

June 5, 2006

The Mahaska County Board of Supervisors met in regular session on the above date at 9:00 a.m. in the third floor conference room of the Mahaska County courthouse. Present were the following board members: Chairman – Greg Gordy; Vice chairman – Lawrence Rouw; member – Henry W. VanWeelden. Also present were the following: – Linda Forsythe; Kathy Anderson – members of the Employee health insurance committee; Sue Salisbury, Oskaloosa Herald; Terry Holub, New Sharon Sun; Scott Dailey, KBOE Radio; Joleen Arnold, Mahaska County CPC; Michael Gipple, Mahaska County Conservation Director; Paul DeGeest, Mahaska County Sheriff; Jerome Nusbaum, Mahaska County Engineer; Don Russell, Mahaska County Sanitarian; Logan Ogden, Mahaska County Conservation Department; Brandt Smith, Secondary Road Department; Duane McDonald and Jason Spooner, Manatt's and Kay Swanson, Mahaska County Auditor.

Chairman Gordy called the meeting to order with a moment of silence.

It was moved by Rouw seconded by VanWeelden to approve the agenda for today's meeting. All present voted aye. Motion carried.

It was moved by Rouw seconded by Gordy to approve the minutes of the May 15th meeting. All present voted aye. Motion carried.

It was moved by Rouw seconded by VanWeelden to approve the bills for May in the amount of \$903,420.40. All present voted aye. Motion carried.

It was moved by Rouw seconded by VanWeelden to approve the following contract extension for Ten-Fifteen Transit for fiscal year July 1, 2006-June 30, 2007. All present voted aye. Motion carried.

TO: MAHASKA COUNTY CPC

RE: Contract Extension July 1, 2006 through June 30, 2007

DATE: May 15,2006

WHEREAS, MAHASKA COUNTY CPC, has an interest in the provision of transportation services, and

WHEREAS, 10-15 Transit currently contracts with MAHASKA COUNTY CPC for the provision of these transportation services, and,

WHEREAS, 10-15 Transit Board of Directors has unanimously voted to maintain the same terms and conditions for MAHASKA COUNTY CPC, including the option to renew or extend the current contract,

NOW, THEREFORE, THE PARTIES DO HEREBY MUTUALLY AGREE AS FOLLOWS:

1. The contract period shall be extended and begin on July 1, 2006 through June 30, 2007.
2. The service description provided in the FY 07 contract shall stand, unless amended in writing by MAHASKA COUNTY CPC.
3. The responsibilities of 10-15 Transit and MAHASKA COUNTY CPC shall stand, unless amended in writing by either 10-15 Transit or MAHASKA COUNTY CPC.
4. The compensation for services provided shall stand, unless amended in writing by 10-15 Transit, as provided in Section E, Item 2 of the FY 06 Contract.
5. All other elements of the contract shall stand, unless amended in writing by 10-15 Transit or MAHASKA COUNTY CPC.

ADOPTED BY THE PARTIES AS WITNESSED AND DATED BELOW.

s/Greg Gordy
 Chairman,
 FOR: MAHASKA COUNTY CPC
 DATE:

By: _____
 Don Greenlee, Chairman
 FOR: 10-15 Transit
 DATE:

It was moved by Rouw seconded by VanWeelden to approve the County Provider and Program Participation Agreement with St. Luke's Hospital for fiscal year July 1, 2006 through June 30, 2007. All present voted aye. Motion carried.

County Provider and Program Participation Agreement
 With St. Luke's Hospital
 ATTACHMENT A

SERVICE DEFINITIONS AND RATES

Service Description	Unit of Service*	Rate
	H=Hourly	
	D=Daily	
	½=1/2 Day	
	M=Monthly	
Provide Detoxification and Psychiatric Services due to a committal exclusive of medical doctor charges. The per diem is from date of admission through the date of discharge for Mental and Substance Abuse Committals. The per diem is for a maximum of two days on Emergency Orders. This per diem covers adult, child and adolescent patients.	DAY	\$474.05
Provide Psychiatric Physician Services if the admitting Psychiatrist is Dr. Larson or Dr. Stutts. (Dr. Larsen is on contract with St. Luke's Hospital and Dr. Stutts does coverage for him. St. Luke's does physician billing for these two psychiatrists. All other admitting psychiatrists will bill for their	Admission Day Daily Care Commitment	150 50

own services.)

Testimony 100

Provide initial medical exam in the Emergency Room by a St. Luke's Emergency Room Physician. ER Medical Exam 150

The above rates shall be effective July 1,2006 through June 30,2007. This Attachment has been executed by the parties hereto, through their duly authorized officials.

It was moved by VanWeelden seconded by Rouw to approve the following Contract for Mental Health Services between Mahaska County and Mahaska Health Partnership Community Health for fiscal year July 1, 2006 – June 30, 2007. All present voted aye. Motion carried.

CONTRACT FOR MENTAL HEALTH SERVICES
BETWEEN MAHASKA COUNTY AND
MAHASKA HEALTH PARTNERSHIP COMMUNITY HEALTH

THIS AGREEMENT entered into this 1st day of July, 2006 by and between Mahaska County, and legal subdivision of the subdivision of the State of Iowa, hereinafter referred to as "County", and Mahaska Health Partnership Community Health, a non-profit agency, hereinafter referred to as provider.

Now, therefore the parties do hereby mutually agree as follows:

I. The County agrees:

1. To provide training on the CPC process.
2. Issue funding agreement when appropriate.
3. Pay all claims in a timely fashion.
4. Will comply with all state and federal laws / rules on confidentiality.
5. Will comply with HIPAA guidelines.
6. Will comply with the Mahaska County managed care plan.
7. Will assist in completing CPC Applications for new clients

II. The Provider agrees:

1. To provide mental health services as outlined in provider profile at rates outlined in provider profile.(see attached
2. To comply with all federal / state rules / laws.
3. To comply with HIPAA guidelines.
4. To provide billing in a timely manner.
5. Comply with Mahaska County managed care plan.
6. Will assist in completing CPC Applications or refer client directly to CPC for assistance.

III. The County and Provider mutually agree:

A. Effective date:

1. This agreement shall begin on July 1, 2006, at 12:01 AM.
2. This agreement shall end on June 30,2007, at 12:00 midnight.

B. Assurance of Civil, Human and Legal Rights of County Residents:

1. The civil, human and legal rights of County residents utilizing the services of the provider shall be protected, specifically including the right to decline disclosure of the resident's name, or other readily recognizable identifying information.
2. The refusal of a County resident to disclose information or to secure information about him or her, by the staff of the Provider shall not be justification for denying the clinical services to said County resident, except in cases in which such disclosures or securing information is deemed by the County as necessary to the effective utilization of said services, or as may be required by Iowa Law.

C. Renegotiation or Modification:

Any alterations, variations, modifications, or waivers of provisions of this agreement shall only be valid when they have been reduced to writing duly signed, and attached to the original of this agreement. The parties agree to renegotiate this agreement if Federal or State revision of any applicable laws or regulations make amendment to this agreement necessary.

D. Financial Support Plan.

1. Funding of all third party insurance options will be reasonably pursued for reimbursement prior to county coverage.
2. Reimbursement rates listed as an attachment in the provider profile will be followed for county eligible clients.

E. Termination:

This agreement, or part of this agreement, may be terminated by either party at any time, upon no less than six months notice in writing to the other party. Said notice shall be delivered by certified mail or in person.

F. All terms and conditions included in agreement:

This agreement contains all terms and conditions agreed upon by the parties. No other agreements oral or otherwise, regarding the subject matter of this agreement, shall be deemed to exist, or to bind any of the parties hereto.

The parties hereto have caused this agreement to be executed by their officials thereunto duly authorized.

Mutually agreed this 1st day of July, 2006.

By: s/Deb Beaty, RN, BSN

Date signed 5-31-06

MAHASKA HEALTH PARTNERSHIP COMMUNITY HEALTH

TITLE; Director

BY: s/ Greg Gordy
FOR MAHASKA COUNTY STATE OF IOWA
TITLE; Supervisor, Chair

Date signed : 6-5-06

It was moved by VanWeelden seconded by Rouw to approve the following Contract for Mental Health Services between Mahaska County and Mahaska Health Partnership New Directions for fiscal year July 1, 2006 – June 30, 2007. All present voted aye. Motion carried.

**CONTRACT FOR MENTAL HEALTH SERVICES
BETWEEN MAHASKA COUNTY AND
MAHASKA HEALTH PARTNERSHIP NEW DIRECTIONS**

THIS AGREEMENT entered into this 1st day of July, 2006 by and between Mahaska County, and legal subdivision of the subdivision of the State of Iowa, hereinafter referred to as "County", and Mahaska Health Partnership New Directions, a non-profit agency, hereinafter referred to as provider.

Now, therefore the parties do hereby mutually agree as follows:

I. The County agrees:

1. To provide training on the CPC process.
2. Issue funding agreement when appropriate.
3. Pay all claims in a timely fashion.
4. Will comply with all state and federal laws / rules on confidentiality
5. Will comply with the managed care plan.

II. The Provider agrees:

1. To provide mental health services as outlined in provider profile at rates outlined in provider profile.(see attached)
2. To comply with all federal / state rules / laws.
3. To provide billing in a timely manner.
4. Comply with Mahaska County managed care plan.

III. The County and Provider mutually agree:

A. Effective date:

1. This agreement shall begin on July 1,2006 at 12:01 AM.
2. This agreement shall end on June 30,2007, at 12:00 midnight.

B. Assurance of Civil, Human and Legal Rights of County Residents:

1. The civil, human and legal rights of County residents utilizing the services of the provider shall be protected, specifically including the right to decline disclosure of the resident's name, or other readily recognizable identifying information.
2. The refusal of a County resident to disclose information, or to secure information, or to secure information about him or her, by the staff of the Provider shall not be justification for denying the clinical services to said County resident, except in cases in which

such disclosures or securing information is deemed by the County as necessary to the effective utilization of said services, or as may be required by Iowa Law.

- C. Renegotiation or Modification:
Any alterations, variations, modifications, or waivers of provisions of this agreement shall only be valid when they have been reduced to writing duly signed, and attached to the original of this agreement. The parties agree to renegotiate this agreement if Federal or State revision of any applicable laws or regulations make amendment to this agreement necessary.
- D. Termination:
This agreement, or part of this agreement, may be terminated by either party at any time, upon no less than six months notice in writing to the other party. Said notice shall be delivered by certified mail or in person.
- E. All terms and conditions included in agreement:
This agreement contains all terms and conditions agreed upon by the parties. No other agreements oral or otherwise, regarding the subject matter of this agreement, shall be deemed to exist, or to bind any of the parties hereto.
The parties hereto have caused this agreement to be executed by their officials thereunto duly authorized.

Mutually agreed this 1st day of July, 2006.

s/Mahaska Health Partnership New Directions	Date signed 5-26-06
s/ Greg Gordy	
Chairman, Mahaska County Supervisor	Date signed 6-5-06

It was moved by Rouw seconded by VanWeelden to approve the following agreement to participate in the Southeast Iowa Contracting consortium 28E Agreement July 1, 2006 until June 30, 2008. All present voted aye. Motion carried.

MAHASKA COUNTY BOARD OF SUPERVISORS

Authorization to Participate in the Southeast Iowa Contracting Consortium 28E Agreement

WHEREAS, the Mahaska County Board of Supervisors desires to cooperate in ways of mutual advantage to contract for services to meet Mahaska county residents' needs in the area of mental health, mental retardation, and developmental disabilities, and

WHEREAS, there is opportunity for the Board of Supervisors to extend their participation in the Southeast Iowa Contracting 28E Agreement (hereafter referred to as the "Agreement") to realize the advantages of a ten (10) county contracting consortium

and,

WHEREAS, the Board of Supervisors agrees to abide by the guidelines set forth in the Agreement

NOW BE IT RESOLVED that the Board of Supervisors authorizes its member of the Southeast Iowa Contracting Consortium Board of Directors to act on the Board of Supervisors to continue Mahaska County's involvement in the Southeast Iowa Consortium 28E Agreement as presented and approved by the Southeast Iowa Contracting Consortium Board of Directors for the year July 1, 2006 until June 30, 2008.

AUTHORIZED BY THE MAHASKA COUNTY BOARD OF SUPERVISORS
ON THIS THE 5th DAY OF June 2006.

Signed by:

s/Greg Gordy

Chair, Mahaska County Board of Supervisors

Attested by: s/ Kay Swanson

Auditor, Mahaska County

It was moved by Rouw seconded by VanWeelden to approve the following 28E Agreement between the City of Eddyville, Iowa and Mahaska County. All present voted aye. Motion carried.

28E AGREEMENT

This Agreement, entered into by and between the City of Eddyville, Iowa, a municipal corporation, hereinafter called "the City", and Mahaska County, Iowa, a political subdivision, hereinafter called "the County", is duly authorized by Chapter 28E of the Code of Iowa.

The City desires to have law enforcement services and the County, through the Office of the Sheriff, has the manpower and equipment necessary to provide said services.

Therefore, the said City and County, in a spirit of cooperation between these public agencies, agree with each other under the following terms and conditions as follows:

1. The County shall provide, through the Office of the Sheriff, law enforcement services and all persons and equipment necessary therefore to said City.
2. The said law enforcement services shall consist of patrol and traffic enforcement which shall be provided to said City for a minimum of twenty hours per week.
3. The City shall pay the County the sum of \$25,000.00 per year as reimbursement for expenses in relation to carrying out this Agreement.

4. The City shall pay the General Fund of the County quarterly on the following schedule or the first business day thereafter:

- July 1, 2006 - \$6,250.00
- October 1,2006 - \$6,250.00
- January 1,2006 - \$6,250.00
- April 1,2006 - \$6,250.00

5. The duration of this Agreement shall be for one year and neither party may terminate it without the express written permission of the other party.

6. The Agreement shall commence on the 1st day of July, 2006.

7. This Agreement shall be supervised by the Mayor and Council of the City and Sheriff of the County.

8. In accordance with Section 28E.7 of the Code of Iowa, 2005, this Agreement does not relieve any of the parties hereto of any obligation or responsibility imposed upon it or them by law, except that to the extent of actual and timely performance thereof by any contracting party hereto, said performance may be offered in satisfaction of the obligation or responsibility.

9. The City shall file a copy of this Agreement with the Secretary of the State and cause a copy hereof to be recorded with the County Recorder.

10. The provisions of Chapter 573A of the Code of Iowa, 2005, for termination of agreements in the event of a national emergency, apply to this Agreement.

Dated this day of _____ June, 2006.

ATTEST:

City Clerk

ATTEST:

s/ Kay Swanson
County Auditor
APPROVED;
s/ Paul DeGeest
Sheriff

CITY OF EDDYVILLE, IOWA
A Municipal Corporation
BY:

Mayor

COUNTY OF MAHASKA, IOWA
A Political Subdivision

s/Greg Gordy
Chairman, Board of Supervisors

It was moved by Rouw seconded by VanWeelden to approve the request of the employee health insurance committee to participate one time in the Auxiant's Partnership Plus Health Management Program and to make it

mandatory for all county employees. Said screening will be held in September. All present voted aye. Motion carried.

It was moved by Rouw seconded by VanWeelden to approve the acquisition of the following real estate near Union Mills for the Conservation Department: NE ¼ of the NW ¼ of the NE ¼ of Section 27 Township 77 Range 15; Lot One of the SW ¼ of the SE ¼; Lot B of the SW ¼ of the SE ¼; the South 12.25 acres of Lot 3 of the NW ¼ of the SE ¼ and the E ½ of the SW ¼ East of the river except the N 8 acres thereof, all in Section 22 Township 77 Range 15. All present voted aye. Motion carried.

It was moved by VanWeelden seconded by Gordy to accept the property from the estate of Marie D. Caldwell to be used by the Conservation Board and to be named "Caldwell Park". Lots 3, 4 and 6 of the Southwest one-quarter of the Southeast one-quarter; Lots 1 and 2 and all of that part of the Southeast one-quarter of the Southwest one-quarter of said section South of the former railroad right-of-way owned by me all in Section 17, Township 75, Range 15; and Lot 3 of the Northwest one-quarter of the Northeast one-quarter and the East half of the Northeast one-quarter of the Northwest one-quarter all in Section 20, Township 75, Range 15; and all of the former railroad right-of-way owned by me in said sections; be used as a public part or recreational area for the people of Mahaska County, Iowa, and the public generally. All present voted aye. Motion carried.

It was moved by VanWeelden seconded by Rouw to open the public hearing for the On-Site Wastewater Treatment and Disposal ordinance. All present voted aye. Motion carried. There were no oral or written comments. It was moved by VanWeelden seconded by Rouw to close the public hearing. All present voted aye. Motion carried.

It was moved by VanWeelden seconded by Rouw to approve this third reading of the On-site Wastewater Treatment and Disposal Ordinance #128. Roll call vote: Rouw – aye; VanWeelden – aye; Gordy –aye. Motion carried.

ON-SITE WASTEWATER TREATMENT AND DISPOSAL

Chapter I

On-Site Wastewater Treatment and Disposal

A regulation relating to permits, licensing, and standards for the treatment and disposal of private sewage and liquid waste for the promotion of public health in Mahaska County, Iowa; and providing penalties for the violation of the provisions hereof.

This ordinance replaces the preceding Ordinance # 123 which was adopted on December 2, 2002.

The Mahaska County Board of Health, pursuant to the authority of Iowa Code Section 455B. 172, hereby adopts the following regulations to wit;

1.1 Definitions - Section A

1.1 (01) "ADMINISTRATIVE AUTHORITY" is the Mahaska County Health Director or his/her authorized representative as authorized by Iowa Code section 137.6.

1.1 (02) "APPROVED" means accepted or acceptable under an applicable specification stated or cited in these rules, or accepted as suitable for the proposed use by the Administrative Authority.

1.1(03) "AREA DRAIN" means a drain installed to collect surface or storm water from an open area of a building or property.

1.1 (04) "ARTICLES AND MATERIALS" shall mean any substances or goods, such as but not limited to, automobiles, auto parts, lumber, wood, metal objects, plastic and concrete objects.

1.1 (05) "BIOFILTER" means a secondary treatment option which includes peat moss, crushed grass, other organic product as a treatment media.

1.1 (06) "BOARD OF HEALTH" means the Mahaska County Board of Health.

1.1 (07) "BEDROCK" is any rock which cannot be excavated by normal trenching equipment, is so slowly permeable that it will not transmit effluent, or has open fractures or solution channels.

1.1 (08) "BUILDING DRAIN" is that part of the lowest horizontal piping of a house drainage system which receives the discharge from soil, waste, and other drainage pipes inside the walls of any building and conveys the same to the building sewer.

1.1 (09) "BUILDING SEWER" is that part of the horizontal piping from the building wall to its connection with the main sewer or the primary treatment portion of an on-site wastewater treatment and disposal system conveying the drainage of one building site.

1.1 (10) "CENTRAL SYSTEM" means a central wastewater collection and treatment center approved by the Board of Health and, when so required, approved also by the Department.

1.1 (11) "CHAMBER SYSTEM" is a buried structure, typically with a domed or arched top, providing at least a six-inch height of sidewall soil exposure, creating a covered open space above a buried soil infiltrative surface.

1.1 (12) "CONVENTIONAL" when used in reference to sewage treatment means a soil absorption system involving a series of two or three foot wide trenched filled with gravel one foot deep, containing a four inch diameter rigid pipe to convey the sewage effluent.

1.1 (13) "COUNTY" means Mahaska County, Iowa.

1.1 (14) "DEPARTMENT" means the Iowa Department of Natural Resources.

1.1 (15) "DISTRIBUTION BOX" is a structure designed to accomplish the equal distribution of wastewater to two or more soil absorption trenches.

1.1 (16) "DOSING" is a measured application of effluent by mechanical or other means from an approved wastewater treatment facility, such as a septic tank, into an approved wastewater disposal system. Dosing utilizes the disposal system more effectively than a conventional gravity flow type system.

1.1 (17) “DRAINAGE DITCH” is any watercourse meeting the classification of a “general use segment” under rule 567—61.3 (455B) which includes intermittent watercourses and those watercourses which typically flow only for short periods of time following precipitation in the immediate locality and whose channels are normally above the water table.

1.1 (18) “DROP BOX” is a structure to divert wastewater flow into a soil absorption trench until the trench is filled to a set level, then allow any additional waste, which is not absorbed by the trench, to flow to the next drop box or soil absorption trench.

1.1 (19) “DWELLING” is any house or building or portion thereof, which is occupied in whole or in part as the home or residence of one or more human beings, either permanently or transiently.

1.1 (20) “FILL SOIL” means clean soil, free of debris or large organic material, which has been mechanically moved onto a site and has been in place for less than one year.

1.1 (21) “FOUNDATION DRAIN” means that portion of a building drainage system provided to drain groundwater from the outside of the foundation or over or under the basement floor not including any wastewater and not connected to the building drain.

1.1 (22) “FREE ACCESS FILTER (OPEN FILTER)” means an intermittent sand filter constructed within the natural soil or above the ground surface with access to the distributor pipes and top of the filter media for maintenance and media replacement.

1.1 (23) “GARBAGE” the putrescible and vegetable wastes resulting from the handling, preparation and consumption of food.

1.1 (24) “GRAVEL” means stone screened from river sand or quarried. Concrete aggregate designed as Class II by the department of transportation is acceptable.

1.1 (25) “GRAVELLESS PIPE SYSTEM” means an absorption system comprised of large diameter (8 and 10 inches) corrugated plastic pipe, perforated with holes on a 120-degree are centered on the bottom, wrapped in a sheath of geotextile filter wrap and installed level in a trench without gravel bedding or cover.

1.1 (26) “HEALTH HAZARD” any condition which, can or has the potential, to cause injury or sickness to human life, animal life or to the environment.

1.1 (27) “INDIVIDUAL MECHANICAL AEROBIC WASTEWATER TREATMENT SYSTEM” means an individual wastewater treatment and disposal system employing bacterial action which is maintained by the utilization of air or oxygen and includes the aeration plant and equipment and the method of final effluent disposal.

1.1 (28) “INTERMITTENT SAND FILTERS” are beds of granular materials 24 to 36 inches deep underlain by graded gravel and collecting tile. Wastewater is applied intermittently to the surface of the bed through distribution pipes or troughs and the bed is underdrained to collect and discharge the final effluent. Uniform distribution is manually obtained by dosing so as to flood the entire surface of the bed. Filters may be designed to provide free access (open filters), or may be buried in the ground (buried filters or subsurface sand filters).

1.1(29) "LAKE" means a natural or man-made impoundment of water with more than one acre of water surface area at the high water level.

1.1 (30) "LIMITING LAYER" means bedrock, seasonally high groundwater level, or any layer of soil with a stabilized percolation rate exceeding 60 minutes for the water to fall one inch or clay loam and clay soils.

1.1 (31) "MOUND SYSTEM" is an alternative above ground system used to absorb effluents from septic tanks in cases where either seasonally high water table, high bedrock conditions, slowly permeable soils or limited land areas prevent conventional subsurface absorption systems.

1.1 (32) "NON-PUBLIC WATER SUPPLY" shall mean a water system that has less than fifteen service connections or serves less than twenty-five people; or one that has more than fifteen service connections or serves more than twenty-five people for less than sixty days a year.

1.1 (33) "ON-SITE WASTEWATER TREATMENT AND DISPOSAL SYSTEM" means all equipment and devices necessary for proper collection, storage, treatment, and disposal of wastewater from four or fewer dwelling units or other facility serving the equivalent of 15 persons (1,500 gpd) or less. This includes domestic waste whether residential or nonresidential but does not include industrial waste of any flow rate. Included within the scope of this definition are building sewers, septic tanks, subsurface absorption systems, mound systems, sand filters, gravelless systems, chamber systems, and individual mechanical aerobic wastewater treatment systems.

1.1 (34) "PERSON" means a natural individual person only.

1.1 (35) "POND" means a man-made impoundment of water with a water surface area of one acre or less at the high water level.

1.1 (36) "PRIMARY TREATMENT" is a unit or system to separate the floating and settleable solids from the wastewater before the partially treated effluent is discharged for secondary treatment.

1.1 (37) "PROFESSIONAL SOIL ANALYSIS" is a field test which depends upon a knowledgeable person evaluating the soil factors, such as color, texture, and structure, in order to determine an equivalent percolation rate. Demonstrated training and experience in soil morphology (testing absorption qualities of soil by the physical examination of the soil's color, mottling, texture, structure, topography, and hillslope position) shall be required to perform a professional soil analysis.

1.1 (38) "PUBLIC SEWER" the entire sewage system including collection, treatment and ultimate disposal, which serves two or more connections.

1.1 (39) "PUBLIC WATER SUPPLY" shall mean a water supply for the provision to the public of piped water for human consumption if such system has at least fifteen service connections or regularly serves an average of at least twenty-five individuals daily at least sixty days out of the year.

1.1 (40) "PUMPING CONTRACTOR" a person engaged in the business of cleaning privy, vaults, cesspools, and septic tanks.

1.1 (41) "REASONABLY ACCESSIBLE" as it applies to a connection to a public sewer system or public water supply shall mean a determination made by the Administrative Authority as to the practicality of the connection.

1.1 (42) "REFUSE" all putrescible and non-putrescible solid wastes except human body wastes, and shall include, but not limited to, garbage, rubbish, ashes, street cleanings, dead animals, and abandoned automobiles.

1.1 (43) "ROOF DRAIN" is a drain installed to receive water collecting on the surface of a roof and discharging into an area or storm drain system.

1.1 (44) "SECONDARY TREATMENT SYSTEM" is a system which provides biological treatment of the effluent from septic tanks or other primary treatment units to meet minimum effluent standards as required in these rules and NPDES General Permit No. 4. Examples include soil absorption systems, sand filters, mechanical aerobic systems, or other systems providing equivalent treatment.

1.1 (45) "SEPTAGE" means the liquid contents (including sludge and scum) of a septic tank normally pumped out periodically and transported to another site for disposal.

1.1 (46) "SEPTIC TANK" is a watertight structure into which wastewater is discharged for solids separation and digestion, referred to as the closed portion of the treatment system.

1.1 (47) "SLUDGE" means the digested or partially digested solid material accumulated in a wastewater treatment facility.

1.1(48) "STORM DRAIN" is a drain used for conveying rainwater, groundwater, subsurface water, condensate, cooling water or other similar discharge to a storm sewer or combined sewer.

1.1 (49) "STREAM" means any watercourse listed as being a "designated use segment" in rule 567-61.3 (455B) which includes any watercourse which maintains flow throughout the year, or contains sufficient pooled areas during intermittent flow periods to maintain a viable aquatic community of significance.

1.1 (50) "SUBSURFACE ABSORPTION SYSTEM" is a system of perforated conduits connected to a distribution system, forming a series of subsurface, water-carrying channels into which the primary treated effluent is discharged for direct absorption into the soil (referred to as part of the open portion of the treatment system).

1.1 (51) "SUBSURFACE SAND FILTER" is a system in which the effluent from the primary treatment unit is discharged into perforated pipes, filtered through a layer of sand, and collected by lower perforated pipes for discharge to the surface of a subsurface absorption system. A subsurface sand filter is an intermittent sand filter which is placed within the ground and provided with a natural topsoil cover over the crown of the distribution pipes.

1.1 (52) "TIME OF SALE" means the first day any buyer or transferee becomes obligated under any purchase agreement or contract for sale, deed, unless such obligation is later rescinded by the parties.

1.1 (53) "TRASH OR RUBBISH" shall include, but not be limited to tin cans, paper, metal scraps, automobile parts, glass, wood, and yard clippings, or abandoned heavy household appliances.

1.1 (54) "WASTEWATER" is the water-carrying water derived from ordinary living processes, including but not limited to the discharge of effluent from any onsite waste water treatment and disposal system.

1.1 (55) “WASTEWATER MANAGEMENT DISTRICT” means an entity organized in accordance with permitting legislation to perform various specific functions such as planning, financing, construction, supervision, repair, maintenance, operation and management of on- site wastewater treatment and disposal systems within a designated area.

1.1 (56) “NUISANCE” As defined in Chapter 657 of the Code of Iowa.

1.1 Section B. Rodent Control

1.1 (56) 1. “RODENT HARBORAGE” shall mean any condition that provides shelter or protection for rodents, thus favoring their multiplication and continued existence in under or outside any structure.

2. It shall be unlawful for any person to place, leave, dump, or permit to accumulate any garbage, rubbish or trash in any structure or on any property so that the same may accumulate any garbage, rubbish or trash in any structure or on any property so that the same may afford food or harborage for rodents.

3. It shall be unlawful for any person to permit to accumulate on any property any articles or materials that may constitute a rodent harborage. Such articles or materials shall be placed on racks that are elevated not less than eighteen inches above the ground and evenly piled or stacked.

4. Upon receipt of a written notice or order from the Local Board or its authorized agent, the owner of any property specified therein shall take immediate measures for rodent control. In the event such control measures are not instigated within the time designated, the Local Board may instigate condemnation and destruction proceedings or take such action as is deemed necessary.

1.1 Section C Garbage and Refuse

1.1 (01) 1. No owner or lessee of any public or private premises shall permit to accumulate upon his or her premises any garbage or refuse except in covered containers approved by the Health Officer. Such containers shall be constructed in such a manner as to be strong, not easily corrodible, rodent proof, insect proof and shall be kept covered at all times except when garbage and refuse is being deposited therein or removed therefrom.

1.2 Illegal Discharge of Wastewater

1.2 (01) It is prohibited to discharge any wastewater from on-site wastewater treatment and disposal systems (except under an NPDES permit) to any ditch, stream, pond, lake, natural or artificial waterway, county drain tile, surface water drain tile, land drain tile, or to the surface of the ground. Under no conditions shall wastewater from on-site wastewater treatment and disposal systems be discharged to any abandoned well, agricultural drainage well or sinkhole. Existing discharges to any of the above-listed locations or structures shall be eliminated by constructing a system which is in compliance with the requirements of these rules.

1.3 Pre-Existing OnSite Wastewater Treatment and Disposal Systems

1.3 (01) No person, firm, partnership, corporation or other public or private entity shall connect an existing on-site wastewater treatment and disposal system to a pre-existing or new structure without the prior approval from the county health department. The county health department shall be notified in writing, to include and not limited to, documentation and a valid permit. The health officer shall determine if a sewage disposal system is adequate.

1.3 (02) If a valid permit has not been issued, the county health department shall evaluate the sewage disposal system to determine if the construction is in accordance with these regulations and is adequate to serve the pre-existing or new structure. If the sewage system is in accordance with these regulations and adequate, the person, firm, partnership, corporation or other public or private entity shall file for a valid sewage permit.

1.3 (03) If a valid permit has not been issued and the sewage disposal system construction is not in accordance with these regulations, connection of the sewage disposal system to a pre-existing or new structure shall be denied and a valid permit shall be applied for in the county health department.

1.4 Permit Requirements

1.4 (01) No on-site wastewater treatment and disposal system shall be installed, altered, expanded or repaired until an application for a permit has been submitted and a permit issued by the Mahaska County Board of Health or the Administrative Authority. The installation shall be in accordance with these rules.

1.4 (02) An on-site wastewater treatment and disposal system permit shall be issued by the Mahaska County Board of Health or the Administrative Authority prior to the issuance of a building permit.

1.4 (03) Permits shall have validity for a maximum of twelve (12) months from the time of issuance, during which time the private sewage disposal system shall be completed.

1.4 (04) No on-site wastewater treatment system shall be covered so as to deny final inspection by the Administrative Authority.

1.4 (05) No on-site wastewater treatment system for which a permit has been issued shall be put into operation until the construction, repair, alteration, or remodeling shall have been inspected and approved by the Administration Authority.

1.5 Fees

1.5 (01) Permit fee schedule shall be determined by the Board of Health.

1.5 (02) No permit shall be refundable after a professional soil analysis had been completed. A permit may be transferable upon written approval of former permit holder.

1.5 (03) Fees: a. Septic tank and/or sub surface absorption field \$150.00

b. Impervious vault toilets and holding tanks	\$100.00
c. Re-inspection or each additional inspection	\$100.00
d. Sand filters or other type of private sewage disposal systems	\$150.00
e. Inspection at time of sale	\$100.00

1.6 Private System Contractor's Licensing

1.6 (01) Any person desiring to act as a private contractor in their own regard or on behalf of an employer, corporation or other person or entity, to construct, alter, or repair any private sewage system in Mahaska County, Iowa, shall first file for a license and approved with the Administrative Authority, conditioned on the faithful performance of all duties and regulations required by the Board of Health of Mahaska County, Iowa and any other laws or ordinance regulating private sewage systems.

1.6 (02) The Administrative Authority will issue a Contractor's License for a fee of one hundred and fifty dollars (\$150), valid for a period of twelve (12) months beginning on March 1st and expiring on February 28th. Renewal of the license shall be considered once application, application fee, and proof of completion of twelve (12) hours of classroom instruction has been received. Classroom instruction shall be from Administrative Authority sponsored/approved sources.

1.6 (03) The private system contractor license may be revoked by the Administrative Authority if terms of this regulation is violated and only reinstated at the discretion of the board of Health. No person in whose name a revoked license was issued shall be issued a new license within a period of twelve (12) months after the effective date of the revocation, except on recommendation by the Board of Health.

1.6 (04) The license fee schedule shall be determined by the Board of Health.

1.7 Emergency Repair

1.7 (01) In the event of an emergency situation, work may be initiated without first obtaining a permit; provided this repair work is reported to the Administrative Authority by 12 o'clock noon of the next business day.

Contractors or property owners failing to report emergency repair work as specified shall be subject to a penalty as indicated in section 1.14- Penalty. All repair work shall conform to the specifications provided in Mahaska County On-Site Wastewater Treatment and Disposal ordinance. All completed work shall be left uncovered until inspection by the Administrative Authority is made and the work approved.

1.8 Abandonment of an On-Site Wastewater Treatment and Disposal System

1.8 (01) All primary treatment sections of the sewage disposal facilities (vault or septic tank) replaced by connections to a publicly operated sewage system or when an existing sewage disposal facility is replaced or use discontinued, shall be abandoned as specified by the Administrative Authority. No sewage disposal

facilities shall be abandoned until the pumping contractor has cleaned said sewage disposal facilities.

1.9 Plats and Sizes Hereinafter Established

1.9 (01) All plats and subdivisions not approved and officially recorded prior to the effective date of this regulation shall have the approval of the Administrative Authority with regards to on-site wastewater treatment system construction and operation.

1.9 (02) Where a public sewer is not made available to serve the proposed plat, the plat must provide engineering data as requested to confirm the suitability of the site for on-site wastewater treatment system construction.

1.10 Enforcement

1.10 (01) It shall be the duty and responsibility of the Board of Health to enforce the provision of this ordinance. This duty may be delegated to an authorized representative. The ordinance may be enforced by either issuing a civil citation for a county infraction or by issuing a criminal citation, or both, for a violation of the County Ordinance.

11.1 Refusal of Admittance

11.1 (01) In the event the Administrative Authority, in proceeding to enter any premises for the purpose of making an inspection to carry out the provisions of this regulation, shall be refused entry, a complaint may be made under oath at the District Court in the County and said Court thereupon issue a warrant directed to some peace officer of the County, commanding him/her between the hours of sunrise and sunset accompanied by the Administrative Authority, to enter upon the premises and make such inspection, and to obtain such samples as may be required to carry out the provisions of this ordinance.

1.12 Notice

1.12 (01) Whenever the Administrative authority determines that there are reasonable grounds to believe there has been a violation of any provisions of this ordinance, he/she shall give notice to such alleged violation to the person or persons responsible, as thereof provided. Such notice shall:

- A) Be in writing
- B) Include a statement of the reasons the ordinance was violated.
- C) Allow reasonable time for performance of any act to remediation to achieve compliance.
- D) Be served upon the responsible owner, agent or occupant, as the case may require. Such notice shall be deemed to be properly served if a copy is sent by certified mail to the last known address of the responsible owner, agent or occupant, or if served by any other method authorized or required by the laws of this state.

1.12 (02) Such notice shall contain an outline of remedial action which, will effect compliance with the provisions of this regulation,

1.12 (03) This provision is not meant to limit the Administrative Authority's right of entry during his/her investigation.

1.13 Hearings

1.13 (01) In the event that any person or entity is aggrieved by any order made by the Administrative Authority, that person or entity may within twenty (20) days of the date of such order, appeal to the Board of Health and in writing, stating reasons for requesting the order to be rescinded or modified. The Board of Health shall review the action of the Administrative Authority, and if reasonable grounds exist, shall modify, withdraw, or order compliance with the said order. Appeal for any order of the Board of Health may be taken within twenty (20) days to the District Court of Mahaska County, Iowa.

1.14 Penalties

1.14 (01) Any person, firm, partnership, corporation, or other entity or responsible person violating any regulation in or any provision of this Ordinance or of any amendment or supplement thereto, shall be guilty of a simple misdemeanor which is punishable by a fine of not more than five hundred dollars (\$500) or by imprisonment of not more that thirty (30) days and shall be guilty of a county infraction punishable by a civil penalty of not more than five hundred dollars (\$500) or if the infraction is a repeat offense by a civil penalty not to exceed one thousand dollars (\$1000). Each day that a violation occurs or is permitted by the defendant to exist, constitutes a separate offense.

1.15 Court Order

1.15 (01) Whenever in the judgment of the Board of Health or the Administrative Authority any person that has engaged or is about to engage in any acts or practices which constitutes or will constitute a violation of the ordinance, application may be made to the appropriate court to grant appropriate relief to abate or halt the violation or both.

1.16 Applicability

1.16 (01) Provisions contained herein are applicable to all on-site wastewater treatment and disposal systems in Mahaska County. No septage or wastewater shall be disposed of except in compliance with the requirements contained in these rules.

1.17 Variances

1.17 (01) Variances to these rules may be granted by the Iowa Department of Natural Resources or by the Board of Health provided sufficient information is afforded to substantiate the need and propriety of such action. Application for variances and justification shall be in writing and copies filed with the Mahaska County Board of Health.

1.18 Amendments

1.18 (01) Amendments and additions to this ordinance shall be made as required by Iowa Code Chapter 137.6. The Board of Health shall propose amendments and additions to this regulation to the Board of Supervisors whenever the Board of Health determines such changes are necessary to fulfill the purpose of this regulation.

1.19 Separability of Provisions

1.19 (01) If any section, paragraph, clause or provision of this ordinance shall be held invalid, the invalidity of such section, paragraph, clause or provision shall not effect any of the remaining provision of this ordinance.

Chapter 2

On-Site Wastewater Treatment and Disposal System Construction

2.1 Requirements When Discharging Into Surface Waters

2.1 (01) All discharges from on-site wastewater treatment and disposal systems which are discharged into any surface water shall be treated in a manner that will conform with the requirements of NPDES General Permit No. 4 issued by the department of natural resources, as referenced in 567-- Chapter 64. Prior to the installation of any system discharging to waters of the state, a notice of intent to be covered by NPDES General Permit No. 4 shall be submitted to the department. Systems covered by this permit must meet all applicable requirements listed in the NPDES permit.

2.2 Requirements When Discharging into the Soil

2.2 (01) No septage or wastewater shall be discharged into the soil except in compliance with the requirements contained in these rules.

2.3 Site Evaluation

2.3 (01) A site evaluation shall be conducted prior to issuance of a construction permit. Consideration shall be given, but not limited to, the impact of the following: topography; drainage ways; terraces; floodplain; percent of land slope; location of property lines; location of easements; buried utilities; existing and proposed tile lines; existing, proposed and abandoned water wells; amount of available area for the installation of the system; evidence of unstable ground; alteration (cutting, filling, compacting) of existing soil profile; and soil factors determined from a professional soil analysis and soil survey maps.

2.4 Minimum Distances

2.4 (01) All on-site wastewater treatment and disposal systems shall be located in accordance with the minimum distances shown in Table I:

Minimum distance in feet from	Closed Portion of Treatment System (1)	Open Portion of Treatment System (2)
Private water supply well	50	100
Public water supply well	200	200

Groundwater heat pump borehole	50	100
Lake or reservoir	50	100
Stream or pond	25	25
Edge of drainage ditch	10	10
Dwelling or other structure	10	10
Property lines (unless a mutual easement is signed and recorded)	10	10
Other type subsurface treatment system	5	10
Water lines continually under pressure	10	10
Suction water lines	50	100
Foundation drains or subsurface tiles	10	10

(1) Includes septic tanks, closed biofilters, mechanical aeration tanks and impervious vault toilets.

(2) Includes subsurface absorption systems, open biofilters mound systems and intermittent sand filters.

2.5 Connection to Public Sewers

2.5 (01) No on-site wastewater treatment and disposal system shall be installed, repaired or rehabilitated where a public sanitary sewer is reasonable accessible within 300 feet of the closest point of the lot line or where a local ordinance requires connection to a public system unless an exception is granted by the Board of Health or Administrative Authority.

2.5 (02) When a public sanitary sewer becomes reasonably accessible, within 300 feet of the closet point of the lot line or where a local ordinance requires connection to a public system unless an exception is granted by the Board of Health or Administrative Authority, any building then served by an on-site wastewater treatment and disposal system shall connect if in violation of other sections of this regulation or within a time frame determined by the County Board of Health.

2.5 (03) When a public sanitary sewer is not available, every building wherein persons reside, congregate or are employed shall be provided with an approved on-site wastewater treatment and disposal system.

2.6 Construction, Alteration or Repair

2.6 (01) All on-site wastewater treatment and disposal systems constructed, altered, or repaired after the effective date of these rules shall comply with these requirements. Alteration includes any changes that effect the treatment or disposal of the waste. Repair of existing components that does not change the treatment or disposal would be exempt.

2.7 Building Sewers

2.7 (01) Location and construction. The types of construction and distances as shown in Table II shall be maintained for the protection of water supplies. The distances shall be considered minimum and increased where possible to provide better protection.

TABLE II

Sewer Construction	Distance from PRIVATE Well Water Supply	Distance from PUBLIC Well Water Supply
Schedule 40 pip (or SDR 26 or stronger) with approved type joint or cast-iron soil pipe (extra heavy or centrifugally cast) with joints of preformed gaskets.	10	25
Sewer pipes installed to remain watertight and rat proof.	50	75

Under on circumstances shall a well suction line pass under a building sewer line.

2.7 (02) Requirements for building sewers.

A) Type. Building sewers used to conduct wastewater from a building to the primary treatment unit of an on-site wastewater treatment and disposal system shall be constructed of Schedule 40 plastic pipe (or SDR-26 or stronger) with solvent-weld or bell-and-gasket type joints, or cast iron, with integral bell-and-gasket type joints.

B) Size. Building sewers shall not be less than four (4) inches in diameter.

C) Grade. Such building sewers shall he laid to the following minimum grades:

4-inch sewer 12 inches per 100 feet

6-inch sewer 8 inches per 100 feet

2.7 (03) Cleanouts

A) Spacing. A cleanout shall be provided where the building sewer leaves the house and at least every 100 feet allowing rodding downstream.

B) Change of direction. An accessible cleanout shall be provided at each change in direction or grade, if the change exceeds 45 degrees.

2.8 Septic Tanks

2.8 (01) General Requirements:

A) Septic tank required. Every on-site wastewater treatment and disposal system, unless waived by the Administrative Authority, shall have as a primary treatment unit a septic tank as described in this rule. All wastewater from the facility serviced shall discharge into the septic tank (except as noted in “ D below).

B) Easements. No septic tank shall be located upon property under ownership different from the ownership of that property or lot upon which the wastewater originates unless easements to that effect are legally recorded and approved by the proper Administrative Authority.

C) Effluent discharge requirements. All septic tanks effluent shall discharge into a secondary treatment system in compliance with this rule or other system approved by the Administrative Authority.

D) Prohibited wastes. Septic tanks shall not be used for the disposal of chemical wastes or grease in quantities which might be detrimental to the bacterial action in the tank for the disposal of drainage from roof drains, foundation drains, area drains, or water softener backwash.

2.8 (02) Capacity

A) Minimum capacity. The minimum liquid holding capacity shall be as specified in the following table (capacity may be obtained by using one or more tanks):

TABLE III

Number of Bedrooms	Minimum Septic Tank Capacity
Up to & including 3 bedroom homes	1,250 gallons
4 bedroom homes	1,500 gallons
5 bedroom homes	1,750 gallons
6 bedroom homes	2,000 gallons

B) Other domestic waste systems. In the event that any installation serves more than a 6-bedroom home or its equivalent, or serves a facility other than a house and serves the equivalent of 15 persons or less (1,500 gal/day) approval of septic tank capacity and design must be obtained from the Administrative Authority. Minimum septic tank liquid holding volume shall be two times the estimated daily sewage flow.

C) For wastewater flow rates for nonresidential and commercial domestic waste applications under 1,500 gal/day, refer to Appendix A.

D) Minimum depth. Minimum liquid holding depth in any compartment shall be 40 inches.

E) Maximum depth. Maximum liquid holding depth for calculating capacity of the tank shall not exceed 6 feet.

F) Dimensions. The interior length of a septic tank should not be less than 5 feet and shall be at least 1 ½ times the width (larger length-to-width ratios are preferred). No tank or compartment shall have an inside width of less than 2 feet. The minimum inside diameter of a vertical cylindrical septic tank shall be 5 feet.

2.8 (03) construction Details

A) Fill soil. Any septic tank placed in fill soil shall be placed upon a level, stable base that will not settle.

B) Compartmentalization. Every septic tank shall be divided into two compartments as follows (compartmentalization may be obtained by using more than one tank):

- 1) The capacity of the influent compartment shall not be less than one-half nor more than two-thirds of the total tank capacity.
- 2) The capacity of the effluent compartment shall not be less than one-third nor more than one-half of the total tank capacity.
- C) Inlet/outlet. The invert of the inlet pipe shall be a minimum of 2 inches and a maximum of 4 inches higher than the invert of the outlet pipe.
- D) Baffles. Four-inch diameter schedule 40 plastic pipe shall be used as inlet and outlet baffles. Inlet tees shall extend at least 6 inches above and 8 inches below the liquid level of the tank. The outlet tee shall extend above the liquid level a distance of at least 6 inches and below the liquid level a distance of at least 10 inches but no more than 25 percent of the liquid depth. A minimum clearance between the top of the inlet and outlet tees and the bottom of the tank lid of 2 inches shall be provided. A horizontal separation of at least 36 inches shall be provided between the inlet baffle and the outlet baffle in each compartment.
A horizontal slot 4 inches by 6 inches, or two suitably spaced 4-inch diameter holes in the tank partition, may be used instead of a tee or baffle, the top of the slot or holes to be located below the water level a distance of one-third the liquid depth. A ventilation hole or slot shall be provided in the partition, at least 8 inches above the liquid level.
- E) Access. All septic tanks shall be equipped with 24 inch risers to a minimum of six (6) inches above the ground surface and provide access to all tank openings and/or internal structures. Lids shall be secured against any unauthorized entry/access.

2.8 (04) Construction

- A) Materials. Tanks shall be constructed of poured concrete or plastic resistant to corrosion or decay and designed so that they will not collapse or rupture when subjected to anticipated earth and hydrostatic pressures when the tanks are either full or empty. Metal tanks are prohibited.
- B) Dividers. Tank divider walls and divider wall supports shall be constructed of heavy, durable plastic, plastic, concrete or other similar corrosion-resistant materials approved by the Administration Authority.
- C) Inlet and outlet ports. Inlet and outlet ports of pipe shall be constructed of heavy, durable schedule 40 PVC plastic sanitary tees or other similar approved corrosion-resistant material.
- D) Effluent Filters. All septic tanks shall be equipped with an effluent filter.

2.8 (05) Wall thickness. Minimum wall thickness for tanks shall conform to the following specifications:

- Poured concrete6 inches thick
- Poured concrete, reinforced..4 inches thick
- Special concrete mix, vibrated & reinforced..2.5 inches thick
- Fiberglass or plastic..0.25 inches thick

2.8 (06) Concrete specifications. Concrete used in precast septic tank construction shall have a maximum water-to-cement ratio of 0.45. Cement content shall be at

least 650 pounds per cubic yard. Minimum compressive strength (f_c) shall be 4,000 psi (28 Mpa) at 28 days of age. The use of ASTM C150 Type I1 cement or the addition of silica fume or Class F fly ash is recommended.

2.8 (07) Tank bottom. Septic tank bottoms shall conform to the specifications set forth for septic tank walls except special mix concrete shall be at least 3 inches thick.

2.8 (08) Tank tops. Concrete or masonry septic tank tops shall be a minimum of 4-inches in thickness and reinforced with 3/8 inch reinforcing rods in a 6-inch grid or equivalent. Fiberglass or plastic tank tops shall be a minimum of 1/4 inch in thickness and shall have reinforcing and be of ribbed construction.

2.8 (09) Reinforcing steel placement. The concrete cover for reinforcing bars, mats, or fabric shall not be less than 1-inch.

2.8 (10) Bedding. Fiberglass or plastic tanks shall be bedded according to manufacturer's specifications. Provisions should be made to prevent flotation when the tanks are empty.

2.8 (11) Connecting pipes.

A) Minimum diameter. The pipes connecting septic tanks installed in series and at least the first 5 feet on the effluent side of the last tank shall be a minimum of 4-inches diameter schedule 40 plastic.

B) Tank connections. All inlet and outlet connections at the septic tanks shall be made by self-sealing gaskets cast into the concrete or formed into the plastic or fiberglass.

C) Joints. All joints in connecting schedule 40 plastic pipe shall be approved plastic pipe connections such as solvent welded or compression-type gaskets.

D) Pipe in unstable ground. Schedule 40 plastic pipe shall be used extending across excavations or unstable ground to at least 2 feet beyond the point where the original ground has not been disturbed in septic tank installations. If the excavation spanned is more than 2 feet, it must be filled with sand or compacted fill to provide a firm bed for the pipe. The first 12-inches of backfill over the pipe shall be applied in thin layers using material free from stones, boulders, large frozen chunks of earth or any similar material that would damage or break the pipe.

2.9 Subsurface Absorption Systems - Secondary treatment system installation shall be determined according to the following guidelines:

A. A conventional system including pressure dosed distribution shall always be the first choice for on-site wastewater treatment and disposal.

B. If a conventional sewage disposal system does not meet the requirements of this Chapter, then a mound system shall be required.

C. If a mound system does not meet the requirements of this chapter, then a subsurface sand filter or biofilter shall be required.

D. If a subsurface sand filter or biofilter does not meet the requirements of this chapter, then an individual mechanical aerobic wastewater treatment system shall be required as specified by section 2.9 (11) of this chapter.

2.9 (01) General requirements.

A) Locations. All subsurface absorption systems shall be located on the

property to maximize the vertical separation distance from the bottom of the absorption trench to the seasonal high groundwater level, bedrock, hardpan, or other confining layer, but under no circumstances shall this vertical separation be less than 3 feet.

B) Soil Evaluation. A professional soil analysis is required before any soil absorption system is installed.

1) When a professional soil analysis is performed, soil factors such as soil content, color, texture, and structure shall be used to determine a percolation rate. 20 Acceptable percolation rate. An area is deemed suitable for conventional soil absorption if the average percolation test rate is 60 minutes per inch or less and greater than 1 minute per inch. However, if an alternative type system is proposed (eg. Mound), then the percolation test should be extended to determine whether a percolation rate of 120 minutes per inch is achieved.

C) Groundwater. If seasonal high groundwater level is present within 3 feet of the trench bottom final grade and cannot be successfully lowered by subsurface tile drainage, the area shall be classified as unsuitable for the installation of a standard subsurface absorption system. Consult the Administrative Authority for an acceptable alternative method of wastewater treatment.

D) Site limitations. In situations where specific: location or site characteristics would appear to prohibit normal installation of a soil absorption system, design modifications may be approved by the Administrative Authority which could overcome such limitations. Examples of such modifications could be the installation of subsurface drainage, use of shallow or at-grade trenches, use of dual soil treatment areas, mound system, or water conservation plans.

E) Prohibited drainage. Roof, foundation, and storm drains shall not discharge into or upon subsurface absorption systems. Nothing shall enter the subsurface absorption system which does not first pass through the septic tank.

F) Prohibited construction. There shall be no construction of any kind, including driveways, covering the septic tank, distribution box or absorption field of an on-site wastewater treatment and disposal system. Vehicle access should be infrequent, primarily limited to vegetation maintenance.

G) Driveway crossings. Connecting lines under driveways shall be constructed of schedule 40 plastic pipe, or equivalent, and shall be protected from freezing.

H) Easements. No wastewater shall be discharged upon any property under ownership different from the ownership of the property or lot upon which it originates unless easements to that effect are legally recorded and approved by the Administrative Authority.

2.9 (02) Trench length requirements.

A) Percolation charts. Table IV (A) specifies lineal feet of lateral trenches required in accordance with the results of the professional soil analysis. Table IV (A) and list an optional method for determining sizing of absorption beds. An alternative option for increased rock usage is used when the size of lots limits the use of trench length prescribed in Table IV (a). Absorption beds (Table IV (B)) shall not be used except when the lot size limitations preclude the installation of a lateral trench system. Further details concerning limitations of these two alternatives should be obtained from the Administrative Authority

prior to requesting authorization for installation.

B) Unsuitable absorption. Conventional subsurface soil absorption trenches shall not be installed in soils that have a percolation rate less than 1-minute per inch or greater than 60 minutes per inch. Plans for an alternative method of wastewater treatment shall be submitted to the Administrative Authority for approval prior to construction.

Table IV (A)
Soil Absorption System Sizing Chart
(Lineal feet of absorption trench)

Min. Per Inch	Two-bedroom 300 gal/day	Three-bedroom 450 gal/day	Four-bedroom 600 gal/day	Five-bedroom 750 gal/day	Six-Bedroom 900 gal/day
1.5	160	200	260	340	400
6-15	200	300	400	500	600
6-30	300	400	500	600	700
31-45	400	500	600	800	900
46-60	500	600	700	900	1,100

For domestic, nonhousehold wastewater flow rates refer to Appendix A.

Table IV (B)

Percolation Rate (min/inch)	Absorption Area Per Bedroom (sq.ft.)	Loading Rate per Day (gal./sq. ft.)
1-5	300	0.5
6-15	400	0.375
16-30	600	0.25

2.9 (03) Construction details (all gravity fed soil absorption trenches)

A) Gravel. A minimum of 6 inches of clean, washed river rock, free of clay and clay coatings, shall be laid below the distribution pipe, and enough rock shall be used to cover the pipe. This rock shall be of such a size that 100 percent will pass a 2.5-inch screen and 100 percent will be retained on a 1/8 inch screen. Limestone or crushed rock is not recommended for soil absorption systems. If used, it shall meet the following criteria:

- 1) Abrasion loss. The percent wear, as determined in accordance with the ASSHTO T 96, Grading C, shall not exceed 40 percent.
- 2) Freeze and thaw loss. When subjected to the freezing and thawing test, Iowa DOT Materials Laboratory Test Method 211, Method A, the percentage loss shall not exceed 10 percent.
- 3) Absorption. The percent absorption, determined in accordance with Iowa DOT Materials Laboratory Test Method 202, shall not exceed 3 percent.
- 4) Gradation. The aggregate shall have not more than 1.5 percent by weight pass a No. 16 sieve.

B) Trench width. Lateral trenches, for gravel systems, shall be a minimum of 24 inches and a maximum of 36 inches in width at the bottom of the trench.

C) Grade. The distribution pipes shall be laid with a minimum grade of 2 inches per 100 feet of run and a maximum grade of 6 inches per 100 feet of run with a preference given to the lesser slope.

D) Pipe. Distribution pipe shall be PVC rigid plastic meeting ASTM Standard 2729, or other suitable material approved by the Administration Authority. The inside diameter shall be not less than 4 inches, with perforations at least 1/2 inch and no more than 3/4 inch in diameter spaced. Two rows of perforations shall be provided 120 degrees apart along the bottom half of the tubing (each 60 degrees up from the bottom centerline). The end of the pipe in each trench shall be sealed with a watertight cap unless, on a level site, a footer is installed connecting the trenches together. Coiled perforated plastic pipe shall not be used when installing absorption systems,

E) Gravel cover. Unbacked, rolled 3.5-inch thick fiberglass insulation, untreated building paper, synthetic drainage fabric, or approved material shall be laid so as to separate the gravel from the soil backfill.

2.9 (05) Gravelless pipe systems

A) Application. Gravelless subsurface absorption systems may NOT be used as an onsite waste water treatment.

2.9 (06) Chamber systems.

A) Application, Chamber systems may be used as an alternative to conventional 4-inch pipe placed in gravel-filled trenches. However, they cannot be used in areas where conventional systems would not be allowed due to poor permeability, high groundwater, or insufficient depth to bedrock.

B) Installation. Manufacturer's specifications and installation procedures shall be closely adhered to.

C) Length of trench. The total length of absorption trench for chambers 24 inches or less in bottom width shall be the same as given in Table IV (A) for a conventional absorption trench. For chambers greater than 33 inches in width a reduction of 25 percent from the lengths given in Table IV (A) may be used.

D) Sidewall. The chambers shall have at least 6 inches of sidewall effluent soil exposure height.

9.2 (07) Gravity distribution.

Dosing is always recommended and preferred to improve distribution, improve treatment and extend the life of the system.

A) On a hillside, septic tank effluent may be serially loaded to the soil absorption trenches by drop boxes or overflowing piping (rigid sewer pipe). Otherwise, effluent shall be distributed evenly to all trenches by use of a distribution box or commercial distribution regulator approved by the Administration Authority.

B) Design. A distribution box shall always be used unless pressure distribution is utilized. It shall be of proper design and installed with separate watertight headers leading from the distribution box to each lateral.

C) Outlet height. The distribution box shall have outlets at the same level at least 4 inches above the bottom of the box to provide a minimum of 4 inches of water retention in the box.

D) Baffles. There shall be a pipe tee or baffle at the inlet to break the water flow.

E) Unused outlets. All unused outlet holes in the box shall be securely closed.

F) Interior coating. All distribution boxes shall be constructed of corrosion-resistant rigid plastic materials, or other corrosion-resistant material approved by the Administrative Authority.

G) Outlets levels. All outlets of the distribution box shall be made level. A 4-inch cap with an offset hole approximately 2 inches in diameter shall be installed on each outlet pipe. These caps shall be rotated until all outlets discharge at the same elevation. Equivalent leveling devices may be approved by the local authority. Once leveling outlets have been set, they shall be securely fastened to prevent shifting or adjustment.

H) Equal length required. The soil absorption area serviced by each outlet of the distribution box shall be of equal length.

2.9 (08) Dosing systems.

A) Pump systems.

1) Pump and pit requirements. In the event the effluent from the septic tank outlet cannot be discharged by gravity and still maintain proper lateral depths, the effluent shall discharge into a watertight vented pump pit with an inside diameter of not less than 24 inches, equipped with a tight-fitting manhole cover set at least 6 inches above grade level, and sized not less than 300 gallons. The sump vent shall extend a minimum of 6 inches above grade level and shall be a minimum size of 1 X inches fitted with a return bend. The pump shall be of a submersible type of corrosion-resistant material.

2) Pump setting. The pump shall be installed in the pump pit in a manner that ensures ease of service and protection from frost and settled sludge. The pump shall be set to provide a dosing frequency of approximately twice a day based on the maximum design flow. No on-site electrical connections shall be made in the pump pit. These connections shall be made in an exterior weatherproof box.

3) Pressure line size. The pressure line from the pump to the point of discharge shall not be smaller than the outlet of the pump it serves.

4) Drainage. Pressure lines shall be installed to provide total drainage between dosings to prevent freezing or be buried below frost level up to the distribution box.

5) High water alarm. Pump pits shall be equipped with a sensor set to detect if the water level rises above the design high water level when the pump fails. This sensor shall activate as an auditory and visual alarm to alert the homeowner that repairs are required.

6) discharge point, The effluent shall discharge under pressure into a distribution box or may be distributed by small diameter pipes throughout the entire absorption field.

7) Pressure regulators. Each pressure distribution line shall be equipped with an accessible ball valve for pressure regulation and a riser pipe at the end of each pressured line for pressure determination. It is recommended that pressured distribution lines be inspected annually for consistent pressure throughout the system.

B) dosing siphons. Dosing siphons may also be used. Manufacturer's specification shall be adhered to for installation. Similar dosing volumes and frequencies are recommended. Dosing siphons require periodic cleaning to ensure their continued proper operation.

2.9 (09) Mound system.

1) General requirements.

A) Mound systems shall be permitted only after a thorough site evaluation has been made and landscaping, dwelling placement, effect on surface drainage and general topography have been considered.

b) Mound systems shall not be utilized on sites which are subject to flooding with a ten-year or greater frequency.

C) Mound systems shall not be utilized on soils where the high groundwater level, impermeable bedrock or soil strata having a percolation rate exceeding 120 minutes per inch occur within 12 inches of natural grade, or where creviced bedrock occurs within 20 inches of natural grade.

D) Mound systems shall be constructed only upon undisturbed naturally occurring soils.

E) Mound systems shall be located in accordance with the distances specified in Table I as measured from the outer edge of the mound toe.

F) No buildings, driveways, or other surface or subsurface obstructions shall be permitted with 50 feet on the down gradient side of the mound when the mound is constructed on a slope greater than 5 percent. No future construction shall be permitted in this effluent disposal area as long as the mound is in use.

G) Specifications given in these rules for mounds are minimal and may not be sufficient for all applications. Technical specifications are changing with experience and research. Other design information beyond the scope of these rules may be necessary to properly design a mound system.

2) Material for mound fill.

A) The mound shall be constructed using clean, medium-textured sand, sometimes referred to as concrete sand. The sand size shall be such that at least 25 percent by weight shall have a diameter between 2.0 and 0.25 mm, less than 35 percent with a diameter between 0.25 and 0.05 mm and less than 5 percent with a diameter between 0.002 and 0.05 mm.

B) Rock fragments larger than 1/16 inch (2.0 mm) shall not exceed 15 percent by weight of the material used for sandy fill.

3) Construction details.

A) There shall be a minimum of 3 feet of fill material and undisturbed naturally occurring soils between the bottom of the washed gravel and the highest elevation of the limiting conditions defined in 2-9 (09) (1) C.

B) Gravel shall be washed and shall range in size from 3/4 inch to 2/5 inches.

C) From 1 to 2 feet of medium textured sand (depending upon the underlying soil depth) must be placed between the bottom of the gravel and the top of the plowed surface of the naturally occurring soil.

D) Mound systems shall utilize absorption bed distribution piping design. The bed shall be installed with the long dimension parallel to the land contour. Systems on steep slopes with slowly permeable soils should be narrow to reduce the possibility of toe seepage.

E) Minimum spacing between distribution pipes shall be 4 feet, and a minimum of 3 feet shall be maintained between any trench and the sidewall of the mound.

F) No soil under or up to 50 feet down gradient of the mound may be removed or disturbed except as specified herein.

G) Construction equipment which would cause undesirable compaction of the soil shall be kept off the base area. Construction or plowing shall not be initiated when the soil moisture content is high. If a sample of soil from approximately 9 inches below the surface can be easily rolled into a 1/8 to 1/4 inch diameter wire, the soil moisture content is too high for construction purposes.

H) Aboveground vegetation shall be closely cut and removed from the ground surface throughout the area to be utilized for the placement of the fill material.

I) The area shall be plowed to a depth of 7 to 8 inches, parallel to the land contour with the plow throwing the soil up slope to provide a proper interface between the fill and the natural soil. Tree stumps should be cut flush with the surface of the ground, and roots should not be pulled.

J) The base area of the mound is to be calculated on the results of percolation rate as indicated in Table V. The base area of the mound below the downslope from the trenches, excluding the area under the end slopes, must be large enough for the natural soil to absorb the estimated daily wastewater flow.

K) Table V.

Percolation Rate Min/Inch	Application Rate Gal/Square Foot/Day
Less than 1	Not Suitable
1-5	1.25
6-15	1.00
16-30	0.75
31-45	0.50
46-60	0.40
61-90	0.20
91-120	0.10
Over 120	Not Suitable

L) The area of the fill material shall be sufficient to extend 3 feet beyond the edge of the gravel area before the sides are shaped to at least a 5:1 slope.

M) Distribution system.

1) The distribution pipe shall be rigid plastic pipe, schedule 40 or 80 with 1 -inch nominal diameter.

2) The distribution pipe shall be provided with a single row of 1/4 inch perforations in a straight line 30 inches on center along the length of the pipe or an equivalent design that ensures uniform distribution. All joints and connections shall be solvent-cemented

3) The distribution pipe shall be placed in the clean, washed gravel with holes downward. The gravel shall be a minimum of 9 inches in depth below and 3 inches in depth above the pipe.

4) No perforations shall be permitted within 3 inches of the outer ends of any distribution pipes.

5) The outer ends of all pressure distribution lines shall be securely capped.

6) The central pressure manifold should consist of 1.5inch or 2-inch solid plastic pipe using a tee or cross for connecting the distribution lines.

7) Clean out caps shall be placed over the ends of each distribution line for inspection purposes and pressure determination.

N) Construction should be initiated immediately after preparation of the soil interface by placing all of the sandy fill material needed for the mound to the top of the trench) to a minimum depth of 21 inches above the plowed surface. This depth will permit excavation of the trenches to accommodate the 9 inches of washed gravel or crushed stone necessary for the distribution piping.

O) The absorption trench or trenches shall be hand excavated to a depth of 9 inches, the bottoms of the trenches made certain to be level,

P) Twelve inches of gravel shall be placed in the trench and hand leveled, and then 3 inches of gravel removed with a shovel in the location where the distribution pipe will be placed. After the distribution pipe is placed, the pipe shall be covered with 2 inches of gravel.

Q) The top of the gravel shall be covered with synthetic drainage fabric. Unbacked, rolled 3-inch thick fiberglass insulation, untreated building paper, or other suitable material may be used with approval of the Administrative Authority. Plastic or treated building paper shall not be used.

R) After installation of the distribution system, gravel and material over the gravel, the entire mound is to be covered with topsoil native to the site or of similar characteristics to support vegetation found in the area. The entire mound shall be crowned by providing 12 inches of topsoil on the side slopes with a minimum of 18 inches over the center of the mound. The entire mound shall be seeded, sodded, or otherwise provided with a grass cover to ensure stability of the installation.

S) The area surrounding the mound shall be graded to provide for diversion of surface runoff water.

4) Dosing.

A) Pressure dosing shall be required for mound systems.

B) The dosing volume shall be five to ten times the distribution piping network volume.

C) The size of the dosing pump or siphon shall be capable of maintaining an approximate pressure of one psi at the outer ends of the distribution lines.

2.9 (10) Intermittent sand filters.

1) General requirements.

A) Use. Intermittent sand filters may be used when the Administrative Authority determines the site is unacceptable for a full-sized soil absorption system or mound system.

B) Location. Intermittent sand filters shall be located in accordance with the distances specified in Table 1.

C) Sampling. A sampling port shall be available at the discharge point of the filter or shall be installed in the discharge line. Monitoring and effluent sampling of intermittent sand filters must meet the requirements of the NPDES permit as specified in rule 69.2(455B). Such sampling shall be performed annually for a subsurface sand filter as described in 69-9(3) and twice a year, at six-month intervals, for free access sand filters as described in 69.9(4). (Beginning January 1, 2005, such sampling shall be done by a qualified sampler as defined by the Iowa Department of Natural Resources.) Tests shall be run on all samples for carbonaceous biochemical oxygen demand (CBOD5) and Escherichia coli (E. coli) (testing for E. coli is limited to locations noted in the following sentence), and once a year in the spring for total suspended solids (TSS). The maximum CBOD5, TSS, and E Coli count limits are as follows. E coli tests shall only be required where effluent is discharged into (directly or within one

mile upgradient of the shoreline of) a Class “A1,” Class A2,” Class “A3,” or class “C” water.

Effluents Discharging to	E Coli cfu/100 ml	CBOD5 mg/1	TSS mg/1
Class “A1,””A2,””A3” and C waters*	No limit	25	25
All other water use Classifications	No limit	25	25

*A separation distance of 750 feet shall be maintained between any point of discharge and shoreline of Class “A1 ,” “A2,” or “A3” water.

- D) Prohibited construction. There shall be no construction, such as buildings or concrete driveways, covering any part of an intermittent sand filter.
- 2) Construction.
 - A) Number. As an intermittent sand filter shall consist of one filtering bed or two or more filtering beds connected in series and separated by a minimum of 6 feet of undisturbed earth.
 - B) Pipelines. Each bed contains a horizontal set of collector lines. The collector lines shall be equivalent to schedule 40 PVC pipe, SDR-35 or other suitable materials.
 - 1) One collector line shall be provided for each 6 feet of width or fraction thereof. A minimum of two collector lines shall be provided.
 - 2) The collector lines shall be laid to a grade of 1 inch in 10 feet (or 0.5 to 1.0 percent).
 - 3) Each collector line shall be vented or connected to a common vent. Vents shall extend at least 12 inches above the ground surface with the outlet screened, or provided with a perforated cap.
 - 4) Gravelless drainfield pipe with fiber wrap may be used for the collector lines. If so, no gravel or pea gravel is required covering the collector lines. The pipe shall be bedded in filter sand.
 - 5) If 4-inch plastic pipe with perforations is used for the collector lines, they shall be covered as follows:
 - a) Gravel 3/4 inch to 2 1/2 inches is size shall be placed around and over the lower collector lines until there is a minimum of 4 inches of gravel over the pipes.
 - b) The gravel shall be overlain with a minimum of 3 inches of washed pea gravel 1/8-inch to 3/8-inch size interfacing with the filter media. A layer of fabric filter may be used in place of the pea gravel. Fabric filters must be 30 by 50 mesh with a percolation rate of at least 5 gal/sq.ft.
 - 6) Soil cover. A minimum of 12 inches of soil backfill shall be provided over the beds.

3) Subsurface sand filters.

A) Distribution system and cover.

1) Gravel base. Six inches of gravel 3/4 inch to 2 1/2 inches in size shall be placed upon the sand in the bed.

2) Distribution lines. Distribution lines shall be level and shall be horizontally spaced a maximum of 3 feet apart, center to center. Distribution lines shall be rigid perforated PVC pipe.

3) Venting. Venting shall be placed in the downstream end of the distribution lines with each distribution line being vented or connected to a common vent. Vents shall extend at least 12 inches above ground surface with the outlet screened, or provided with a perforated cap.

4) Gravel cover. Enough gravel shall be carefully placed to cover the distributors.

5) Separation layer. A layer of material such as unbacked, rolled 3 inch thick fiberglass insulation, untreated building paper of 40 to 60 pound weight, synthetic drainage fabric or 4 to 6 inches of marsh hay or straw shall be placed upon the top of the upper layer of gravel.

6) Soil cover. A minimum of 12 inches of soil back fill shall be provided over the beds.

7) Distribution boxes. A distribution box shall be provided for each filter bed where gravity distribution is used. The distribution boxes shall be placed upon undisturbed earth outside the filter bed. Separate watertight lines shall be provided leading from the distribution boxes to each of the distributor lines in the beds.

B) Sizing for subsurface sand filters.

1) Gravity flow.

a) For residential systems, single bed subsurface sand filters shall be sized at a rate of 240 square feet of surface area per bedroom.

b) Dual subsurface sand filters, constructed in series, shall be sized at the rate of 160 square feet of surface per bedroom in the first filter and 80 square feet of surface area per bedroom in the second filter in the series.

2) Pressure dosed.

a) For residential systems, single bed subsurface sand filters dosed by a pump or dosing siphon may be sized at a rate of 180 square feet of surface area per bedroom.

b) Dual subsurface sand filters, constructed in series, may be sized at the rate of 120 square feet of surface per bedroom in the first filter and 60 square feet of surface area per bedroom in the second filter in series.

3) Nonhousehold. Effluent application rates for commercial systems treating domestic waste shall not exceed the following:

- a) 1.5 gallon/square feet/day for double bed sand filters
- b) 1 .0 gallon/square feet/day for single bed sand filters.
- c) Total surface area for any subsurface sand filter system shall not be less than 200 feet square feet.

4) Free access sand filters.

A) Description. Media characteristics and underdrain systems for free access filters are similar to those for subsurface filters.

Dosing of the filter should provide for flooding the bed to a depth of approximately 2 inches. Dosing frequency is usually greater than two times per day. For coarser media (greater than 0.5 mm) a dosing frequency greater than four times per day is desirable.

Higher acceptable loadings on these filters as compared to subsurface filters relate primarily to the accessibility of the filter surface for maintenance. Gravel is not used on top of the sand media, and the distribution pipes are exposed above the surface.

B) Distribution. Distribution to the filter may be by means of troughs laid on the surface, pipelines discharging to splash plates located at the center or corners of the filter, or spray distributors. Care must be taken to ensure that lines discharging directly to the filter surface do not erode the sand surface. The use of curbs around the splash plates or large stones placed around the periphery of the plates will also be employed to avoid surface erosion. This practice will create maintenance difficulties, however, when it is time to rake or remove a portion of the media surface.

C) Covers, Free access filters may be covered to protect against severe weather conditions and to avoid encroachment of weeds or animals. The cover also serves to reduce odor conditions. Covers may be constructed of treated wooden planks, galvanized metal, or other suitable material. Screens or hardware cloth mounted on wooden frames may also serve to protect filter surfaces. Where weather conditions dictate, covers should be insulated. A space of 42 to 24 inches should be allowed between the insulated cover and sand surface. Free access filters may not be buried by soil or sod.

D) Loading, The hydraulic loading for free access sand filters should be from 2.0 to 5.0 gpd/sq.ft.

E. Number of filters. Dual filters each sized for the design flow are recommended for loading rates in excess of 3 ½ gpd/sq.ft. treating septic tank effluent.

5) Dosing. Dosing for sand filters is strongly advised. Without dosing, the entire area of the sand filter is never effectively used. Dosing not only improves treatment effectiveness but also decreases the chance of premature failure.

A) Pumps. A pump shall be installed when adequate elevation is

not available for the system to operate by gravity.

- 1) The pump shall be of corrosion-resistant material.
- 2) The pump shall be installed in a watertight pit.
- 3) The dosing system shall be designed to flood the entire filter during the dosing cycle. A dosing frequency of greater than two times per day is recommended.
- 4) A high water alarm shall be installed.

B) Dosing siphons. When a dosing siphon is used where elevations permit, such siphon shall be installed as follows:

- 1) Dosing siphons shall be installed between the septic tank and the first filter bed.
- 2) Dosing siphons shall be installed with strict adherence to the manufacturer's instructions.

C) Dosing tanks. The dosing tank shall be of such size that the siphon will flood the entire filter during the dosing cycle. A dosing frequency of greater than two times per day is recommended.

2.9 (11) Individual Mechanical Aerobic Wastewater Treatment Systems.

- 1) Use. Mechanical aerobic systems may be used only when the Administrative Authority determines that the site is unacceptable for a full-sized soil absorption system, mound system, subsurface sand filter, or biofilter. Because of the higher maintenance requirements of Mechanical aerobic systems, preference should be given to other sewage disposal systems where conditions allow.
- 2) Certification. All individual mechanical aerobic wastewater treatment plants shall be certified by an ANSI-accepted third-party certifier to meet National Sanitation Foundation Standard 40, Class I, including appendices (May 1996).
- 3) Installation and operation. All individual mechanical aerobic wastewater treatment plants shall be installed, operated and maintained in accordance with the manufacturer's instructions and the requirements of the Administrative Authority. The aerobic plants shall have a minimum treatment capacity of 150 gallons per bedroom per day or 500 gallons, whichever is greater. Installation of these types of plants should be restricted to those locations where they can be monitored by the local Administrative Authority.
- 4) Effluent treatment. The effluent from individual mechanical aerobic wastewater treatment plants shall receive additional treatment through the use of intermittent sand filters, mound systems or subsurface absorption systems of the same magnitude as prescribed in rules 2.9(1), 2.9(09) and 2.9(11) or as allowed by the Administrative Authority.
- 5) Maintenance contract. A maintenance contract with a manufacturer certified technician shall be maintained at all times. Maintenance agreements and responsibility waivers shall be recorded with the county recorder and in the abstract of title for the premises on which mechanical

aerobic treatment systems are installed. Mechanical aerobic units shall be inspected for proper operation at least twice a year on six month intervals.

6) A mechanical aerobic treatment plant shall be accessible to allow maintenance and service to all components within the plant.

7) The design and construction of the plant shall prevent discharge of wastewater, under normal operation w component malfunction, from any opening which is not part of the designed flow path of the entire treatment process. A plant shall not be constructed (intentionally or unintentionally) in a manner that defeats this intent. No openings within the plant shall exist which will allow a portion of the treatment proves to be bypassed should a malfunction occur. An access opening as provided shall not be deemed as an opening which will provide a bypass.

8) The system shall be equipped with an audible and visual alarm in a conspicuous location within the building in order to warn the owner of an overflow.

9) Effluent sampling. Any open discharge from systems involving mechanical aeration shall have the effluent sampled at each semi-annual inspection. Tests shall be run for CBOD5, TSS and E coli bacteria. The analysis shall be conducted by a certified laboratory and shall be at the homeowner's expense. A copy of the laboratory results of effluent sampling shall be submitted to the health department.

10) Continuation of the use and operation of the unit, as originally installed, is subject to the issuance of a discharge permit. Issuance of the discharge permit is based on the discharge criteria established and considered acceptable for surface discharge as stated in the IAC 567, Chapter 69 and compliance with manufacturer's specifications for system operation. Discharge permit fees shall be established by the Board of Health to cover the cost of the department's monitoring. These need to be established to cover cost of our testing.

11) Disinfection is required of the effluent discharging to a stream utilized for whole body contact.

12) Pre-tank requirements: All mechanical aeration units shall be equipped with a pre-tank of at least 1/2 of the rated capacity of the mechanical aeration unit and in no case less than 500 gallons.

2.9 (13) Requirements for impervious vault toilets. All impervious vault toilets hereafter constructed or required by the Administrative Authority to be reconstructed shall comply with the following requirements:

1) Location. Impervious vault toilets shall be located in accordance with the distances given in Table 1 for the closed portion of the treatment system.

2) Construction. The vault shall be constructed of reinforced, impervious concrete at least 4 inches thick. The superstructure including floor slab, seat, seat cover, riser and building shall comply with good design and construction practices to provide permanent safe, sanitary facilities. The vault shall be provided with a cleanout opening fitted with a fly-tight cover.

3) Disposal. Wastewater from impervious vault toilets shall be disposed of at a public sewage treatment facility.

2.9 (13) Requirements for portable toilets. All portable toilets shall be designed to receive and retain the wastes deposited in them and shall be located and maintained in a manner that will prevent the creation of any nuisance condition. Disposal of waste from portable toilets shall be at a public sewage treatment facility.

2.9 (14) Requirements for chemical toilets. All chemical toilets shall comply with the following requirements:

- 1) Tank. Chemical toilets for use in isolated residences shall have a receptacle of smooth, impervious material that is resistant to chemicals and easily cleanable.
- 2) Vent. When vents are required for chemical toilets, they shall be of durable corrosion-resistant material installed in a professional manner.
- 3) Mixing and chemical charge. The fixture shall be equipped with a mixing device and shall be charged with the proper concentration of bactericidal chemical or chemicals. Chemical recharges shall be added and mixed with the contents when necessary to maintain sufficient solution strength and to suppress odors.
- 4) Toilet rooms. Chemical toilets shall be located in toilet rooms which are well lighted, ventilated and maintained in a nuisance-free condition.
- 5) Final disposal of receptacle contents. The receptacle contents shall be disposed of in accordance with the requirements of 567 - chapter 68. The recommended method of disposal is discharging to a municipal sewage treatment facility.

2.9 (15) Other methods of wastewater disposal. Other methods or types of private wastewater treatment and disposal systems shall be installed only after plans and specifications for each project have been approved by the Administrative Authority.

This ordinance shall be effective from and after its final passage and approval and publication as required by law.

First Meeting Date	Ayes:	Nays:
May 1,2006	Gordy Rouw VanWeelden	none
Second Meeting Date	Ayes:	Nays:
May 15,2006	Gordy Rouw	none
		VanWeelden was absent
Third Meeting Date	Ayes:	Nays:
June 5,2006	Gordy Rouw VanWeelden	none

Dated this 5th day of June, 2006
Greg Gordy, Chairman
Mahaska County Board of Supervisors
Attest:

Kay Swanson
Mahaska County Auditor

It was moved by VanWeelden seconded by Rouw to approve Amendment #2 to Ordinance #127 Rural Residential Building Ordinance. Roll call vote: Rouw – aye; VanWeelden – aye; Gordy – aye. Motion carried.

**Amendment #2 to the Rural Residential Building Ordinance #127
Of Mahaska County, Iowa**

It is proposed that Section 10, defining ‘Fees’ be amended to provide as follows: The owner of a single lot shall pay to the Auditor a fee in the amount of \$250.00 at the time of the filing the application for a building permit. The monies collected shall be distributed by the Auditor as follows: Mahaska County Environmental Services - \$150.00, Mahaska County Secondary Roads - \$50.00, and Mahaska County Auditor - \$50.00.

The owner of the land being subdivided shall pay to the Auditor a fee in the amount of \$300.00 at the time of filing a preliminary plat. The monies collected shall be distributed by the Auditor as follows: Mahaska County Environmental Services - \$100.00, Mahaska County Secondary Roads - \$100.00, Mahaska County Auditor - \$50.00, and Mahaska County Assessor - \$50.00. If individual sewage treatment or on-site systems are required, a \$150.00 environmental inspection fee which shall be paid to the Mahaska County Sanitarian at the time of construction.

In event the owner of the land is constructing a residence to replace an existing residence of said land owner, the only fee required will be the \$150.00 environmental inspection fee which will be paid to the Mahaska County Sanitarian at the time of construction.

The owner of the land being subdivided shall pay to the Auditor a fee in the amount of \$200.00 at the time of filing of the final plat. The monies collected shall be distributed by the Auditor as follows: Mahaska County Environmental Services - \$50.00, Mahaska County Secondary Roads - \$50.00, and Mahaska County Auditor - \$100.00.

Permits shall be valid for a maximum of twelve (12) months from the time of issuance. If the residence is not started in that time, the permit must be reviewed, and additional fees paid.

Amendment will be effective July 1, 2006.

It was moved by VanWeelden seconded by Rouw to approve the Mahaska County Voting Security Policy. All present voted aye. Motion carried.

It was moved by VanWeelden seconded by Rouw to approve the Veteran Affairs Commission report for May 2006. All present voted aye. Motion carried.

Appointments to the Veteran Affairs Commission were tabled until June 19, 2006.

It was moved by VanWeelden seconded by Rouw to place Brian Knudtson on the payroll effective June 5, 2006 as the GIS Coordinator at a salary of \$36,500.00 with a review in 3 months and then increase his salary by 6%. All present voted aye. Motion carried.

It was moved by VanWeelden seconded by Rouw that the public restrooms be open on June 10, 2006 for Art on the Square and on August 3, 2006 for Sweet Corn Serenade. All present voted aye. Motion carried.

It was moved by Rouw seconded by Gordy to approve the proposal from Local Disposal, Inc. for garbage pick-up for the courthouse and law center to begin July 1, 2006. All present voted aye. Motion carried.

It was moved by Rouw seconded by VanWeelden to approve the following Stop sign resolution. All present voted aye. Motion carried.

**STOP AT INTERSECTION
MUTCD 2B-5
RESOLUTION**

WHEREAS: Traffic on Galeston Avenue (T38), which is functionally classified as a Major Collector, is endangered by traffic from the east on Mahaska Hwy G5T, functionally classified as a Minor Arterial, at the intersection located at the SE corner, Section 18, T-77N, R- 16W, Prairie Township, because of intersection/roadway geometry and sight distance limitations at the Mahaska Hwy G5T and Galeston Avenue (T38) intersection.

NOW, THEREFORE, BE IT RESOLVED by the Mahaska County Board of Supervisors that the Galeston Avenue T38) approach from the North be designated as "STOP approach" to the above described intersection and that a STOP sign shall be erected accordingly.

Passed and approved this 5th day of June 2006.

s/ Greg Gordy
Chairman, Board of Supervisors

Attest: s/Kay Swanson
County Auditor

Bids were opened for Project LFM-T65R(04)-06 Division 1, 2.3 miles of PCC Paving on 220th Street from Lynn Avenue to Osburn Avenue and 0.41 mile

of PCC paving on Merino Avenue from 220th Street south and Division 2, 0.37 mile PCC Paving on Rte T65 from Oxford Avenue and 180th Street north.

	Fred Carlson	Manatt's
Division 1	\$1,418,827.95	\$1,352,418.75
Division 2	<u>212,229.75</u>	<u>259,815.60</u>
Total	\$1,631,057.70	\$1,612,234.35

It was moved by VanWeelden seconded by Rouw to approve the recommendation of the Engineer to award the bid to Manatt's for the above project. Vote – 2 aye – one nay. Motion carried.

It was moved by Rouw seconded by VanWeelden to adjourn. All present voted aye. Motion carried.

Greg Gordy, Chairman
Mahaska County Board of Supervisors

ATTEST: _____
Kay Swanson, Mahaska County Auditor