



STATE OF IOWA

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

DEPARTMENT OF NATURAL RESOURCES
ROGER L. LANDE, DIRECTOR

March 13, 2012

Mr. Mike Cherry, P.E.
City of Waverly
200 1st St. NE
Waverly, IA 50677

Subject: Variance Request from Design Standards Section 13.12.5
Sanitary Sewer lift Station Improvements
Waverly, Iowa

Dear Mr. Cherry:

After careful and thorough consideration, the Department has approved your March 13, 2012 request for a variance from Chapter 13.12.5 of the Iowa Wastewater Facilities Design Standards which requires the installation of a force main by cut and fill methods.


Based on the documentation presented by your Engineer, it is the determination of this Department that satisfactory justification has been presented to warrant the granting of variances for the installation of a gravity sewer by horizontal directional drilling methods. The requested variance is deemed to be reasonable and necessary pursuant to the Iowa Code section 455B.181.

The facts presented for the project present unique circumstances and the variance is therefore justified to provide the narrowest exception possible to the provisions of the rule in accordance with Rule 561 IAC 10.5. Since the project planning and construction may last more than one year, the variance is considered to be of a permanent nature. The validity of this variance approval shall last for a period of one year from the date of the construction permit in accordance with Rule 561 IAC 10.5.

This decision is based on the Department's review of justifications presented to support the request. This concurrence with the request is based on the Department's finding that the resulting project will provide substantially equivalent effectiveness (567 IAC 64.2 (9) e) as would be provided by technical compliance with the design standard on this issue.

If you have any questions, please call Victor Croasdale at 515-281-8877.

Sincerely,


Shelli Grapp
Bureau Chief - Water Quality

cc: DNR Field Office #1
DNR File 6 09-90-0-01
Kevin Graves, P.E. WHKS & Co..
DNR Legal Services - Diana Hansen

VARIANCE REQUEST

Iowa Department of Natural Resources

1. Date:	March 3, 2012	14. Decision:	<i>JMC</i>
2. Reviewer/Engr.:	Victor J. Croasdale	Date:	3/13/12
3. Date Received:	March 3, 2012		
4. Facility Name:	City of Waverly		
5. Facility Number:	09 90 0 01		
6. County Number:	09	15. Appealed:	
7. Program Area:	CP (Wastewater Construction)	Date:	
8. Facility Type:	CO 1 (Collection/treatment)		
9. Subject Area:	394, Pipe bursting/reaming		
10. Rule Reference:	567-64.2(9)		
11. Design Std. Ref.:	13.12.5 (Materials of Construction)		
12. Consulting Engr.:	WHKS & Co.		
13. Variance Rule:	567-64.2 (9)		

16. Description of Variance Request:

The City of Waverly has requested the IDNR to review the variance request submitted by their consulting engineer, WHKS & Co. The request is for variance from Design Standard 13.12.5, Materials of Construction for sanitary sewer force mains. This standard describes the requirements for installation of sanitary sewer force mains using open-cut methods including requirements for excavation, pipe bedding, and installation. The proposed method is a pipe bursting process using 6-inch HDPE pipe to replace approximately 500 linear feet of 4-inch CIP sanitary force main and 10-inch HDPE pipe to replace approximately 1,500 linear feet of 8-inch CIP sanitary force main. This is a trenchless method of installing sanitary sewer that is not covered by the Iowa Wastewater Facilities Design Standards.

17. Applicant's/Consulting Engineer's Justification:

The City's intent is to replace approximately 2,000 linear feet of CIP force main with larger HDPE pipe and abandon the existing CI pipe in place. The need for this replacement was due to accommodate the growth in the City. The City's interest in pipe bursting is mainly for less public disruption and surface restoration involved with open trenching and avoidance of closing the HMA bike path

18. Department's Justification: RECOMMEND APPROVAL etc

1. As these are force mains, minimum slope is not an issue.
2. The upsizing of the pipe and existing pipe fragments that will be left underground may provide additional bedding for the new sewer.
3. This procedure has been widely used, in Iowa, and the rest of the world for many years and is an established technology.
4. The Engineer has experience using this method in other states.

19. Precedents Used:

City of Fontanelle	June 23, 2000
City of Ottumwa	Sept 16, 2004
City of North Liberty	Project No S2005-0367 Permit No 2005-0342-S May 2, 2005
City of Brooklyn	Project No S2011-0117 Permit No 2011-0115-S Oct 1, 2010

20. Staff Reviewer: Victor J. Croasdale *Victor J. Croasdale* Date: March 13, 2012

21. Supervisor: Satya Chennupati *Satya Chennupati* Date: 3/13/2012

22. Authorized by: Shelli Grapp *Shelli Grapp* Date: 3/13/12

WHKS & CO.

ENGINEERS PLANNERS LAND SURVEYORS

FOUAD K. DAOUD, P.E. & S.E., PRESIDENT & CEO
PENNY L. SCHMITZ, EXEC. VICE PRES., COO & CFO
RICK G. ENGSTROM, C.E.T., VICE PRESIDENT
MICHAEL A. ZELINSKAS, P.E., VICE PRESIDENT
WILLIAM K. ANGERMAN, P.E., VICE PRESIDENT
SCOTT D. SANFORD, P.E. & S.E., PRINCIPAL

March 8, 2012

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ROCHESTER, MN 55904-5515
phone 507-288-3923
fax 507-288-2675
e-mail: rochester@whks.com
website: www.whks.com

Mr. Satya Chennupati, P.E.
Section Supervisor
Iowa Department of Natural Resources – Wastewater Section
Henry A. Wallace Building
502 E. 9th Street
Des Moines, IA 50319

RE: Sanitary Sewer Lift Station Improvements
Waverly, Iowa

Dear Mr. Chennupati:

On behalf of the City of Waverly, this letter serves as a variance request pursuant to 561 Iowa Administrative Code (IAC) Chapter 10, incorporated by reference by 567 IAC Chapter 13. This request is for the Waverly Sanitary Sewer Lift Station Improvements project, specifically regarding the utilization of pipe bursting to replace existing sanitary sewer force mains associated with the 6th Avenue and Ridgewood Lift Stations within the Waverly sanitary sewer collection system. Following is contact information for the City of Waverly:

Mike Cherry, P.E.
Director of Public Works & City Engineer
City of Waverly
200 1st Street NE
Waverly, IA 50677-0616
(319) 352-9065

We are requesting a variance from the Iowa Department of Natural Resources (IDNR) Wastewater Facilities Design Standards, Chapter 13 Part 13.12 – FORCEMAINS. The City is requesting to utilize the pipe bursting technique to replace two (2) existing forcemains within the sanitary sewer collection system, at the 6th Avenue Lift Station and the Ridgewood Lift Station. This technique will provide the City with a more cost-effective project by minimizing the surface restoration associated with the forcemain replacement. Based on discussions with IDNR Staff, previous variance requests for utilization of the pipe bursting technique have been granted by the Wastewater Section. WHKS & Co. has also successfully utilized this technique for previous projects within the State of Minnesota.

In accordance with the IDNR regulations for submitting a variance request, following is additional information pertinent to said request:

- 1) The City of Waverly's Water Pollution Control Facility (WPCF) has been inspected by IDNR Field Staff three (3) times within the past five (5) years. In addition, the WPCF has received three (3) notices of violation of their existing discharge permit within the last five (5) years. However, these violations do not directly impact the sanitary sewer collection system and the lift station forcemains associated with this variance request.
- 2) There are no other known agencies that regulate this activity or that will be affected by the granting of this variance request.

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- 3) There are no other known entities that would be adversely affected by the granting of this variance request.
- 4) The only entities having knowledge of relevant facts concerning this variance request are the City of Waverly and WHKS & Co.
- 5) There are no signed releases required for this variance request other than those of the City of Waverly (petitioner) and WHKS & Co. (professional engineer) which are included below.

A construction permit application with plans and specifications for this project have previously been submitted to IDNR Staff for review and approval. The City is tentatively planning to begin construction of the lift station improvements in April 2012.

Please do not hesitate to contact me with any questions.

Sincerely,

WHKS & Co.




Kevin Graves, P.E.

KG:tr

Cc: Mike Cherry, City of Waverly
Victor Croasdale, IDNR

Signature of authorized representative for the City of Waverly:

Michael J. Cherry Director of Public Works & City Engineer 3-9-12
Name/Title Date

	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.	
	<u>Kevin J. Graves</u> Kevin J. Graves, P.E.	<u>3/8/12</u> Date
	License number <u>17597</u>	
	My license renewal date is December 31, 2012.	
	Pages or sheets covered by this seal: <u>All pages.</u>	