmental contamination

2) a detailed map of the site and application fields

3) a list of contact names and numbers included with the plan and posted near the phone

4) a clean-up plan

This fact sheet is not designed to be a "fill-in-the-blank" form. It is designed to give you the basic information needed to prepare an emergency action plan. The plan you design will be specific to your livestock facility and your management practices. You may want to work with your local emergency management coordinator when developing your emergency action plan. The coordinator can help you identify resources and file any necessary notifications needed in the response of an accident or spill.

## PLAN OF ACTION

A plan of action should be developed for each livestock facility. Review the plan of action every six months and make sure all personnel involved with the livestock facility are familiar with the plan. Items to consider for a plan of action include:

- Assess the situation, know what factors are at risk (human health, animal welfare, the environment, livestock structures)
- Reduce risk through implementation of planned steps
  - Prevent spills or discharges by maintaining equipment and following plans
  - Eliminate the source of manure if spill or discharge occur
  - Contain the spill
- Contact appropriate authorities to report emergencies or accidents
- Assess damages

In the event of a manure spill or leak, every effort possible should be made to prevent movement of manure off-site. If necessary, contact neighbors or nearby contractors with earth-moving equipment available to assist with containment. If tile intakes are present, have devices on hand to prevent manure from entering the tile lines. Contact neighbors with manure handling equipment to land apply the manure. Prevent manure from entering bodies of water or other environmentally sensitive areas, such as sinkholes and ag drainage wells. For assistance, contact your local sheriffs department or other emergency response personnel in your county. **State law requires that you report manure spills or leaks to the Iowa Department of Natural Resources as soon as possible, but not later than 6 hours from onset or discovery of the problem** (see *Contact Names and Numbers*).

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# Emergency Action Plans

## SITE MAP

A good planning tool for emergency action plans is a site map of the livestock facility. A site map can be of assistance to new employees, delivery personnel, and emergency response personnel. A site map should include the following information:

- Facility address and location (including e911 address)
- Building locations
- Electrical service boxes
- Water main connections and shut-off valves
- Identification of the manure storage structure with associated pump-out ports, valves, pumps, etc...
- Location of wellheads
- Identification of nearby tile intakes, sinkholes, ag drainage wells, streams, lakes or other environmentally sensitive areas
- Drainage and water movement indications
- Identification of property boundaries
- First aid kit
- Fire extinguisher(s)

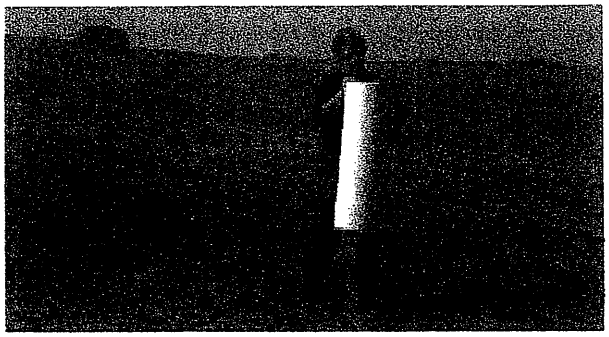
In addition to a site map for livestock facilities, copies of maps of fields for land application of manure should be included. If you already have these maps filed with your manure management plans, an extra set could be filed with your emergency action plan. These maps should include manure application setback distances, designated areas, watercourses, and property boundaries. It is also helpful to include the location of field access roads and gates. You may wish to file a site map with your DNR regional field office.

## CONTACT NAMES AND NUMBERS

See attached sheets.

## CLEAN-UP PLAN

A clean-up plan should include methods of proper manure removal and land application of manure at agronomic rates. Manure applications from a spill should also be recorded in your manure management plan if you are required to have one. You should consult DNR field staff for appropriate clean-up methods. You may be required to file a report following a manure spill, leak or other incident.



*This fact sheet was developed by the Iowa Manure Management Action Group (IMMAG). Special thanks to Don Peterson and Paul Miller, NRCS; Karen Grimes and Kathie Lee, IDNR staff; and Jeff Lorimor and Angela Rieck-Hinz, ISU; for development of this material. Members of IMMAG include: Natural Resource Conservation Service (NRCS), Iowa Environmental Council, Agribusiness Association of Iowa, Iowa Farm Bureau, Iowa Pork Producers Association, Iowa Cattlemen's Association, Iowa Poultry Association, Conservation Districts of Iowa, Farm Credit Services of America, Iowa Department of Natural Resources (IDNR), Division of Soil Conservation of the Iowa Department of Agriculture and Land Stewardship (DSC-DALS), Iowa Beef Center, Iowa Pork Industry Center and Iowa State University Extension, and the College of Agriculture.*

*A special thanks to the IDNR field staff, Extension field staff, and State Emergency Response personnel for assistance.*



PM 1859 January 2001
File: Environmental Quality 4-1 [A]

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University Extension

# Contact Names and Numbers

A list of contact names and numbers should be filed with the emergency action plan and a copy posted by the phone for emergencies.

**Site Name**

Grandview Farms Inc (Sow Farm)

**Owner/Operator**

Name: Tom Dittmer

Phone: 563-285-4006

**Site Address (including e911 address)**

12090 240th St

Eldridge IA 52748

**Specific Directions to the Site**

West of Eldridge on West

Leclaire Rd 4.3 miles

## HUMAN INJURY

Explain that self-contained breathing apparatus may be required if someone has been overcome by gases.

**Rescue Unit/Ambulance**

Phone: 911

**Doctor or Physician**

Name: DR Matt Neal

Phone: 563-285-7232

**Hospital or Medical Clinic**

Name: Genesis West

Phone: 563-421-1000

**Fire Department**

Phone: 911

**County Sheriff**

Name: Dennis Conard

Phone: 563-326-8625

**County Health Official**

Name: Larry Linenbrink

Phone: 563-326-8618

**Poison Control Center**

Phone: 1-800-222-1222

**Others**

Name:

Phone:

Name:

Phone:

*Post by the telephone for reference.*

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# Contact Names and Numbers

## Manure Leaks or Spills

### IOWA DEPARTMENT OF NATURAL RESOURCES FIELD OFFICE

**State law requires that you report manure spills or leaks to the Iowa Department of Natural Resources as soon as possible, but not later than 6 hours from onset or discovery of the problem (see *Contact Names and Numbers*).**

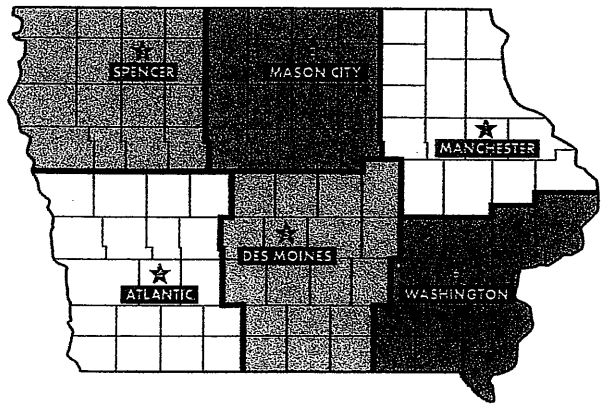
**Work Days 8 a.m. - 4:30 p.m.**

Phone: 319-653-2135

**Weekends, Holidays, and After Business Hours**

Phone: (515) 281-8694

**FIELD OFFICE LOCATIONS**
**ENVIRONMENTAL PROTECTION DIVISION**




| FIELD OFFICE | LOCATION | PHONE NUMBER |
|---|---|---|
| 1 | 909 W. Main, Suite 4 • Manchester, IA 52057 | 319-927-2640 |
| 2 | 2300 15th St. SW • Mason City, IA 50401 | 641-424-4073 |
| 3 | 1900 North Grand Ave. • Spencer, IA 51301 | 712-262-4177 |
| 4 | 1401 Sunnyside Lane • Atlantic, IA 50022 | 712-243-1934 |
| 5 | 401 SW 7th St., Suite I • Des Moines, IA 50309 | 515-725-0268 |
| 6 | 1004 West Madison • Washington, IA 52353 | 319-653-2135 |

### COUNTY SHERIFF

Name: Dennis Conard

Phone: 563-326-8625

### CONTRACTOR

**Earth Moving**

Name: Engelbrecht Brothers

Phone: 563-285-8281

**Pumping Equipment**

Name: Grandview Farms Inc

Phone: 563-285-4006

**Hauling Equipment**

Name: Grandview Farms Inc

Phone: 563-285-4006

**Equipment Owners**

Name: Tom Dithmer

Phone: 563-285-4006

**County Engineer**

Name: John Burgstrum

Phone: 563-326-8640

**Others**

Name: _____

Phone: _____

*Post by the telephone for reference.*

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University Extension

# Contact Names and Numbers

## PARTIAL SYSTEM FAILURE

Equipment suppliers and technicians:

**Electricity**

Name: Central city Electric

Phone: 1-800-642-6676

**Plumbing**

Name: Latta well

Phone: 1-800-354-3161

**Ventilation**

Name: Custom Builders

Phone: 1-800-657-8004

**Heating**

Name: Brian Brooks

Phone: 563-343-7598

**Feed**

Name: River Valley Co-op

Phone: 1-800-247-0797

**Veterinarian**

Name: Ume Group

Phone: 319-668-1111

**Mortality Disposal**

Name: Darling International

Phone: 1-800-462-6550

**Insurance Carrier**

Name: Grau/meyer

Phone: 1-800-279-2081

Policy: _____

**Other**

_____

_____

_____

*Post by the telephone for reference.*

Grandview Farms

## 1.) PLAN OF ACTION FOR A MANURE SPILL

If a manure spill happens, immediately safely stop the leak, and call:

- Tom @ (563)320-1542;
- Mike @ (563)370-3361;
- Dave @ (563)320-7343.

We will then determine what action to take due to the situation.

If the spill is very sizeable, we need to stop the manure from flowing into the tile inlet by the following steps:

1. Cover the tile inlet with a solid PVC pipe to keep manure from going into the tile.
2. Get loader tractor and dam-up the manure run-off.
3. Get the manure to "pool" so it can be pumped into a tank and hauled to a field in the MMP.
4. If we need assistance with heavy equipment, call Cory Engelbrecht @ (563)529-1164; or Kevin Engelbrecht @ (563)529-8653. They have the earth moving equipment needed and are only 2 miles away.
5. Call DNR Emergency as soon as possible @ (515)281-8694.

## 2.)CLEAN UP PLAN AFTER THE SPILL

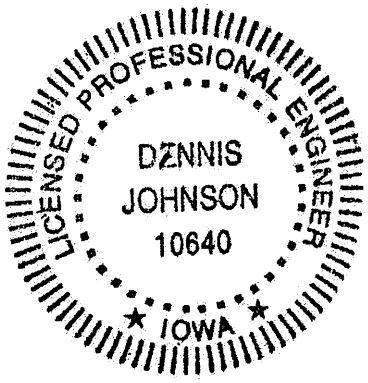
- Go to the "Manure Pool" and set pumps in and pump the manure into the manure tank.
- Spread the manure to field in MMP at 5000 gallons / acre. All fields around the sow farm are in the MMP.
- The dirt and dry manure can be loaded into the "Dry Manure Spread" and applied to the field in the MMP.

# PROJECT MANUAL

I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the Laws of the State of Iowa

Date: 10/25/16

Dennis J. Johnson, P.E. Reg.No.10640




## GRANDVIEW FARMS WEST SOW ADDITION

## SHERIDAN TOWNSHIP

## SCOTT COUNTY

SW ¼ of SW ¼
SECTION 7
T-79-N R-03-E

**Wenck File #1773-06**

**Prepared for:**

**GRANDVIEW FARMS, INC.**
12090 WEST 240TH STREET
ELDRIDGE, IA 52748

OCTOBER 2016

**Prepared by:**

**WENCK ASSOCIATES, INC.**
1012 5th Avenue
P.O. Box 453
Windom, Minnesota 56101
(507) 831-2703

WENCK ASSOCIATES

Responsive partner.
Exceptional outcomes.

# GRANDVIEW FARMS – WEST SOW ADDITION

## SCOTT COUNTY, SHERIDAN TOWNSHIP, IOWA

## SECTION 7 – SW ¼ of SW 1/4, T79N, R03E

## TABLE OF CONTENTS

# GRANDVIEW FARMS – WEST SOW ADDITION

## TABLE OF CONTENTS

Please staple check here

# Iowa Department of Natural Resources

## Construction Permit Application Form

### Confinement Feeding Operations

**INSTRUCTIONS:**

Prior to constructing, installing, modifying or expanding a confinement feeding operation structure[1], answer questions 1-8 on Item 3, Section A (page 2), to determine if a construction permit is required. To calculate the animal unit capacity (AUC) of the operation, complete Table 1 (page 4.) If a construction permit is required, complete the rest of the form, have the applicant(s) sign it on pages 5 and 6. Mail to the DNR (see address on page 5) this application form, documents and fees requested in Checklist No. 1 or 2 (pages 10-15). See item 5 (page 5), to determine which checklist to use.

If a construction permit is not needed, some pre-construction requirements may still apply prior to the construction of a formed manure storage structure[2]. See page 5 for additional DNR contact information.

**THIS APPLICATION IS FOR:**

1. ☒ **A new confinement feeding operation**
2. ☒ **An existing confinement feeding operation** *(answer all of the following questions):*
   a) Facility ID No. (5 digit number): 59556
   b) Date when the operation was first constructed: 1979
   c) Date when the last construction, expansion or modification was completed: 2015

(Not needed if the confinement operation has previously received a construction permit from DNR.)

d) Is this also an ownership change? ☐ Yes ☒ No If yes box is checked additional fees apply. See page 8

**ITEM 1 – LOCATION AND CONTACT INFORMATION** (*See page 17 for instructions and an example*):

A) Name of operation: Grandview Farms - Sow Site

Location:

| SW | SW | 07 | 79N 3E | Sheridan | Scott |
|---|---|---|---|---|---|
| (1/4 1/4) | (1/4) | (Section) | (Tier & Range) | (Name of Township) | (County) |

B) Applicant information:

Name: Grandview Farms, Inc. Title: Owner

Address: 12090 West 240th Street, Eldridge, IA 52748

Telephone: 563-285-4006 Fax: 563-285-4014 Email: tadittmer@aol.com

C) Person to contact with questions about this application (if different than applicant):

Name: Thomas Dittmer Title: Agent

Address: 12090 West 240th Street, Eldridge, IA 52748

Telephone: 563-285-4006 Fax: 563-285-4014 Email: tadittmer@aol.com

☒ Enclose aerial photo or engineering drawing showing the proposed location of the confinement feeding operation structure[1] and all applicable separation distances, as requested in Attachment 1 (pages 11-12 or 14-15). See example of aerial photo on pages 18 to 19, at the end of this form.

☐ I manage or am the majority owner of another confinement feeding operation located within 2,500 feet of the proposed site. Please contact the DNR AFO Program staff at (712) 262-4177 to verify site adjacency requirements.

[1] Confinement feeding operation structure = animal feeding operation structure (confinement building, manure storage structure or egg washwater storage structure) that is part of a confinement feeding operation. Manure storage structures include formed and unformed manure storage structures.

[2] Formed manure storage structure = covered or uncovered concrete or steel tanks, and concrete pits below the building.

**ITEM 2 – SITING INFORMATION:**

A) Karst Determination: Go to DNR AFO Siting Atlas at http://programs.iowadnr.gov/maps/afo/. Agree to the disclaimer, then search for your site by either scrolling into your location or entering an address or legal description in the bottom search bar. Left click on the location of your proposed structure. Make sure the karst layer box is checked on the map layers. If you cannot access the map, or if you have questions about this issue, contact the AFO Engineer at (712) 262-4177. Check one of the following:

☒ The site is not in karst or potential karst. Print and enclose the map with the name and location of the site clearly marked.

☐ The site is in karst. The upgraded concrete standards of 567 IAC 65.15(14)"c" must be used. Refer to "Applicant's submittal checklist" on page 10 for karst documentation.

☐ The site is within 1,000 feet of a known sinkhole, Secondary Containment Barrier is required in accordance with 567 IAC 65.15(17).

B) Alluvial Soils Determination: Go to the AFO Siting Atlas as described above. Make sure the alluvial layer box is checked on the map legend. If you cannot access the map, or if you have questions about this issue, contact DNR Flood Plain at (866) 849-0321. Check one of the following:

☒ The site is not in alluvial soils. Print and enclose the map with the name and location of the site clearly marked.

☐ The site is in alluvial soils. You will need to submit a request for a flood plain determination from DNR Flood Plain (866) 849-0321. After receiving determination submit one of the following:

- ☐ Not in 100-year floodplain or does not require a flood plain permit. Include correspondence from the DNR Flood Plain Section.
- ☐ Requires flood plain permit. Include flood plain permit.
- ☐ Documentation has been submitted to determine site is not in alluvial soils. Refer to "Applicant's Submittal Checklist" on page 10 for alluvial soils documentation.

**ITEM 3 – OPERATION INFORMATION:**

A) A construction permit is required prior to any of the following:

1. ☐ Constructing or modifying any unformed manure storage structure[3], or constructing or modifying a confinement building that uses an unformed manure storage structure[3].
2. ☒ Constructing, installing or modifying a confinement building or a formed manure storage structure[2] at a confinement feeding operation if, after construction, installation or expansion, the AUC of the operation is 1,000 animal units (AU) or more. This also applies to confinement feeding operations that store manure exclusively in a dry form.
3. ☐ Initiating a change that would result in an increase in the volume of manure or a modification in the manner in which manure is stored in any unformed manure storage structure[3], even if no construction or physical alteration is necessary. Increases in the volume of manure due to an increase in animal capacity, animal weight capacity or AUC up to the limits specified in a previously issued construction permit do not require a new construction permit.
4. ☐ Initiating a change, even if no construction or physical alteration is necessary, that would result in an increase in the volume of manure or a modification in the manner in which manure is stored in a formed manure storage structure[2] if, after the change, the AUC of the operation is 1,000 AU or more. Increases in the volume of manure due to an increase in animal capacity, animal weight capacity or AUC up to the limits specified in a previously issued construction permit do not require a new construction permit.
5. ☐ Constructing or modifying any egg washwater storage structure or a confinement building at a confinement feeding operation that includes an egg washwater storage structure.
6. ☐ Initiating a change that would result in an increase in the volume of egg washwater or a modification in the manner in which egg washwater is stored, even if no construction or physical alteration is necessary. Increases in the volume of egg washwater due to an increase in animal capacity, animal weight capacity or AUC up to the limits specified in a previously issued construction permit do not require a new construction permit.
7. ☐ Repopulating a confinement feeding operation if it was closed for 24 months or more and if any of the following apply:
   1. ☐ The confinement feeding operation uses an unformed manure storage structure[3] or egg washwater storage structure;
   2. ☐ The confinement feeding operation includes only confinement buildings and formed manure storage structures[2] and has an AUC of 1,000 AU or more.
8. ☐ Installing a permanent manure transfer piping system, unless the department determines that a construction permit is not required.

[3] Unformed manure storage structure = covered or uncovered anaerobic lagoon, earthen manure storage basin, aerobic earthen structure.

B) **In your own words, describe in detail, the proposed construction, expansion, installation, modification or repair being proposed in this project.(Must be completed) Attach additional pages if necessary:**

SEE ATTACHMENT

C) **Master Matrix** *(must check one).* If any of boxes 1 to 3 are checked, the operation is required to be evaluated with the master matrix if the county, where the confinement feeding operation structure[1] is or would be located, has adopted a 'Construction Evaluation Resolution' (CER). Select the one that best describes your confinement feeding operation:

1. ☐ A new confinement feeding operation proposed in a county that has adopted a CER.
2. ☐ An existing operation constructed on or after April 1, 2002, in a county that has adopted a CER.
3. ☒ An existing operation constructed prior to April 1, 2002, with a current or proposed AUC of 1,667 AU or more, in a county that has adopted a CER.
4. ☐ None of the above. Therefore, the master matrix evaluation is not required.

D) **Qualified Operation** *(must check one).* If any of boxes 1 to 4 are checked, the operation is also a 'qualified operation'. A qualified operation is required to use a manure storage structure that employs bacterial action which is maintained by the utilization of air or oxygen, and which shall include aeration equipment. However, this requirement does not apply if box 5 is checked. Select the one that best describes your confinement feeding operation:

1. ☐ A swine farrowing and gestating operation with an AUC of 2,500 AU or more. If the replacement breeding swine are raised and used at the operation, the animal units for those replacement animals do not count in the operations total AUC.
2. ☐ A swine farrow-to-finish operation with an AUC of 5,400 AU or more.
3. ☐ A cattle confinement feeding operation (including dairies) with an AUC of 8,500 AU or more.
4. ☐ Other confinement feeding operations with an AUC of 5,333 AU or more.
5. ☒ This is not a qualified operation because:
   a. ☐ It is below the limits shown on boxes 1 to 4.
   b. ☒ It includes a confinement feeding operation structure[1] constructed prior to May 31, 1995.
   c. ☐ It handles manure exclusively in a dry form (poultry).

## ITEM 4 – ANIMAL UNIT CAPACITY (AUC) and, if applicable, ANIMAL WEIGHT CAPACITY (AWC):

### A) Calculating AUC – Required for all operations

For each animal species, multiply the maximum number of animals that you would ever confine at one time by the appropriate factor, then add all AU together on Table 1 (page 4). Use the maximum market weight for the appropriate animal species to select the AU factor.

You must complete all applicable columns in Table 1. Use column a) to calculate the existing AUC, before permit for existing operations only. Use column b) to calculate the 'Total proposed AUC' (after a permit is issued) including new operations. The number obtained in column b) is the AUC of the operation and must be used to determine permit requirements. Use column c) to calculate the 'New AU' to be added to an existing operation. To calculate the indemnity fee (see page 7), also use column c), however, if the "Existing AUC" (column a) is 500 AU or less, enter the "Total proposed AUC" (column b) in the "New AU" (column c).

In calculating the AUC of a confinement feeding operation, you must include the AUC of all confinement buildings which are part of the confinement feeding operation, unless a confinement building has been abandoned. A confinement feeding operation structure[1] is abandoned if the confinement feeding operation structure[1] has been razed, removed from the site of a confinement feeding operation, filled in with earth, or converted to uses other than a confinement feeding operation structure[1] so that it cannot be used as a confinement feeding operation structure[1] without significant reconstruction. Therefore, in Table 1, enter the animal unit capacity of all the confinement buildings, including those that are from an "adjacent" operation located within 2,500 feet. For more information, contact the AFO Program at (712) 262-4177.

**Table 1. Animal Unit Capacity (AUC):** **(No. HEAD) x (FACTOR) = AUC**

| Animal Species | a) Existing AUC (Before permit) | | | b) Total Proposed AUC (After permit) | | |
|---|---|---|---|---|---|---|
| | (No. Head) | x (Factor) | = AUC | (No. Head) | x (Factor) | = AUC |
| Slaughter or feeder cattle | | 1.0 | | | 1.0 | |
| Immature dairy cattle | | 1.0 | | | 1.0 | |
| Mature dairy cattle | | 1.4 | | | 1.4 | |
| Gestating sows | 6976 | 0.4 | 2790 | 10776 | 0.4 | 4310 |
| Farrowing sows & litter | 1768 | 0.4 | 707 | 2344 | 0.4 | 938 |
| Boars | 16 | 0.4 | 6 | 24 | 0.4 | 10 |
| Gilts | 3970 | 0.4 | 1588 | 5170 | 0.4 | 2068 |
| Finished (Market) hogs | | 0.4 | | | 0.4 | |
| Nursery pigs 15 lbs to 55 lbs | 500 | 0.1 | 50 | 500 | 0.1 | 50 |
| Sheep and lambs | | 0.1 | | | 0.1 | |
| Horses | | 2.0 | | | 2.0 | |
| Turkeys 7lbs or more | | 0.018 | | | 0.018 | |
| Turkeys less than 7 lbs | | 0.0085 | | | 0.0085 | |
| Broiler/Layer chickens 3 lbs or more | | 0.01 | | | 0.01 | |
| Broiler/Layer chickens less than 3 lbs | | 0.0025 | | | 0.0025 | |
| Fish | | 0.001 | | | 0.001 | |

**Note:** If the "Existing AUC" (column a) is 500 AU or less, enter the "Total proposed AUC" (column b) in the "New AU" (column c)

**c) New AU = b) - a):**

**d)**

| **TOTALS:** | **a) Existing AUC:** | 5142 | **b) Total proposed AUC:** | 7376 | 2234 |
|---|---|---|---|---|---|

*(This is the AUC of the operation)*

**B) Calculating AWC - Only for operations first constructed prior to March 1, 2003**

The AWC is needed for an operation that was first constructed prior to March 1, 2003, to determine some of the minimum separation distance requirements for construction or expansion.

The AWC is the product of multiplying the maximum number of animals that you would ever confine at any one time by their average weight (lbs) during the production cycle. Then add the AWC if more than one animal species is present (examples on how to determine the AWC are provided in 567 IAC 65.1(455B).)

If the operation was first constructed prior to March 1, 2003, you must complete all applicable columns in Table 2:

**Table 2. Animal Weight Capacity (AWC):** **(No. head) * (Avg. weight, lbs) = AWC, lbs**

| Animal Species | a) Existing AWC (Before Permit) | | | b) Proposed AWC (After permit) | | |
|---|---|---|---|---|---|---|
| | (No. head) x | avg weight | = AWC | (No. head) x | avg weight | = AWC |
| Slaughter or feeder cattle | | | | | | |
| Immature dairy cattle | | | | | | |
| Mature dairy cattle | | | | | | |
| Gestating sows | 6976 | 375 | 2616000 | 10776 | 375 | 4041000 |
| Farrowing sows & litter | 1768 | 375 | 663000 | 2344 | 375 | 879000 |
| Boars | 16 | 350 | 5600 | 24 | 350 | 8400 |
| Gilts | 3970 | 200 | 794000 | 5170 | 200 | 1034000 |
| Finished (Market) hogs | | | | | | |
| Nursery pigs 15 lbs to 55 lbs | 500 | 35 | 17500 | 500 | 35 | 17500 |
| Sheep and lambs | | | | | | |
| Horses | | | | | | |
| Turkeys 7lbs or more | | | | | | |
| Turkeys less than 7 lbs | | | | | | |
| Broiler/Layer chickens 3 lbs or more | | | | | | |
| Broiler/Layer chickens less than 3 lbs | | | | | | |
| Fish | | | | | | |

**c) New AWC = b) - a):**

| **TOTALS:** | **a) Existing AWC:** | 4096100 | **b) Total proposed AWC:** | 5979900 | 1883800 |
|---|---|---|---|---|---|

*(This is the AWC of the operation)*

**ITEM 5 – SUBMITTAL REQUIREMENTS** Checklists No. 1 or 2 (pages 10-15) describe the submittal requirements, which are based on the type of confinement feeding operation structure[1] and AUC proposed. To determine which checklist to use, choose the option that best describes your confinement feeding operation:

A) ☐ **Formed manure storage structures[2]**: The proposed confinement feeding operation structure[1] will be or will use a formed manure storage structure[2]. Check one of the following boxes:

1. ☒ A swine farrowing and gestating operation with an AUC of 1,250 AU or more. Use Submittal Checklist No. 2 (page 13).
2. ☐ A swine farrow-to-finish operation with an AUC of 2,750 AU or more. Use Submittal Checklist No. 2 (page 13).
3. ☐ A cattle confinement feeding operation (including dairies) with an AUC of 4,000 AU or more. Use Submittal Checklist No. 2 (page 13).
4. ☐ Other confinement feeding operations with an AUC of 3,000 AU or more. Use Submittal Checklist No. 2 (page 13).
5. ☐ None of the above. Use Submittal Checklist No. 1 (page 10).

If any of boxes 1 to 4 are checked, the operation meets the threshold requirements for an engineer[4] and a Professional Engineer (PE), licensed in Iowa, is required. For these cases, use Submittal Checklist No. 2 (page 13).

If you checked box 5, your operation is below threshold requirements for an engineer[4] and a Professional Engineer (PE) is not required. Use Submittal Checklist No. 1 (page 10).

B) ☐ **Unformed manure storage structure[3]**: The proposed confinement feeding operation structure[1], will be or will use an unformed manure storage structure[3] or an egg washwater storage structure. A Professional Engineer (PE) licensed in Iowa must design and sign the engineering documents for any size of operation. Use Submittal Checklist No. 2 (page 13) and Addendum "A" (page 16).

**ITEM 6 – SIGNATURE:**

I hereby certify that the information contained in this application is complete and accurate.

Signature of Applicant(s): _____ Date: 11-27-16

_____

**MAILING INSTRUCTIONS:**

To expedite the application process, follow the submittal requirements explained in Checklist No. 1 or 2 (pages 10 to 16), whichever applies. Page 1 of this form should be the first page of the package. Mail all documents and fees to:

**Iowa DNR**
**AFO Program**
**1900 N Grand Ave**
**Gateway North, Ste E17**
**Spencer, IA 51301**

*(Note: Incomplete applications will be returned to the sender.)*

## Questions

Questions about construction permit requirements or regarding this form should be directed to an engineer of the animal feeding operations (AFO) Program at (712) 262-4177 To contact the appropriate DNR Field Office, go to http://www.iowadnr.gov/InsideDNR/DNRStaffOffices/EnvironmentalFieldOffices.aspx.

[4] Threshold requirements for an engineer apply to the construction of a formed manure storage structure[2]. Operations that meet or exceed the threshold requirements for an engineer are required to submit engineering documents signed by a professional engineer licensed in the state of Iowa. Please refer to Checklist No. 2 (pages 13-15).

**ITEM 7**

## Interested Parties Form
## Confinement Feeding Operation

**Interest** means ownership of a confinement feeding operation as a sole proprietor or a 10 percent or more ownership interest held by a person in a confinement feeding operation as a joint tenant, tenant in common, shareholder, partner, member, beneficiary or other equity interest holder. Ownership interest is an interest when it is held either directly or indirectly through a spouse or dependent child, or both.

**INSTRUCTIONS:**

Please list all persons (including corporations, partnerships, etc.) who have an interest in any part of the confinement feeding operation covered by this permit application.

| Full Name | Address | City/State | Zip |
|---|---|---|---|
| Grandview Farms, Inc. | 12090 West 240th Street | Eldridge/IA | 52748 |
| Tom Dittmer | 12090 West 240th Street | Eldridge/IA | 52748 |

For each name above, please list below all other confinement feeding operations in Iowa in which that person has an interest. Check box "**None**", below, if there are no other confinement feeding operations in Iowa in which the above listed person(s) has or have an interest.

| Operation Name | Location (1/4 1/4, 1/4, Section, Tier, Range, Township, County) | City |
|---|---|---|
| ☐ **None** [There are no other confinements in Iowa in which the above listed person(s) has or have an interest]. | | |
| SEE ATTACHED LIST | | |

I hereby certify that the information provided on this form is complete and accurate.

Signature of Applicant(s): Grandview Farms Inc — Date: 11-27-16

Tom Dittmer

**ITEM 8**

## Manure Storage Indemnity Fee Form for Construction Permits

| CASHIER'S USE ONLY |
|---|
| 0474-542-474A-0431 |
| Facility ID # |
| County |

Credit fees to: Grandview Farms, Inc.

Name of operation: Grandview Farms -Sow Site

**INSTRUCTIONS:**

1) Use the 'Total Proposed AUC' from column b), Table 1 (page 4), to select the appropriate fee line in the table below. The 'Total Proposed AUC' is the AUC of the operation.
2) Select the animal specie and row number (see examples). Enter the 'New AU' from column c), Table 1 (page 4). The 'New AU' is the number of AU to be added to an existing operation or being proposed with a new operation. **Note**: If the "Existing AUC" (column a) is 500 AU or less, enter the "Total proposed AUC" (column b) in "New AU" (column c).
3) Multiply the 'New AU' by the appropriate 'Fee per AU'. The resulting number is the indemnity fee due.

- **Example 1**: An existing swine operation is expanding from an 'Existing AUC' of 1,000 AU to a 'Total Proposed AUC' of 1,800 AU, and has previously paid an indemnity fee for the existing 1,000 AU. Calculate the indemnity fee as follows: The 'Total Proposed AUC' is between 1,000 AU and 3,000 AU; the animal specie is other than poultry; enter 800 AU in the 'New AU' column, row 4, and multiply it by $ 0.15:
  (800 AU) x ($ 0.15 per AU) = $ 120.00
- **Example 2**: An existing poultry operation is expanding from an 'Existing AUC' of 250 AU to a 'Total Proposed AUC' of 2,000 AU and has not paid the indemnity fee for animals housed in the existing buildings. Calculate the indemnity fee as follows: The 'Total Proposed AUC' is between 1,000 AU and 3,000 AU; the animal specie is poultry and the indemnity fee has not previously been paid, enter 2,000 AU in the 'New AU' column on row 3, and multiply it by $0.06:
  (2,000 AU) x ($ 0.06 per AU) = $ 120.00
- **Example 3**: If you are proposing a new swine confinement feeding operation with a 'Total Proposed AUC' of 3,500 AU, enter 3,500 AU in the 'New AU' column, row 6 and multiply it by $ 0.20:
  (3,500 AU) x ($ 0.20 per AU) = $ 700.00
- **Example 4**: If you are applying for a construction permit but you are not increasing the AUC of the operation, and has previously paid the applicable indemnity for the animals housed in the existing buildings, there is no indemnity fee due ($ 0.00). If no indemnity fee is due, do not submit this page.

**Indemnity Fee Table:**

| Total Proposed AUC - (After permit) from column b), Table 1 | Row | Animal species | New AU - from column c), Table 1 | x | Fee per AU | Indemnity Fee |
|---|---|---|---|---|---|---|
| Less than 1,000 AU | 1 | Poultry | | x | $ 0.04 = | |
| | 2 | Other | | x | $ 0.10 = | |
| 1,000 AU or more to less than 3,000 AU | 3 | Poultry | | x | $ 0.06 = | |
| | 4 | Other | | x | $ 0.15 = | |
| 3,000 AU or more | 5 | Poultry | | x | $ 0.08 = | |
| | 6 | Other | 2234 | x | $ 0.20 = | 446.80 |

**ITEM 8 (Cont.)**

## Filing Fees Form for Construction Permits

**CASHIER'S USE ONLY**
0473-542-473A-0431
0474-542-474A-0431
Facility ID #
County

Credit fees to: Grandview Farms, Inc.

Name of operation: Grandview Farms -Sow Site

**INSTRUCTIONS:**

1. If the operation is applying for a construction permit enclose a payment for the following:
   ☒ Construction application fee $250.00.
   (Note: This fee is non-refundable)
2. A manure management plan must be submitted with a filing fee.
   ☒ Manure management plan filing fee $250.00
   (Note: This fee is non-refundable)
3. If this is a change in ownership then indemnity fees must also be paid on the current (existing) total AUC at the appropriate rate on page 7.

   ☒ Indemnity fee due to ownership change $ 446.80
4. Total filing fees: Add the fees paid in items 1, 2 and 3 (above): $ 946.00

**SUMMARY:**

| | |
|---|---|
| - Manure Storage Indemnity Fee (see previous page) to be deposited in the Manure Storage Indemnity Fee Fund (474) | $ 446.80 |
| - Total filing fees (see item 4 on this page) to be deposited in the Animal Agriculture Compliance Fund (473) | $ 500.00 |
| **TOTAL DUE:** | $ 946.80 |

Make check payable to: Iowa Department of Natural Resources or Iowa DNR; and send it along with the construction application documents (See Submittal Checklist No. 1 or 2, pages 10-15.) Note: Do not send this fee to the county.

ITEM 9

# COUNTY VERIFICATION RECEIPT OF DNR CONSTRUCTION PERMIT APPLICATION

This form provides proof that the County Board of Supervisors has been provided with a complete copy of the construction permit application documents (everything except the fees) for the confinement feeding operation or a complete MMP has been provided to the County because manure will be applied in that county:

Applicant: Grandview Farms, Inc. Telephone: 563.285-4006

Name of operation: Grandview Farms - Sow site

| Location: | SW | SW | 7 | 79N | 3E | Scott |
|---|---|---|---|---|---|---|
| | (1/4 1/4) | (1/4) | (Section) | (Tier & Range) | (Name of Township) | (County) |

Documents being submitted to the county:

- ☒ Construction permit application form: submit items 1 to 9 (see Submittal Checklist No. 1 or 2)
- ☒ Attachment 1 - Aerial photos: Must clearly show the location of the proposed confinement feeding operation structure[1] and that all the separation distances are met, including those claimed for points in the master matrix (if applicable).
- ☒ Attachment 2 - Statement of design certification, submit any of the following (see Checklist No. 1 or 2):
  - ☐ Construction Design Statement form
  - ☒ Professional Engineer (PE) Design Certification form
  - ☒ Engineering report, construction plans and technical specifications
  - ☐ In addition, if proposing an unformed manure storage structure[3] or an egg washwater storage structure submit documentation required in Addemdum "A" of this construction application form.
- ☒ Attachment 3 - Manure management plan.
- ☒ Attachment 4 - Master Matrix (if required). You must include supporting documents (see Checklist No. 1 or 2)

## THIS SECTION IS RESERVED FOR THE COUNTY

As soon as DNR receives a construction permit application, the DNR will fax your County Auditor a "Courtesy reminder letter" explaining what actions your County Board of Supervisors must complete and the deadlines.

Public Notice is required for **all** construction permit applications, including those applications not required to be evaluated with the master matrix and applications in counties not participating in the Master matrix.

Counties participating in the master matrix: the county's master matrix evaluation and county's recommendation is required for the following cases:

- A new confinement feeding operation that is applying for a construction permit
- An existing confinement feeding operation that was first constructed on or after April 1, 2002 that is applying for a construction permit.
- An existing confinement feeding operation that was first constructed prior to April 1, 2002 that is applying for a construction permit with an animal unit capacity (AUC) is 1,667 animal units (AU) or more.

I have read and acknowledge the county's duty with this construction permit application, as specified in 567 IAC 65.10 and Iowa Code 459.304. On behalf of the Board of Supervisors for:

COUNTY: Scott

NAME: Allan Sabat

TITLE: Planning & Development Specialist

(Member of the County Board of Supervisors or its designated official/employee)

Date: November 28, 20 16.

If you do not receive the courtesy reminder letter within a reasonable time, or if you have any questions, please contact the animal feeding operations (AFO) Program at (712) 262-4177 or visit www.IowaDNR.gov

**GRANDVIEW FARMS, INC. 2017 SOW FARM EXPANSION PLANS**

Five buildings will be constructed to include one farrowing barn 146' x 291' with a 2' deep concrete scraper pit above an 8' manure storage pit, two gestation barns each 101' x 276' with an 8' deep concrete manure storage pit, a gilt breeding/gestation barn 101' x 276' with an 8' deep concrete manure storage pit, and a gilt development barn 61' x 242' with an 8' deep concrete manure storage pit. The farrowing barn manure will be piped to the gestation barns for longer term storage.

Grandview Farms Inc. or Tom Dittmer site interest list

| Farm ID# | Farm Name | Legal Despcription | CITY |
|---|---|---|---|
| 59556 | Home Sow | SW SW Sec. 7 T79N R3E Sheridan, Scott Co. | Eldridge |
| 59557 | Walcott WF | NW SW Sec. 10 T78N R2E Blue Grass, Scott Co. | Walcott |
| 65036 | Engler Site | SE NW Sec. 4 T79N R3E Sheridan, Scott Co. | Long Grove |
| 65037 | DeWulf Site | SE SW Sec. 17 T80N R3E Winfield, Scott Co. | Eldridge |
| 65381 | TJ WF(Cline) | NW NW Sec. 13 T79N R2E Hickory Grove, Scott Co. | Eldridge |
| 66831 | TJ West | NW NE Sec. 24 T79N R1W Farmington, Cedar Co. | Durant |
| 66929 | J2T2 LLC | NE NE SEC. 17 T79N R1W Cleona, Scott Co. | Stockton |
| 67903 | Pioneer WF | NE NE Sec. 25 T79N R1W Farminton, Cedar Co. | Durant |
| 68688 | JT Center Pork 2+ | SW SE SEC. 22 T80N R2W Center, Cedar Co. | Tipton |
| 68689 | JT Center Pork 1 | SE SE SEC. 33 T80N 2W Center, Cedar co. | Tipton |
| 56977 | JT Center Pork 3 | NW NW Sec. 26 T80N R2W Center, Cedar Co. | Tipton |
| 68979 | JT Farmington Pork | NE NW Sec. 7 T79N R1W Farmington, Cedar Co. | Tipton |

Doc ID: 015286840002 Type: LAN
Recorded: 03/31/2005 at 03:34:19 PM
Fee Amt: $12.00 Page 1 of 2
Scott County Iowa
Rita A. Vargas Recorder
File 2005-00009739

Prepared by and return to: Mike Blaser, 666 Grand Avenue, Suite 2000, Des Moines, IA 50309 (515) 242-2480

## SEPARATION DISTANCE WAIVER AND AGREEMENT

THIS SEPARATION DISTANCE WAIVER AND AGREEMENT ("Agreement") is made as of the 11 day of March, 2005, between the undersigned Albert Keppy, a single person and resident of the State of Iowa ("Owner") and Grandview Farms, Inc., an Iowa corporation ("Producer"), and provides as follows:

1. Owner owns a residence and/or hold title to land which is benefited by applicable separation distance(s) from animal feeding operation structure(s) (collectively, the "AFOS") owned and/or operated by Producer. The approximate legal description of the land owned by Owner and on which the residence of Owner is located is as follows:

4-10 Acres in the NW ¼ Section 18, T79N R3E, Scott County, Iowa, and a Farm Place also located in Section 18, T79N R3E, Scott County, Iowa

and locally known as: 12017 240th St., Eldridge, IA 52748 and 12139 240th Street, Eldridge, IA 52748

2. The approximate legal description of the property on which Producer owns and operates the AFOS is as follows:

SW ¼ SW ¼ of Section 7, T79N R3E, Scott County, Iowa and E ½ SE ¼ of Section 12, T78N R2E, Scott County, Iowa.

3. Owners hereby waive all applicable separate distances required to be maintained between the AFOS and the residence of Owners and/or the land to which Owners hold title. This Agreement: (1) shall run with the land described above to which Owners hold title; (2) is binding on the heirs, assigns, successors and transferees of Owners; and (3) is intended by Owners and Producer to be a valid and complete waiver of all separate distance requirements for AFOS provided in the Iowa Code, including, without limitation, the requirements of Iowa Code Sections 459.202, 459.203 and 459.204.

GRANDVIEW FARMS, INC.

By: Tom Dittmer
Tom Dittmer, President

OWNER

Albert Keppy
Albert Keppy

STATE OF IOWA )
) SS:
COUNTY OF Scott )

On this 11 day of March, 2005, before me, the undersigned, a Notary Public in and for said State, personally appeared Tom Dittmer, who is President of Grandview Farms, Inc., in his capacity as President and acknowledged that he executed the same as the voluntary act and deed of the corporation, the same as his voluntary act and deed.

JENNIFER STILLMAN
Commission Number 715999
My Commission Expires
4/10/05

Jennifer Stillman
_____, Notary Public in and for said County and State

STATE OF IOWA )
) SS:
COUNTY OF Scott )

On this 11 day of March, 2005, before me, the undersigned, a Notary Public in and for said State, personally appeared Albert Keppy, to me known to be the identical person named in and who executed the foregoing instrument and acknowledged that he executed the same as his voluntary act and deed.

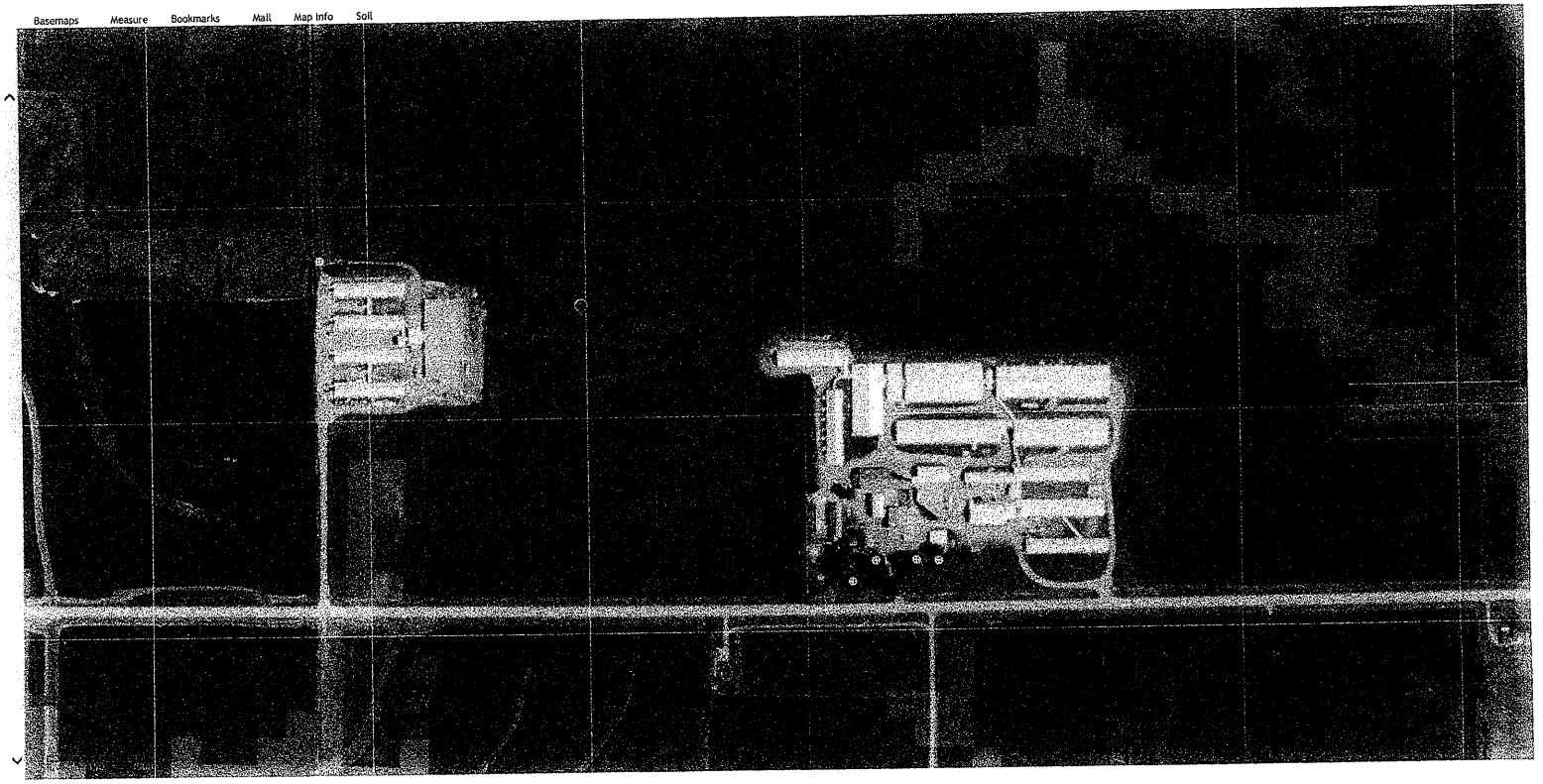
Jennifer Stillman
_____, Notary Public in and for said County and State

JENNIFER STILLMAN
Commission Number 715999
My Commission Expires
4/10/05

Iowa DNR - AFO Siting

GRANDVIEW FARMS, INC.

AFO Siting




Karst + Alluvial soils Map

DNR IOWA
DEPARTMENT OF NATURAL RESOURCES

Basemaps Measure Bookmarks Mail Map Info Soil

Legend Map layers Soil

**AFO Siting Data**

**Sinkholes**

**Agriculture Drainage Well**

**Wells**

**Agriculture Drainage Districts**

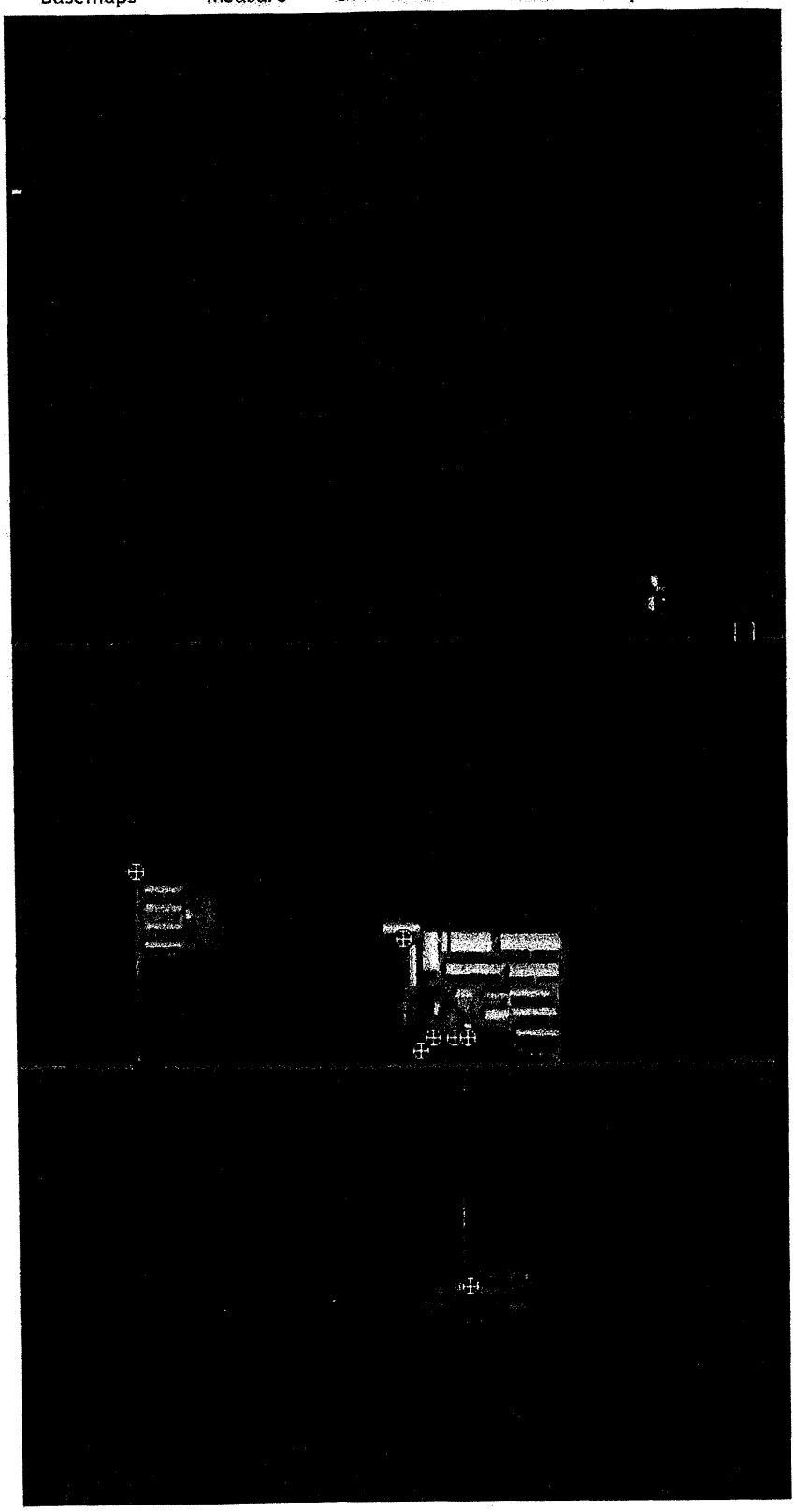
**AFO Model/Support Data**

**Alluvial Soils**

- Alluvial Aquifer
- Alluvial Soils

**Sinkhole or Potential Karst**

- Sinkhole w/ 1000 ft radius
- Karst and Potential Karst



ENGINEERING REPORT

GRANDVIEW FARMS – WEST SOW ADDITION

*REVISED ON 2/5/2015
*REVISED ON 8/29/16
*REVISED ON 10/25/16

The present site was built in 1950 and has been changed numerous times since 1979. The original site was a 2000 head farrow to finish facility with pasture lots. The changes began in 1979 and are as follows:

| | | | | | |
|---|---|---|---|---|---|
| Building 6 | 1979 | Finishing Barn | 600 head | 30' x 170' building | 160'x12'x8' deep pit |
| Building 4 | 1982 | Nursery-grower | 600 head | 28' x 108' building | 72'x28'x8' deep pit |
| Building 13 | 1982* | Hen House | 13 farrowing | | 6' x 22' x 8'building |
| Building 14 | 1982* | Old Barn | 60 gestation | | 12'x24'x 8'building |
| Building 1 | 1983 | Gestation Barn | 200 head | 41' x 96' building | 36'x12'x8' deep pit |
| Building 2 | 1984 | Gestation Barn | 120 head | 41' x 56' building | 24'x12'x8' deep pit |
| Building 3 | 1991 | Gestation Barn | 365 head | 41' x 190' building | 70' dia x 8' deep tank |
| Building 5 | 1993 | Farrowing-Nursery 64 farrowing | 640 nursery | 50' x 150' building | 50'x150'x8' deep pit |
| Building 6 | 1993* | Finishing | 1140 head | 41' x 240' building | 41'x240'x8' deep pit |
| Building 4 | 1996 | Nursery | 600 head | Converted 1982 building to all nursery | |
| Building 6 | 1998 | Gilt breeding | 600 head | Converted 1979 building to gilt breeding | |
| Building 5 | 1998* | Farrowing | 51 head | Converted 1993 building to farrowing | |
| Building 5 | 1998 | Farrowing | 32 farrowing | Added on to 1993 building | |
| Building 14 | 1999 | Farrowing | 32 farrowing | Converted 1982 building to farrowing | |
| Building 6 | 2000 | Gestation | 496 head | Converted 1993 building to gestation | |
| Building 3 | 2001 | Gestation | 176 head | Added on to 1991 building | |
| Building 5 | 2001 | Farrowing | 32 farrowing | Added on to 1993 building | |
| Building 7 | 2005 | Gestation | 1250 gestating | 81' x 320' building | 81' x 320' x 10' deep pit |
| Building 8 | 2005 | Farrowing | 500 farrowing | 70' x 252.8' building | 70' x 252.8' x 2' pit |

In the 2005 addition, the improvement included a gestation barn with dimensions of 81' x 320' (Building 7) and a farrowing barn with dimensions of 70' x 252.8' (Building 8). The gestation barn has 10' deep pits and the farrowing barn has 2' pits. The total animals on the farm was 2,750 gestating sows and 530 farrowing, 400 gilts, and 25 boars. The total animal weight in all the barns was 1,942,000 lbs. The manure produced by the 2750 gestating and 530 farrowing sows, 400 gilts and 25 boars was anticipated to be 490,560 c.f. and 2600 c.f. of rainwater on the existing open tank for a total of 493,160 c.f. The capacity of all the barns was 380,405 c.f., so there was about 9 months of storage. The manure from the deep pits and tank was injected.

The 2006 addition included a 121'- 4" x 51'-10" x 8' deep gilt development unit. The proposed increase in animals was 240 nursery and 720 finishers. This brought the total on the farm to 2,750 gestation, 530 farrowing, 400 gilts, 25 boars, 240 nursery and 720 finishing animals.

The manure produced in the GDU was to be 45,114 cf/yr with a capacity of 51,107 cf. The manure was injected.

The 2010 addition included a 121'- 4" x 51'-10" x 8' deep gilt development unit, a 70' x 72' x 2' (Building 8) farrowing addition, a 422' x 101' x 10' (Building 10) deep gestation barn, and a 124' x 263' x 2' deep

farrowing barn. This will bring the total on the farm to 4800 gestation, 1077 farrowing, 1,800 gilts, 10 boars, and 4800 finishing animals.

The 2012 addition included a 14' x 51' x 2' (Building 9) deep nursery, 44' x 70' x 2' (Building 8) deep farrowing addition, 44' x 128' x 2' deep farrowing addition and 101' x 240' x 8' (Building 15) deep gestation barn. This will bring the total on the farm to 4766 gestation, 1178 farrowing, 10 boars, 2360 gilts, 4800 finishers, 320 nursery.

A nearby 4800 head wean to finish farm (Building 12) is adjacent.

The 2015 expansion will include

- Building a new 1200 head Gilt Grower Barn (GDU Finisher)(Building 17), 51'x241'8' deep Manure Storage Pit with 3 pumpouts on each side. It will be built west and north of the present GDU, which is listed as #9 or straight west of the NW corner of the Gilt in 2012.
- Tear down the west 31'x169' of Barn #6 that was built in 1979. Build a new 41'x181'x8' deep pit 400 head Sow Gestation Barn. (*In 2016 built a new 48'x178'x8' deep pit 120 head Sow Farrowing Barn with 2 pumpouts on each side (Building 6)). Add onto east end of #6, 41'x121'x8' deep pit 250 head Sow Gestation Barn.
- Tear down #4, 28'x108' 1982 42 head farrowing barn. Build a new 61'x120'x8' deep pit 300 head Sow Gestation Barn (Building 4).
- Add 48' onto the east end of #5, 32 farrowing spaces. It will have a 2' deep scraper pit that will flow manure into the existing round 70' diameter manure tank (Building 5).
- Plan to cap and eliminate existing well #1 located off the SW corner of barn #5. It was drilled in 1993 and grandfathered in, but with the new 61'x101'x8' deep pit Sow Gestation Barn planned to be build, the well will be an issue. We will drill a new well about 40' east of the existing well (#2) and well house that is located just east of the house.

West New Sow Farm – converting the existing 4800 head Wean Finish Site.

- Convert the 4-W-F Barns to 504 head Sow Gestation per barn (Buildings 12).
- Build a new 480 head Farrowing Barn. 124'x275'x8' deep. Located 75' east of the 4 existing barns.

The 2016 expansion will include

- Building a new 576 head Farrowing Barn (Building #18), 146'x291' barn with a 146'x275'x8' deep pit.
- Building two new 2400 head total Gestation Barns (Building #19 and #20), 101'x276' barn with a 101'x260'x8' deep pit.
- Building a new 1400 head with 8 boars Gilt Breeding Gestation Barn (GB2)(Building #21), 101'x276' barn with a 101'x260'x8' deep pit.
- Building a new 1200 head GDU (Barn #22), 61'x 242' barn with a 61'x226'x8' deep pit.

The total manure produced will be 2,117,176 c.f. and West Sow Farm is 1,031,018 c.f. The manure will be injected.

The Facility is not in the 100 year flood zone. The soil indicates the seasonal high water table to be about 3-4' which will require a tile.

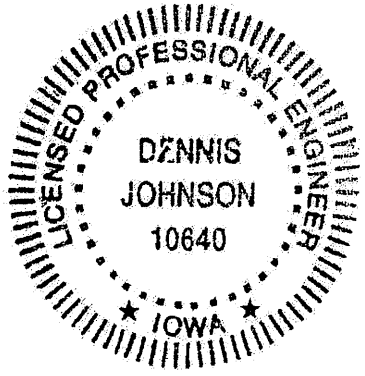
It is our opinion that the proposed concrete tanks would meet the requirements of Iowa Code 459, Subpart 111 and 567 Iowa Administrative Code 65.

WENCK ASSOCIATES, INC.

10/26/16

(SEAL)

Dennis J. Johnson, P.E.



SECTION 03310 - CONCRETE WORK

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and General Provisions of Contract, including General & Supplementary Conditions and Division 1 Specification sections and Iowa Department of Transportation apply to work of this section.

1.02 SUMMARY

A. Extent of concrete work is shown on drawings.
B. Concrete paving and walks are shown on drawings.

1.03 SUBMITTALS

A. Product Data: Submit data for proprietary materials and items, including reinforcement and forming accessories, admixtures, patching compounds, water-stops, joint systems, curing compounds, dry-shake finish materials, and others as requested by architect/engineer.

B. Laboratory Test Reports: Submit laboratory test reports for concrete materials and mix design test.

C. Materials Certificates: Provide materials certificates in lieu of materials laboratory test reports when permitted by architect/engineer. Materials certificates shall be signed by manufacturer and contractor, certifying that each material item complies with, or exceeds, specified requirements. Provide certification from admixture manufacturers that chloride content complies with specification requirements.

1.04 PROJECT CONDITIONS

A. Protection of Footings Against Freezing: Cover completed work at footing level with sufficient temporary or permanent cover as required to protect footings and adjacent subgrade against possibility of freezing; maintain cover for time period as necessary.

Protect adjacent finish materials against spatter during concrete placement.

PART 2 - PRODUCTS

SECTION 03310 – CONCRETE WORK

2.01 FORM MATERIALS

A. Forms for Exposed Finish Concrete: Plywood, metal, metal-framed plywood faced, or other acceptable panel-type materials, to provide continuous, straight, smooth, exposed surfaces. Furnish in largest practicable sizes to minimize number of joints and to conform to joint system shown on drawings.

B. Forms for Textured Finish Concrete: Units of face design, size, arrangement, and configuration to match architect/engineer's control sample. Provide solid backing and form supports to ensure stability of textured form liners.

C. Form Coatings: Provide commercial formulation form coating compounds that will not bond with, stain, nor adversely affect concrete surfaces, and will not impair subsequent treatments of concrete surfaces.

D. Form Ties: Factory-fabricated, adjustable-length, removable or snapoff metal form ties, designed to prevent form deflection and to prevent spalling concrete upon removal. Provide units which will leave no metal closer than 1-1/2 inches to surface.

2.02 REINFORCING MATERIALS

A. Reinforcing Bars: ASTM A-615, Grade 60, deformed.

2.03 CONCRETE MATERIALS

A. Portland Cement: ASTM C-150, Type I.

Use one brand of cement throughout project, unless otherwise acceptable to engineer.

B. Fly Ash: ASTM C-618, Type C or Type F.

C. Normal Weight Aggregates: ASTM C-33 or Iowa Department of Transportation 4110 and 4115 and as herein specified. Provide aggregates from a single source for exposed concrete. The maximum aggregate size shall be 1 1/2 inches.

For exterior exposed surfaces, do not use fine or coarse aggregates containing spalling-causing deleterious substances.

D. Water: Drinkable.

E. Air-Entraining Admixture: ASTM C-260, certified by manufacturer to be compatible with other required admixtures.

F. Water Reducing Admixture: ASTM C-494, Type A, and containing not more than 0.1 percent chloride ions.

## 2.04 RELATED MATERIALS

A. Granular Base: Evenly graded mixture of fine and coarse aggregates to provide, when compacted, a smooth and even surface below slabs on grade meeting requirements of Iowa Department of Transportation.

B. Non-Shrink Grout: CRD-C 621, factory pre-mixed grout.

C. Liquid Membrane-Forming Curing Compound: Liquid type membrane forming curing compound complying with ASTM C-309, Type I, Class A. Moisture loss not more than 0.055 gr/sq cm. when applied at 200 sq. ft./gal.

D. Epoxy Adhesive: ASTM C-881, two component material suitable for use on dry or damp surfaces. Provide material "Type", "Grade", and "Class" to suit project requirements. Epoxy shall be Sikadur Hi-Mod, Sika Chemical Company or equal.

E. Waterstop shall be of one of the following:

1) PVC waterstops shall be 3/16" x 4".
2) Waterstop Plus TM or equal.

F. Joint sealant shall be one of the following or equal.

1) Sikadur CJR.
2) Sikadur 51 NS/SL
3) Unitex Pro-Flex Flexible Epoxy Control Joint Sealer
4) Sonneborn Epolith-P
5) Sonneborn Epolith-G

Expansion joints shall be 1/2" inch Sonoflex-F (polyethelene foam expansion joint filler or equal).

## 2.05 PROPORTIONING AND DESIGN OF MIXES

A. Prepare design mixes for each type and strength of concrete by either laboratory Trial batch or field experience methods as specified in ACI-301. If trial batch Method used, use an independent testing facility acceptable to architect/engineer for preparing and reporting proposed mix designs. The testing facility shall not be the same as used for field quality control

Submit written reports to architect/engineer of each proposed mix for each class of concrete at least 15 days prior to start of work. Do not begin concrete production until mixes have been reviewed by architect/engineer.

Design mixes to provide normal weight concrete with the following properties, as indicated on drawings and schedules:

1) 4000 psi 28-day compressive strength; W/C ratio as below, air content as below, or Iowa Dept. of Transportation.

B. Adjustment to Concrete Mixes: Mix design adjustments may be requested by contractor when characteristics of materials, job conditions, weather, test results, or other circumstances warrant; at no additional cost to Owner and as accepted by architect/engineer. Laboratory test data for revised mix design and strength results must be submitted to and accepted by architect/engineer before using in work.

C. Admixtures: Use water-reducing admixture or high range water reducing admixture (super plasticizer) in concrete as required for placement and workability.

Use air-entraining admixture in exterior exposed concrete, unless otherwise indicated. Add air-entraining admixture at manufacturer's prescribed rate to result in concrete at point of placement having total air content with a tolerance of plus-or-minus 1-1/2 percent within the following limits:

Concrete structures and slabs exposed to freezing and thawing, deicer chemicals, or subjected to hydraulic pressure:

1) 5.0 percent (moderate exposure); 6.0 percent (severe exposure) 3/4 inch max. aggregate.

D. Water-Cement Ratio: Provide concrete for following conditions with maximum

water-cement (W/C) ratios as follows:

1) Subjected to deicers/watertight; W/C 0.45

E. Slump Limits: Proportion and design mixes to result in concrete slump at point of placement as follows:

1) Ramps, slabs, and sloping surfaces: Not more than 3 inches.

2) Other concrete: Not less than 1 inch nor more than 5 inches.

## 2.06 CONCRETE MIXING

A. Ready-Mix Concrete: Comply with requirements of ASTM C-94, and as herein specified.

During hot weather, or under conditions contributing to rapid setting of concrete, a shorter mixing time than specified in ASTM C-94 may be required.

# PART 3 - EXECUTION

## 3.01 GENERAL

A. Coordinate the installation of joint materials and vapor retarders with placement of forms and reinforcing steel.

## 3.02 FORMS

A. Design, erect, support, brace, and maintain formwork to support vertical and lateral, static, and dynamic loads that might be applied until such loads can be supported by concrete structure. Construct formwork so concrete members and structures are of correct size, shape, alignment, elevation, and position. Maintain formwork construction tolerances complying with ACI 347.

Design formwork to be readily removable without impact, shock, or damage to cast-in-place concrete surfaces and adjacent materials.

Construct forms to sizes, shapes, lines, and dimensions shown, and to obtain accurate alignment, location, grades, level and plumb work in finished structures. Provide for

openings, offsets, sinkages, keyways, recesses, moldings, rustications, reglets, chamfers, blocking, screeds, bulkheads, anchorages and inserts, and other features required in work. Use selected materials to obtain required finishes. Solidly butt joints and provide back-up at joints to prevent leakage of cement paste.

Fabricate forms for easy removal without hammering or prying against concrete surfaces. Provide crush plates or wrecking plates where stripping may damage cast concrete surfaces. Provide top forms for inclined surfaces where slope is too steep to place concrete with bottom forms only. Kerf wood inserts for forming keyways, reglets, recesses, and the like to prevent swelling and for easy removal.

Cleaning and Tightening: Thoroughly clean forms and adjacent surfaces to receive concrete. Remove chips, wood, sawdust, dirt, or other debris just before concrete is placed. Retightening forms and bracing after concrete placement is required to eliminate mortar leaks and maintain proper alignment.

## 3.03 PLACING REINFORCEMENT

A. Comply with Concrete Reinforcing Steel Institutes recommended practice for "Placing Reinforcing Bars", for details and methods of reinforcement placement and supports, and as herein specified.

1) Avoiding cutting or puncturing vapor retarder during reinforcement placement and concreting operations.

2) Clean reinforcement of loose rust and mill scale, earth, ice, and other materials which reduce or destroy bond with concrete.

3) Accurately position, support, and secure reinforcement against displacement by formwork, construction, or concrete placement operations. Locate and support reinforcing by metal chairs, runners, bolsters, spacers, and hangers, as required.

4) Place reinforcement to obtain at least minimum coverages for concrete protection. Arrange, space, and securely tie bars and bar supports to hold reinforcement in position during concrete placement operations. Set wire ties so ends are directed into concrete, not toward exposed concrete surfaces.

## 3.04 JOINTS

A. Construction Joints: Locate and install construction joints as indicated or, if not indicated, locate so as not to impair strength and appearance of the structure, as acceptable to architect/engineer.

Place construction joints perpendicular to main reinforcement. Continue reinforcement across construction joints, except as otherwise indicated.

B. Isolation Joints in Slab-On Ground: Construct isolation joints in slab-on-ground at points of contact between slabs-on-ground and vertical surfaces, such as column pedestals, foundation walls, grade beams, and elsewhere as indicated.

1) Joint filler and sealant materials shall be used according to manufacturer's instructions.

C. Contraction (Control) Joints in Slabs-On-Ground: Construct contraction joints in slabs-on-ground to form panels of patterns as shown. Use saw cuts 1/8" x 1/4 slab depth or inserts 1/4" wide x 1/4 of slab depth, unless otherwise indicated.

Form contraction joints by inserting premolded plastic, hardboard or fiberboard strip into fresh concrete until top surface of strip is flush with slab surface. Tool slab edges round on each side of insert. After concrete has cured, remove inserts and clean groove of loose debris.

Contraction joints in unexposed floor slabs may be formed by saw cuts as soon as possible after slab finishing as may be safely done without dislodging aggregate.

If joint pattern not shown, provide joints not exceeding 20 feet in either direction and located to conform to bay spacing wherever possible (at column centerlines, half bays, third-bays).

1) Joint sealant shall be installed according to manufacturer's instructions.

## 3.05 PREPARATION OF FORM SURFACES

1) Clean re-used forms of concrete matrix residue, repair and patch as required to return forms to acceptable surface condition.

2) Coat contact surfaces of forms with a form-coating compound before reinforcement is placed.

3) Thin form-coating compounds only with thinning agent of type, amount, and under conditions of form-coating compound manufacturer's directions. Do not allow excess form-coating material to accumulate in forms or to come into contact with inplace concrete surfaces against which fresh concrete will be placed. Apply in compliance with manufacturer's instructions.

4) Coat steel forms with a non-staining, rust-preventative form oil or otherwise protect against rusting. Rust-stained steel formwork is not acceptable.

## 3.06 CONCRETE PLACEMENT

A. Preplacement Inspection: Before placing concrete, inspect and complete formwork installation, reinforcing steel, and items to be embedded or cast-in. Notify other crafts to permit installation of their work; cooperate with other trades in setting such work. Moisten wood forms immediately before placing concrete where form coatings are not used.

Apply temporary protective covering to lower 2 feet of finished walls adjacent to poured floor slabs and similar conditions, and guard against spattering during placement.

B. General: Comply with ACI 304 "Recommended Practice for Measuring, Mixing, Transporting, and Placing Concrete", and as herein specified.

Deposit concrete continuously or in layers of such thickness that no concrete will be placed on concrete which has hardened sufficiently to cause the formation of seams or planes of weakness. If a section cannot be placed continuously, provide construction joints as herein specified. Deposit concrete as nearly as practicable to its final location to avoid segregation.

C. Placing Concrete in Forms: Deposit concrete in forms in horizontal layers not deeper than 24 inches and in a manner to avoid inclined construction joints. Where placement consists of several layers, place each layer while preceding layer is still plastic to avoid cold joints.

Consolidate placed concrete by mechanical vibrating equipment supplemented by hand-spading, rodding, or tamping. Use equipment and procedures for consolidation of concrete in accordance with ACI 309.

D. Placing Concrete Slabs: Deposit and consolidate concrete slabs in a continuous operation, within limits of construction joints, until the placing of a panel or section is completed.

Consolidate concrete during placing operations so that concrete is thoroughly worked around reinforcement and other embedded items and into corners.

Bring slab surfaces to correct level with straightedge and strikeoff. Use bull floats or darbies to smooth surface, free of humps or hollows. Do not disturb slab surfaces prior to beginning finishing operations.

Maintain reinforcing in proper position during concrete placement operations.

E. Hot Weather Placing: When hot weather conditions exist that would seriously impair quality and strength of concrete, place concrete in compliance with ACI 305 and as here-in specified.

1) Cool ingredients before mixing to maintain concrete temperature at time of placement below 90 degrees F (32 degrees C). Mixing water may be chilled, or chopped ice may be used to control temperature provided water equivalent of ice is calculated to total amount of mixing water. Use of liquid nitrogen to cool concrete is contractor's option.

2) Cover reinforcing steel with water-soaked burlap if it becomes too hot, so that steel temperature will not exceed the ambient air temperature immediately before embedment in concrete.

3) Fog spray forms, reinforcing steel, and subgrade just before concrete is placed.

F. Cold Weather Placing: When cold weather conditions exist that would seriously impair quality and strength of concrete, place concrete in compliance with ACI 306 and as herein specified:

1) Warm water or aggregate before mixing to maintain concrete temperature at time of placement above 40 degrees F. The temperature of the water shall be below 165 degrees F.

2) Before placing concrete at low temperatures, all subgrade, forms, or reinforcement surfaces with which the concrete may come in contact, should be heated to remove any ice or snow and to prevent freezing of the concrete.

3) The concrete shall be kept above 32 degrees F for a minimum of 24 hours. Corners and edges are very critical.

## 3.07 FINISH OF FORMED SURFACES

A. Smooth Form Finish: For formed concrete surfaces exposed-to-view, or that are to be covered with a coating material applied directly to concrete, or a covering material applied directly to concrete, such as waterproofing, dampproofing, veneer plaster, painting, or other similar system. This is as-cast concrete surface obtained with selected form facing material, arranged orderly and symmetrically with a minimum of seams. Repair and patch defective areas with fins or other projections completely removed and smooth.

## 3.08 MONOLITHIC SLAB FINISHES

A. Non-Slip Broom Finish: Apply non-slip broom finish to exterior concrete platforms, steps and ramps, and elsewhere as indicated.

Immediately after float finishing, slightly roughen concrete surface by brooming with fiber bristle broom perpendicular to main traffic route. Coordinate required final finish with architect/engineer before application.

B. Non-Slip Aggregate Finish: Apply non-slip aggregate finish to concrete stair treads, platforms, ramps, sloped walks, and elsewhere as indicated.

After completion of float finishing, and before starting trowel finish, uniformly spread 25 lbs. of dampened non-slip aggregate per 100 sq. ft. of surface. Tamp aggregate flush with surface using a steel trowel, but do not force below surface. After broadcasting and tamping, apply trowel finishing as herein specified.

After curing, lightly work surface with a steel wire brush, or an abrasive stone, and water to expose non-slip aggregate.

## 3.09 CONCRETE CURING AND PROTECTION

A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures.

Start initial curing as soon as free water has disappeared from concrete surface after placing and finishing. Weather permitting, keep continuously moist for not less than 7- days.

Begin final curing procedures immediately following initial curing and before concrete has dried. Continue final curing for at least 7 days in accordance with ACI 301 procedures. Avoid rapid drying at end of final curing period.

B. Curing Methods: Perform curing of concrete by curing and sealing compound, by moist curing, by moisture-retaining cover curing, and by combinations thereof, as herein specified.

Provide curing and sealing compound to exposed interior slabs and to exterior slabs, walks, and curbs, as follows:

1) Apply specified curing and sealing compound to concrete slabs as soon as final finishing operations are complete (within 2 hours). Apply uniformly in continuous operation by power-spray or roller in accordance with manufacturer's directions. Recoat areas subjected to heavy rainfall within 3 hours after initial application. Maintain continuity of coating and repair damage during curing period.

## 3.10 REMOVAL OF FORMS

A. Formwork not supporting weight of concrete, such as sides of walls, walks and similar parts of the work, may be removed after cumulatively curing at not less than 50-deg. F (10 deg. C) for 24 hours after placing concrete, provided concrete is sufficiently hard to not be damaged by form removal operations, and provided curing and protection operations are maintained.

## 3.11 RE-USE OF FORMS

A. Clean and repair surfaces of forms to be re-used in work. Split, frayed, delaminated, or otherwise damaged form facing material will not be acceptable for exposed surfaces.

Apply new form coating compound as specified for new formwork.

When forms are extended for successive concrete placement, thoroughly clean surfaces, remove fins and laitance, and tighten forms to close joints. Align and secure joint to avoid offsets.

Do not use "patched" forms for exposed concrete surfaces, except as acceptable to architect/engineer.

## 3.12 MISCELLANEOUS CONCRETE ITEMS

A. Filling-In: Fill-in holes and openings left in concrete structures for passage of work by other trades, unless otherwise shown or directed, after work of other trades is in place. Mix, place, and cure concrete as herein specified, to blend with inplace construction. Provide other miscellaneous concrete filling shown or required to complete work.

B. Equipment Bases and Foundations: Grout base plates and foundations as indicated, concrete repair area, using specified non-shrink grout. Use non-metallic grout for exposed conditions, unless otherwise indicated.

## 3.13 CONCRETE SURFACE REPAIRS

A. Patching Defective Areas: Repair and patch defective areas with cement mortar immediately after removal of forms, when acceptable to architect/engineer.

Cut out honeycomb, rock pockets, voids over 1/4-inch in any dimension, and holes left by tie rods and bolts, down to solid concrete but, in no case to a depth of less than 1-inch. Make edges of cuts perpendicular to the concrete surface. Thoroughly clean, dampen with water, and brushcoat the area to be patched with specified bonding agent. Place patching mortar after bonding compound has dried.

For exposed-to-view surfaces, blend white portland cement and standard portland cement so that, when dry, patching mortar will match color surrounding. Provide test areas at inconspicuous location to verify mixture and color match before proceeding with patching. Compact mortar inplace and strike-off slightly higher than surrounding surface.

B. Repair of Formed Surfaces: Remove and replace concrete having defective surfaces if defects cannot be repaired to satisfaction of architect/engineer. Surface defects, as such,

include color and texture irregularities, cracks, spalls, air bubbles, honeycomb, rock pockets; fins and other projections on surface; and stains and other discolorations that cannot be removed by cleaning.. Flush out form tie holes, fill with dry pack mortar, or precast cement cone plugs secured in place with bonding agent.

C. Repair of Unformed Surfaces: Repair finished unformed surfaces that contain defects which affect durability of concrete. Surface defects, as such, include crazing, cracks in excess of 0.01 inches wide or which penetrate to reinforcement or completely through non-reinforced sections regardless of width, spalling, pop-outs, honeycomb, rock pockets, and other objectionable conditions.

Repair defective areas, except random cracks and single holes not exceeding 1- inch diameter, by cutting out and replacing with fresh concrete. Remove defective areas to sound concrete with clean, square cuts and expose reinforcing steel with at least 3/4-inch clearance all around.

Dampen concrete surfaces in contact with patching concrete and apply bonding compound. Mix patching concrete of same materials to provide concrete of same type or class as original concrete. Place, compact, and finish to blend with adjacent finished concrete. Cure in same manner as adjacent concrete.

Repair isolated random cracks and single holes not over 1- inch in diameter by dry-pack method. Groove top of cracks and cut-out holes to sound concrete and clean of dust, dirt, and loose particles.

Dampen cleaned concrete surfaces and apply bonding compound. Mix dry-pack, consisting of 1-part portland cement to 2-1/2 parts fine aggregate passing a No. 16 mesh sieve, using only enough water as required for handling and placing. Place dry-pack after bonding compound has dried. Compact dry-pack mixture in place and finish to match adjacent concrete. Keep patched area continuously moist for not less than 72 hours.

# AG WASTE MANAGEMENT SYSTEM

# OPERATION AND MAINTENANCE PLAN

# GRANDVIEW FARMS – WEST SOW ADDITION

You, as owner are responsible for maintaining this conservation practice to assure that it continues to serve the purpose for which it was intended. The practice must be inspected periodically to enable proper operation and maintenance. To assist you in making these inspections, the following guidelines have been prepared for your use.

## A) CONFINED SPACES:

Your Waste Management System may include structures that are considered "confined spaces" by Department of Labor and Industry Rules. Entry into a confined space is hazardous and must only be done by a trained person using proper safety procedures.

It is generally known that tanks, pits, sumps, etc., that contain manure are likely to contain dangerous gases and should not be entered without proper safety precautions. Other structures such as sumps that have no water or only clean water are also subject to developing dangerous air conditions.

For your information, this Operation and Maintenance Plan includes a copy of the current rules on confined spaces. These rules are being provided to you for your information and safety.

NEVER ENTER CONFINED SPACES SUCH AS RECEPTION AND STORAGE PITS AND TANKS, PUMPING SUMPS, ETC. WITHOUT FIRST TESTING FOR POISONOUS GASES, ESTABLISHING AND MAINTAINING POSITIVE VENTILATION TO THE SPACE AT ALL TIMES, AND USING SPOTTERS AND PERSONAL SAFETY LINES FOR EACH PERSON ENTERING THE CONFINED AREA.

Your plan also includes the requirement that warning signs be prominently placed at all entrances to confined spaces. The warning signs should read:

DANGER
TOXIC GAS OR SUFFOCATION
HAZARD
KEEP OUT

The letters shall be a minimum of 1 1/2" in height and 1/4" in width. The warning signs must be kept in good condition.

OPERATION AND MAINTENANCE PLAN

B) OUTDOOR COMPONENTS OF THE SYSTEM:

1. Inspect embankments, water course channels and ridges regularly, especially following heavy rains and spring runoff. Repair damage as soon as conditions allow with compacted earth fill, reshaping, staked sod, reseeding and/or mulch as needed.

2. Control brush, weed and tree growth. Use herbicides that do not harm the grass sod, or mow and clip where possible.

C) WASTE STORAGE STRUCTURES:

1. Empty storage structures according to the waste utilization plan schedule.

   a) Concrete storage pits - once per year or as needed.

2. Agitate pits only at pumpout locations. Provide temporary fencing during this operation so the drowning danger is reduced. Always perform pumpout operation with teams of 2-people minimum. Use safety ropes when near pumpouts. Also, utilize an air monitor during agitation and pumpout.

3. After complete removal of solid waste in barns, wash off joints and check sealants. If loose, change existing sealant and follow manufacturer's recommendations for cleaning & installation. Use a gas monitor and safety ropes if entering a confined space.

D) VENTILATION AND EXHAUST:

The exhaust ventilation system has both mechanical and curtain type ventilators. All fans should be visually inspected on a daily basis and lubricated as outlined by the manufacturer.

There should be a pit air quality monitor installed. This should be checked on a routine basis according to manufacturer's recommendations.

E) OTHER PRACTICES AND APPURTENANCES:

a. Maintain any fences in good condition; repairing broken wires, gates and posts to insure that the safety intent of the fencing is not compromised.

OPERATION AND MAINTENANCE PLAN

E) OTHER PRACTICES AND APPURTENANCES (CONTINUED):

b. Maintain all mechanical diversions (concrete and/or treated plank) as originally installed.

c. Maintain commercially manufactured mechanical manure delivery systems (ram pumps, liquid pumps, gutter scrapers, etc) in good operating condition according to manufacturer's specifications and recommendations.

F) CALL YOUR ENGINEER FOR GUIDANCE IF YOU SEE:

1. Evidence of holding pond leakage such as:

   a. Seepage from the drain tile system. This should be checked on a daily basis. This outlet should also be checked for smell on a daily basis and records kept.

   b. Failure of the pit to fill up (water level remains constant over extended time periods or raises after significant rains and then drops).

   c. A sudden drop in the water level.

2. Evidence of significant waterway or diversion channel erosion.

3. Evidence of water running over diversion ridges.

G) ROAD SURFACE MAINTENANCE:

1. Provide crushed rock (approximately 6 inches) on subgrade and add sufficient gravel for passable surface (approximately 6 inches).

2. EVIDENCE OF ROAD SURFACE DISTRESS:
   a. Soft spots with subgrade "pumping" through gravel.
   b. "Washboarding" of surface.
   c. Rough surface

3. Maintenance for each distress would be as follows:
   a. Excavate the soft spot to a depth of about 6" below the soft subgrade. Install crushed rock to a depth of 6" below the surface. Install gravel to finish surface.
   b. Grade surface to shed water and repack after rain.
   c. Add gravel and blade to shed water.

OPERATION AND MAINTENANCE PLAN

H) WATER SYSTEM:

1. The water system consists of stainless steel troughs, connected together in front of the sow crates. The troughs are filled with the use of a timer which energizes a selanoid valve to allow water to flow. There is a float switch which will not let the trough overflow.

2. The water system should be checked daily for signs of leaks or timer malfunction. The timer should be adjusted so there is no overflow. The selanoid valves and float switch should be checked daily for proper function.

# OPERATION AND MAINTENANCE INSPECTION GUIDELINES

Production Function -

| Element to Check | How to Check | Recommended Action |
|---|---|---|
| Volume produced | Compare actual number of animals, weights of animals, bedding used, areas producing polluted runoff, and other sources of wastewater to those assumed in design. | If actual volume produced is greater and will result in early filling of storage\ treatment facilities, check waterers, number of animals and other sources of water. |
| Clean water exclusion | See that clean water exclusion practices, such as diversion channels, roof gutters and downspouts, and curbs, are functional and in good condition. | Maintenance should be performed to correct deficiencies found. |
| Slatted floors | See that ventilation is provided beneath slatted floors. Check structural integrity of slats. | Provide ventilation if not found. Replace or repair slat if necessary. |

Waste Storage Structure – Tank -

| | | |
|---|---|---|
| Rate of filling | Use established method for determining depth of waste in the tank that will permit determination of volume of waste and allow calculation of volume per unit of time, e.g., cubic feet per month. This rate can be compared to rate of filling assumed in design. The rate can also be used as a basis for planning/ design of subsequent AWMS's. | Make adjustment to reduce filling rate if it exceeds assumed rate. |
| Agitation | During agitation observe that dry crusts that may have formed on the surface and heavy solids | Improve methods used in agitation if it is adequate. |

Waste Storage Structure – Tank (continued)

| | | |
|---|---|---|
| | that may have settled to the tank are put into suspension. | |
| Emptying | Confirm that tank is pumped out in accordance with established utilization plan and that records are kept of when and how much is removed from the tank. | |
| Structural integrity | For reinforced concrete structures, inspect for excessive cracking and concrete deterioration. | Consult with concrete repair specialist for recommended repairs. |
| | For steel tanks check for corrosion around bolts and deterioration of protective coatings. | Repair, if found. |
| | Observe differential or excessive settlement. | If found, consult an Engineer for action needed. |
| Water table control drains | See that drains are properly functioning to maintain water table to level required for structure loadings assumed in design. | Repair blockages as necessary. |
| Safety measure | Assure that warning signs are visible and in good condition, and that protective grates and covers are in place. Confirm that an emergency action plan is in place to deal with accidental tank entry or other crisis. | Assist in development of a plan if one has not been developed. |
| Reception Pits - | | |
| Structural integrity | For concrete and concrete block structures, inspect for excessive cracking and concrete deterioration. | Consult with concrete repair specialist for recommended repairs. |
| Foreign material | Check for excessive debris that will impair function of pit. | Remove debris remotely from outside the pit. |

Reception Pits (continued)

| | | |
|---|---|---|
| Safety | Assure that protective grates are installed in good condition. | Repair grates as necessary. |
| | Assure that pits enclosed in buildings are properly vented to prevent accumulation of gases. | Provide necessary venting. |
| Gravity Pipelines - | | |
| Outlet | See that outlet is free flowing and is not causing erosion. | Clean outlet. |
| Safety | Note that pipeline inlets located within buildings are properly vented so gases do not accumulate. | |
| Equipment - | | |
| Proper operation and maintenance | Verify that equipment is operated and maintained in accordance with manufacturer's recommendations. Records of use should be kept. | Perform maintenance at recommended intervals. |
| Safety | Assure that safety devices and equipment is in good repair and being used as appropriate. | |
| | Assure that tractors are matched with hauling equipment being pulled. | |
| | Assure that public safety is protected when hauling equipment uses public roads | Use proper signage and clean up spilled materials. |
| Land Application - | | |
| Amount applied | Measure the amount of waste actually being applied. Estimate the amount of nutrients being applied by considering | If nutrients being applied are found excessive or crop |

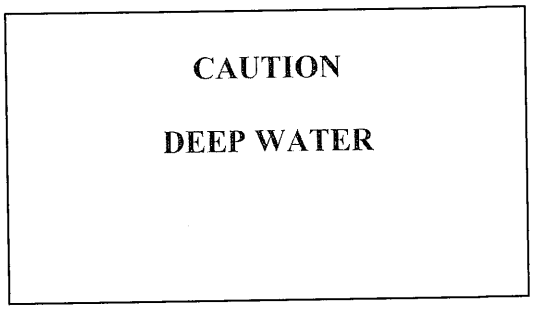
Land Application (continued)

| | | |
|---|---|---|
| | nutrient losses involved to the point of application. A laboratory analysis to determine nutrient content of the waste applied allows a more precise estimate. Compare actual amount of waste and nutrients being applied to the recommendations in the nutrient management plan. | condition indicates over-application, reduce future application amounts. This may require that additional fields receive waste or that waste treatment be included in the AWMS to reduce nutrient content of the waste. |
| | Observe the condition of the crop. For example, yellowing might indicate that not enough nutrients are being applied. On the other hand, burned leaves might indicate that too many nutrients are being applied. | If nutrients being applied are found insufficient for optimum production or the crop condition indicates under-application of nutrients, consider supplementing with commercial fertilizer.<br><br>Recommend calibrating application equipment. |
| Method of application | Observe method being used to apply waste. Compare method being used with the method assumed in computing nutrient losses for the nutrient management plan. | If a different method is being used, it may be necessary to adjust to the amount of the waste applied. For example, if in the nutrient management plan it was assumed a surface application method and an injection method is being used, nitrogen loss may be less than |

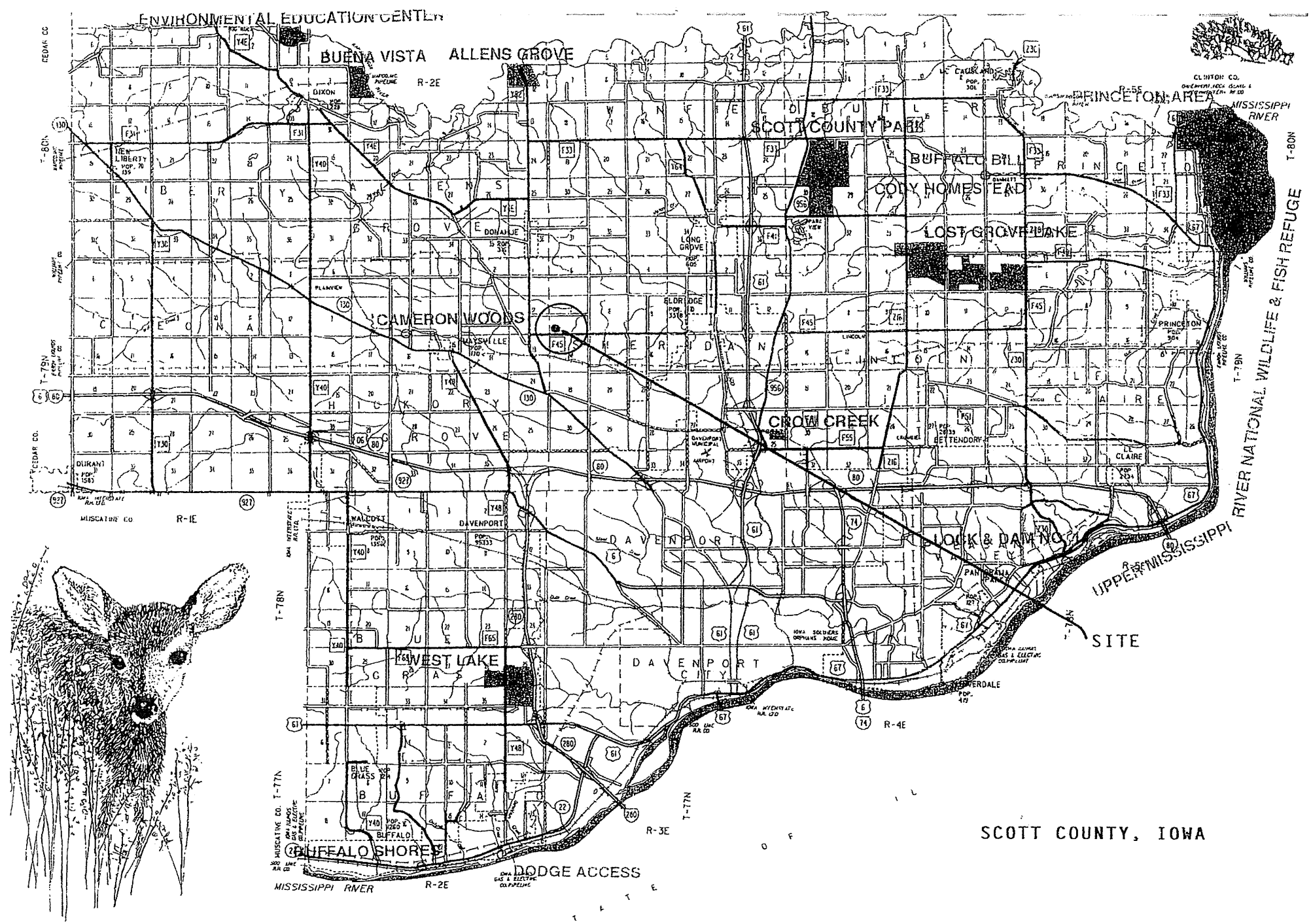
Land Application (continued)

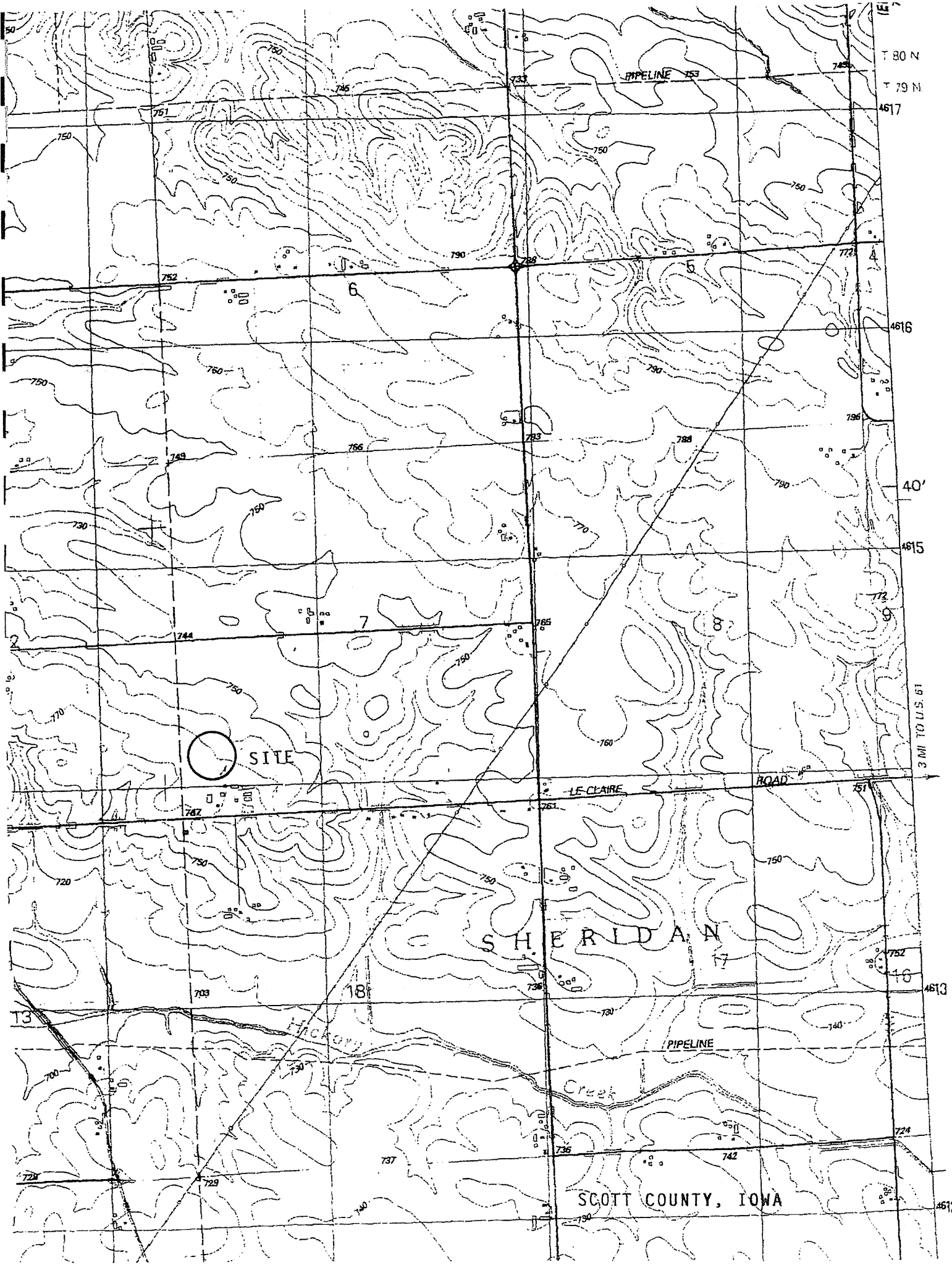
| | | |
|---|---|---|
| | | assumed, so more nutrient are actually being applied to the crop than planned.<br><br>This may make the nutrient application excessive. |
| Placement of waste | Observe how the waste is being placed and its distribution on the farm. Check for field runoff during application. | Compare fields to which waste is being distributed to those planned to receive waste in the nutrient management plan. Recommend appropriate modification if they are found different. If waste application is not evenly distributed or is causing runoff, recommend adjustment to equipment itself or in the way equipment is being used. |
| Timing of application | Observe when waste is being applied. | Compare actual timing with timing recommended in the nutrient management plan. Consider the environmental consequences if actual timing of application and recommended timing differ. Consequences, such as increased runoff and leaching losses, and inability of crop to use available nutrients should be considered. Recommend modification to timing of application if appropriate. |
| Safety | Observe unsafe actions or conditions, such as unshielded moving parts that could be injurious. | Recommend appropriate modification to unsafe activities or correct unsafe conditions (see 651.1303). |

## CAUTION SIGN FOR ALL STORAGE PROJECTS




**ALL LETTERING SHALL BE 2 INCHES WITH RED LETTERS ON A WHITE BACKROUND. ONE (1) SIGN SHALL BE PLACED ON EACH SIDE OF STORAGE FENCING.**


ENVIRONMENTAL EDUCATION CENTER
BUENA VISTA
ALLENS GROVE
PRINCETON AREA
MISSISSIPPI RIVER
SCOTT COUNTY PARK
BUFFALO BILL
COLY HOMESTEAD
LOST GROVE LAKE
CAMERON WOODS
CROW CREEK
LOCK & DAM NO. 14
UPPER MISSISSIPPI RIVER NATIONAL WILDLIFE & FISH REFUGE
SITE
WEST LAKE
DAVENPORT
DAVENPORT CITY
BUFFALO SHORES
DODGE ACCESS
MISSISSIPPI RIVER
SCOTT COUNTY, IOWA
LIBERTY
CEDAR
HICKORY GROVE
BUFFALO
LINCOLN
PRINCETON
LE CLAIRE
DURANT
WALCOTT
DIXON
DONAHUE
ELDRIDGE
NEW LIBERTY
LONG GROVE
PLEASANT VALLEY
R-1E
R-2E
R-3E
R-4E
T-80N
T-79N
T-78N
T-77N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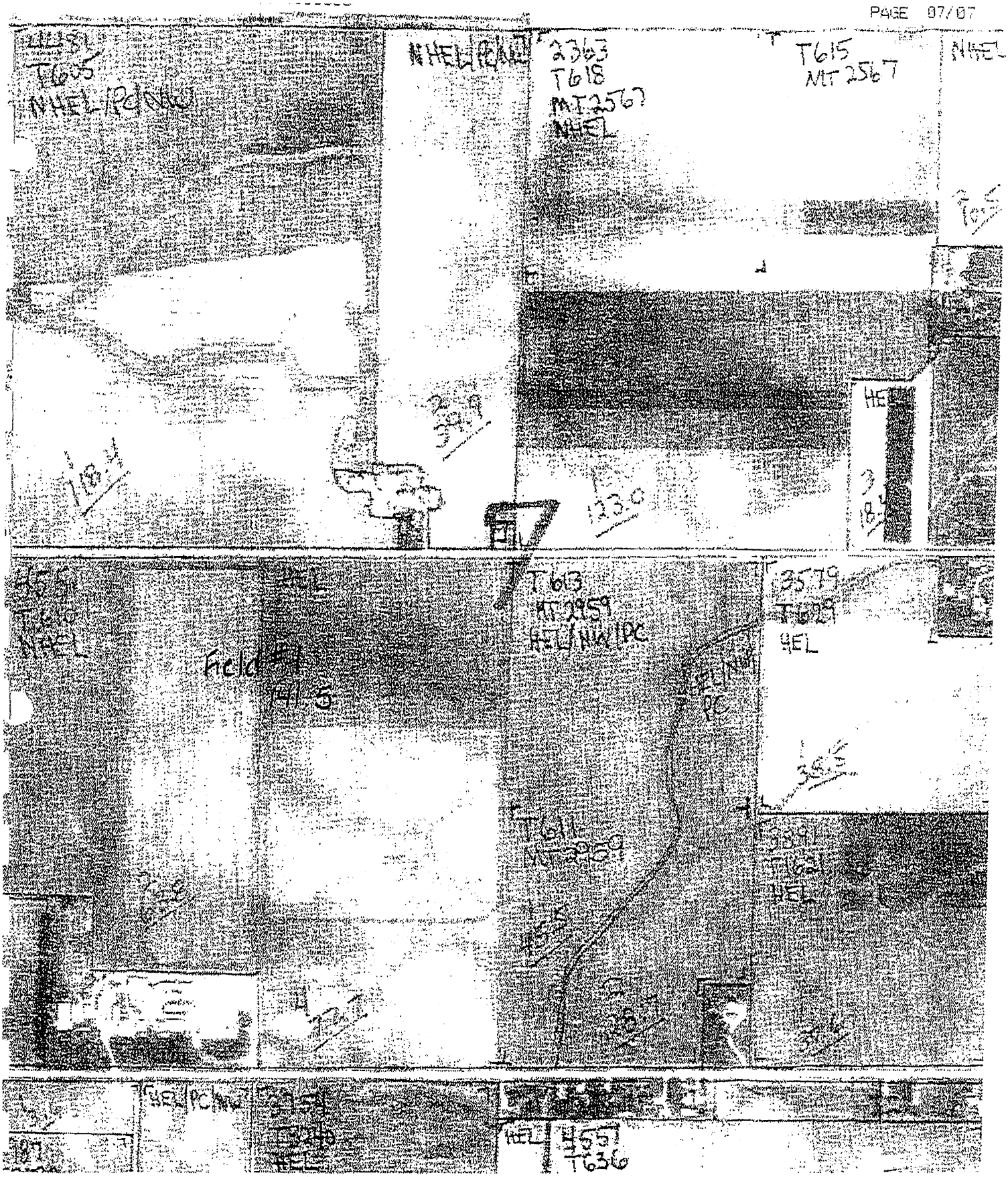
SHERIDAN
PIPELINE
Creek
SCOTT COUNTY, IOWA




NOT TO SCALE (1994 FLIGHT) SCOTT COUNTY -CROP YEAR _____ H-5

# THERE ARE NO KNOWN SINKHOLES IN AREA OF CONSTRUCTION.

# DRAINAGE TILE LINE CERTIFICATION

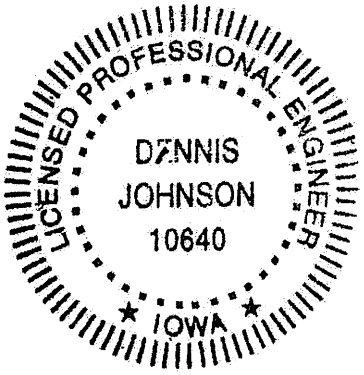
"I hereby certify that I am a licensed Engineer in the State of Iowa. To the best of my knowledge, information and belief, the construction of the animal feeding operation structures proposed by GRANDVIEW FARMS , SCOTT COUNTY, SHERIDAN TOWNSHIP, SECTION 7, SW ¼ of SW 1/4, T79N, R03E will not impede the drainage of established tile lines which cross their property lines and if construction disturbs drainage tile lines, I will recommend the necessary measures to be taken to reestablish drainage and, upon completion of construction, file a statement that those measures were taken to reestablish drainage."

Dennis J. Johnson, P.E.

Date: 10/25/16

Iowa Registration No. 10640

(SEAL)



For unpermitted and permitted confinement feeding operations

# Professional Engineer[1] (PE) Design Certification

This form is to be used in lieu of a Construction Design Statement (CDS) for confinement feeding operations with an Animal Unit Capacity (AUC)[2] of more than 500 Animal Units (AU), not required to have a PE, that are constructing a formed manure storage structure[3] with a site-specific design sealed by a PE. For more information contact the Department of Natural Resources (DNR) (see page 2 for contact information).

Name of operation: Grandview Farms West Sow Addition Facility ID No.: 59556

Location: SW (¼ ¼) SW (¼) 7 (Section) T79N, R3E (Tier & Range) Sheridan (Name of Township) Scott (County)

Describe the proposed confinement feeding operation structures: 146' x 291' Farrowing Barn with a 146' x 275' x 8' deep pit

**Design Certification:** Pursuant to 567 Iowa Administrative Code (IAC) 65.15(14)"a" or "b", I prepared an engineering report, plans and specifications for the operation referenced above. Design considerations were in conformance with the following design methods:

| American Concrete Institute (ACI): | Portland Cement Association (PCA): | MidWest Plan Service (MWPS): |
|---|---|---|
| ☒ ACI 318 | ☐ EB 075 | ☐ MWPS 36 |
| ☐ ACI 360 | ☐ EB 001 | ☐ MWPS TR9 |
| ☐ ACI 350 | ☐ IS0 72 | |

In addition, for non-dry manure the following additional requirements of 567 IAC 65.15(14)"a"(1) will be met:

☒ 1. The floors shall be a minimum of 5 inches thick. Nondestructive methods to verify the floor slab thickness may be required by the DNR. The results shall indicate that at least 95 percent of the floor slab area meets the minimum required thickness. In no case shall the floor slab thickness be less than 4.5 inches.

☒ 2. Wire mesh shall not be used as primary reinforcement for a formed manure storage structure with a depth of 4 feet or more. Fiber shall not be used as reinforcement.

☒ 3. Waterstops shall be installed in all areas where fresh concrete meets hardened concrete. Waterstops shall be made of plastic, rolled bentonite or similar materials approved by the department.

☒ 4. The vertical steel of all walls shall be extended into the footing and be bent at 90° or a separate dowel shall be installed. As an alternate to the 90° bend, the dowel may be extended at least 12 inches into the footing, with a minimum concrete cover of 3 inches at the bottom. In lieu of dowels, mechanical means or alternate methods may be used as anchorage of interior walls to footings.

**Karst Determination:** Go to www.IowaDNR.gov, select the link to "Environment" then click on Mapping and GIS, then click on the AFO Siting Atlas. Click on the red push pin icon to enter a legal description of the proposed location. Make sure the karst box is checked in the left legend. If you cannot access the map or if you have questions about this issue, contact the AFO Engineer at 712-262-4177. Check one of the following:

☒ The site is not in karst or potential karst. Print and enclose the map with the name and location of the site clearly marked.
☐ The Siting Atlas has indicated that the site is in karst. The upgraded concrete standards of 567 IAC 65.15(14)"c" are used:

567 IAC 65.15(14)"c." Karst terrain—upgraded standards. If the site of the proposed formed manure storage structure is located in an area that exhibits karst terrain or an area that drains into a known sinkhole, the minimum concrete standards set forth in 65.15(14)"a" or "b" shall apply. In addition, the following requirements apply to all formed manure storage structures that store nondry or dry manure:

☒ (1) A minimum 5-foot vertical separation distance between the bottom of a formed manure storage structure and limestone, dolomite, or other soluble rock is required if the formed manure storage structure is not designed by a PE or an NRCS engineer.

☐ (2) If the vertical separation distance between the bottom of the proposed formed manure storage structure and limestone, dolomite, or other soluble rock is less than 5 feet, the structure shall be designed and sealed by a PE or an NRCS engineer who certifies the structural integrity of the structure and a 2-foot-thick layer of compacted clay liner material shall be constructed underneath the floor of the formed manure storage structure.

☐ (3) In addition, in an area that exhibits karst terrain or an area that drains into a known sinkhole, a PE, a Natural Resources Conservation Service(NRCS) engineer or a qualified organization shall submit a soil exploration study based on the results from soil borings or test pits to determine the vertical separation between the bottom of the formed structure and limestone, dolomite or other soluble rock. A minimum of two soil borings or two test pits, equally spaced within each formed structure, are required. After soil exploration is completed, each soil boring and pit shall be properly plugged with concrete grout, bentonite or similar materials.

[1] PE includes a professional engineer licensed in the state of Iowa or an NRCS Engineer.
[2] To determine the Animal Unit Capacity (AUC) see the "Manure Storage Indemnity Fee" (DNR Form 5424021) or the "Construction Permit Application" (DNR Form 542-1428) or contact the DNR (see page 2 for contact information).
[3] Formed manure storage structure = covered or uncovered concrete or steel tank, and concrete pit below the building.

☐ (4) Groundwater monitoring shall be performed as specified by the DNR.
☐ (5) Backfilling shall not start until the floor slats have been placed or permanent bracing has been installed, and shall be performed with material free of vegetation, large rocks, or debris.

**Alluvial Soils Determination**: Go to www.IowaDNR.gov, select the link to "Environment" then "Mapping and GIS," then click on the AFO Siting Atlas. Click on the red push pin icon to enter a legal description of the proposed location. Make sure the alluvial box is checked in the left legend. If the site is in potential alluvial soils, if you cannot access the map, or if you have questions about this issue, contact the DNR Flood Plain section at 866-849-0321. Check one of the following:

■ The site is not in alluvial soils. Print and enclose the map with the name and location of the site clearly marked.
☐ If the site is in alluvial soils contact the DNR Flood Plain section at 866-849-0321. You will be required to submit a petition for a declaratory order if less than 1,000 AUC or request a Flood Plain determination if 1,000 AUC or greater. Submit one of the following:
  ☐ Include correspondence from the DNR showing the site is not in the 100-year floodplain or does not require a floodplain permit.
  ☐ Include a copy of the Floodplain Permit if a floodplain permit is required.

**Groundwater separation requirements:** (check one of the following boxes):
■ **A drain tile shall be installed along the footings to artificially lower the groundwater table, pursuant to 65.15(7)"b".**
☐ The drain tiles will have a device to allow shut off and monitoring, if the drain tiles do not have a surface outlet accessible in the property, as required in 65.15(7)"b".
☐ In lieu of the drain tile, a certification signed by a PE, a groundwater professional certified pursuant to 567 IAC Chapter 134, a qualified staff from NRCS or a qualified organization is being submitted indicating that the groundwater elevation, measured according to 567 IAC 65.15(7)"c," is below the bottom of the formed structure.

**Engineer's Certification**: I hereby certify that I have prepared a site-specific design for the formed manure storage structure[3](s) referenced above that complies with the minimum concrete standards of 567 IAC 65.15(14). A copy of the site-specific engineering report, plans and specifications will be available on site for the DNR's inspection.
*(Include PE engineering seal, stamp, signature in contrasting color ink and date.)*

| | |
|---|---|
| Company: | Wenck Associates, Inc. |
| Address: | 1012 5th Avenue, Windom, MN 56101 |
| Phone No. | 507-831-2703 |
| Fax No. | 507-831-5271 |

10/25/16

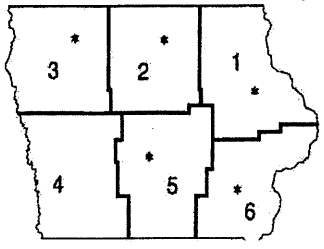
LICENSED PROFESSIONAL ENGINEER
DENNIS JOHNSON
10640
IOWA

**Contractor's Certification** If the PE will not be present on site observing critical points of construction, I hereby certify that I will construct the formed manure storage structure(s) referenced above according to the engineering design.

| (Print Contractor's Name) | (Contractor's Signature) | |
|---|---|---|
| Wenck Associates, Inc. | 209 W. South St., Tipton, IA 52772 | 563-886-6196 |
| (Company) | (Address) | (Phone No.) |

**Mailing Instructions**: Mail this "PE Design Certification" according to the following:

1. Operations with an AUC between 501 and 999 AU and constructing a formed manure storage structure, required to submit a manure management plan (MMP), prior to beginning construction must file this "PE Design Certification," the karst and alluvial soils documentation requested in pages 1 and 2, the MMP and fees to the nearest DNR Field Office:




| | | |
|---|---|---|
| Field Office 1<br>909 W Main St Ste 4<br>Manchester, IA 52057<br>(563) 927-2640 | Field Office 3<br>1900 N Grand Ave<br>Spencer, IA 51301<br>(712) 262-4177 | Field Office 5<br>7900 Hickman Rd Ste 200<br>Windsor Heights, IA 50324<br>(515) 725-0268 |
| Field Office 2<br>2300 15th St SW<br>Mason City, IA 50401<br>(641) 424-4073 | Field Office 4<br>1401 Sunnyside Ln<br>Atlantic, IA 50022<br>(712) 243-1934 | Field Office 6<br>1023 W Madison<br>Washington, IA 52353<br>(319) 653-2135 |

2. If a construction permit is required (AUC = 1,000 AU or more and constructing a formed manure storage structure), mail this form as required in the construction permit application form (DNR Form 542-1428).

If you have any questions regarding the concrete standards requirements and this PE Design Certification, contact an engineer of the AFO- Program at 712-262-4177, the nearest DNR Field Office, or visit www.IowaDNR.gov/afo.

For unpermitted and permitted confinement feeding operations

# Professional Engineer[1] (PE) Design Certification

This form is to be used in lieu of a Construction Design Statement (CDS) for confinement feeding operations with an Animal Unit Capacity (AUC)[2] of more than 500 Animal Units (AU), not required to have a PE, that are constructing a formed manure storage structure[3] with a site-specific design sealed by a PE. For more information contact the Department of Natural Resources (DNR) (see page 2 for contact information).

Name of operation: Grandview Farms West Sow Addition Facility ID No.: 59556

Location: SW (¼ ¼) SW (¼) 7 (Section) T79N, R3E (Tier & Range) Sheridan (Name of Township) Scott (County)

Describe the proposed confinement feeding operation structures: 101' x 276' Gestation Barn with a 101' x 260' x 8' deep pit

**Design Certification:** Pursuant to 567 Iowa Administrative Code (IAC) 65.15(14)"a" or "b", I prepared an engineering report, plans and specifications for the operation referenced above. Design considerations were in conformance with the following design methods:

| American Concrete Institute (ACI): | Portland Cement Association (PCA): | MidWest Plan Service (MWPS): |
|---|---|---|
| ☒ ACI 318 | ☐ EB 075 | ☐ MWPS 36 |
| ☐ ACI 360 | ☐ EB 001 | ☐ MWPS TR9 |
| ☐ ACI 350 | ☐ IS0 72 | |

In addition, for non-dry manure the following additional requirements of 567 IAC 65.15(14)"a"(1) will be met:

☒ 1. The floors shall be a minimum of 5 inches thick. Nondestructive methods to verify the floor slab thickness may be required by the DNR. The results shall indicate that at least 95 percent of the floor slab area meets the minimum required thickness. In no case shall the floor slab thickness be less than 4.5 inches.

☒ 2. Wire mesh shall not be used as primary reinforcement for a formed manure storage structure with a depth of 4 feet or more. Fiber shall not be used as reinforcement.

☒ 3. Waterstops shall be installed in all areas where fresh concrete meets hardened concrete. Waterstops shall be made of plastic, rolled bentonite or similar materials approved by the department.

☒ 4. The vertical steel of all walls shall be extended into the footing and be bent at 90° or a separate dowel shall be installed. As an alternate to the 90° bend, the dowel may be extended at least 12 inches into the footing, with a minimum concrete cover of 3 inches at the bottom. In lieu of dowels, mechanical means or alternate methods may be used as anchorage of interior walls to footings.

**Karst Determination:** Go to www.IowaDNR.gov, select the link to "Environment" then click on Mapping and GIS, then click on the AFO Siting Atlas. Click on the red push pin icon to enter a legal description of the proposed location. Make sure the karst box is checked in the left legend. If you cannot access the map or if you have questions about this issue, contact the AFO Engineer at 712-262-4177. Check one of the following:

☒ The site is not in karst or potential karst. Print and enclose the map with the name and location of the site clearly marked.
☐ The Siting Atlas has indicated that the site is in karst. The upgraded concrete standards of 567 IAC 65.15(14)"c" are used:

567 IAC 65.15(14)"c." Karst terrain—upgraded standards. If the site of the proposed formed manure storage structure is located in an area that exhibits karst terrain or an area that drains into a known sinkhole, the minimum concrete standards set forth in 65.15(14)"a" or "b" shall apply. In addition, the following requirements apply to all formed manure storage structures that store nondry or dry manure:

☒ (1) A minimum 5-foot vertical separation distance between the bottom of a formed manure storage structure and limestone, dolomite, or other soluble rock is required if the formed manure storage structure is not designed by a PE or an NRCS engineer.

☐ (2) If the vertical separation distance between the bottom of the proposed formed manure storage structure and limestone, dolomite, or other soluble rock is less than 5 feet, the structure shall be designed and sealed by a PE or an NRCS engineer who certifies the structural integrity of the structure and a 2-foot-thick layer of compacted clay liner material shall be constructed underneath the floor of the formed manure storage structure.

☐ (3) In addition, in an area that exhibits karst terrain or an area that drains into a known sinkhole, a PE, a Natural Resources Conservation Service(NRCS) engineer or a qualified organization shall submit a soil exploration study based on the results from soil borings or test pits to determine the vertical separation between the bottom of the formed structure and limestone, dolomite or other soluble rock. A minimum of two soil borings or two test pits, equally spaced within each formed structure, are required. After soil exploration is completed, each soil boring and pit shall be properly plugged with concrete grout, bentonite or similar materials.

[1] PE includes a professional engineer licensed in the state of Iowa or an NRCS Engineer.
[2] To determine the Animal Unit Capacity (AUC) see the "Manure Storage Indemnity Fee" (DNR Form 5424021) or the "Construction Permit Application" (DNR Form 542-1428) or contact the DNR (see page 2 for contact information).
[3] Formed manure storage structure = covered or uncovered concrete or steel tank, and concrete pit below the building.

☐ (4) Groundwater monitoring shall be performed as specified by the DNR.
☐ (5) Backfilling shall not start until the floor slats have been placed or permanent bracing has been installed, and shall be performed with material free of vegetation, large rocks, or debris.

**Alluvial Soils Determination**: Go to www.IowaDNR.gov, select the link to "Environment" then "Mapping and GIS," then click on the AFO Siting Atlas. Click on the red push pin icon to enter a legal description of the proposed location. Make sure the alluvial box is checked in the left legend. If the site is in potential alluvial soils, if you cannot access the map, or if you have questions about this issue, contact the DNR Flood Plain section at 866-849-0321. Check one of the following:

■ The site is not in alluvial soils. Print and enclose the map with the name and location of the site clearly marked.
☐ If the site is in alluvial soils contact the DNR Flood Plain section at 866-849-0321. You will be required to submit a petition for a declaratory order if less than 1,000 AUC or request a Flood Plain determination if 1,000 AUC or greater. Submit one of the following:
  ☐ Include correspondence from the DNR showing the site is not in the 100-year floodplain or does not require a floodplain permit.
  ☐ Include a copy of the Floodplain Permit if a floodplain permit is required.

**Groundwater separation requirements:** (check one of the following boxes):
■ **A drain tile shall be installed along the footings to artificially lower the groundwater table, pursuant to 65.15(7)"b".**
☐ The drain tiles will have a device to allow shut off and monitoring, if the drain tiles do not have a surface outlet accessible in the property, as required in 65.15(7)"b".
☐ In lieu of the drain tile, a certification signed by a PE, a groundwater professional certified pursuant to 567 IAC Chapter 134, a qualified staff from NRCS or a qualified organization is being submitted indicating that the groundwater elevation, measured according to 567 IAC 65.15(7)"c," is below the bottom of the formed structure.

**Engineer's Certification**: I hereby certify that I have prepared a site-specific design for the formed manure storage structure[3](s) referenced above that complies with the minimum concrete standards of 567 IAC 65.15(14). A copy of the site-specific engineering report, plans and specifications will be available on site for the DNR's inspection.
*(Include PE engineering seal, stamp, signature in contrasting color ink and date.)*

| | |
|---|---|
| Company: | Wenck Associates, Inc. |
| Address: | 1012 5th Avenue, Windom, MN 56101 |
| Phone No. | 507-831-2703 |
| Fax No. | 507-831-5271 |

10/26/16

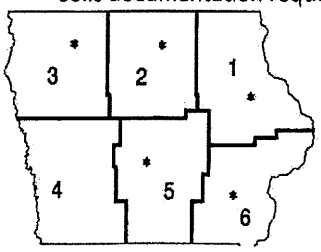
LICENSED PROFESSIONAL ENGINEER
DENNIS JOHNSON
10640
IOWA

**Contractor's Certification** If the PE will not be present on site observing critical points of construction, I hereby certify that I will construct the formed manure storage structure(s) referenced above according to the engineering design.

| (Print Contractor's Name) | (Contractor's Signature) | (Date) |
|---|---|---|
| Wenck Associates, Inc. (Company) | 209 W. South St., Tipton, IA 52772 (Address) | 563-886-6196 (Phone No.) |

**Mailing Instructions**: Mail this "PE Design Certification" according to the following:

1. Operations with an AUC between 501 and 999 AU and constructing a formed manure storage structure, required to submit a manure management plan (MMP), prior to beginning construction must file this "PE Design Certification," the karst and alluvial soils documentation requested in pages 1 and 2, the MMP and fees to the nearest DNR Field Office:




| | | |
|---|---|---|
| Field Office 1<br>909 W Main St Ste 4<br>Manchester, IA 52057<br>(563) 927-2640 | Field Office 3<br>1900 N Grand Ave<br>Spencer, IA 51301<br>(712) 262-4177 | Field Office 5<br>7900 Hickman Rd Ste 200<br>Windsor Heights, IA 50324<br>(515) 725-0268 |
| Field Office 2<br>2300 15th St SW<br>Mason City, IA 50401<br>(641) 424-4073 | Field Office 4<br>1401 Sunnyside Ln<br>Atlantic, IA 50022<br>(712) 243-1934 | Field Office 6<br>1023 W Madison<br>Washington, IA 52353<br>(319) 653-2135 |

2. If a construction permit is required (AUC = 1,000 AU or more and constructing a formed manure storage structure), mail this form as required in the construction permit application form (DNR Form 542-1428).

If you have any questions regarding the concrete standards requirements and this PE Design Certification, contact an engineer of the AFO- Program at 712-262-4177, the nearest DNR Field Office, or visit www.IowaDNR.gov/afo.

For unpermitted and permitted confinement feeding operations

# Professional Engineer[1] (PE) Design Certification

This form is to be used in lieu of a Construction Design Statement (CDS) for confinement feeding operations with an Animal Unit Capacity (AUC)[2] of more than 500 Animal Units (AU), not required to have a PE, that are constructing a formed manure storage structure[3] with a site-specific design sealed by a PE. For more information contact the Department of Natural Resources (DNR) (see page 2 for contact information).

Name of operation: Grandview Farms West Sow Addition Facility ID No.: 59556

Location: SW (¼ ¼) SW (¼) 7 (Section) T79N, R3E (Tier & Range) Sheridan (Name of Township) Scott (County)

Describe the proposed confinement feeding operation structures: 101' x 276' Gestation Barn with a 101' x 260' x 8' deep pit

**Design Certification:** Pursuant to 567 Iowa Administrative Code (IAC) 65.15(14)"a" or "b", I prepared an engineering report, plans and specifications for the operation referenced above. Design considerations were in conformance with the following design methods:

| American Concrete Institute (ACI): | Portland Cement Association (PCA): | MidWest Plan Service (MWPS): |
|---|---|---|
| ☒ ACI 318 | ☐ EB 075 | ☐ MWPS 36 |
| ☐ ACI 360 | ☐ EB 001 | ☐ MWPS TR9 |
| ☐ ACI 350 | ☐ ISO 72 | |

In addition, for non-dry manure the following additional requirements of 567 IAC 65.15(14)"a"(1) will be met:

☒ 1. The floors shall be a minimum of 5 inches thick. Nondestructive methods to verify the floor slab thickness may be required by the DNR. The results shall indicate that at least 95 percent of the floor slab area meets the minimum required thickness. In no case shall the floor slab thickness be less than 4.5 inches.

☒ 2. Wire mesh shall not be used as primary reinforcement for a formed manure storage structure with a depth of 4 feet or more. Fiber shall not be used as reinforcement.

☒ 3. Waterstops shall be installed in all areas where fresh concrete meets hardened concrete. Waterstops shall be made of plastic, rolled bentonite or similar materials approved by the department.

☒ 4. The vertical steel of all walls shall be extended into the footing and be bent at 90° or a separate dowel shall be installed. As an alternate to the 90° bend, the dowel may be extended at least 12 inches into the footing, with a minimum concrete cover of 3 inches at the bottom. In lieu of dowels, mechanical means or alternate methods may be used as anchorage of interior walls to footings.

**Karst Determination:** Go to www.IowaDNR.gov, select the link to "Environment" then click on Mapping and GIS, then click on the AFO Siting Atlas. Click on the red push pin icon to enter a legal description of the proposed location. Make sure the karst box is checked in the left legend. If you cannot access the map or if you have questions about this issue, contact the AFO Engineer at 712-262-4177. Check one of the following:

☒ The site is not in karst or potential karst. Print and enclose the map with the name and location of the site clearly marked.
☐ The Siting Atlas has indicated that the site is in karst. The upgraded concrete standards of 567 IAC 65.15(14)"c" are used:

567 IAC 65.15(14)"c." Karst terrain—upgraded standards. If the site of the proposed formed manure storage structure is located in an area that exhibits karst terrain or an area that drains into a known sinkhole, the minimum concrete standards set forth in 65.15(14)"a" or "b" shall apply. In addition, the following requirements apply to all formed manure storage structures that store nondry or dry manure:

☒ (1) A minimum 5-foot vertical separation distance between the bottom of a formed manure storage structure and limestone, dolomite, or other soluble rock is required if the formed manure storage structure is not designed by a PE or an NRCS engineer.

☐ (2) If the vertical separation distance between the bottom of the proposed formed manure storage structure and limestone, dolomite, or other soluble rock is less than 5 feet, the structure shall be designed and sealed by a PE or an NRCS engineer who certifies the structural integrity of the structure and a 2-foot-thick layer of compacted clay liner material shall be constructed underneath the floor of the formed manure storage structure.

☐ (3) In addition, in an area that exhibits karst terrain or an area that drains into a known sinkhole, a PE, a Natural Resources Conservation Service(NRCS) engineer or a qualified organization shall submit a soil exploration study based on the results from soil borings or test pits to determine the vertical separation between the bottom of the formed structure and limestone, dolomite or other soluble rock. A minimum of two soil borings or two test pits, equally spaced within each formed structure, are required. After soil exploration is completed, each soil boring and pit shall be properly plugged with concrete grout, bentonite or similar materials.

[1] PE includes a professional engineer licensed in the state of Iowa or an NRCS Engineer.
[2] To determine the Animal Unit Capacity (AUC) see the "Manure Storage Indemnity Fee" (DNR Form 5424021) or the "Construction Permit Application" (DNR Form 542-1428) or contact the DNR (see page 2 for contact information).
[3] Formed manure storage structure = covered or uncovered concrete or steel tank, and concrete pit below the building.

☐ (4) Groundwater monitoring shall be performed as specified by the DNR.
☐ (5) Backfilling shall not start until the floor slats have been placed or permanent bracing has been installed, and shall be performed with material free of vegetation, large rocks, or debris.

**Alluvial Soils Determination**: Go to www.IowaDNR.gov, select the link to "Environment" then "Mapping and GIS," then click on the AFO Siting Atlas. Click on the red push pin icon to enter a legal description of the proposed location. Make sure the alluvial box is checked in the left legend. If the site is in potential alluvial soils, if you cannot access the map, or if you have questions about this issue, contact the DNR Flood Plain section at 866-849-0321. Check one of the following:

■ The site is not in alluvial soils. Print and enclose the map with the name and location of the site clearly marked.
☐ If the site is in alluvial soils contact the DNR Flood Plain section at 866-849-0321. You will be required to submit a petition for a declaratory order if less than 1,000 AUC or request a Flood Plain determination if 1,000 AUC or greater. Submit one of the following:
  ☐ Include correspondence from the DNR showing the site is not in the 100-year floodplain or does not require a floodplain permit.
  ☐ Include a copy of the Floodplain Permit if a floodplain permit is required.

**Groundwater separation requirements:** (check one of the following boxes):
■ **A drain tile shall be installed along the footings to artificially lower the groundwater table, pursuant to 65.15(7)"b".**
☐ The drain tiles will have a device to allow shut off and monitoring, if the drain tiles do not have a surface outlet accessible in the property, as required in 65.15(7)"b".
☐ In lieu of the drain tile, a certification signed by a PE, a groundwater professional certified pursuant to 567 IAC Chapter 134, a qualified staff from NRCS or a qualified organization is being submitted indicating that the groundwater elevation, measured according to 567 IAC 65.15(7)"c," is below the bottom of the formed structure.

**Engineer's Certification**: I hereby certify that I have prepared a site-specific design for the formed manure storage structure[3](s) referenced above that complies with the minimum concrete standards of 567 IAC 65.15(14). A copy of the site-specific engineering report, plans and specifications will be available on site for the DNR's inspection.
*(Include PE engineering seal, stamp, signature in contrasting color ink and date.)*

Company: Wenck Associates, Inc.
Address: 1012 5th Avenue, Windom, MN 56101
Phone No. 507-831-2703
Fax No. 507-831-5271

10/25/16

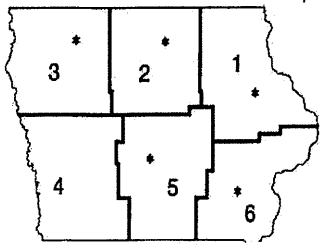
LICENSED PROFESSIONAL ENGINEER
DENNIS JOHNSON
10640
IOWA

**Contractor's Certification** If the PE will not be present on site observing critical points of construction, I hereby certify that I will construct the formed manure storage structure(s) referenced above according to the engineering design.

| (Print Contractor's Name) | (Contractor's Signature) | (Date) |
|---|---|---|
| Wenck Associates, Inc. | 209 W. South St., Tipton, IA 52772 | 563-886-6196 |
| (Company) | (Address) | (Phone No.) |

**Mailing Instructions**: Mail this "PE Design Certification" according to the following:

1. Operations with an AUC between 501 and 999 AU and constructing a formed manure storage structure, required to submit a manure management plan (MMP), prior to beginning construction must file this "PE Design Certification," the karst and alluvial soils documentation requested in pages 1 and 2, the MMP and fees to the nearest DNR Field Office:




| | | |
|---|---|---|
| Field Office 1<br>909 W Main St Ste 4<br>Manchester, IA 52057<br>(563) 927-2640 | Field Office 3<br>1900 N Grand Ave<br>Spencer, IA 51301<br>(712) 262-4177 | Field Office 5<br>7900 Hickman Rd Ste 200<br>Windsor Heights, IA 50324<br>(515) 725-0268 |
| Field Office 2<br>2300 15th St SW<br>Mason City, IA 50401<br>(641) 424-4073 | Field Office 4<br>1401 Sunnyside Ln<br>Atlantic, IA 50022<br>(712) 243-1934 | Field Office 6<br>1023 W Madison<br>Washington, IA 52353<br>(319) 653-2135 |

2. If a construction permit is required (AUC = 1,000 AU or more and constructing a formed manure storage structure), mail this form as required in the construction permit application form (DNR Form 542-1428).

If you have any questions regarding the concrete standards requirements and this PE Design Certification, contact an engineer of the AFO- Program at 712-262-4177, the nearest DNR Field Office, or visit www.IowaDNR.gov/afo.

For unpermitted and permitted confinement feeding operations

# Professional Engineer[1] (PE) Design Certification

This form is to be used in lieu of a Construction Design Statement (CDS) for confinement feeding operations with an Animal Unit Capacity (AUC)[2] of more than 500 Animal Units (AU), not required to have a PE, that are constructing a formed manure storage structure[3] with a site-specific design sealed by a PE. For more information contact the Department of Natural Resources (DNR) (see page 2 for contact information).

Name of operation: Grandview Farms West Sow Addition Facility ID No.: 59556

Location: SW (¼ ¼) SW (¼) 7 (Section) T79N, R3E (Tier & Range) Sheridan (Name of Township) Scott (County)

Describe the proposed confinement feeding operation structures: 101' x 276' gilt breeding gestation barn with a 101' x 260' x 8' deep pit

**Design Certification:** Pursuant to 567 Iowa Administrative Code (IAC) 65.15(14)"a" or "b", I prepared an engineering report, plans and specifications for the operation referenced above. Design considerations were in conformance with the following design methods:

| American Concrete Institute (ACI): | Portland Cement Association (PCA): | MidWest Plan Service (MWPS): |
|---|---|---|
| ☒ ACI 318 | ☐ EB 075 | ☐ MWPS 36 |
| ☐ ACI 360 | ☐ EB 001 | ☐ MWPS TR9 |
| ☐ ACI 350 | ☐ IS0 72 | |

In addition, for non-dry manure the following additional requirements of 567 IAC 65.15(14)"a"(1) will be met:

☒ 1. The floors shall be a minimum of 5 inches thick. Nondestructive methods to verify the floor slab thickness may be required by the DNR. The results shall indicate that at least 95 percent of the floor slab area meets the minimum required thickness. In no case shall the floor slab thickness be less than 4.5 inches.

☒ 2. Wire mesh shall not be used as primary reinforcement for a formed manure storage structure with a depth of 4 feet or more. Fiber shall not be used as reinforcement.

☒ 3. Waterstops shall be installed in all areas where fresh concrete meets hardened concrete. Waterstops shall be made of plastic, rolled bentonite or similar materials approved by the department.

☒ 4. The vertical steel of all walls shall be extended into the footing and be bent at 90° or a separate dowel shall be installed. As an alternate to the 90° bend, the dowel may be extended at least 12 inches into the footing, with a minimum concrete cover of 3 inches at the bottom. In lieu of dowels, mechanical means or alternate methods may be used as anchorage of interior walls to footings.

**Karst Determination:** Go to www.IowaDNR.gov, select the link to "Environment" then click on Mapping and GIS, then click on the AFO Siting Atlas. Click on the red push pin icon to enter a legal description of the proposed location. Make sure the karst box is checked in the left legend. If you cannot access the map or if you have questions about this issue, contact the AFO Engineer at 712-262-4177. Check one of the following:

☒ The site is not in karst or potential karst. Print and enclose the map with the name and location of the site clearly marked.
☐ The Siting Atlas has indicated that the site is in karst. The upgraded concrete standards of 567 IAC 65.15(14)"c" are used:

567 IAC 65.15(14)"c." Karst terrain—upgraded standards. If the site of the proposed formed manure storage structure is located in an area that exhibits karst terrain or an area that drains into a known sinkhole, the minimum concrete standards set forth in 65.15(14)"a" or "b" shall apply. In addition, the following requirements apply to all formed manure storage structures that store nondry or dry manure:

☒ (1) A minimum 5-foot vertical separation distance between the bottom of a formed manure storage structure and limestone, dolomite, or other soluble rock is required if the formed manure storage structure is not designed by a PE or an NRCS engineer.

☐ (2) If the vertical separation distance between the bottom of the proposed formed manure storage structure and limestone, dolomite, or other soluble rock is less than 5 feet, the structure shall be designed and sealed by a PE or an NRCS engineer who certifies the structural integrity of the structure and a 2-foot-thick layer of compacted clay liner material shall be constructed underneath the floor of the formed manure storage structure.

☐ (3) In addition, in an area that exhibits karst terrain or an area that drains into a known sinkhole, a PE, a Natural Resources Conservation Service(NRCS) engineer or a qualified organization shall submit a soil exploration study based on the results from soil borings or test pits to determine the vertical separation between the bottom of the formed structure and limestone, dolomite or other soluble rock. A minimum of two soil borings or two test pits, equally spaced within each formed structure, are required. After soil exploration is completed, each soil boring and pit shall be properly plugged with concrete grout, bentonite or similar materials.

[1] PE includes a professional engineer licensed in the state of Iowa or an NRCS Engineer.
[2] To determine the Animal Unit Capacity (AUC) see the "Manure Storage Indemnity Fee" (DNR Form 5424021) or the "Construction Permit Application" (DNR Form 542-1428) or contact the DNR (see page 2 for contact information).
[3] Formed manure storage structure = covered or uncovered concrete or steel tank, and concrete pit below the building.

☐ (4) Groundwater monitoring shall be performed as specified by the DNR.
☐ (5) Backfilling shall not start until the floor slats have been placed or permanent bracing has been installed, and shall be performed with material free of vegetation, large rocks, or debris.

**Alluvial Soils Determination**: Go to www.IowaDNR.gov, select the link to "Environment" then "Mapping and GIS," then click on the AFO Siting Atlas. Click on the red push pin icon to enter a legal description of the proposed location. Make sure the alluvial box is checked in the left legend. If the site is in potential alluvial soils, if you cannot access the map, or if you have questions about this issue, contact the DNR Flood Plain section at 866-849-0321. Check one of the following:

■ The site is not in alluvial soils. Print and enclose the map with the name and location of the site clearly marked.
☐ If the site is in alluvial soils contact the DNR Flood Plain section at 866-849-0321. You will be required to submit a petition for a declaratory order if less than 1,000 AUC or request a Flood Plain determination if 1,000 AUC or greater. Submit one of the following:
  ☐ Include correspondence from the DNR showing the site is not in the 100-year floodplain or does not require a floodplain permit.
  ☐ Include a copy of the Floodplain Permit if a floodplain permit is required.

**Groundwater separation requirements:** (check one of the following boxes):
■ **A drain tile shall be installed along the footings to artificially lower the groundwater table, pursuant to 65.15(7)"b".**
☐ The drain tiles will have a device to allow shut off and monitoring, if the drain tiles do not have a surface outlet accessible in the property, as required in 65.15(7)"b".
☐ In lieu of the drain tile, a certification signed by a PE, a groundwater professional certified pursuant to 567 IAC Chapter 134, a qualified staff from NRCS or a qualified organization is being submitted indicating that the groundwater elevation, measured according to 567 IAC 65.15(7)"c," is below the bottom of the formed structure.

**Engineer's Certification**: I hereby certify that I have prepared a site-specific design for the formed manure storage structure[3](s) referenced above that complies with the minimum concrete standards of 567 IAC 65.15(14). A copy of the site-specific engineering report, plans and specifications will be available on site for the DNR's inspection.
*(Include PE engineering seal, stamp, signature in contrasting color ink and date.)*

| | |
|---|---|
| Company: | Wenck Associates, Inc. |
| Address: | 1012 5th Avenue, Windom, MN 56101 |
| Phone No. | 507-831-2703 |
| Fax No. | 507-831-5271 |

10/25/16

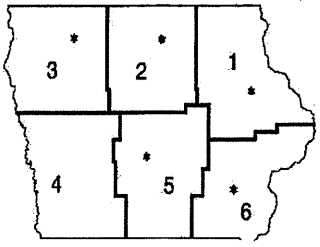
LICENSED PROFESSIONAL ENGINEER
DENNIS JOHNSON
10640
IOWA

**Contractor's Certification** If the PE will not be present on site observing critical points of construction, I hereby certify that I will construct the formed manure storage structure(s) referenced above according to the engineering design.

| (Print Contractor's Name) | (Contractor's Signature) | |
|---|---|---|
| Wenck Associates, Inc. | 209 W. South St., Tipton, IA 52772 | 563-886-6196 |
| (Company) | (Address) | (Phone No.) |

**Mailing Instructions**: Mail this "PE Design Certification" according to the following:

1. Operations with an AUC between 501 and 999 AU and constructing a formed manure storage structure, required to submit a manure management plan (MMP), prior to beginning construction must file this "PE Design Certification," the karst and alluvial soils documentation requested in pages 1 and 2, the MMP and fees to the nearest DNR Field Office:




| | | |
|---|---|---|
| Field Office 1<br>909 W Main St Ste 4<br>Manchester, IA 52057<br>(563) 927-2640 | Field Office 3<br>1900 N Grand Ave<br>Spencer, IA 51301<br>(712) 262-4177 | Field Office 5<br>7900 Hickman Rd Ste 200<br>Windsor Heights, IA 50324<br>(515) 725-0268 |
| Field Office 2<br>2300 15th St SW<br>Mason City, IA 50401<br>(641) 424-4073 | Field Office 4<br>1401 Sunnyside Ln<br>Atlantic, IA 50022<br>(712) 243-1934 | Field Office 6<br>1023 W Madison<br>Washington, IA 52353<br>(319) 653-2135 |

2. If a construction permit is required (AUC = 1,000 AU or more and constructing a formed manure storage structure), mail this form as required in the construction permit application form (DNR Form 542-1428).

If you have any questions regarding the concrete standards requirements and this PE Design Certification, contact an engineer of the AFO- Program at 712-262-4177, the nearest DNR Field Office, or visit www.IowaDNR.gov/afo.

For unpermitted and permitted confinement feeding operations

# Professional Engineer[1] (PE) Design Certification

This form is to be used in lieu of a Construction Design Statement (CDS) for confinement feeding operations with an Animal Unit Capacity (AUC)[2] of more than 500 Animal Units (AU), not required to have a PE, that are constructing a formed manure storage structure[3] with a site-specific design sealed by a PE. For more information contact the Department of Natural Resources (DNR) (see page 2 for contact information).

Name of operation: Grandview Farms West Sow Addition Facility ID No.: 59556

Location: SW (¼ ¼) SW (¼) 7 (Section) T79N, R3E (Tier & Range) Sheridan (Name of Township) Scott (County)

Describe the proposed confinement feeding operation structures: 61' x 242' finishing unit with a 61' x 226' x 8' deep pit

**Design Certification**: Pursuant to 567 Iowa Administrative Code (IAC) 65.15(14)"a" or "b", I prepared an engineering report, plans and specifications for the operation referenced above. Design considerations were in conformance with the following design methods:

| American Concrete Institute (ACI): | Portland Cement Association (PCA): | MidWest Plan Service (MWPS): |
|---|---|---|
| ☒ ACI 318 | ☐ EB 075 | ☐ MWPS 36 |
| ☐ ACI 360 | ☐ EB 001 | ☐ MWPS TR9 |
| ☐ ACI 350 | ☐ ISO 72 | |

In addition, for non-dry manure the following additional requirements of 567 IAC 65.15(14)"a"(1) will be met:

☒ 1. The floors shall be a minimum of 5 inches thick. Nondestructive methods to verify the floor slab thickness may be required by the DNR. The results shall indicate that at least 95 percent of the floor slab area meets the minimum required thickness. In no case shall the floor slab thickness be less than 4.5 inches.

☒ 2. Wire mesh shall not be used as primary reinforcement for a formed manure storage structure with a depth of 4 feet or more. Fiber shall not be used as reinforcement.

☒ 3. Waterstops shall be installed in all areas where fresh concrete meets hardened concrete. Waterstops shall be made of plastic, rolled bentonite or similar materials approved by the department.

☒ 4. The vertical steel of all walls shall be extended into the footing and be bent at 90° or a separate dowel shall be installed. As an alternate to the 90° bend, the dowel may be extended at least 12 inches into the footing, with a minimum concrete cover of 3 inches at the bottom. In lieu of dowels, mechanical means or alternate methods may be used as anchorage of interior walls to footings.

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☐ The Siting Atlas has indicated that the site is in karst. The upgraded concrete standards of 567 IAC 65.15(14)"c" are used:

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[1] PE includes a professional engineer licensed in the state of Iowa or an NRCS Engineer.

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LICENSED PROFESSIONAL ENGINEER
DENNIS JOHNSON
10640
IOWA

**Contractor's Certification** If the PE will not be present on site observing critical points of construction, I hereby certify that I will construct the formed manure storage structure(s) referenced above according to the engineering design.

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|---|---|---|
| Wenck Associates, Inc. (Company) | 209 W. South St., Tipton, IA 52772 (Address) | 563-886-6196 (Phone No.) |

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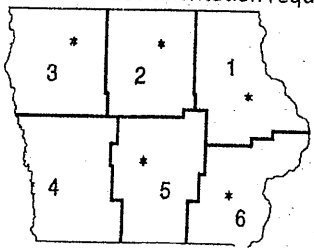


| | | |
|---|---|---|
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NOTE: NEW WELL NEAR SW CORNER OF BARN #2 AND EXISTING WELL HOUSE.

| REV | REVISION DESCRIPTION | DWN | APP | REV DATE |
|---|---|---|---|---|

SEAL

PRIME CONSULTANT
Wenck
© Wenck Associates, Inc. Consulting Engineers
Web Site: www.wenck.com
1012 5th Ave., Suite 1B
Windom, MN 56101
(507) 831-2703
(507) 831-5271

PROJECT TITLE
2016 West Sow Addition

Grandview Farms, Inc.
12090 West 240th Street
Eldridge, IA 52748

SHEET TITLE
Overall Site Plan
Option #2

| DWN BY | CHK'D | APP'D | DWG DATE |
|---|---|---|---|
| TNT | DJJ | DJJ | 11/14/2016 |

SCALE 1" = 200'

PROJECT NO. 1773-06
SHEET NO. C-101
REV NO.