

VARIANCE REQUEST

Iowa Department of Natural Resources

1. Date : 2/16/96 13. Decision: *Approved*
2. Review Engineer : *Fred Evans* Date: *2/2/96*
3. Date Received : *11/21/95, 1/17/96 & 1/25/96*
4. Facility Name : *Westend Apartments* 14. Appeal:
5. County Number : *8* Date:
6. Program Area : *CP*
7. Facility Type : *CU5*
8. Subject Area : *308*
9. Rule Reference : *64.2 (9) for variance & 64.2(3) a for separation*
10. Design Std. Ref. : *14.2.3*
11. Consulting Engr. : *FOX Engineering*
12. Variance Rule : *64.2 (9) c*

15. Description of Variance Request

A project has been submitted to construct an apartment complex at the west edge of Ames in Boone County. Since sanitary sewers are not available the designing engineer is proposing a septic tank & mound system to serve an average flow of 7,200 gpd. In a site survey by a Field Office staff member it was noted that a construction company office/shop was located approximately 300 feet east and 3 dwellings are located approximately 800-900 feet east of the mound site. Actual measurements provided on a site plan submitted by the engineer indicates that one of the dwellings is located more than 1000 feet from the site. A written agreement with the owner of this dwelling had been obtained prior to the measurement. In accordance with the department rules and design standards the owner of the office/shop and the elderly lady who owns both the dwellings located within the 1000 feet radius of the site were contacted for written agreements. Both owners declined out of concern for possible negative impacts on their properties, therefore, a variance from our separation distance requirements has been requested.

16. Consulting Engineer's Justification

This letter is in response to phone discussions with both Dick Sandal and Bob Schuelzky of your department related to the wastewater construction permit application for the Westend Apartment Project. They have indicated that they believe that the owner of the facility will have to obtain written waivers from all property owners within 1,000 feet of the proposed location of the mound disposal system for the project because of separation distance requirements. We would like to request a review of this requirement and its applicability to a mound disposal system. As I read the design standards for wastewater treatment plants, the regulations require that such waivers be obtained from owners of inhabitable buildings within 1,000 feet of the water surface of lagoons or treatment facilities. Since a mound system does not really have a water surface as such, we do not believe these requirements should apply. We believe the intent of the regulations is to protect surrounding properties from the nuisances of odor or esthetics from wastewater facilities. Since the mound system will not produce surface odors or even be apparent as a wastewater treatment system from the surface, these concerns would not seem to apply.

16. Consulting Engineer's Justification (cont.)

In support of our request for a different interpretation of the siting regulations, we have noted that the regulations related to land application of wastewater in section 21.1.1.2. require only a 300 foot separation distance from existing dwellings and public use areas. The sludge application regulations in section 567-67.8(2)k. for class II sludges, require only a 200 foot separation distance from inhabited residences. And finally, the On-Site Wastewater Treatment and Disposal System rules which apply to system below 15 persons, require only a separation distance of 10 feet from dwellings. It would seem that the subsurface disposal of partially stabilized wastewater would be no more objectionable than wastewater of sludge application to the surface of the land and should fall within the 200 or 300 foot rules. In past projects for septic tank mound systems for the Ames Golf and Country Club and the Technical Services Company in Ames, I do not recall the separation distance being an issue, but perhaps this was due to there being adequate distances.

We would appreciate your review of this issue and if possible the waiver of the 1,000 foot separation distance requirements for the project so that the construction permit may be issued. Please don't hesitate to contact me if you have any questions or comments regarding this request.

17. Department's Justification

It is recommended that a variance be granted based upon the engineer's justification and the following additional reasons:

- 1. The office/shop building is owned by a carpenter/cabinet-maker who uses the building as an office and work shop but not as a dwelling. A house that was previously located on the property has been demolished. The ground surface at the office/shop building is higher than the ground surface at the mound system.*
- 2. The two residences owned by an elderly lady, are located on the east side of the County line road. The road surface is higher than the adjacent ground on either side of the county line road. Also the ground surface at the two residences is in another drainage sub-area than the mound system.*
- 3. The nearest private well to the site is located more than 550 feet from the proposed mound system and at a higher ground elevation.*
- 4. The mound system is a buried non-discharging wastewater system; therefore, any possible adverse affects on the environment, water quality or aesthetics will be minimized.*

18. Precedents Used

Site separation variances previously approved for the cities of Albion, Bronson, Chillicothe, Eddyville, Fort Dodge, Oden, Ossian, Washington and West Chester. Variances also approved for The Meadow Lawn Nursing Center, Northridge Mall, Riverview Estates, Troy Mills S.D. and Beachland Inn MHP

9. Staff Reviewer

: Fred Evans

Date: *2/16/96*

20. Supervisor

: [Signature]

Date: *2/19/96*

21. Authorized by

: [Signature]

2/21/96

November 20, 1995



Mr. Fred Evans, P.E.
Wastewater Section, Environmental Protection Division
Iowa Department of Natural Resources
Wallace State Office Building
Des Moines, IA 50319

Re: Separation Distance Requirements
Westend Apartment Wastewater System - Ames, Iowa

Dear Fred:

This letter is in response to phone discussions with both Dick Sandal and Bob Schuelzky of your department related to the wastewater construction permit application for the Westend Apartment Project. They have indicated that they believe that the owner of the facility will have to obtain written waivers from all property owners within 1,000 feet of the proposed location of the mound disposal system for the project because of separation distance requirements. We would like to request a review of this requirement and its applicability to a mound disposal system. As I read the design standards for wastewater treatment plants, the regulations require that such waivers be obtained from owners of inhabitable buildings within 1,000 feet of the **water surface** of lagoons or treatment facilities. Since a mound system does not really have a water surface as such, we do not believe these requirements should apply. We believe the intent of the regulations is to protect surrounding properties from the nuisances of odor or esthetics from wastewater facilities. Since the mound system will not produce surface odors or even be apparent as a wastewater treatment system from the surface, these concerns would not seem to apply.

In support of our request for a different interpretation of the siting regulations, we have noted that the regulations related to land application of wastewater in section 21.1.1.2. require only a 300 foot separation distance from existing dwellings and public use areas. The sludge application regulations in section 567-67.8(2)k. for class II sludges, require only a 200 foot separation distance from inhabited residences. And finally, the On-Site Wastewater Treatment and Disposal System rules which apply to system below 15 persons, require only a separation distance of 10 feet from dwellings. It would seem that the subsurface disposal of partially stabilized wastewater would be no more objectionable than wastewater of sludge application to the surface of the land and should fall within the 200 or 300 foot rules. In past projects for septic tank mound systems for the Ames Golf and Country Club and the Technical Services Company in Ames, I do not recall the separation distance being an issue, but perhaps this was due to there being adequate distances.

We would appreciate your review of this issue and if possible the waiver of the 1,000 foot separation distance requirements for the project so that the construction permit may be issued. Please don't hesitate to contact me if you have any questions or comments regarding this request.

Sincerely:

A handwritten signature in dark ink, appearing to read "James A. Merideth".

James A. Merideth, P.E.

cc Dr. Prem Sahai
Rudi-Lee-Dryer Architects

FOX Engineering Associates, Inc.

1531 Airport Road, Ames, Iowa 50010



January 15, 1996

Mr. Fred Evans, P.E.
Wastewater Section, Environmental Protection Division
Iowa Department of Natural Resources
Wallace State Office Building
Des Moines, IA 50319

Re: Separation Distance Requirements
Westend Apartment Wastewater System - Ames, Iowa

Dear Fred:

This is a follow up to our previous communications regarding the wastewater system for Westend Apartments in Ames. As per your instructions, we approached those property owners within the 1,000 foot radius of the proposed mound system and requested a waiver from them to allow installation of the system within IDNR regulations. I have enclosed a sample of the letter and waiver form that we used in requesting these waivers. We also communicated with each of the owners personally by phone. The result is that one of the property owners has signed the waiver and the remainder have declined to do so due to concern that there may be some negative impact to their property or to their neighbors property by reason of the proposed installation. I think it is not too difficult to understand the reluctance of the people to willingly agree to the waiver since there is no personal benefit to them to do so and there may be some future detriment, however unlikely.

Based on our inability to obtain the requested waivers, we would repeat the owner's request that the IDNR waive the requirement for the 1000 foot separation. We would support this request with the same factors pointed out in our original letter where we stated that the most likely reasons for the separation distances, (i.e. to protect surrounding properties from the nuisances of odor or esthetics) do not apply to this situation. Further, we would point out that should there be a failure of the mound system, with the result that partially treated wastewater would come to the surface of the ground, such problems would remain on Dr. Sahai's property due to the natural slope of the areas around the mound.

We would appreciate your review of this issue and approval of the waiver of the 1,000 foot separation distance requirements for the project so that the construction permit may be issued. Please don't hesitate to contact me if you have any questions or comments regarding this request.

Sincerely:

A handwritten signature in cursive script that reads "James A. Merideth".

James A. Merideth, P.E.

cc Dr. Prem Sahai
Rudi-Lee-Dryer Architects



January 23, 1996

Mr. Fred Evans, P.E.
Wastewater Section, Environmental Protection Division
Iowa Department of Natural Resources
Wallace State Office Building
Des Moines, IA 50319

Re: Separation Distance Requirements
Westend Apartment Wastewater System - Ames, Iowa

Dear Fred:

In response to our phone conversation this morning in which you requested a plat showing the actual distances to habitable structures and private wells in the vicinity of the proposed wastewater system, we have prepared the enclosed drawing. As you can see by this drawing based on field data collected today, there are only three buildings and two wells within the 1,000 foot radius. In the earlier work we had used USGS mapping and based on that had included some additional buildings north and east of the 1,000 area. The one waiver that we were able to obtain was from one of those properties, however, I have enclosed a copy for your information. As you can see, we are at least 300 feet from the nearest building and over 550 feet from the nearest well with the proposed construction. Note also that the general drainage pattern around the mound is south and west, away from the adjacent properties. Actual elevation difference is not that great, but the properties are in another drainage sub-area.

We hope this additional information will allow you to reach a decision regarding the request for waiver of the separation distances.

Sincerely:

A handwritten signature in cursive script, appearing to read "James A. Merideth".

James A. Merideth, P.E.

cc Mr. Rudi Ramsaroop
Dr. Prem Sahai
Rudi-Lee-Dryer Architects

Post-It® Fax Note 7671		Date 1-26-96	# of pages 2
To Fred Evans	From Gary		
Co./Dept. DNR	Co. Fox Engineering		
Phone #	Phone # 233-8000		
Fax # 281-8895	Fax #		

December 1995

Mr. and Mrs. Kenneth W. Welty
Rural Route 4
Ames, Iowa 50010

re: Waiver of Separation for Wastewater Facility

Dear Mr. and Mrs. Welty:

I am writing to you representing Dr. Prem Sahai requesting that you sign a Waiver of Separation for a proposed wastewater treatment system to be constructed by Dr. Sahai to serve his Westend Apartment Project. The apartment project is being constructed at the southwest corner of Lincolnway and County Line Road in Boone county. Since the City of Ames has refused to allow the project to connect to city water or sewer service because they are outside of the City Limits, Dr. Sahai contracted with our firm to design an on-site wastewater disposal system to serve the apartments. The design we have developed involves use of a septic tank and mound type subsurface disposal system. The septic tank is to be located on the site of the apartment building construction, however, sufficient space was not available on that site for construction of the mound disposal system. The mound has been located in the farm field west of the site of the former Red Barn Supper Club. A site map is enclosed showing the location of the apartments, septic tank, and mound for your information.

The mound itself consists of a large one-foot-deep sand bed constructed at the surface of the ground with a one-foot-deep gravel bed constructed on top of the sand. The sand and gravel are then covered with one to two feet of soil on which grass is planted. Partially stabilized wastewater that has passed through the septic tank will be pumped to the mound where it is distributed into the rock layer and then passes through the sand layer and into the soils beneath the mound. Normal operations will not result in any wastewater reaching the ground surface over or around the mound and the wastewater should be completely stabilized before it reaches the ground water table. No odors or other adverse environmental impact should affect your property due to this construction. The concept for the system is identical to the septic tank and tile system that probably serves your property except that it is designed to serve more than 15 persons, the cutoff point at which State Permit Requirements apply. A similar system was designed and installed at the Ames Golf and Country club several years ago and has operated without problems since its installation. The Ames Golf and Country Club mound can be seen from the County Road in the open grass area south of the tennis courts and swimming pool.

If you are willing to agree to allow this system to be constructed at the location shown on the ap, please sign the enclosed waiver form and return it to us. An extra copy is included for your files. This form should be notarized and we have a notary in our office that can provide that function if you would like to bring the form in and sign it in her presence. If this is a problem, we can arrange to have her come to your home or business to notarize the signature. Once approved, the forms will be furnished to the Iowa Department of Natural Resources (IDNR) and also be recorded with the County Recorder's Office.

If we are not able to obtain the necessary waivers from you and your neighbors, we will request that the IDNR approve the construction permit without the waivers. The IDNR would then have to make a determination about whether or not they will approve the requested construction. They do have the authority to approve the construction without waivers but we have no advance knowledge as to what their decision would be in this regard.

I would like to thank you in advance for taking the time to consider this request. I will be contacting you within a few days to answer any questions you may have with regard to the request and the proposed construction. If you wish to contact us, please feel free to do so by phone or in person at the address and phone numbers listed on the letterhead.

The engineer with whom we have been dealing at the Iowa Department of Natural Resources is Mr. Fred Evans. His Address is; Fred Evans, Wastewater Division, Iowa Department of Natural Resources, Wallace State Office Building, Des Moines, Iowa 50319, and his phone number is 515-281-8995. I'm sure he would also be willing to answer questions related to this request.

Sincerely:

James A. Merideth, P.E.

WAIVER OF SEPARATION

I hereby agree that I am familiar with the proposed Septic Tank/Mound project to be constructed by Dr. Prem Sahai in connection with the Westend Apartment project. I understand that the separation requirement from a commercial or residential building established by the Iowa Department of Natural Resources is 1000 feet or 90% of the existing distance, whichever is less. I further understand that the distance from the proposed mound to my building is less than 1000 feet.

I hereby agree to waive the separation distance requirement as it relates to my building located on the property described as follows.

Legal Description:

The West 258 feet of the South 131 feet of the N 1/3 of the N fractional 1/2 of the SW 1/4 of Section 6, Township 83 N, Range 24 W of the 5th P.M., Story County, Iowa, subject to public highway.

SIGNED: Kenneth Webb

SIGNED: Tracy Welton

DATE: 12-14-95

STATE OF IOWA

On this 14th day of December, 1995 before me a Notary Public in and for said State, appeared Kenneth + Tracy Welton to me known to be the person named in and who executed the forgoing instrument, and acknowledged the same voluntary act and deed.

James A. Dudding
Notary Public