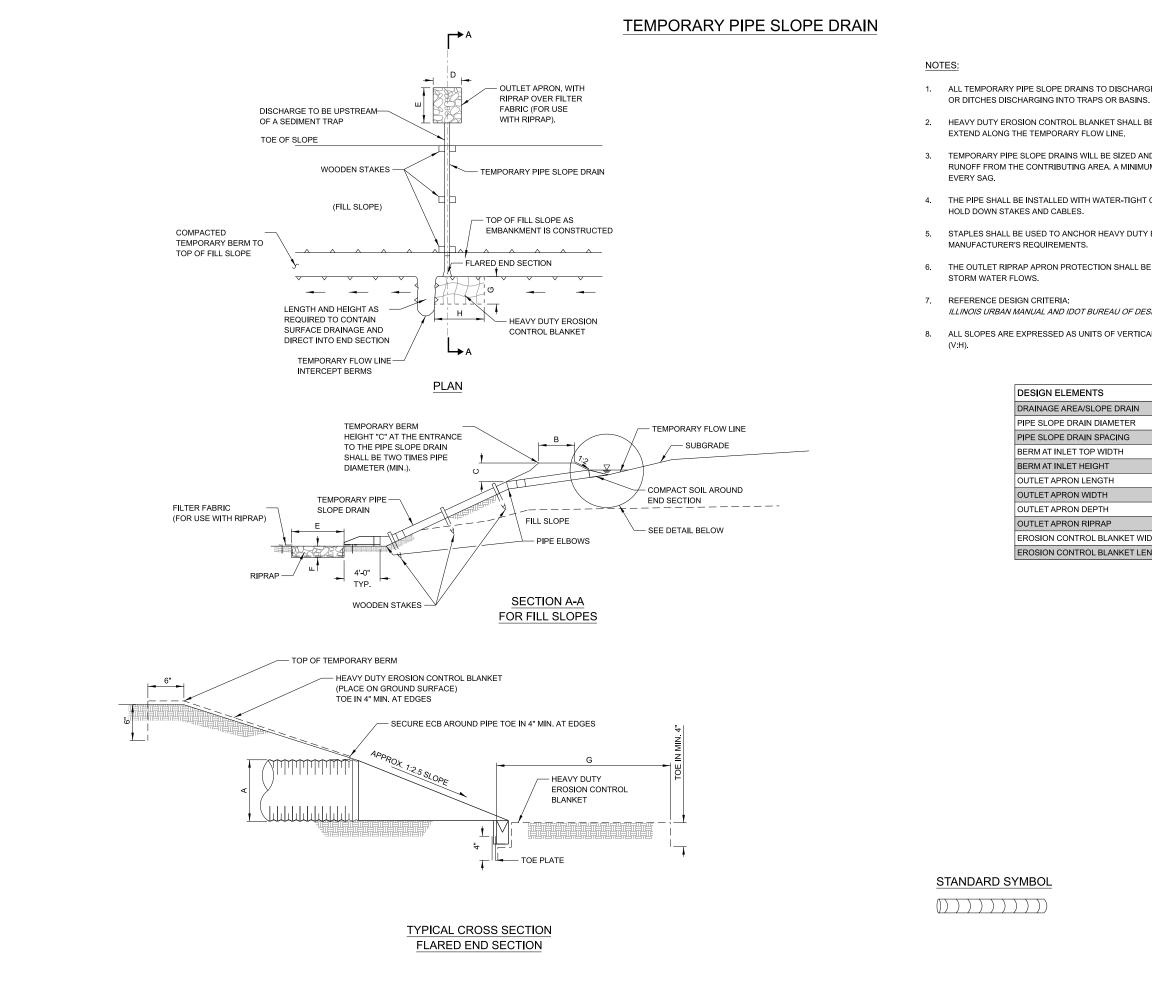
Illinois Tollway Base Sheet Revisions

ion M	Base Sheet Dra	awings	
	Drawing	Modification Summary	Effective: 03-01-2024
		Erosion and Sediment Control (ESC) - Se	eries 200
	M-ESC-200	TEMPORARY PIPE SLOPE DRAIN	
		Added wooden stakes to plan view and Section A-A, "compacted" to berm callout, changed blanket dimen	
	M-ESC-202	DEWATERING BASIN	
		Added "compacted" to earth dike callout.	
	M-ESC-204	DIVERSION DIKE	
		Replaced "clay" with "soil" in berm callout, added "so	il" to Note 1.
	M-ESC-205	SEDIMENT BASIN DEWATERING DEVICE	
		Removed anti seep collar from section view.	
	M-ESC-206	SEDIMENT BASIN AGGREGATE BERM	
		Added "MAX." to slope callouts.	



Retired Standard



1. ALL TEMPORARY PIPE SLOPE DRAINS TO DISCHARGE INTO THE BACK OF SEDIMENT TRAPS, INTO SEDIMENT BASINS

HEAVY DUTY EROSION CONTROL BLANKET SHALL BE PLACED AROUND THE FLARED END SECTION, AND SHALL

TEMPORARY PIPE SLOPE DRAINS WILL BE SIZED AND SPACED ALONG THE FILL TO ADEQUATELY HANDLE THE RUNOFF FROM THE CONTRIBUTING AREA. A MINIMUM TWO TEMPORARY PIPE SLOPE DRAINS WILL BE PLACED IN

THE PIPE SHALL BE INSTALLED WITH WATER-TIGHT CONNECTING BANDS AND SHALL BE SECURELY ANCHORED BY

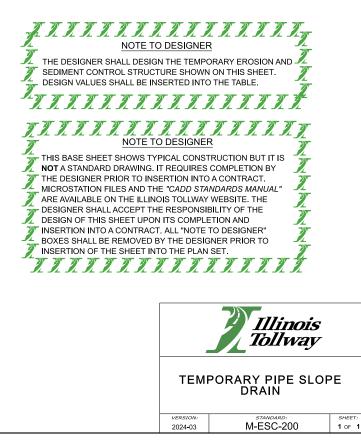
STAPLES SHALL BE USED TO ANCHOR HEAVY DUTY EROSION CONTROL BLANKET IN CONFORMANCE TO

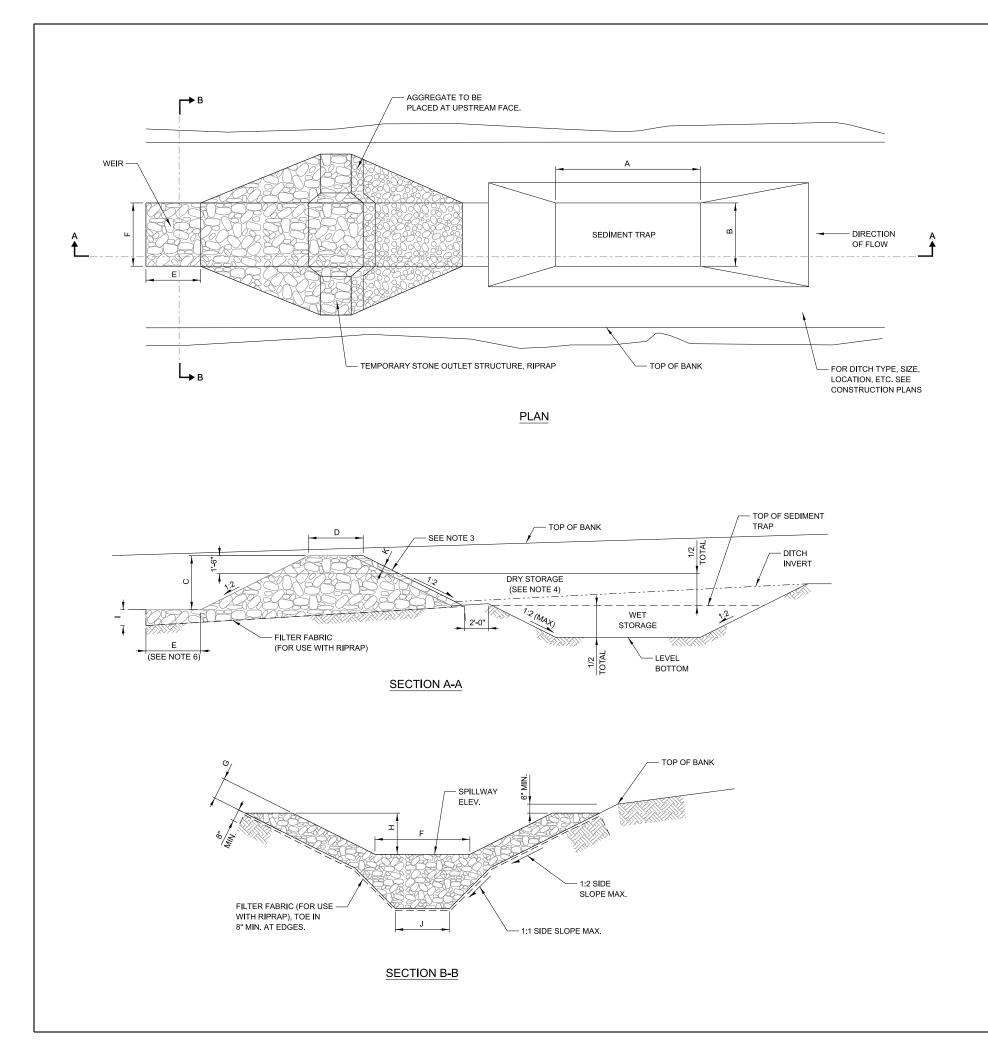
THE OUTLET RIPRAP APRON PROTECTION SHALL BE BASED ON THE PIPE DIAMETER AND DISCHARGE VELOCITY OF

ILLINOIS URBAN MANUAL AND IDOT BUREAU OF DESIGN AND ENVIRONMENTAL MANUAL.

ALL SLOPES ARE EXPRESSED AS UNITS OF VERTICAL DISPLACEMENT TO UNITS OF HORIZONTAL DISPLACEMENT

S	UNITS	VALUES
DPE DRAIN	X (ACRES)	
IAMETER	A (INCHES)	
PACING	S (FEET)	
WIDTH	B (FEET)	
нт	C (FEET)	
GTH	D (FEET)	
ТН	E (FEET)	
ТН	F (FEET)	
RAP	GRADATION	
BLANKET WIDTH	G (FEET)	
BLANKET LENGTH	H (FEET)	



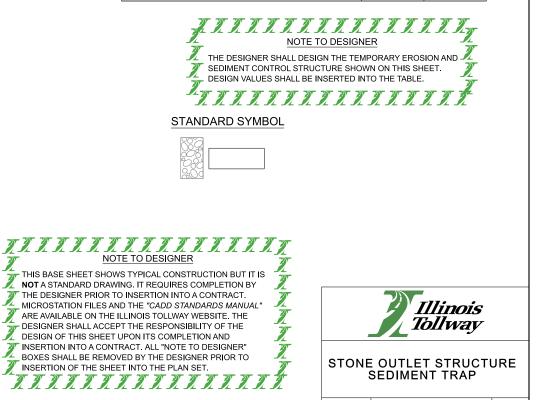


Z DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT, ALL "NOTE TO DESIGNER" INSERTION OF THE SHEET INTO THE PLAN SET

#### NOTES:

- 1. STONE OUTLET STRUCTURES TO BE USED IN EXISTING, PROPOSED AND TEMPORARY DITCHES OF ALL TYPES.
- 2. THE STONE OUTLET STRUCTURES SHALL BE REPLACED DUE TO WASHOUT, CONSTRUCTION TRAFFIC DAMAGE OR SILT ACCUMULATION. THE SILT SHALL BE CLEANED OUT WHEN WET STORAGE PORTION OF TRAP IS 50% FULL.
- A LAYER OF AGGREGATE SHALL BE PLACED AGAINST THE UPSTREAM FACE OF THE 3. TEMPORARY STONE OUTLET STRUCTURE.
- 4. THE DETENTION STORAGE SHALL BE COMPOSED OF EQUAL VOLUMES OF "WET" AND "DRY" STORAGE AREAS. HALF THE DETENTION STORAGE SHALL BE BELOW THE PERMEABLE FILL.
- 5. THE MINIMUM LENGTH TO WIDTH RATIO OF SEDIMENT TRAP SHALL BE 2:1.
- THE SPILLWAY WEIR SHALL BE DETERMINED BY THE DRAINAGE RUNOFF FROM THE 6. CONTRIBUTING AREA.
- REFERENCE DESIGN CRITERIA: 7. ILLINOIS URBAN MANUAL AND IDOT BUREAU OF DESIGN AND ENVIRONMENTAL MANUAL.
- ALL SLOPES ARE EXPRESSED AS UNITS OF VERTICAL DISPLACEMENT TO UNITS OF 8. HORIZONTAL DISPLACEMENT (V:H).

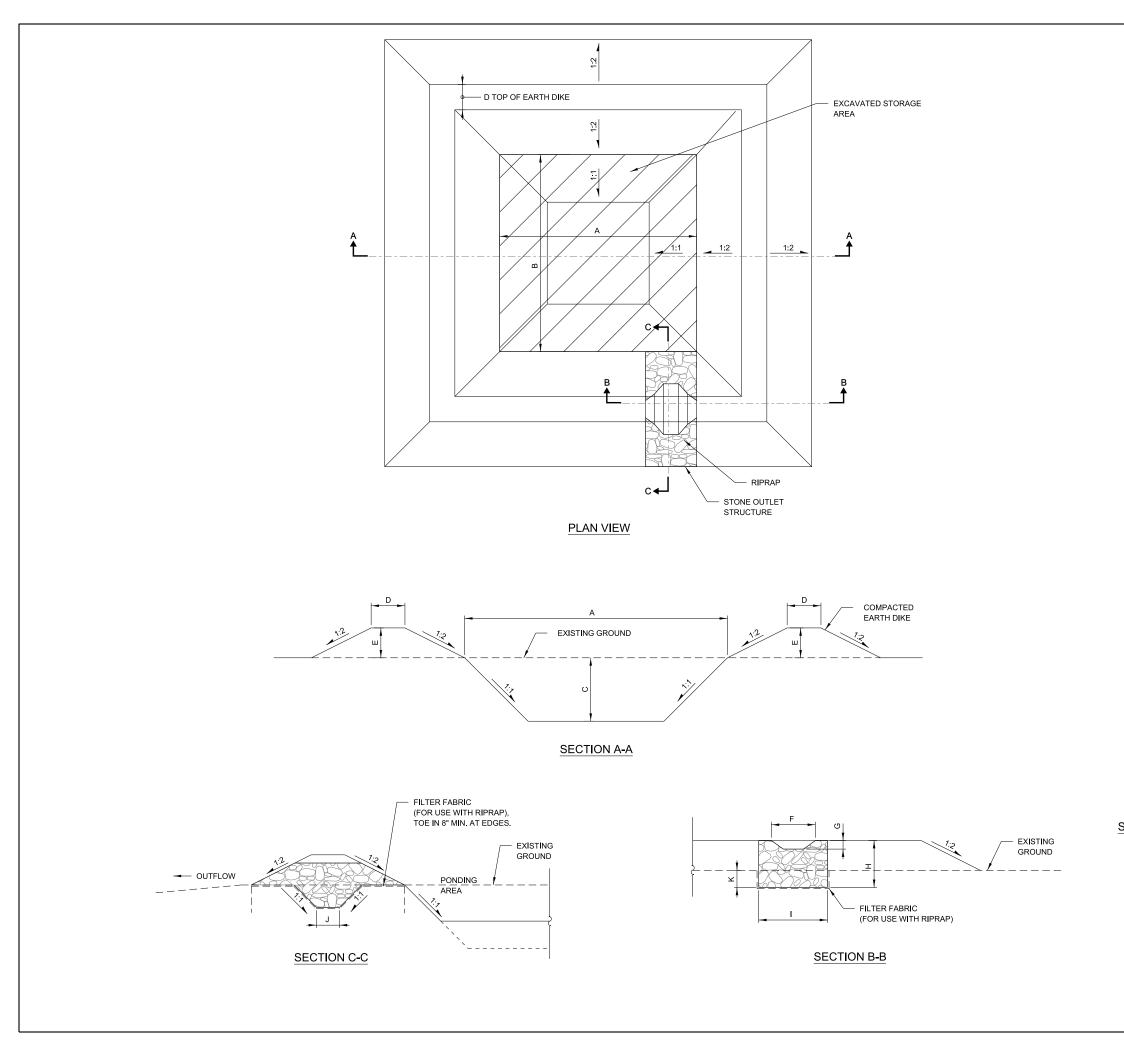
DESIGN ELEMENTS	UNITS	VALUES
DRAINAGE AREA	X (ACRES)	
SEDIMENT TRAP: STORAGE CAPACITY	V (CU. YD.)	
WET DETENTION STORAGE	1/2 V (CU. YD)	
DRY DETENTION STORAGE	1/2 V (CU. YD)	
SEDIMENT TRAP LENGTH	A (FEET)	
SEDIMENT TRAP WIDTH	B (FEET)	
STONE OUTLET STRUCTURE HEIGHT	C (FEET)	
STONE OUTLET STRUCTURE TOP WIDTH	D (FEET)	
WEIR LENGTH	E (FEET)	
WEIR TOP WIDTH	F (FEET)	
WEIR SIDE SLOPE THICKNESS	G (FEET)	
WEIR SIDE SLOPE HEIGHT	H (FEET)	
WEIR DEPTH	I (FEET)	
WEIR BASE WIDTH	J (FEET)	
RIPRAP	GRADATION	
AGGREGATE	GRADATION	
STONE OUTLET AGGREGATE THICKNESS	K (FEET)	



2023-03

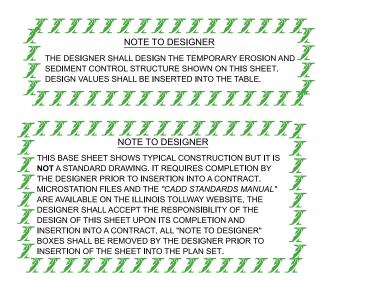
M-ESC-201

1 OF 1



- 1. ANY DEWATERING OF THE CONSTRUCTION AREA SHALL BE FILTERED THROUGH A DEWATERING BASIN PRIOR TO ENTERING RECEIVING WATERS.
- 2. PUMPING INTO THESE BASINS SHALL CEASE WHEN THE EFFLUENT FROM THE BASIN BECOMES SEDIMENT LADEN. SURFACE FLOWS SHALL BE DIVERTED AROUND THIS DEVICE.
- 3. ONCE THE DEWATERING BASIN BECOMES FILLED TO  $\frac{1}{2}$  OF THE EXCAVATED DEPTH, ACCUMULATED SEDIMENT SHALL BE REMOVED.
- 4. THE OUTFALL FROM THE BASIN(S) SHALL HAVE A STABILIZED CONVEYANCE TO RECEIVING WATERS.
- 5. REFERENCE DESIGN CRITERIA: ILLINOIS URBAN MANUAL AND IDOT BUREAU OF DESIGN AND ENVIRONMENTAL MANUAL.
- 6. ALL SLOPES ARE EXPRESSED AS UNITS OF VERTICAL DISPLACEMENT TO UNITS OF HORIZONTAL DISPLACEMENT (V:H).

DESIGN ELEMENTS	UNITS	VALUE
STORAGE CAPACITY	V (CU. YD.)	
BASIN TOP WIDTH	A (FEET)	
BASIN TOP LENGTH	B (FEET)	
BASIN DEPTH	C (FEET)	
EARTH DIKE TOP WIDTH	D (FEET)	
EARTH DIKE HEIGHT	E (FEET)	
STONE OUTLET STRUCTURE RIPRAP	GRADATION	
STONE OUTLET SPILLWAY TOP WIDTH	F (FEET)	
STONE OUTLET SPILLWAY DEPTH	G (FEET)	
STONE OUTLET STRUCTURE HEIGHT	H (FEET)	
STONE OUTLET BASE WIDTH	I (FEET)	
STONE OUTLET BASE LENGTH	J (FEET)	
STONE OUTLET BASE DEPTH	K (FEET)	



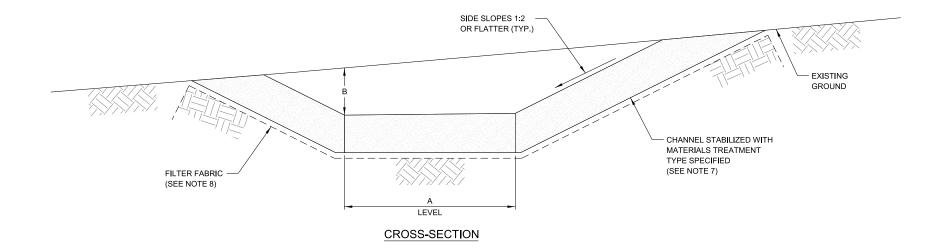
## STANDARD SYMBOL





# DEWATERING BASIN

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M-ESC-202
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- 1. ALL TEMPORARY SWALES SHALL HAVE UNINTERRUPTED POSITIVE GRADE TO AN OUTLET.
- 2. DIVERTED RUNOFF FROM A DISTURBED AREA SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE.
- 3. DIVERTED RUNOFF FROM AN UNDISTURBED AREA SHALL OUTLET DIRECTLY INTO AN UNDISTURBED STABILIZED AREA AT NON-EROSIVE VELOCITY.
- 4. ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS, AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED AND DISPOSED OF SO AS NOT TO INTERFERE WITH THE PROPER FUNCTIONING OF THE SWALE. THIS WORK SHALL BE INCIDENTAL TO THE COST OF THE TEMPORARY SWALE.
- 5. THE SWALE SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE, AND CROSS-SECTION AS REQUIRED TO MEET THE DESIGN CRITERIA AND BE FREE OF BANK PROJECTIONS OR OTHER IRREGULARITIES WHICH WILL IMPEDE NORMAL FLOW.
- 6. ALL EARTH REMOVED AND NOT NEEDED FOR CONSTRUCTION SHALL BE PLACED SO THAT IT WILL NOT INTERFERE WITH THE FUNCTIONING OF THE SWALE, SHALL BE STABILIZED.
- 7. CHANNEL STABILIZATION TYPE TO BE DETERMINED BY CHANNEL GRADE (%) AND DRAINAGE AREA INTO THE TEMPORARY SWALE.
- 8. FILTER FABRIC TO BE USED ONLY WITH TREATMENT TYPES II AND III.
- 9. WIDTH OF FLOW CHANNEL TO BE SIZED FOR DRAINAGE AREA INTO THE TEMPORARY SWALE.
- 10. REFERENCE DESIGN CRITERIA: ILLINOIS URBAN MANUAL AND IDOT BUREAU OF DESIGN AND ENVIRONMENTAL MANUAL.
- 11. ALL SLOPES ARE EXPRESSED AS UNITS OF VERTICAL DISPLACEMENT TO UNITS OF HORIZONTAL DISPLACEMENT (V:H).



DESIGN VALUES SHALL BE INSERTED INTO THE TABLE. 

DESIGN ELEMENTS	DATA	VALUES
DRAINAGE AREA	X (ACRES)	
FLOW CHANNEL WIDTH	A (FEET)	
FLOW CHANNEL DEPTH	B (FEET)	
CHANNEL GRADE	%	
CHANNEL STABILIZATION	TREATMENT TYPE	

# 

THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS **NOT** A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE "CADD STANDARDS MANUAL" TARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE Z DESIGNER SHALL ACCEPT THE REST OFFICIAL STATE INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO TINSERTION OF THE SHEET INTO THE PLAN SET. *「エエエエエエエエエエエエ*エエエ

## STANDARD SYMBOL

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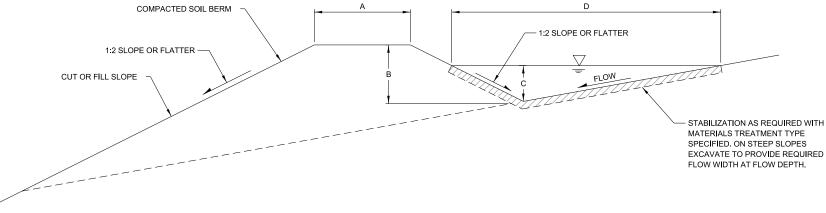


2

## TEMPORARY SWALE

2023-03

M-ESC-203



**CROSS** -SECTION

2.

3.

4.

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6.

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1. ALL DIKES SHALL BE COMPACTED SOIL.

ALL DIKES SHALL HAVE POSITIVE DRAINAGE TO AN OUTLET.

TOP WIDTH MAY BE WIDER AND SIDE SLOPES MAY BE FLATTER IF DESIRED TO FACILITATE CROSSING BY CONSTRUCTION TRAFFIC.

FIELD LOCATION SHOULD BE ADJUSTED AS NEEDED TO UTILIZE A STABILIZED SAFE OUTLET.

EARTH DIKES SHALL HAVE AN OUTLET THAT FUNCTIONS WITH A MINIMUM OF EROSION. RUNOFF SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE SUCH AS A SEDIMENT TRAP OR SEDIMENT BASIN WHERE EITHER THE DIKE CHANNEL OR THE DRAINAGE AREA ABOVE THE DIKE ARE NOT ADEQUATELY STABILIZED.

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

STABILIZATION OF FLOW AREA ALONG DIVERSION DIKE TO BE DETERMINED BY CHANNEL GRADE (%) AND DRAINAGE AREA INTO DIVERSION DIKE.

DIVERSION DIKE AND EMBANKMENT FLOW STABILIZATION DIMENSION TO BE SIZED FOR DRAINAGE AREA INTO DIVERSION DIKE.

REFERENCE DESIGN CRITERIA:

ILLINOIS URBAN MANUAL AND IDOT BUREAU OF DESIGN AND ENVIRONMENTAL MANUAL.

10. ALL SLOPES ARE EXPRESSED AS UNITS OF VERTICAL DISPLACEMENT TO UNITS OF HORIZONTAL DISPLACEMENT (V:H).

DESIGN ELEMENTS	DATA	VALUES
DRAINAGE AREA	X (ACRES)	
WIDTH OF DIKE	A (FEET)	
HEIGHT OF DIKE	B (FEET)	
CHANNEL FLOW HEIGHT	C (FEET)	
CHANNEL FLOW WIDTH	D (FEET)	
CHANNEL GRADE	%	
CHANNEL STABILIZATION	TREATMENT TYPE	

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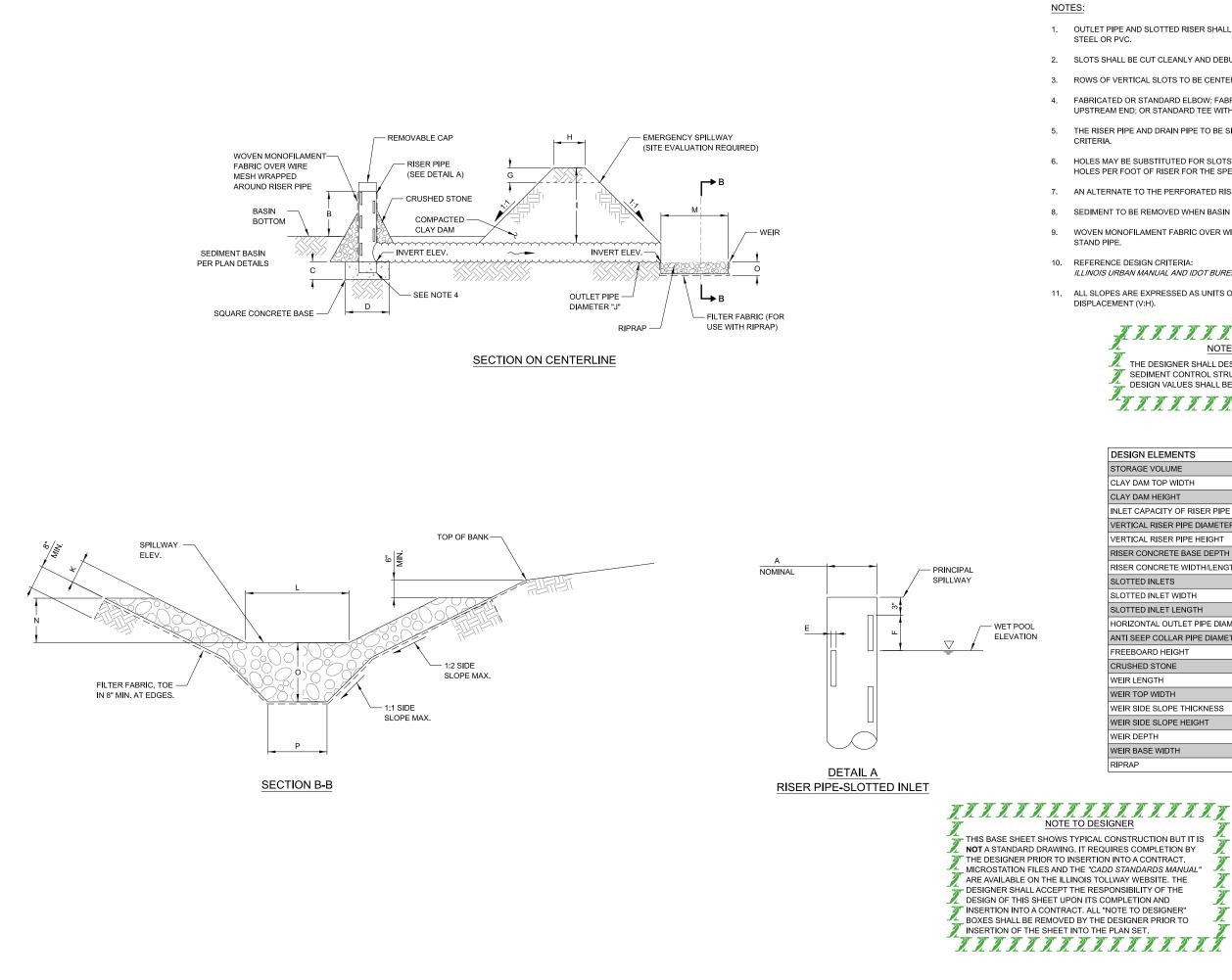




# **DIVERSION DIKE**

2024-03

M-ESC-204



OUTLET PIPE AND SLOTTED RISER SHALL BE FABRICATED FROM CORRUGATED METAL, SMOOTH

2. SLOTS SHALL BE CUT CLEANLY AND DEBURRED. ENDS OF SLOTS MAY BE ROUND OR SQUARE.

3. ROWS OF VERTICAL SLOTS TO BE CENTERED AND PLACED BASED ON RISER DIAMETER.

FABRICATED OR STANDARD ELBOW; FABRICATED OR STANDARD TEE WITH THE PIPE OR PLUG IN UPSTREAM END; OR STANDARD TEE WITH ONE END EMBEDDED IN CONCRETE.

THE RISER PIPE AND DRAIN PIPE TO BE SIZED TO CARRY THE PEAK IN FLOW PER DESIGN STORM

HOLES MAY BE SUBSTITUTED FOR SLOTS IN RISER PIPE. PROVIDE THE REQUIRED NUMBER OF HOLES PER FOOT OF RISER FOR THE SPECIFIED DIAMETER OF RISER PIPE.

AN ALTERNATE TO THE PERFORATED RISER PIPE IS A SKIMMER DEVICE.

SEDIMENT TO BE REMOVED WHEN BASIN IS 50% FULL.

WOVEN MONOFILAMENT FABRIC OVER WIRE MESH SHALL BE WRAPPED AROUND THE RISER

ILLINOIS URBAN MANUAL AND IDOT BUREAU OF DESIGN AND ENVIRONMENTAL MANUAL.

11. ALL SLOPES ARE EXPRESSED AS UNITS OF VERTICAL DISPLACEMENT TO UNITS OF HORIZONTAL

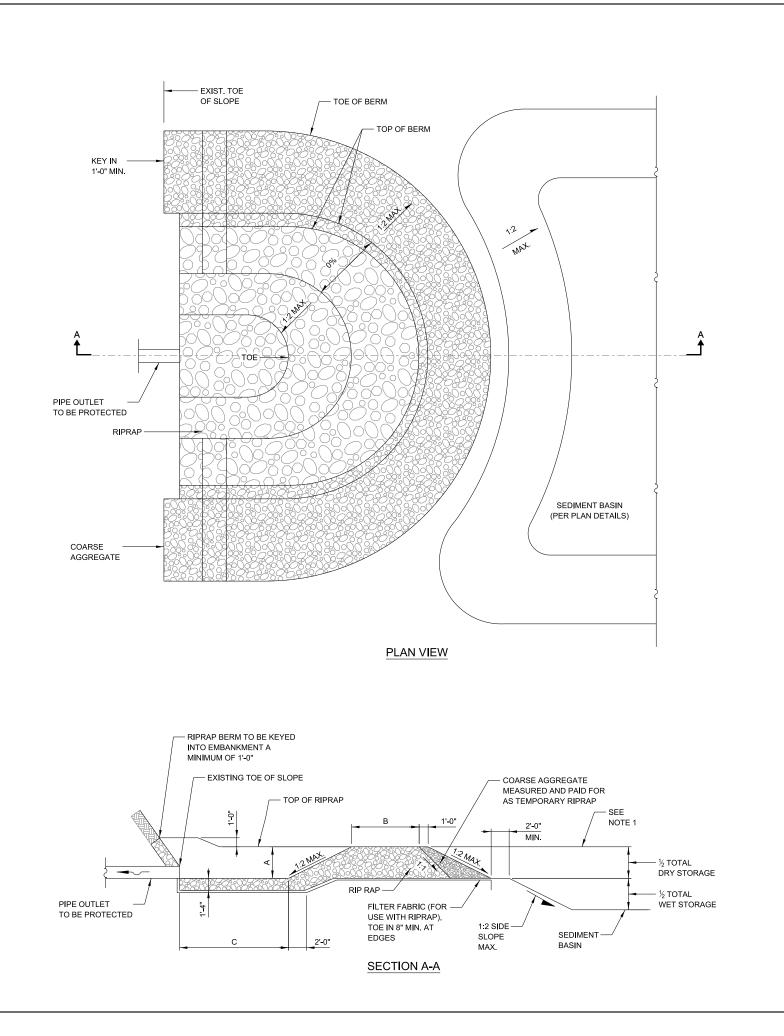


DESIGN ELEMENTS	DATA	VALUES
STORAGE VOLUME	V (CU. YD.)	
CLAY DAM TOP WIDTH	H (FEET)	
CLAY DAM HEIGHT	I (FEET)	
INLET CAPACITY OF RISER PIPE	Q (CU. FT./SEC.)	
VERTICAL RISER PIPE DIAMETER	A (INCHES)	
VERTICAL RISER PIPE HEIGHT	B (FEET)	
RISER CONCRETE BASE DEPTH	C (FEET)	
RISER CONCRETE WIDTH/LENGTH	D (FEET)	
SLOTTED INLETS	X (NUMBER)	
SLOTTED INLET WIDTH	E (INCHES)	
SLOTTED INLET LENGTH	F (INCHES)	
HORIZONTAL OUTLET PIPE DIAMETER	J (INCHES)	
ANTI SEEP COLLAR PIPE DIAMETER	R (INCHES)	
FREEBOARD HEIGHT	G (FEET)	
CRUSHED STONE	GRADATION	
WEIR LENGTH	M (FEET)	
WEIR TOP WIDTH	L (FEET)	
WEIR SIDE SLOPE THICKNESS	K (FEET)	
WEIR SIDE SLOPE HEIGHT	N (FEET)	
WEIR DEPTH	O (FEET)	
WEIR BASE WIDTH	P (FEET)	
RIPRAP	GRADATION	



#### SEDIMENT BASIN DEWATERING DEVICE

- 1.
- 2.
- 3.
- 5.







WHEN SEDIMENT BASIN AGGREGATE BERM IS USED FOR OUTLET CONTROL, THE DETENTION STORAGE SHALL BE COMPOSED OF EQUAL VOLUMES OF "WET" AND "DRY" STORAGE AREAS. HALF THE DETENTION STORAGE SHALL BE BELOW THE PERMEABLE FILL. DRAINAGE AREA INCLUDES BOTH ON -SITE AND OFF-SITE TRIBUTARY AREAS.

TO MINIMIZE EXCAVATION, THE BOTTOM OF THE WET STORAGE BASIN MAY BE DESIGNED AT THE PIPE OUTLET INVERT ELEVATION. PROVIDE COMPACTED CLAY DAM BELOW AGGREGATE BERM.

MAINTENANCE SHALL BE PERFORMED AS NEEDED. THE AGGREGATE BERM SHALL BE REPLACED IF WASHED OUT, DAMAGED BY CONSTRUCTION OR SILT ACCUMULATION. THE SILT SHALL BE CLEANED OUT WHEN THE WET STORAGE POOL PORTION OF BASIN IS 50% FULL.

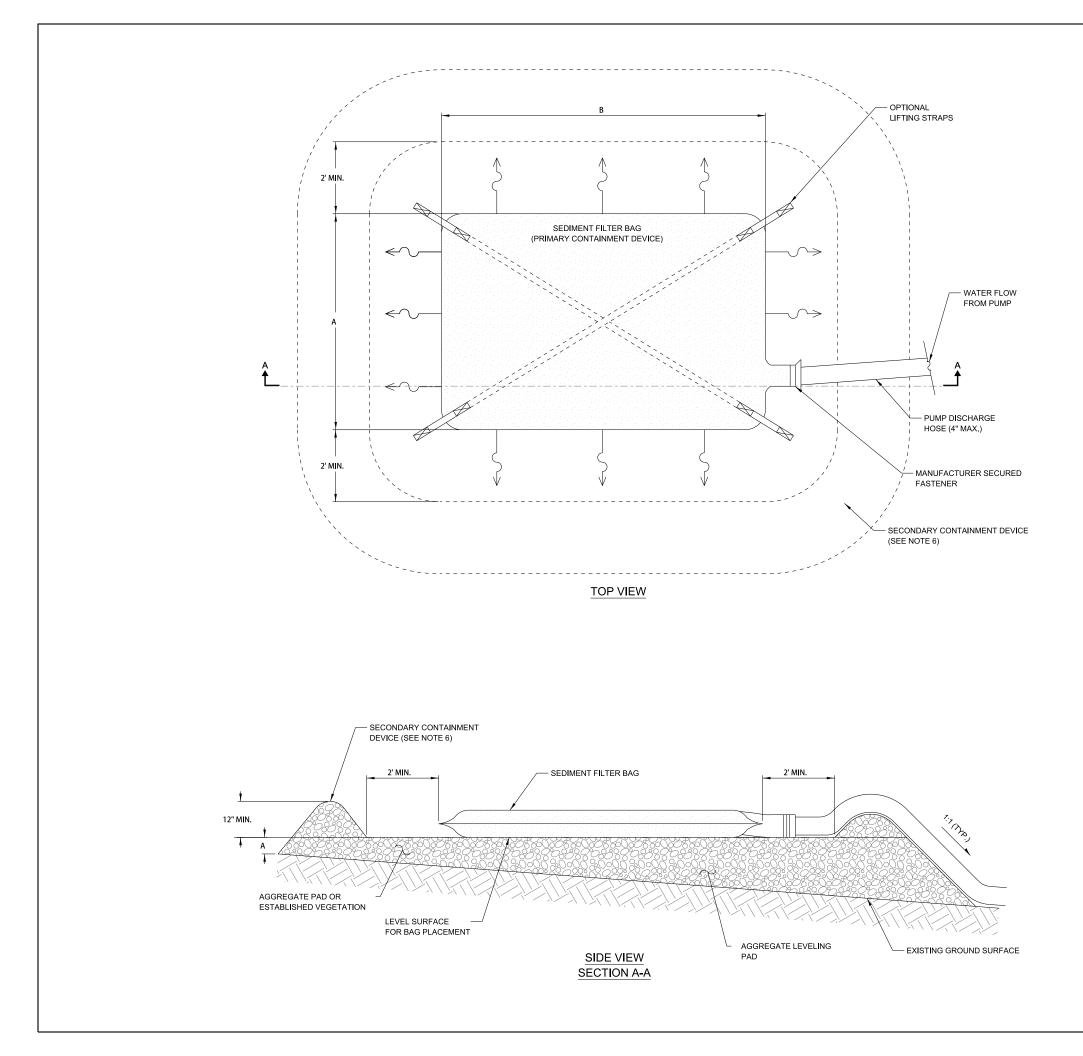
4. ALL SLOPES ARE EXPRESSED AS UNITS OF VERTICAL DISPLACEMENT TO UNITS OF HORIZONTAL DISPLACEMENT (V:H).

SEDIMENT BASIN AGGREGATE BERM SHALL BE USED WHEN EXISTING OR PROPOSED DETENTION BASIN OR INFIELD AREA IS USED FOR A SEDIMENT BASIN.

Z.I.I.I.I.I.I.I.I.I.I.I.I.I.I.
NOTE TO DESIGNER
THE DESIGNER SHALL DESIGN THE TEMPORARY EROSION AND
SEDIMENT CONTROL STRUCTURE SHOWN ON THIS SHEET.
<sup>N</sup> NNNNNNNNNNNNN

DESIGN ELEMENTS	DATA	VALUES
DRAINAGE AREA	X (ACRES)	
SEDIMENT BASIN STORAGE CAPACITY	V (CU. YD.)	
WET DETENTION STORAGE	½ V (CU. YD.)	
DRY DETENTION STORAGE	½ V (CU. YD.)	
AGGREGATE BERM HEIGHT	A (FEET)	
AGGREGATE BERM TOP WIDTH	B (FEET)	
OUTLET WEIR LENGTH	C (FEET)	
RIPRAP	GRADATION	
COARSE AGGREGATE	GRADATION	





- 1. SEDIMENT FILTER BAGS TO BE CONSIDERED AN ALTERNATE FOR SITES WHERE SEDIMENT BASIN INSTALLATION IS PROBLEMATIC.
- 2. SEDIMENT FILTER BAGS TO BE SIZED BASED ON VOLUME OF WATER BEING PUMPED, QUANTITY AND TYPE OF SEDIMENT AND THE PERMITTIVITY OF THE SPECIFIC BAG SIZE. THE MINIMUM BAG SIZE SHALL BE 10 FEET BY 15 FEET WITH A USABLE SURFACE AREA OF 300 SQUARE FEET.
- 3. MULTIPLE DISCHARGES INTO A SINGLE BAG ARE NOT PERMITTED.
- 4. SEDIMENT FILTER BAG SHALL BE ORIENTED TO DIRECT FLOW AWAY FROM CONSTRUCTION AREA AND DISCHARGE FILTERED WATER INTO APPROVED RECEIVING AREA OR CONTAINMENT SYSTEM.
- SEDIMENT FILTER BAG SHALL BE REPLACED WHEN IT BECOMES ½ FULL OF SEDIMENT OR WHEN THE SEDIMENT HAS REDUCED DISCHARGE FLOW RATE BELOW DESIGN REQUIREMENTS.
- SECONDARY CONTAINMENT DEVICE SHALL BE COMPRISED OF AGGREGATE MATERIAL, TEMPORARY DITCH CHECK OR EQUIVALENT.
- 7. PLACE STRAPS, CROSS CHAINS, PALLETS OR OTHER LIFTING DEVICE UNDER THE SEDIMENT FILTER BAG WHEN REPLACEMENT IS ANTICIPATED.



DESIGN ELEMENTS	DATA	VALUES
AGGREGATE PAD AND SECONDARY CONTAINMENT DEVICE	GRADATION	
AGGREGATE PAD DEPTH (MIN.)	A (INCH)	



2023-03

M-ESC-207