Iowa Department of Natural Resources Geological Survey Bureau
109 Trowbridge Hall Iowa City, Ia. 52242-1319 PH (319) 335-1575

WELL RECORD 54060

PWSid 5715802 Permit No. _____

Site identification

Property Owner Four Oaks Well Number 1
Address Bertram, IA
Tenant Bertram Campus
Well Depth 400 ft Date Completed 4 / 30 / 01

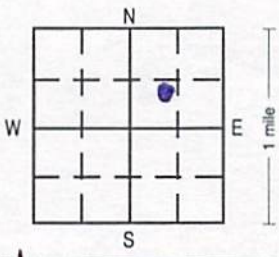
Location

County Linn

____mi. N/S and ____mi. E/W of intersection of _____ and _____

NE 1/4 of the SW 1/4 of the NE 1/4 of Sec 34 TWP 83 RNG 6 E/W

Show exact location of well in section grid with a dot (●).



Sketch map of well location on property

(see attached site plan)

N

200 ft

X upland ☐ hillside ☐ valley Elevation (if known) 760±

Formation log

From	To	Color	Hardness	Formation description
0	15			Silt & Clay
15	90			Brown Limestone
90	400			Sulurian Limestone

use additional sheets as needed

Remarks (including depth of lost drilling fluids, materials, or tools)

Well use

☐ Domestic ☐ Livestock ☐ Test Well
☐ Municipal X Public Supply ☐ Irrigation
☐ Industrial ☐ Monitoring ☐ Other _____ (explain)

Drill method

X rotary ☐ auger ☐ cable other _____

Hole size

12 inch from 0 ft to 295 ft
6 inch from 295 ft to 400 ft

hole size continued
___ inch from ____ ft to ____ ft
___ inch from ____ ft to ____ ft

Record all depth measurements from ground level (GL). Use (+) for above GL measurements.

Casing

Drive shoe (yes / X no) Pitless adaptor (yes / X no)

Size (ID/OD)	Type / Wt	Depth top	Depth bottom	Amount (length)
6" ID	19LB Sch40		295	

Perforated or slotted casing? (yes / X no)

Perforated / slotted from _____ ft to _____ ft
Perforated / slotted from _____ ft to _____ ft

Casing grouted? (X yes / no)

Type	Depth Top	Depth Bottom	Amount
Ben-Seal		295	56 Bags pumped

Well screen? (yes / X no)

Diameter	Slot size	Depth Top	Depth Bottom	Length	Material

Bottom capped (yes / no) with _____
Seals / Packers (yes / no) kind _____ depth _____ ft
Gravel packed (yes / no) from _____ ft to _____ ft
type _____ amount _____

Well developed? (X yes / no)

Explain Air

Pump installed? (X yes / no) Date 5 / 23 / 01

Installer's name Jack Kremer
Type of pump Sub Depth to intake 175 ft
Pump diameter 4 Rated capacity 75 GPM

Water information

Aquifer: ☐ sand/gravel X limestone ☐ sandstone
Main water-supply zone from 310 ft to 380 ft
Final water level (static water level) 66 ft (X below / above) GL.
Pumping water level 108' ft below GL; ☐ tape X airline ☐ E-line
At yield of 70 GPM; ☐ orifice X volumetric ☐ estimate Date 5-24-01

Water quality test? (X yes / no) Date tested 5 / 25 / 01

Tested by Hygenic Lab Sherri marine
Test results _____

Contractor Jack Kremer Well Drilling
Address 1187 202nd St.
Driller Jack Kremer Certification no. 40123

white copy - **Iowa DNR, Geological Survey Bureau** blue copy - **Well Contractor** pink copy - **Customer** yellow copy - **County Health Officer**

WELL AND PUMP DATA

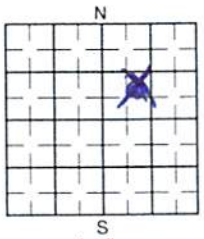
54060

Location of Well

County	Township Number	Range Number	Section No.	Fraction	
Linn	83 (N) or S	6 E or (W)	34		NE, SW, NE ¼ ¼ ¼
Township: Bertram					

Street Address and City or Distance and Direction from Road Intersections: 1341 Bertram Street, Bertram, IA

Show exact location of well in section grid with an 'x'



Addition Name

Block Number

Lot Number

Remarks, Elevation, Source of Data, etc.: Elev = 760 ±

Property owner's name and address

Four Oaks
Bertram Campus

Well depth: 400 ft

Datum point from which all measurements are taken

Method of Drilling

☐ Cable tool ☐ Hollow rod ☐ Driven ☐ Dug
☐ Direct rotary ☒ Air rotary ☐ Bucket auger ☐ _____
☐ Reverse rotary ☐ Jetted ☐ Flight auger

Use

☐ Domestic ☒ Public supply ☐ Industrial ☐ _____
☐ Irrigation ☐ Municipal ☐ Commercial
☐ Test Well ☐ Heating or cooling ☐ Monitoring

Casing Type

☒ Steel ☐ Threaded
☐ Galv ☒ Welded
☐ PVC ☐ Solvent welded
☐ SS

Height above/below surface: 18" +/-
Drive shoe? Yes ☒ No ☐

					Hole diameter
____ in	to ____ ft	Wgt ____ lb/ft	Sch. No ____		____ in to ____ ft
____ in	to ____ ft	Wgt ____ lb/ft	Sch. No ____		____ in to ____ ft
____ in	to ____ ft	Wgt ____ lb/ft	Sch. No ____		____ in to ____ ft

Borehole data

Formation Log	Color	Hardness	From	To
Silt & Clay			0	15
Limestone Brown			15	90
Silurian Limestone			90	400

Intake Portion of Well

Screen type ____ or open hole from 295 ft to 400 ft
Manufacturer ____
Material ____ Dia. ____
Fittings ____ Length ____
Set between ____ ft and ____ ft Slot ____
____ ft and ____ ft Slot ____
____ ft and ____ ft Slot ____
Method of installation ____

Filter Pack

Source ____ Gradation ____
Method of installation ____ Composition ____
Volume used ____ Depth to top of f p ____

Grout

Used? ☒ Yes ☐ No Volume used 5k Bags
☐ Neat Cement ☒ Bentonite ☐ ____
Method of installation Tremie @ 240'
Depth: from ____ ft to ____ ft
from ____ ft to ____ ft

Development

Method air Duration ____
Dates ____ Sand content after ____ hrs ____
Chemicals used None

Static Water Level

66 ft ☒ below ☐ above grade
Date measured 5-24-01

Pumping Water Level

108 ft ☐ below ☐ above grade Date 5-24-01
After 12 hrs pumping at 70 gpm

Specific Capacity

70gpm gpm/ft of drawdown at ____ hours
Date 5-24-01

Pump

Date installed 5-18-01 Type Sub
Manufacturer Goulds Model No 55 GS
H.P. 5 Volts 220 Capacity 70 gpm
Depth of pump intake setting 175 No. of stages ____
☐ Oil ☒ Water lubrication Power source ____
Material of drop pipe 2" galv Steel bowls ____
shafting ____ impellers ____ Bowl dia. ____
Column pipe dia 2 Length 168 Modifications ____

Well Head Completion

☒ Pitless adaptor ☐ Basement offset Distance above grade 18"

Nearest Sources of Possible Contamination

300 ft Direction SE Type Stream
Well disinfected upon completion? ☒ Yes ☐ No

Geophysical Logs Run

Contractor Name and Address

Name of Driller: Jack Kremer
State License Number: 40123

Water Quality

Sample taken? ☒ Yes ☐ No
Where analyzed Hygenic Lab IA. City

Date well completed ____

AQUIFER TEST DATA 54060

Owner Four Oaks Address Bertram County Linn State IA

Date 5-21-01 Company performing test Kremer Well Drilling Measured by

Well No. Distance from pumping well Type of test Test No.

Measuring equipment

Time Data
Pump on: Date 5-21 Time 11:30 AM
Pump off: Date 5-22 Time 12:00 (PM)
Duration of aquifer test:
Pumping 12.5 Recovery 3

Water Level Data
Static water level 66'
Measuring point top of tube
Elevation of measuring point

Discharge Data
How Q measured Water Meter
Depth of pump/air line 175
Previous pumping? Yes ___ No X
Duration ___ End ___

Comments on factors affecting test data

Water meter Reading on 1008 gal
at 54000 gal

Date	Clock time	Time since pump started t	Time since pump stopped t'	t/t'		Water level measurement	Correction or Conversion	Water level	Water level change s or s'		Discharge measurement	Rate		
5/21	11:30					66		66				Water meter	00	1008
	11:31	1 m				86			20'				055	54000 gal
	11:32	2 m				90			4'					
	11:33	3 m				94			4'					70.47 gal per min
	11:34	4 m				95			1					
	11:35	5 m				96			1					
	11:40	10 m				97			1					
	11:45	15 m				98			1					
	11:50	20 m				99.5			1.5					
	11:55	25 m				99.75			.25					
	12:00	30 m				100.5			.75					
	12:05	35 m				100.5			-					
	12:10	40 m				101			.5					
	12:15	45 m				101.5			.5					
	12:20	50 m				101.75			.25					
	12:25	55 m				102			.25					
	12:30	60 m				102.25			.25					
	12:45	1:15 hr				103			.75					
	1:00	1:30 hr				103.5			.5					
	1:15	1:45				103.5			-					
	1:30	2:00				104			.5					
	2:00	2:30				104.5			.5					
	2:30	3:00				105			.5					
	3:00	3:30				105.5			.5					
	3:30	4:00				106			.5					
	4:00	4:30				106.5			.5					
	4:30	5 hr.				107			.5					
	5:00	55				107.5			.5					
	5:30	6				107.5			-					

AQUIFER TEST DATA 54060

Owner _____ Address _____ County _____ State _____

Date _____ Company performing test _____ Measured by _____

Well No. _____ Distance from pumping well _____ Type of test _____ Test No. _____

Measuring equipment _____

Time Data
Pump on: Date _____ Time _____ (t)
Pump off: Date _____ Time _____ (t')
Duration of aquifer test:
Pumping _____ Recovery _____

Water Level Data
Static water level _____
Measuring point _____
Elevation of measuring point _____

Discharge Data
How Q measured _____
Depth of pump/air line _____
Previous pumping? Yes ___ No ___
Duration _____ End _____

Comments on factors affecting test data

Date	Clock time	Time since pump started t	Time since pump stopped t'	t/t'		Water level measurement	Correction or Conversion	Water level	Water level change s or s'		Discharge measurement	Rate		
5/21	6:00	6.5 hr.				107.5			—					
	6:30	7				107.5			—					
	7:00	7½				108			.5					
	7:30	8				108			—					
	8:00	8.5				108			—					
	8:30	9				108.5			.5					
	9:00	9.5				108.5			—					
	9:30	10				108.5			—					
	10:00	10½				108.5			—					
	10:30	11				108.5			—					
	11:00	11.5				108.5			—					
	11:30	12				108.5			—					
	12:00	12.5				108.5			—					

AQUIFER TEST DATA 54060

Owner _____ Address _____ County _____ State _____

Date _____ Company performing test _____ Measured by _____

Well No _____ Distance from pumping well _____ Type of test _____ Test No _____

Measuring equipment _____

Time Data
Pump on: Date _____ Time _____ (t)
Pump off: Date _____ Time _____ (t')
Duration of aquifer test:
Pumping _____ Recovery _____

Water Level Data
Static water level _____
Measuring point _____
Elevation of measuring point _____

Discharge Data
How Q measured _____
Depth of pump/air line _____
Previous pumping? Yes ____ No ____
Duration _____ End _____

Comments on factors affecting test data

Date	Clock time	Time since pump started t	Time since pump stopped t'	t/t'		Water level measurement	Correction or Conversion	Water level	Water level change s or s'		Discharge measurement	Rate		
		Recovery					Chart							
5/22	2 pm					108.5		108.5	–					
		1	m			92			16.5					
		2	m			87			5					
		3	m			85			2					
		4	m			83			2					
		5	m			83			–					
		10	m			79			4					
		15	m			77			2					
		20	m			76			1					
		25	m			76			-					
		30	m			74			2					
		35	m			74			–					
		40	m			74			-					
		45	m			73.5			.5					
		50	m			73			.5					
		55	m			73			–					
		60	m			72.5			.5					
		1:15				72			.5					
		1:30				71.5			.5					
		1:45				71			.5					
		2:00				70			1					
		2:30				70			–					
		3:00				69.5			.5					

HALL & HALL ENGINEERS, INC.
209 29th Street N.E.
CEDAR RAPIDS, IOWA 52402

Ph.(319) 362-9548
Fax (319) 362-7595

54060

LETTER OF TRANSMITTAL

TO Four Oaks
5400 Kirkwood Blvd SW
Cedar Rapids, IA 52404

DATE	JOB NO.
6-11-01	7085

ATTENTION: Dave Davis, Ed Schroder

RE: Four Oaks Center
Bertram, Iowa

WE ARE SENDING YOU ☐ Attached ☐ Under separate cover via _____ the following items:

☐ Shop drawings ☐ Prints ☐ Plans ☐ Samples ☐ Specifications
☐ Copy of letter ☐ Change order ☐ _____

COPIES	DATE	NO.	DESCRIPTION
1	6-5-01		Kremer Well Drilling Invoice - $40,551.00
3	6-1-01		Abandoned Water Well Plugging Record
1			Well Record
1			Well and Pump Data
1	5-21-01		Aquifer Test Data

THESE ARE TRANSMITTED as checked below:

☑ For approval ☐ Approved as submitted ☐ Resubmit _____ copies for approval
☐ For your use ☐ Approved as noted ☐ Submit _____ copies for distribution
☐ As requested ☐ Returned for corrections ☐ Return _____ corrected prints
☐ For review and comment ☐ _____
☐ FOR BIDS DUE _____ ☐ PRINTS RETURNED AFTER LOAN TO US

REMARKS (1) I checked the invoice against the Bid Prices, and everything seems to be O.K. I could not verify the total length (575') of 2" water main since additional water main was installed to the future group homes.
(2) The Abandoned Water Well Plugging Records should be signed for you, and forwarded on to the Linn County Health Dept. and Iowa Dept. of Natural Resources.
(3) I have forwarded the originals of the well records to the Iowa Geological Survey.

COPY TO Kremer Well Drilling
Iowa Geological Survey

SIGNED: Dennis Kettel

If enclosures are not as noted, kindly notify us at once.

54060

Iowa Department of Natural Resources

Abandoned Water Well
Plugging Record

1. Owner:

Name: Four Oaks City: Bertram State: IA
Address: 5400 Kirkwood Blvd Zip: 52404 Phone: (319) 364-0259
Cedar Rapids, IA

2. Well (Cistern) Location:

NE 1/4 of, SW 1/4 of, NE 1/4 of, Section 34 Twp 83 Range 6 West/East (circle one)

~~HENRY~~ Linn County, Describe well location on property:
S. Side of Red Brick House

3. Description:

Well Depth:	100 ft.	Casing material: steel, plastic, concrete, clay, brick, stone (circle one)	
Depth to water:	65 ft.		
Casing diameter:	5 in.	Type of construction: drilled, driven, bored, dug, augered (circle one)	
Yr. or decade constr:			
Depth of casing:	ft.	Check if this is a Monitoring Well	

Check if Cistern: _____ depth: _____ ft. diameter: _____ ft.

I certify this well has been plugged as required by rule 567-39.8 of the Iowa Administrative Code (IAC). I agree to provide any additional information the county or department may need concerning this well.

Signature of Owner: _____ Date Plugged: 6-1-01

If plugged by certified well contractor, complete this box:

I have plugged this well as required by rule 567-39.8 of the Iowa Administrative Code (IAC).

Signature of Contractor: Jack Kramer Cert. No. 4012 3

OR, If plugged by well owner, complete this box:

The property owner has plugged this well following requirements in rule 567-39.8 of the Iowa Administrative Code with the oversight and assistance of the designated county agent.

Signature of County Agent: _____ Date Approved: _____

Eligible for Grants-to-Counties cost share: YES NO (determined by County Agent)

Complete one form for each well plugged and submit within 30 days to the local county agent:

Henry County Maintenance & Engineering
P O Box 655
Mt. Pleasant IA 52641

file: abandon.wel disk: wells

54060

Iowa Department of Natural Resources

Abandoned Water Well
Plugging Record

1. Owner:

Name: Four Oaks City: Bertram State: IA
Address: 5400 Kirkwood Blvd Zip: 52404 Phone: (319) 364-0259
Cedar Rapids, IA

2. Well (Cistern) Location:

NE 1/4 of, SW 1/4 of, NE 1/4 of, Section 34 Twp 83 Range 6 West/East (circle one)
Linn
~~HENRY~~ County, Describe well location on property: _____
Front Side of East Dormatory Upper Well

3. Description:

Well Depth:	215 ft.	Casing material: steel, plastic, concrete, clay, brick, stone (circle one)	
Depth to water:	70 ft.		
Casing diameter:	6 in.	Type of construction: drilled, driven, bored, dug, augered (circle one)	
Yr. or decade constr:	_____		
Depth of casing:	40 ft.	Check if this is a Monitoring Well _____	

Check if Cistern: _____ depth: _____ ft. diameter: _____ ft.

I certify this well has been plugged as required by rule 567-39.8 of the Iowa Administrative Code (IAC). I agree to provide any additional information the county or department may need concerning this well.

Signature of Owner: _____ Date Plugged: 6-1-01

If plugged by certified well contractor, complete this box:

I have plugged this well as required by rule 567-39.8 of the Iowa Administrative Code (IAC).

Signature of Contractor: Jack Kresman Cert. No. 20123

OR, If plugged by well owner, complete this box:

The property owner has plugged this well following requirements in rule 567-39.8 of the Iowa Administrative Code with the oversight and assistance of the designated county agent.

Signature of County Agent: _____ Date Approved: _____

Eligible for Grants-to-Counties cost share: YES NO (determined by County Agent)

Complete one form for each well plugged and submit within 30 days to the local county agent:

Henry County Maintenance & Engineering
~~P O Box 655~~
Mt. Pleasant ~~IA~~ 52641

file: abandon.wel disk: wells

54060

Iowa Department of Natural Resources

Abandoned Water Well
Plugging Record

1. Owner:

Name: Four Oaks City: Bertram State: IA
Address: 5400 Kirkwood Blvd Zip: 52404 Phone: (319) 364-0259
Cedar Rapids, IA

2. Well (Cistern) Location:

NE 1/4 of, SW 1/4 of, NE 1/4 of, Section 34 Twp 83 Range 6 (West) East (circle one)
Linn
~~HENRY~~ County, Describe well location on property: _____
Lower well Between two Driveways

3. Description:

Well Depth:	220 ft.	Casing material: steel, (plastic), concrete, clay, brick, stone (circle one)	
Depth to water:	45 ft.		
Casing diameter:	4 in.	Type of construction: (drilled), driven, bored, dug, augered (circle one)	
Yr. or decade constr:	_____		
Depth of casing:	40 ft.	Check if this is a Monitoring Well _____	

Check if Cistern: _____ depth: _____ ft. diameter: _____ ft.

I certify this well has been plugged as required by rule 567-39.8 of the Iowa Administrative Code (IAC). I agree to provide any additional information the county or department may need concerning this well.

Signature of Owner: _____ Date Plugged: 6-1-01

If plugged by certified well contractor, complete this box:

I have plugged this well as required by rule 567-39.8 of the Iowa Administrative Code (IAC).

Signature of Contractor: Jack Kram Cert. No. 4012.3

OR, If plugged by well owner, complete this box:

The property owner has plugged this well following requirements in rule 567-39.8 of the Iowa Administrative Code with the oversight and assistance of the designated county agent.

Signature of County Agent: _____ Date Approved: _____

Eligible for Grants-to-Counties cost share: YES NO (determined by County Agent)

Complete one form for each well plugged and submit within 30 days to the local county agent:

Henry County Maintenance & Engineering
P O Box 655
Mt. Pleasant IA 52641

file: abandon.wel disk: wells

Hygienic Laboratory

54060

The University of Iowa

Date of report: 05-25-2001

KREMER WELL DRILLING
1187 202ND STREET

MOUNT PLEASANT IA 52641

Sample Number	**200104373**
Date Received	05-22-2001
Project	
Date Collected	05-21-2001 10:00
Collection Site	flush hyd north
Collection Town	Bertram
Description	water
Reference	4-OAKS/BERTRAM
Collector	KREMER JACK
Phone	(319) 986-2247
Purchase Order	

Comments: *Received at 11 degrees C.*

Results of Analyses

Microbial Identification

Total Coliform Bacterial Absent, MPN < 1

Date Analyzed: 05-22-2001 Analyst: M
Method: CULTURE Verified: CR

Description of units used within this report

No Units - No Units

Iowa Laboratory Certification No. 027. AIHA, ICR, NVLAP, USEPA and other credentials available upon request.

If you have any questions please call Sherri Marine at 800/421-IOWA (4692) or 319/335-4500. Thank you.

Mary J. R. Gilchrist, Ph.D.
Director

102 Oakdale Campus, #101 OH
Iowa City, Iowa 52242-5002
319/335-4500 Fax: 319/335-4555

http://www.uhl.uiowa.edu

H.A. Wallace Building
East Grand, Des Moines, Iowa 50319-(
515/281-5371 Fax: 515/243-1349

Hygienic Laboratory

54060

The University of Iowa

Date of report: 05-25-2001

KREMER WELL DRILLING
1187 202ND STREET

MOUNT PLEASANT IA 52641

Sample Number	**200104372**
Date Received	05-22-2001
Project	
Date Collected	05-21-2001 10:00
Collection Site	flush hyd south
Collection Town	Bertram
Description	water
Reference	4-OAKS/BERTRAM
Collector	KREMER JACK
Phone	(319) 986-2247
Purchase Order	

Comments: *Received at 11 degrees C.*

Results of Analyses

Microbial Identification

Total Coliform Bacterial Absent, MPN < 1

Date Analyzed: 05-22-2001 Analyst: M
Method: CULTURE Verified: CR

Description of units used within this report

No Units - No Units

Iowa Laboratory Certification No. 027. AIHA, ICR, NVLAP, USEPA and other credentials available upon request.

If you have any questions please call Sherri Marine at 800/421-IOWA (4692) or 319/335-4500. Thank you.

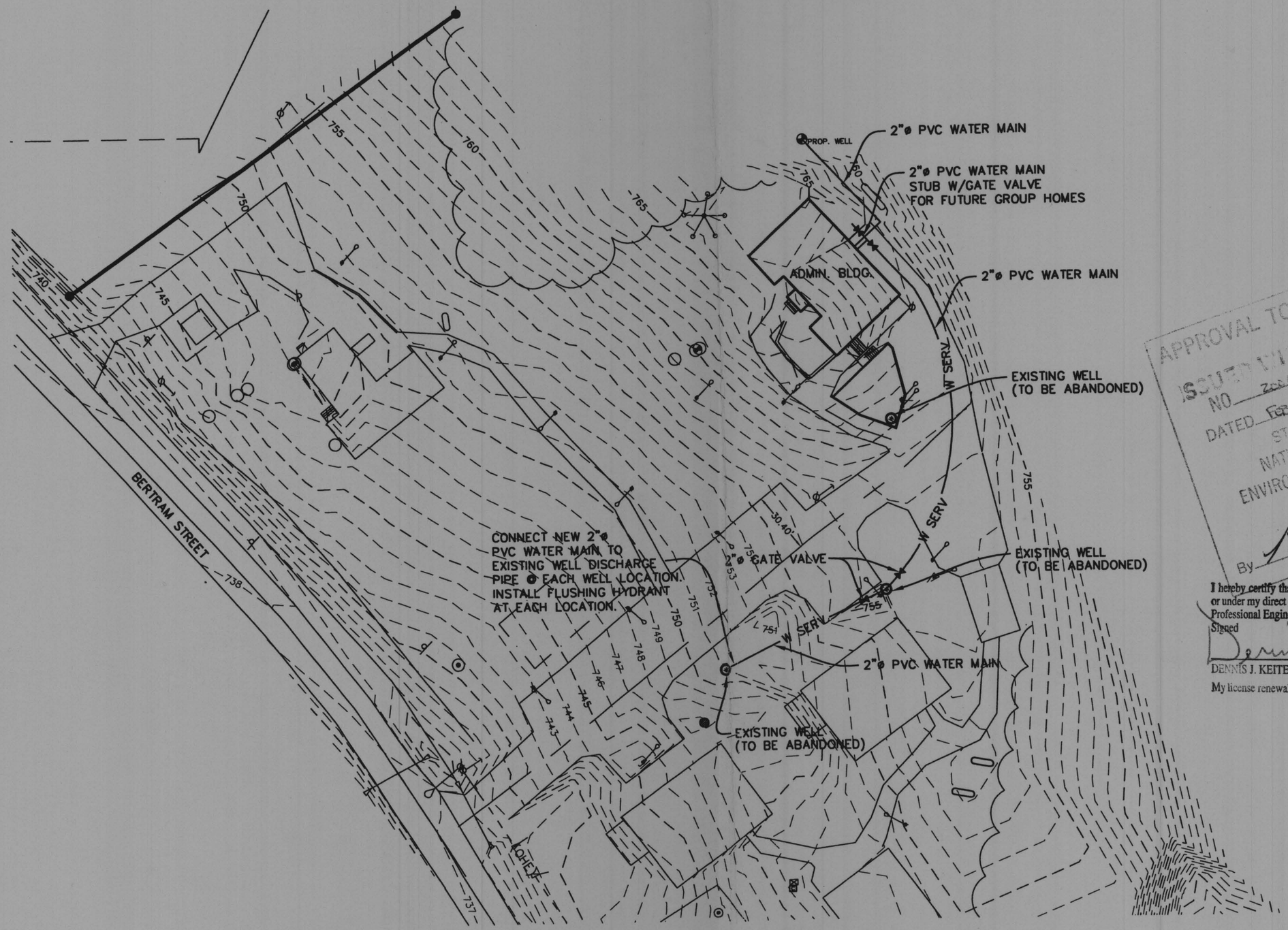
Mary J. R. Gilchrist, Ph.D.
Director

102 Oakdale Campus, #101 OH
Iowa City, Iowa 52242-5002
319/335-4500 Fax: 319/335-4555

http://www.uhl.uiowa.edu

H.A. Wallace Building
East Grand, Des Moines, Iowa 50319-
515/281-5371 Fax: 515/243-1349

54060



APPROVAL TO CONSTRUCT
ISSUED WITHOUT
NO 2001-143-W
DATED February 9, 2001
STATE OF IOWA
NATURAL RESOURCES
ENVIRONMENTAL PROTECTION
DIVISION
By Roy D Neppl

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

Signed Dennis Keitel Date 1-31-01

DENNIS J. KEITEL, P.E. Iowa Lic. No. 8896

My license renewal date is December 31, 01

LICENSED PROFESSIONAL ENGINEER
DENNIS J. KEITEL
8896
IOWA

FILE NAME: I:\CAD\DJKK\PROJECTS\7085\DWG\7085B01.DWG	DRAWN BY: TAM					CEDAR RAPIDS City of Five Seasons	HALL AND HALL ENGINEERS, INC. 209 29TH STREET N.E. CEDAR RAPIDS, IOWA 52402 (319) 362-9548 CIVIL ENGINEERING · LAND SURVEYING · LANDSCAPE ARCHITECTURE · SITE AND LAND DEVELOPMENT PLANNING
SCALE: NO SCALE	CHECKED BY: DJK						
PLOT DATE: 02/01/01	APPROVED BY: DJK						
	DATE: 01/29/01						
	FIELD BOOK: XXX	NO.	REVISION DESCRIPTION	APPROVED	DATE		

FOUR OAKS – BERTRAM CAMPUS
BERTRAM, IOWA

SITE PLAN
PROJECT NO: 7085

SHEET 1 OF 3