48" (1220) x 30" (760) MANHOLE

48" (1220) x 48" (1220) MANHOLE

66" (1675) x 30" (760) MANHOLE

66" (1675) x 48" (1220) MANHOLE

SECTION A-A

SECTION B-B

BOX MANHOLE COVER SLAB DETAILS

NOTES:
1. COVER SLABS SHALL BE PRE-CAST.
2. ALL BARS SHALL BE #5 (M6) SPACED AT 6" (150) UNLESS NOTED OTHERWISE.
3. MINIMUM BAR COVER = 1/2" (13).
4. DIMENSIONS TO MATCH OUTSIDE TO OUTSIDE DIMENSIONS OF BOX.
**48" (1220) x 30" (760) JUNCTION BOX**

**48" (1220) x 48" (1220) JUNCTION BOX**

**66" (1675) x 30" (760) JUNCTION BOX**

**66" (1675) x 48" (1220) JUNCTION BOX**

**NOTES:**
1. COVER SLABs ARE TO BE PRE-CAST.
2. ALL BARS ARE TO BE #6 (16mm) SPACED @ 2' (600mm) UNLESS NOTED OTHERWISE.
3. MINIMUM BARR COVER = 1½" (38mm).
4. DIMENSIONS TO MATCH OUTSIDE TO OUTSIDE DIMENSIONS OF BOX.

**SECTION A-A**

**SECTION B-B**

**JUNCTION BOX COVER SLAB DETAILS**
CONCRETE HEADWALL FOR UNDERDRAIN OUTLET
NOT TO SCALE

NOTES:

1. GEOTEXTILE FILTER FABRIC SHALL BE PLACED ENTIRELY OVER THE TOP OF UNDERDRAIN TRENCH AND LAPPED AS SHOWN.

2. SLOPE OF UNDERDRAINS SHALL MATCH ROADWAY GRADE, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

3. OUTLET PIPE CONFIGURATIONS SHALL USE 45 DEGREE ELBOWS OR SHALL USE STRAIGHT PIPE WITH A MINIMUM RADIUS OF 3' (900) TO DIRECT UNDERDRAIN PIPE INTO SIDE OF DRAINAGE INLET OR TO POSITIVE GRADE. PIPE SHALL ALSO BE NON-PERFORATED AND HAVE A SMOOTH INTERIOR.

4. RODENT SCREEN SHALL SNUGLY FIT THE PROVIDED SLOT WITH THE SCREEN LIP FITTING TIGHT TO THE BOTTOM FLOW LINE.

5. A 4' (1200) FLEXIBLE DELINEATOR SHALL BE FURNISHED AND INSTALLED AT THE DIRECTION OF THE ENGINEER TO MARK THE LOCATION OF THE CONCRETE HEADWALL. COST INCIDENTAL TO DOWNSPOUT SPLASH APRONS ITEM.

6. WHEN TWO LINES OF PIPE UNDERDRAIN DRAIN TO A LOW POINT, EACH PIPE MUST HAVE ITS OWN OUTLET.
LIMIT OF CONSTRUCTION

EXISTING GROUND

PHASE 1 EXCAVATION

INTERMEDIATE PHASES\nEXCAVATION

FINAL PHASE EXCAVATION

PERIMETER DRAIN/\nSMALLEY USING AS A CLEAN W\N WATER DIVERSION. SEE STANDARD SHEET

CUT SECTION

BREAK IN CROSS SLOPE MAY BE ELIMINATED TO DIRECT SURFACE FLOW LEFT OR RIGHT OR AS DIRECTED BY THE ENGINEER.

EDGE BERM TO BE PLACED AT THE END OF EACH WORK DAY AND USED UNTIL SLOPE IS COMPLETELY STABILIZED.

MINIMUM 5' [1500MM] OFFSET FROM TOE OF SLOPE

SILT FENCE, SEE STANDARD SHEET

FINAL PHASE EMBANKMENT

INTERMEDIATE PHASES\nEMBANKMENT

PHASE 1 EMBANKMENT

EXISTING GROUND

TEMPORARY SNALE, SEE STANDARD SHEET

FILL SECTION

NOTES:
1) EDGE BERRNS AND TEMPORAARY SLOPE DRANS SHALL BE CONSTRUCTED ALONG THE TOP OF ALL SLOPES TO INTERCEPT RUNOFF AND CONVEY IT DOWN THE SLOPE STAYS WITHOUT CREATING GULLIES OR WASHOUTS.

2) SLOPE FACES SHALL BE TRACKED WITH CLEATED EQUIPMENT SUCH THAT THE CLEAT MARKS ARE ORIENTED HORIZONTALLY.

3) ALL CUT AND FILL SLOPES OF THE HIGHWAY EMBANKMENT SHALL BE PERMANENTLY STABILIZED AS THE WORK PROGRESSES IN INCREMENTS NOT TO EXCEED 10' [3000MM] MEASURED ALONG THE SLOPE.

4) CROSS SLOPES SHALL BE 2% MINIMUM, 6% MAXIMUM.
ISOMETRIC VIEW

CONSTRUCTION AREA

A

B

GEOTEXTILE

WIRE MESH

POST

SECURE WITH WIRE OR STAPLES

FLOW

SECTION B-B

FASTEN GEOFABRIC TO WIRE MESH AT 6'0" (1500 mm) TYP.

6" x 6'1500 x 1 (50)

4 GAGE 16.0 WIRE MESH

FLOW

SECTION A-A

FASTEN AT 4 PLACES, EQUALLY SPACED

EMBED APPROX. 12" (300) OF GEOTEXTILE, BACKFILL TRENCH WITH SOIL AND COMPACT THOROUGHLY.

EXISTING GROUND

6" x 6'1500

GEOTEXTILE

CONNECTON DETAIL

FOR USE WITH JOINING TWO ADJACENT SILT FENCE SECTIONS

PLAN SYMBOL

REINFORCED

S.F.

R.S.F.

SILT FENCE

DEPARTMENT OF TRANSPORTATION

STANDARD NO. E-2 (2001)

SHT. 1 OF 1

APPROVED

RECOMMENDED

05/2/2001
NOTE: IF THE INLET IS NOT IN A LOW POINT, CONSTRUCT A SEDIMENT CONTROL EARTH Dike in the ditchline downstream from it. See Standard Sheet for additional information.
NOTES:
8. Stone check dams are intended for use in existing, proposed, and temporary ditches of all types as shown on plans or as directed by the engineer.
2L. For ditches less than 32" (750mm) in depth, place dam as directed.
SLOPE VARY
DITCH FLOW LINE

SECTION B-B

PLAN SYMBOL
S.T.

NOTEs:
1. SEDIMENT TRAPS ARE INTENDED FOR USE IN EXISTING, PROPOSED, AND
   TEMPORARY DITCHES OF ALL TYPES WITH A MAXIMUM DRAINAGE AREA OF
   16 ACRES (6.5 HECTARES) AS SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER.
2. SIDE SLOPES SHALL BE STABILIZED WITH "TEMPORARY GRASS SEEDING, DRY GROUND"
   AND STRAW MULCH.
3. AN OUTLET STRUCTURE IS REQUIRED, STONE CHECK DAMS, PERFORATED RISER
   PIPES, STRAINER DEWATERING DEVICES, OR DRAINAGE PLETS MAY BE USED. SEE
   APPROPRIATE STANDARD SHEET FOR ADDITIONAL INFORMATION.
4. FOR SIZE, LOCATION, ETC. OF SEDIMENT TRAP, SEE CONSTRUCTION PHASING,
   M.O.T., AND EROSION CONTROL PLANS.
5. ALL SLOPES SHALL BE 2:1.
6. A 2:1 LENGTH TO WIDTH RATIO SHOULD BE ACHIEVED WHERE POSSIBLE; IF THIS IS
   NOT POSSIBLE, THE USE OF Baffles OR OTHER SPECIAL DESIGNS SHOULD BE
   INCORPORATED TO INCREASE FLOW TIME.
1. The work shall consist of the construction of a sediment trap around a drainage inlet to allow sedimentation to occur before runoff enters the drainage inlet.

2. Drainage inlet sediment traps shall be limited to a three (3) acre 0.2 hectare maximum drainage area.

3. The dimensions of the drainage inlet sediment trap are to be as indicated on the plans or as directed by the engineer.
ELEVATION

**NOTES:**
1. THIS DEVICE IS INTENDED TO BE USED AS AN OUTLET FOR SEDIMENT TRAPS.
2. PERFORATIONS SHALL BE 1" IN DIAMETER, LOCATED IN CONCAVE PORTIONS OF PIPE, SPACED 6" 0'-0" HORIZONTALLY AND VERTICALLY, AND SHALL NOT BE MADE ANY LOWER THAN 6'-0" ABOVE THE TOP OF THE OUTFALL PIPE.
3. THE PIPE OUTLET SHOWN SHALL ONLY BE USED WITH SEDIMENT TRAPS WITH DRAINAGE AREAS OF 5 ACRES (2.0 HECTARES) OR LESS. LARGER DRAINAGE AREAS WILL REQUIRE AN ENGINEERED DESIGN.

**PLAN SYMBOL**

**DELWARE DEPARTMENT OF TRANSPORTATION**

**RISER PIPE ASSEMBLY FOR SEDIMENT TRAP**

**STANDARD NO.** E-8 (2001)  
**SHT. 1 OF 2**

**APPROVED**  
**RECOMMENDED**
STABILIZATION OF EMBANKMENTS

NOTES:
1. STAPLES TO BE STAGGERED AT 18"(450) SPACING.
2. TOPSOIL UNDER EROSION CONTROL BLANKET IS TO BE TRACED AND SEEDED.
3. WHEN OFFSITE RUNOFF OCCURS, ADDITIONAL MEASURES AS DIRECTED BY THE ENGINEER SHALL BE USED TO ENSURE STABILITY OF EMBANKMENT.

STABILIZATION OF DITCHES

PLAN

NOTES:
1. ADDITIONAL STAPLES NOT SHOWN ARE REQUIRED AT OVERLAPS.
2. STAPLES ARE TO BE STAGGERED.
3. TOPSOIL UNDER EROSION CONTROL BLANKET IS TO BE TRACED AND SEEDED.

EROSION CONTROL BLANKET APPLICATIONS

STANDARD NO. E-9 (2001)
SHT. 1 OF 1
APPROVED
RECOMMENDED
SECTION A-A

SECTION B-B

PLAN

NOTES:
1. SECURING PINS ARE TO BE PLACED AT LOCATIONS SHOWN AND AT 24" (600) LONGITUDINAL AND LATERAL SPACING.
2. SEE PLANS FOR LOCATION, DIMENSIONS, GRADES, ETC.
3. USE OF R-7 RIPRAP WILL REQUIRE A SEPARATE PROFESSIONAL ENGINEERING DESIGN FOR SIGHT SPECIFIC CONDITIONS.

DEPARTMENT OF TRANSPORTATION

RIPRAP DITCH

_STANDARD NO._ E-10 (2001) _SHT._ 1 OF 1 _APPROVED_ _RECOMMENDED_
CHART A - STABILIZATION

<table>
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<tr>
<th>SYMBOL</th>
<th>SWALE GRADE</th>
<th>TYPE OF TREATMENT</th>
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<tr>
<td>1</td>
<td>0.5-2.0%</td>
<td>DRAINAGE AREA A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(5 AC 12 hso OR LESS)</td>
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<tr>
<td>2</td>
<td>2.0-8.0%</td>
<td>DRAINAGE AREA B</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(5 AC - 10 AC 2 hso - 4 hso)</td>
</tr>
<tr>
<td>3</td>
<td>8.0-20.0%</td>
<td>SEED USED WITH</td>
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<tr>
<td></td>
<td></td>
<td>EROSION CONTROL BL.</td>
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<td></td>
<td></td>
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<tr>
<td></td>
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<td>R-4 RRRAP</td>
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<tr>
<td></td>
<td></td>
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<td>ENGINEERED DESIGN</td>
</tr>
<tr>
<td></td>
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CHART B - SWALE DIMENSIONS

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>SWALE A</th>
<th>SWALE B</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>1' (3000 MIN.)</td>
<td>1' (3000 MIN.)</td>
</tr>
<tr>
<td>D</td>
<td>4' (12000 MIN.)</td>
<td>6' (18000 MIN.)</td>
</tr>
</tbody>
</table>

NOTES:
1. DIVERTED RUNOFF FROM A DISTURBED AREA SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE.
2. DIVERTED RUNOFF FROM AN UNDISTURBED AREA SHALL OUTLET DIRECTLY INTO AN UNDISTURBED STABILIZED AREA AT NON-EROSSIVE VELOCITY.
3. IF TEMPORARY SWALES OR CLEAN WATER DIVERSIONS ARE TO BE OPERATIONAL FOR LESS THAN 4 DAYS, THEY SHALL BE STABILIZED IN ACCORDANCE WITH CHART A PRIOR TO BECOMING OPERATIONAL.
4. IF TEMPORARY SWALES OR CLEAN WATER DIVERSIONS ARE TO BE OPERATIONAL FOR LESS THAN 4 DAYS, THEY SHALL BE STABILIZED WITH GEOTEXTILE IN ACCORDANCE WITH THE STANDARD DETAL "GEOTEXTILE LINED CHANNEL DIVERSION."

PLAN SYMBOL

A - 2 (COND) B - 3 (COND)

CLEAN WATER DIVERSION

A - 2 B - 3

TEMPORARY SWALE

DELAWARE
DEPARTMENT OF TRANSPORTATION

TEMPORARY SWALE

STANDARD NO. E-11 (2001) SHT. 1 OF 1

APPROVED

RECOMMENDED

04/17/2001
SECTION A-A

NOTES:

1. DIVERTED RUNOFF FROM A DISTURBED AREA SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE.

2. DIVERTED RUNOFF FROM AN UNDISTURBED AREA SHALL OUTLET INTO AN UNDISTURBED STABILIZED AREA AT NON-EROSIVE VELOCITY.

3. IF PERIMETER DIKE SWALES ARE TO BE OPERATIONAL FOR MORE THAN 4 DAYS, THEY SHALL BE STABILIZED IN ACCORDANCE WITH CHART A PRIOR TO BECOMING OPERATIONAL.

4. IF TEMPORARY SWALES OR CLEAN WATER DIVERSIONS ARE TO BE OPERATIONAL FOR LESS THAN 4 DAYS, THEY SHALL BE STABILIZED WITH GEOTEXTILE IN ACCORDANCE WITH THE STANDARD DETAIL "GEOTEXTILE-LINED CHANNEL DIVERSION".

PLAN SYMBOL

DELWARE DEPARTMENT OF TRANSPORTATION

PERIMETER DIKE / SWALE

STANDARD NO. E-12 (2001) SHT. 1 OF 1

APPROVED

RECOMMENDED
SECTION A-A

PLAN

CHART A - FLOW CHANNEL STABILIZATION

<table>
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<tr>
<th>TYPE</th>
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<th>TYPE OF TREATMENT</th>
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<tr>
<td>1</td>
<td>0.5-2.0%</td>
<td>SEED AND EROSION CONTROL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>BLANKET</td>
</tr>
<tr>
<td>2</td>
<td>2.0-4.0%</td>
<td>R-4 SRRAP</td>
</tr>
<tr>
<td>3</td>
<td>8.0-20%</td>
<td>ENGINEERED DESIGN</td>
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CHART B - EARTH DIKE DIMENSIONS

<table>
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<tr>
<th>SYMBOL</th>
<th>DIKE A (5-10 cc or less)</th>
<th>DIKE B (5-10 cc or less)</th>
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<tbody>
<tr>
<td>a-DIKE HEIGHT</td>
<td>24' (7300)</td>
<td>18' (5500)</td>
</tr>
<tr>
<td>b- DIKE WIDTH</td>
<td>12' (3600)</td>
<td>12' (3600)</td>
</tr>
<tr>
<td>c- FLOW WIDTH</td>
<td>48' (14400)</td>
<td>72' (21600)</td>
</tr>
<tr>
<td>c- FLOW DEPTH</td>
<td>44' (13500)</td>
<td>27' (8100)</td>
</tr>
</tbody>
</table>

NOTES:
1. IF DESIRED, TOP WIDTH MAY BE WIDER AND SIDE SLOPES MAY BE FLATTER TO FACILITATE CROSSING BY CONSTRUCTION TRAFFIC.
2. FIELD LOCATION SHOULD BE ADJUSTED AS NEEDED TO INSURE A STABILIZED OUTFALL.

PLAN SYMBOL

A-2

B-3
NOTES:
1. THE WORK SHALL CONSIST OF CONSTRUCTING A STILLING WELL FOR THE PURPOSE OF PUMPING CLEAN WATER AROUND A DISTURBED CONSTRUCTION AREA TO A STABILIZED OUTFALL.

2. THE DIMENSIONS OF THE STILLING WELL SHALL BE AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

PLAN SYMBOL

SW
NOTES:
1. THE WORK SHALL CONSIST OF CONSTRUCTING A SUMP PIT FOR THE PURPOSE OF FILTERING AND PUMPING WATER TO A STABILIZED OUTFALL.

2. GEOTEXTILE FOR THE 36" (900) CMP SHALL BE REPLACED WHEN CLOGGED WITH SEDIMENT.

3. 1/2" x 1/2" x 10" GAGE WIRE MESH SHALL BE PLACED AROUND THE REMOVABLE 36" (900) CMP BEFORE ATTACHING THE GEOTEXTILE TO INCREASE FLOW THROUGH THE GEOTEXTILE.

4. ALL PERFORATIONS SHALL BE 1" (25) IN DIAMETER AND 1/2" (12) ON CENTER IN ALL DIRECTIONS.

5. TYPE I SUMP PIT SHALL BE USED ONLY WHEN PUMPING IS NEEDED FOR LESS THAN 7 DAYS.
NOTES:

1. A DEWATERING BASIN (DB) IS USED TO REMOVE SEDIMENT FROM SEQUENCE-LADEN WATER PUMPED FROM A CONSTRUCTION SITE BEFORE THE WATER RE-ENTERS THE WATERWAY. THE DB SHAL HAVE A MINIMUM TOP WIDTH OF 5' (1.525M) AND A MINIMUM DEPTH OF 3' (0.914M). THE MINIMUM TOP LENGTH SHOWN IN THE PLAN IS USED ONLY FOR QUANTITY CALCULATIONS. BY THE ENGINEER, THE ACTUAL TOP LENGTH IN THE FIELD SHALL BE CALCULATED BY THE EQUATION:

   US CUSTOMARY: \( \text{TOP LENGTH (FEET)} = 26' + .32 \times Y \)

   METRIC: \( \text{TOP LENGTH (METERS)} = 7.93 + 0.48 \times Y \)

   WHERE \( Y \) IS THE MAXIMUM CAPACITY IN GALLONS PER MINUTE (CUBIC METERS PER SECOND) OF THE DEWATERING PUMP.

2. THE OUTFALL FROM THE BASIN TO THE RECEIVING WATERS SHALL BE STABILIZED. PUMPING INTO THE DB SHALL CEASE WHEN THE EFFLUENT FROM THE BASIN BECOMES SEQUENCE-LADEN.

3. A SUMP PIT OR STILLING WELL (SEE STANDARD SHEETS) SHALL BE USED IN CONJUNCTION WITH A DB. THE BASIN MAY BE BYPASS TO THE STABILIZED OUTFALL IF THE WATER BEING PUMPED IS NON-SEQUENCE-LADEN. DIRECT DISCHARGE TO THE RECEIVING WATERS SHALL CEASE AND BE REDIRECTED TO THE DB WHEN EFFLUENT FROM THE PUMP BECOMES SEQUENCE-LADEN.

4. MAINTENANCE MUST BE PERFORMED IN ORDER FOR THE DB TO FUNCTION PROPERLY. ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED DISPOSAL AREA WHEN THE BASIN IS FILLED TO WITHIN 2'-1500 MIN. FROM THE OUTFALL.

5. WHEN USED IN CONJUNCTION WITH A COFFERDAM, DEWATERING SHALL BEGIN NO SOONER THAN 12 HOURS AFTER COFFERDAM INSTALLATION IN ORDER TO ALLOW SEDIMENT PRODUCED DURING INSTALLATION TO SETTLE COMPLETELY.

PLAN SYMBOL

\( \text{D-WB} \)
OBELIQUE VIEW

FLOW

STONE TRENCH

2' (600) OVERLAP

PINS

(2x4) (600) MAX. LONGITUDINAL SPACING
(6x5) (50) MAX. LATERAL SPACING

PLAN

EXISTING CHANNEL WORK AREA

STONE TRENCHES

GEOTEXTILE

TEMPORARY DIVERSION CHANNEL

SECTION A-A

FLOW

STONE TRENCHES

GEOTEXTILE

NOTE: SEE PLANS FOR LOCATION, DIMENSIONS, GRADES, ETC.

PLAN SYMBOL

DEL. NO. 3 STONE

3/16" (10) DIA. WASHER

90°

8" (200)

3/16" X 5/8" PINS

FASTENING DETAIL

TRENCHING DETAIL

DEL. NO. 3 STONE

F (300)

STONE TRENCH

F (300)

STONE TRENCH

DEL. NO. 3 STONE

F (300)

STONE TRENCH

F (300)

GEOTEXTILE

G. L. C. D

DELAWARE
DEPARTMENT OF TRANSPORTATION

GEOTEXTILE-LINED CHANNEL DIVERSION

STANDARD NO. E-18 (200)

SHT. 1 OF 1

APPROVED

RECOMMENDED

04/17/2001
NOTES:
1. The work shall consist of installing flow diversions for the purpose of erosion control when construction activities take place within the stream channel such as bank stabilization or bridge abutment construction.
2. The diversion structure shall be installed from upstream to downstream.
3. The effective channel width shall be sized to pass a one-year storm event peak flow, or 1/3 of stream width, whichever is greater.
4. The sandbag diversion height (H) shall be 1' (300) above the peak elevation of the one-year storm.

DELaware
DEPARTMENT OF TRANSPORTATION

SANDBAG DIVERSION

STANDARD NO. E-19 (2001) SHT. 1 OF 1

APPROVED

04/07/2001
NOTES:

1. THE WORK SHALL CONSIST OF INSTALLING A SANDBAG DIKE FOR THE PURPOSE OF EROSION CONTROL.
   WHEN CONSTRUCTION ACTIVITIES TAKE PLACE WITHIN THE STREAM CHANNEL SUCH AS BANK STABILIZATION OR BRIDGE ABUTMENT CONSTRUCTION.

2. THE SANDBAG DIKE SHALL BE INSTALLED AT THE UPSTREAM LOCATION FIRST.

3. THE HEIGHT OF THE SANDBAG DIKE SHALL BE 1' (300MM) ABOVE THE PEAK ELEVATION OF THE ONE YEAR STORM OR EQUAL WITH THE TOP OF BANK, WHICHEVER IS LESS. SEE PLANS FOR INFORMATION.

4. THE SPILLWAY SHALL BE SIZED TO PASS A (1) ONE YEAR STORM EVENT PEAK FLOW, SEE PLANS.

5. THE PIPE, WHEN UTILIZED, SHALL BE SIZED TO PASS THE STREAM BASE FLOW.

PLAN SYMBOL

SBD

DELAWARE
DEPARTMENT OF TRANSPORTATION

SANDBAG DIKE

STANDARD NO. E-20 (2001) SHT. 1 OF 1

APPROVED RECOMMENDED

05/2/2001
NOTES:
1. ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED UNDER THE ENTRANCE, IF NECESSARY, A MOUNTABLE BERM WITH SLOPES SHALL BE ALLOWED TO FACILITATE Placement OF PIPES IN SHALLOW CONDITIONS.

2. THE LOCATION AND NUMBER OF STABILIZED CONSTRUCTION ENTRANCES SHALL BE AS INDICATED ON THE PLANS. ANY CHANGE IN LOCATION, ADDITION, OR DELETION OF AN ENTRANCE SHALL BE APPROVED IN ADVANCE BY THE ENGINEER.

3. DRAINAGE PIPE, IF UTILIZED, SHALL BE PAID FOR SEPARATELY UNDER THE APPROPRIATE BID ITEM.

4. THE TOP 2" (50) OF STONE SHALL BE REMOVED AND REPLACED WITH 2" (50) OF CLEAN STONE WHEN Voids ARE FILLED OR AS DIRECTED BY THE ENGINEER.
NOTES:
1. ALL P.V.C. PIPES ARE TO BE 4" 1000-LD, SCHEDULE 40.

2. ALL JOINTS OF THE FLOATATION SECTION SHALL BE SOLVENT WELDED. JOINTS OF SKIMMER SECTION NEED NOT BE WATER-TIGHT.

3. 4" 1000-LD FLEXIBLE DRAIN PIPE IS TO BE ATTACHED TO THE POND OUTLET STRUCTURE WITH WATER-TIGHT CONNECTIONS.

4. ORIFICE IS TO BE SIZED ACCORDING TO STORAGE VOLUME AND TO SLOWLY RELEASE 1/2 OF RUNOFF FOR AT LEAST 24 HOURS.

DELWARE
DEPARTMENT OF TRANSPORTATION

SKIMMER DEWATERING DEVICE

STANDARD NO. E-22 (2001)
SHT. 1 OF 1

APPROVED

RECOMMENDED

05/2/2001
FLOATING TURBIDITY CURTAIN

NOTE:  
1) ADDITIONAL PANEL REQUIRED FOR DEPTHS GREATER THAN 5' (1524)
2) FLOATING TURBIDITY CURTAIN SHALL REACH BOTTOM UP TO DEPTHS OF 10' (3048) BY USING TWO PANELS. DEPTHS GREATER THAN 10' (3048) SHALL REQUIRE SPECIAL DEPTH CURTAINS SPECIFICALLY CALLED FOR IN THE PLANS OR AS DIRECTED BY THE ENGINEER.
SECTION

ELEVATION

PLAN VIEW

STAKED TURBIDITY CURTAIN

SHALLOW WATER/MARSH APPLICATION

PLAN SYMBOL

DELWARE
DEPARTMENT OF TRANSPORTATION

TURBIDITY CURTAIN

STANDARD NO. E-25 (2001)
SHT. 2 OF 2
APPROVED

04/17/2021
NOTES:
8. THE PORTABLE SEDIMENT TANK SHOWN MAY BE USED IN SITES WHERE SPACE IS LIMITED TO CONSTRUCT A DEWATERING BASKET.

2. THE MAXIMUM PUMP DISCHARGE INTO THIS TYPICAL PORTABLE SEDIMENT TANK SHALL BE 425 GALLONS PER MINUTE OR LITERS PER SECOND. THE FILTER FABRIC SHALL BE REPLACED WHEN THE PORTABLE SEDIMENT TANK CAN NO LONGER ALLOW THIS FLOW RATE, WHEN THERE IS A TEAR, OR WHEN DIRECTED BY THE ENGINEER.

3. SEVERAL UN-CONNECTED OR CONNECTED IN PARALLEL PORTABLE SEDIMENT TANKS MAY BE USED WHEN A HIGHER FLOW RATE IS NEEDED TO DE-WATER THE JOB.

4. OTHER DESIGNS MAY BE USED PROVIDED THE HYDRAULIC DESIGN IS SUBMITTED TO AND APPROVED BY THE STORMWATER ENGINEER.

DELAWARE
DEPARTMENT OF TRANSPORTATION

PORTABLE SEDIMENT TANK

SHT. 1 OF 1

APPROVED
RECOMMENDED

05/2001
LONGITUDINAL STEEL 6 GAGE 14.5# WIRE
SPACED 3" (15) C.C., 26" (1650) LONG (Typ.)

TRANSVERSE STEEL 7 GAGE 14.5# WIRE
SPACED 8" (200) C.C.

SECTION A-A

NOTES:
1. LONGITUDINAL STEEL SHALL BE HELD IN PLACE BY CRADLES.
2. LETTERS AND CROSS TO BE COUNTERSUNK IN TOP OF MARKER 1/4" (6).
DATE

DELAWARE DEPARTMENT OF TRANSPORTATION

CHIEF ENGINEER

DESIGN ENGINEER

RECOMMENDED APPROVED

N.T.S.

SHT. STANDARD NO.

BOLLARD DETAILS

M-3 (2004)

1

8' (2450) OR 10' (3050)

4' (1220)

10' (3050)

1

NOTES:

6" (150) x 6" (150) (NOM) TREATED POST

3" (75) PLATE WELDED TO TUBE WITH 3" (75) O.C. HOLE

SEE DETAIL A-A

REFLECTOR PANEL (PLACE ON ALL FOUR SIDES)

HINGED 6" (150) STEEL HASP WELDED TO STEEL TUBE 3" (75) LONG

EYE BOLT LAGGED INTO POST

HINGED 6" (150) STEEL HASP WELDED TO STEEL TUBE 3" (75) LONG

EYE BOLT LAGGED INTO POST

SEE NOTE 4

2" (50) DIA. HOLE LOCATED 4" (100) ABOVE GRADE

CLASS B CONCRETE

6" (150) x 6" (150) x 3/4" (19) STEEL TUBE STOCK

2" (50) DIA. HOLE LOCATED 4" (100) ABOVE GRADE

STEEL TUBE TO EXTEND ½" (13) ABOVE GRADE TO KEEP WATER AND SEDIMENT FROM DRAINING INTO TUBE.

SHARED USE PATH INTERSECTION

1. THE 4" (100) CONCRETE SHARED-USE PATH SHALL BE FINISHED TO INCLUDE A TEXTURED WARNING SURFACE BY USING A JOINT STRIKE TO PRODUCE A ⅛" (3) DEEP V-JOINT AT 6" (150) O.C. PAYMENT FOR INSTALLING THE GROOVED FINISH SHALL BE INCIDENTAL TO THE SIDEWALK CONSTRUCTION.

2. FOR 8' (2450) AND 10' (3050) PATH WIDTH, THE OUTSIDE DIMENSION FROM CENTER OF BOLLARD TO EDGE OF PATH SHALL BE 2' (610) AND 3' (915) RESPECTIVELY.


4. STEEL TUBE TO EXTEND ½" (13) ABOVE GRADE WITH CONCRETE TO SLOPE AWAY FROM TUBE TO KEEP WATER AND SEDIMENT FROM DRAINING INTO TUBE.

SEE DETAIL 1

SEE NOTE 1

SEE NOTE 2

SEE DETAIL A-A

END OF PATH

SHARED USE PATH

REMOVABLE BOLLARD

SEE DETAIL

6" (150) x 6" (150) (NOM) TREATED POST

EYE BOLT LAGGED INTO POST

6" (150) x 6" (150) (NOM) TREATED POST

END OF PATH

BLACK STRIPE

YELLOW STRIPE

REMOVABLE BOLLARD

SEE DETAIL

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