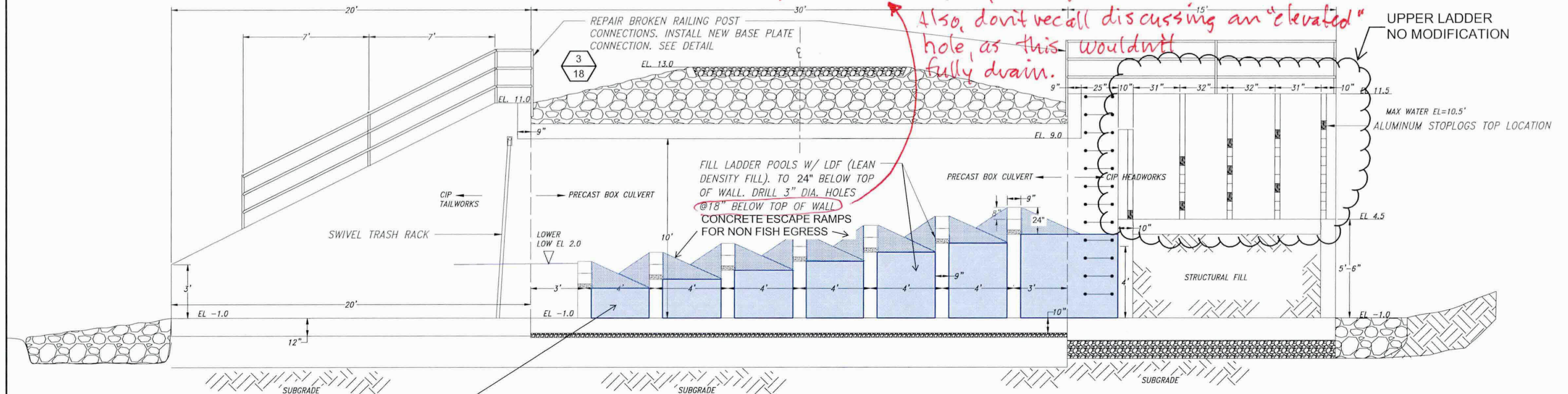


Diagram seems to show holes at base of LDF i.e. 24" below top of wall.

Also, don't recall discussing an "elevated" hole, as this wouldn't fully drain.



### PROFILE FISH LADDER MODIFICATION (LOWER WEIR POOLS)

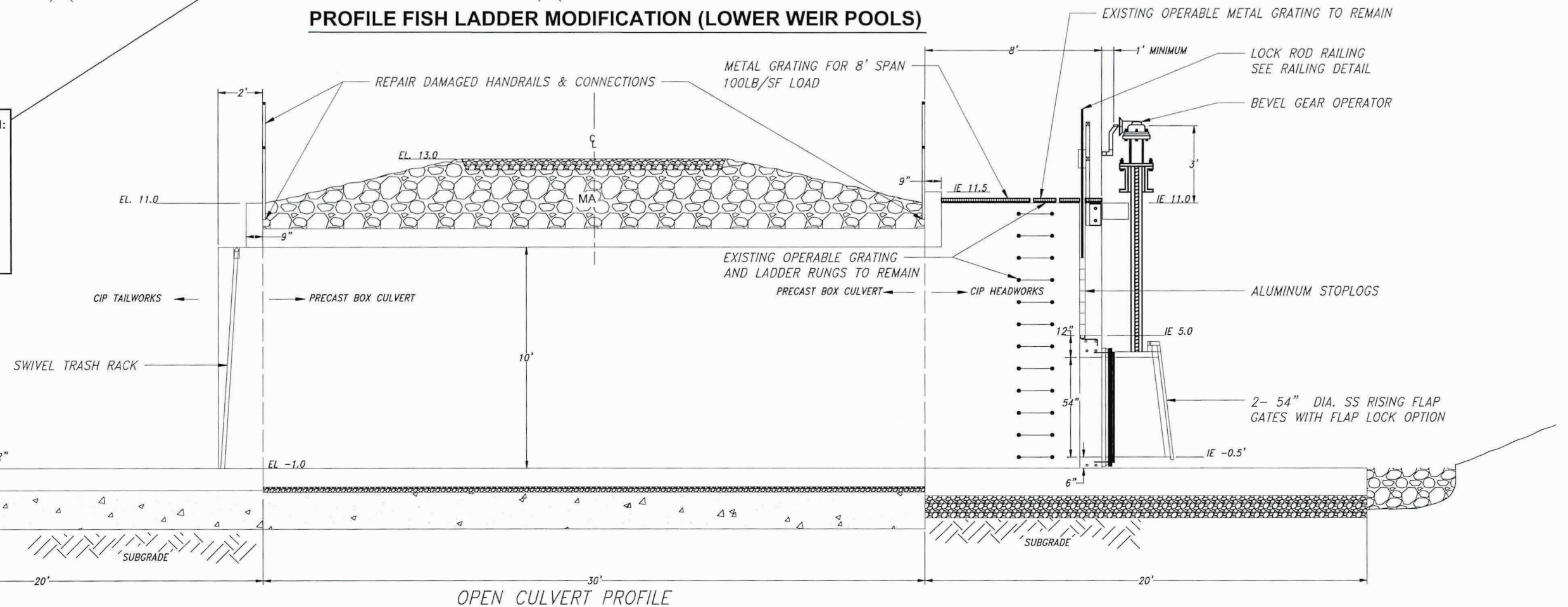
#### FISH LADDER FLOW AND VOLUME AND CALCULATION:

LADDER FLOW REGULATED TO 3.75 CFS MAX FLOW.

VOLUME LADDER POOL REQUIRED  $V = wQH/4$

$V \text{ (required)} = 62.4(3.75).5/4 = 29.25 \text{ C.F.}$

$V \text{ (ladder)} = 8' \times 4' \times 2' = 64 \text{ C.F. OK}$

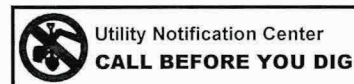


### 1 PROFILE OPEN CULVERT MODIFICATIONS

### PERMIT SET

#### Unauthorized Changes & Uses

The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes must be in writing and must be approved by the preparer of these plans.

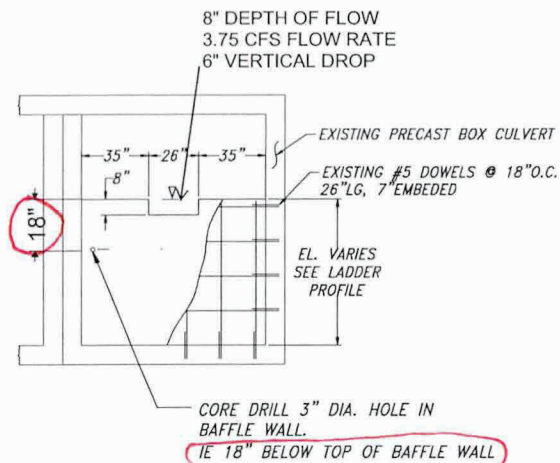


REVISIONS			
REV. NO.	DESCRIPTION	DATE	APPROVED
1			
2			
3			
4			



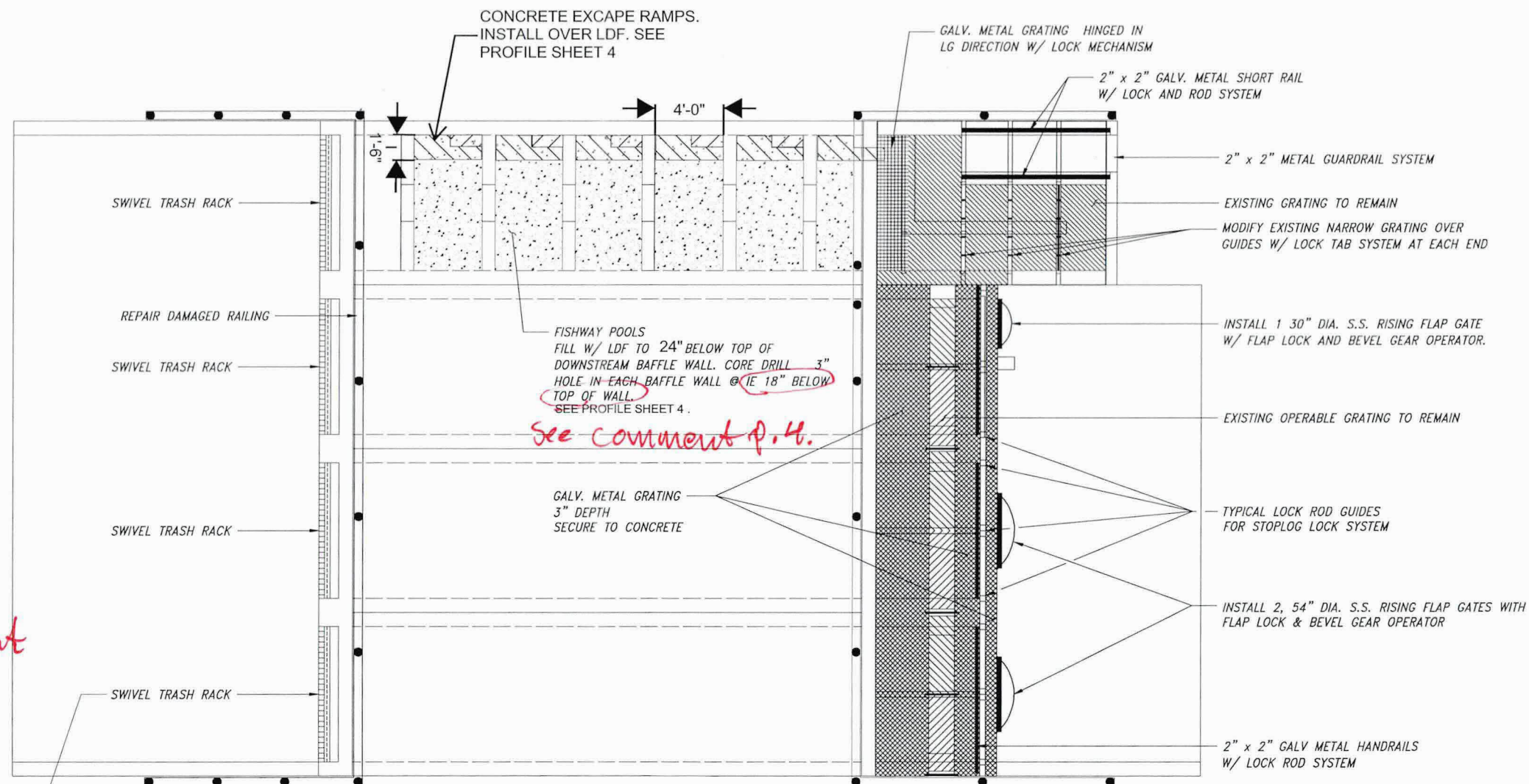
PROJECT NO. US-OR-32-8	DATE: 12/14/16	DESIGNED BY: GW
METRO: SMITH BYBEE		DRAWN BY: DMC
		SURVEYED BY:
		CHECKED BY:
		SHEET NO. 4 OF 8
WCS IMPROVEMENTS		



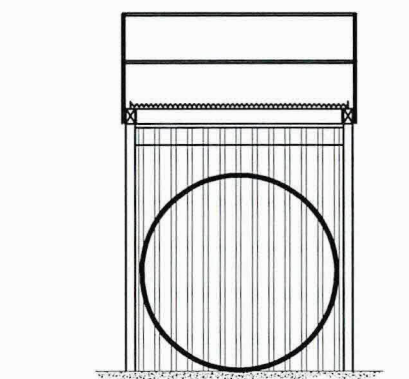


**2 FISH LADDER BAFFLES  
IMPROVEMENTS**

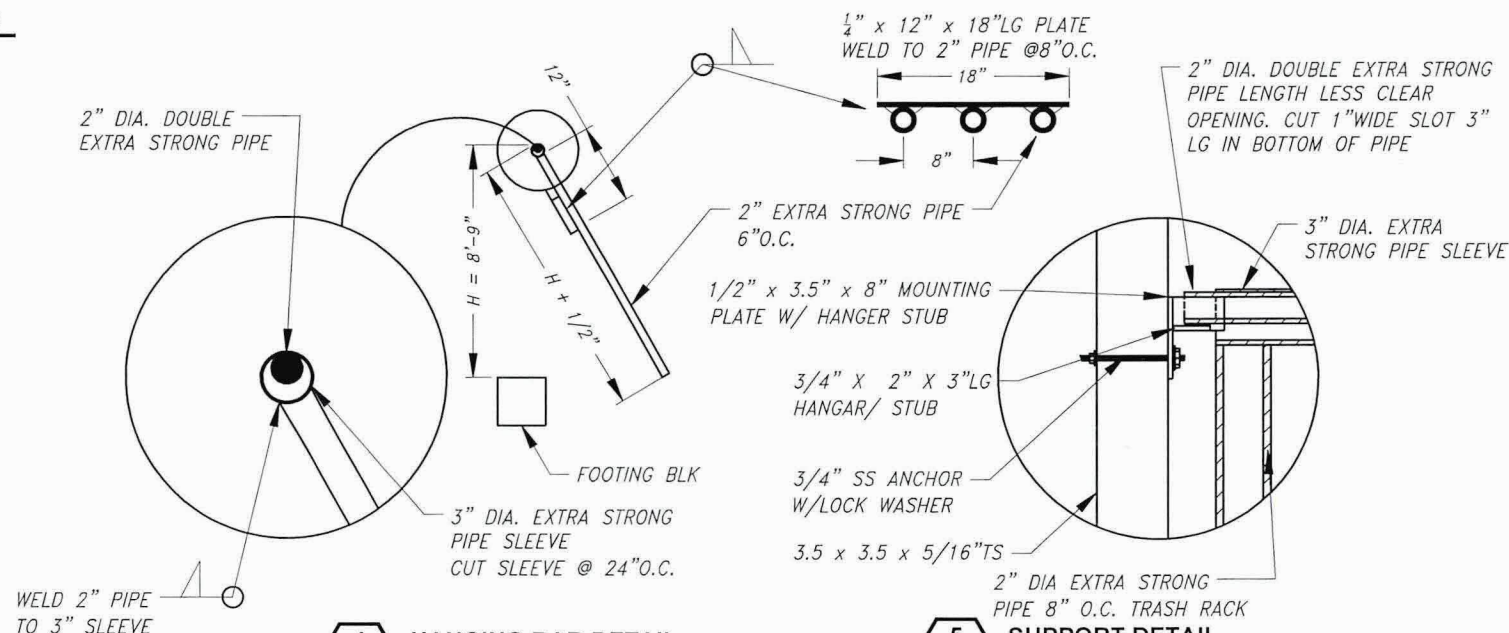
See  
comment  
p.4



**1 WCS IMPROVEMENTS  
WCS PLAN VIEW**



**3 TRASH RACK**



**4 HANGING BAR DETAIL  
TRASH RACK**

**5 SUPPORT DETAIL  
TRASH RACK**

**PERMIT SET**

**Unauthorized Changes & Uses**  
The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes must be in writing and must be approved by the preparer of these plans.



REVISIONS			
REV. NO.	DESCRIPTION	DATE	APPROVED
1			
2			
3			
4			
5			



PROJECT NO. US-OR-32-8	DATE: 12/14/16	DESIGNED BY: GW
METRO: SMITH BYBEE		DRAWN BY: DMC
		SURVEYED BY:
		CHECKED BY:
		SHEET NO. 5 OF 8

WCS IMPROVEMENTS