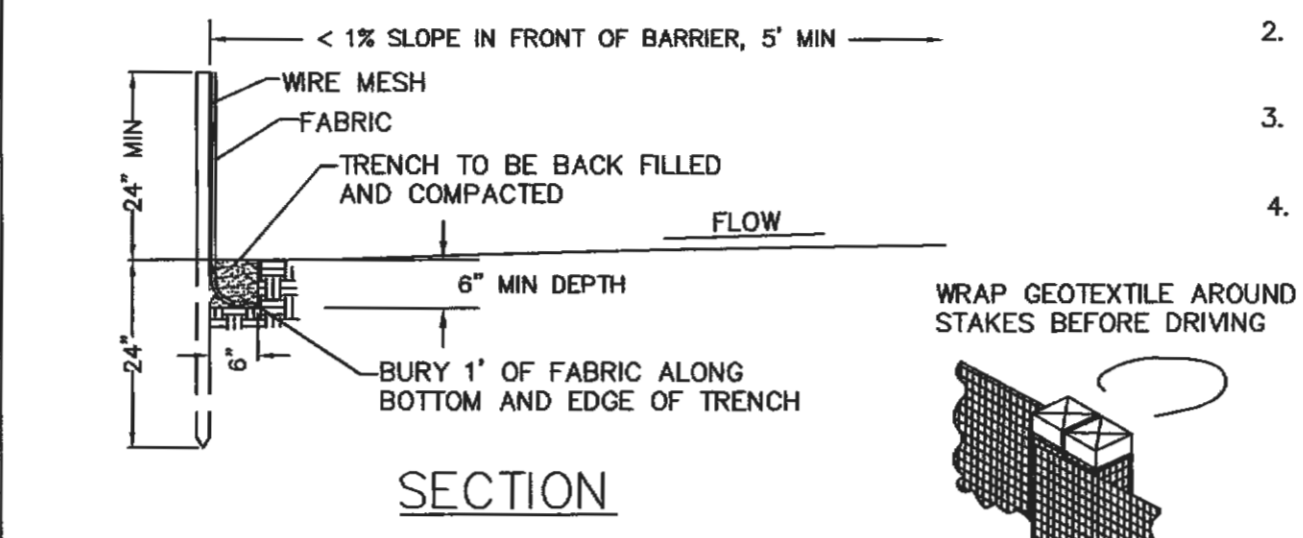
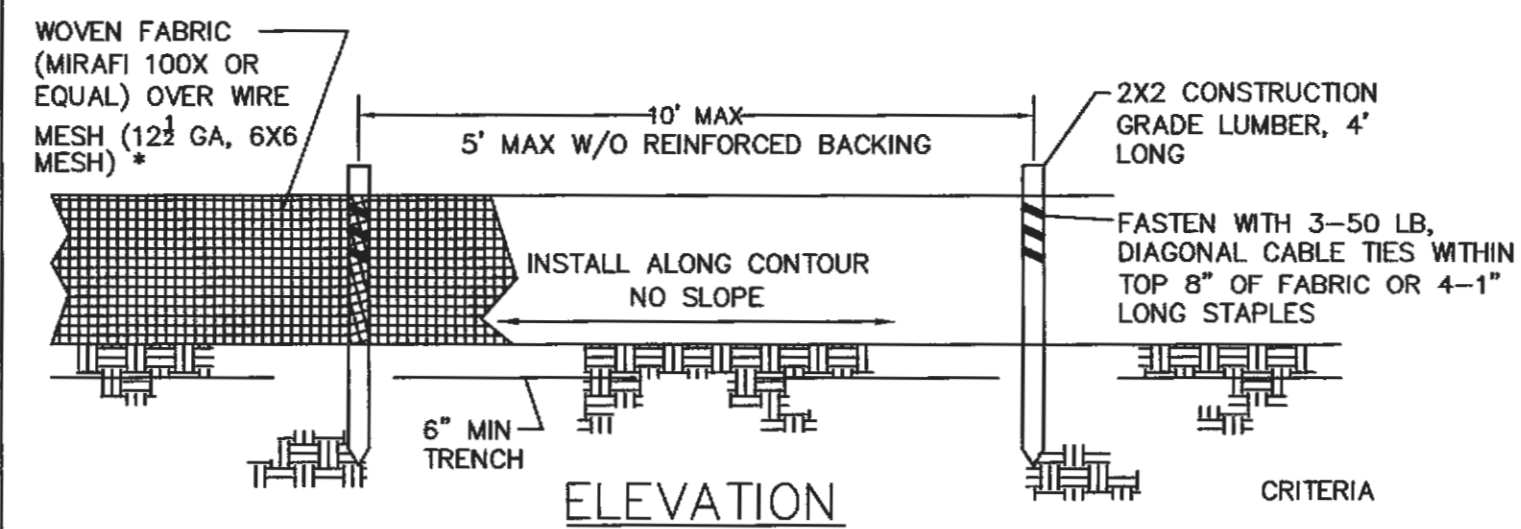


- DESIGN CRITERIA**
1. SILT FENCE FOR SHEET FLOW SHALL HAVE A MAXIMUM DRAINAGE AREA OF 1/4 ACRE PER 100 LF.
 2. STRAW BALE BARRIERS FOR SHEET FLOW SHALL HAVE A MAXIMUM DRAINAGE AREA OF 1/4 ACRE PER 100 LF.
 3. REFER TO INDIVIDUAL ESC FIGURE FOR INSTALLATION.
 4. TERRACING INCLUDES LOGS, WATTLES & FILTER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

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SPACING CHART FOR ESC DEVICES



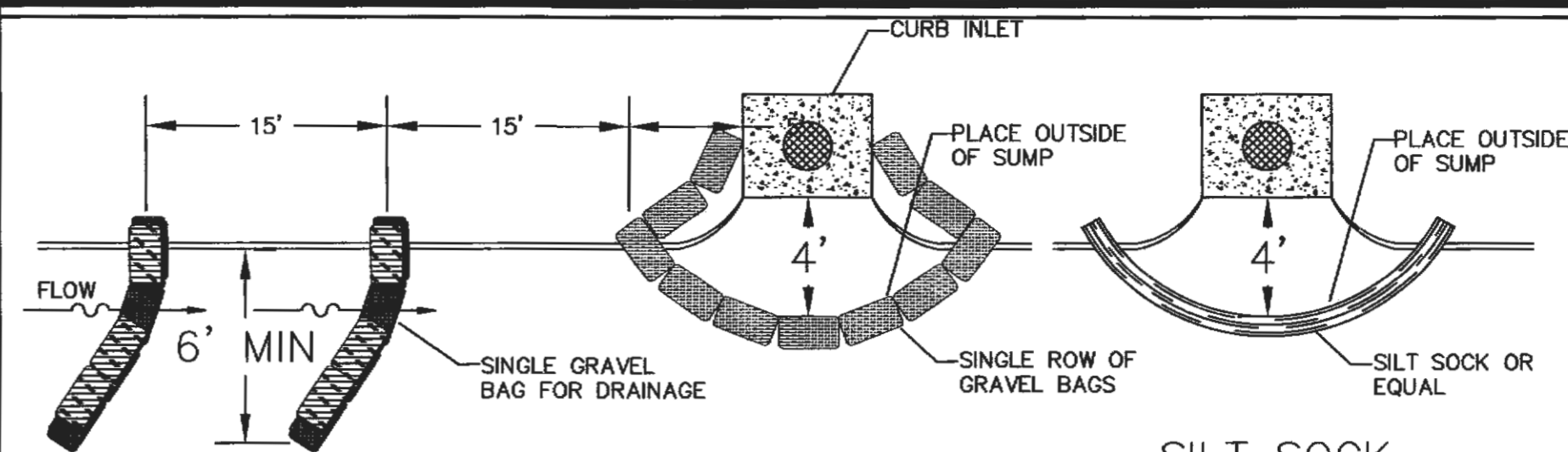
JOINING SECTIONS OF SILT FENCE

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

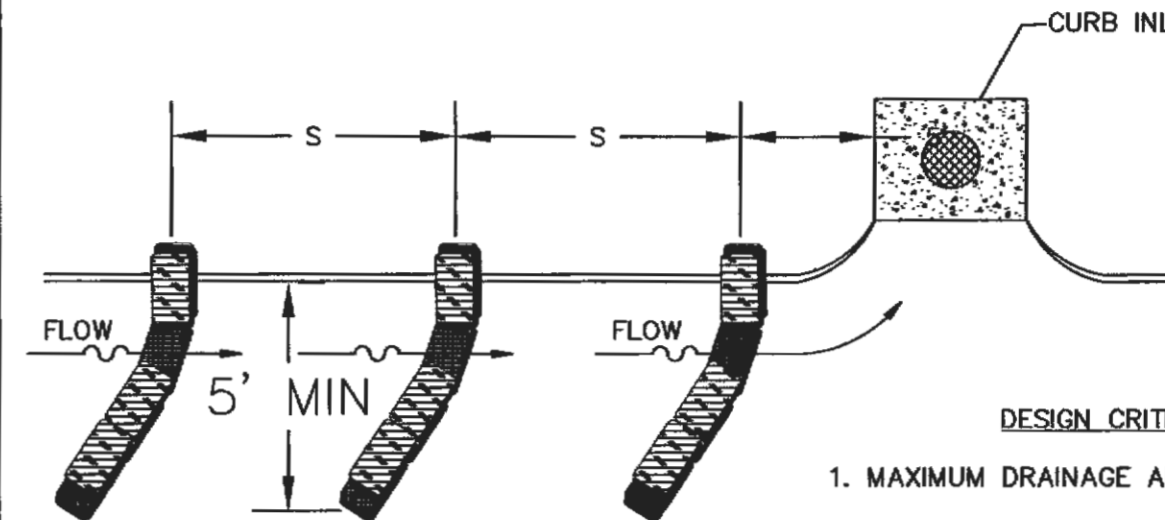
- CRITERIA**
1. SILT FENCE SHALL BE 24 INCHES HIGH.
 2. SILT FENCE SHALL NOT BE USED FOR CONCENTRATED FLOWS.
 3. GEOSYNTHETIC REINFORCED SILT FENCE BACKING MAY BE USED IN LIEU OF WIRE MESH.
 4. WIRE MESH WILL BE USED AT LOCATIONS SHOWN ON THE APPROVED SWPPP.

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SILT FENCE INSTALLATION SHEET FLOW (ONLY)



TRAP PLACEMENT AT LOW POINT



TRAP PLACEMENT AT INTERMEDIATE INLET

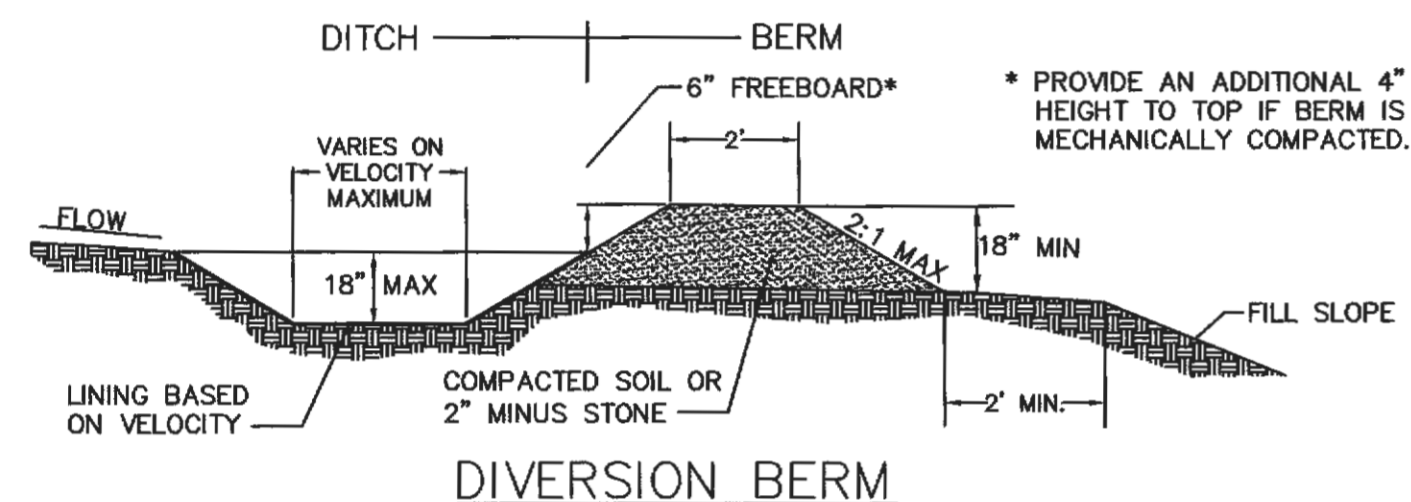
- DESIGN CRITERIA**
1. MAXIMUM DRAINAGE AREA - 1 ACRE.
 2. PEAK RUNOFF SHALL BE ≤ 2 CFS BASED ON THE 6-MONTH STORM.
 3. STACK GRAVEL BAGS DOUBLE HIGH. PROVIDE GAP FOR DRAINAGE.

SPACING OF TRAPS

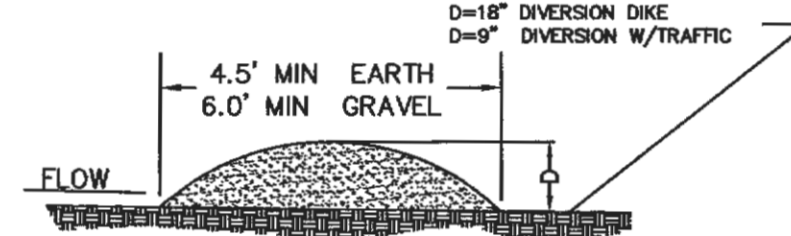
GUTTER SLOPE	S
LOW PT	15'
1%	20'
2%	15'
3% MAX.	10'

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CURB INLET PROTECTION



DIVERSION BERM

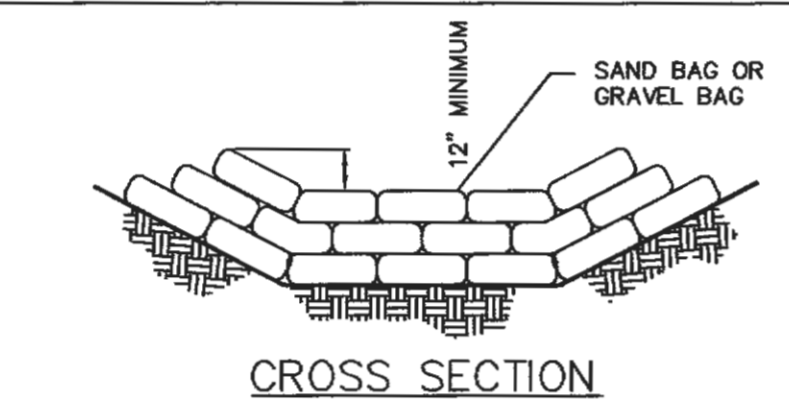


DIVERSION DIKE

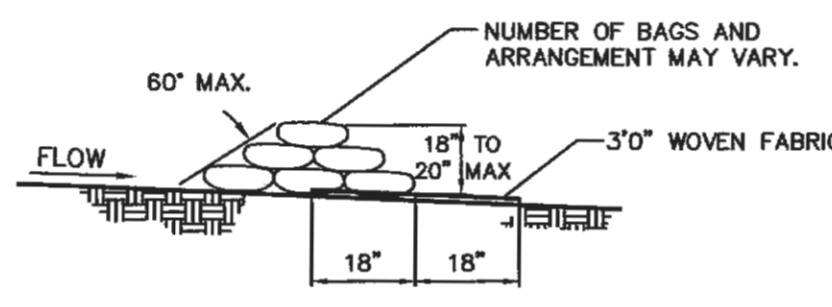
- DESIGN CRITERIA**
1. DIVERSIONS SHALL BE USED FOR DRAINAGE AREAS ≤ 3 ACRES.
 2. DIVERSION CHANNELS SHALL BE DESIGNED TO CONVEY THE 6-MO STORM AT NON-EROSIVE VELOCITIES.
 3. CRITICAL LOCATIONS SHALL BE DESIGNED FOR THE 15YR / 20MIN. STORM.
 4. MAXIMUM CHANNEL SLOPE OF 3% WITHOUT CHECK DAMS.
 5. SWALE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

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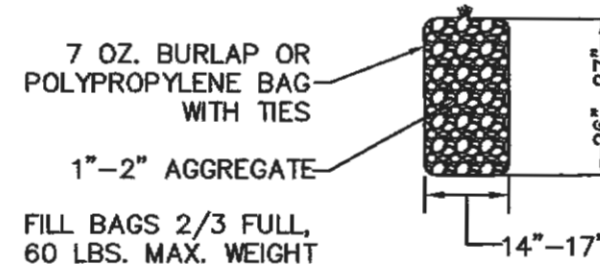
DIVERSION BERMS + DIKES



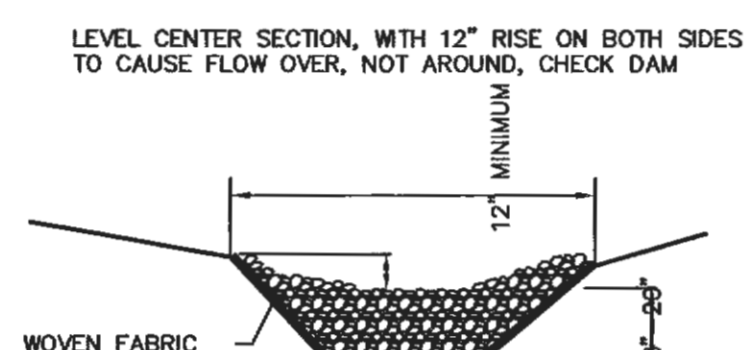
CROSS SECTION



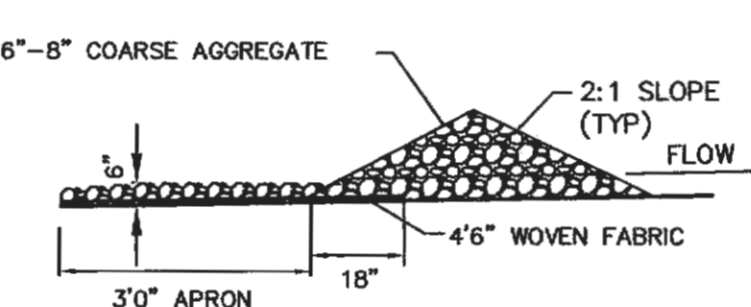
PROFILE SAND BAG OR GRAVEL BAG CHECK DAM



GRAVEL BAG



CROSS SECTION

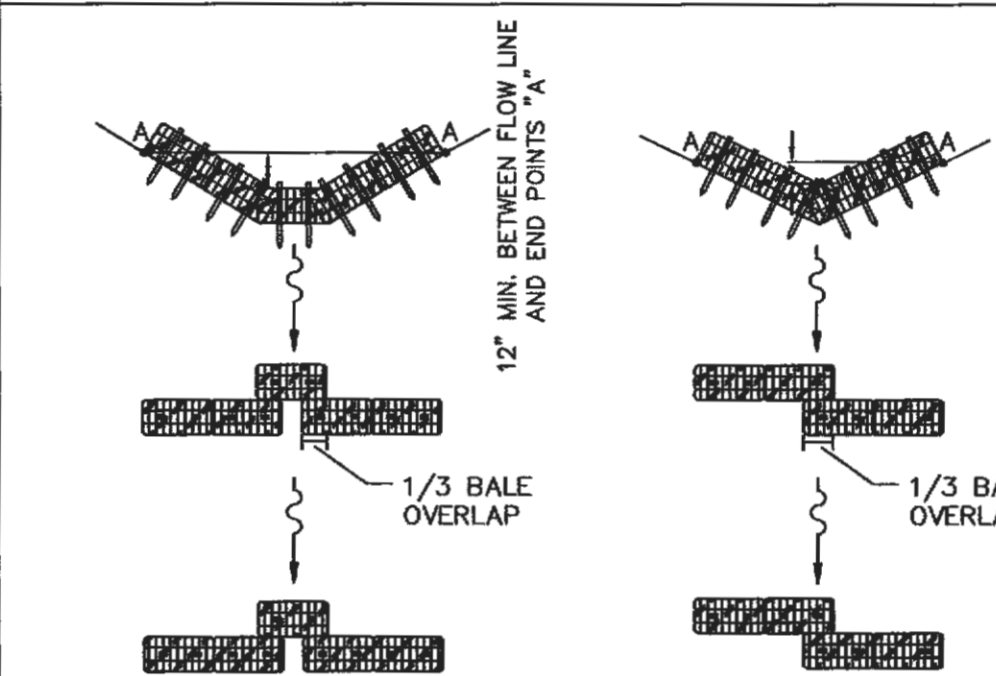


PROFILE ROCK CHECK DAM

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

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CHECK DAMS



TRAPEZOIDAL DITCH V-DITCH

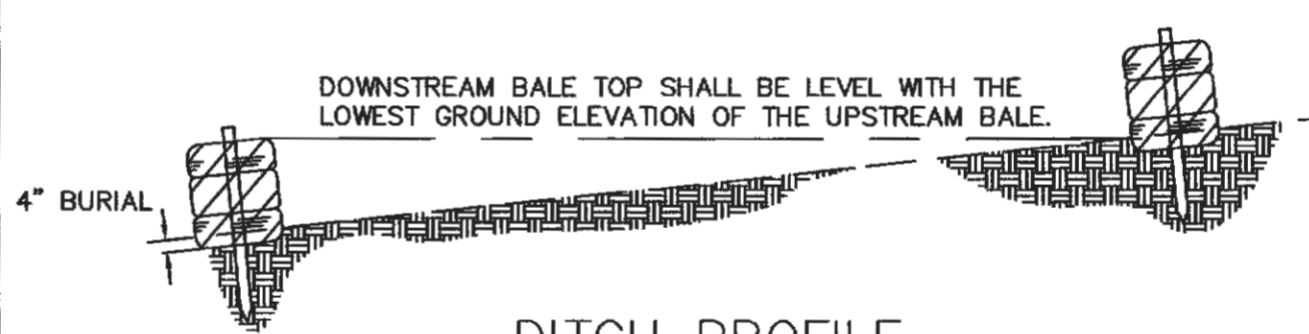
- CRITERIA FOR LOW CONCENTRATED FLOWS**
1. DRAINAGE AREAS SHALL BE LESS THAN 1 ACRE.
 2. INSTALL TWO STAKES PER BALE.
 3. BALES WILL BE TRENCHED 4" DEEP INTO EARTH.
 4. MAXIMUM CHANNEL SLOPE OF 3%.
 5. SEDIMENTATION TRAPS TO BE USED IN HIGHLY EROSION AREAS.

CHECK DAM SPACING

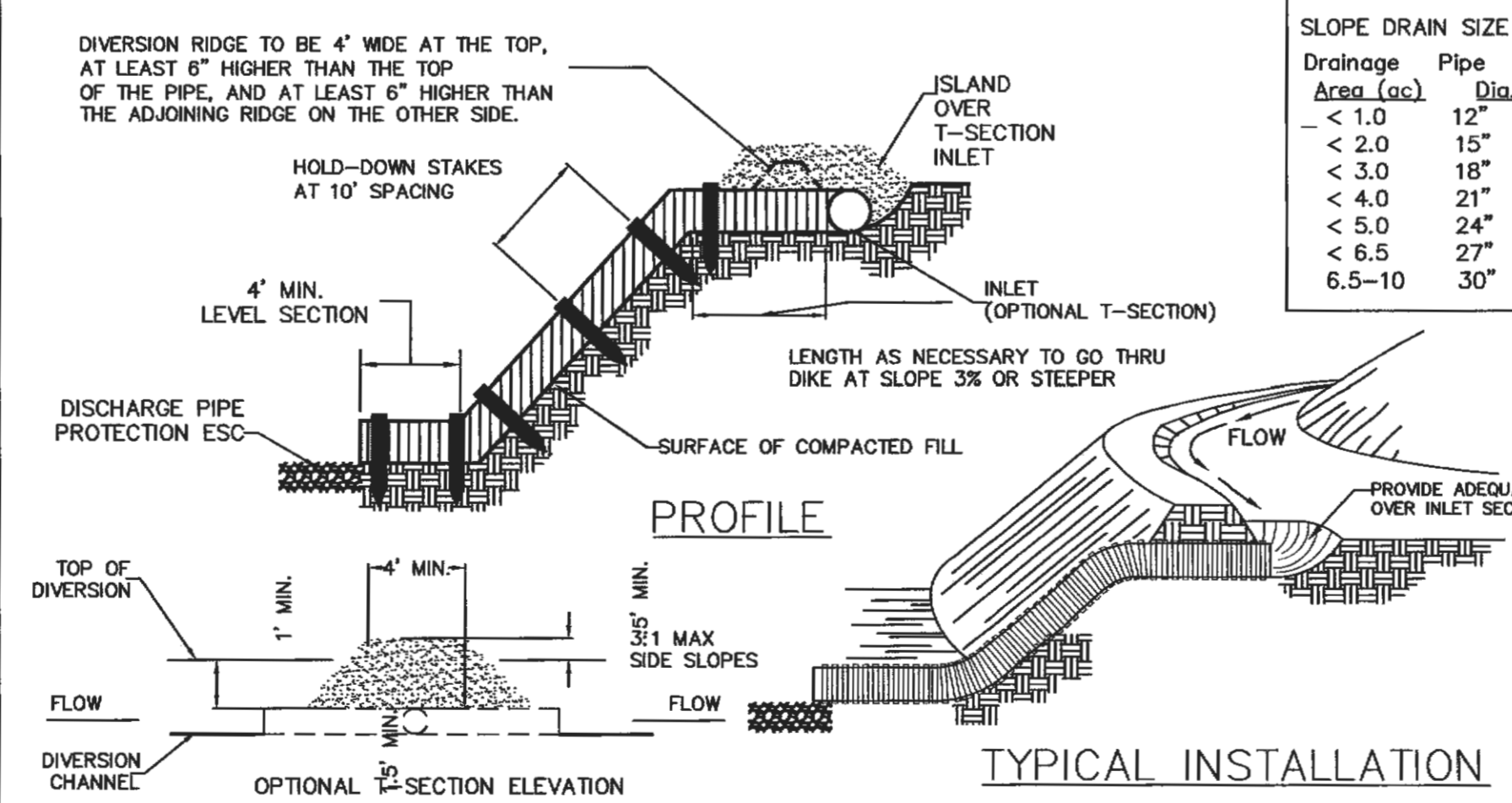
Ditch Slope	Maximum Spacing
3%	50%
2%	75%

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STRAW BALE CHECK DAM



DITCH PROFILE

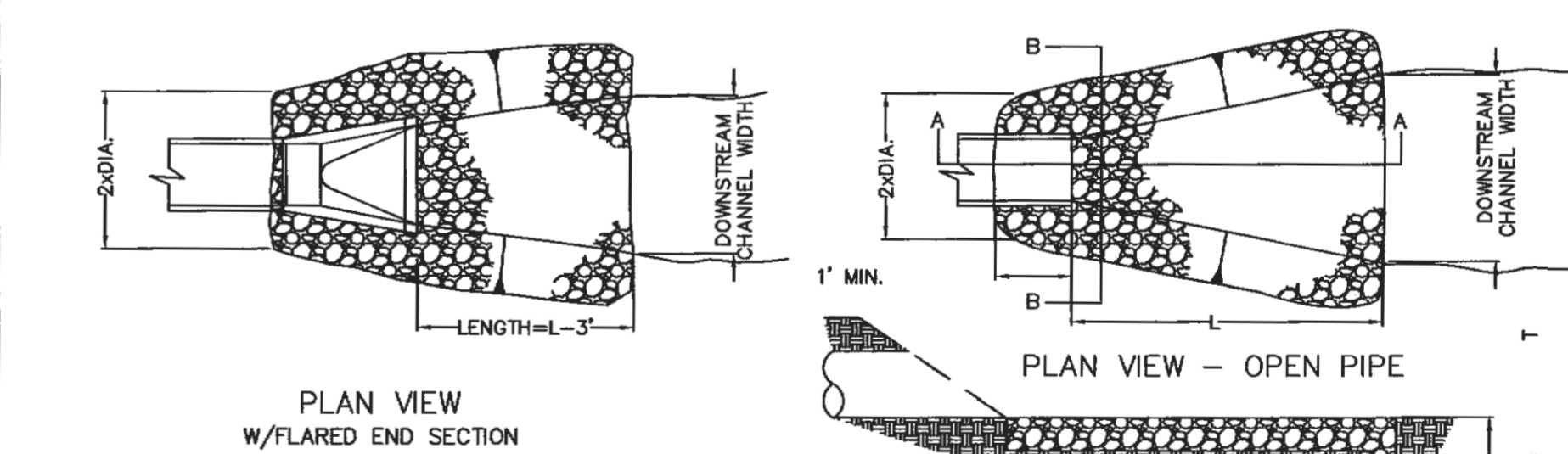


TYPICAL INSTALLATION

- NOTE:**
1. PIPE CAN BE CMP, PVC, FLEXIBLE TUBING, OR SIMILAR.
 2. THIS METHOD MUST BE USED IN CONJUNCTION WITH OTHER ESC DEVICES. THIS IS NOT A STAND ALONE CONTROL DEVICE.

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TEMPORARY SLOPE DRAIN



PLAN VIEW W/FLARED END SECTION

RIPRAP SIZE & APRON DIMENSION

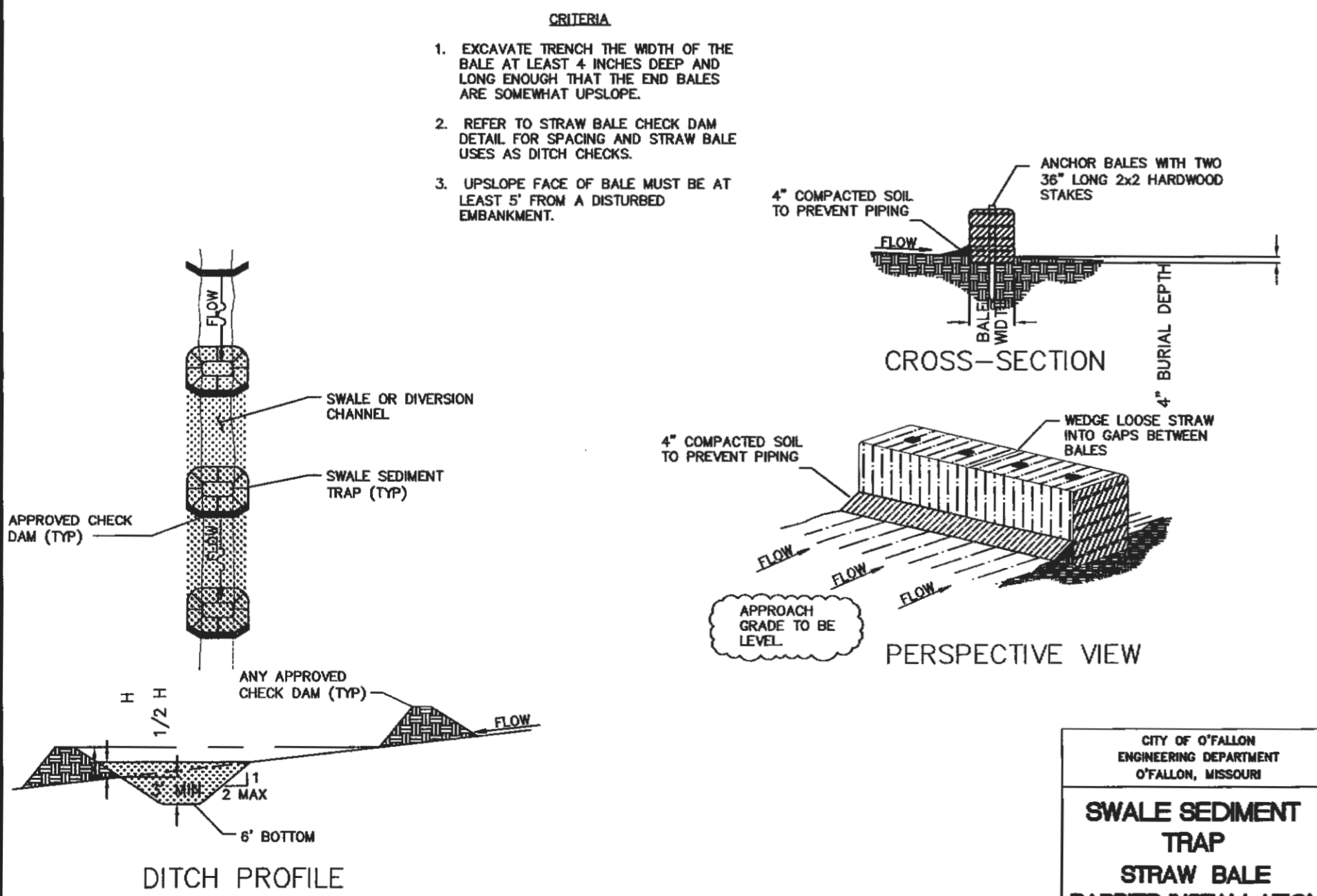
PIPE SIZE (inch)	VELOCITY < 5 FPS				VELOCITY < 10 FPS			
	ROCK SIZE (inch)	APRON DIM (inch)	ROCK SIZE (ft)	APRON DIM (ft)	ROCK SIZE (inch)	APRON DIM (inch)	ROCK SIZE (ft)	APRON DIM (ft)
12	5	9	15	12	5	9	15	16
15	5	9	15	14	5	9	15	18
18-24	5	9	15	16	9	14	24	20
27-30	5	9	15	18	9	14	24	22
36-42	14	24	22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

d₅₀ - NOMINAL DIAMETER
d_{max} - MAXIMUM DIAMETER
T - THICKNESS
L - LENGTH

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TEMPORARY OUTLET PIPE DISCHARGE PROTECTION

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



DITCH PROFILE

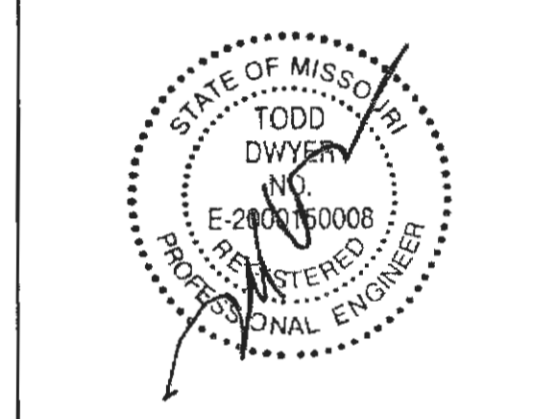
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SWALE SEDIMENT TRAP STRAW BALE BARRIER INSTALLATION

PROJECT TITLE

BRAMBLETT HILLS APARTMENTS

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FAX: 636-294-3272
WEB: THDESIGNGROUP.COM



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ENGINEERING DEPARTMENT
O'FALLON, MISSOURI

STRAW BALE CHECK DAM

Developer / Owner Information:
Michael Towerman
Tristar Properties
13397 Lakefront Drive
Earth City, MO 63045

P+Z No: 3805.05.02
Approval Date: 02/05/2015
City No.

Page No.

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