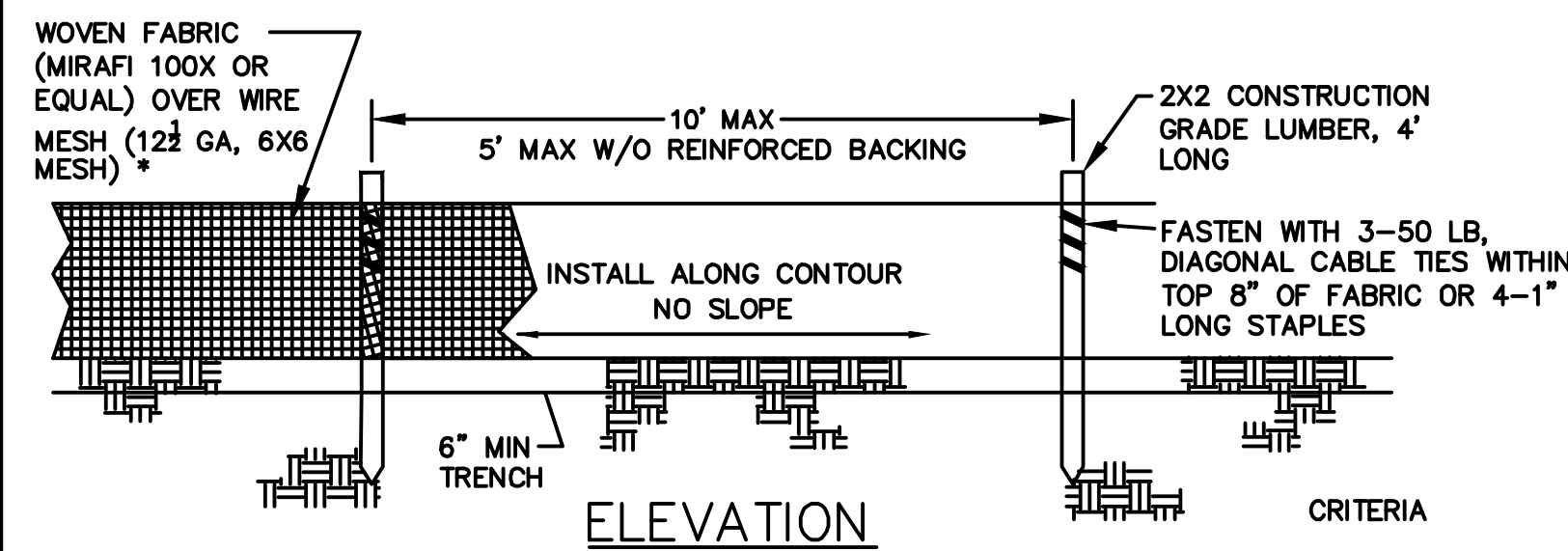


**DESIGN CRITERIA**

- SILT FENCE FOR SHEET FLOW SHALL HAVE A MAXIMUM DRAINAGE AREA OF 1/4 ACRE PER 100 LF.
- STRAW BALE BARRIERS FOR SHEET FLOW SHALL HAVE A MAXIMUM DRAINAGE AREA OF 1/4 ACRE PER 100 LF.
- REFER TO INDIVIDUAL ESC FIGURE FOR INSTALLATION.
- TERRACING INCLUDES LOGS, WATTLES & FILTER SOCKS.

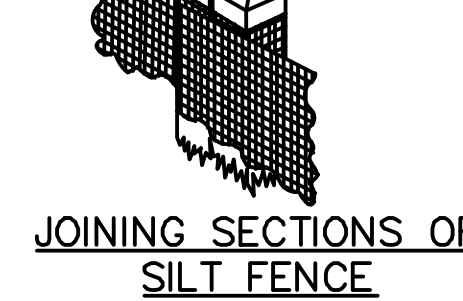
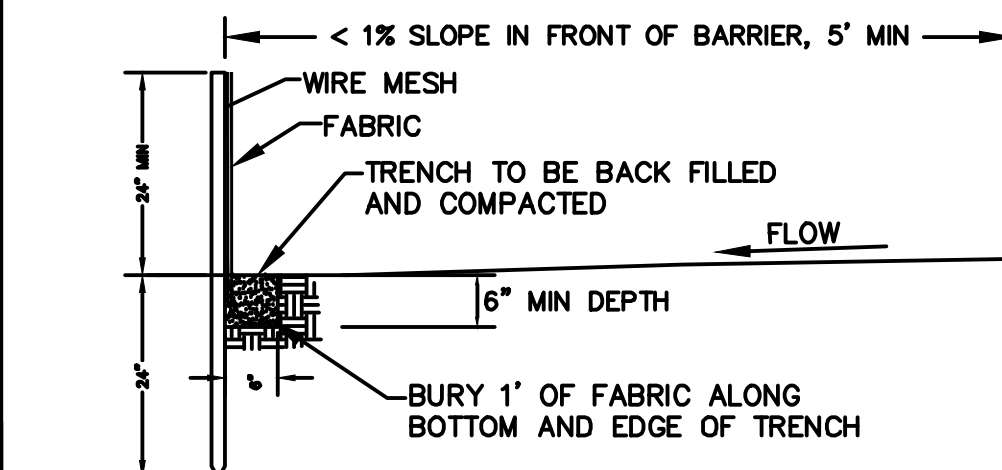
**CITY OF O'FALLON  
ENGINEERING DEPARTMENT  
O'FALLON, MISSOURI**

**SPACING CHART  
FOR ESC DEVICES**



**CRITERIA**

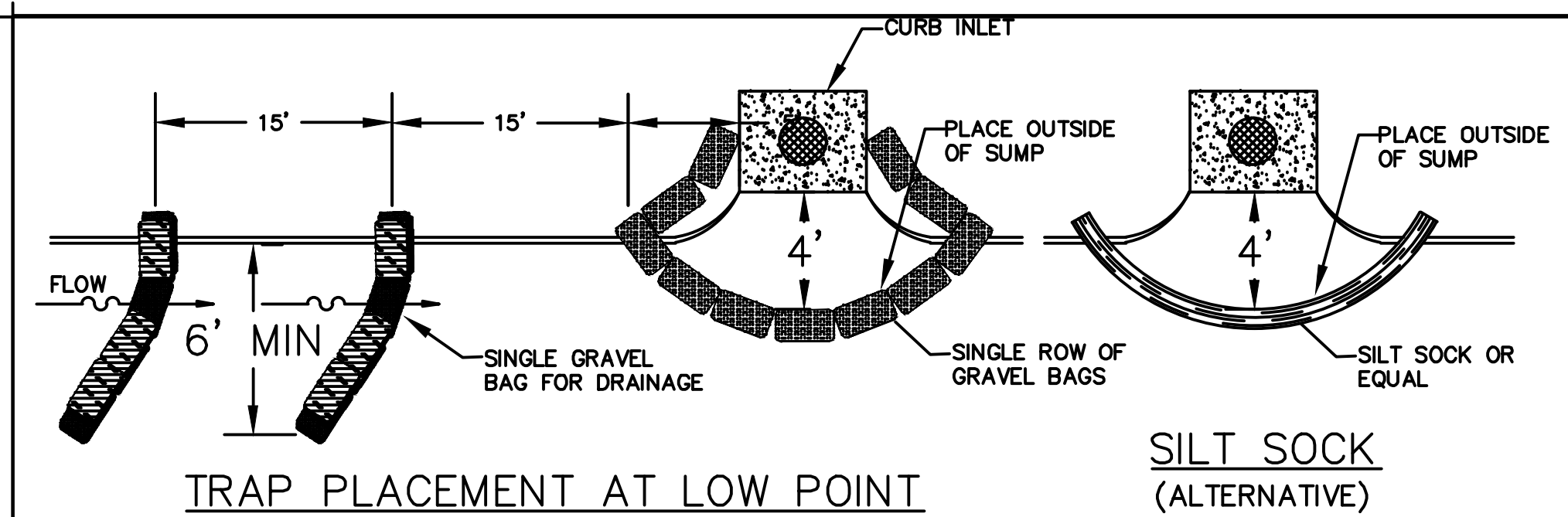
- SILT FENCE SHALL BE 24 INCHES HIGH.
- SILT FENCE SHALL NOT BE USED FOR CONCENTRATED FLOWS.
- GEOSYNTHETIC REINFORCED SILT FENCE BACKING MAY BE USED IN LIEU OF WIRE MESH.
- WIRE MESH WILL BE USED AT LOCATIONS SHOWN ON THE APPROVED SWPPP.



NOTE: IF FABRIC IS INSTALLED BY EQUIPMENT DESIGNED TO SLICE INTO THE GROUND, THE TRENCH IS NOT REQ'D.

**CITY OF O'FALLON  
ENGINEERING DEPARTMENT  
O'FALLON, MISSOURI**

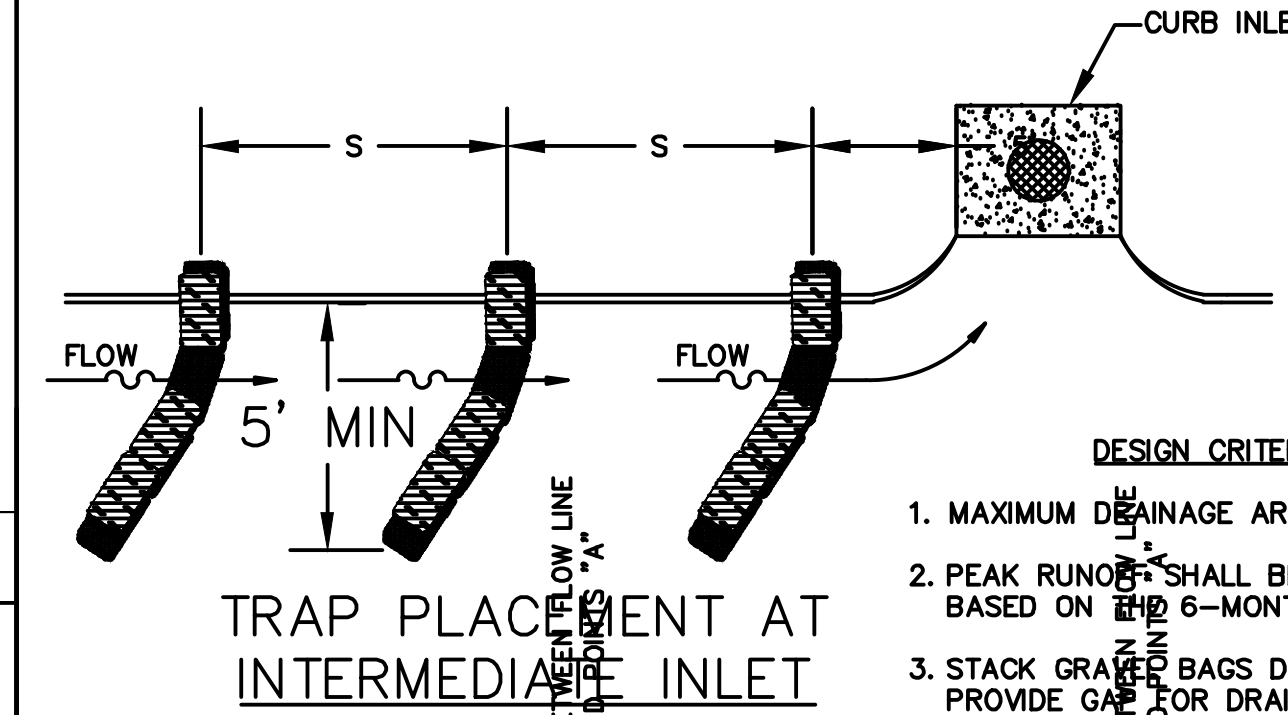
**SILT FENCE INSTALLATION  
(SHEET FLOW ONLY)**



**SILT SOCK (ALTERNATIVE)**

**SPACING OF TRAPS**

GUTTER SLOPE	S
1%	15'
2%	20'
3% MAX.	10'

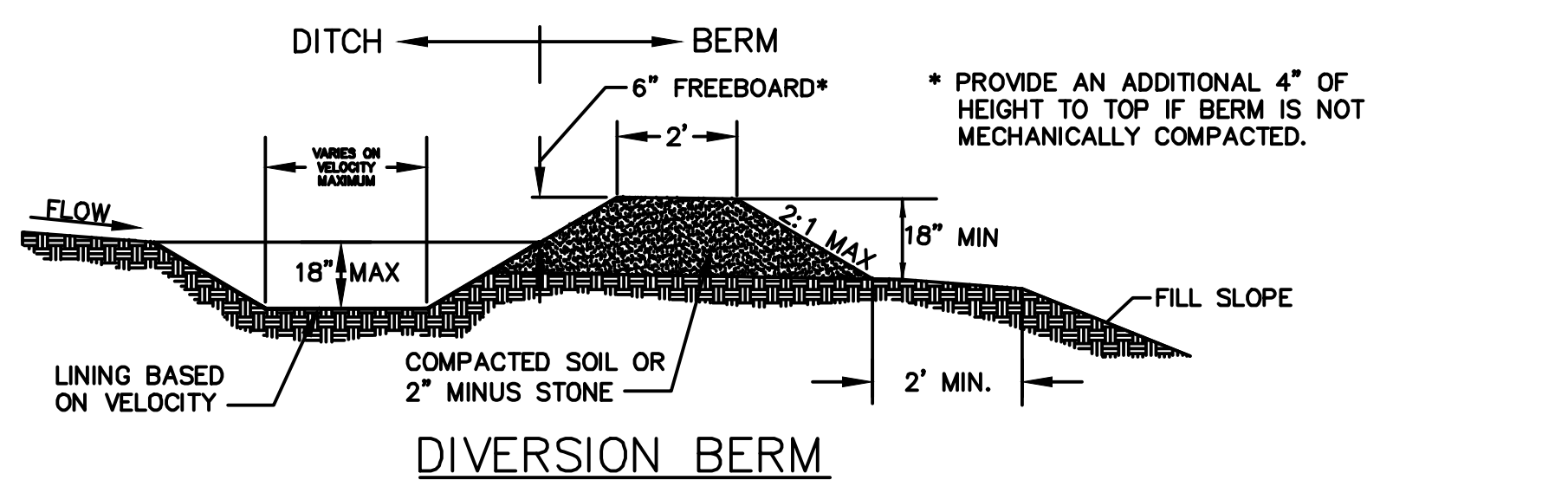


**DESIGN CRITERIA**

- MAXIMUM DRAINAGE AREA - 1 ACRE.
- PEAK RUNOFF SHALL BE ≤ 2 CFS BASED ON THE 6-MONTH STORM.
- STACK GRAVEL BAGS DOUBLE HIGH. PROVIDE GAP FOR DRAINAGE.

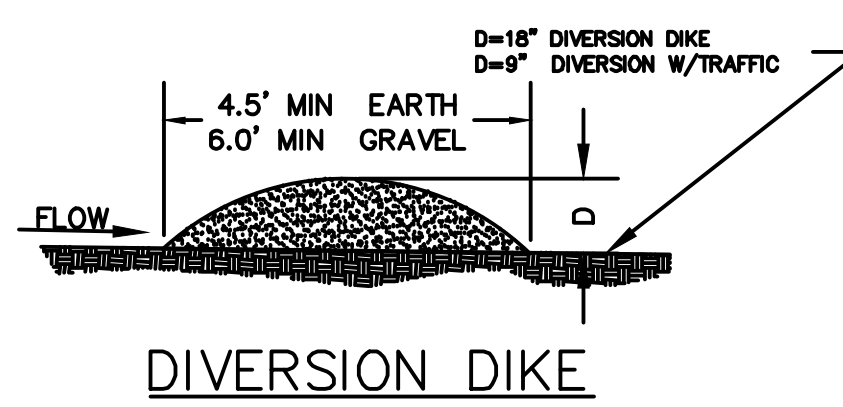
**CITY OF O'FALLON  
ENGINEERING DEPARTMENT  
O'FALLON, MISSOURI**

**CURB INLET PROTECTION**



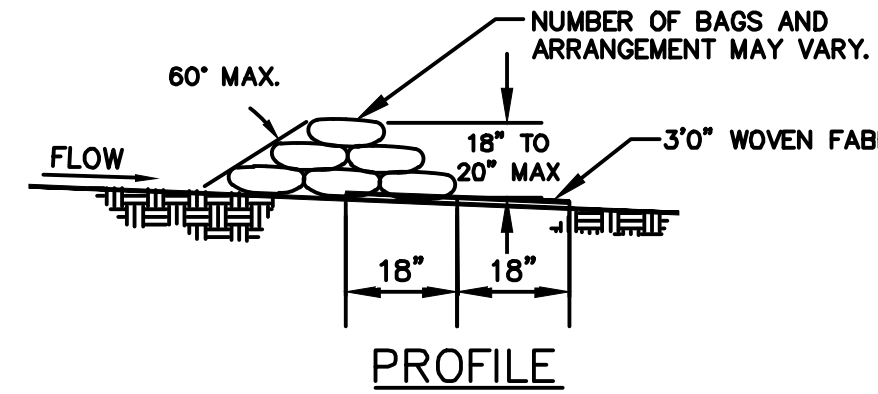
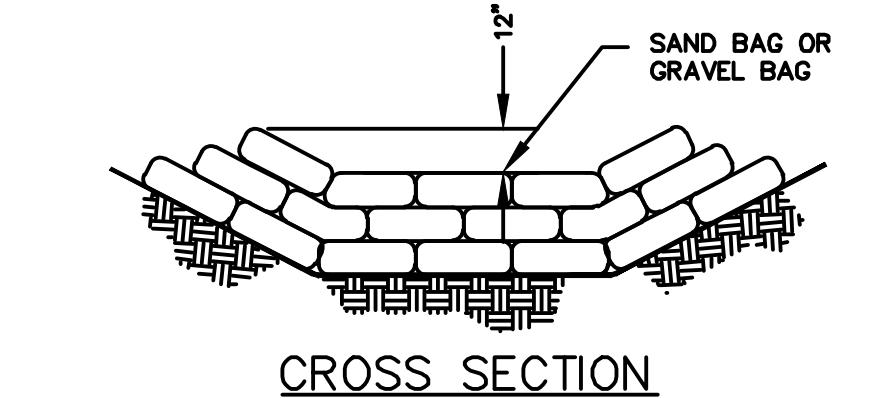
**DESIGN CRITERIA**

- DIVERSIONS SHALL BE USED FOR DRAINAGE AREAS ≤ 3 ACRES.
- DIVERSION CHANNELS SHALL BE DESIGNED TO CONVEY THE 6-MO STORM AT NON-EROSIVE VELOCITIES.
- CRITICAL LOCATIONS SHALL BE DESIGNED FOR THE 15YR / 20Min. STORM.
- MAXIMUM CHANNEL SLOPE OF 3% WITHOUT CHECK DAMS.
- SWALE SEDIMENT TRAPS ARE TO BE USED IN HIGHLY EROSION AREAS.
- CHANNELS SHALL BE PROTECTED USING APPROPRIATE CHANNEL LINERS.
- CHANNEL OUTLETS MUST BE STABILIZED.
- STORM SEWERS MAY BE USED IN LIEU OF OPEN CHANNELS.

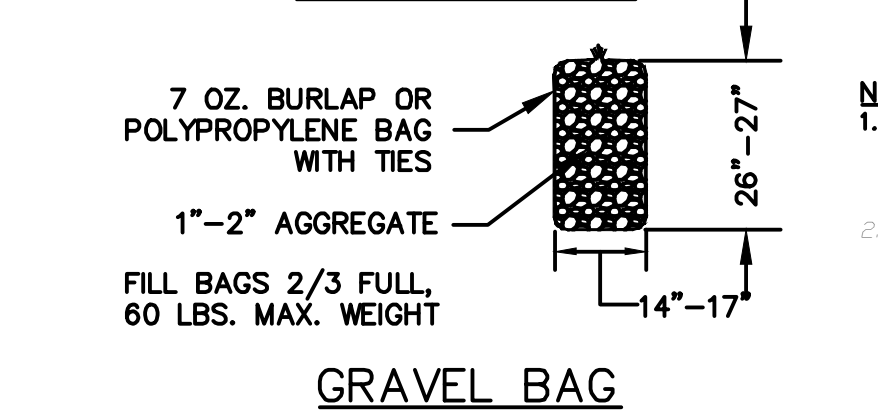


**CITY OF O'FALLON  
ENGINEERING DEPARTMENT  
O'FALLON, MISSOURI**

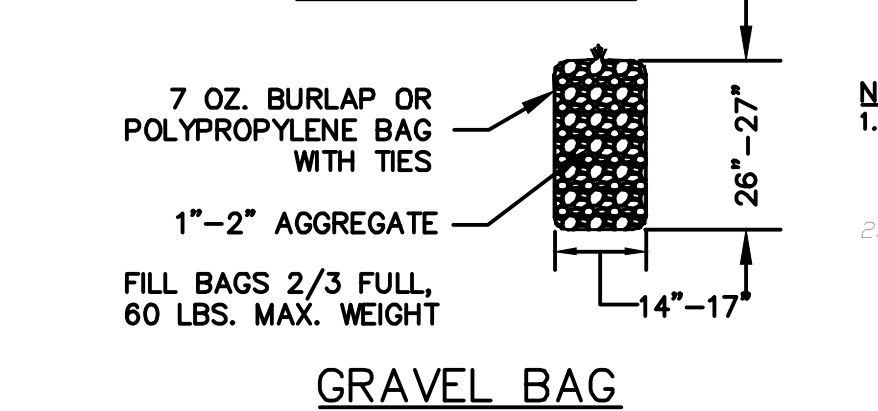
**DIVERSION BERMS + DIKES**



**SAND BAG OR GRAVEL BAG CHECK DAM**



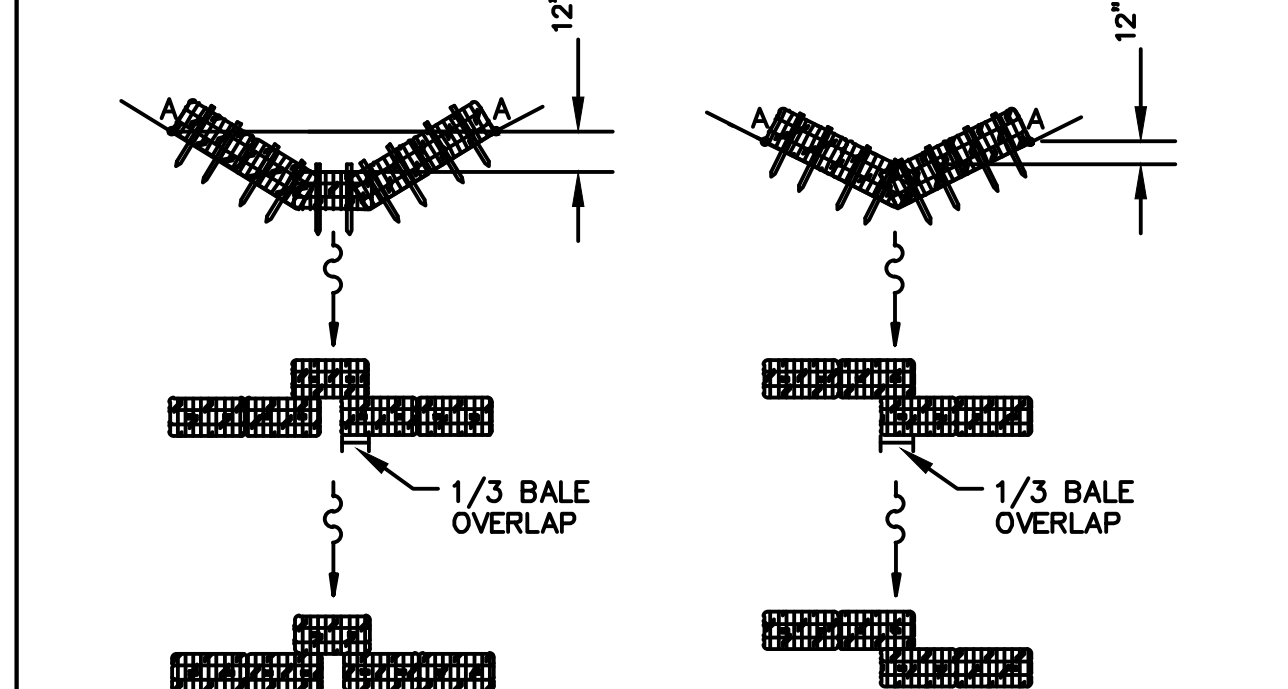
**ROCK CHECK DAM**



- NOTE:**
- CHECK DAMS MAY BE CONSTRUCTED OF SEVERAL ESC CHECK DAM PRODUCTS.
  - SEE TABLE 60-12 AND ESC 1 FOR CHECK DAM SPACING.

**CITY OF O'FALLON  
ENGINEERING DEPARTMENT  
O'FALLON, MISSOURI**

**CHECK DAMS**



**CRITERIA FOR LOW CONCENTRATED FLOWS**

- DRAINAGE AREAS SHALL BE LESS THAN 1 ACRE.
- INSTALL TWO STAKES PER BALE.
- BALES WILL BE TRENCHED 4" DEEP INTO EARTH.
- MAXIMUM CHANNEL SLOPE OF 3%.
- SEDIMENTATION TRAPS TO BE USED IN HIGHLY EROSION AREAS.

**CHECK DAM SPACING**

Ditch Slope	Maximum Spacing
3%	50'
2%	75'

**TRAPEZOIDAL DITCH**

**V-DITCH**

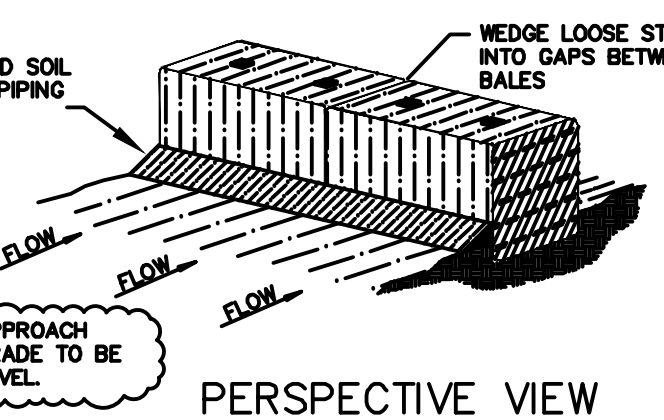
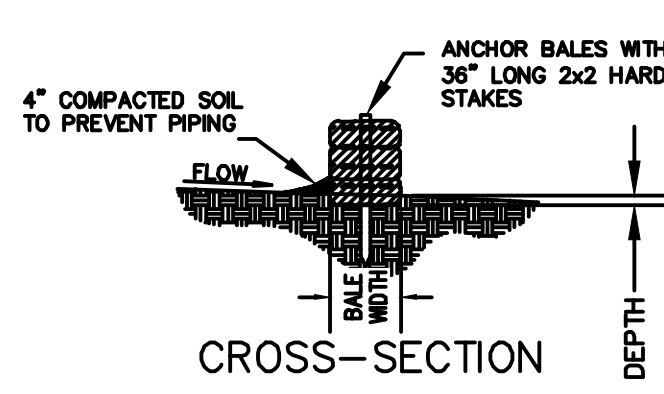


**CITY OF O'FALLON  
ENGINEERING DEPARTMENT  
O'FALLON, MISSOURI**

**STRAW BALE CHECK DAM**

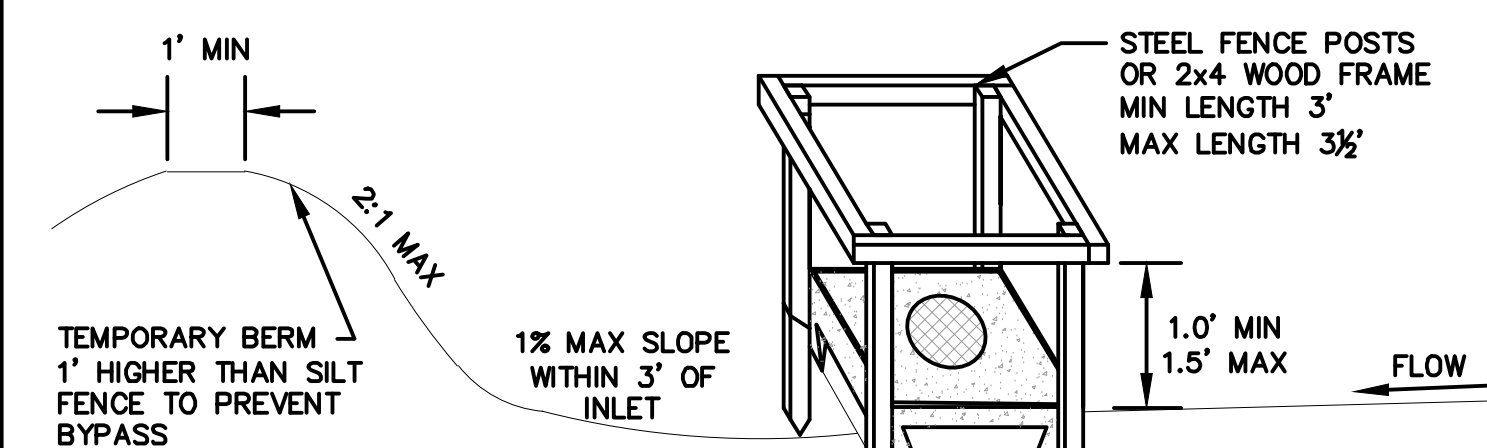
**CRITERIA**

- EXCAVATE TRENCH THE WIDTH OF THE BALE AT LEAST 4 INCHES DEEP AND LONG ENOUGH THAT THE END BALES ARE SOMEWHAT UPSLOPE.
- REFER TO STRAW BALE CHECK DAM DETAIL FOR SPACING AND STRAW BALE USES AS DITCH CHECKS.
- UPSLOPE FACE OF BALE MUST BE AT LEAST 5' FROM A DISTURBED EMBANKMENT.



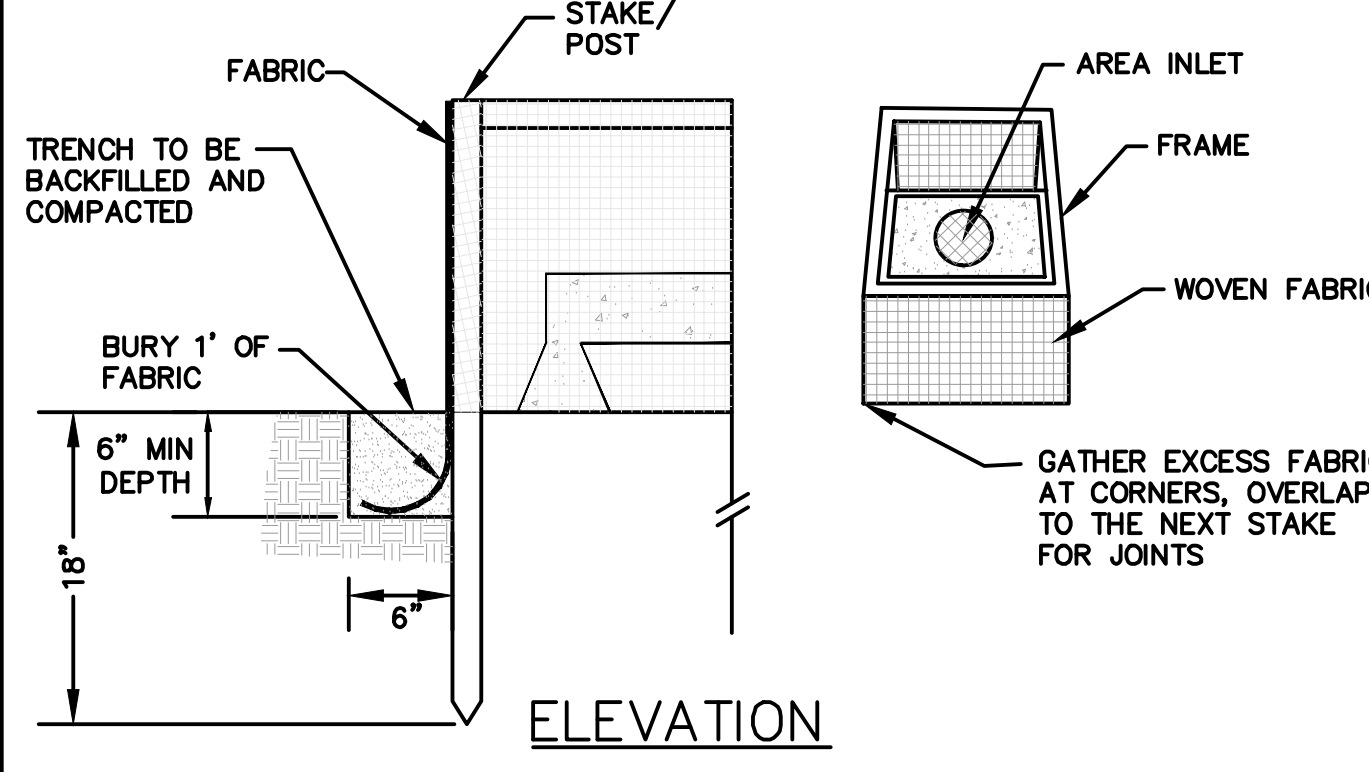
**CITY OF O'FALLON  
ENGINEERING DEPARTMENT  
O'FALLON, MISSOURI**

**SWALE SEDIMENT TRAP STRAW BALE BARRIER INSTALLATION**



**DESIGN CRITERIA**

- MAXIMUM DRAINAGE AREA - 1 ACRE.
- PEAK RUNOFF SHALL NOT EXCEED 2 CFS BASED ON A 6-MONTH STORM EVENT.
- OTHER SEDIMENT PROTECTION PRODUCTS MAY BE USED, SUCH AS FIBR FENCE™.

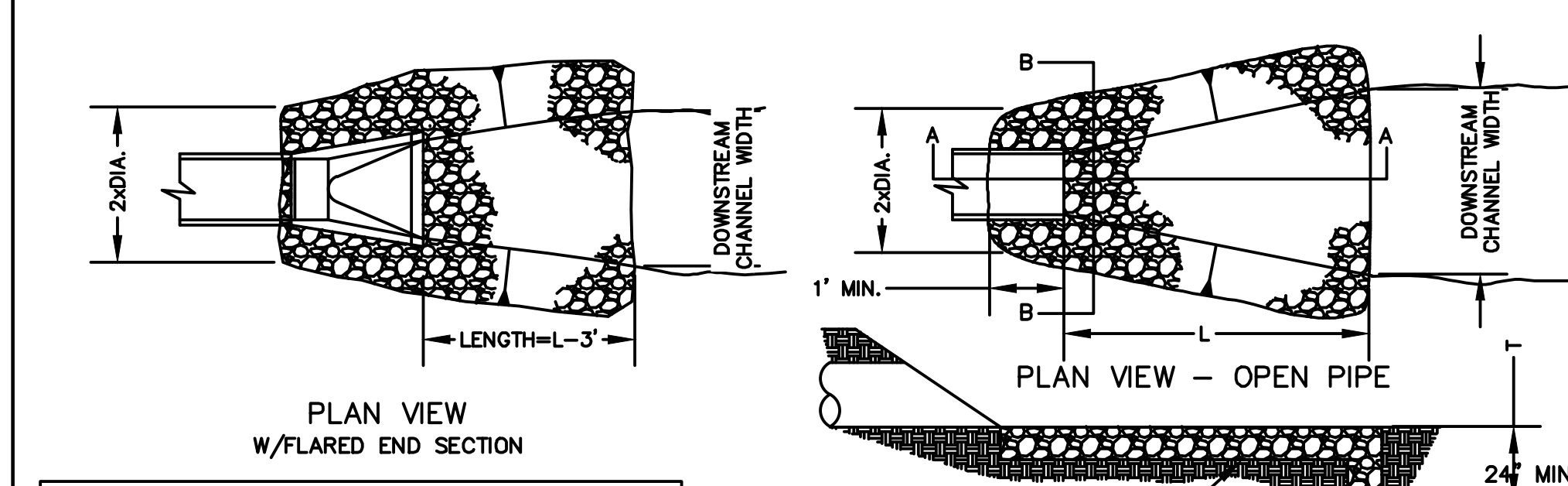


**St. Charles County  
Erosion & Sediment Controls  
Standard Drawings**

**AREA INLET PROTECTION FABRIC DROP**

DATE: MARCH 2008

DRAWING: ESC-14



**RIPRAP SIZE & APRON DIMENSION**

PIPE SIZE	VELOCITY < 5 FPS				VELOCITY < 10 FPS			
	ROCK SIZE	APRON DIM	ROCK SIZE	APRON DIM	ROCK SIZE	APRON DIM	ROCK SIZE	APRON DIM
(inch)	(inch)	(inch)	(ft)	(inch)	(inch)	(inch)	(ft)	(ft)
12	5	9	15	12	5	9	15	16
15	5	9	15	14	5	9	15	18
18-24	5	9	15	16	9	14	24	20
27-30	5	9	15	18	9	14	24	22
36-42	14	24	22	12	18	27	26	
48-54	14	24	26	12	18	27	30	
60-66	12	18	27	34	15	24	30	38
72-84	15	24	30	42	15	24	30	46
96	18	27	30	50	18	27	30	54

d<sub>50</sub> - NOMINAL DIAMETER  
d<sub>max</sub> - MAXIMUM DIAMETER  
T - THICKNESS  
L - LENGTH

- DESIGN CRITERIA**
- FROUDE NUMBER MUST BE ≤ 2.50.
  - USE 3 TIMES PIPE DIAMETER FOR DOWNSTREAM CHANNEL WIDTH IF THERE IS NO DEFINED CHANNEL.
  - BANK PROTECTION HEIGHT TO BE 2/3 TIMES PIPE DIAMETER.
  - ROCK SLOPES SHALL BE NO STEEPER THAN 3:1.

**CITY OF O'FALLON  
ENGINEERING DEPARTMENT  
O'FALLON, MISSOURI**

**TEMPORARY OUTLET PIPE DISCHARGE PROTECTION**

**St. Peters**  
22 Richmond Center Court  
St. Peters, MO 65276  
Phone (636) 397-1211  
Fax (636) 397-1104  
www.prs8.com

**Pickett  
Ray & Silver**  
Civil Engineering  
& Land Surveying  
Beyond Standard

**ENGINEERS AUTHORIZATION**  
BY PROFESSIONAL ENGINEERING BOARD  
I hereby authorize the use of my name and seal in connection with the design and construction of the above project. My license number is 14463 and expires on 12/31/2021. I am a member of the Missouri Society of Professional Engineers, Inc. My membership number is 14463.

**WILLIAM SCHMIDT**  
Professional Engineer  
No. 14463  
No. PE-2018007869

STATE OF MISSOURI  
WILLIAM SCHMIDT  
Professional Engineer  
No. 14463  
No. PE-2018007869

**CITY OF O'FALLON  
ENGINEERING DEPARTMENT  
O'FALLON, MISSOURI**

**STRAW BALE CHECK DAM**

**Developer / Owner Information**

**Pinkerton Properties LLC**  
801 Texas Court  
O'Fallon, Missouri 63366

P-Z No. 21-003918  
City No. Approved 06-03-2021  
Page No. 12 of 12