3. The face of slope paving shall be cut into rectangles not more than
two feet square, using a grooving tool.

GENERAL NOTES

1. A continuous five inch solid sod strip shall be placed along the sides and
pavement in front of the slope paving for a distance of the full width of the
bridge. This strip shall extend both sides of the slope paving.

2. Where slope paving is placed on bridges 30' or less apart, slope paving
shall be placed 2'-0" wider than bridge on each side.

3. The face of slope paving shall be cut into rectangles not more than
two feet square, using a grooving tool.

SLOPE PAVING WHEN BRIDGE IS ON SKY

NOTE:

Slopes under separation bridges shall be true and firm to receive a 4"
thickness of concrete slope paving for the item of slope paving. The cost of
placing curbs and walls as detailed shall be paid for under the item of
slope paving.

Urban Section

1. A continuous 16" strip of solid sod shall be placed along the sides and
pavement in front of the slope paving for a distance of the full width of the
bridge. This strip shall extend both sides of the slope paving.

2. Where dual bridges are 30' or less apart, slope paving shall be
placed 2'-0" wider than bridge on each side.

3. The face of slope paving shall be cut into rectangles not more than
two feet square, using a grooving tool.

Sketch showing locations where slope paving is required

Outline separation structures not on sky

Section

1. The face of slope paving shall be cut into rectangles not more than
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Example for computing concrete quantities:

\[ \text{Concrete Quantity (CU YD)} = (\text{Front Slope}) + (\text{Back Slope}) \]

Given:
- 0.049 CU YD (Front Slope)
- 0.027 CU YD (Back Slope)

\[ \text{Concrete Quantity} = 0.049 + 0.027 = 0.076 \text{ CU YD} \]

NOTE
1. Erosion control shall be provided as shown in the plans or as directed by the engineer.
2. Expansion joint material shall meet the requirements of Section 242 of the Alabama Department of Transportation specifications.
3. Expansion joints shall be placed at the end of flumes and any other location the engineer may direct.
4. Expansion joints shall be formed with an approved marking tool.
5. Expansion joints between flumes shall be made with an approved marking tool.
6. Expansion joint material shall meet the requirements of Section 242 of the Alabama Department of Transportation specifications.
7. Expansion joints shall be placed at the end of flumes and any other location the engineer may direct.
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49. Expansion joints between flumes shall be made with an approved marking tool.
50. Expansion joint material shall meet the requirements of Section 242 of the Alabama Department of Transportation specifications.
1. Specifications current designs department of transportation standard.
2. The design and construction of the roadway are subject to the approval of the department. 
3. The work shall be constructed in accordance with the requirements of the plans and the specifications.
4. The work shall be performed in a manner that will cause no damage to the existing structures.
5. The work shall be performed in accordance with the approved plans and specifications.
6. The work shall be performed in a manner that will cause no damage to the existing structures.
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21. The work shall be performed in accordance with the approved plans and specifications.
SELECTED UNCLASSIFIED EXCAVATION WITHOUT STONES OR ROOTS

GENERAL NOTES

1. CONSTRUCTION SEQUENCE SHALL BE AS REQUIRED IN SECTION 224 OR AS DETERMINED BY THE ENGINEER.

2. LIMITS OF THE EXCAVATION SHALL BE DETERMINED BY THE ENGINEER.

3. ROCK & CEMENT MORTAR FLOWABLE BACKFILL MIXTURE LIMITS SHALL BE DETERMINED BY THE ENGINEER.

4. UNCLASSIFIED EXCAVATION OR BORROW SHALL BE PLACED AND PAID FOR IN ACCORDANCE WITH SECTION 210.

SPECIAL LIME SINK TREATMENT

Drawing on 01-15-13 by B.W.M.
Modified Note Nos. 1 through 5 and old Note No. 6 on 06-05-03 by W.W.A.
Deleted Note No. 5; replaced it with 2.
Added to CADD on 10-13-00

L.V.S.
3-31-78
LS-224

CADD CENTER
1409 COLISEUM BOULEVARD
MONTGOMERY, AL 36130-3050

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DESIGN BUREAU SPECIAL DRAWING

CURRENT ALABAMA DEPARTMENT OF TRANSPORTATION -- SPECIFICATIONS--

NOT TO SCALE
SECTION "AA"
ALTERNATE NO. 1
WILLIAMS HOLLOW CORE SYSTEM

SECTION "AA"
ALTERNATE NO. 2
TOE PIPE SYSTEM

*NOTE: ALL REFERENCES TO PNEUMATIC CONCRETE BLANKET AND SILOP P IPS WILL APPLY TO SHOTCRETE CONCRETE IF SECTION HILE IS CALLED FOR. THE PIPES AND SPECIFICATIONS AS FIS DOUBLE TO THE ROOMS AND THIS RECOMMENDATION.

DETAILS OF PNEUMATIC BLANKET
(AS TO BE USED AT LOCATIONS AS DIRECTED BY THE ENGINEER)
Detail of Riprap @ Bridge Ends

Section A-A

Notes:
2. See General Plan and Elevation of Bridge Plans for details.
3. See General Plan and Elevation of Bridge Plans for details.
4. Section A-A and accompanying notes shall be used in conjunction with Section B-B and see General Plan and Elevation of Bridge Plans.

Specifications:
- Filters Blanket: Required Loose Riprap, Payment to be measured along this line.
- Natural Ground Line: See Note No. 1 and 2.
- Required Geotextile Filter Fabric Blanket: See Note No. 1.

Note: The 2'-0" line condition shown, construct a 2'-0" line condition similar except riprap begins 2'-0" behind the road shoulder. Riprap shall be placed on the newly formed slope. Section B-B and see General Plan and Elevation of Bridge Plans.
WASTE FROM DITCH SECTION

CONSTRUCT DIKE FROM MATERIAL TAKEN FROM OTHER SOURCES.

SURFACE DITCHES OVER CUT

LAY OUT SURFACE DITCHES OR DIKES ON GRADE CONTOURS FOLLOWING PRINCIPLE OF FARM TERRACES AS FAR AS PRACTICAL.

USE A LEVEL IN STAKING OUT ALL SURFACE DITCHES.

WHERE PERMISSION CAN BE SECURED FROM ADJACENT PROPERTY OWNERS, RUN SURFACE DITCHES BACK OFF RIGHT-OF-WAY ON GRADE CONTOUR INTO INTERCEPTING DRAINAGE.

DITCH AND WASTE BANK TO BE COVERED WITH EROSION CONTROL NETTING AND GRASSED OR JUST GRASSED AS DIRECTED.

MIN

ROADWAY

TERRACE BANK

SOD

TERRACE OUTLET

CHANNEL GRADE

FERTILIZER SHALL BE APPLIED IN ACCORDANCE WITH SPECIFICATIONS OR SPECIAL PROVISIONS ACCOMPANYING PROPOSAL AND PLAN ASSEMBLY FOR EACH INDIVIDUAL PROJECT.

SECTION "A-A"

SHOW ON SECTION "A-A". SOD BLOCKS TO BE SECURELY TAMPED AND PEGGED IN MAXIMUM THICK

SOLID SOD TERRACE OUTLET

NOT LESS THAN 6' IN WIDE BY 3'-0" MIN

3'-0" (VARIES)

SOLID SOD 2" THICK

DEPT (VARIES)

SOD FLUME

LONG ELEVATION

NOTE: ON SLOPES OF APPROXIMATELY 2:1 OR STEEPER, EROSION CONTRO

LEVEL ACCORDING TO SECTION "A-A"

THESE POSITIONS TO BE PROTECTED

SLOPE TO CONFORM WITH CUT BACKSLOPE

SLOPE

THICK

D + 18" MIN

AND SOD FLUMES

SOD TERRACE OUTLETS

by J.F.T.

Added to CADD on 10-16-00

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L.V.S.

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DESIGN BUREAU SPECIAL DRAWING

1409 COLISEUM BOULEVARD

MONTGOMERY, AL  36130-3050

ALABAMA DEPARTMENT OF TRANSPORTATION

CURRENT ALABAMA DEPARTMENT OF TRANSPORTATION--SPECIFICATIONS--

Bureau Std Engr:

DRAWN BY:

DATE DRAWN:

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INDEX NO

REFERENCE

PROJECT NO

FISCAL YEAR

REVISIONS

NOT TO SCALE
TREES THAT OCCUR IN CUTS SUCH AS SHOWN BY THIS SKETCH SHALL BE PRESERVED ONLY UPON THE APPROVAL OF THE STATE LANDSCAPE ARCHITECT.

WELLS ARE TO BE CONSTRUCTED AS SHOWN, AUGMENTED BY SPECIFICATIONS FOR TREE WELLS AND TREE ROOT PROTECTION MATERIAL.

THE TOP OF THE TREE ROOT PROTECTION MATERIAL) REMAINING PORTION OF WELLS AND WALLS SHALL BE CONSTRUCTED OF DRY UNCOURSED RUBBLE MASONRY.

RUBBLE MASONRY WALL IS TO BE PLACED AS SHOWN, AUGMENTED BY SPECIFICATIONS FOR TREE WELLS AND TREE ROOT PROTECTION. WALLS ARE TO EXTEND FAR ENOUGH FROM CENTER OF TREE TO AMPLE COVER THE ROOTS.

WELLS TO BE CIRCULAR, AND EQUAL IN HEIGHT TO FILL AROUND TREE. TOE OF FILL TO DRAIN BEYOND TOE OF FILL.

PLAN

RUBBLE MASONERY WELL FOR TREE PROTECTION IN CUT

MATERIAL FOR TREE

GENERAL NOTE:
NOTE WHERE THE TOP OF SLOPE IN CUT IS WITHIN 6' OR LESS OF TREE, THE TOP 12" OF ALL TREE WELLS AND WALLS SHALL BE CONSTRUCTED OF CEMENT UNCOURSED RUBBLE MASONRY (EXCEPT THAT IN NO CASE SHALL CEMENT UNCOURSED RUBBLE MASONRY BE USED BELOW ORIGINAL GROUND ELEVATION). TOE OF WELL TO BE CIRCULAR, AND EQUAL IN HEIGHT TO FILL AROUND TREE.

NOTE: WHERE FILL AROUND TREE IS 12" OR MORE IN DEPTH OVER ANY PART OF THE FEEDING ROOT AREA OR PERIPHERY OF THE TREE, THE TOP 12" OF ALL TREE WELLS AND WALLS SHALL BE CONSTRUCTED OF CEMENT UNCOURSED RUBBLE MASONRY.

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WHERE PLANS PROVIDE FOR IMPROVED ROADBED ALL CUTS SHALL BE UNDERCUT TO THE ELEVATION SPECIFIED ON PLANS AND COMPLETED TO SUBGRADE AS IMPROVED ROADBED WITH MATERIALS FINISHED GRADE INTO THE CUT, FURTHER UNDERCUTTING IMPROVED ROADBED, CUTS NEAR GRADE POINTS AND AT OTHER POINTS SHALL BE UNDERCUT AREAS SHALL LATER BE BACKFILLED WITH SUITABLE MATERIAL AND COMPACTED AS DIRECTED AS DIRECTED IN SPECIFICATIONS.

MATERIAL FROM UNDERCUT AREAS SHALL BE USED IN EMBANKMENT, UNLESS UNSUITABLE.

UNDERCUTTING AND BACKFILLING IN CUTS AND GRADE POINTS
**GENERAL NOTES**

1. **SETTLEMENT PLATES:**
   - Placement of settlement plates is specified at certain depths and locations in an embankment.
   - Note: Each 2" Black steel pipe used will be coated with a thick coat of Asphalt Grade PG 67-22 and double wrapped with Aluminum Foil (0.0015 inches thick).
   - Note: Each 2" Black steel pipe used will have an outer 4" PVC Isolation Casing.

2. **WARNING STRIPES & WARNING POSTS:**
   - Protection posts shall be provided at the completion of the project with warning stripes and/or other safety devices as determined by the Engineer.

3. **PAYMENT:**
   - Payment may be made per each settlement plate assembly.

---

**DETAILS OF TYPICAL SETTLEMENT PLATE**

- Steel plate base unit:
  - Details of typical settlement plate
  - Option 1
  - Option 2

- Yellow flag:
  - Details of warning flag

- Steel plate:
  - Details of typical settlement plate

- Concrete sand or other free draining materials:
  - Placement of filling materials

- Protection posts:
  - Protection posts used with warning stripes.

---

**REFERENCE**

- Bureau STD Engr: [Signature]
- Drawn by: [Signature]
- Date Drawn: 08-18-06 by W.W.A.

---

**NOT TO SCALE**
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<tr>
<th>BEST MANAGEMENT PRACTICE (BMP)</th>
<th>SPECIAL DRAWING NUMBER</th>
<th>PLAN SYMBOL</th>
<th>MATERIAL REQUIREMENT REFERENCES</th>
<th>CONSTRUCTION REQUIREMENT REFERENCES</th>
<th>USAGE GUIDELINES</th>
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REFERENCES: [ALDOT LIST II-3][1]

NOT TO SCALE

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1. ALABAMA DEPARTMENT OF TRANSPORTATION

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ESC-300 (SHT 1 OF 4)

ESC-300 (SHT 2 OF 4)

ESC-300 (SHT 3 OF 4)

ESC-300 (SHT 4 OF 4)
**Recommended Anchor Detail**

Notes:

1. Temporary slope drain pipes, drains and rock, if necessary, shall be used as the embankment is constructed. Maximum spacing of the drain assembly shall be 300 feet, or as designated by the engineer. The drain assemblies shall be used until the slopes are protected with permanent soil erosion control measures.

2. Temporary berms shall also be constructed at the top of all embankment cut slopes designated or permitted by the engineer. The diameter of the pipes shall be the maximum possible that conditions permit.

3. In some cases it may be necessary to extend metal or plastic pipe into the fill slope to ensure proper anchorage.

4. The contractor shall select the size of slope drain pipe.

---

**Temporary Rock Ditch Check with Sump Excavation**

See SWPD-ESC-200 for details.

---

**Temporary Pipe End Treatment**

---

**Temporary Slope Drain Pipe**

---

**Temporary Earth Berm at Top of Slope**

---

**Temporary Sand Bag Berm Length as Required to Contain Surface Drainage and Direct Flow into End Section of Temporary Slope Drain Pipe.**

---

**Plan at Low Point**

---

**NOT TO SCALE**
**Sediment Barrier at Cross Drain**

**Temporary Brush Barriers**

- **Notes:**
  1. Brush barriers may be used where material, grading, or level of slopes vary from project.
  2. Place brush logs and tree limbs approximately parallel, the toe of fill slope with side of the barrier parallel being placed on top to provide additional friction at the barrier as detailed at locations shown on plans.
  3. To allow water to drain through brush barriers, interplane the brush logs and tree limbs so as not to form a solid mass.
  4. The brush barrier shall be covered with filter fabric.

**Silt Fence Section at Toe of Fill**

**NOT TO SCALE**

**Diagram Information:**

- **Reference Project No.**
- **Sheet No.**

**Alaska Department of Transportation and Public Facilities**

**Details of Sediment Barrier Applications**

**Sheet No.**

**H-823-2**
ELEVATION VIEW

NOTES
1. METHOD II FENCE INSTALLATION ALSO TO INCLUDE ANCHORS AND TRENCHES AS REQUIRED.
2. SILT FENCE SHALL BE USED IN AREAS WHERE FLOW IS LOW TO MODERATE OR AS DIRECTED BY THE ENGINEER.
3. SILT FENCES ARE TEMPORARY SEDIMENT CONTROL VIGILANCE THAT SHALL BE ERECTED AROUND AREAS SUCH AS NUCLEAR GRADERS, KILL AREAS, AND AREAS CONFOUGED TO STREAMS AND CHANNELS.
4. SILT FENCE SHOULD BE PLACED WELL UNDERNEATH Lean AND AT OR ABOVE THE LEVEE LINE. THIS WILL ALLOW ROOM FOR ADDITIONAL SEDIMENT MANAGEMENT PRACTICES SUCH AS SEEDED BERRIES.
5. WHEREVER POSSIBLE SILT FENCE SHALL BE CONSTRUCTED BACK OF THE LEVEE. THIS AID IN PREVENTING OF RADIO AND FACILITATES SEPARATION.
6. THE CONTRACTOR MAY ELEI TO USE EITHER INSTALLATION METHOD I OR METHOD II.
7. METHOD II INSTALLATION SHALL BE ACCOMPLISHED USING THE EQUIPMENT THAT IS MANUFACTURED FOR THE APPLICATION AND PROVIDES THE REQUIREMENTS OF THE DETAIL.
8. SEE ALSO LIST 11-2 FOR APPROVED SILT FENCE GEOTEXTILES.

SIDE VIEW

PLAN VIEW

REQUIRED LAPPING
NOT TO SCALE

Section A-A

Mechanical Installation

Details of Sediment Retention Barrier

Notes:
1. The proposed installation site is to be graded and is to be made even.
2. The trench is to be dug using hand tools.
3. The post shall be driven to a depth of 5 feet (60 inches).
4. The wire overlap at post shall be 2 feet.
5. The wire overlap at fence shall be 1 foot.
6. The post shall be anchored with a tieback anchor.
7. The wire ends shall be woven.
8. The geotextile with soil shall be placed on the soil.
9. The trench shall be filled with soil.
10. The wire and fabric shall be placed on the trench.

Construction Details:
- Elevation View
- Plan View
- Side View

Additional Strength
- Wherever possible, sediment retention barriers shall be constructed along newly graded fill slopes and adjacent to streams and channels.

The contractor may elect to use either installation method I or II, with their functional equivalents.

References:
1. Reference Project No.
2. Year

Sheet:
- ESE-200 Sheet 5 of 51

References:
- Alabama Department of Transportation
- Special Drawing No.
7. Silt dikes can be used in ditches with concentrated flows within the clear zone where flow may be directed or permitted by the engineer. Silt dikes are used to control runoff velocity and to reduce erosion and provide for trapping of sediments.

8. The type and size of rock used to construct rock check dikes will be selected by the designer and shown on the plans. The size of rock check dikes is proportional to expected flows and velocities. Sediment trapping effectiveness may be increased by choking.

9. Rock check dikes with slump excavation can be placed in ditches to facilitate on-site sediment trapping. Rock check dikes with slump excavation are used when ditches are underlain by unstable, erodible strata. The type of rock check dikes is proportional to expected flows and velocities. Sediment trapping effectiveness may be increased by choking.

10. Silt dikes should not be placed in line checks.

11. Configuration and spacing may be adjusted if approved by the engineer to accommodate traffic safety, water flow, or soil and vegetation challenges.

12. Silt fence ditch dikes are used where it has been determined that only silt dikes are inadequate, or silt fence ditch dikes can be justified based on cost. Silt fence ditch dikes are used to intercept low volume flows in low to moderate gradient ditches.
HAY BALE DITCH CHECK SELECTION GUIDELINES

HAY BALES ARE USED TO INTERCEPT LOW VOLUME FLOWS IN LOW TO MODERATE GRADIENT DITCHES.

NOTES:
1. MINIMUM RECOMMENDED CHECK SPACING IS 100 FEET UNLESS SHOWN OTHERWISE ON THE PLANS OR APPROVED BY THE ENGINEER. SEE SPACING GUIDANCE ON SHEET 1 OF 8.
2. ANCHORING STAKES SHALL BE SIZED, SPACED, AND BE OF A MATERIAL THAT EFFECTIVELY SECURES THE CHECK. A MINIMUM OF TWO STAKES PER BALE IS RECOMMENDED. ALL NON-DEGRADABLE MATERIALS SHALL BE REMOVED WHEN NO LONGER NEEDED.
3. BALES SHALL BE EMBEDDED IN THE SOIL A MIN OF 4 INCHES.
4. BALES SHOULD BE PLACED IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES. THE BALES SHALL BE PLACED WITH BINDINGS PARALLEL TO THE GROUND.
5. SOIL IS COMPACTED ALONG THE BASE OF THE UPSTREAM FACE TO PREVENT PIPING.
6. MULTIPLE ADJACENT ROWS OF BALES ARE REQUIRED AS SHOWN.
SAND BAG DITCH CHECK SELECTION GUIDELINES

SAND BAG DITCH CHECKS ARE USED FOR VELOCITY REDUCTION AND MINIMAL SEDIMENT TRAPPING IN CONCRETE PAVED DITCHES OR IN DITCHES THAT HAVE ROCKY BOTTOMS.

NOTES:
1. MINIMUM RECOMMENDED PLACEMENT INTERVAL BETWEEN SAND BAG DITCH CHECK IS 100' UNLESS SHOWN OTHERWISE ON THE PLANS OR APPROVED BY THE ENGINEER. SEE SPACING GUIDANCE ON SHEET 1 OF 8.
2. PREVENTING SEDIMENT FROM ENTERING A PAVED DITCH IS PREFERABLE TO CAPTURING SEDIMENT WITHIN PAVED DITCH.

SIDE VIEW
(IN DITCH BOTTOM)
WATTLE DITCH CHECK SELECTION GUIDELINES

NOTES:
1. MINIMUM RECOMMENDED PLACEMENT INTERVAL BETWEEN WATTLE DITCH CHECK IS 100FT UNLESS SHOWN OTHERWISE ON THE PLANS OR APPROVED BY THE ENGINEER. SEE SPACING GUIDANCE ON SHEET 1 OF 8.
2. ANCHORING STAKES SHALL BE STAPLED, SPACED, DRIVEN AND BE OF A MATERIAL THAT EFFECTIVELY SECURES THE CHECK. STAKE SPACING SHALL BE A MAXIMUM OF TWO FEET.
3. WATTLE SHOULD NOT BE USED IN HARD BOTTOM CHANNELS.
4. STAPLES SPACED 18 INCHES APART, ALONG THE CHANNEL EDGES AND DOWN THE CENTER OF THE CHANNEL. STAPLES SPACED 10 INCHES APART, ACROSS THE UPSTREAM AND DOWNSTREAM EDGES.

ELEVATION DETAIL

WATTLE DITCH CHECK SELECTION GUIDELINES

WATTLE DITCH CHECKS ARE APPROPRIATE FOR VELOCITY REDUCTION AND CONTROL OF SEDIMENT TRANSPORT UNDER LOW TO MEDIUM FLOW CONDITIONS NOT EXCEEDING 1.0 CFIT/SEC.
SILT DIKE DITCH INSTALLATION FOR ROADWAY DITCHES

SECTION A-A

1. Minimum recommended placement interval between silt dike ditch check is 100 feet unless shown otherwise on the plans or approved by the engineer. See spacing guidance on SHEET 1 of 8.

2. Installation shall be in accordance with manufacturer's recommendations.

NOTE:
- EL. A must be higher than EL. B to ensure that water flows over the dike and not around the ends.

SECTION B-B

STAPLES SHALL BE PLACED WHERE THE UNITS OVERLAP AND IN THE CENTER OF THE UNIT

ALABAMA DEPARTMENT OF TRANSPORTATION

DESIGN BUREAU SPECIAL DRAWING

1409 COLISEUM BOULEVARD
MONTGOMERY, AL  36130-3050

SPECIAL DRAWING NO. 1517
INDEX NO. 28

NOT TO SCALE

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DATE DRAWN:

Bureau Std Engr:

DRAWN BY:

REFERENCE

FISCAL YEAR

PROJECT NO.

REFERENCE

REVISIONS

REFERENCE

PAGE 5 OF 8
PROPOSED DITCH FLOW LINE OF
SLOPE OF 1' MIN.

SECTION B-B
DETAIL FOR SPACING BETWEEN DITCH CHECKS
ROCK DITCH CHECK SELECTION GUIDELINES

TEMPORARY ROCK DITCH CHECKS IN ROADSIDE DITCHES
OF ROCK PLACED UNDER ENTIRE WIDTH
GEOTEXTILE FABRIC SHALL BE
SEEN LIST II-3 FOR APPROVED GEOTEXTILES.

FLOW LINE OF DITCH 2' MIN.

SECTION A-A
FLOW SMALLER AGGREGATE
CHOKE WITH
FLOW TOE OF DITCH
TOP OF DITCH
PLAN VIEW
DETAIL FOR TRAPEZOIDAL DITCH

DETAIL FOR SPACING BETWEEN DITCH CHECKS

NOTES:
1. MINIMUM SPACING FOR ROCK DITCH CHECKS SHALL BE 50 FEET OR AS DIRECTED BY THE ENGINEER.
2. ROCK DITCH CHECKS SHALL BE CHOKED WITH FILTER FABRIC.
3. SEE SPACING GUIDANCE ON SHT 1 OF 8.

ROCK DITCH CHECK SELECTION GUIDELINES

ONE TYPE AND SIZE OF ROCK DITCH CHECKS WILL BE SELECTED BY THE DESIGNER AND SHOWN ON THE PLANS. THE SIZE OF ROCK CHECKS WILL BE PROPORTIONAL TO EXPECTED FLOWS AND VELOCITIES.
PLAN VIEW

ROCK DITCH CHECK WITH SUMP EXCAVATION SELECTION GUIDELINES

The type and size of rock used to construct the check will be selected by the designer and shown on the plans. The size of rock chosen will be proportional to expected flows and velocities.

SECTION A-A

PROFILE VIEW

DITCH CENTERLINE

GEOTEXTILE FABRIC UNDERLAYMENT

ROCK DITCH CHECK REQUIRED FOR VELOCITY REDUCTION

LENGTH OF SEDIMENT TRAP

FLOW LINE OF DITCH

FLOW OF DITCH MAY BE PLATED WITH POLYETHYLENE OR FILTER FABRIC

NOT TO SCALE
EDGES @ 6" O.C.
STAPLES ON ALL
GEOTEXTILE UNDERLAYMENT
A COVERED WITH GEOTEXTILE
WOVEN WIRE MESH
COVERED WITH GEOTEXTILE
2' MIN FABRIC
GEOTEXTILE
WEIR WITHOUT FLOW
SIDE VIEW
POST
ELEVATION VIEW
POST
FLOW
POST
FLOW
POST
FLOW
POST
DITCH CHECK
DETAILS OF SILT FENCE
1. SILT FENCE SHALL BE USED IN AREAS WHERE FLOW IS MODERATE TO HIGH OR AS DIRECTED BY THE ENGINEER.
2. SILT FENCES ARE TEMPORARY EROSION CONTROL ITEMS THAT SHALL BE ERRECTED DOWN GRADE OF ERODIBLE AREAS SUCH AS NEWLY GRADED FILL SLOPES AND ADJACENT TO STREAMS AND CHANNELS.
3. IF THE TOP OF THE GEOTEXTILE AT POINT B IS HIGHER THAN THE BOTTOM OF THE FENCE AT POINT A, THEN NO WEIR IS REQUIRED.
4. SEE ALDOT LIST II-3 FOR APPROVED SILT FENCE GEOTEXTILES.

NOTES:

1. SILT FENCE SHALL BE USED IN AREAS WHERE FLOW IS MODERATE TO HIGH OR AS DIRECTED BY THE ENGINEER.
2. SILT FENCES ARE TEMPORARY EROSION CONTROL ITEMS THAT SHALL BE ERRECTED DOWN GRADE OF ERODIBLE AREAS SUCH AS NEWLY GRADED FILL SLOPES AND ADJACENT TO STREAMS AND CHANNELS.
3. IF THE TOP OF THE GEOTEXTILE AT POINT B IS HIGHER THAN THE BOTTOM OF THE FENCE AT POINT A, THEN NO WEIR IS REQUIRED.
4. SEE ALDOT LIST II-3 FOR APPROVED SILT FENCE GEOTEXTILES.

SILT FENCE MATERIAL
AT POINT B HIGHER THAN TOP OF GEOTEXTILE
NOTE: END POINTS A MUST BE BACKING)
HORIZONTAL MEMBER OF WIRE (ANCHOR TOP OF WEIR TO WEIR
POINT  A (BOTTOM OF FENCE)
A "W" SHAPE MAY BE USED FOR WIDER DITCHES.
POINT  B (TOP OF GEOTEXTILE)
4. SEE ALDOT LIST II-3 FOR APPROVED SILT FENCE GEOTEXTILES.

NOTES:

1. SILT FENCE SHALL BE USED IN AREAS WHERE FLOW IS MODERATE TO HIGH OR AS DIRECTED BY THE ENGINEER.
2. SILT FENCES ARE TEMPORARY EROSION CONTROL ITEMS THAT SHALL BE ERRECTED DOWN GRADE OF ERODIBLE AREAS SUCH AS NEWLY GRADED FILL SLOPES AND ADJACENT TO STREAMS AND CHANNELS.
3. IF THE TOP OF THE GEOTEXTILE AT POINT B IS HIGHER THAN THE BOTTOM OF THE FENCE AT POINT A, THEN NO WEIR IS REQUIRED.
4. SEE ALDOT LIST II-3 FOR APPROVED SILT FENCE GEOTEXTILES.

SILT FENCE MATERIAL
AT POINT B HIGHER THAN TOP OF GEOTEXTILE
NOTE: END POINTS A MUST BE BACKING)
HORIZONTAL MEMBER OF WIRE (ANCHOR TOP OF WEIR TO WEIR
POINT  A (BOTTOM OF FENCE)
A "W" SHAPE MAY BE USED FOR WIDER DITCHES.
POINT  B (TOP OF GEOTEXTILE)
4. SEE ALDOT LIST II-3 FOR APPROVED SILT FENCE GEOTEXTILES.

NOTES:

1. SILT FENCE SHALL BE USED IN AREAS WHERE FLOW IS MODERATE TO HIGH OR AS DIRECTED BY THE ENGINEER.
2. SILT FENCES ARE TEMPORARY EROSION CONTROL ITEMS THAT SHALL BE ERRECTED DOWN GRADE OF ERODIBLE AREAS SUCH AS NEWLY GRADED FILL SLOPES AND ADJACENT TO STREAMS AND CHANNELS.
3. IF THE TOP OF THE GEOTEXTILE AT POINT B IS HIGHER THAN THE BOTTOM OF THE FENCE AT POINT A, THEN NO WEIR IS REQUIRED.
4. SEE ALDOT LIST II-3 FOR APPROVED SILT FENCE GEOTEXTILES.
**DITCH INLET CONSTRUCTION STAGES**

**NOTES:**
1. Foundation backfill should be placed in Stage 1 immediately after pipe installation. Inlet construction should commence as soon as possible and be continuous through completion.
2. Configurations may be adjusted with approval of the engineer for vehicular safety, water flow, soil or installation challenges.
3. During Stage 3 and Stage 4, wattle may be installed outside of the inlet location as directed by the engineer.
4. If silt fence is installed around the inlet excavation, it should be placed in a configuration that will allow sheet construction.
5. Inlet protection is required for Stage 3, 4, and 6.

**STAGE 1**
Inlet/Junction box location excavated

**STAGE 2**
Inlet/Junction box constructed but not backfilled

**STAGE 3**
Inlet constructed and backfilled

**STAGE 4**
Completed inlet with adjacent impermeable surface
Be a minimum of 1.5' above the elevation of the edge of the inside shoulder and a minimum of 6" below the elevation of the outside inlet working section.

Section A-A

Section B-B

Notes:

1. The elevation of the top of the required stone berm shall be a minimum of 1.5' above the elevation of the inlet working point and a minimum of 6" below the elevation of the outside edge of the inside shoulder.

2. This coarse aggregate inlet protection shall not be utilized during stage 1 and stage 2 inlet construction. See Sheet 1 of 4 for inlet protection typical applications and details.

3. 2" x 6" boards may be replaced with wire mesh openings less than 1" x 1".

Plan - On Grade

Plan - In Sag

Filter Water

Inlet

Flow

Special Drawing No. 1409 Coliseum Boulevard
Montgomery, AL 36130-3050

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CURB INLET PROTECTION (STAGE 2)
SINGLE OR DOUBLE WING INLET

NOTES:
1. ANCHORING STAKES SHALL BE SIZED, SPACED, AND BE OF A MATERIAL THAT EFFECTIVELY SECURES THE WATTLE. STAKE SPACING SHALL BE A MAXIMUM OF TWO FEET.
2. OVERLAP ENDS OF WATTLES PER MANUFACTURERS RECOMMENDATIONS (1'MIN, 3'MAX).
3. SEE ALDOT LIST II-24 FOR APPROVED WATTLES.
4. Silt fence or sand bags may also be used for this application. Hay bales not acceptable during this stage.

SECTION B-B

SECTION A-A

NOT TO SCALE
1. CURB INLET PROTECTION CAN ALSO BE USED AT OTHER EDGE-OF-PAVEMENT TYPE INLETS SUCH AS TYPE "E" INLETS.

2. SEE SHEET 3 OF 4 FOR INLET PROTECTION WHERE INLET CONSTRUCTION HAS NOT BEEN COMPLETED.

3. THIS CURB INLET PROTECTION METHOD CAN BE USED DURING ANY STAGE OF BASE AND PAVEMENT CONSTRUCTION.

4. BAG HEIGHT AND NUMBER OF BAGS SHOULD BE BASED ON CURB HEIGHT AND USE OF TRAVELWAY.

5. SEDIMENT SHOULD BE CONTROLLED PRIOR TO ENTERING GUTTER. GUTTER CHECKS AND SAND BAG BARRIER OR TYPICAL (SAND BAG) PROTECTION FOR INLET IN SAG WILL BE MADE AS APPROPRIATE FOR ITEMS USED.

6. REMOVE ACCUMULATED SEDIMENT AFTER EVERY RAINFALL. SWEEP SEDIMENT FROM HARD SURFACES AND DISPOSE OF APPROPRIATELY AWAY FROM INLETS AND/OR WATER BODIES.

7. IF DENUDED AREAS EXIST BEHIND THE INLET, A SEDIMENT BARRIER SHOULD BE INSTALLED (SEE SHEET 3 OF 4) WILL BE MADE AS APPROPRIATE FOR ITEMS USED.

8. PAYMENT FOR CURB INLET PROTECTION FOR WORK REQUIRED BEYOND STAGE 2 (80 BAGS MIN)

3 BAGS HIGH AND STAGGERED. NO GAPS ARE EVIDENT.

PLACE SAND BAGS SO THAT NO GAPS ARE EXIST. 3 BAGS HIGH AND STAGGERED.

NOTE: THE FLOW-LINE MUST BE LOWER THAN THE TOP OF CURB.

NOTE: THE FLOW-LINE BAG MUST BE LOWER THAN THE TOP OF CURB.

OVERLAP ONTO CURB SAND BAGS TO "S" INLET ON GRADE SINGLE WINGED FLOW TRAVELWAY.

OVERLAP ONTO CURB SAND BAGS TO FLOW TRAVELWAY.

FLOW 8' DIA. (MIN.) THAN THE TOP OF CURB.

FLOW-LINE MUST BE LOWER (3 SAND BAGS WIDE MIN.) SPILLWAY (1 SAND BAG HIGH) SPILLWAY.

NOTE: THE FLOW-LINE BAG MUST BE LOWER THAN THE TOP OF CURB.

OVERLAP ONTO CURB SAND BAGS TO "S" INLET ON GRADE SINGLE WINGED FLOW TRAVELWAY.

OVERLAP ONTO CURB SAND BAGS TO FLOW TRAVELWAY.

FLOW 8' DIA. (MIN.) THAN THE TOP OF CURB.

FLOW-LINE MUST BE LOWER (3 SAND BAGS WIDE MIN.) SPILLWAY (1 SAND BAG HIGH) SPILLWAY.

NOTE: THE FLOW-LINE BAG MUST BE LOWER THAN THE TOP OF CURB.

OVERLAP ONTO CURB SAND BAGS TO "S" INLET ON GRADE SINGLE WINGED FLOW TRAVELWAY.

OVERLAP ONTO CURB SAND BAGS TO FLOW TRAVELWAY.

FLOW 8' DIA. (MIN.) THAN THE TOP OF CURB.

FLOW-LINE MUST BE LOWER (3 SAND BAGS WIDE MIN.) SPILLWAY (1 SAND BAG HIGH) SPILLWAY.
FLOATING BASIN BOOM APPLICATIONS

TYPICAL FLOATING BASIN BOOM INSTALLATION

NOTES:
1. The contractor is responsible for selection of the appropriate type of floating basin boom and installation method based on water body conditions.

2. Floating basin booms are to be installed in accordance with manufacturers' specifications.

3. Floating basin booms can be staked and/or anchored in steel or wooden stake.

4. Floating basin booms are required to prevent current migration within the basin area. It is not required to be installed as the primary erosion control method, or to capture sediment from upland areas as a primary function. Other erosion control and sediment control measures should be incorporated as provided in the plans and standard drawings.

5. Floating basin boom work may be subject to proprietary floating basin boom design control. It may also be used.

LEGEND

- SPECIAL FILL OR WORK AREA
- ANCHOR/STAKE
- ANCHOR
- WOODING BOLT BY ANCHOR

FLOATING BASIN BOOM

CURRENT ALABAMA DEPARTMENT OF TRANSPORTATION

1. Floating basin boom application areas are required to prevent current migration within the basin area. It is not required to be installed as the primary erosion control method, or to capture sediment from upland areas as a primary function. Other erosion control and sediment control measures should be incorporated as provided in the plans and standard drawings.

2. Floating basin boom work may be subject to proprietary floating basin boom design control. It may also be used.

NOT TO SCALE
1. A stabilized construction entrance shall be constructed at locations shown on the erosion control sheets as approved by the engineer based on safety, economy, and construction sequence. The entrance is points of access from stabilized areas of the project to public roads where offsite tracking or mud could occur. Traffic from unfavorable areas of the project shall be reduced such that the stabilized entrance adequately functions, or other positive means shall be used as required to limit and direct vehicular passages across the stabilized entrance.

2. The contractor may propose an alternative technique to minimize offsite tracking of sediments. The alternative must be reviewed and approved by the engineer prior to its use.

3. All materials spilled, dropped, or tracked onto public roads (including the stabilized construction entrance aggregate and construction mud) shall be removed daily, or more frequently if so directed by the engineer.

4. Aggregates shall be ADOT size #1. Sizes containing excessive small aggregate will track off the project and are unsuitable.

5. Stabilized construction entrances shall be maintained in a condition that will allow it to perform its function to prevent offsite tracking. Additional stabilization of the entrance may be required to limit the mud tracked.

6. The nominal size of a standard stabilized construction entrance is 15’ wide, unless otherwise shown in the plans. if the volume of entering and exiting vehicles warrant, a 30’ width may be used if approved by the engineer.
TEMPORARY DEWATERING STRUCTURE (BERM AND FABRIC)

NOTES:
1. THE PRIMARY USE OF THE TEMPORARY DEWATERING STRUCTURE IS FOR DEWATERING COFFERDAMS, TRENCHES, SPREAD FOOTINGS, ETC.
2. THE ACCUMULATED SEDIMENT MUST BE REMOVED WHEN THE DRAIN IS HALF FULL.
3. SILT FENCE MUST BE PLACED BETWEEN THE TEMPORARY DEWATERING STRUCTURES.
4. THE USE OF SOCKS TO COLLECT SEDIMENT WHEN PUMPING FROM TEMPORARY DEWATERING STRUCTURE INTO AN ADJACENT STREAM MAY BE USED WHEN APPROVED BY THE ENGINEER.
5. SUNK SILT FENCE BETWEEN SEDIMENT AGGREGATE (CLASS 2) AND THE TEMPORARY DEWATERING STRUCTURE.
6. FRENCH FILTER FABRIC IS REQUIRED.
7. THE DETAILS SHOWN ARE OPTIONAL RECOMMENDATIONS, BUT NOT MANDATORY.

TEMPORARY DEWATERING STRUCTURE VOLUMES

<table>
<thead>
<tr>
<th>TYPE</th>
<th>DIA. (IN)</th>
<th>MAX. CAPACITY (GPM)</th>
<th>RATE (GPM)</th>
<th>VOLUME REQUIRED (CUBIC FT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>6,400</td>
<td>140</td>
<td>8,400 GPM</td>
<td>10,000 FT</td>
</tr>
<tr>
<td>3</td>
<td>15,600</td>
<td>260</td>
<td>5,000 GPM</td>
<td>2600 FT</td>
</tr>
<tr>
<td>4</td>
<td>33,900</td>
<td>260</td>
<td>33,900 GPM</td>
<td>33,900 FT</td>
</tr>
<tr>
<td>6</td>
<td>69,600</td>
<td>1,700</td>
<td>1,700 GPM</td>
<td>1,700 FT</td>
</tr>
</tbody>
</table>

VOLUME OF DEWATERING STRUCTURE SHOWN BY SECTION AND SEDIMENT COLLECTOR PUMP TO BE BASED ON USE OF 4 INCH CONSTRUCTION PUMP SHOWN IN THE ABOVE VOLUME.
1. **Temporary Culvert Stream Crossings** provide a means for vehicles and equipment to safely cross a watercourse while minimizing damage to the channel and/or banks.

2. Temporary Culvert Stream Crossings shall be designed to safely pass the expected mean water flow of the stream for the time of year and length of time that they are installed.

3. Temporary Stream Crossings shall be designed to ensure structural integrity and stability, and minimize visual and environmental impacts. The use of permanent crossings and permanent access fill shall be minimized to the extent practicable.

4. A continuous program of effective erosion and sediment control measures shall be established prior to and throughout the time of construction. The use of temporary crossings and temporary access fill shall be minimized to the extent practicable.

5. A continuous program of effective erosion and sediment control measures shall be established prior to and throughout the time of construction. The use of temporary crossings and temporary access fill shall be minimized to the extent practicable.

6. The contractor may propose other options for temporary stream crossings such as steel/timber bridge, ford or mats.

7. The contractor shall submit detailed stream crossing plans in accordance with ALDOT Specification Section 107.23.

---

**NOT TO SCALE**
1. Temporary diversion channels may be used to divert normal stream flow from an existing stream until such work can be completed.

2. Contractor shall determine culvert and diversion channel sizes, construction methods and materials for temporary facility crossings.

3. Filter fabric or suitable plastic sheeting may be used without rip-rap for channel flow velocities of less than 3.0 fps.

4. Rip-rap with filter fabric may be used for normal stream flow velocities of 3.0 fps to 7.5 fps. The rip-rap shall be sized using the design criteria of Section A-A: Liner Limits.

5. Locations of types of temporary diversion will not be shown on the plans or required thereon, nor will specifications for materials or construction methods be included in the standard specifications.

6. Temporary channels must be maintained and perfected by the contractor before flow is diverted.

7. During construction of diversion channels damage to the existing stream, channel borders, and edges of the channel construction shall be minimized.

8. New channel construction shall be completed in the dry before diverting water into the existing channel unless it is not feasible. Temporary dirt diversion structures can be used, but take care that these structures are in any non-erodible material.

9. Construction of the diversion facilities and culverts should proceed as follows: show temporary channel location plans on the plans, detail for open cut temporary channels, and provide specifications for the following:

   - Rip-rap, filter bags (see SP.DWG.ESC-503), and silt fence
   - Temporary plugging
   - Temporary dewatering
   - Temporary erosion control measures

10. The details provided depict typical temporary diversion channels. The details shown are optional recommendations, but not mandatory.

11. The contractor may propose the use of other erosion control such as rip-rap, silt fence and other construction.

12. After the completion of the design, all items and work associated with construction are subject to the designer's approval.
SUSPENDED PIPE DIVERSION (UPSTREAM) GENERAL NOTES

1. SUSPENDED PIPE DIVERSIONS MAY BE USED TO DIVERT FLOW OR TO DIVERT FLOW WHERE THE DURATION OF CONSTRUCTION IS EXPECTED TO BE BRIEF.

2. SUSPENDED PIPE DIVERSIONS MAY BE USED TO DIVERT FLOW WHERE THE DURATION OF CONSTRUCTION IS EXPECTED TO BE BRIEF.

3. SUSPENDED PIPE DIVERSIONS MAY BE USED TO DIVERT FLOW WHERE THE DURATION OF CONSTRUCTION IS EXPECTED TO BE BRIEF.

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13. SUSPENDED PIPE DIVERSIONS MAY BE USED TO DIVERT FLOW WHERE THE DURATION OF CONSTRUCTION IS EXPECTED TO BE BRIEF.

14. SUSPENDED PIPE DIVERSIONS MAY BE USED TO DIVERT FLOW WHERE THE DURATION OF CONSTRUCTION IS EXPECTED TO BE BRIEF.
1. Inlet and spillway locations to be adjusted to fit existing site contours. (basin is not necessarily rectangular shaped)

2. Baffles shall be constructed of 100% coconut (coir) fiber material supported between posts with a wire mesh backing as shown below, rows shall be evenly spaced through the basin.

3. Flocculant shall be placed at the inlet end of the basin in the flocculant introduction zone. Flocculant condition shall be monitored and shall be replaced when it no longer appears to be effective.

4. Do not construct temporary sedimentation basin in floodway.

5. Temporary sedimentation basins shall be constructed utilizing existing ground surface where possible to minimized disturbance.

NOTES:

1. Inlet and spillway locations to be adjusted to fit existing site contours. (basin is not necessarily rectangular shaped)

2. Baffles shall be constructed of 100% coconut (coir) fiber material supported between posts with a wire mesh backing as shown below, rows shall be evenly spaced through the basin.

3. Flocculant shall be placed at the inlet end of the basin in the flocculant introduction zone. Flocculant condition shall be monitored and shall be replaced when it no longer appears to be effective.

4. Do not construct temporary sedimentation basin in floodway.

5. Temporary sedimentation basins shall be constructed utilizing existing ground surface where possible to minimized disturbance.

Filters shall be constructed of 100% coconut (coir) fiber material supported between posts with a wire mesh backing as shown below, rows shall be evenly spaced through the basin.

Flocculant shall be placed at the inlet end of the basin in the flocculant introduction zone. Flocculant condition shall be monitored and shall be replaced when it no longer appears to be effective.

Do not construct temporary sedimentation basin in floodway.

Temporary sedimentation basins shall be constructed utilizing existing ground surface where possible to minimized disturbance.
FLOCCULANT SOCK USE WITH WATTLE DITCH CHECK
(SEE SPECIAL DRAWING ESC-300, SHEET 4 OF 8)

FLOCCULANT BLOCK USE WITH TEMPORARY SLOPE DRAIN
(SEE SPECIAL DRAWING ESC-300, SHEET 2 OF 8)

FLOCCULANT BLOCK USE WITH SEDIMENTATION BASIN
(SEE SPECIAL DRAWING ESC-300, SHEET 4 OF 8)

NOTES:

1. AN ALDOT LIST OF APPROVED FLOCCULANTS CAN BE FOUND IN THE MSDAR MANUAL LIST 13-24 "TEMPORARY EROSION AND SEDIMENT CONTROL PRODUCTS."

2. SOME FLOCCULANTS ARE SOIL SPECIFIC AND MUST BE SELECTED BASED ON SOIL AND RUNOFF TESTING.

3. HEAVY SEDIMENT AND SAND SHOULD BE REMOVED PRIOR TO THE LOCATION OF FLOCCULANT APPLICATION.

4. PASSIVE DOSING OF FLOCCULANTS REQUIRES FLOWING WATER WITH A MODERATE VELOCITY.

5. FLOCCULANTS REQUIRE AN INITIAL PERIOD OF MIXING/AGITATION FOLLOWED BY A PERIOD OF LOW VELOCITY TO ALLOW THE SETTLING OF PARTICLES.

6. SEDIMENT CONTROL MEASURES MUST BE UTILIZED TO CAPTURE THE FLOCCULATED MATERIAL AND PREVENT RE-SUSPENSION PRIOR TO DISCHARGE.

7. FLOCCULANT SHOULD NEVER BE APPLIED DIRECTLY TO LIVE STREAMS OR WATERS OF THE STATE.

8. FLOCCULANT BLOCKS CAN DRY OUT PREVENTING DISSOLUTION. BLOCKS MUST BE PROTECTED FROM THE SUN AND SHOULD BE REMOVED IF POSSIBLE.

9. FLOCCULANT SOCKS WILL FLATTEN WHEN EMPTY INDICATING THE NEED FOR REPLACEMENT.

10. POWDER FORMS OF FLOCCULANT TYPICALLY MUST BE REPLACED AFTER EACH RAIN EVENT.

FLOCCULANT Application.

FLOCCULANT SOCK USE WITH WATTLE DITCH CHECK
(SEE SPECIAL DRAWING ESC-300, SHEET 4 OF 8)

FLOCCULANT POWDER USE WITH WATTLE DITCH CHECK
(SEE SPECIAL DRAWING ESC-300, SHEET 4 OF 8)

FLOCCULANT SOCK USE WITH SEDIMENTATION BASIN
(SEE SPECIAL DRAWING ESC-300, SHEET 4 OF 8)
1. Rolled erosion control products shall be installed parallel to the direction of flow. There shall be an anchor trench at the upstream edge of the installation. Upstream repps shall overlap any downstream repps. Adjacent repps shall also be overlapped.

2. Staples shall be placed on overlaps at the toe of the repp, and throughout the repp installation in accordance with manufacturer's recommendations to ensure the repp is in contact with the underlying soil.

3. Hydraulic erosion control products shall be installed by spraying in opposing directions to provide a solid blanket of product. Repps shall be applied by equipment and at a rate that meets the recommendations of the product manufacturer specific to the slope.

4. Hydraulic erosion control products should not be installed in areas subject to channelized flow or areas having a potential to flood during a local 2 year, 24 hour storm event.

5. Repp Type C2 and C4 are to be placed on top of seeding. Repp Type C6, C8, and C10 are to be placed below the topsoil and seeding. The topsoil and seeding must be covered by either sod or repp Type C2 or C4. See Options A and B. Only use option A if water can be kept out of the channel until vegetated. If not, use Option B.


NOT TO SCALE