SB. V. 9-18-06

VARIANCE REQUEST

Iowa Department of Natural Resources

12.5.1

1. Date	: 7/22/97	13. Decision:	Approved
2. Review Engineer	: Fred Evans	Date:	8/1/97
3. Date Received	: 7/7/97		
4. Facility Name	: City of Clermont	14. Appeal:	
5. County Number	: 33	Date:	
6. Program Area	: CP		
7. Facility Type	: C01		
8. Subject Area	: 305		
9. Rule Reference	: 64.2(9)		
10. Design Std. Ref.	: 12.5.1		
11. Consulting Engr.	: Erdman Engineering		
12. Variance Rule	: 64.2(9)c		

15. Description of Variance Request

A residential subdivision is proposed for the City of Clermont. It is proposed that two short sewer extensions located in cul-de-sacs be constructed of 6" diameter pipe. Inasmuch as DNR design standards require a minimum pipe diameter of 8" for public gravity sanitary sewers in sewered communities, the project developer has requested a variance to use 6" diameter sewer pipe at the locations indicated on the attached copies of the two cul-de-sacs.

16. Consulting Engineer's Justification

The project owner, Darrel Bushman, requests a variance to allow the use of a 6-inch PVC pipe instead of an 8-inch PVC pipe for both cul-de-sac's in the referenced project.

Neither sewer will have a main extension added as both are dead ends so there will be a maximum of four lots serviced on the western 6-inch sewer and a maximum of five lots serviced on the eastern 6-inch sewer.

Also, both 6-inch sewer slopes are 7.44% and 8.72%, respectively, which are well above the minimum slope of 0.60%

16. Consulting Engineer's Justification (cont.)

17. Department's Justification

Approval of the variance request is recommended based upon the above justification and the following additional considerations:

1. The wastewater carrying capacities of the two proposed 6" sewers are considerably in excess of the anticipated flows from the lots to be served.

2. The use of 6" diameter sewers as proposed for this project has the approval of the City of Clermont (see attached letter).

18. Precedents Used

Variances for use of 6-inch diameter sewers in sewered communities have been previously approved for the following cities: Albia, Clenmont, Fairfield, Keokuk, Lean, Lisbon, McGregor, Pleasantville, University Park, Waukoma, Corning and Peosta

19. Staff Reviewer : Brian M. Evans Date: 7/31/97

20. Supervisor : [illegible] Date: 7/31/97

IOWA DEPARTMENT OF NATURAL RESOURCES
WASTEWATER PERMITS SECTION
CONSTRUCTION PERMIT APPLICATION
SCHEDULE C, Lateral Sewer Extension

DATE PREPARED	PROJECT IDENTITY	DNR USE
June 10, 1997	Oak Ridge Heights Fifth Addition Water and Sanitary Sewer Improvements Clermont, Iowa	PROJECT NO.
DATE REVISED		PERMIT NO.

1. Design Basis

	Initial		Design Year (2017)	
Residential service area	7	Acres	40	Acres
Population	16	Persons	150	Persons
Flow (100 GPCD)	1600	GPD	15,000	GPD
BOD_5 (0.17 #/d/cap)	2.7	#/day	26	#/day
Industrial service area	0	Acres	0	Acres
Rated Flow	0	GPD	0	GPD
BOD_5	0	#/day	0	#/day
Other _____	0	Acres	0	Acres
Rated Flow	0	GPD	0	GPD
BOD_5	0	#/day	0	#/day
Total BOD_5	2.7	#/day	26	#/day
Total Flow	1600	GPD	15,000	GPD
Peak Hourly Flow	6400	GPD	60,000	GPD

2. Pipe

	8-inch		8-inch		6 inch	
Diameter						
Material	PVC				PVC	
Joint	Slip-on Gasketed				PVC Slip-on Gasketed	
Minimum Slope	.50	%		%	7.0	%
Maximum Manhole Space	364	Ft.		Ft.	212	Ft.
Total Sewer Length	848	Ft.		Ft.	430	Ft.
Maximum Cover	13.5	Ft.		Ft.	13.5	Ft.
Minimum Cover	9	Ft.		Ft.	9	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 ASTM D2321 and Standard Specifications

B. Pipe laying ASTM D2321 and Standard Specifications

C. Compaction C-ASTM-698 and Standard Specifications

D. Manhole C-478-77

E. Specified maximum infiltration/exfiltration rate 200 GPDPMP1

F. Infiltration/exfiltration test procedures Clay Pipe Engineering Manual

G. Alignment & grade test procedures
(1) During construction: Stake & Batter Board X Laser X
(2) After construction: Lamping X Other

H. Deflection test procedures Standard Specifications

4. Are detailed manhole drawings included? Yes X No ____ Typical frame and cover assembly Neenah R-1642.

Are manhole covers nonvented? Yes X No ____ Manhole diameter 48 in.
Manhole opening diameter 24 in. Material Precast Concrete

5. Minimum sewer & water main separation: Horizontal 10 ft. Vertical 18 in. Are specifications included? Yes

6. Stream, road, or railroad crossing protection NA
Are specifications included? NA

ERDMAN ENGINEERING, P.C.
708 COMMERCE DRIVE
P. O. BOX 246
DECORAH, IOWA 52101-0246

PHONE (319) 382-4194
FAX (319) 382-3623

Civil Engineering
Land Surveying

July 3, 1997

Mr. Fred Evans
Iowa Department of Natural Resources
Wallace State Office Building
900 East Grand Avenue
Des Moines, Iowa 50319

Re: Oak Ridge Heights Fifth Addition
Water and Sanitary Sewer Improvements
Clermont, Iowa

Dear Fred:

The project owner, Darrel Bushman, requests a variance to allow the use of a 6-inch PVC pipe instead of an 8-inch PVC pipe for both cul-de-sac's in the referenced project.

Neither sewer will have a main extension added as both are dead ends so there will be a maximum of four lots serviced on the western 6-inch sewer and a maximum of five lots serviced on the eastern 6-inch sewer.

Also, both 6-inch sewer slopes are 7.44% and 8.72%, respectively, which are well above the minimum slope of 0.60%

If you have any questions, please give us a call.

Sincerely,

Lindsay Erdman, P.E. & L.S.

LCE/kh

CITY OF CLERMONT

CLERMONT, IA 52135

7/29/97

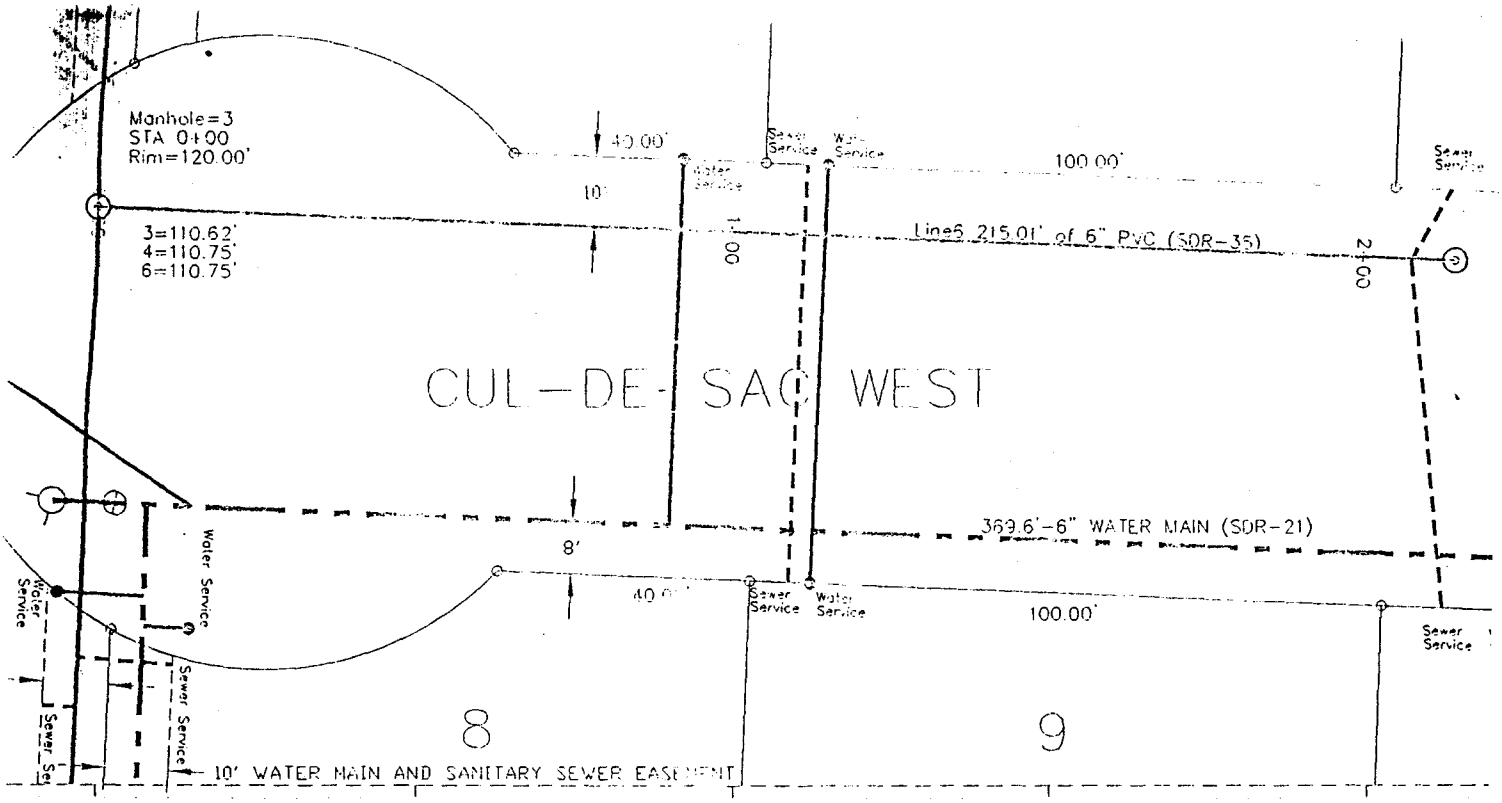
TO: Fred Evans
Iowa DNR

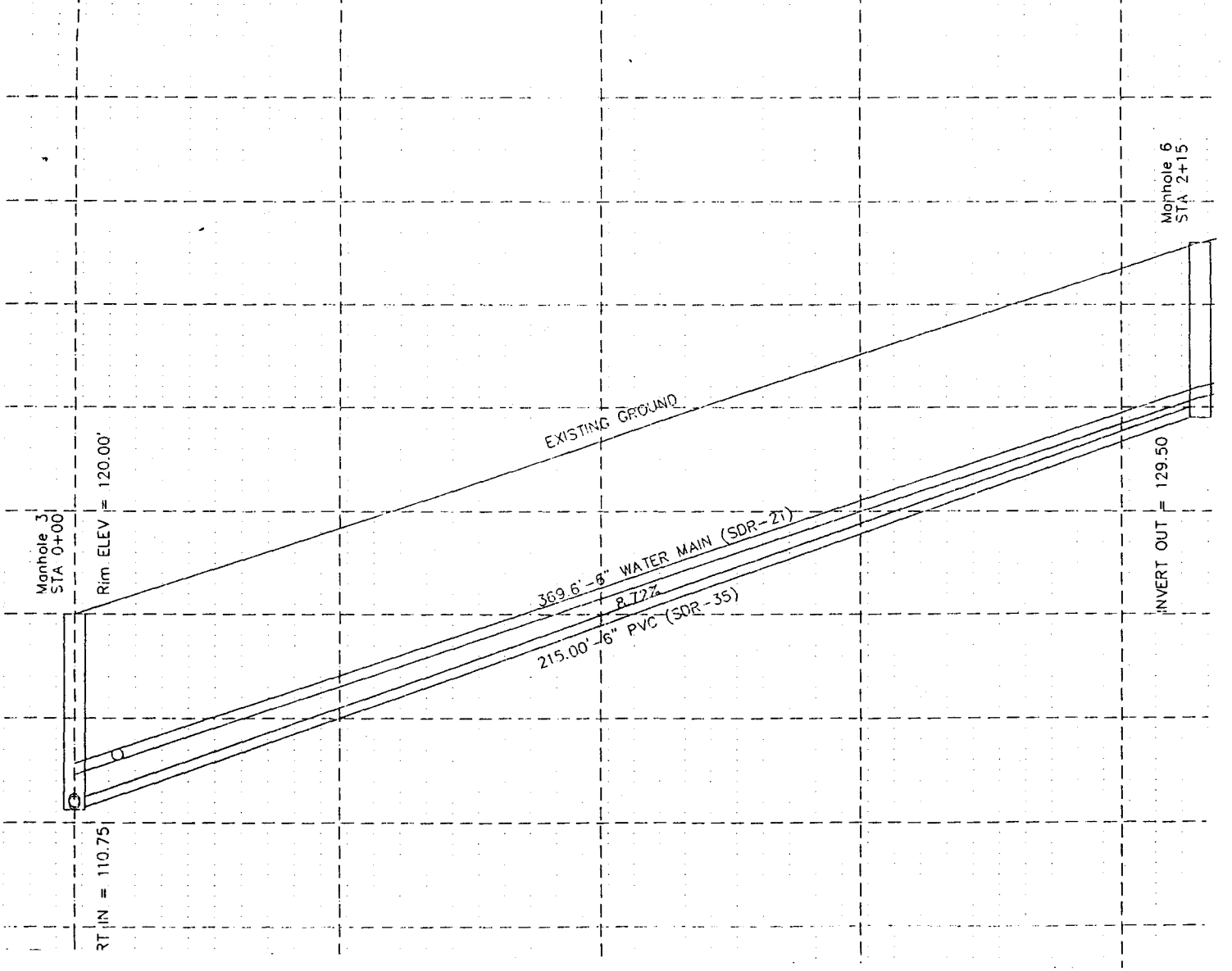
This letter is in reference to an approval request for a 6 inch sewer line connecting the Oak Ridge Heights 5th Addition in the Clermont city limits to the city's sewer system. This concerns the properties being developed by Darrel and Eunice Bushman.

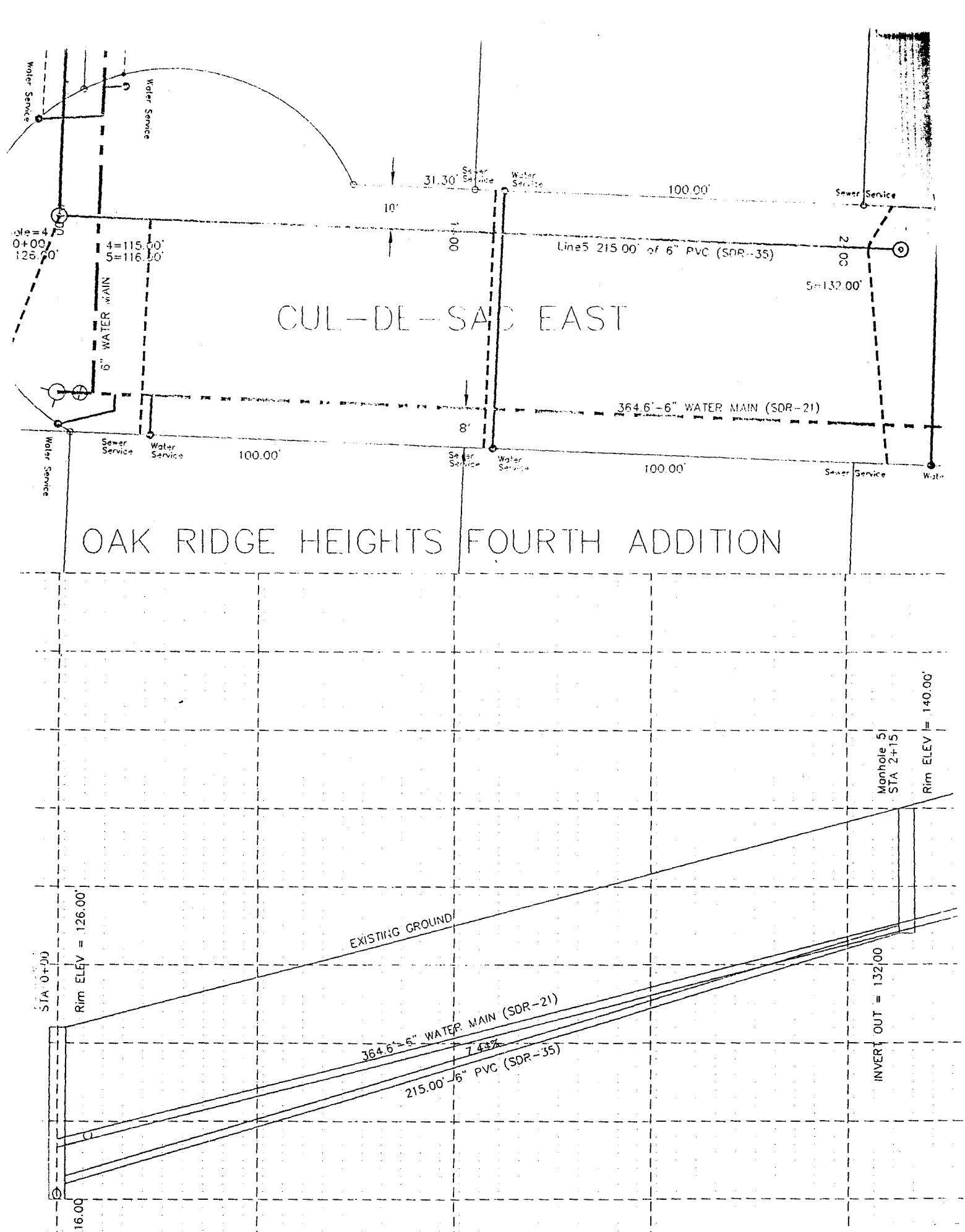
This letter is hereby granting permission for the Oak Ridge Heights 5th Addition to be connected to the Clermont sewer system.

If there are any further questions, please feel free to contact our city office.

Regards,
Michael F. Heller
Michael F. Heller
Mayor


Manhole=3
STA 0+00
Rim=120.00'
3=110.62'
4=110.75'
6=110.75'
40.00'
10'
100.00'
Line6 215.01' of 6" PVC (SDR-35)
200
CUL-DE-SAC WEST
369.6'-6" WATER MAIN (SDR-21)
8'
Water Service
Sewer Service
8
9
10' WATER MAIN AND SANITARY SEWER EASEMENT


Manhole 6
STA 2+15
EXISTING GROUND
Manhole 3
STA 0+00
Rim ELEV = 120.00'
369.6'-6" WATER MAIN (SDR-21)
8.72%
215.00'-6" PVC (SDR-35)
INVERT OUT = 129.50
RT IN = 110.75


Water Service
Water Service
31.30'
Sewer Service
Water Service
100.00'
Sewer Service
10'
100'
Line5 215.00' of 6" PVC (SDR-35)
100'
5=132.00'
4=115.00'
5=116.00'
6" WATER MAIN
CUL-DE-SAC EAST
364.6'-6" WATER MAIN (SDR-21)
8'
Water Service
Sewer Service
Water Service
100.00'
Sewer Service
Water Service
100.00'
Sewer Service
OAK RIDGE HEIGHTS FOURTH ADDITION
Manhole 5
STA 2+15
Rim ELEV = 140.00'
EXISTING GROUND
Rim ELEV = 126.00'
364.6'-6" WATER MAIN (SDR-21)
7.44%
215.00'-6" PVC (SDR-35)
INVERT OUT = 132.00