

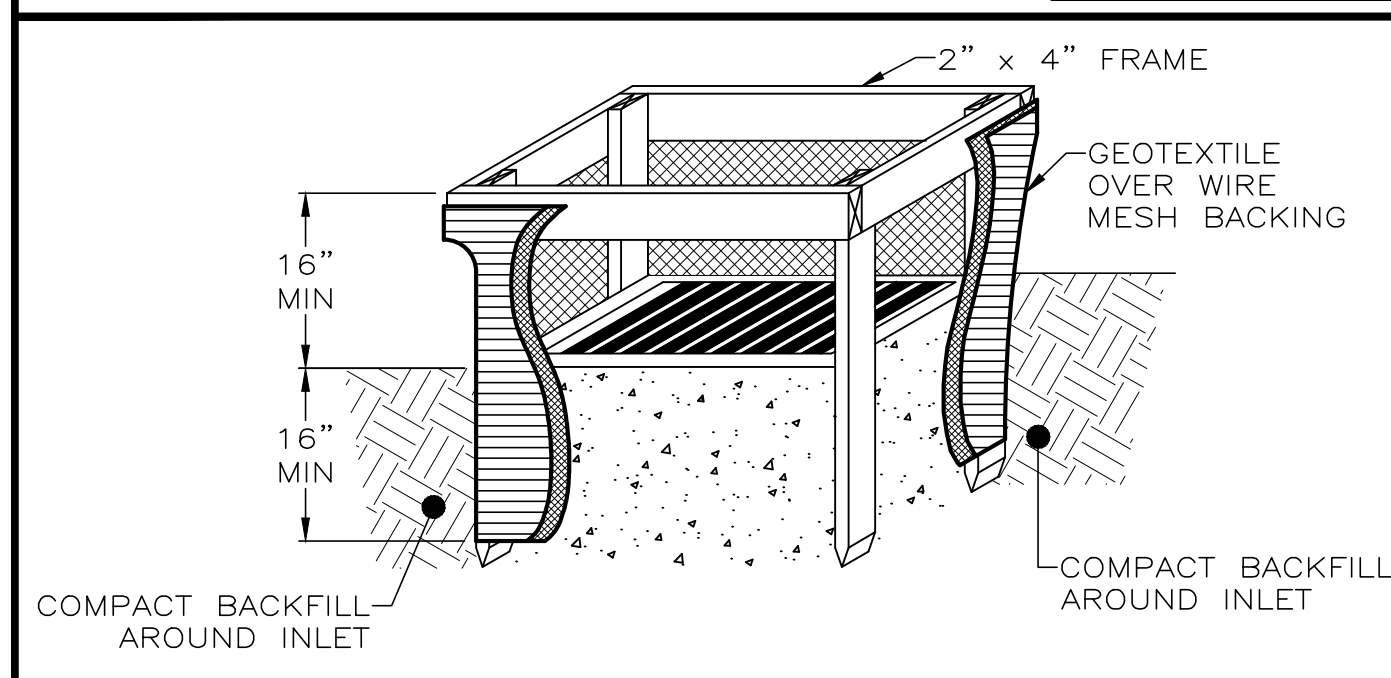
SEEDING DATES	SPECIES	POUNDS/1,000 SF	POUNDS/ACRE	NOTES
MAR. 1 TO AUG. 15	OATS	3	128 (4 BU)	FOR CLOSE MOWING & WATERWAYS WITH <2.0 FT/SEC VELOCITY
	TALL FESCUE	1	40	
	ANNUAL RYEGRASS	1	40	
	PERENNIAL RYEGRASS	1	40	
	TALL FESCUE	1	40	
	ANNUAL RYEGRASS	1	40	
	PERENNIAL RYEGRASS	1.25	55	
	PERENNIAL RYEGRASS	3.25	142	
	CREeping RED FESCUE	0.4	17	
	KENTUCKY BLUEGRASS	0.4	17	
AUG. 16TH TO NOV.	OATS	3	128 (3 BU)	DO NOT SEED LATER THAN AUGUST
	TALL FESCUE	1	40	
	ANNUAL RYEGRASS	1	40	
	WHEAT	3	120 (2 BU)	
	TALL FESCUE	1	40	
	ANNUAL RYEGRASS	1	40	
	PERENNIAL RYE	1	40	
	TALL FESCUE	1	40	
	ANNUAL RYEGRASS	1	40	
	ANNUAL RYEGRASS	1.25	40	
PERENNIAL RYEGRASS	3.25	40		
CREeping RED FESCUE	0.4	40		
KENTUCKY BLUEGRASS	0.4	40		

POUNDS/ACRE	POUNDS/1,000 SF	NOTES
GENERAL USE:		
CREeping RED FESCUE	20-40	1/2-1
DOMESTIC RYEGRASS	10-20	1/4-1/2
KENTUCKY BLUEGRASS	20-40	1/2-1
TALL FESCUE	40-50	1-1 1/4
TURF-TYPE (DWARF) FESCUE	90	2 1/4
STEEP BANKS OR CUT SLOPES:		
TALL FESCUE	40-50	1-1 1/4
CROWN VETCH	10-20	1/4-1/2
TALL FESCUE	20-30	1/2-3/4
FLAT PEA	20-25	1/2-3/4
TALL FESCUE	20-30	1/2-3/4
ROAD DITCHES AND SWALES:		
TALL FESCUE	40-50	1-1 1/4
TURF-TYPE:		
(DWARF) FESCUE	90	2 1/4
KENTUCKY BLUEGRASS	5	0.1
LAWNS:		
KENTUCKY BLUEGRASS	100-120	2
PERENNIAL RYEGRASS	100-120	2
KENTUCKY BLUEGRASS	100-120	2
CREeping RED FESCUE		1-1/2
NOTE: OTHER APPROVED SEED SPECIES MAY BE SUBSTITUTED.		
PERMANENT SEEDING		
NOTE: STRAW MULCHING SHALL BE APPLIED AT A RATE OF 90 POUNDS PER 1,000 SF OF DISTURBED AREA OR TWO (2) TONS/ACRE. ALL HYDROSEEDING MUST BE WOOD CELLULOSE FIBER AND APPLIED AT 2,000 LBS/AC OR 46 POUNDS PER 1,000 SF.		

NOVEMBER 1 TO FEB. 29 USE MULCH ONLY OR DORMANT SEEDING
NOTE: OTHER APPROVED SPECIES MAY BE SUBSTITUTED.

TEMPORARY SEEDING

SEEDING CHARTS

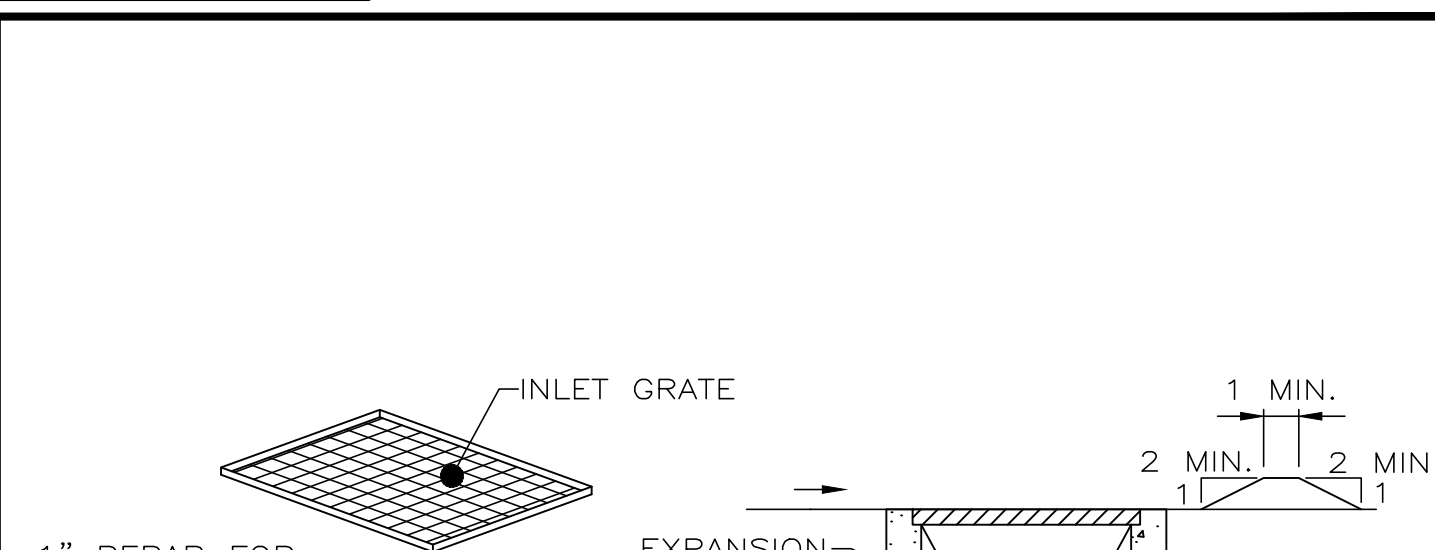


NOTES FOR INLET PROTECTION IN SWALES, DITCH LINES OR YARD INLETS:

- INLET PROTECTION SHALL BE CONSTRUCTED EITHER BEFORE UPSLOPE LAND DISTURBANCE BEGINS OR BEFORE THE STORM DRAIN BECOMES OPERATIONAL.
- THE EARTH AROUND THE INLET SHALL BE EXCAVATED COMPLETELY TO A DEPTH AT LEAST 16 INCHES.
- THE WOODEN FRAME SHALL BE CONSTRUCTED OF 2-BY-4-INCH CONSTRUCTION-GRADE LUMBER. THE 2-BY-4-INCH POSTS SHALL BE DRIVEN 18 INCHES INTO THE GROUND AT FOUR CORNERS OF THE INLET AND THE TOP PORTION OF 2-BY-4-INCH FRAME ASSEMBLY USING THE OVERLAP JOINT SHOWN. THE TOP OF THE FRAME SHALL BE AT LEAST 6 INCHES BELOW ADJACENT ROADS IF PONDED WATER WOULD POSE A SAFETY HAZARD TO TRAFFIC.
- WIRE MESH SHALL BE OF SUFFICIENT STRENGTH TO SUPPORT FABRIC WITH WATER FULLY IMPOUNDED AGAINST IT. IT SHALL BE STRETCHED TIGHTLY AROUND THE FRAME AND FASTENED SECURELY TO THE FRAME.
- GEOTEXTILE SHALL HAVE AN EQUIVALENT OPENING SIZE OF 20-40 SIEVE AND BE RESISTANT TO SUNLIGHT. IT SHALL BE STRETCHED TIGHTLY AROUND THE FRAME AND FASTENED SECURELY. IT SHALL EXTEND FROM THE TOP OF THE FRAME TO 18 INCHES BELOW THE INLET NOTCH ELEVATION. THE GEOTEXTILE SHALL OVERLAP ACROSS ONE SIDE OF THE INLET SO THE ENDS OF THE CLOTH ARE NOT FASTENED TO THE SAME POST.
- BACKFILL SHALL BE PLACED AROUND THE INLET IN COMPACTED 6 INCH LAYERS UNTIL THE EARTH IS EVEN WITH NOTCH ELEVATION ON ENDS AND TOP ELEVATION ON SIDES.
- A COMPACTED EARTH DIKE OR A CHECK DAM SHALL BE CONSTRUCTED IN THE DITCH LINE BELOW THE INLET IF THE INLET IS NOT IN A DEPRESSION AND IF RUNOFF BYPASSING THE INLET WILL NOT FLOW TO A SETTLING POND. THE TOP OF EARTH DIKES SHALL BE AT LEAST 6 INCHES HIGHER THAN THE TOP OF THE FRAME.

INLET PROTECTION DETAIL

NOT TO SCALE

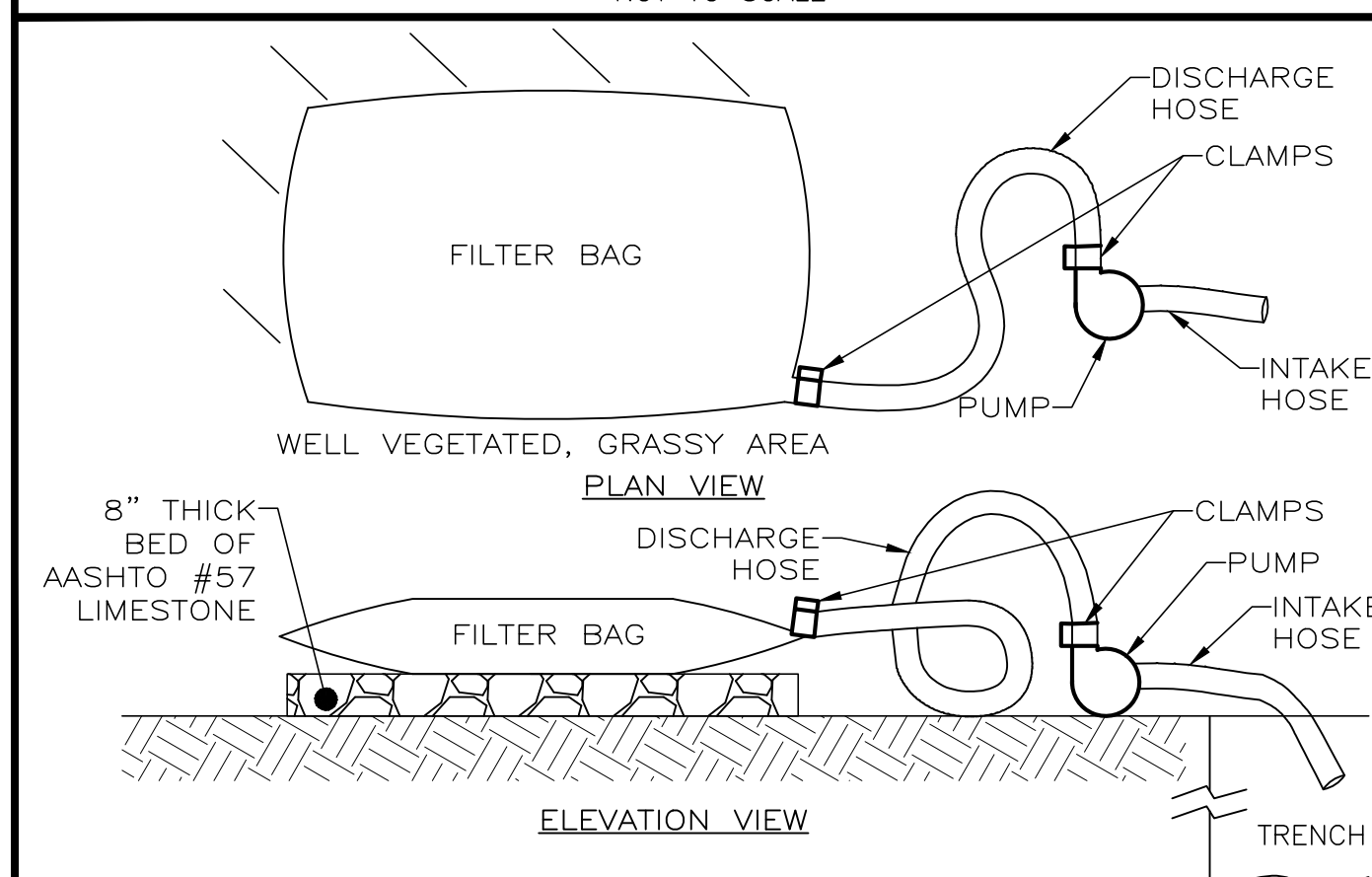


NOTES:

- MAXIMUM DRAINAGE AREA = 1/2 ACRE.
- INLET PROTECTION IS NOT REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP.
- BERMS REQUIRED FOR ALL INSTALLATIONS.
- EARTHEN BERM IN ROADWAY SHALL BE MAINTAINED UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM ON ROADWAY SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. EARTHEN BERM IN CHANNEL SHALL BE MAINTAINED UNTIL PERMANENT STABILIZATION IS COMPLETED OR TO REMAIN PERMANENTLY.

SILTSACK DETAIL

NOT TO SCALE



PUMPED WATER FILTER BAG DETAIL

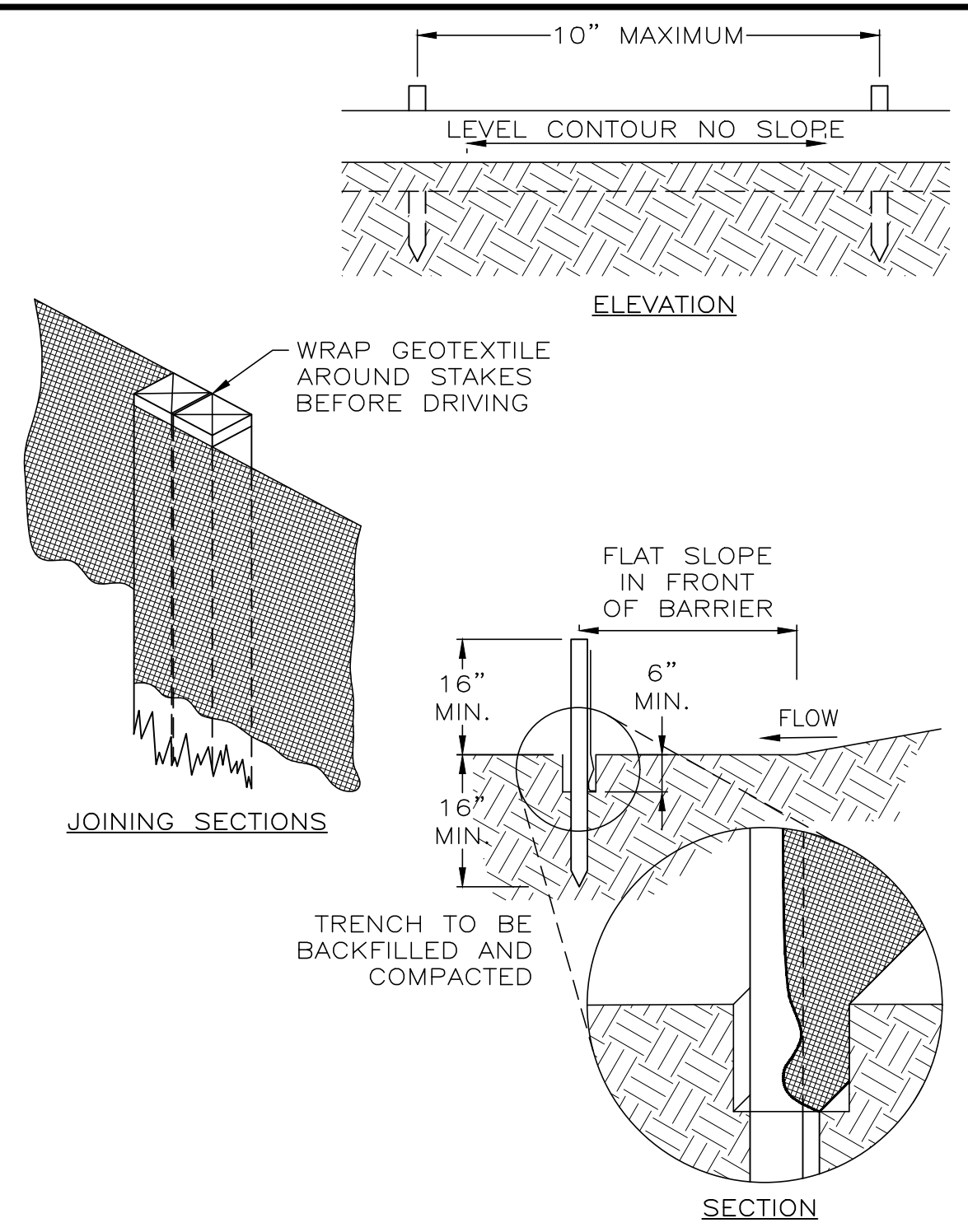
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NOTES:

- USE FILTER BAGS MADE FROM NON-WOVEN GEOTEXTILE MATERIAL SEWN WITH HIGH STRENGTH, DOUBLE STITCHED "J" TYPE SEAMS, CAPABLE OF TRAPPING PARTICLES LARGER THAN 150 MICRONS.
- A SUITABLE MEANS OF ACCESSING THE BAG WITH MACHINERY REQUIRED FOR DISPOSAL PURPOSES MUST BE PROVIDED. REPLACE FILTER BAGS WHEN THEY BECOME 1/2 FULL. KEEP SPARE BAGS AVAILABLE FOR REPLACEMENT OF THOSE THAT HAVE FAILED OR ARE FILLED.
- PLACE BAGS IN WELL-VEGETATED (GRASSY) AREAS, AND DISCHARGE ONTO STABLE, EROSION RESISTANT AREAS. WHERE THIS IS NOT POSSIBLE, PROVIDE A GEOTEXTILE FLOW PATH. DO NOT PLACE BAGS ON SLOPES GREATER THAN 5%.
- INSERT PUMP DISCHARGE HOSE INTO THE BAGS IN THE MANNER SPECIFIED BY THE MANUFACTURER AND SECURELY CLAMPED.
- THE PUMPING RATE SHOULD BE NO GREATER THAN 750 GPM OR 1/2 THE MAXIMUM SPECIFIED BY THE MANUFACTURER, WHICHEVER IS LESS. PUMP INTAKES SHALL BE FLOATING AND SCREENED.
- INSPECT FILTER BAGS DAILY. IF ANY PROBLEM IS DETECTED, CEASE PUMPING IMMEDIATELY AND DO NOT RESUME UNTIL THE PROBLEM IS CORRECTED.

FABRIC-SILT FENCE NOTES:

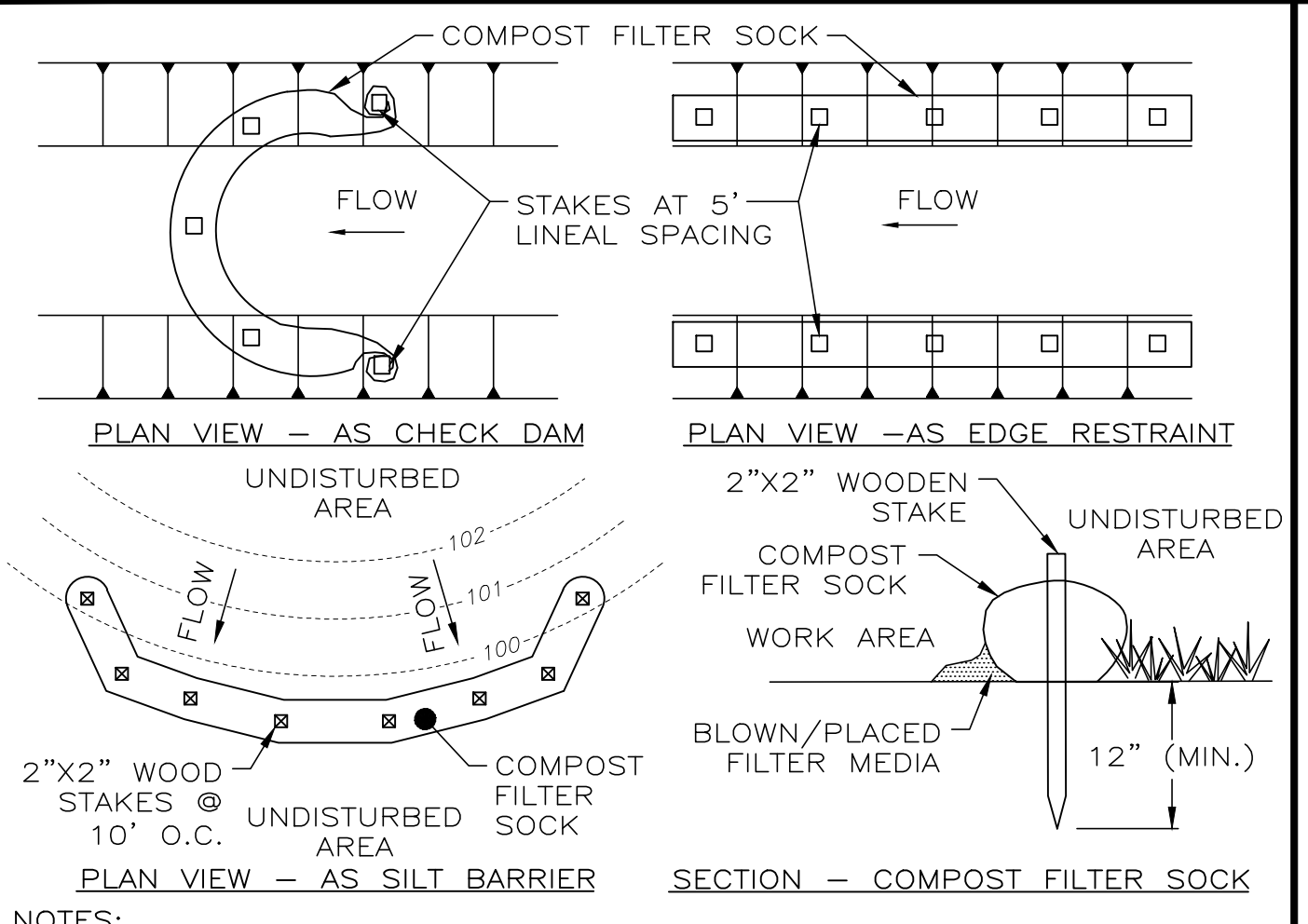
- SILT FENCE SHALL BE CONSTRUCTED BEFORE UPSLOPE LAND DISTURBANCE BEGINS. WHERE POSSIBLE, SILT FENCE SHALL BE PLACED ON THE FLATTEST AREA AVAILABLE.
- ALL SILT FENCE SHALL BE PLACED AS CLOSE TO THE CONTOUR AS POSSIBLE SO THAT WATER WILL NOT CONCENTRATE AT LOW POINTS IN THE FENCE AND SO THAT SMALL SWALES OR DEPRESSIONS WHICH MAY CARRY SMALL CONCENTRATED FLOWS TO THE SILT FENCE ARE DISSIPATED ALONG ITS LENGTH.
- TO PREVENT WATER PONDED BY THE SILT FENCE FROM FLOWING AROUND THE ENDS, EACH END SHALL BE CONSTRUCTED UPSLOPE SO THAT THE ENDS ARE AT A HIGHER ELEVATION.
- WHERE POSSIBLE, VEGETATION SHALL BE PRESERVED FOR 5 FEET (OR AS MUCH AS POSSIBLE) UPSLOPE FROM THE SILT FENCE. IF VEGETATION IS REMOVED, IT SHALL BE REESTABLISHED WITHIN 7 DAYS FROM THE INSTALLATION OF THE SILT FENCE.
- SILT FENCE HEIGHT SHALL BE A MINIMUM OF 16 INCHES ABOVE THE ORIGINAL GROUND SURFACE.
- THE SILT FENCE SHALL BE PLACED IN A TRENCH CUT A MINIMUM OF 6 INCHES DEEP. THE TRENCH SHALL BE CUT WITH A TRENCHER, CABLE LAYING MACHINE, OR OTHER SUITABLE DEVICE WHICH WILL ENSURE AN ADEQUATELY UNIFORM TRENCH DEPTH.
- THE SILT FENCE SHALL BE PLACED WITH THE STAKES ON THE DOWNSLOPE SIDE OF THE GEOTEXTILE AND SO THAT 8 INCHES OF CLOTH ARE BELOW THE GROUND SURFACE. EXCESS MATERIAL SHALL LAY ON THE BOTTOM OF THE 6-INCH-DEEP TRENCH. THE TRENCH SHALL BE BACKFILLED AND COMPACTED.
- SEAMS BETWEEN SECTION OF SILT FENCE SHALL BE OVERLAPPED WITH THE END STAKES OF EACH SECTION WRAPPED TOGETHER BEFORE DRIVING INTO THE GROUND.
- SILT FENCE SHALL ALLOW RUNOFF TO PASS ONLY AS DIFFUSE FLOW THROUGH THE GEOTEXTILE. IF RUNOFF OVERTOPS THE SILT FENCE, FLOWS UNDER OR AROUND THE ENDS, OR IN ANY OTHER WAY BECOMES A CONCENTRATED FLOW, ONE OF THE FOLLOWING SHALL BE PERFORMED, AS APPROPRIATE:
 - THE LAYOUT OF THE SILT FENCE SHALL BE CHANGED.
 - ACCUMULATED SEDIMENT SHALL BE REMOVED, OR
 - OTHER PRACTICES SHALL BE INSTALLED.
- SEDIMENT DEPOSITS SHALL BE ROUTINELY REMOVED WHEN THE DEPOSIT REACHES APPROXIMATELY ONE-HALF OF THE HEIGHT OF THE SILT FENCE. SILT FENCES SHALL BE INSPECTED AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. THE LOCATION OF EXISTING SILT FENCE SHALL BE REVIEWED DAILY TO ENSURE ITS PROPER LOCATION AND EFFECTIVENESS. IF DAMAGED, THE SILT FENCE SHALL BE REPAIRED IMMEDIATELY.
- CRITERIA FOR SILT FENCE MATERIALS:
 - FENCE POSTS - THE LENGTH SHALL BE A MINIMUM OF 32 INCHES LONG. WOOD POSTS WILL BE 2 X 2 INCH HARDWOOD OF SOUND QUALITY. THEY SHALL BE FREE OF KNOTS, SPLITS AND OTHER VISIBLE IMPERFECTIONS THAT WEAKEN THE POSTS. THE MAXIMUM SPACING BETWEEN POSTS SHALL BE 10 FEET. POSTS SHALL BE DRIVEN A MINIMUM OF 16 INCHES INTO THE GROUND WHERE POSSIBLE. IF NOT POSSIBLE, THE POSTS SHALL BE ADEQUATELY SECURED TO PREVENT OVERTURNING OF THE FENCE DUE TO SEDIMENT/WATER LOADING.
 - SILT FENCE FABRIC - SEE CHART TO THE RIGHT.



MINIMUM CRITERIA FOR SILT FENCE FABRIC (ODOT, 2003)		
FABRIC PROPERTIES	VALUES	TEST METHOD
MINIMUM TENSILE STRENGTH	120 LBS	ASTM D 4632
MAXIMUM ELONGATION AT 60 LBS	50%	ASTM D 4632
MINIMUM PUNCTURE STRENGTH	50 LBS	ASTM D 4833
MINIMUM TEAR STRENGTH	40 PSI	ASTM D 4533
APPARENT OPENING SIZE	≤ 0.84 mm	ASTM D 4751
MINIMUM PERMITTIVITY	1x10-2 sec-1	ASTM D 4491
UV EXPOSURE STRENGTH RETENTION	70%	ASTM G 4355

FABRIC SILT FENCE DETAIL

NOT TO SCALE

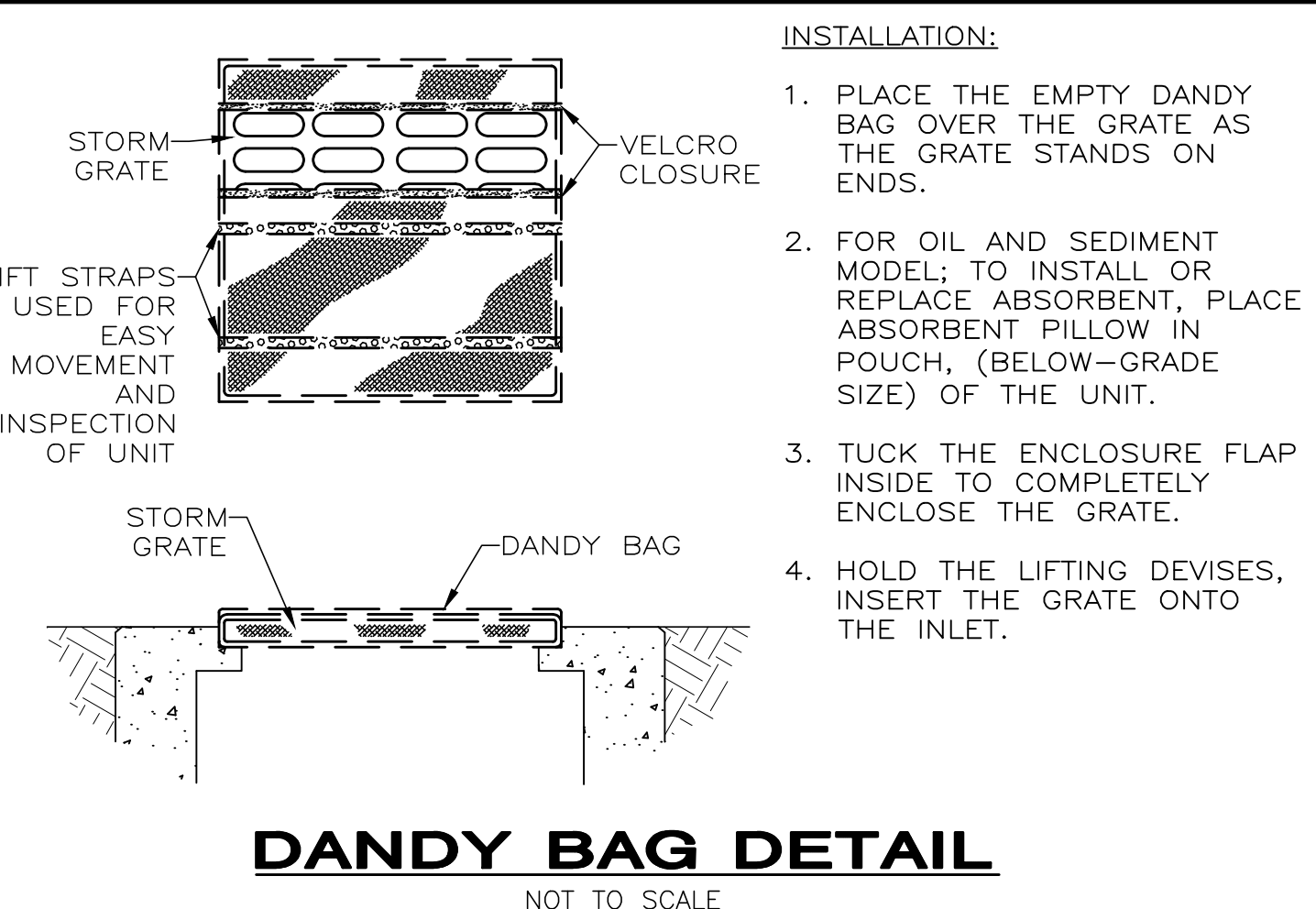


NOTES:

- THIS PROJECT REQUIRES THE USE OF 8" DIA. COMPOST FILTER SOCK. SOCK FABRIC, COMPOST, USAGE, AND MAINTENANCE SHALL MEET AND FOLLOW THE STANDARDS OF THE LATEST VERSION OF THE OHIO RAINWATER AND LAND DEVELOPMENT MANUAL. TRAFFIC SHALL NOT BE PERMITTED TO CROSS FILTER SOCK.
- COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE SOCK SHALL BE EXTENDED AT LEAST 8' UP SLOPE AT 45° TO THE MAIN SOCK ALIGNMENT. MAXIMUM SLOPE LENGTH ABOVE ANY SOCK SHALL NOT EXCEED THAT SHOWN IN THE OHIO RAINWATER AND LAND DEVELOPMENT MANUAL.
- SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES 1/2 THE ABOVE GROUND HEIGHT OF THE SOCK AND DISPOSED IN THE MANNER DESCRIBED IN THE OHIO RAINWATER AND LAND DEVELOPMENT MANUAL. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.
- BIODEGRADABLE FILTER SOCK SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
- UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCK, STAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE MESH SHALL BE CUT OPEN AND THE MULCH SPREAD AS A SOIL SUPPLEMENT.

COMPOST FILTER SOCK

NOT TO SCALE



INSTALLATION:

- PLACE THE EMPTY DANDY BAG OVER THE GRATE AS THE GRATE STANDS ON ENDS.
- FOR OIL AND SEDIMENT MODEL: TO INSTALL OR REPLACE ABSORBENT, PLACE ABSORBENT PILLOW IN POUCH, (BELOW-GRADE SIZE) OF THE UNIT.
- TUCK THE ENCLOSURE FLAP INSIDE TO COMPLETELY ENCLOSE THE GRATE.
- HOLD THE LIFTING DEVICES, INSERT THE GRATE ONTO THE INLET.

DANDY BAG DETAIL

NOT TO SCALE

MAINTENANCE:

- THE CONTRACTOR SHALL REMOVE ALL ACCUMULATED SEDIMENT AND DEBRIS FROM SURFACE AND VICINITY OF UNIT AFTER EACH RAIN EVENT OR AS DIRECTED BY THE ENGINEER/INSPECTOR. DISPOSE OF UNIT NO LONGER IN USE AT AN APPROPRIATE RECYCLING OR SOLID WASTE FACILITY.
- FOR OIL AND SEDIMENT MODEL: REMOVE AND REPLACE ABSORBENT WHEN NEAR SATURATION.

DANDY CURB BAG DETAIL

NOT TO SCALE



your trusted advisor
engineers
architects
planners
consultants

NO.	DATE	REVISION

ISSUED FOR/UTILITY COORD.	ISSUE DATE:	SCALE:	DESIGNED BY:	MPC	MPC/JPL	CHECKED BY:	XXX
	08/28/18	AS SHOWN					

ERIE STREET WATER LINE REPLACEMENT DEPARTMENT OF UTILITIES - WILLOUGHBY - SWPPP DETAILS

PROJECT NO.	180608
DISCIPLINE	CIVIL
SHEET NAME	SWPPP-02
SHEET	OF
19	20