

VARIANCE REQUEST

Iowa Department of Natural Resources

9-11-06

1. Date	: 8-22-97	13. Decision:	Denied
2. Review Engineer	: Terry Kirschman	Date:	8-27-97
3. Date Received	: 8-19-97		
4. Facility Name	: Ottumwa	14. Appeal:	
5. County Number	: 90	Date:	
6. Program Area	: CP (Wastewater)		
7. Facility Type	: COS		
8. Subject Area	: 333		
9. Rule Reference	: 567-64.2(9)g		
10. Design Std. Ref.	: 14.4.9.3		
11. Consulting Engr.	: McClure		
12. Variance Rule	: 567-64.2(9)c		

15. Description of Variance Request

Retain submerged flow split approach
for two existing clarifiers.

16. Consulting Engineer's Justification

No noticeable flow variation can be
detected between the two clarifiers.

Although the structure is being modified
the function it is performing remains the
same.

16. Consulting Engineer's Justification (cont.)

17. Department's Justification

Deny Variance

Flow splitting control for even splits of hydraulic and solids loading with the proposed structure is very difficult. Design standard 14.4.9.3 clearly was written to prevent designs similar to the Ottumwa approach. More clarifiers may be added in the future as the structure is designed for the addition of more units. With the design as proposed it is impossible to have equal flow splits for a wide range of flows unless the operator is there continually adjusting.

Even if he balances out the hydraulic loadings it is unlikely the solids loadings will be balanced to

18. Precedents Used

In 1987 a submerged type split was approved for the primary clarifiers at the Des Moines ICA plant. It was felt that Des Moines was too big to use the standard type approach. Good splitting for a primary is less critical.

19. Staff Reviewer

: Terry Kersch

Date: 8-22-97

20. Supervisor

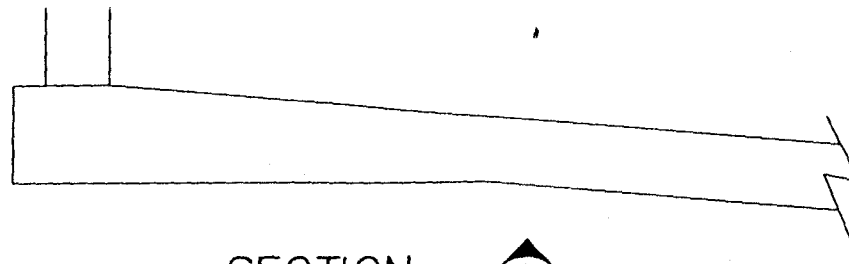
: [Signature]

Date:

ES:

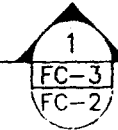
PROPOSED DROP COLLECTION
TO BE COVERED WITH 1 1/2"
ALUMINUM GRATING.

SEE SECTION 2 THIS SHEET
FOR EXISTING REINFORCING



SECTION

SCALE: 1/2" = 1' - 0"



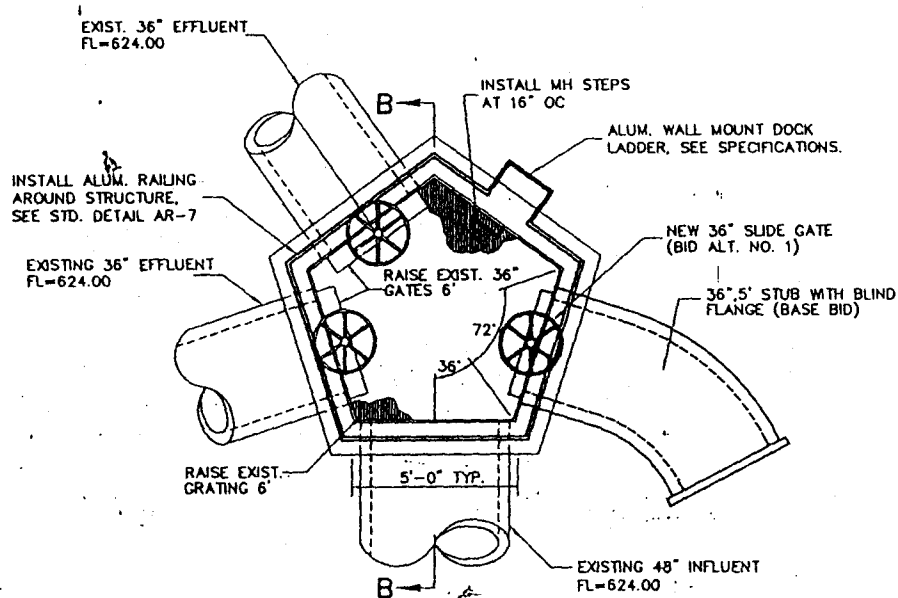
4 - #4 REBAR VERT (TYP.)
4 - #4 STIRRUPS @ 12" O.C.

SECTION

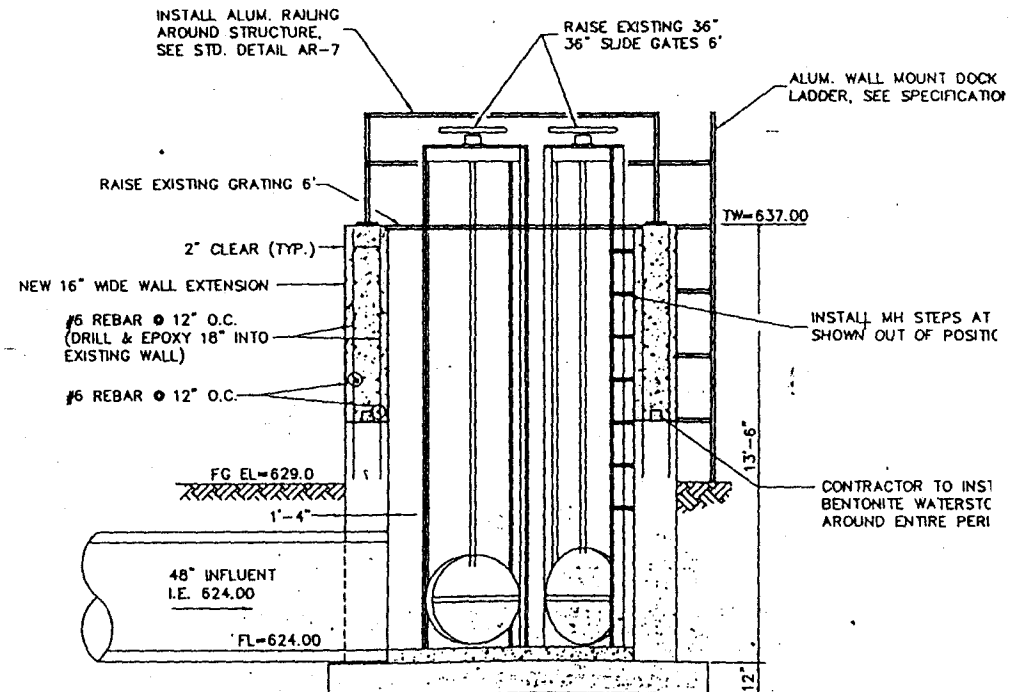
SCALE: 1/4" = 1' - 0"

TYPICAL FINAL C
STAIR DETAILS

SCALE: 1/4" = 1' - 0"



MODIFIED CLARIFIER SPLITTER BOX
SCALE 1/4"=1'



MODIFIED CLARIFIER SPLITTER BOX SECTION B-B
SCALE 1/4"=1'