

DATE RECEIVED		FACILITY NAME		COUNTY No.	PROGRAM AREA CODE	FACILITY TYPE CODE	SUBJECT AREA CODE
3 2/16/88 4/11/89		4 City of Lisbon		5 57	6 CP	7 C01	8 305
RULE REFERENCE	DESIGN STANDARD REFERENCE		DECISION		APPEAL ACTION		
9 64.2(9)	10 12.5.1		11 Approved 1/11/89		12		
ENGINEER				VARIANCE RULE			
13 Shoemaker & Haaland				14 64.2(9) C			

15. DESCRIPTION OF VARIANCE REQUESTED: Project is for construction of a 6" diameter sewer to replace an existing 4" private sewer line serving only 4 existing homes. During construction of a water main last year the City found this private sewer to be located in the City right-of-way and in conflict with the water main; therefore, the City wants to rebuild the sewer to state standards to become a part of the municipal sanitary sewer system. Inasmuch as DNR design standards require a minimum pipe diameter of 8" for public gravity sanitary sewers, the designing engineer is requesting a variance to use 6" diameter pipe for replacement.

16. ENGINEERS JUSTIFICATION:

1. The proposed sewer will never be extended and will serve only four homes. Hydraulic capacity considerably more than required.
2. The downstream sewer is only 6" in diameter, serving two city blocks and 8 homes through 561' of 6" pipe.
3. The old sewer is in near proximity to a new city water main and city officials do not want to risk the possibility of contamination.
4. The City is proposing to reconstruct a private 4" sewer line of questionable integrity, with a new public sewer of 6" diameter pipe and cleanout which is constructed to state standards.
5. The new sewer will be installed by the City of Lisbon and will be an extension to the public sewer system which is owned and maintained by City.
6. The City feels they have the necessary means to maintain the proposed sewer extension, and if necessary they will submit a letter to that effect.
7. The extra cost of an 8" sewer and manhole is not justified in this situation.

17. DEPARTMENTS JUSTIFICATION: We concur with the engineers proposal to replace the existing 4" private sewer with a 6" public sewer based upon the above justification. The existing 4" sewer has apparently served as a private sewer for 4 homes for a number of years without any serious problems. The provision of a 6" sewer which is owned and maintained by the City of Lisbon should be an improvement over the existing installation. Also the new sewer line can be so located and constructed as to provide necessary separation distances or special construction, if necessary, to protect the new water main from possible contamination.

18. PRECEDENTS USED:

City of Mystic - approved 7/16/86; City of Delta - approved 11/10/86;
City of Shambaugh - approved 2/10/87; City of Keokuk - approved 6/3/87;
City of Albia - approved 7/27/87

19. STAFF REVIEWER:

a. SUPERVISOR:

b. AUTHORIZED BY:

Bob M. Evans 1/11/89
[Signature] 4/1/89
Daniel McAllister 4/11/89

STATE OF IOWA
DEPARTMENT OF NATURAL RESOURCES
HENRY A. WALLACE BUILDING
DES MOINES, IOWA 50319

CONSTRUCTION PERMIT

RECORD COPY

File Name

Lisbon - Sewage

Permit Initials

JME

City of Lisbon
City Hall
Lisbon, Iowa 52253

PERMIT NO.: 89-60-S

FILE: Lisbon - Sewage

RE: Cemetary Road Sanitary Sewer

PROJECT NO: S88-56

In accordance with the provisions of Section 455B.173.9 and 455B.174.4, Code of Iowa, and Rule 567--64.2(455B) or Rule 567--65.5(455B), or Rule 567--41.12(455B) of the Iowa Administrative Code, the Director of the Department of Natural Resources does hereby issue a permit for the construction of:

275 feet of 6-inch sanitary sewer and appurtenances, Cemetary Road sanitary sewer replacement, city of Lisbon, Iowa.

The requested variances from our design standards to permit the use of 6-inch diameter sewer on a minimum grade of 0.34 ft/100 ft and terminate the sewer line with a cleanout are hereby granted.

The construction of the project shall be initiated within one year of issuance of this permit or this permit is no longer valid. Within thirty days after completion of construction, the permit holder shall submit a certification by a registered professional engineer that the project was completed in accordance with the approved project documents.

Pursuant to Section 455B.174.4, Code of Iowa, you have the right to appeal any condition of this permit by filing with the Director of the Department of Natural Resources a notice of appeal and request for administrative hearing within thirty days of receipt of this permit.

Contact Fred M. Evans at 515/281-8995 with any questions or comments.

For the Department of Natural Resources

Larry J. Wilson, Director

By:

ENVIRONMENTAL PROTECTION DIVISION

Date:

January 25, 1989

cc: Shoemaker & Maaland Professional Engineers, Coralville, IA
Field Office 1

FME:pla/LIS

6" approved to replace
existing 4" sewer
serving 4 homes

Shoemaker & Haaland Professional Engineers

December 30, 1988

Mr. Fred Evans
Iowa Dept. of Natural Resources
Wallace State Office Building
Des Moines, Iowa 50319

Re: Sanitary Sewer Reconstruction
Cemetery Road/Lisbon, Iowa

Dear Mr. Evans:

Pursuant to your review and advice, we are resubmitting a revised request for design variances for the above referenced sewer.

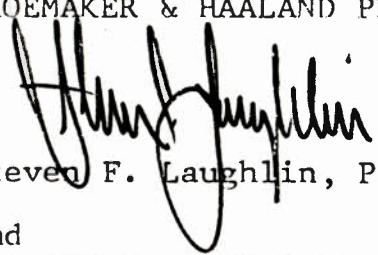
On behalf of the City of Lisbon, we are requesting variance from the Chapter 12 design standard to allow for:

1. A 6" diameter sewer in lieu of 8" per Section 12.5.1.
2. Sewer construction at a minimum grade of 0.34%, which will provide for a minimum velocity of 1.5 feet per second. Per Section 12.5.3.
3. A sewer cleanout at the terminal point rather than a sanitary sewer manhole. Per Section 12.5.7.

A sketch plan and revised Schedule C was submitted with our letter of February 5, 1988 as you earlier requested, but we have attached a revised Schedule C which shows the proposed grade at 0.34% minimum. We trust that this letter, together with previous submittals will allow you to issue a construction permit including the variances requested.

Very truly yours,

SHOEMAKER & HAALAND PROFESSIONAL ENGINEERS



Steven F. Laughlin, P.E.

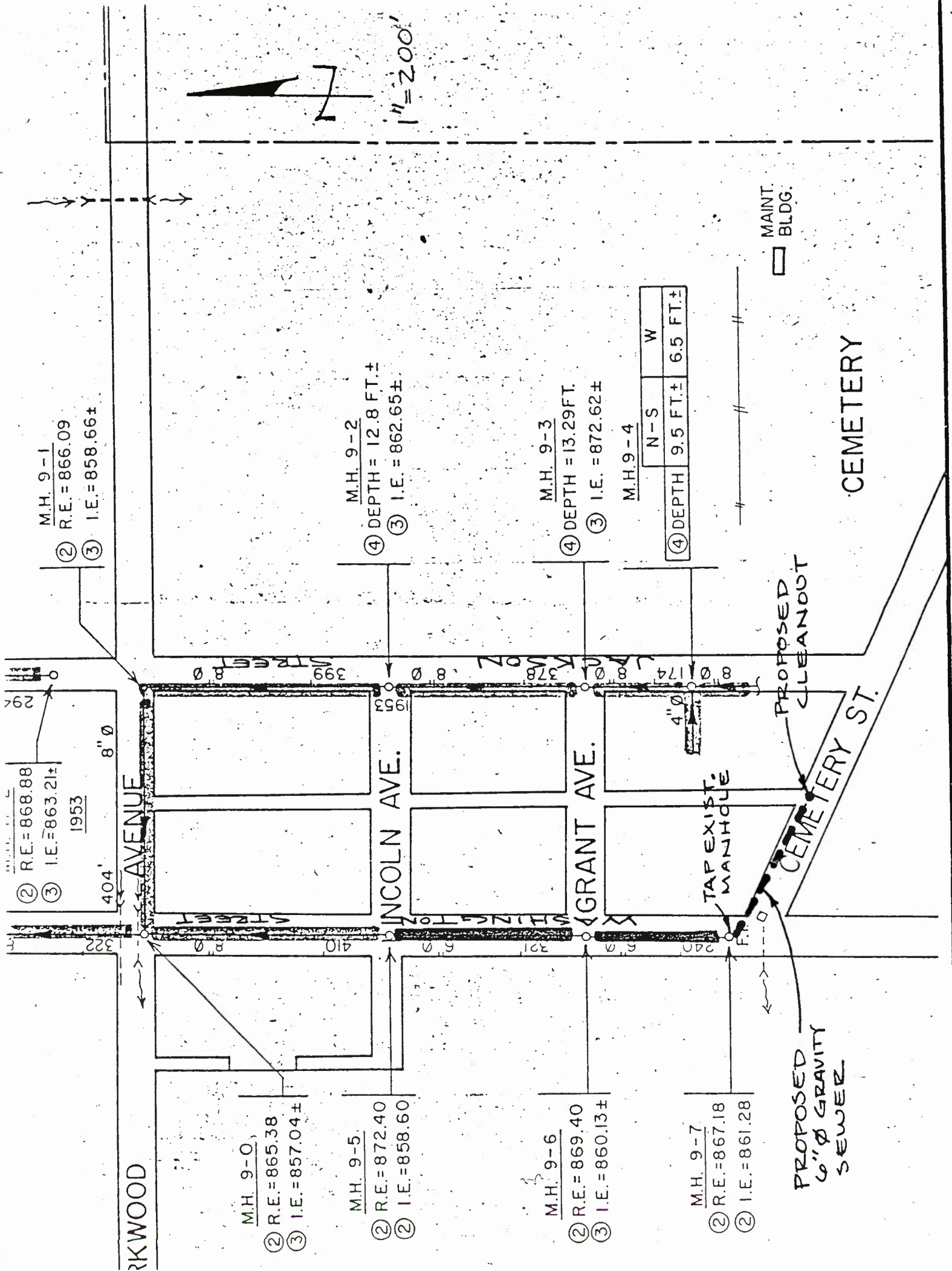
amd

cc: Dorothy Albright, Clerk

Windmill Pointe
1500 First Avenue
Coralville, Iowa 52241
Phone 319-351-7150

2021 Main Street
Keokuk, Iowa 52632
Phone 319-524-2883

Vernon Design Center
2857 Mt. Vernon Road S.E.
Cedar Rapids, Iowa 52403
Phone 319-363-3555



M.H. 9-1
② R.E. = 866.09
③ I.E. = 858.66±

② R.E. = 868.88
③ I.E. = 863.21±
1953
8" Ø

M.H. 9-0
② R.E. = 865.38
③ I.E. = 857.04±

M.H. 9-5
② R.E. = 872.40
③ I.E. = 858.60

M.H. 9-6
② R.E. = 869.40
③ I.E. = 860.13±

M.H. 9-7
② R.E. = 867.18
③ I.E. = 861.28

M.H. 9-2
④ DEPTH = 12.8 FT.±
③ I.E. = 862.65±

M.H. 9-3
④ DEPTH = 13.29 FT.
③ I.E. = 872.62±

M.H. 9-4

	N-S	W
④ DEPTH	9.5 FT.±	6.5 FT.±

MAINT. BLDG.

CEMETERY

CEMETERY ST.

PROPOSED CLEANOUT

TAP EXIST. MANHOLE

PROPOSED 6" Ø GRAVITY SEWER



1" = 200'

**WATER QUALITY
PROGRAM**

**CONSTRUCTION PERMIT APPLICATION
SCHEDULE C, LATERAL SEWER EXTENSION**

WAWM USE

DATE PREPARED
12/30/87

PROJECT IDENTITY
Cemetery Road/Lisbon, Iowa
Sanitary Sewer Reconstruction

PROJECT NO.

DATE REVISED
2/11/88

PERMIT NO.

1. Design Basis	Initial		Design Year ()	
Residential service area		Acres		Acres
Population	12	Persons		Persons
Flow (100 GPCD)	1200	GPD		GPD
BOD ₅ (0.17 #/d/cap)	2.0	#/day		#/day
Industrial service area		Acres		Acres
Rated Flow		GPD		GPD
BOD ₅		#/day		#/day
Other		Acres		Acres
Rated Flow		GPD		GPD
BOD ₅		#/day		#/day
Total BOD ₅	2.0	#/day		#/day
Total Flow	1200	GPD		GPD
Peak Hourly Flow	4200	GPD		GPD

2. Pipe	6			
Diameter	8 Inch PVC	10 Inch	12 Inch	
Material	ASTM-D3034 or AWWA C900			
Joint	ASTM-D3212 or AWWA C900			
Minimum Slope	0.34 %	%	%	%
Maximum Manhole Space	275 Ft.	Ft.	Ft.	Ft.
Total Sewer Length	275 Ft.	Ft.	Ft.	Ft.
Maximum Cover	6 Ft.	Ft.	Ft.	Ft.
Minimum Cover	4 Ft.	Ft.	Ft.	Ft.

3. Construction specifications (Indicate ASTM No. or other standard included in the specifications). A brief description is required in each part.

A. Bedding class See Spec. Sec. 3-04 p. SS 3-3 & DSR-6 ASTM C12-14

B. Pipe laying See Spec. Sec. 10-5 p. SS10-5 & DSR-16 ASTM C12-14

C. Compaction See Spec. Sec. 3-11 p. SS 3-7 & DSR-12 ASTM C-694

D. Manhole See Spec. Sec. 10-10 p. SS10-8 & DSR-17 ASTM C-478

E. Specified maximum infiltration/exfiltration rate 200 GPDPMPI

F. Infiltration/exfiltration test procedures See Spec. p. SS10-15 ASTM C12-24

G. Alignment & grade test procedures

(1) During construction: Stake & batter board Laser X.

(2) After construction: Lamping X Other

H. Deflection test procedures See Spec. Sec. SS10-15f and DSR Sec. 10-15f

4. Are detailed manhole drawings included? Yes X No . Typical frame and cover assembly *. Are manhole covers nonvented? Yes X No . * Neenah R-1370 & R-1394

Manhole diameter 48 in. Manhole opening diameter 24 in. Material RCP.

5. Minimum sewer & water main separation: Horizontal 10 ft. Vertical 18 in.

Are specifications included? Yes

6. Stream, road, or railroad crossing protection N/A

Are specifications included?