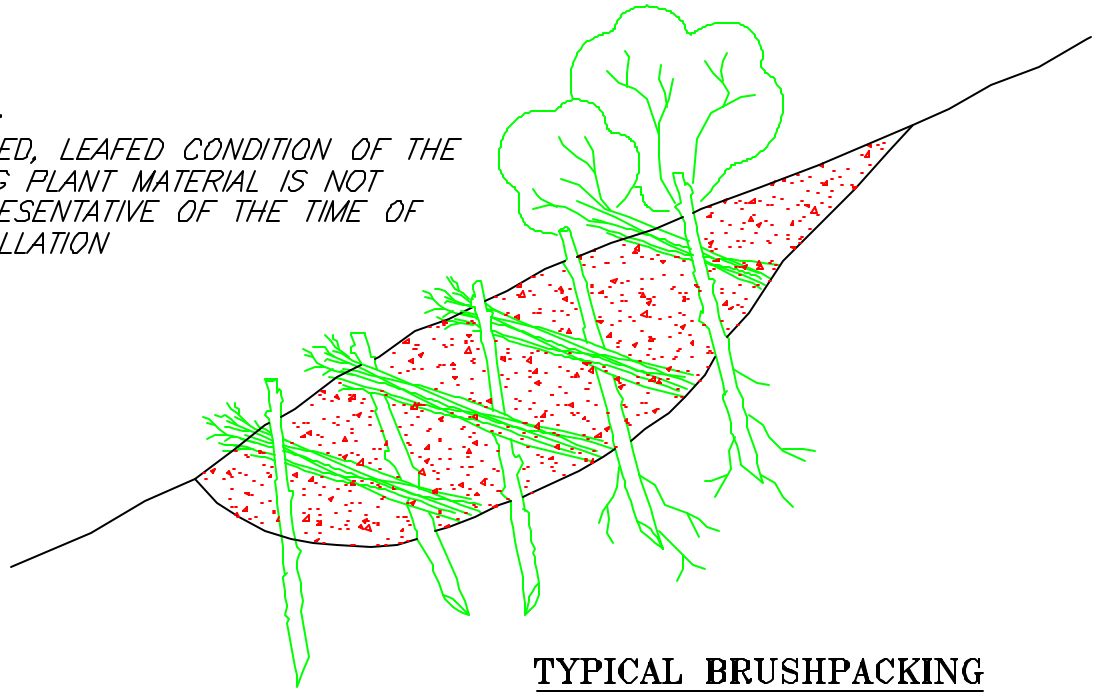


Appendix C Drawings of BMPs

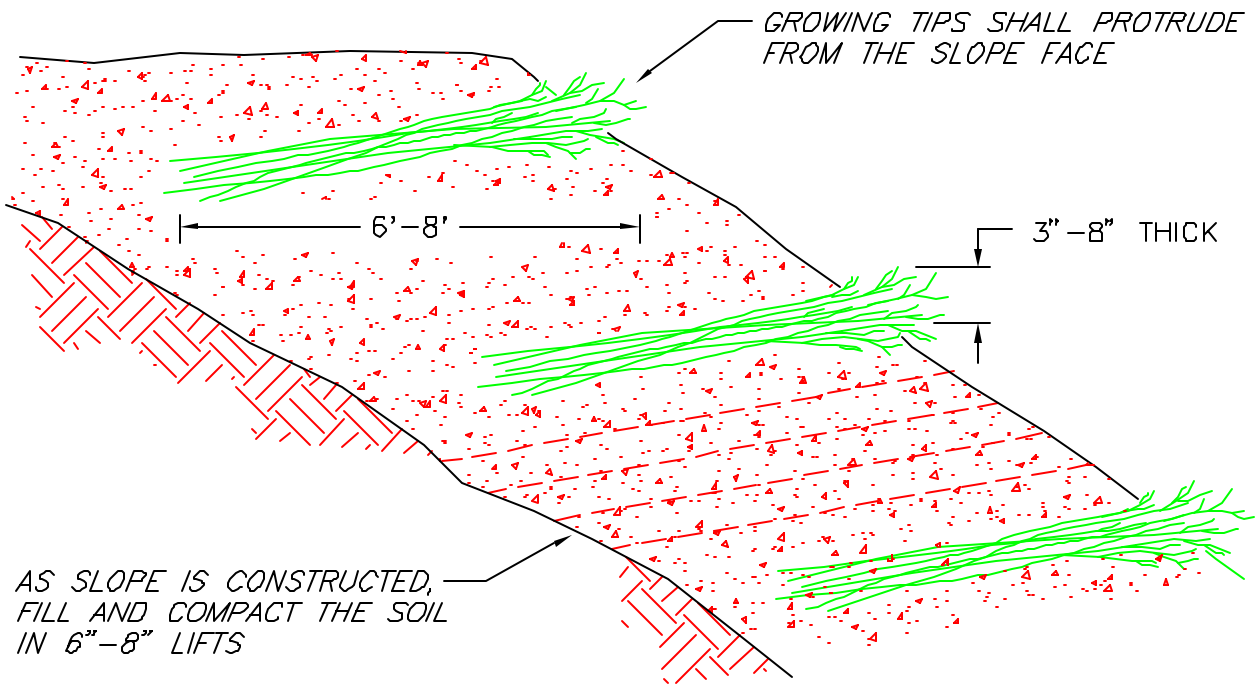
	<u>Page</u>
Brushlayering	C-1
Check Dam.....	C-2
Construction Entrance	C-3
Culvert Inlet Sediment Barrier	C-4
Curb Inlet Sediment Barrier – Block and Gravel.....	C-5
Curb Inlet Sediment Barrier – Sandbags.....	C-6
Diversion Channel.....	C-7
Drop Inlet Sediment Barrier – Block and Gravel.....	C-8
Erosion Blankets and Turf Reinforcement Mats – Channel Installation	C-9
Erosion Blankets and Turf Reinforcement Mats – Slope Installation.....	C-10
Gabions	C-11
Grass Lined Channel – Typical Cross Sections	C-12
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Sediment Basin – Plan View	C-17
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Slope Drain.....	C-27
Stream Crossing	C-28
Surface Roughening	C-29
Wattle	C-30

NOTE:
 ROOTED, LEAFED CONDITION OF THE
 LIVING PLANT MATERIAL IS NOT
 REPRESENTATIVE OF THE TIME OF
 INSTALLATION



TYPICAL BRUSHPACKING

COVER BRUSHLAYER IMMEDIATELY WITH
 6" OF FILL SOIL, WATER AND COMPACT
 ACCORDING TO SPECIFICATIONS

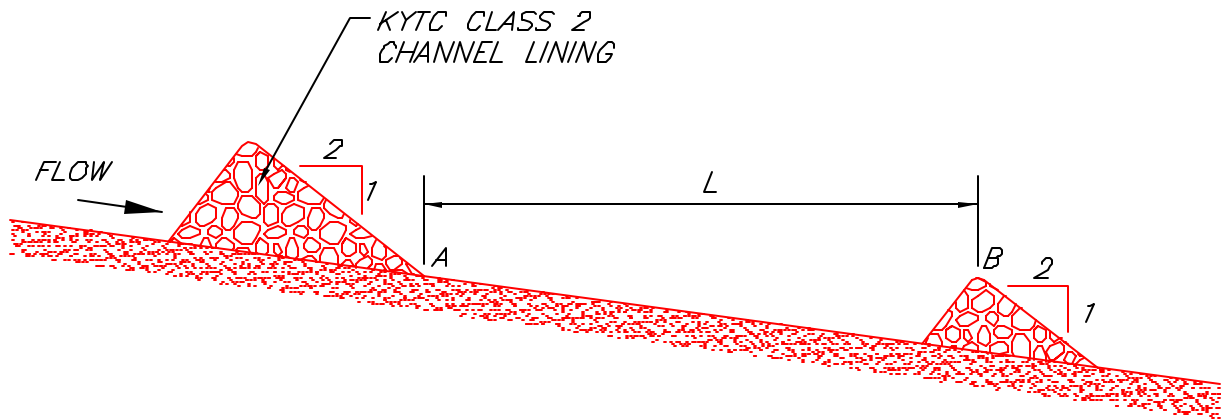


**TYPICAL BRUSHLAYERING
 WITH SLOPE CONSTRUCTION**

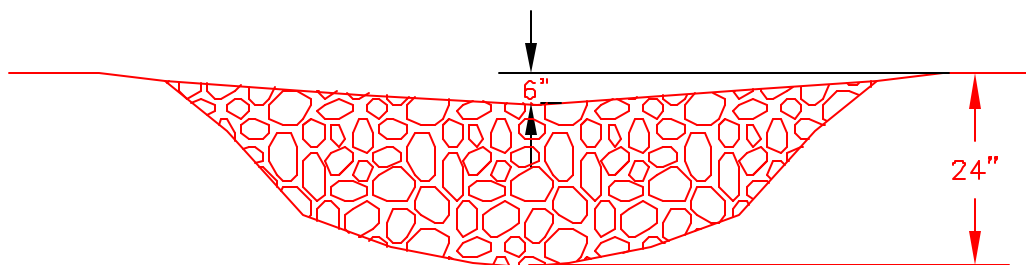
BRUSHLAYERING

SOURCE: SALIX APPLIED EARTHCARE -
 EROSION DRAW 5.0

*L = THE DISTANCE SUCH THAT
POINTS A AND B ARE OF
EQUAL ELEVATION*



**LONGITUDINAL SECTION SHOWING
SPACING BETWEEN CHECK DAMS**

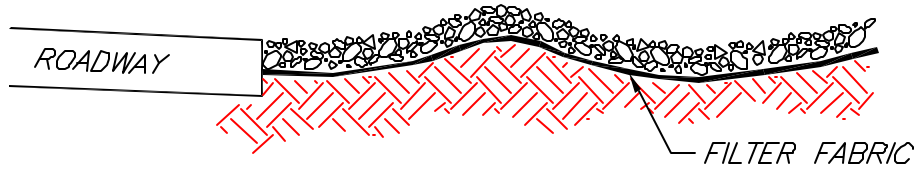


SECTION ACROSS CHANNEL

CHECK DAM

DIVERSION RIDGE REQUIRED
WHERE GRADE EXCEEDS 2%

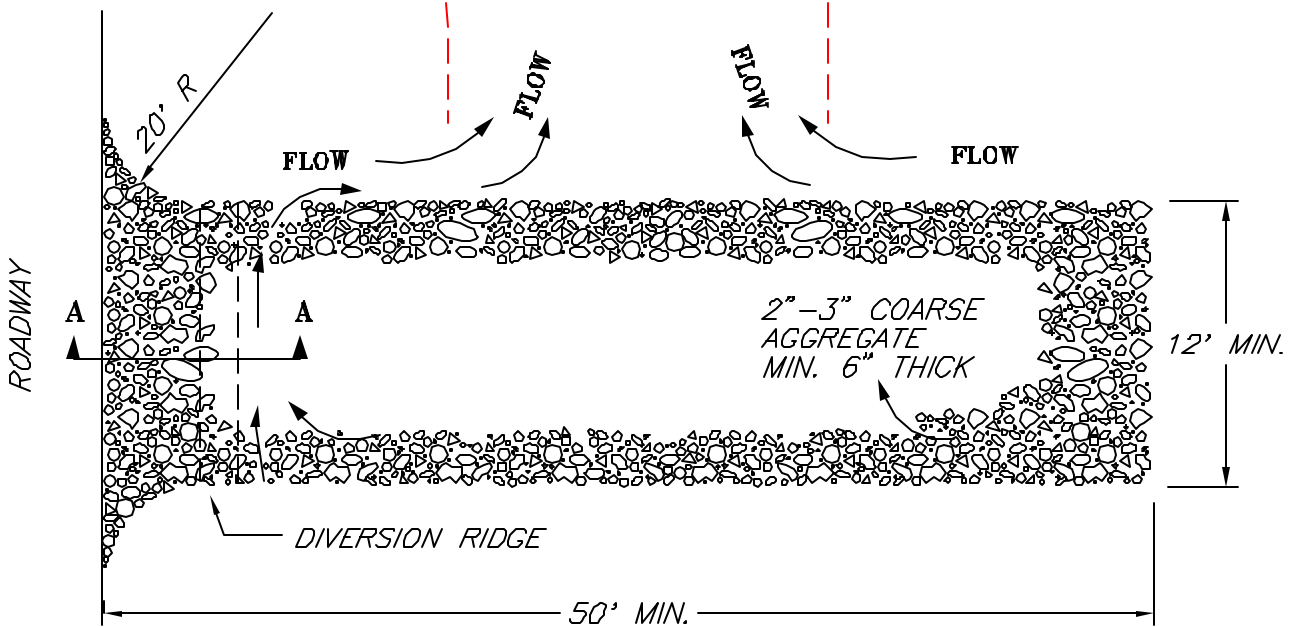
2% OR GREATER



SECTION A - A



NOTE:
USE SANDBAGS OR OTHER
METHODS TO CHANNELIZE
RUNOFF TO BASIN AS
REQUIRED.



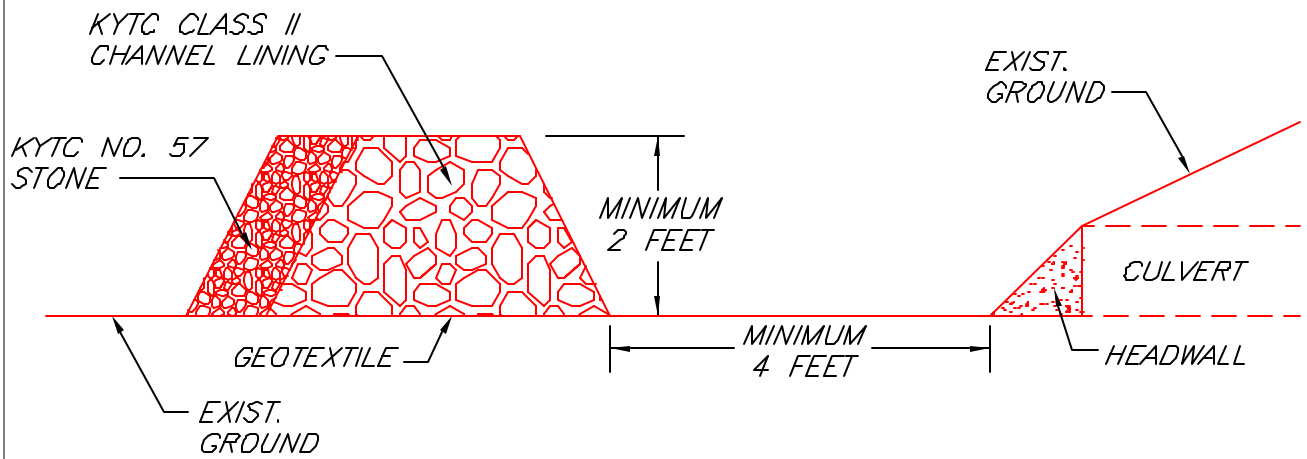
PLAN

NOTES:

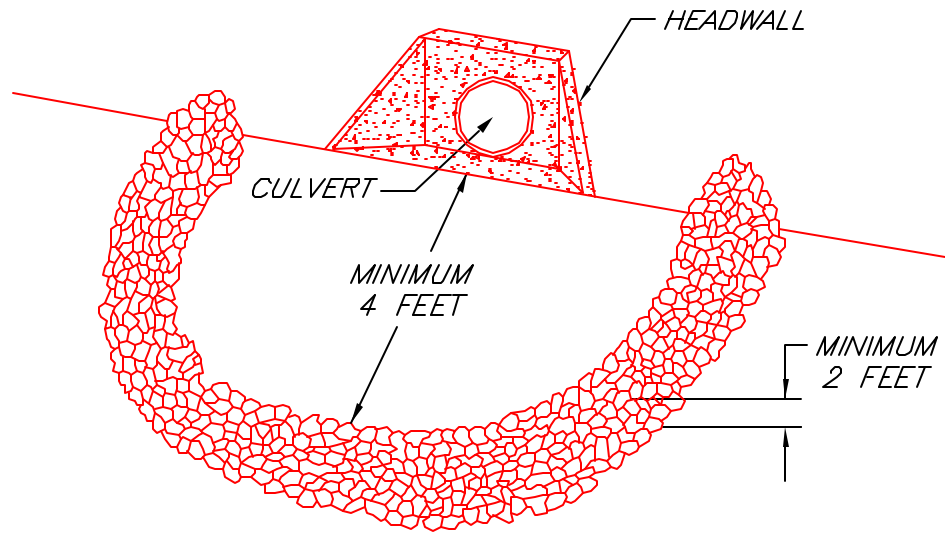
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.

**CONSTRUCTION
ENTRANCE**

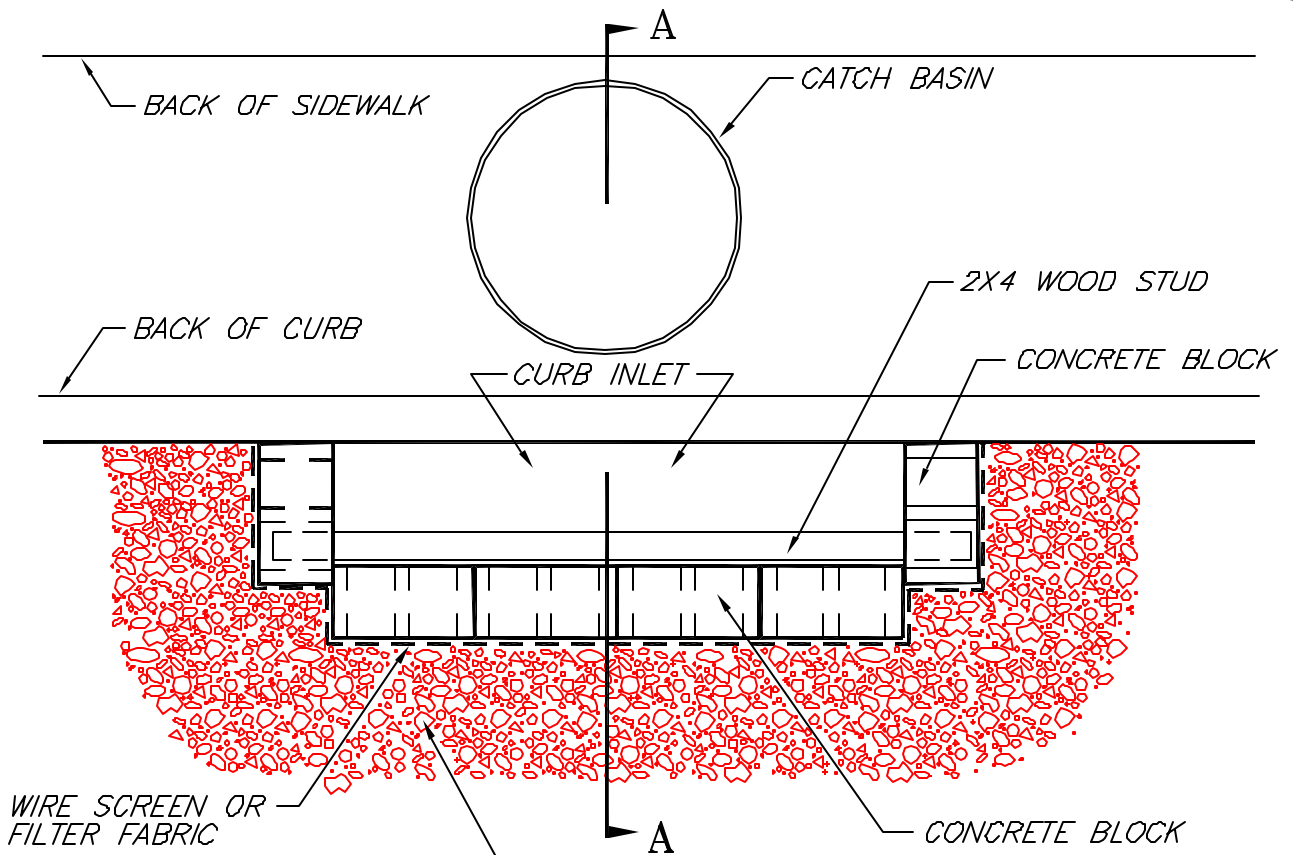
SOURCE: SALIX APPLIED EARTHCARE -
EROSION DRAW 5.0



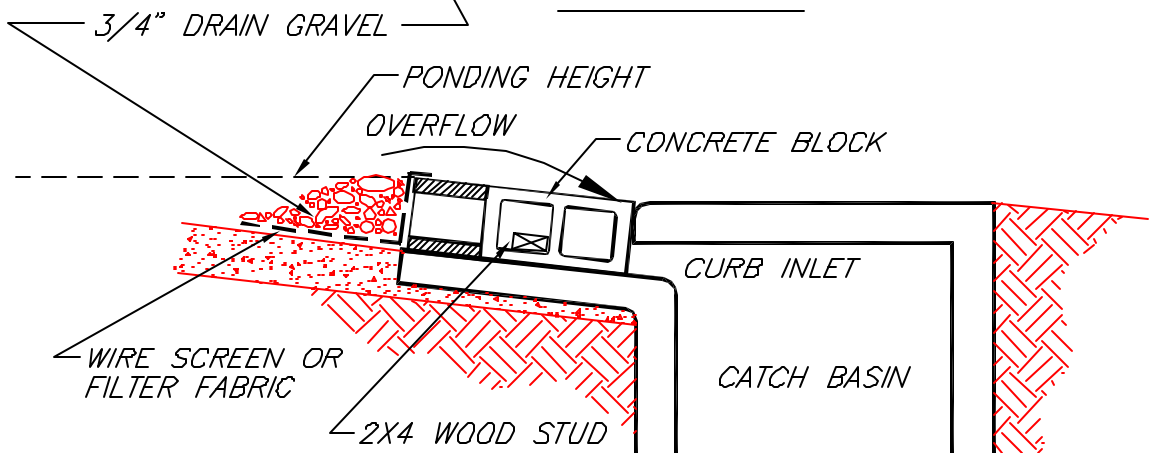
CROSS SECTION



**CULVERT INLET
SEDIMENT
BARRIER**



PLAN VIEW



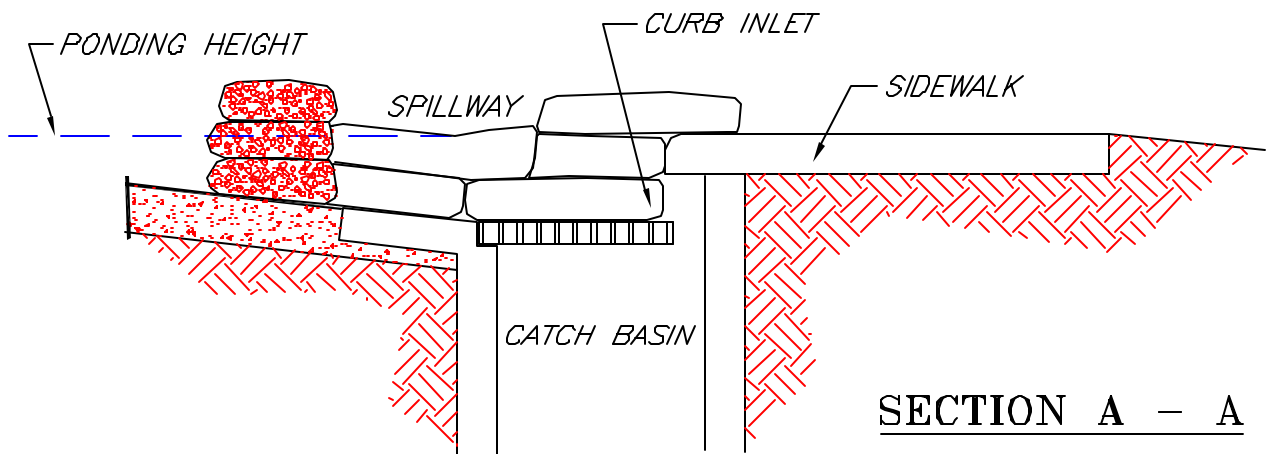
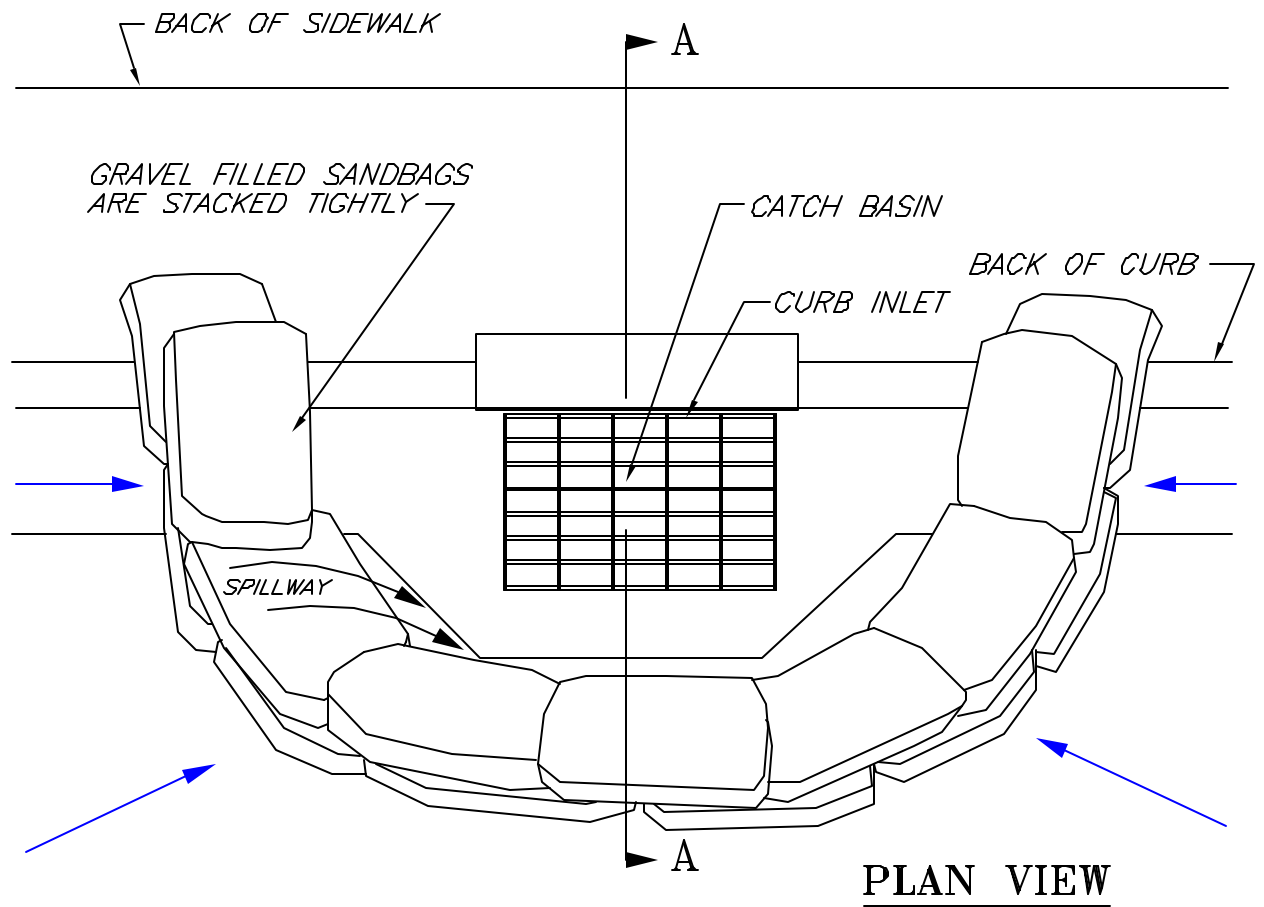
SECTION A - A

NOTES:

1. USE BLOCK AND GRAVEL TYPE SEDIMENT BARRIER WHEN CURB INLET IS LOCATED IN GENTLY SLOPING STREET SEGMENT, WHERE WATER CAN POND AND ALLOW SEDIMENT TO SEPARATE FROM RUNOFF.
2. BARRIER SHALL ALLOW FOR OVERFLOW FROM SEVERE STORM EVENT.
3. INSPECT BARRIERS AND REMOVE SEDIMENT AFTER EACH STORM EVENT. SEDIMENT AND GRAVEL MUST BE REMOVED FROM THE TRAVELED WAY IMMEDIATELY.

SOURCE: SALIX APPLIED EARTHCARE -
EROSION DRAW 5.0

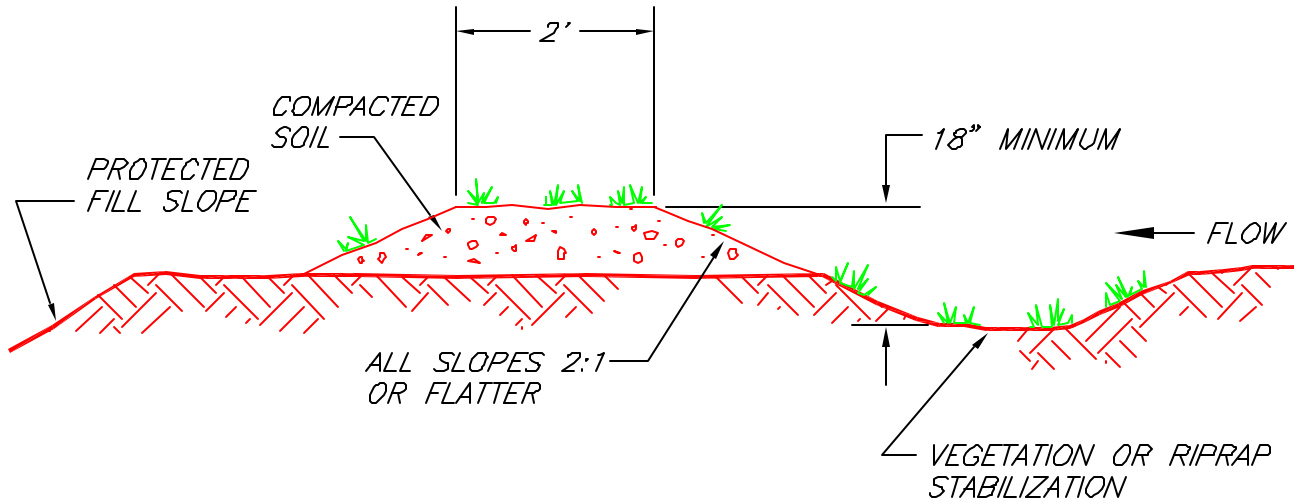
**CURB INLET
SEDIMENT BARRIER
(BLOCK & GRAVEL)**



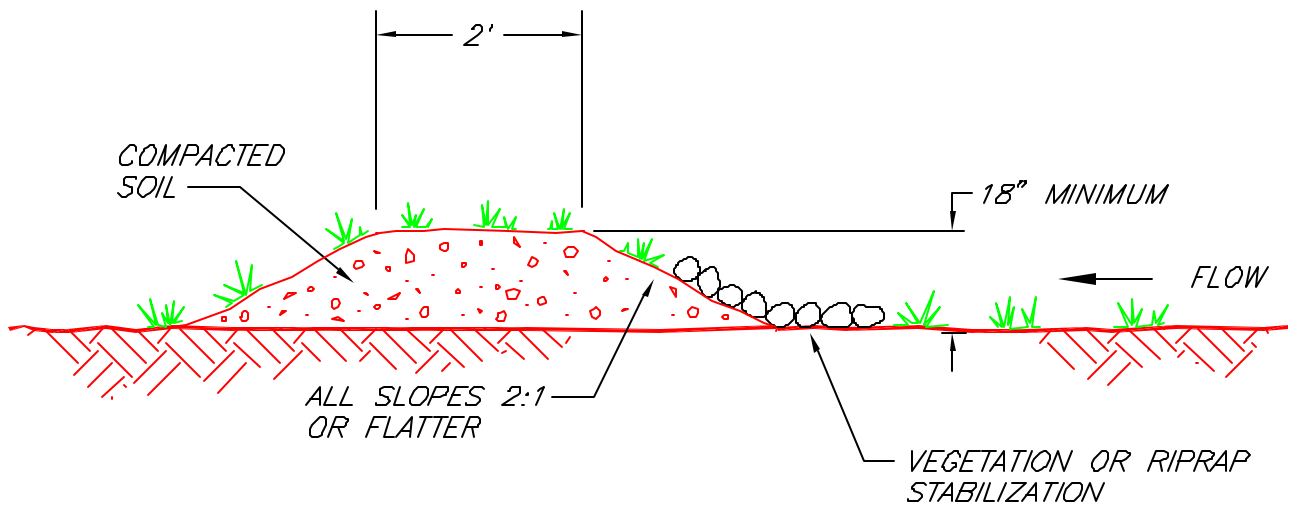
NOTES:

1. PLACE CURB TYPE SEDIMENT BARRIERS ON GENTLY SLOPING STREET SEGMENTS WHERE WATER CAN POND AND ALLOW SEDIMENT TO SEPARATE FROM RUNOFF.
 2. SANDBAGS, OF EITHER BURLAP OR WOVEN GEOTEXTILE FABRIC, ARE FILLED WITH GRAVEL, LAYERED AND PACKED TIGHTLY.
 3. LEAVE ONE SANDBAG GAP IN THE TOP ROW TO PROVIDE A SPILLWAY FOR OVERFLOW.
 4. INSPECT BARRIERS AND REMOVE SEDIMENT AFTER EACH STORM EVENT. SEDIMENT AND GRAVEL MUST BE REMOVED FROM THE TRAVELED WAY IMMEDIATELY.
- SOURCE: SALIX APPLIED EARTHCARE – EROSION DRAW 5.0

**CURB INLET
SEDIMENT BARRIER
(SANDBAGS)**



TYPICAL FILL DIVERSION



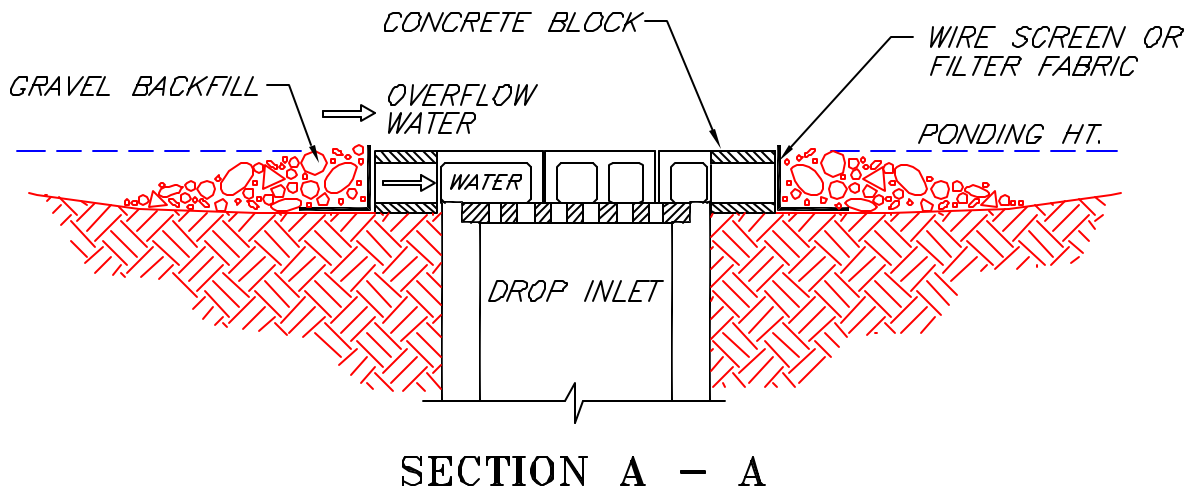
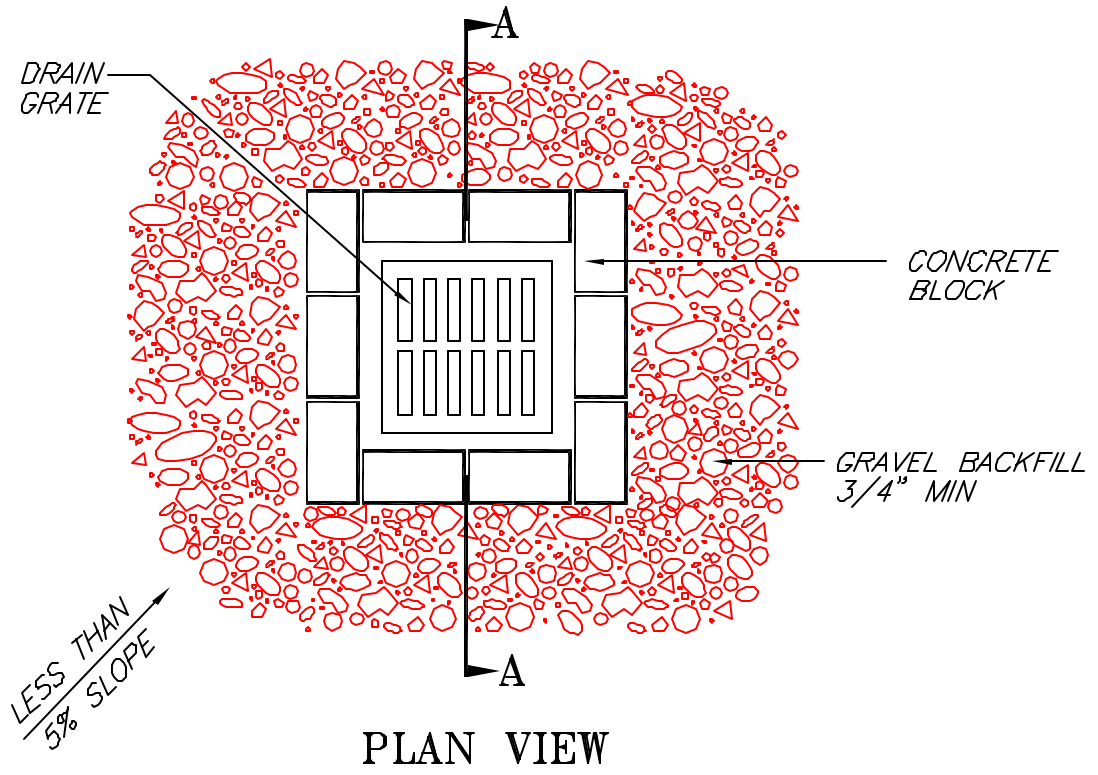
TYPICAL TEMPORARY DIVERSION DIKE

NOTES:

1. THE CHANNEL BEHIND THE DIKE SHALL HAVE POSITIVE GRADE TO A STABILIZED OUTLET.
2. THE DIKE SHALL BE ADEQUATELY COMPACTED TO PREVENT FAILURE.
3. THE DIKE SHALL BE STABILIZED WITH TEMPORARY OR PERMANENT SEEDING OR RIPRAP.

SOURCE: SALIX APPLIED EARTHCARE –
EROSION DRAW 5.0

**DIVERSION
CHANNEL**

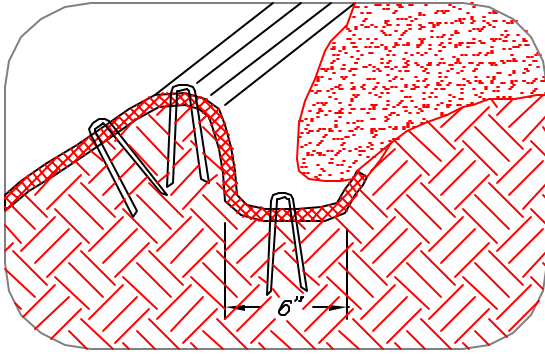


NOTES:

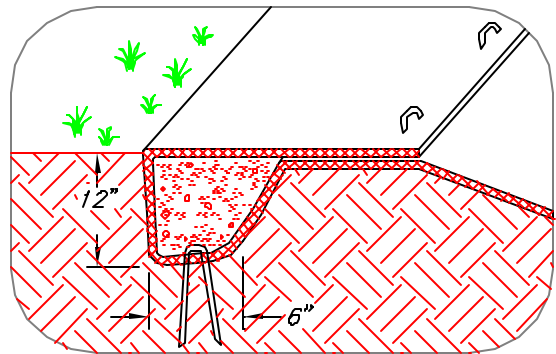
1. DROP INLET SEDIMENT BARRIERS ARE TO BE USED FOR SMALL, NEARLY LEVEL DRAINAGE AREAS. (LESS THAN 5%)
2. EXCAVATE A BASIN OF SUFFICIENT SIZE ADJACENT TO THE DROP INLET.
3. THE TOP OF THE STRUCTURE (PONDING HEIGHT) MUST BE WELL BELOW THE GROUND ELEVATION DOWNSLOPE TO PREVENT RUNOFF FROM BYPASSING THE INLET. A TEMPORARY DIKE MAY BE NECESSARY ON THE DOWNSLOPE SIDE OF THE STRUCTURE.

**DROP INLET
SEDIMENT BARRIER
BLOCK AND GRAVEL**

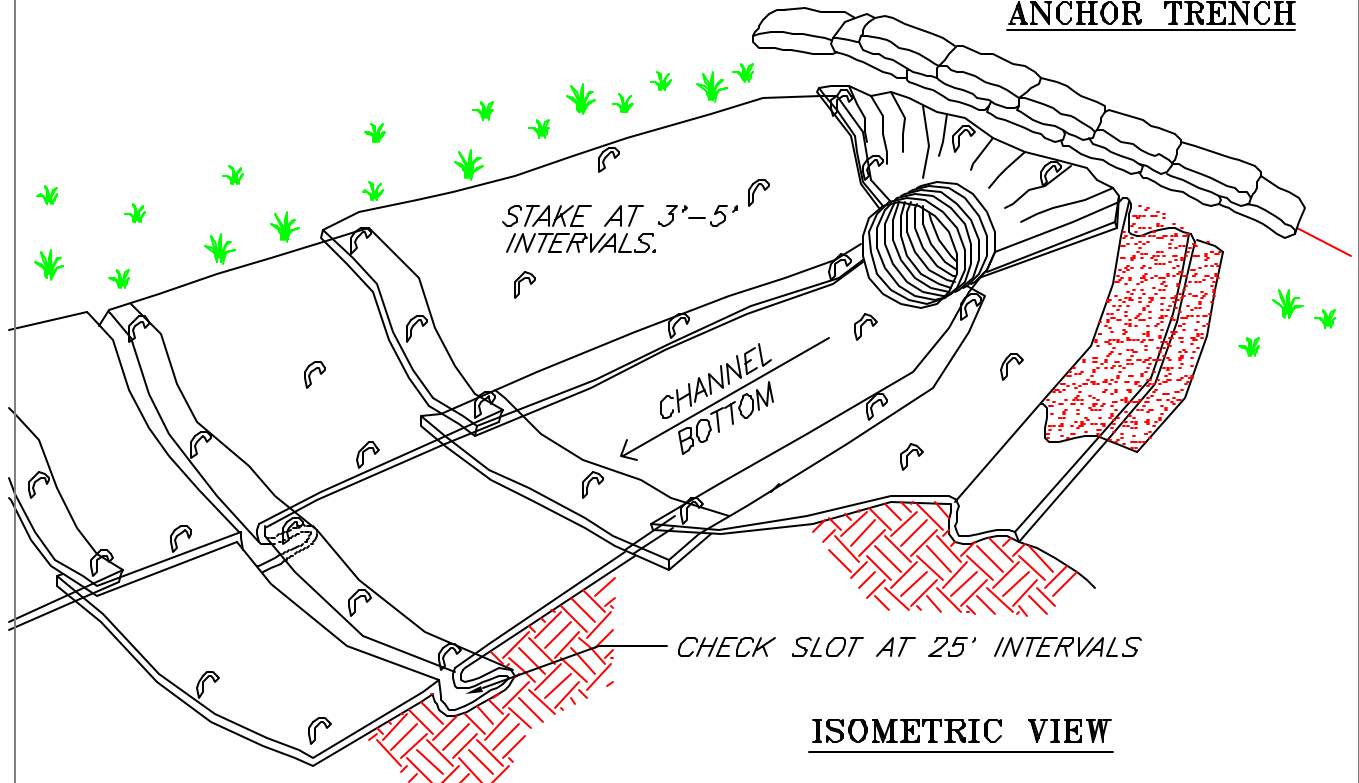
SOURCE: SALIX APPLIED EARTHCARE -
EROSION DRAW 5.0



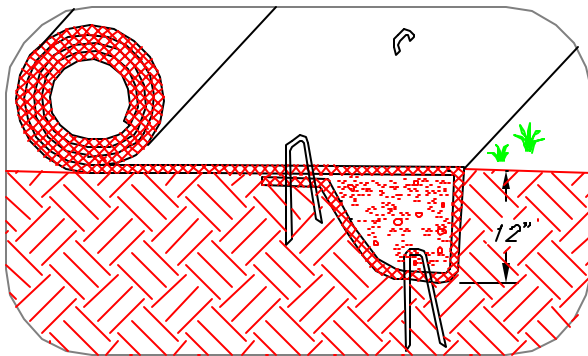
LONGITUDINAL ANCHOR TRENCH



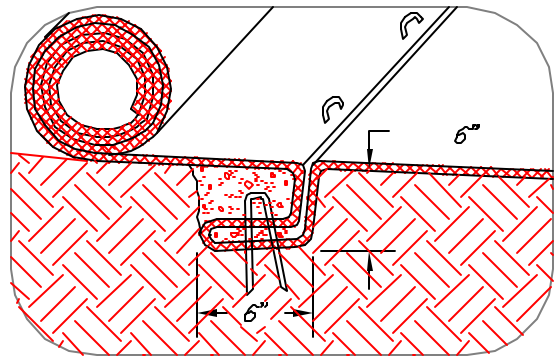
TERMINAL SLOPE AND CHANNEL ANCHOR TRENCH



ISOMETRIC VIEW



INITIAL CHANNEL ANCHOR TRENCH



INTERMITTENT CHECK SLOT

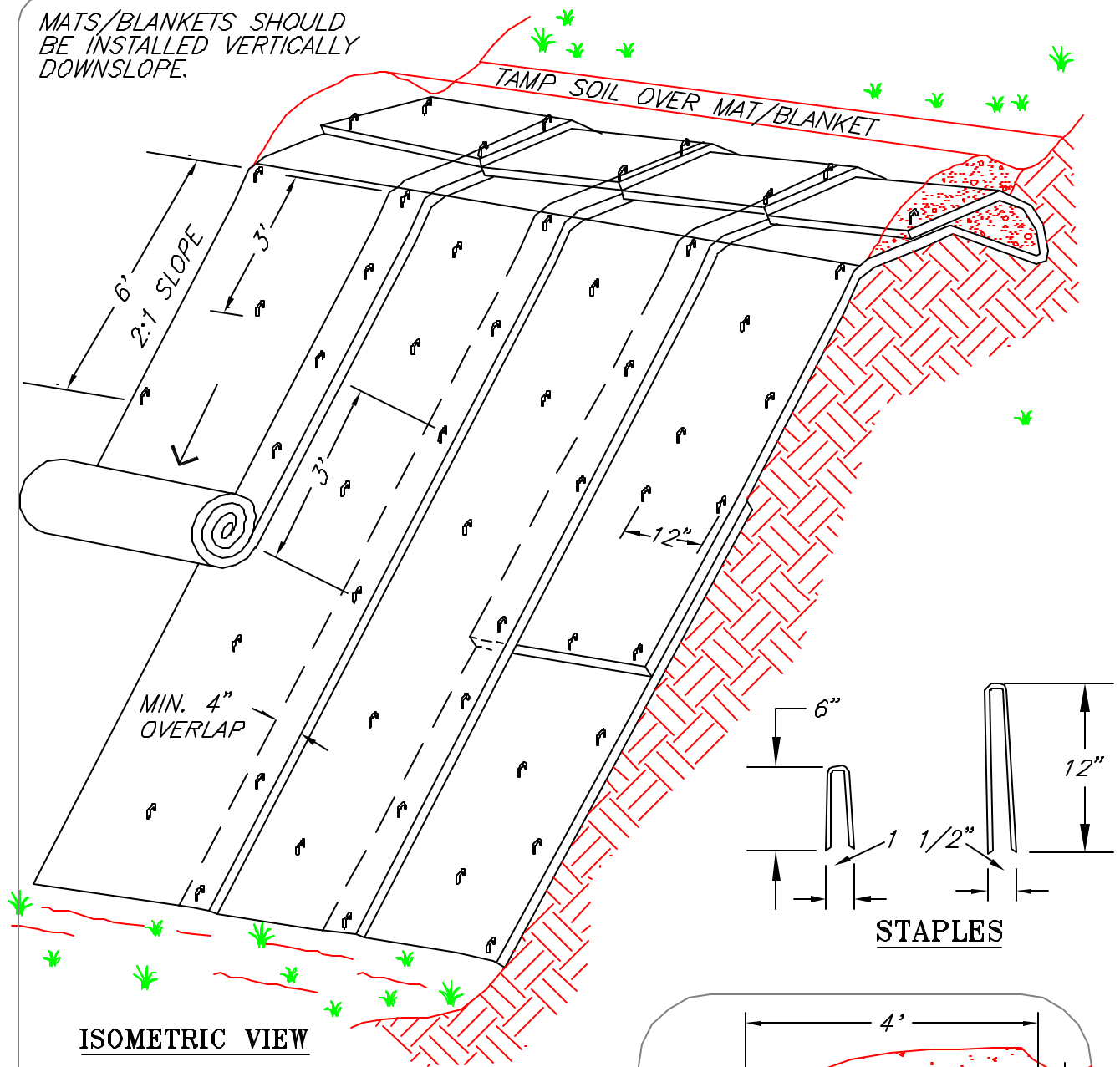
NOTES:

1. CHECK SLOTS TO BE CONSTRUCTED PER MANUFACTURERS SPECIFICATIONS.
2. STAKING OR STAPLING LAYOUT PER MANUFACTURERS SPECIFICATIONS.

SOURCE: SALIX APPLIED EARTHCARE – EROSION DRAW 5.0

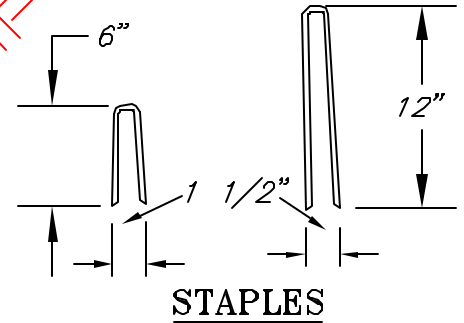
**EROSION BLANKETS &
TURF REINFORCEMENT MATS
CHANNEL INSTALLATION**

MATS/BLANKETS SHOULD BE INSTALLED VERTICALLY DOWNSLOPE.

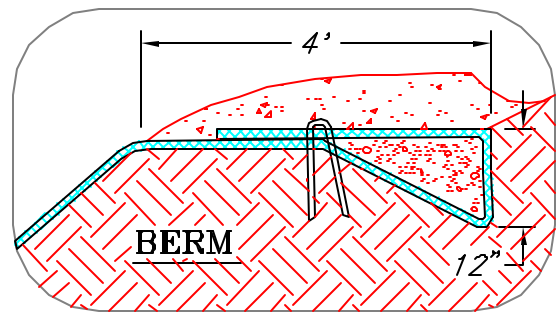


ISOMETRIC VIEW

**TYPICAL SLOPE
SOIL STABILIZATION**



STAPLES



BERM

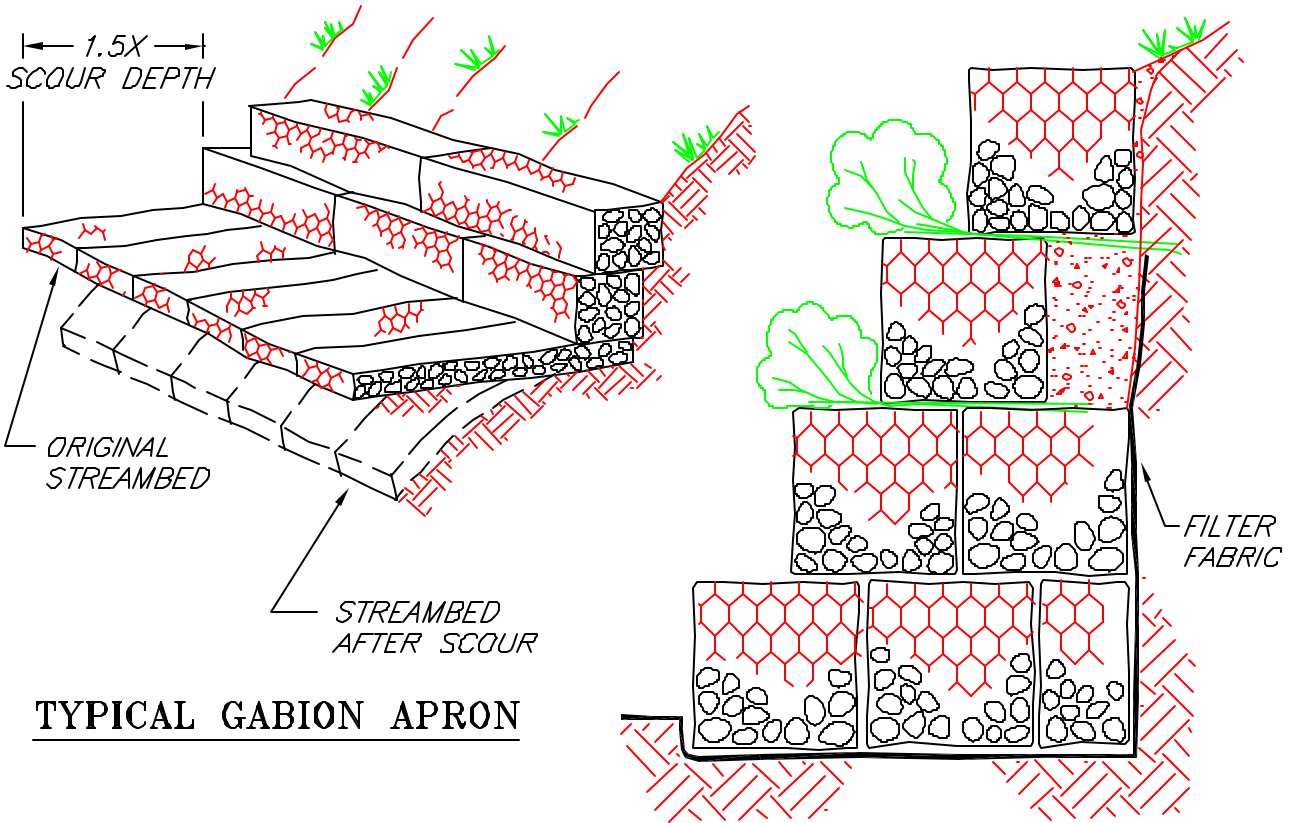
NOT TO SCALE

NOTES:

1. SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS AND GRASS. MATS/BLANKETS SHALL HAVE GOOD SOIL CONTACT.
2. APPLY PERMANENT SEEDING BEFORE PLACING BLANKETS.
3. LAY BLANKETS LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH THE SOIL. DO NOT STRETCH.

SOURCE: SALIX APPLIED EARTHCARE –
EROSION DRAW 5.0

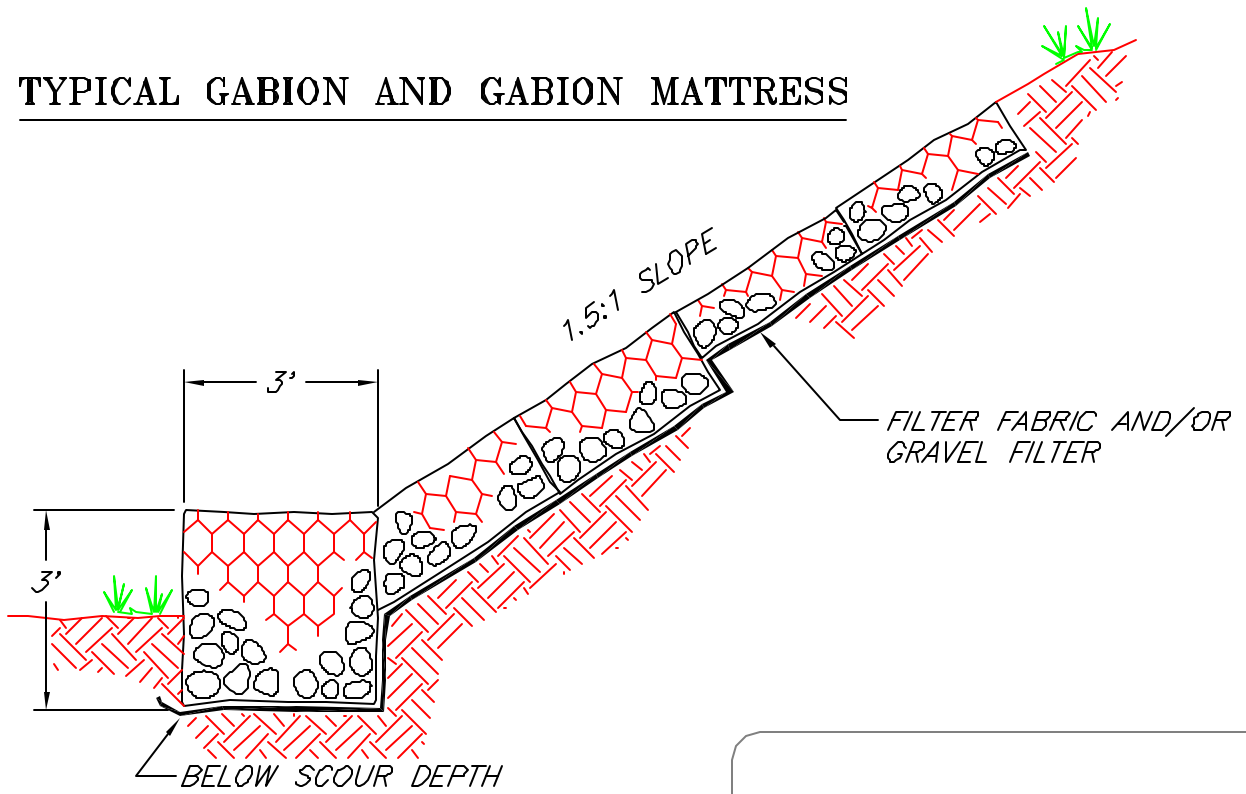
**EROSION BLANKETS &
TURF REINFORCEMENT MATS
SLOPE INSTALLATION**



TYPICAL GABION APRON

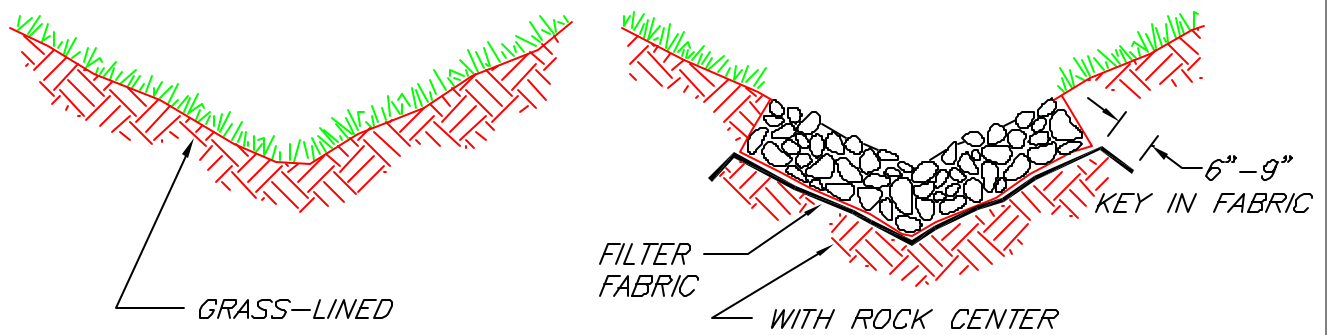
TYPICAL VEGETATED ROCK GABION

TYPICAL GABION AND GABION MATTRESS

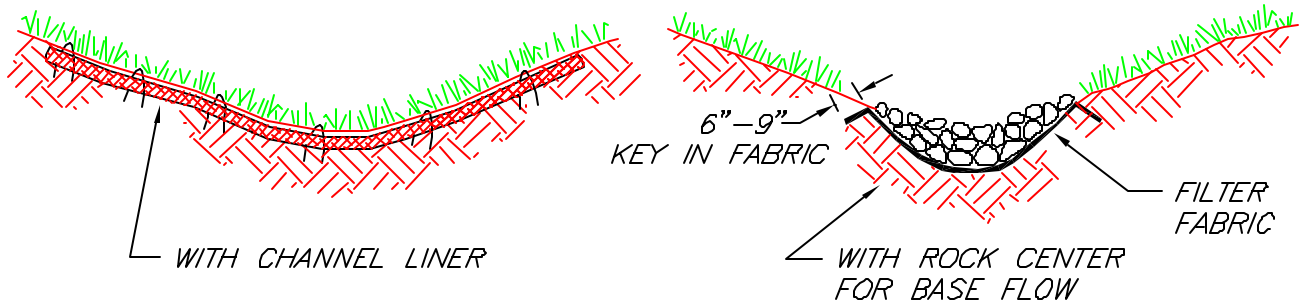


GABIONS

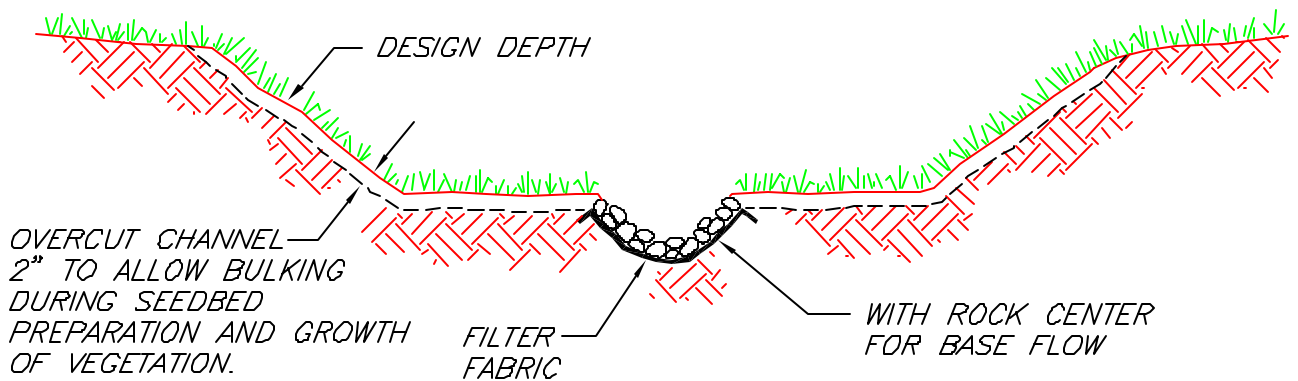
SOURCE: SALIX APPLIED EARTHCARE – EROSION DRAW 5.0



**TYPICAL V-SHAPED CHANNEL
CROSS-SECTION**



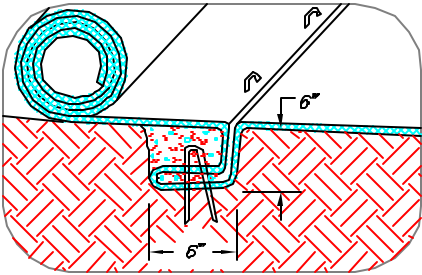
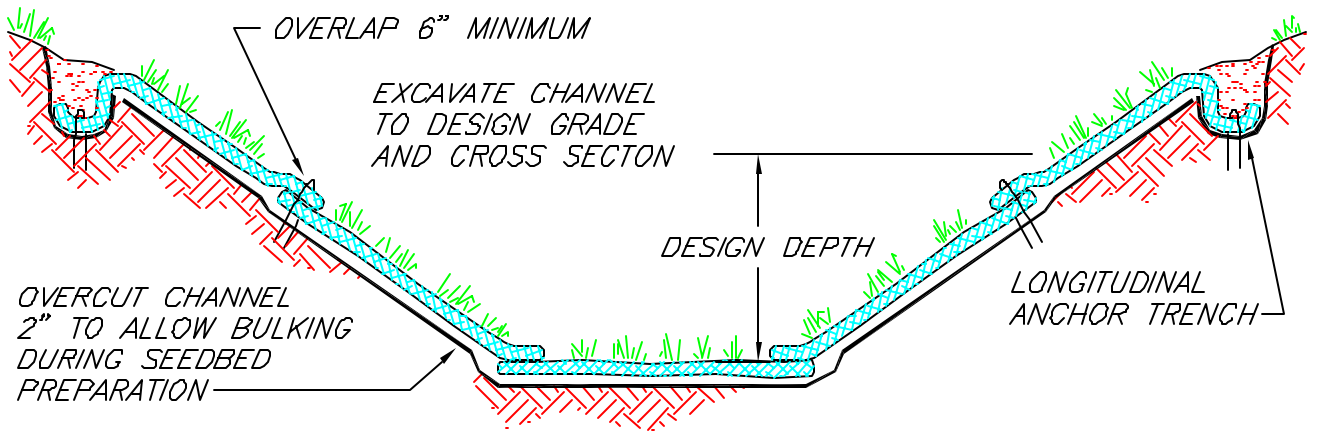
**TYPICAL PARABOLIC CHANNEL
CROSS-SECTION**



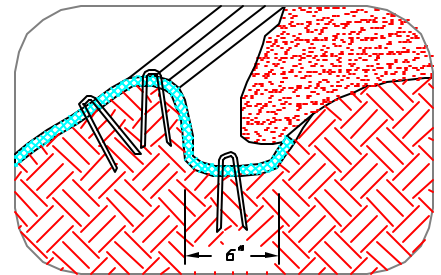
**TYPICAL TRAPEZOIDAL CHANNEL
CROSS-SECTION**

**GRASS-LINED CHANNEL
TYPICAL CROSS SECTIONS**

SOURCE: SALIX APPLIED EARTHCARE -
EROSION DRAW 5.0



TYPICAL INSTALLATION WITH EROSION CONTROL BLANKETS OR TURF REINFORCEMENT MATS

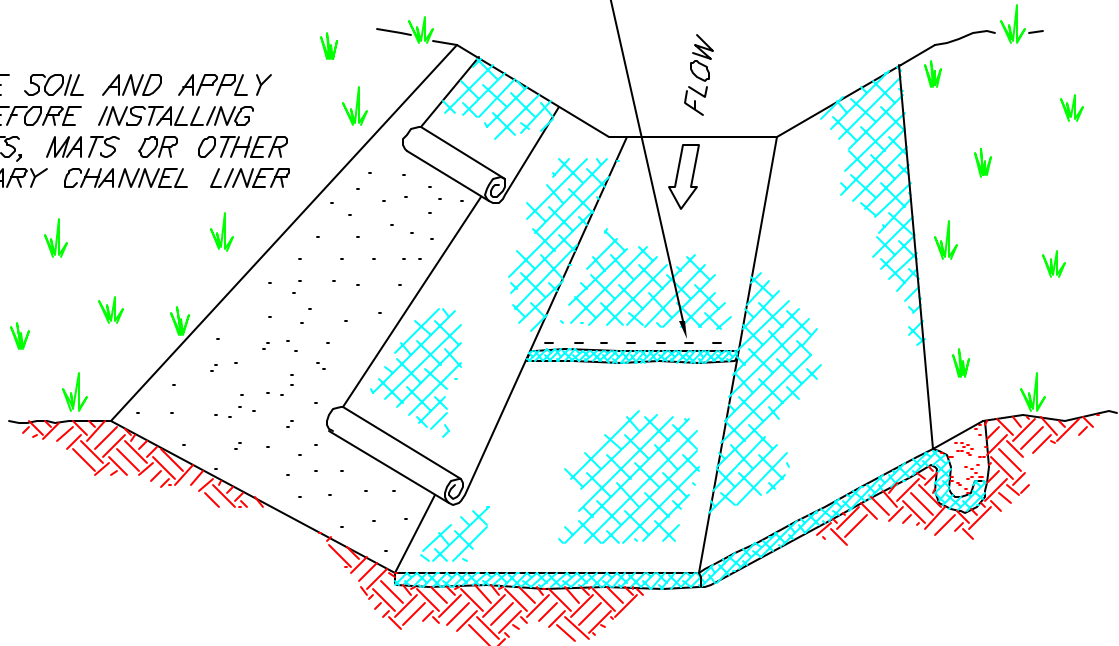


INTERMITTENT CHECK SLOT

LONGITUDINAL ANCHOR TRENCH

SHINGLE-LAP SPliced ENDS OR BEGIN NEW ROLL IN AN INTERMITTENT CHECK SLOT

PREPARE SOIL AND APPLY SEED BEFORE INSTALLING BLANKETS, MATS OR OTHER TEMPORARY CHANNEL LINER SYSTEM



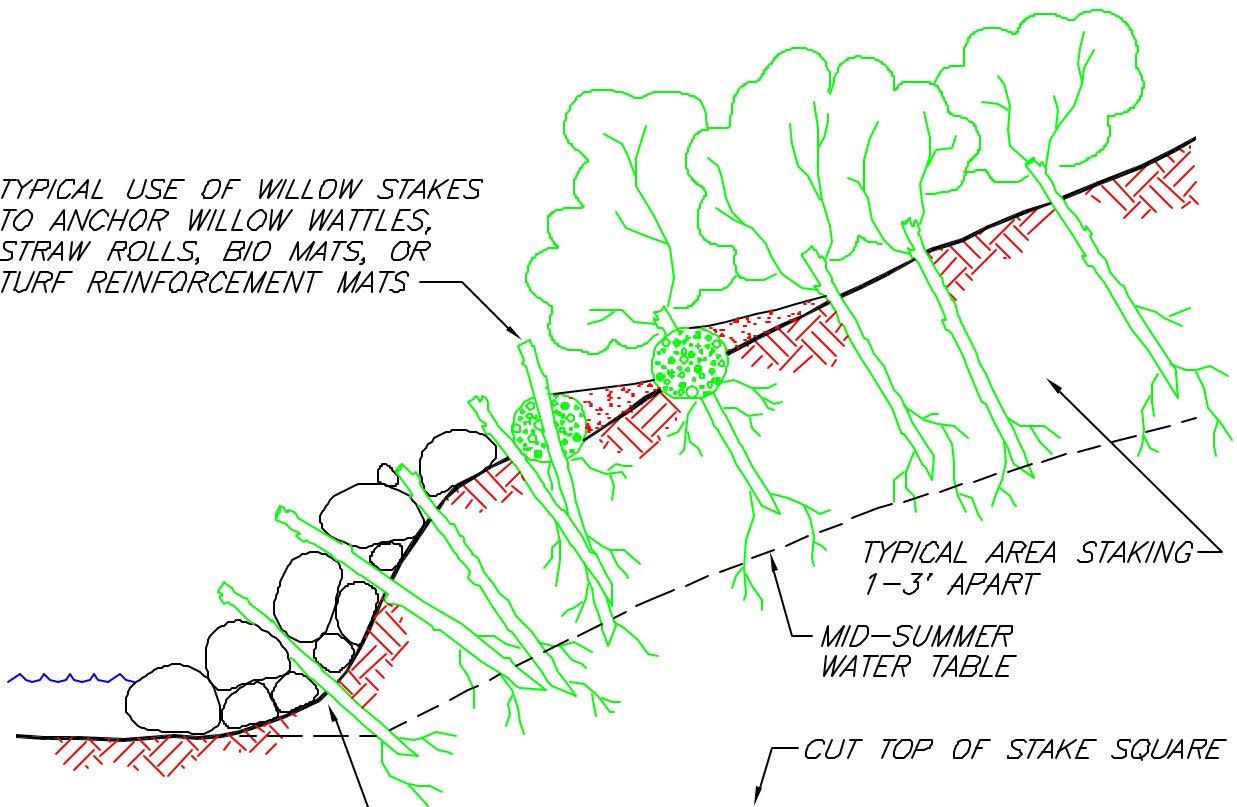
- NOTES:
1. DESIGN VELOCITIES EXCEEDING 2 FT/SEC REQUIRE TEMPORARY BLANKETS, MATS OR SIMILAR LINERS TO PROTECT SEED AND SOIL UNTIL VEGETATION BECOMES ESTABLISHED.
 2. GRASS-LINED CHANNELS WITH DESIGN VELOCITIES EXCEEDING 6 FT/SEC SHOULD INCLUDE TURF REINFORCEMENT MATS.

NOT TO SCALE

**GRASS-LINED CHANNEL
TYPICAL INSTALLATION**

SOURCE: SALIX APPLIED EARTHCARE – EROSION DRAW 5.0

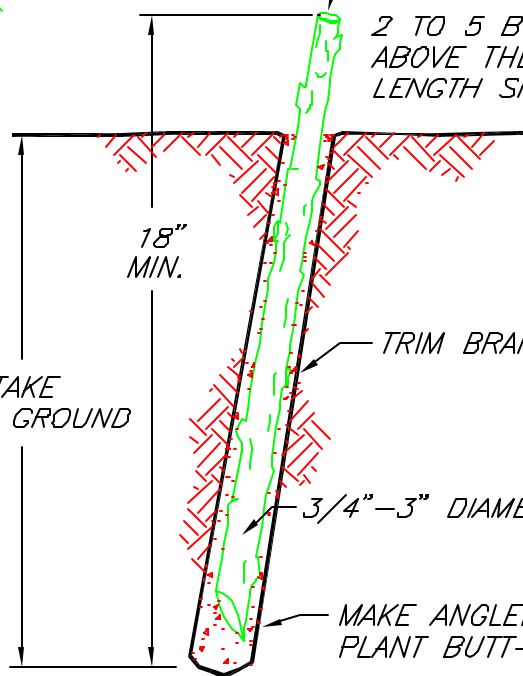
TYPICAL USE OF WILLOW STAKES TO ANCHOR WILLOW WATTLES, STRAW ROLLS, BIO MATS, OR TURF REINFORCEMENT MATS



TYPICAL - DRIVE OR PLANT WILLOW STAKES THROUGH OPENINGS IN RIPRAP OR GABIONS

CUT TOP OF STAKE SQUARE

2 TO 5 BUDS SCARS SHALL BE ABOVE THE GROUND. ADDITIONAL LENGTH SHOULD BE REMOVED.



PLANT 80% OF STAKE LENGTH INTO THE GROUND

18" MIN.

TRIM BRANCHES CLOSE

3/4" - 3" DIAMETER

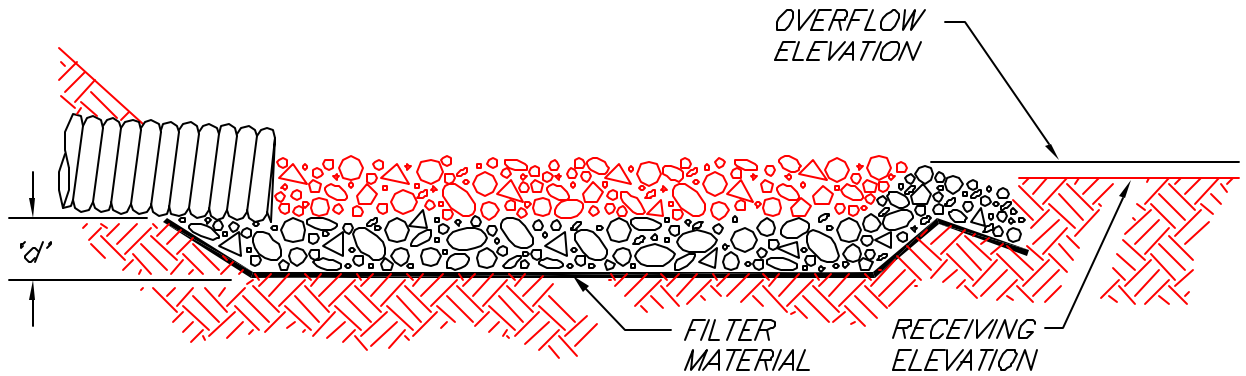
MAKE ANGLED CUT AT BUTT-END, PLANT BUTT-END DOWN

- NOTES:
1. HARVEST AND PLANT STAKES DURING THE DORMANT SEASON.
 2. USE HEALTHY, STRAIGHT AND LIVE WOOD AT LEAST 1 YEAR OLD.
 3. MAKE CLEAN CUTS AND DO NOT DAMAGE STAKES OR SPLIT ENDS DURING INSTALLATION, USE A PILOT BAR IN FIRM SOILS.
 4. SOAK CUTTINGS FOR 24 HOURS (MIN.) PRIOR TO INSTALLATION.
 5. TAMP THE SOIL AROUND THE STAKE.

NOT TO SCALE

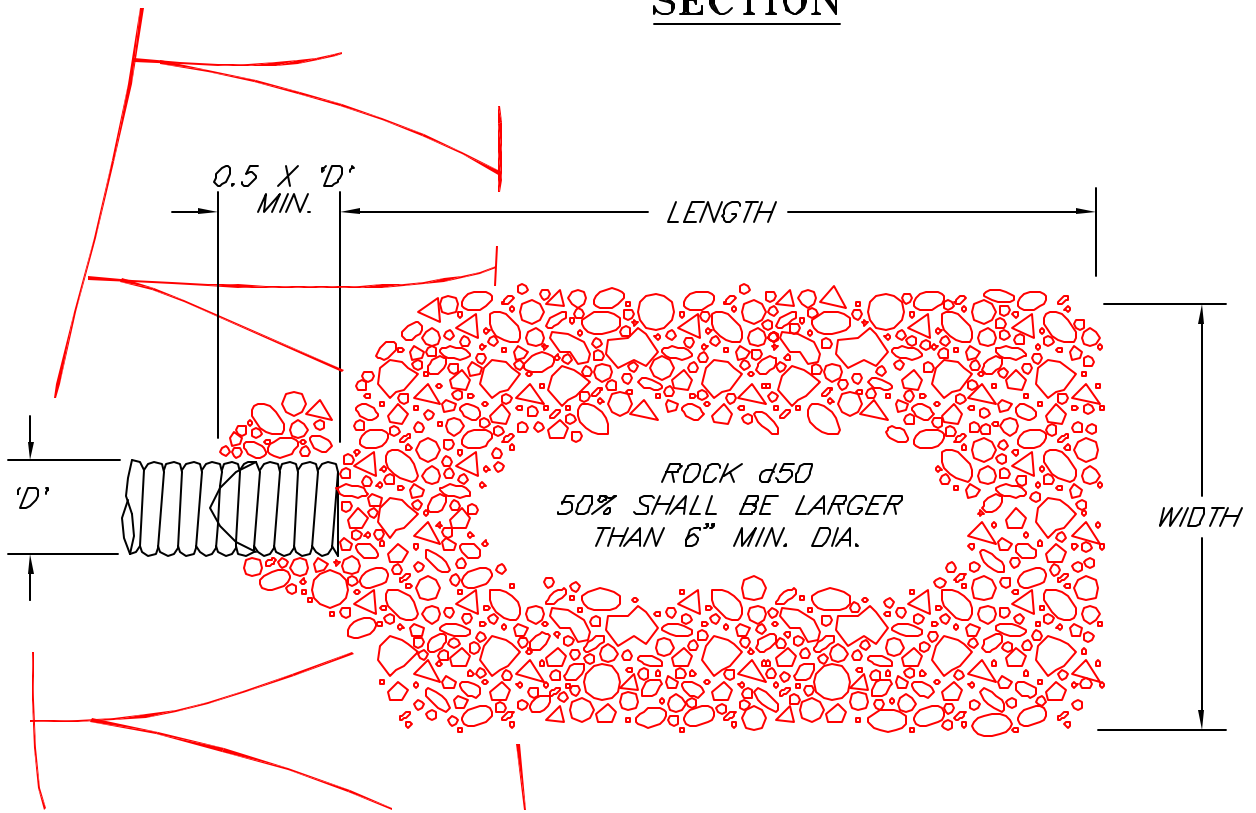
LIVE STAKING

SOURCE: SALIX APPLIED EARTHCARE - EROSION DRAW 5.0



THICKNESS ('d') = 1.5 x MAX. ROCK DIAMETER - 6" MIN.

SECTION



PLAN

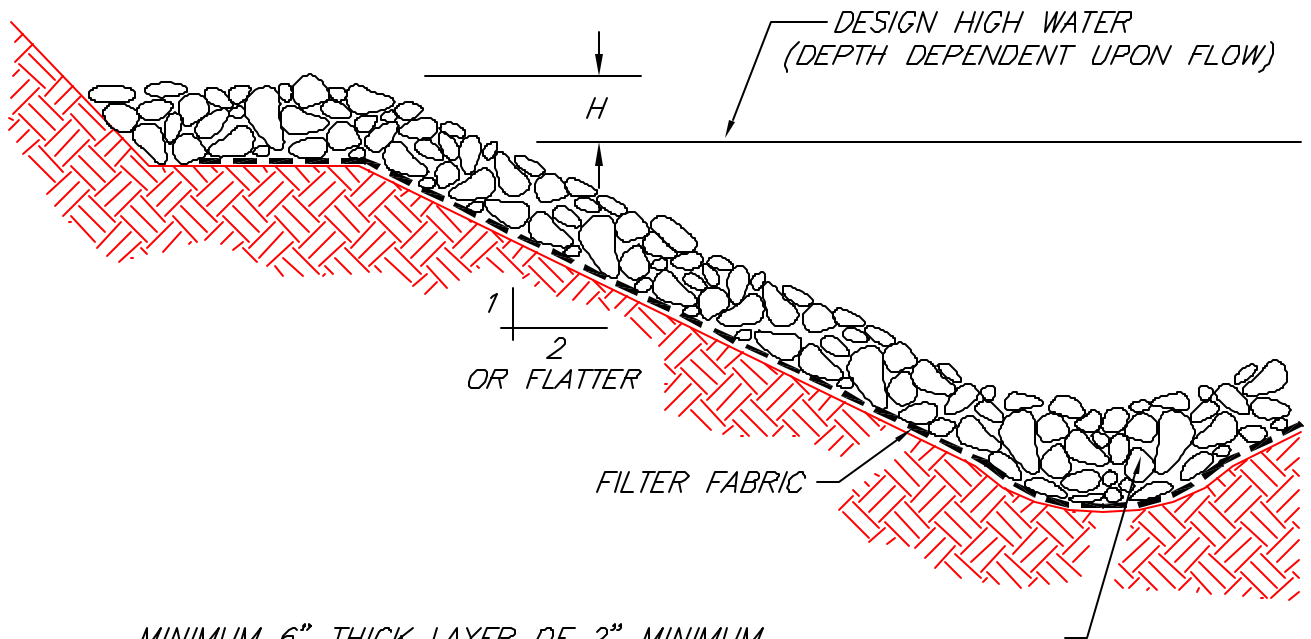
NOTES:

1. THE LENGTH AND WIDTH SHALL BE DETERMINED BY THE ENGINEER.
2. APRON SHALL BE SET AT A ZERO GRADE AND ALIGNED STRAIGHT.
3. FILTER MATERIAL SHALL BE FILTER FABRIC OR 6" THICK MINIMUM GRADED GRAVEL LAYER.

**OUTLET PROTECTION
ENERGY DISSIPATOR**

SOURCE: SALIX APPLIED EARTHCARE -
EROSION DRAW 5.0

DESIGN HEIGHT (H), WIDTH AND STONE SIZE SHALL
BE DETERMINED BY THE ENGINEER

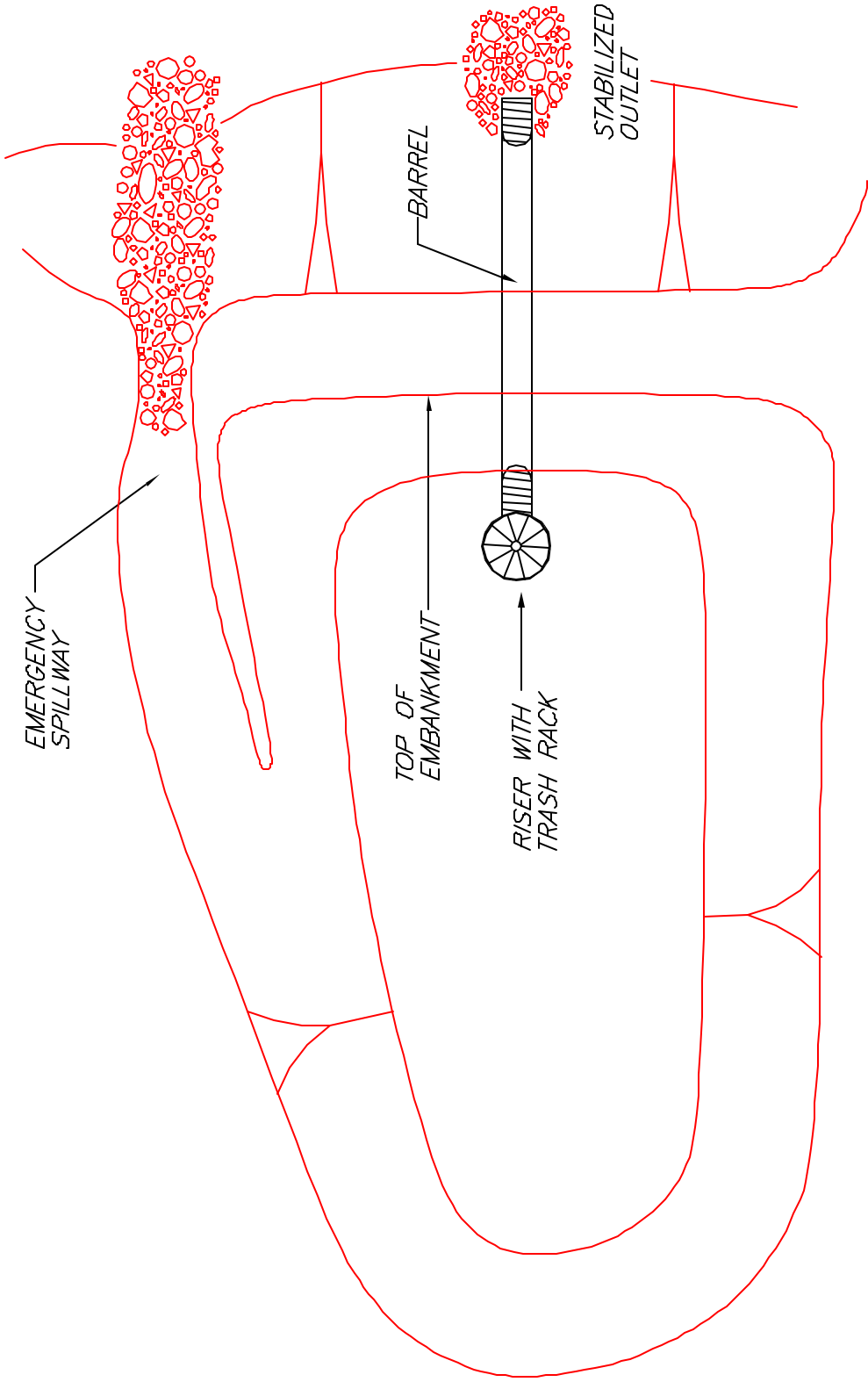


MINIMUM 6" THICK LAYER OF 2" MINIMUM
DIAMETER DRAIN ROCK. LARGER STONE SHALL BE USED
DEPENDENT UPON GRADIENT, SOIL TYPE, AND DESIGN FLOW.

TYPICAL SECTION

ROCK LINED CHANNEL

SOURCE: SALIX APPLIED EARTHCARE –
EROSION DRAW 5.0

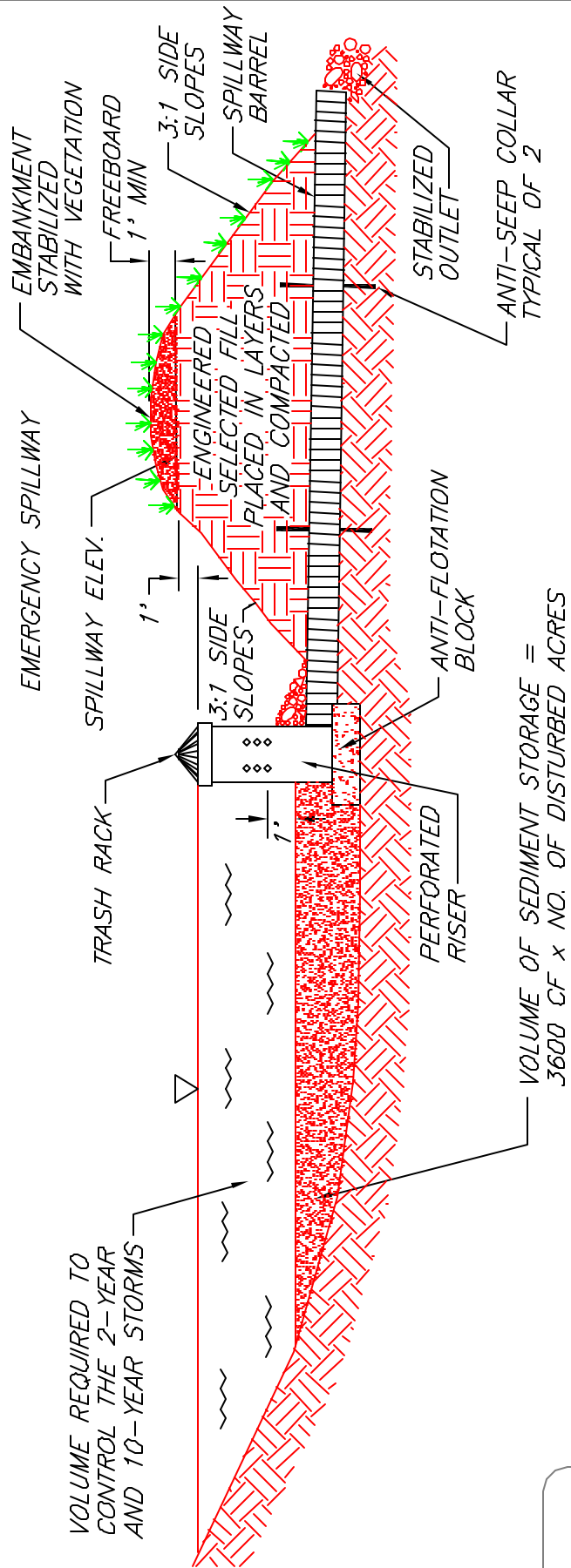


NOTE:
A SEDIMENT BASIN IS REQUIRED FOR DISTURBED AREAS GREATER THAN 10 ACRES.

**SEDIMENT
BASIN**

SOURCE: SALIX APPLIED EARTH CARE –
EROSION DRAW 5.0

PLAN



VOLUME REQUIRED TO CONTROL THE 2-YEAR AND 10-YEAR STORMS

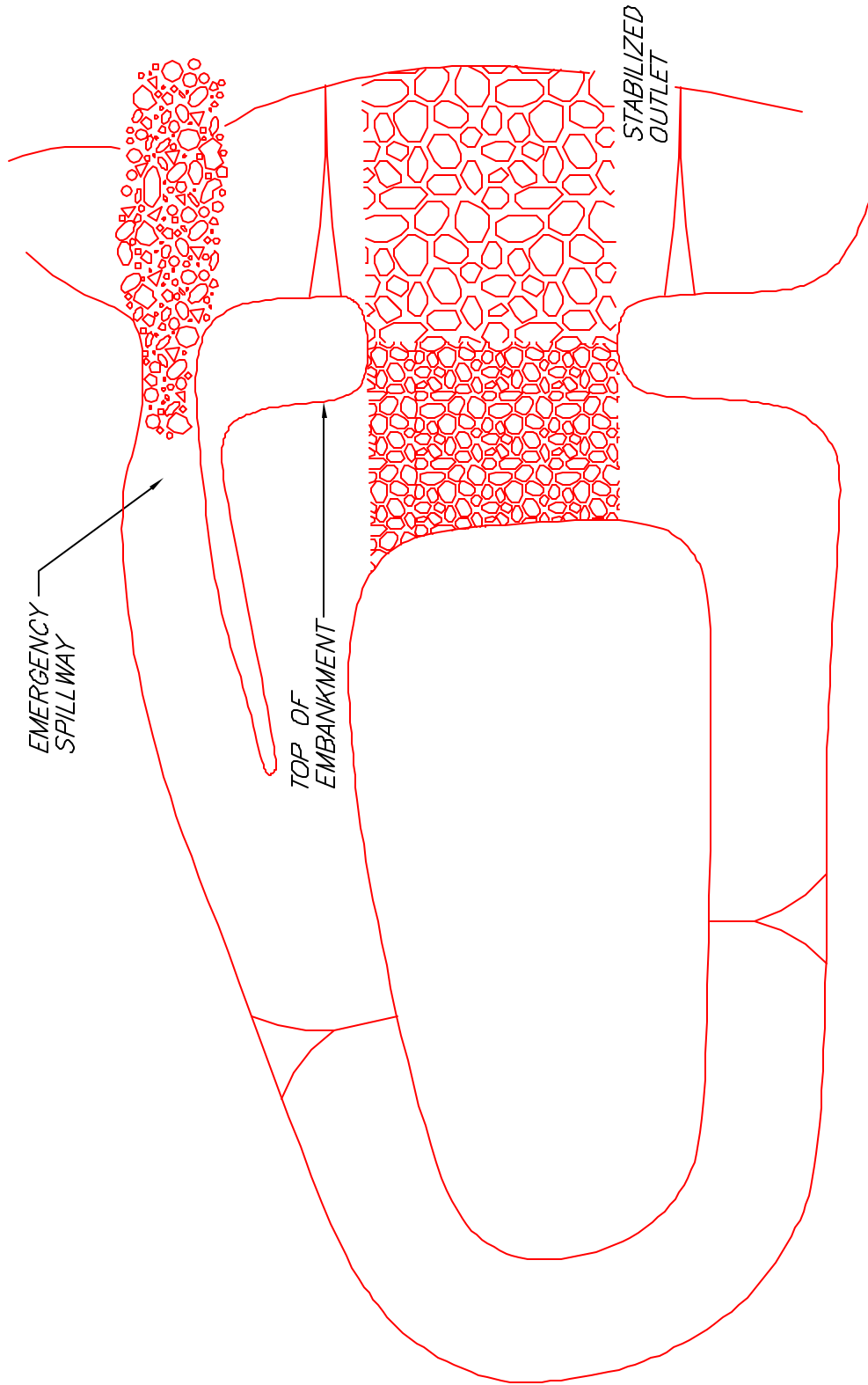
VOLUME OF SEDIMENT STORAGE = 3600 CF x NO. OF DISTURBED ACRES

NOTE: A SEDIMENT BASIN IS REQUIRED FOR DISTURBED AREAS GREATER THAN 10 ACRES.

SEDIMENT BASIN

SECTION

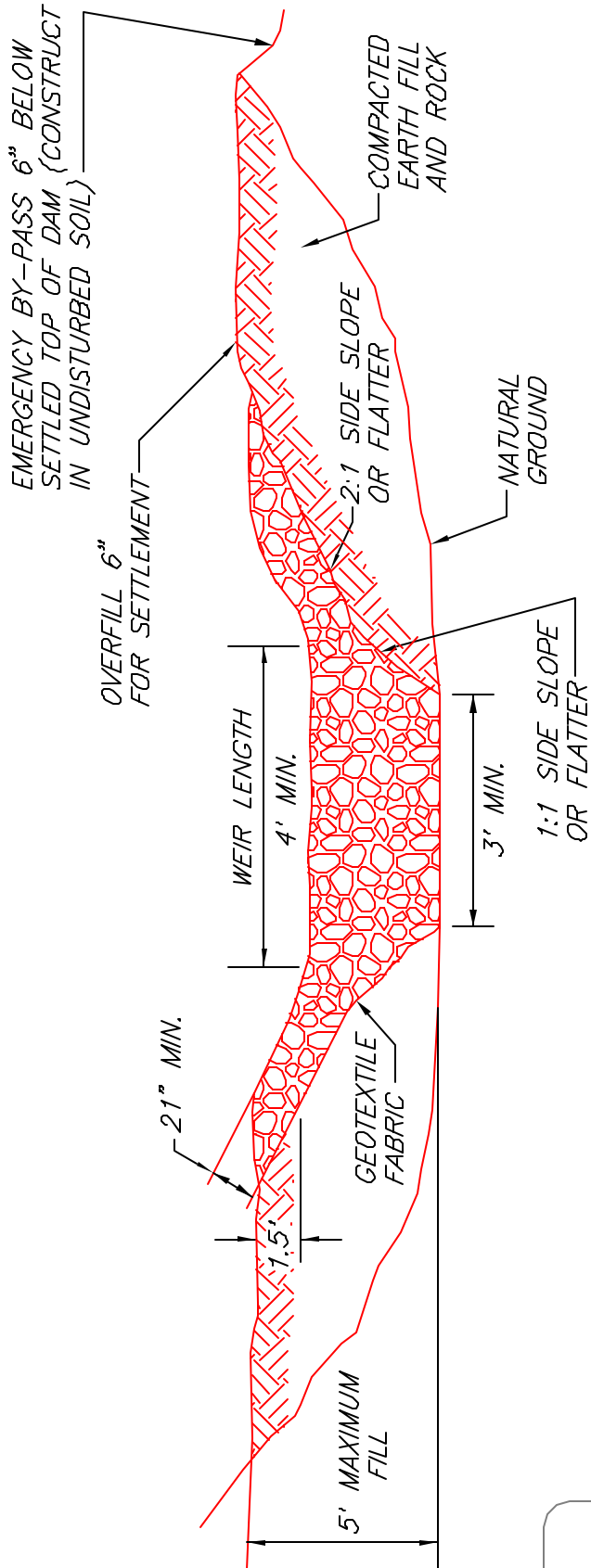
SOURCE: SALIX APPLIED EARTH CARE - EROSION DRAW 5.0



*NOTE:
A SEDIMENT TRAP CAN BE USED FOR DISTURBED AREAS LESS THAN 5 ACRES.*

**SEDIMENT
TRAP**

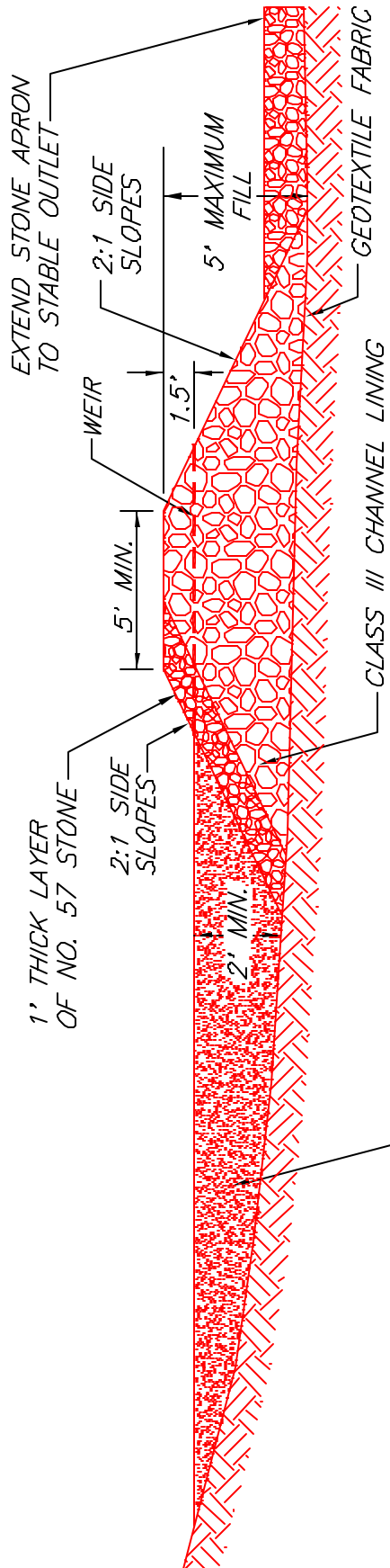
PLAN



NOTE:
A SEDIMENT TRAP CAN BE USED FOR DISTURBED AREAS LESS THAN 5 ACRES.

SEDIMENT TRAP

EMBANKMENT AND SPILLWAY ELEVATION

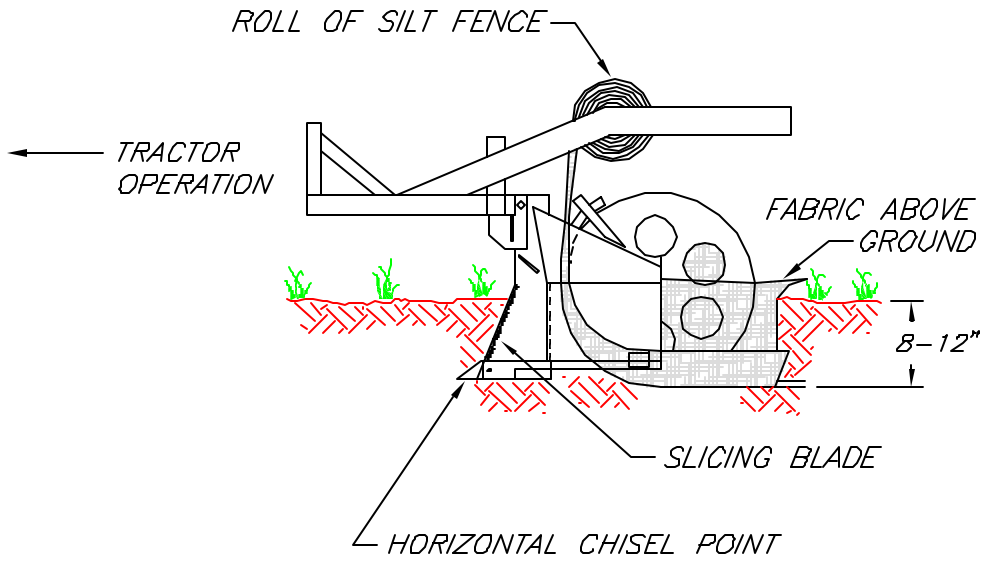


VOLUME OF SEDIMENT STORAGE =
3600 CF x NO. OF DISTURBED ACRES

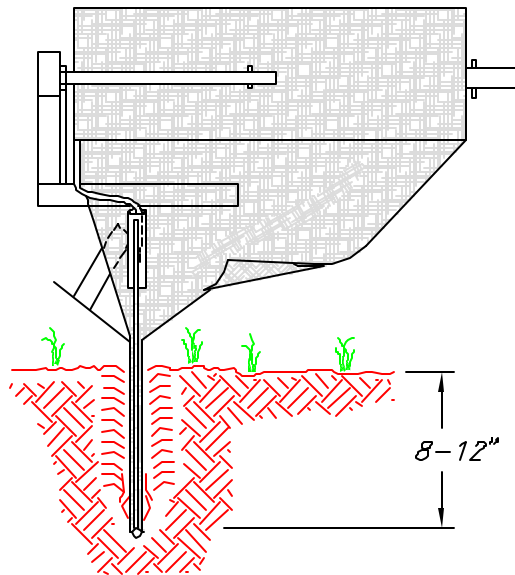
NOTE:
A SEDIMENT TRAP CAN BE USED FOR DISTURBED AREAS LESS THAN 5 ACRES.

SEDIMENT TRAP

STONE SECTION



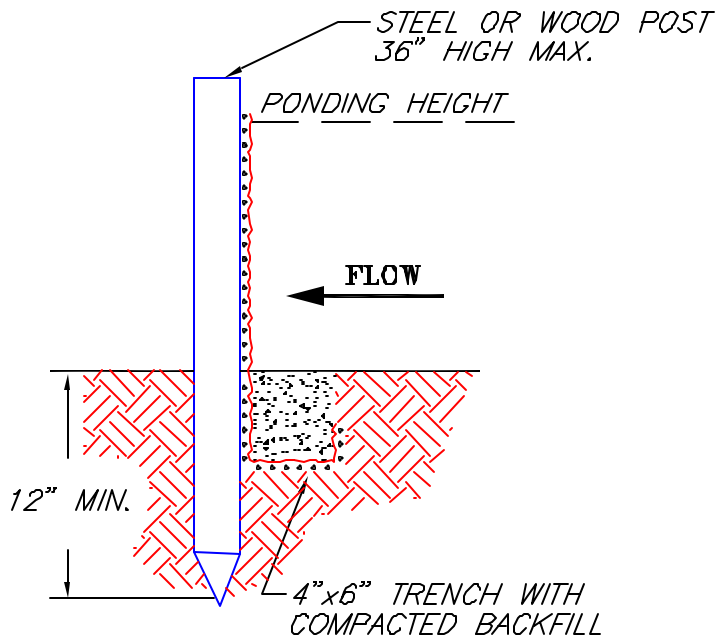
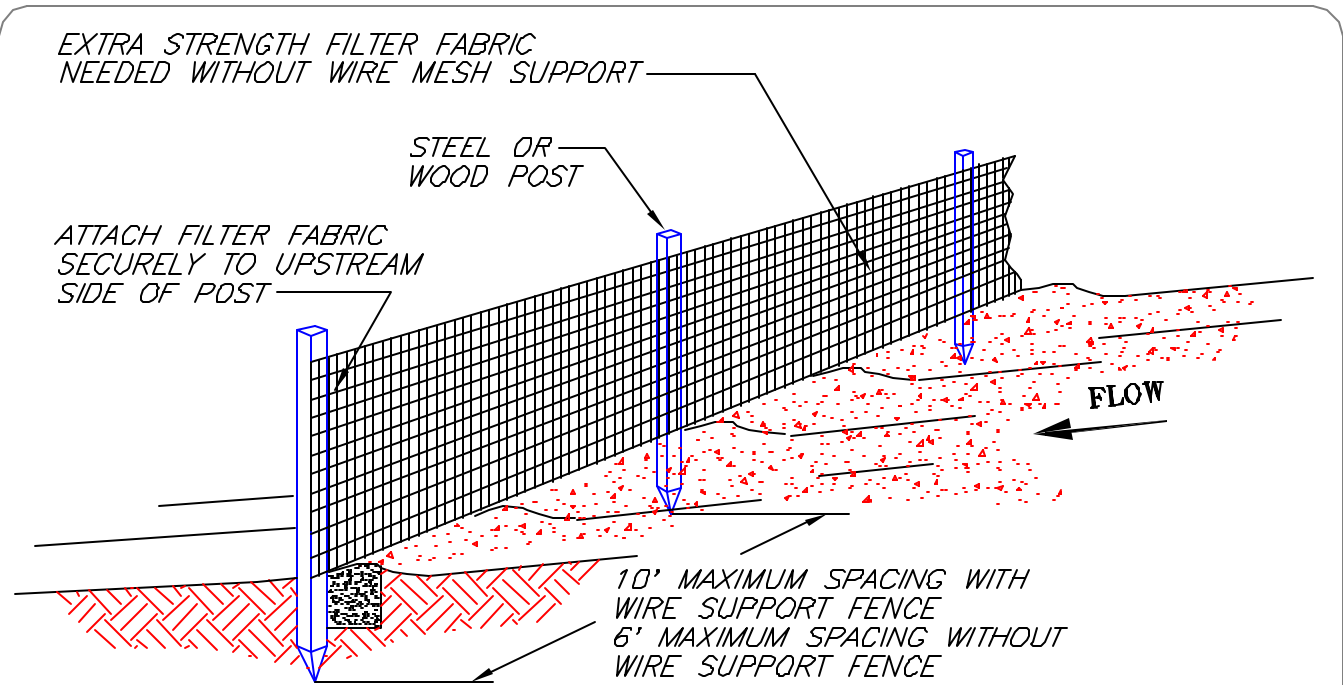
STATIC SLICING METHOD
SIDE VIEW



STATIC SLICING METHOD
BACK VIEW

**SILT FENCE
INSTALLATION
SLICING METHOD**

SOURCE: SALIX APPLIED EARTHCARE –
EROSION DRAW 5.0



TRENCH DETAIL

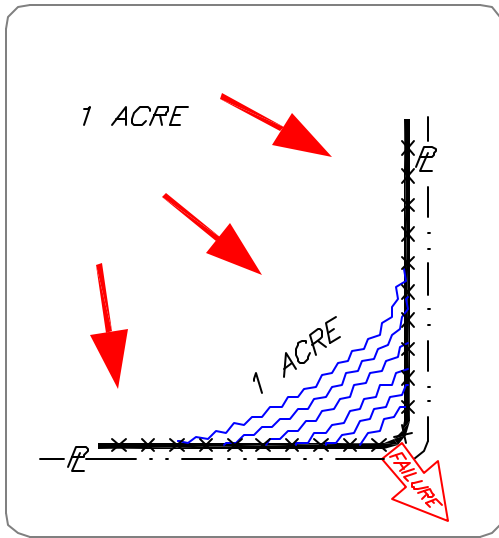
NOTES:

1. SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY.
2. INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY. 9" MAXIMUM RECOMMENDED STORAGE HEIGHT.
3. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.

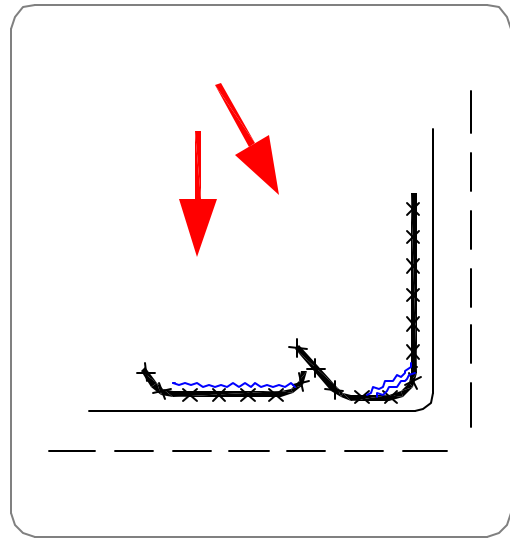
NOT TO SCALE

**SILT FENCE
INSTALLATION
TRENCH METHOD**

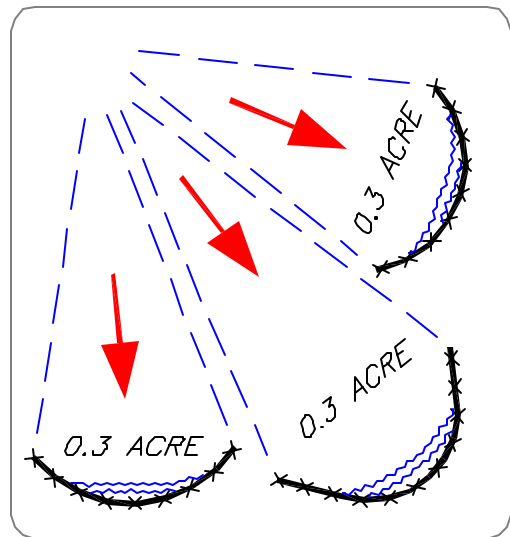
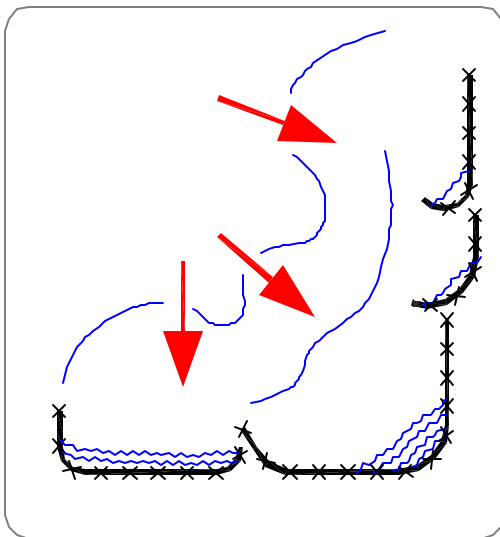
SOURCE: SALIX APPLIED EARTHCARE –
EROSION DRAW 5.0



Incorrect - Do Not layout "perimeter control" silt fences along property lines. All sediment laden runoff will concentrate and overwhelm the system.



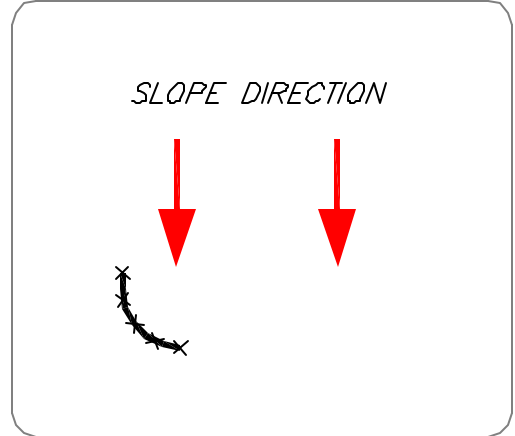
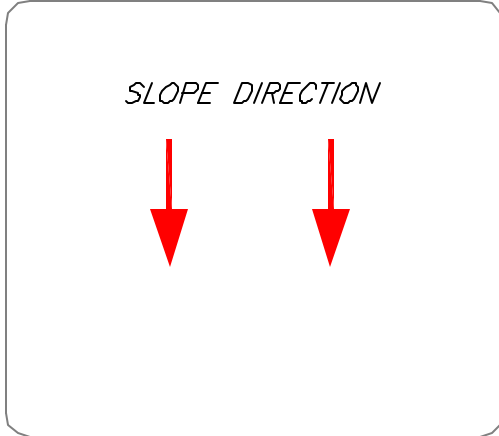
Correct - Install J-hooks



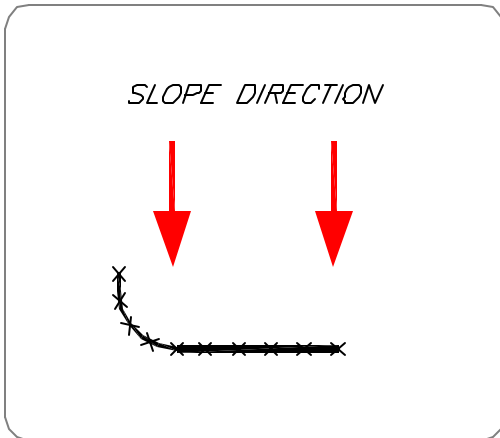
Discreet segments of silt fence, installed with J-hooks will be much more effective.

SILT FENCE PLACEMENT FOR PERIMETER CONTROL

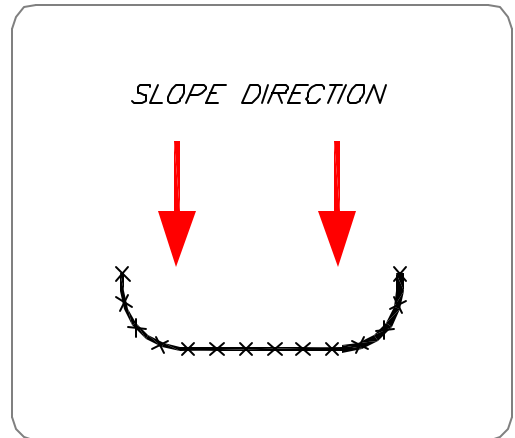
SOURCE: SALIX APPLIED EARTH CARE -
EROSION DRAW 5.0



STEP 1 – CONSTRUCT LEG



STEP 2 – CONSTRUCT DAM

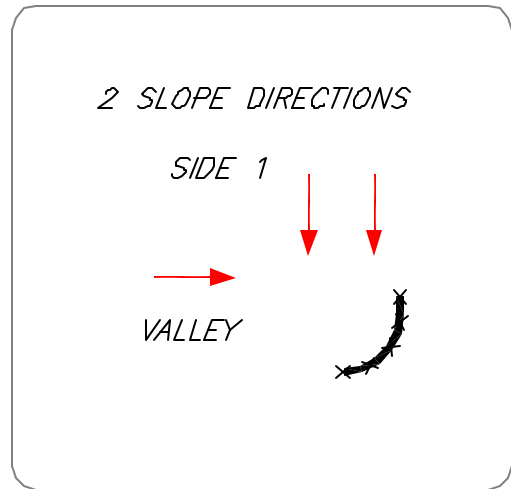
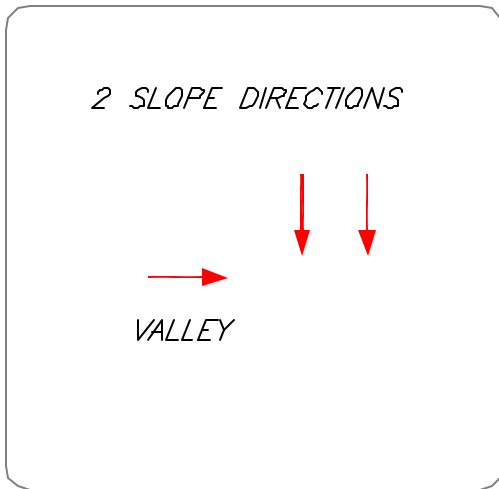


STEP 3 – CONSTRUCT LEG 2

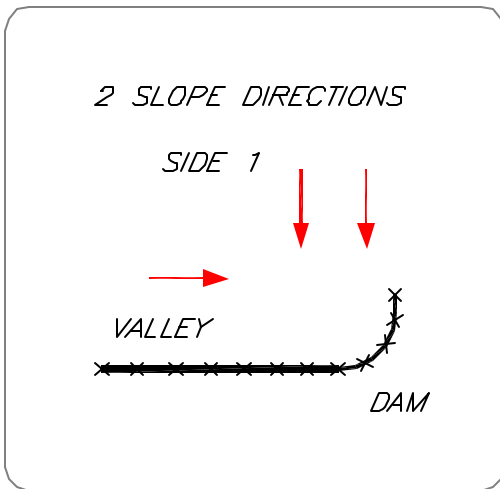
INSTALLATION WITH J-HOOKS INCREASE SILT FENCE EFFICIENCY.

**SILT FENCE
TYPICAL PLACEMENT
ONE SLOPE**

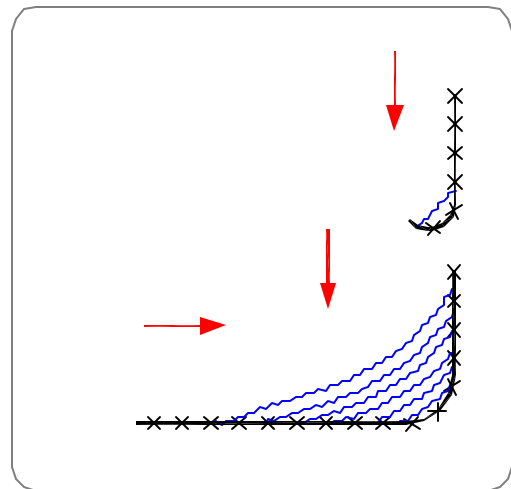
SOURCE: SALIX APPLIED EARTH CARE –
EROSION DRAW 5.0



STEP 1 - CONSTRUCT A DAM



STEP 2 - CONSTRUCT SIDE 2

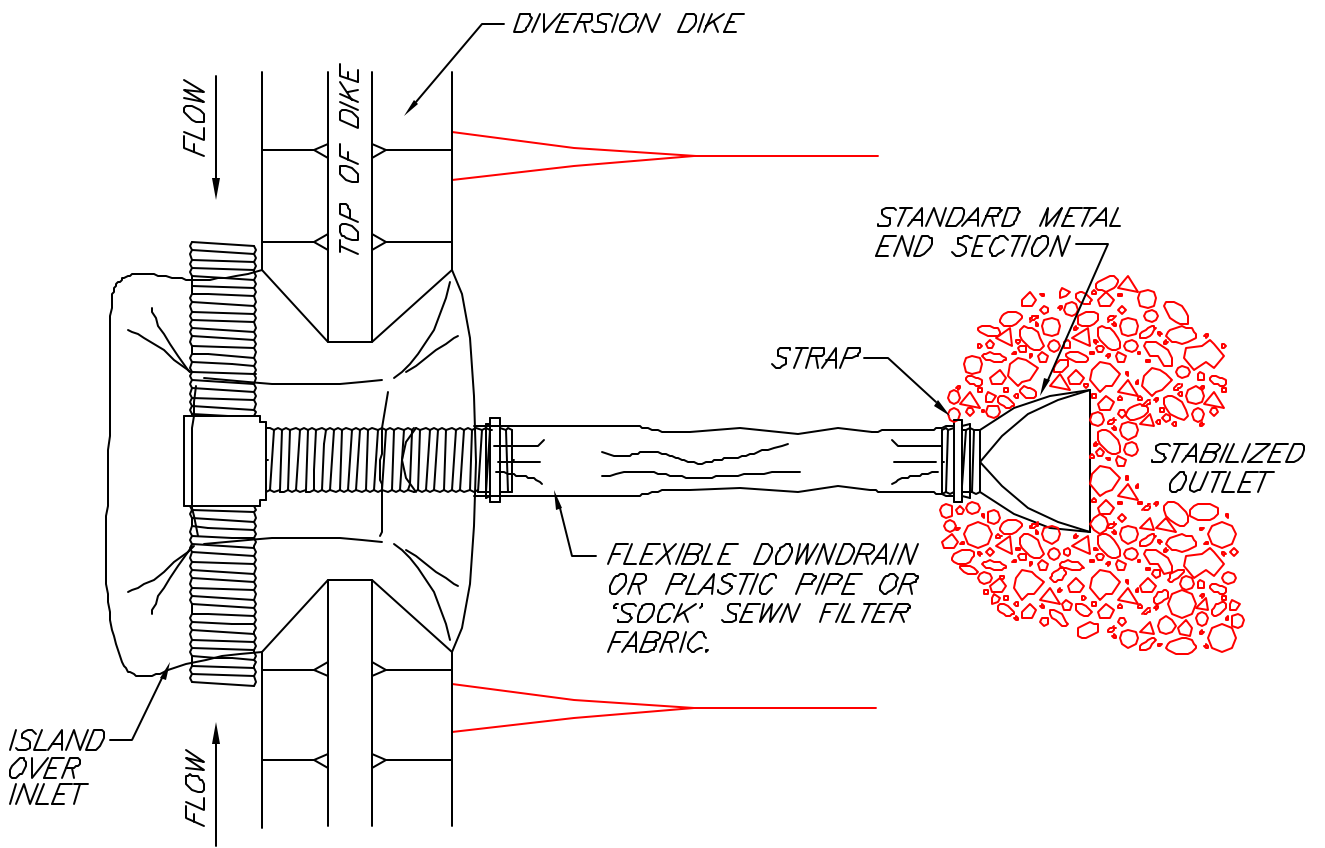


STEP 3 - CONSTRUCT J-HOOKS AS NEEDED

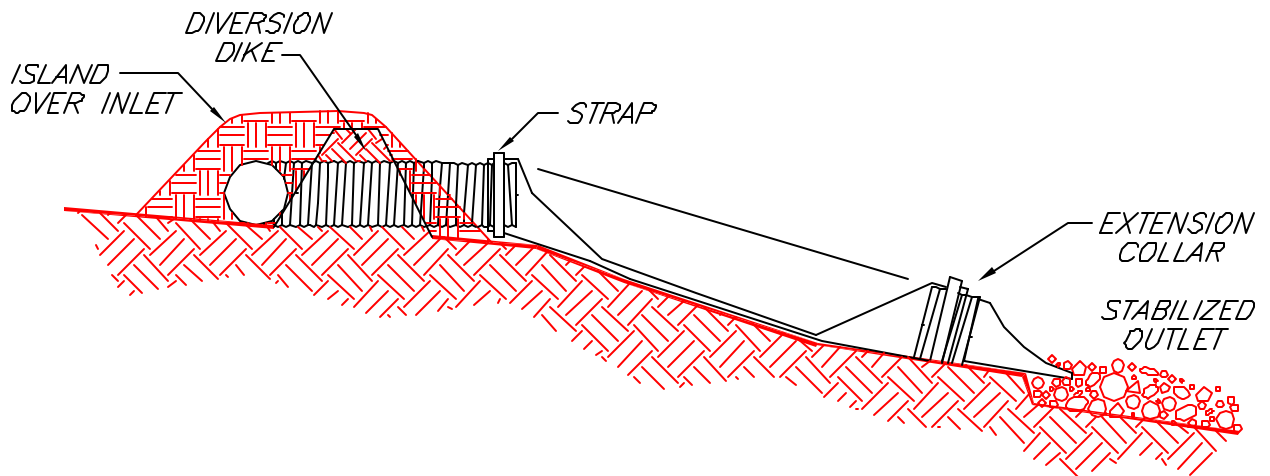
INSTALLATION WITH J-HOOKS WILL INCREASE SILT FENCE EFFICIENCY AND REDUCE EROSION-CAUSING FAILURES.

**SILT FENCE
TYPICAL PLACEMENT
TWO SLOPES**

SOURCE: SALIX APPLIED EARTHCARE -
EROSION DRAW 5.0



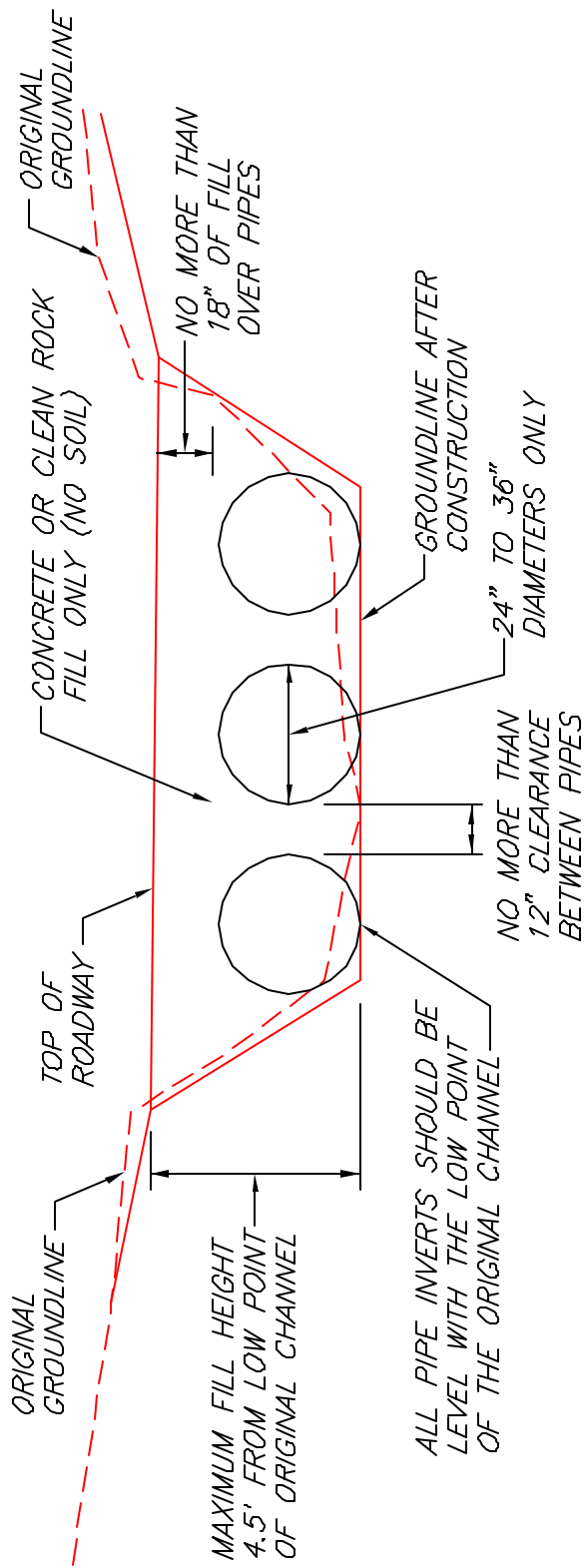
PLAN VIEW



SECTION

SLOPE DRAIN

SOURCE: SALIX APPLIED EARTH CARE –
EROSION DRAW 5.0

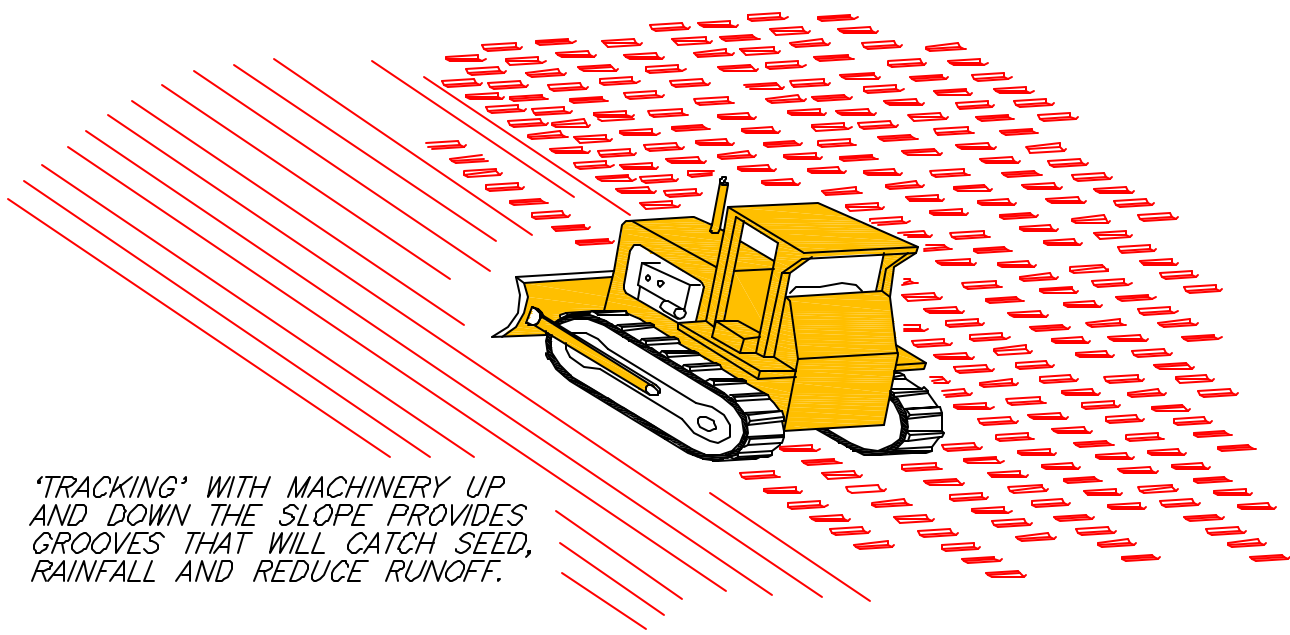


NOTES

1. THIS IS A CONCEPTUAL DRAWING. THE NUMBER AND SIZE OF PIPES AND OTHER DETAILS WILL VARY DEPENDING ON SPECIFIC SITE CONDITIONS.
2. THE PIPES AND BACKFILL MUST BE CONTAINED WITHIN THE STREAM CHANNEL AS SHOWN ABOVE. DURING THE CONSTRUCTION OF THE APPROACHES AND ACCESS ROADWAY ACROSS THE FLOODPLAIN, UNSTABLE AND UNCONSOLIDATED MATERIALS UNSUITABLE FOR ROADWAYS MAY BE EXCAVATED AND REPLACED WITH RIPRAP, CRUSHED STONE, OR OTHER STABLE ROAD CONSTRUCTION MATERIALS. THIS MAY ONLY BE DONE, HOWEVER, WITH THE FOLLOWING PROVISIONS: (1) THE DISPOSAL OF EXCESS, UNCONSOLIDATED MATERIALS THUS EXCAVATED MUST BE OUTSIDE OF THE FLOODPLAIN AND (2) THE FINISHED SURFACE OF THE COMPLETED ROAD MAY BE NO MORE THAN THREE INCHES (3") ABOVE THE PRE-CONSTRUCTION SURFACE OF THE FLOODPLAIN AT ANY POINT BEYOND THE TOP OF BANKS.

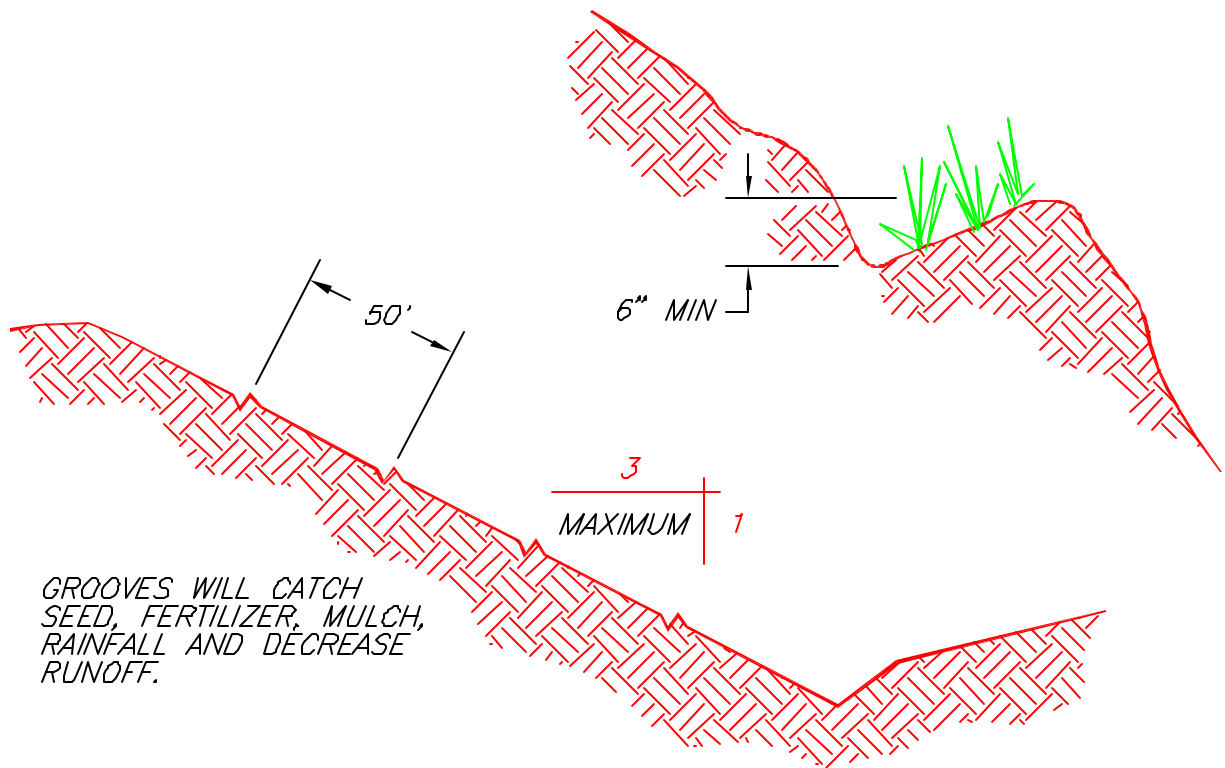
STREAM CROSSING

**KY DIVISION OF WATER
LOW-WATER CROSSING**



'TRACKING' WITH MACHINERY UP AND DOWN THE SLOPE PROVIDES GROOVES THAT WILL CATCH SEED, RAINFALL AND REDUCE RUNOFF.

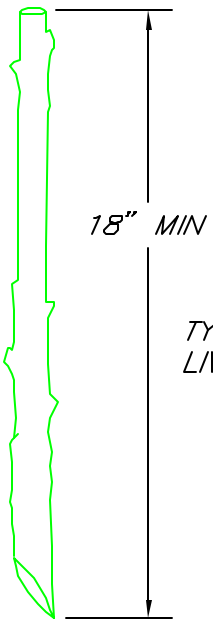
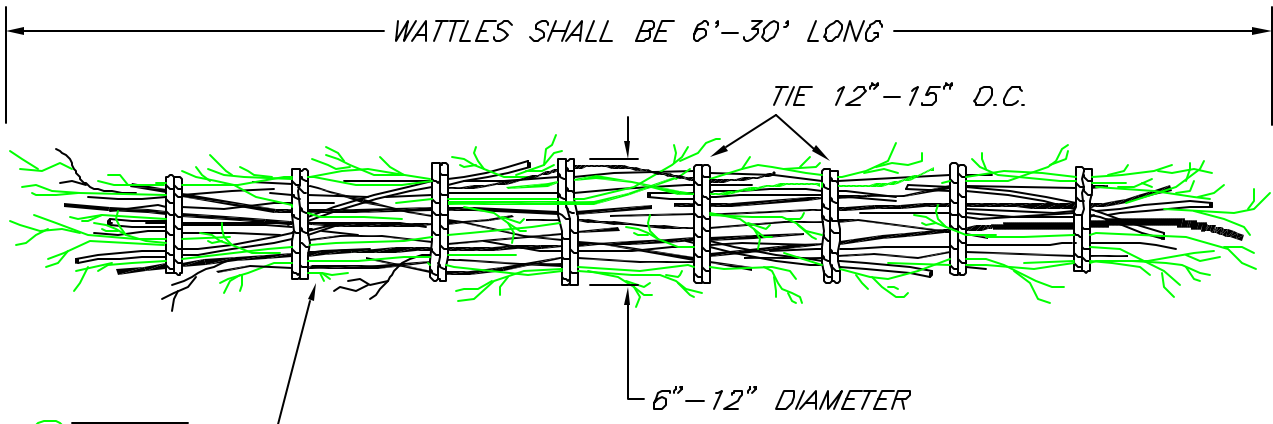
TRACKING



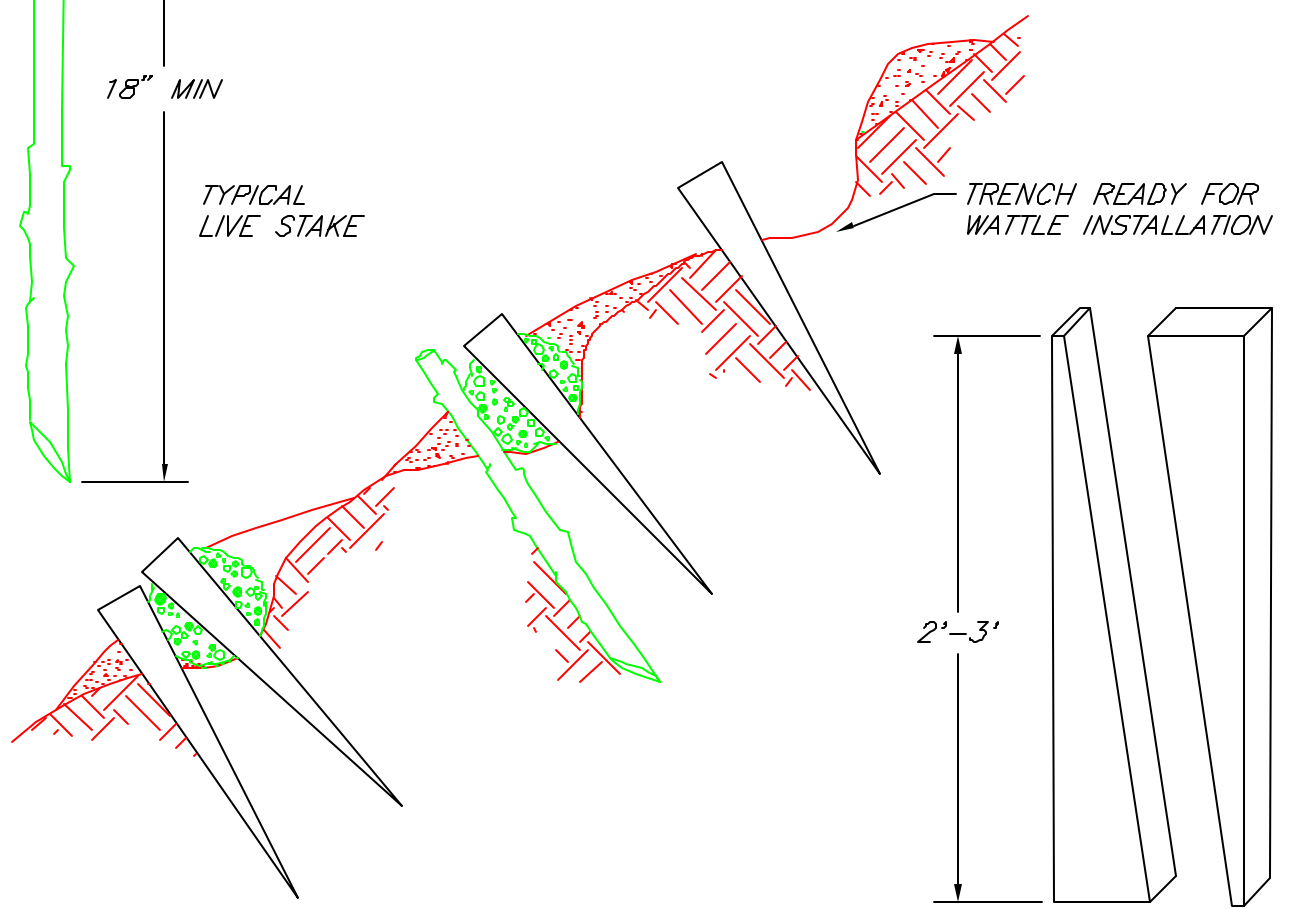
GROOVES WILL CATCH SEED, FERTILIZER, MULCH, RAINFALL AND DECREASE RUNOFF.

CONTOUR FURROWS

**SURFACE
ROUGHENING**



PREPARE WATTLES WITH 1/4" - 1 1/2" CUTTINGS, WITH ALTERNATING BUTT-ENDS AND TIED SECURELY WITH TWINE OR ROPE.



- NOTES:
1. HARVEST AND INSTALL WATTLES DURING DORMANT SEASON.
 2. INSTALL WATTLES ON SLOPE CONTOURS.
 3. ALL WORK PROCEEDS FROM THE BOTTOM OF THE SLOPE TO THE TOP.
 4. FILL OR PARTIALLY COVER WATTLE WITH SOIL FROM SLOPE OR TRENCH ABOVE.
 5. COMPACT AND WORK SOIL INTO COMPLETED WATTLES.

TYPICAL CONSTRUCTION STAKE
SAW 2X4 LUMBER ON DIAGONAL

NOT TO SCALE

**WATTLE
(LIVE FASCINE)**

SOURCE: SALIX APPLIED EARTHCARE -
EROSION DRAW 5.0