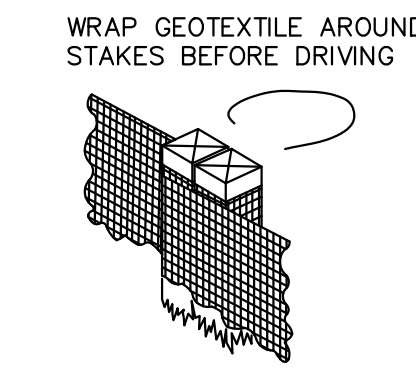
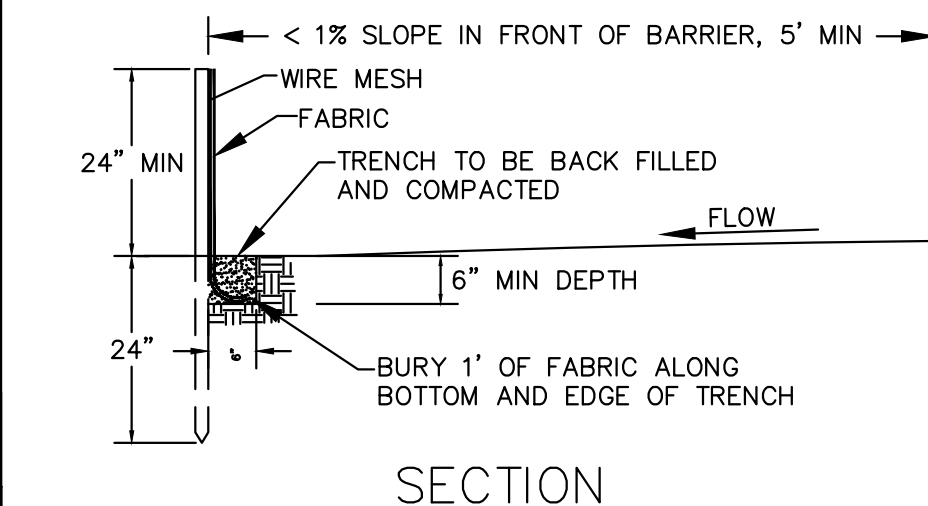
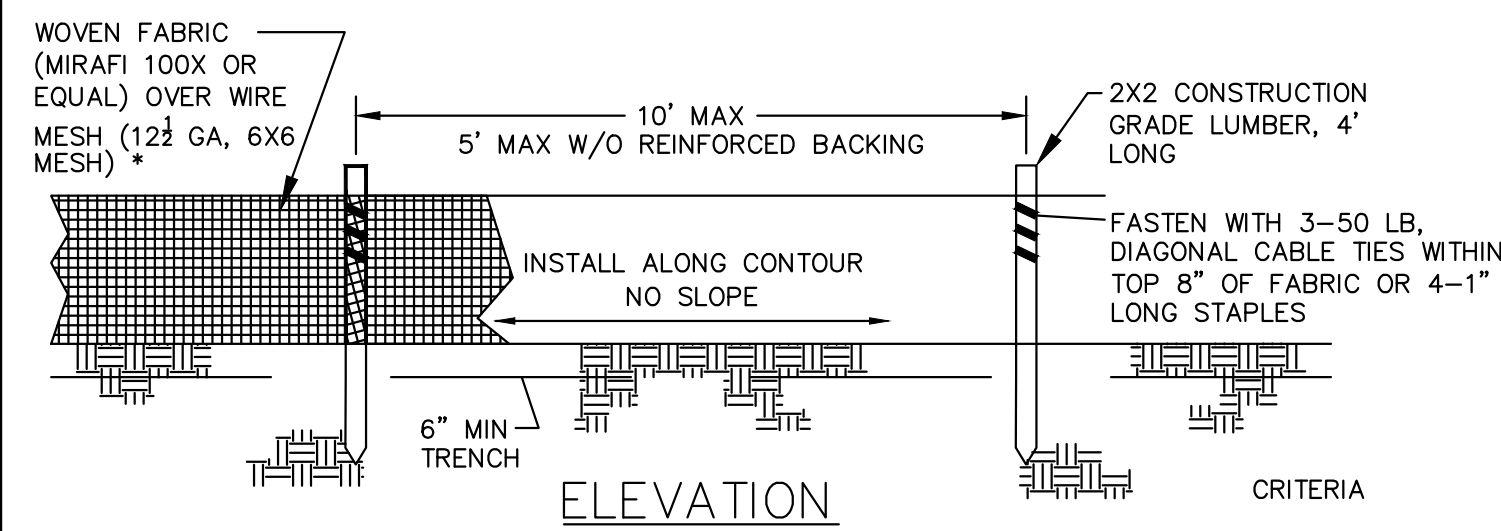


- DESIGN CRITERIA**
- SILT FENCE FOR SHEET FLOW SHALL HAVE A MAXIMUM DRAINAGE AREA OF 1/4 ACRE PER 100 LF.
  - STRAW BALE BARRIERS FOR SHEET FLOW SHALL HAVE A MAXIMUM DRAINAGE AREA OF 1/4 ACRE PER 100 LF.
  - REFER TO INDIVIDUAL ESC FIGURE FOR INSTALLATION.
  - TERRACING INCLUDES LOGS, WATLES & FILTER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

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**SPACING CHART FOR ESC DEVICES**



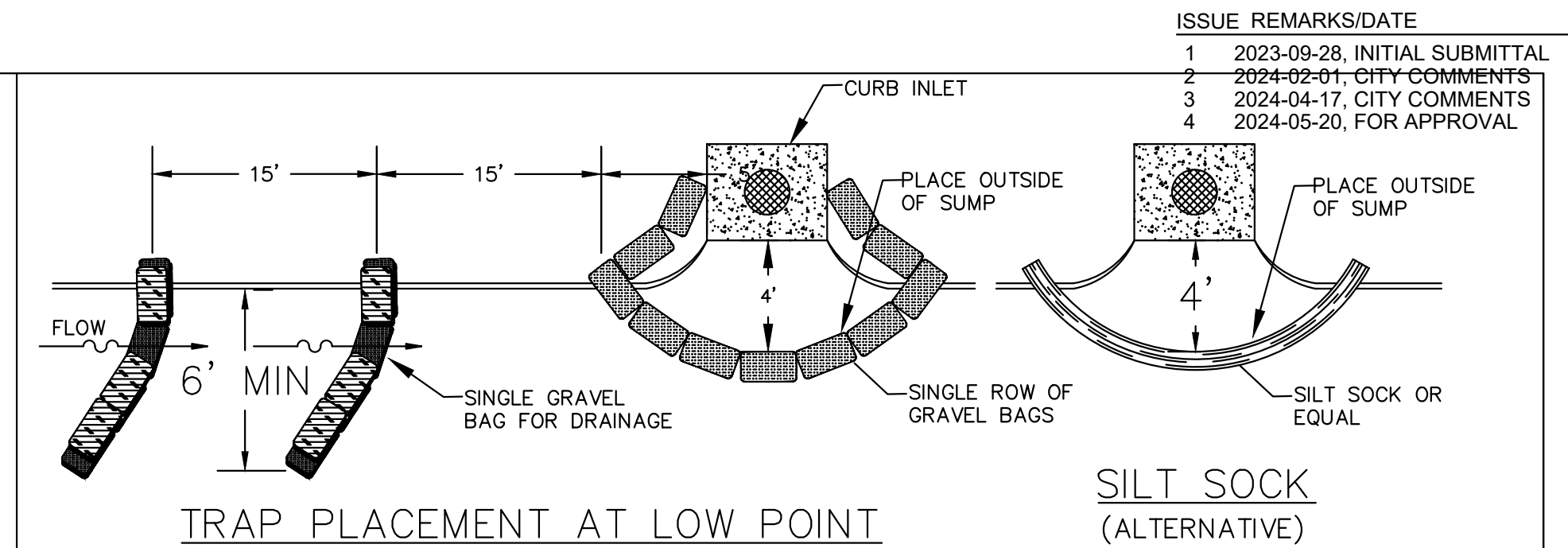
NOTE: IF FABRIC IS INSTALLED BY EQUIPMENT DESIGNED TO SLICE INTO THE GROUND, THE TRENCH IS NOT REQ'D.

JOINING SECTIONS OF SILT FENCE

- 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.

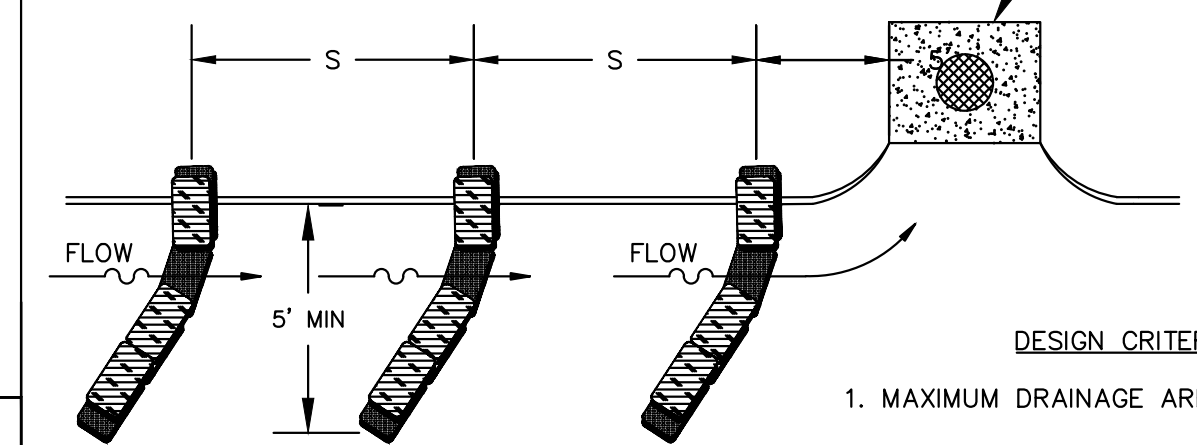
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**SILT FENCE INSTALLATION SHEET FLOW (ONLY)**



**SPACING OF TRAPS**

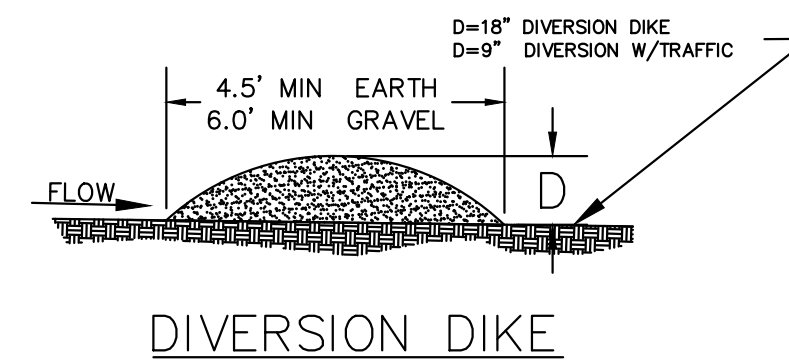
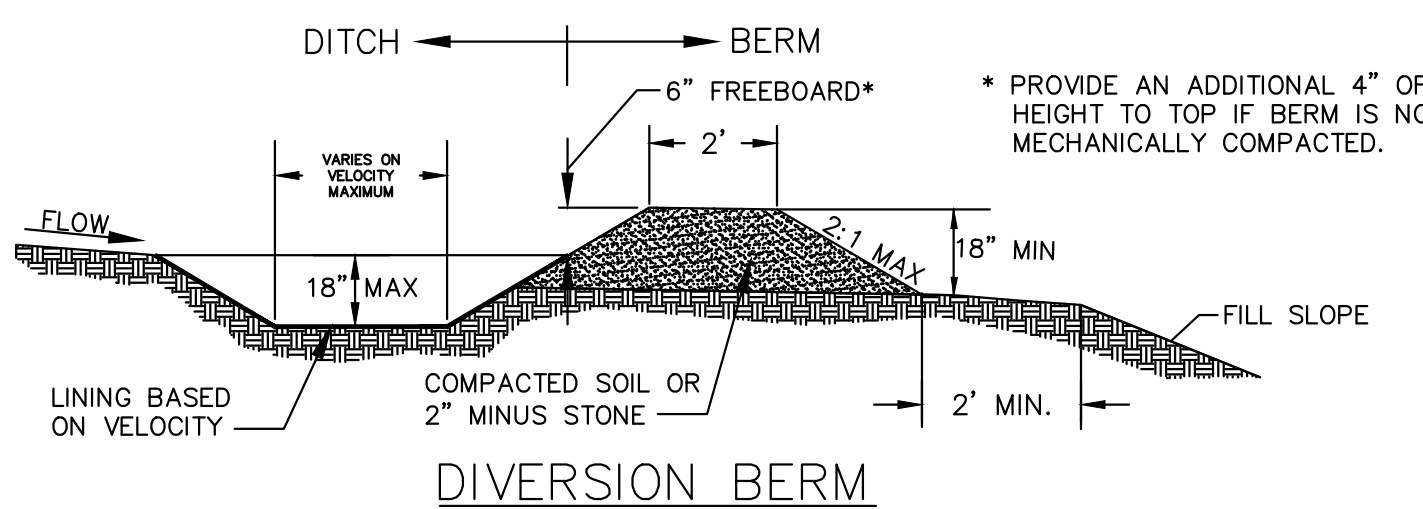
GUTTER SLOPE	S
LOW PT	15'
1%	20'
2%	15'
3% MAX.	10'



- 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.

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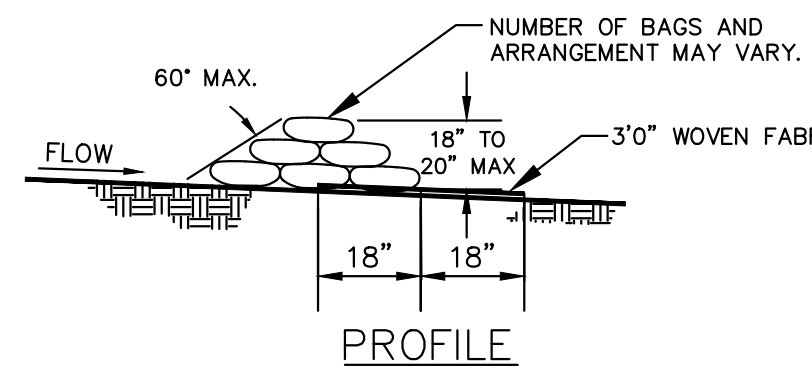
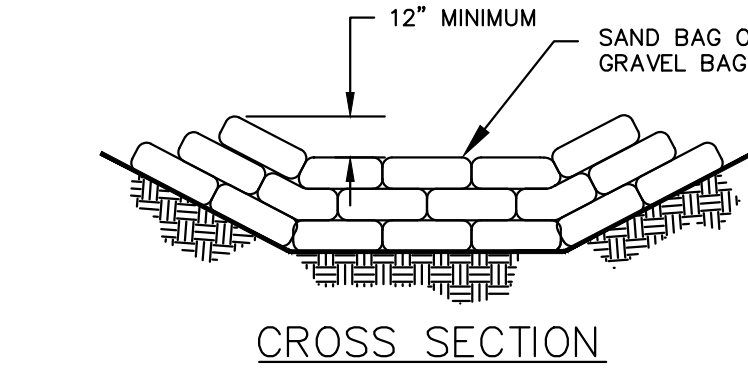
**CURB INLET PROTECTION**



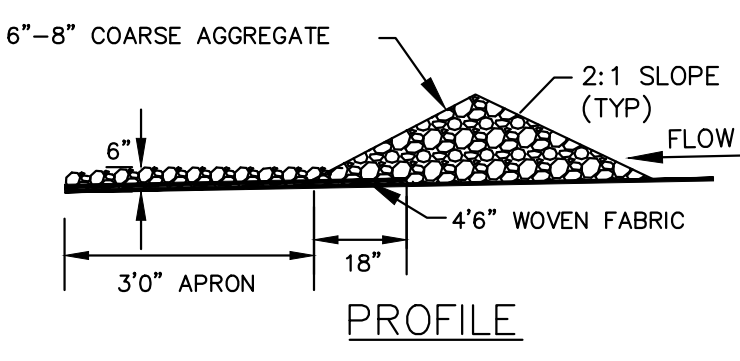
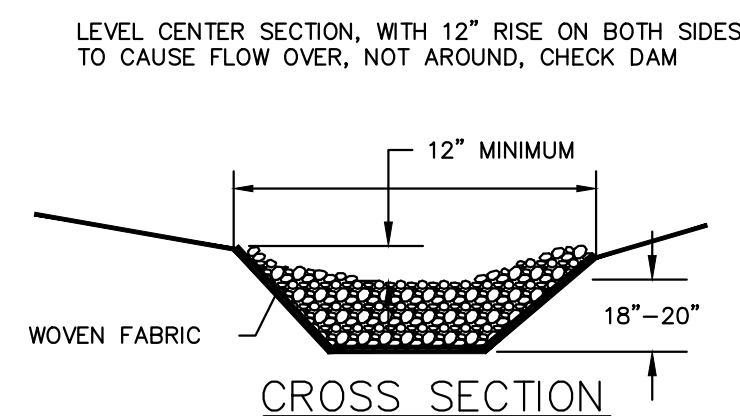
- DESIGN CRITERIA**
- DIVERSIONS SHALL BE USED FOR DRAINAGE AREAS ≤ 3 ACRES.
  - DIVERSION CHANNELS SHALL BE DESIGNED TO CONVEY THE 6-MO STORM AT NON-EROSIVE VELOCITIES.
  - CRITICAL LOCATIONS SHALL BE DESIGNED FOR THE 15YR / 20Min. STORM.
  - MAXIMUM CHANNEL SLOPE OF 3% WITHOUT CHECK DAMS.
  - SWALE 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.

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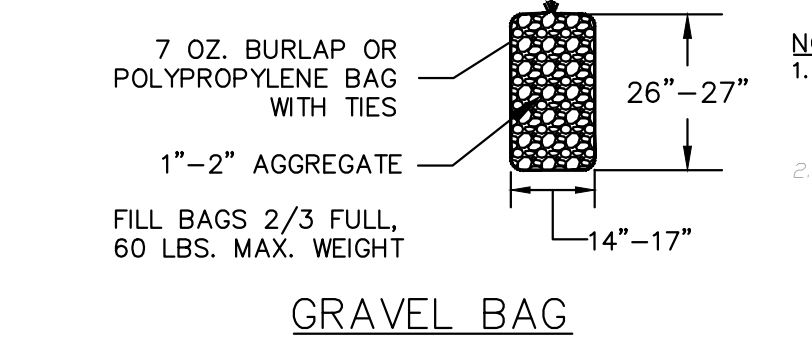
**DIVERSION BERMS + DIKES**



CROSS SECTION  
PROFILE  
SAND BAG OR GRAVEL BAG CHECK DAM



CROSS SECTION  
PROFILE  
ROCK CHECK DAM

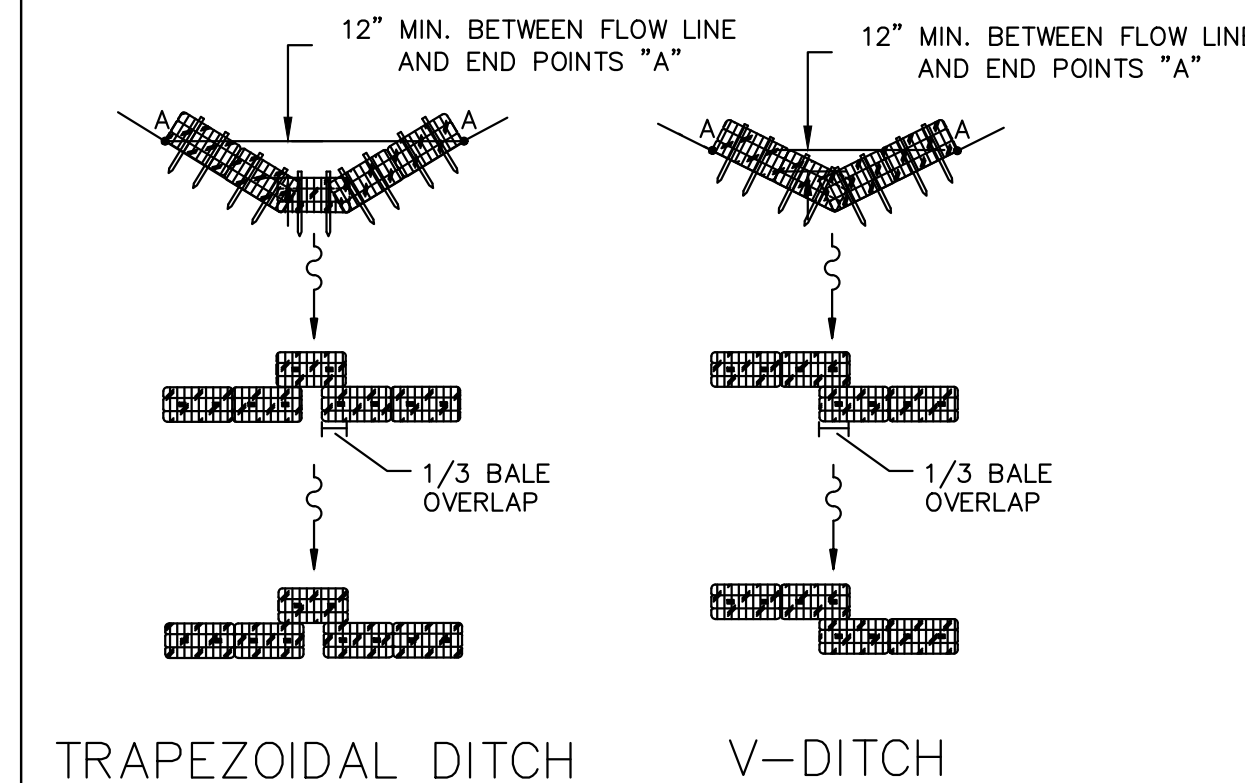


GRAVEL BAG

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

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**CHECK DAMS**

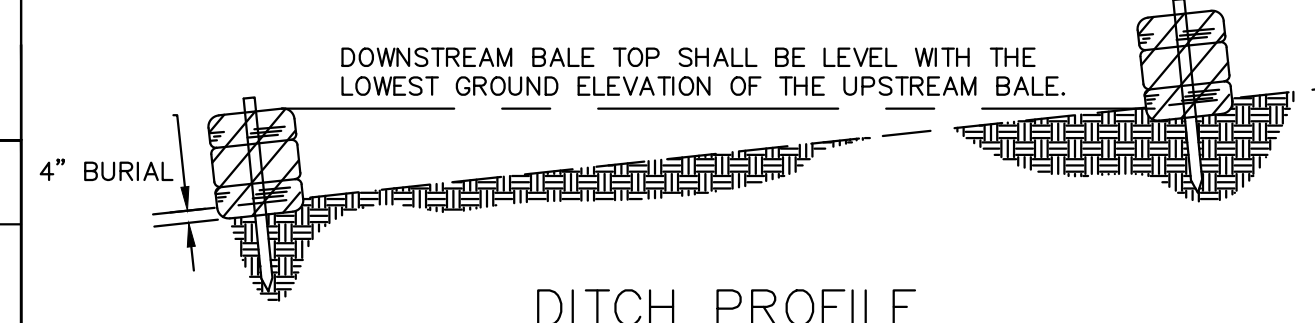


TRAPEZOIDAL DITCH  
V-DITCH

- CRITERIA FOR LOW CONCENTRATED FLOWS**
- DRAINAGE AREAS SHALL BE LESS THAN 1 ACRE.
  - INSTALL TWO STAKES PER BALE.
  - BALES WILL BE TRENCHED 4\"/>

**CHECK DAM SPACING**

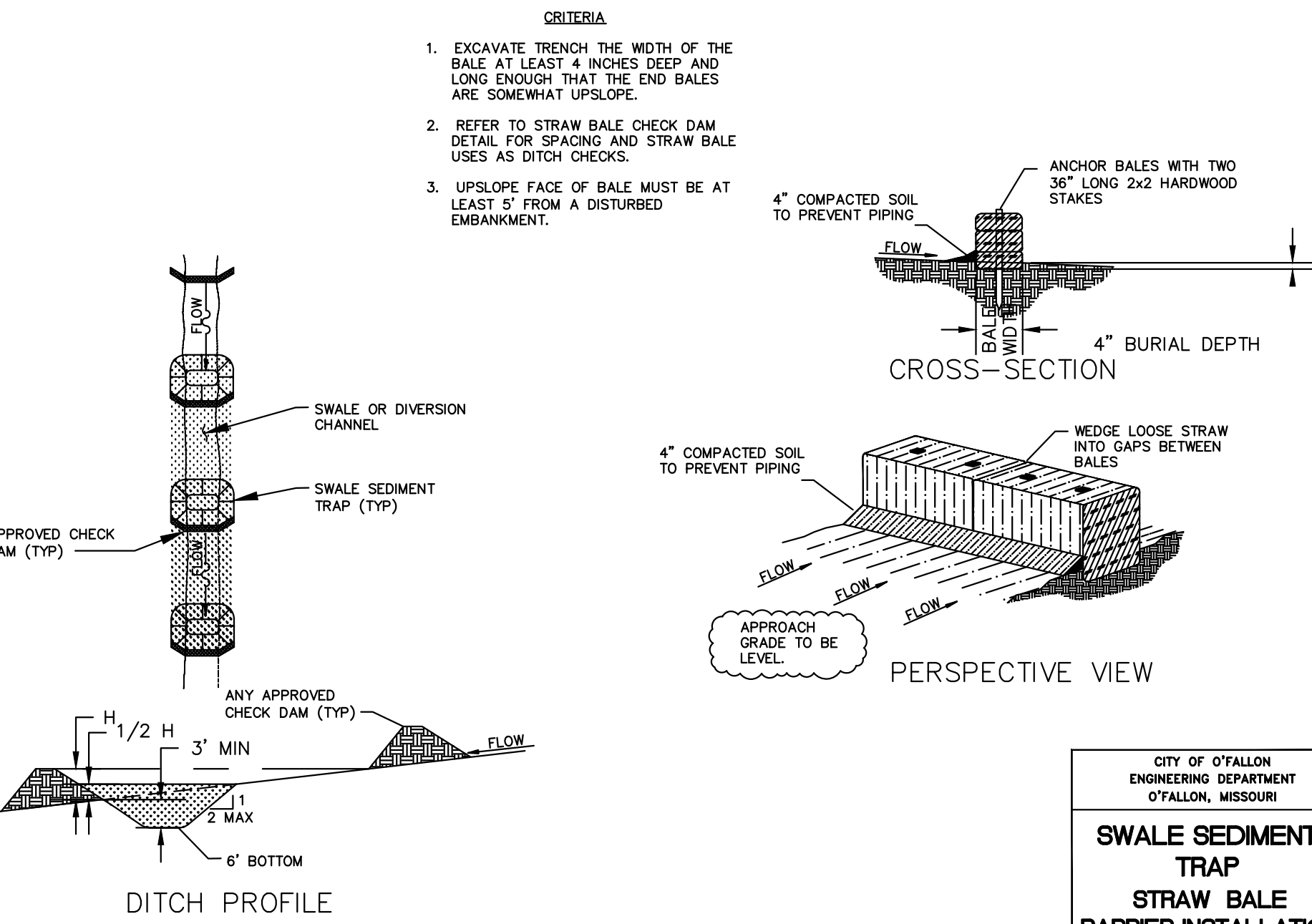
Ditch Slope	Maximum Spacing
3%	50'
2%	75'



DITCH PROFILE

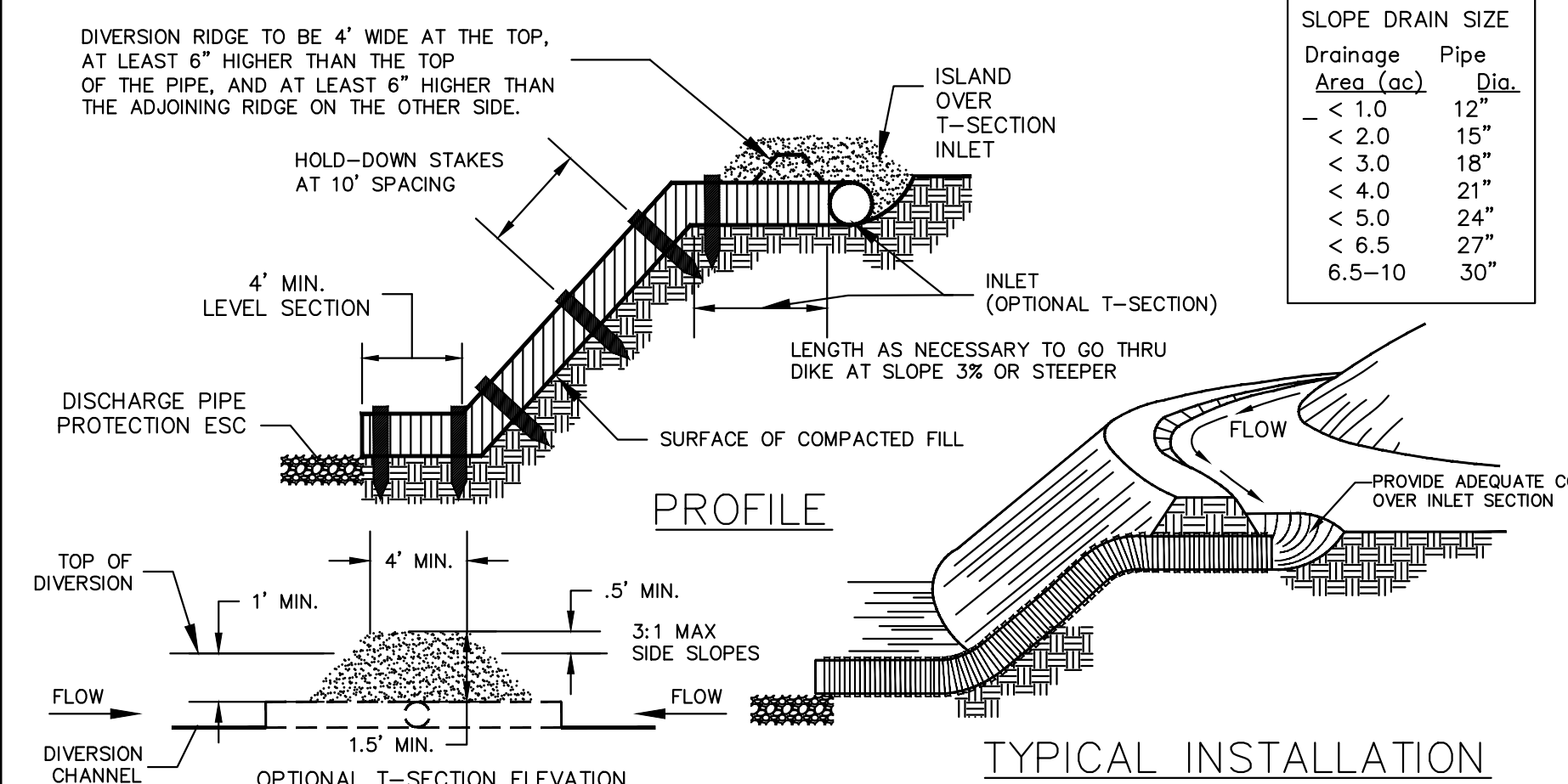
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**STRAW BALE CHECK DAM**



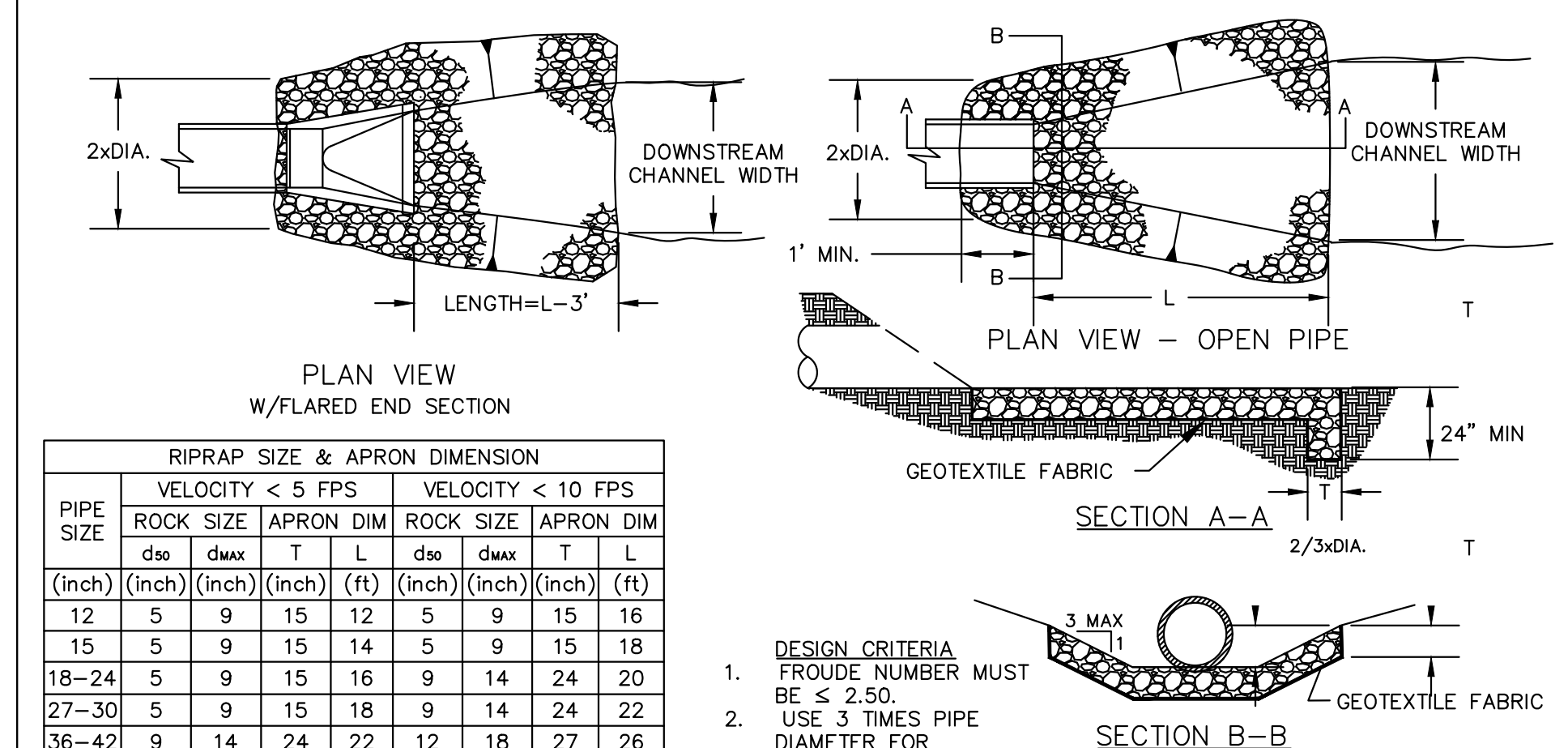
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**SWALE SEDIMENT TRAP STRAW BALE BARRIER INSTALLATION**



**SLOPE DRAIN SIZE**

Drainage Pipe Area (sq. ft)	Dia.
< 1.0	12"
< 2.0	15"
< 3.0	18"
< 4.0	21"
< 5.0	24"
< 6.5	27"
6.5-10	30"



**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
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	9	14	24	22	12	18	27	26
48-54	9	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

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**TEMPORARY OUTLET PIPE DISCHARGE PROTECTION**

- 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.

PROJECT TITLE

**HARVEST AT HOPEWELL**

O'Fallon, Missouri

**O'FALLON PHASE IB**

THE **STERLING** CO.  
ENGINEERS & SURVEYORS

6055 New Baumgartner Road  
St. Louis, Missouri 63129  
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Corporate Certificate of Authority #001348

Date: 05-20-2024  
Michael G. Boerding  
License No. MO E-28643  
Professional Engineer

HARVEST HOPEWELL, LLC  
5091 New Baumgartner Road  
St. Louis, Missouri 63129

P+Z No. 21-004994  
City No. 21-011444  
Date: 05-20-2024  
Job No. 20-09-327

Page No.

**DTL-1**

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