JEFFERSON COUNTY EROSION & SEDIMENT CONTROL NOTES:

1. ANY AREA OF EXPOSED SOIL WHERE NO CONSTRUCTION IS ANTICIPATED FOR A PERIOD OF LONGER THAN THREE WEEKS OR WHERE CONSTRUCTION ACTIVITY HAS STOPPED FOR THREE WEEKS SHALL BE TEMPORARILY STABILIZED.
2. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT STABILIZATION SHALL BE COMPLETED WITHIN FOUR (4) CALENDAR DAYS AFTER COMPLETION OF ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES GREATER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND FOUR (4) CALENDAR DAYS AFTER REACHING FINAL GRADE FOR ALL OTHER DISTURBED OR GRADED AREAS.
   - THESE PROVISIONS DO NOT APPLY TO THOSE AREAS THAT ARE SHOWN ON THE PLAN FOR MATERIAL STORAGE OR FOR THOSE AREAS ON WHICH ACTUAL CONSTRUCTION ACTIVITIES ARE CURRENTLY BEING PERFORMED.
   - THESE TIME REQUIREMENTS MAY BE EXTENDED, AS DEEMED NECESSARY BY THE JEFFERSON COUNTY ENGINEER IN THE EVENT THAT ADVERSE CONDITIONS PREVENT COMPLIANCE WITH THE STATED TIME LIMITATIONS FOR THE COMPLETION OF PERMANENT OR TEMPORARY STABILIZATION.
3. STABILIZATION WILL BE CONSIDERED ADEQUATE WHEN THE FOLLOWING CONDITIONS ARE MET:
   A) WATER COURSES, STREAM BANKS, AND DRAINAGE EASEMENTS SHALL BE 100% STABILIZED AND FREE FROM EROSION AND DEPOSITION.
   B) SLOPES STEEPER THAN 10% SHALL HAVE AT LEAST 98% STABLE GROUND COVER, AS DETERMINED BY THE JEFFERSON COUNTY ENGINEER.
   C) ALL OTHER AREAS SHALL HAVE AT LEAST 85% STABLE GROUND COVER, AS DETERMINED BY THE JEFFERSON COUNTY ENGINEER.
   D) GRASS VEGETATION SHALL HAVE REACHED A MINIMUM OF 3 INCHES OF HEIGHT OR HAVE BEEN MOWED BACK TO A MINIMUM OF 2 INCHES IN HEIGHT.
4. FOR ALL PROJECTS ADJACENT TO OR WITHIN 500 FEET OF A CONTINUOUSLY FLOWING STREAM, NO GRADING, EXCAVATING, REMOVAL, OR DESTRUCTION OF TOPSOIL, TREES, OR OTHER VEGETATIVE COVER, OR CONSTRUCTION ACTIVITY SHALL RESULT IN POINT OR NON-POINT LOADING OF SUSPENDED MATTER SUCH THAT TURBIDITY STANDARDS SPELLED OUT IN THE WATER RESOURCES BOARD LEGISLATIVE RULES ARE VIOLATED. SAID STANDARDS STATE THAT TURBIDITY SHALL NOT EXCEED 10 NTU'S OVER BACKGROUND TURBIDITY WHEN THE BACKGROUND IS 50 NTU'S OR LESS, OR HAVE MORE THAN A 10% INCREASE IN TURBIDITY (PLUS 10 NTU'S MINIMUM) WHEN THE BACKGROUND TURBIDITY IS MORE THAN 50 NTU'S.
5. NO OFF-SITE SOURCE OF BORROW MATERIALS IS ANTICIPATED FOR THIS PROJECT. IN THE EVENT THAT AN OFF-SITE SOURCE OF BORROW MATERIALS IS USED, AN EROSION AND SEDIMENT CONTROL PLAN SHALL BE PROVIDED FOR THE BORROW PIT AND THE BORROW PIT SHALL MEET ALL APPLICABLE REQUIREMENTS AND PERMITS OF THE WVDEP
6. MAINTENANCE SHALL BE PERFORMED AS NECESSARY TO ENSURE THAT ALL EROSION AND SEDIMENT CONTROL MEASURES ARE PERFORMING AS DESIGNED. THE JEFFERSON COUNTY ENGINEER MAY REQUIRE MODIFICATIONS TO AN APPROVED PLAN, REQUIRE ADDITIONAL SEDIMENT AND EROSION CONTROL MEASURES, OR CAUSE NEW PLANS TO BE SUBMITTED AS A RESULT OF FIELD INSPECTION REVEALING THE APPROVED PLANS DO NOT PROVIDE ADEQUATE PROTECTION. MODIFICATIONS MAY ALSO BE REQUESTED BY THE OWNER OR DEVELOPER DUE TO UNFORESEEN FIELD CONDITIONS.
7. ALL RESIDENTIAL AND COMMERCIAL/INDUSTRIAL BUILDING LOTS SHALL HAVE A STABILIZED CONSTRUCTION ENTRANCE INSTALLED PRIOR TO BEGINNING CONSTRUCTION ON THE LOT.

PUBLIC NOTICE SIGN:

NOT TO SCALE

NOTES:

1. SECTION G.4.b.5 OF THE GENERAL PERMIT STATES THAT "WITHIN 72 HOURS OF FILING AN NOI (ONE TO LESS THAN THREE ACRES) OR A SITE REGISTRATION APPLICATION (THREE ACRES OR MORE) WITH THE DIVISION OF WATER AND WASTE MANAGEMENT (DWWM), ALL PROJECTS SHALL DISPLAY A SIGN FOR THE DURATION OF THE CONSTRUCTION PROJECT NEAR THE ENTRANCE OF THE PROJECT OR, FOR LINEAR PROJECTS, AT A LOCATION NEAR AN ACTIVE PART OF THE PROJECT THAT IS ACCESSIBLE BY THE PUBLIC CONTAINING THE FOLLOWING INFORMATION:

- THE APPLICANT'S NAME OR THE NAME OF THE CONTACT PERSON, A TELEPHONE NUMBER AND ADDRESS WHERE THE APPLICANT CAN BE REACHED;
- A BRIEF DESCRIPTION OF THE PROJECT;
- A STATEMENT INDICATING THAT THE APPLICATION HAS BEEN SUBMITTED TO THE DIRECTOR;
- A STATEMENT THAT ANY PERSON MAY REVIEW THE APPLICATION BY USING PUBLIC QUERY FUNCTION OF THE ELECTRONIC SUBMISSION SYSTEM (ESS) LOCATED AT: http://apps.dep.wv.gov/WebApp/_dep/Search/ePermitting/ePermittingApplicationSearchPage.cfm
- ADDITIONALLY, THE SIGN SHALL NOTIFY THE PUBLIC THAT COMMENTS ABOUT THE PROPOSED PROJECT MAY BE SUBMITTED AT DEP.Comments@wv.gov.

2. THE SIGN SHALL BE A MINIMUM OF TWO FEET BY TWO FEET AND BE AT LEAST THREE FEET ABOVE GROUND LEVEL; CLEARLY VISIBLE AND LEGIBLE FROM A PUBLIC ROADWAY OR RIGHT-OF-WAY.
3. IF IT IS NOT FEASIBLE TO DISPLAY A SIGN AT OR NEAR THE PROJECT, THE APPLICANT MAY POST, WITHIN 72 HOURS OF FILING THE APPLICATION NOTICE CONTAINING THE FOREGOING INFORMATION AT A LOCAL PUBLIC BUILDING, INCLUDING, BUT NOT LIMITED TO, A TOWN HALL OR PUBLIC LIBRARY.
4. THE APPLICANT SHALL PROVIDE THE LOCATION WHERE THE SIGN OR NOTICE IS TO BE POSTED.
5. WITHIN 7 DAYS OF ASSIGNMENT OF THE PERMIT REGISTRATION NUMBER, THE APPLICANT SHALL AFFIX SUCH NUMBER TO THE SIGN OR TO THE POSTED NOTICE.

A TEMPLATE FOR THE SIGN IS AS FOLLOW:

- THE TOP PART OF THE SIGN, DOWN TO THE WORDS "APPLICATION DATE", SHALL BE WORDED AND FORMATTED AS SHOWN. REMAINING TEXT SHALL BE FILLED IN BY THE APPLICANT (DATE, NAME OF REGISTRANT OR CONTACT, PROJECT DESCRIPTION, AND PHONE) IN THE SIZE AND FORMAT SHOWN. HIGH CONTRAST COLORS MUST BE USED.
- THE SIGN SHALL BE A MINIMUM 24" x 24" WITH 1.6" AND 0.8" LETTERS
- THE SIGN SHALL BE A MINIMUM 36" ABOVE GROUND LEVEL.

①1.6" LETTERS
②0.8" LETTERS

① For Info on NPDES
① Stormwater Permit
② To comment on Sediment Control Plan
① Call: 800-654-5227
or
② DEP.Comments@wv.gov
② DEP 601 57th Street SE, Charleston WV 25304
② Application Date: ***XX/XX/XX*** ①
① ***Birdhill Meadows,***
① ***Residential Subdivision***
② ***(area code) Tele. No.***

Table 3.10.1 Temporary seed chart

PLANT NAMES		PLANTING DATES	APPLICATION RATE LBS/ACRE
COMMON	SCIENTIFIC		
Annual Ryegrass	*Lolium multiflorum*	2/16 – 5/15 8/1 – 11/1	40
Field Bromegrass	*Bromus ciliatus*	3/1 – 6/15 8/1 – 9/15	40
Spring Oats	*Avena sativa*	3/1 –6/15	100
Winter Rye	*Secale cereale*	8/15 –2/28	170
Winter Wheat	*Triticum aestivum*	8/15 – 2/28	180
Japanese Millet	*Echinochloa crusgalli*	5/15 – 8/15	30
Redtop	*Agrostis alba*	3/1 – 6/15	10
Annual Ryegrass and Spring Oats	*Lolium multiflorum* *Avena sativa*	3/1 – 6/15	30 70
German/Foxtail Millet	*Setaria italica*	5/1 – 8/1	40
Hairy Vetch	*Vicia villosa*	8/15 – 4/1	60

*Inoculation is required. If a hydroseeder is utilized, the application rate is 5 times the recommended rate.

Table 3.11.1 Permanent seeding

SEED MIX	PLANT NAMES		APPLICATION RATE LBS/ACRE
	COMMON	SCIENTIFIC	
A	Kentucky 31 Fescue Red Fescue Birdsfoot Trefoil	*Festuca arundinacea* *Festuca rubra* *Lotus corniculatus*	65 20 5
B	Switchgrass Perennial Ryegrass Redtop Birdsfoot Trefoil	*Panicum virgatum* *Lolium perenne* *Agrostis alba* *Lotus corniculatus*	15 20 5 15
C	Red Fescue Kentucky Bluegrass Merion Bluegrass	*Festuca rubra* *Poa pratensis* *Poa pratensis*	20 40 30
D	Kentucky 31 Fescue Red Fescue Kentucky Bluegrass White Dutch Clover	*Festuca arundinacea* *Festuca rubra* *Poa pratensis* *Trifolium repens*	45 20 25 5
E	Perennial Ryegrass Switchgrass Crownvetch or Perennial Pea	*Lolium perenne* *Panicum virgatum* *Coronilla varia* *Lathyrus latifolius*	30 15 20 30
F	Orchardgrass Ladino Clover Redtop	*Dactylis glomerata* *Trifolium repens* *Agrostis alba*	20 5 5
G	Birdsfoot Trefoil Weeping Lovegrass Perennial Ryegrass	*Lotus corniculatus* *Eragrostis curvula* *Lolium perenne*	15 45 10
H	Crownvetch Orchardgrass	*Coronilla varia* *Dactylis glomerata*	25 40
I	Crownvetch Perennial Ryegrass	*Coronilla varia* *Lolium perenne*	25 30
J	Perennial Pea Orchardgrass	*Lathyrus latifolius* *Dactylis glomerata*	30 30
K	Deertongue Birdsfoot Trefoil Weeping Lovegrass	*Panicum clandestinum* *Lotus corniculatus* *Eragrostis curvula*	30 15 5
L	Orchardgrass Serecia Lespedeza Ladino Clover	*Dactylis glomerata* *Lespedeza cunata* *Trifolium repens*	30 40 5
M	Perennial Ryegrass Ladino Clover Redtop	*Lolium perenne* *Trifolium repens* *Agrostis alba*	50 5 5
N	Crownvetch Orchardgrass Redtop	*Coronilla varia* *Dactylis glomerata* *Agrostis alba*	15 30 5
O	Perennial Ryegrass Birdsfoot Trefoil Redtop	*Lolium perenne* *Lotus corniculatus* *Agrostis alba*	40 15 5
P	Serecia Lespedeza Orchardgrass Redtop	*Lespedeza cunata* *Dactylis glomerata* *Agrostis alba*	40 30 5
Q	Orchardgrass Reed Canarygrass[1] Redtop Ladino Clover	*Dactylis glomerata* *Phalaris arundinacea* *Agrostis alba* *Trifolium repens*	25 30 5 5
R	Kentucky Bluegrass Redtop White Clover or Birdsfoot Trefoil	*Poa pratensis* *Agrostis alba* *Trifolium repens* *Lotus corniculatus*	30 5 5 15
S	Reed Canarygrass[1] Weeping Lovegrass	*Phalaris arundinacea* *Eragrostis curvula*	40 5
T	Perennial Ryegrass Reed Canarygrass[1] Birdsfoot Trefoil	*Lolium perenne* *Phalaris arundinacea* *Lotus corniculatus*	30 15 5
U	Timothy Alfalfa	*Phluem pratense* *Medicago sativa*	10 18
V	Timothy Birdsfoot Trefoil	*Phluem pratense* *Lotus corniculatus*	10 15
W	Redtop Perennial Ryegrass Orchardgrass	*Agrostis alba* *Lolium perenne* *Dactylis glomerata*	5 30 25
X	Reed Canarygrass[1] Birdsfoot Trefoil Redtop	*Phalaris arundinacea* *Lotus corniculatus* *Agrostis alba*	30 20 5
Y	Switchgrass Birdsfoot Trefoil	*Panicum virgatum* *Lotus corniculatus*	30 20
Z	Switchgrass Serecia Lespedeza	*Panicum virgatum* *Lespedeza cunata*	15 30
A-1	Orchardgrass Red Clover	*Dactylis glomerata* *Trifolium pratense*	30 10
A-2	Switchgrass Big Bluestem Indiangrass Little Bluestem Sideoats Grama[2]	*Panicum virgatum* *Andropogon gerardi* *Sorghastrum nutans* *Andropogon scoparius* *Bouteloua curtipendula*	15 5 5 5 5
A-3	Switchgrass Eastern Gamagrass[3]	*Panicum virgatum* *Tripsacum dactyloides*	20 15

NOTE: When utilizing a properly prepared seedbed, the rates of application can be reduced by 30 percent except for seed mixes A-2 & A-3.

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[1] Reed Canarygrass shall not be used east of I-79 and/or south of Charleston.
[2] Use north and east of I-64 and I-79.
[3] Use south and west of I-64 and I-79.

Table 3.11.2 Nurse crops

PLANT NAMES		PLANTING DATES	APPLICATION RATE LBS/ACRE
COMMON	SCIENTIFIC		
Annual Ryegrass	*Lolium multiflorum*	2/16 – 5/15 8/1 – 11/1	25
Field Bromegrass	*Bromus ciliatus*	3/1 – 6/15 8/1 – 9/15	20
Spring Oats	*Avena sativa*	3/1 –6/15	50
Winter Rye	*Secale cereale*	8/15 –2/28	85
Winter Wheat	*Triticum aestivum*	8/15 – 2/28	90
Japanese Millet	*Echinochloa crusgalli*	5/15 – 8/15	15
Redtop	*Agrostis alba*	3/1 – 6/15	10
Annual Ryegrass and Spring Oats	*Lolium multiflorum* *Avena sativa*	3/1 – 6/15	15 35
German/Foxtail Millet	*Setaria italica*	5/1 – 8/1	25
Hairy Vetch*	*Vicia villosa*	8/15 – 4/1	30

* Inoculation is required. If a hydroseeder is utilized, the application rate is five times the recommended rate.

Table 3.12.1 Organic mulch materials and application rates

Mulches:	Rates:		Notes:
	Per acre	Per 1,000 ft^2.	
Straw or hay	1½ - 2 tons (minimum 2 tons for winter cover)	70 - 90 lbs.	Free from weeds and coarse matter. Must be anchored. Spread with mulch blower or by hand.
Fiber mulch	Minimum 1,500 lbs.	35 lbs.	Do not use as mulch for winter cover or during hot, dry periods.* Apply as slurry.
Cornstalks	4 - 6 tons	185 - 275 lbs.	Cut or shredded in 4-6" lengths. Air-dried. Do not use in fine turf areas. Apply with mulch blower or by hand.
Wood chips	4 - 6 tons	185 - 275 lbs.	Free of coarse matter. Air-dried. Treat with 12 lbs. nitrogen per ton. Do not use in fine turf areas. Apply with mulch blower, chip handler, or by hand.
Bark chips or Shredded bark	50 - 70 cu. yds.	1-2 cu. yds.	Free of coarse matter. Air-dried. Do not use in fine turf areas. Apply with mulch blower, chip handler, or by hand.

* When fiber mulch is the only available mulch during periods when straw should be used, apply at a minimum rate of 2,000 lbs./ac. or 45 lbs./1,000 sq. ft.

From VA DSWC

Table 3.11.3 Permanent seeding requirements

SEED MIX	FINE LAWN	COARSE LAWN	LOW MAINT.	NO MAINT.	PASTURE	SENSITIVE NATURAL AREAS	pH RANGE	DRAINAGE	SHADE TOLERANCE	PREFERRED PLANTING DATES			
										3/1 -6/15	6/16 -8/14	8/15 - 9/15	9/16 - 2/28
A			✓ 1				6.0 – 7.5	MOD. - WELL	FULL SUN	✓	♦	✓	♦
B				✓			5.0 – 7.5	MOD. – WELL	FULL SUN	✓	♦	✓	♦
C	✓ 1						6.0 – 7.5	MOD. – WELL	FULL SUN	✓		✓	
D		✓ 1					6.0 – 7.5	MOD. – WELL	FULL SUN	✓		✓	
E				✓ 1			6.0 – 7.5	MOD. – WELL	FULL SUN	✓	♦	✓	♦
F			✓	✓	✓		5.5 – 7.5	MOD. – WELL	TOLERANT	✓	♦	✓	♦
G				✓	✓		5.0 – 7.5	MOD. – WELL	FULL SUN	✓	♦	✓	♦
H			✓	✓ 1	✓		5.0 – 7.5	MOD. – WELL	TOLERANT	✓	♦	✓	♦
I			✓	✓ 1	✓		5.0 – 7.5	MOD. – WELL	FULL SUN	✓	♦	✓	♦
J			✓	✓ 1	✓		4.0 – 8.0	MOD. – WELL	TOLERANT	✓	♦	✓	♦
K				✓			4.0 – 7.0	MOD. – WELL	FULL SUN	✓	♦	✓	♦
L				✓	✓		4.5 – 7.5	MOD. – WELL	TOLERANT	✓	♦	✓	♦
M			✓	✓	✓		5.0 – 7.5	MOD. – WELL	TOLERANT	✓	♦	✓	♦
N			✓	✓ 1	✓		5.0 – 7.5	MOD. – WELL	TOLERANT	✓	♦	✓	♦
O			✓	✓	✓		5.0 – 7.5	MOD. – WELL	FULL SUN	✓	♦	✓	♦
P			✓	✓	✓		4.5 – 7.5	MOD. – WELL	TOLERANT	✓	♦	✓	♦
Q			✓	✓	✓		4.5 – 7.5	POOR - WELL	TOLERANT	✓	♦	✓	♦
R			✓	✓	✓		5.5 – 7.5	MOD. – WELL	FULL SUN	✓	♦	✓	♦
S			✓	✓	✓		4.5 – 7.5	POOR – WELL	FULL SUN	✓	♦	✓	♦
T					✓		5.5 – 7.5	POOR – WELL	FULL SUN	✓	♦	✓	♦
U					✓		6.5 – 8.0	MOD. – WELL	FULL SUN	✓	♦	✓	♦
V					✓		5.5 – 7.5	POOR – WELL	FULL SUN	✓	♦	✓	♦
W			✓	✓	✓		5.0 – 7.5	MOD. – WELL	TOLERANT	✓	♦	✓	♦
X					✓		5.5 – 7.5	POOR – WELL	FULL SUN	✓	♦	✓	♦
Y			✓	✓	✓		5.0 – 7.5	MOD. – WELL	FULL SUN	✓	♦	✓	♦
Z			✓	✓	✓		5.0 – 7.5	MOD. – WELL	FULL SUN	✓	♦	✓	♦
A-1					✓		4.5 – 7.5	MOD. – WELL	TOLERANT	✓	♦	✓	♦
A-2				✓	✓	✓	5.0 – 7.5	MOD. – WELL	FULL SUN	✓	♦	✓	♦
A-3				✓		✓	5.0 – 7.5	POOR - WELL	FULL SUN	✓	♦	✓	♦

♦ Nurse crop required – See Table B
1 Urban areas only

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JASON P. GERHART
No. 19127
12-13-24

SEAL:

REVISIONS
1. 10/23/2024 - JEFFERSON COUNTY, WVDOH, CTUB, AND WVAW COMMENTS
2. 12/13/2024 - JEFFERSON COUNTY AND CTUB PUMP STATION COMMENTS

EROSION AND SEDIMENT CONTROL NOTES

BIRDHILL MEADOWS SUBDIVISION PHASE 1

TAX MAP 3, PARCEL 29; D.B. 1291, PG. 381
MIDDLEWAY TAX DISTRICT
JEFFERSON COUNTY, WEST VIRGINIA

J.C. FILE #24-12-SD

SCALE: HORIZ.: N/A
VERT.: N/A
DATE: JULY 2024
JOB: 3568-0301
DRAWN: JMM
CHECK: JPG
CADD: C-GC-001.DWG
NCS:
SHEET: 10 OF 147

NOTE:
EROSION AND SEDIMENT CONTROLS FOR OFFSITE UTILITIES, SEE SHEETS 91-95 AND 109-113.

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OVERALL EROSION AND SEDIMENT CONTROL PHASE I

BIRDHILL MEADOWS SUBDIVISION PHASE 1

TAX MAP 3, PARCEL 29; D.B. 1291, PG. 381
MIDDLEWAY TAX DISTRICT
JEFFERSON COUNTY, WEST VIRGINIA

J.C. FILE #24-12-SD

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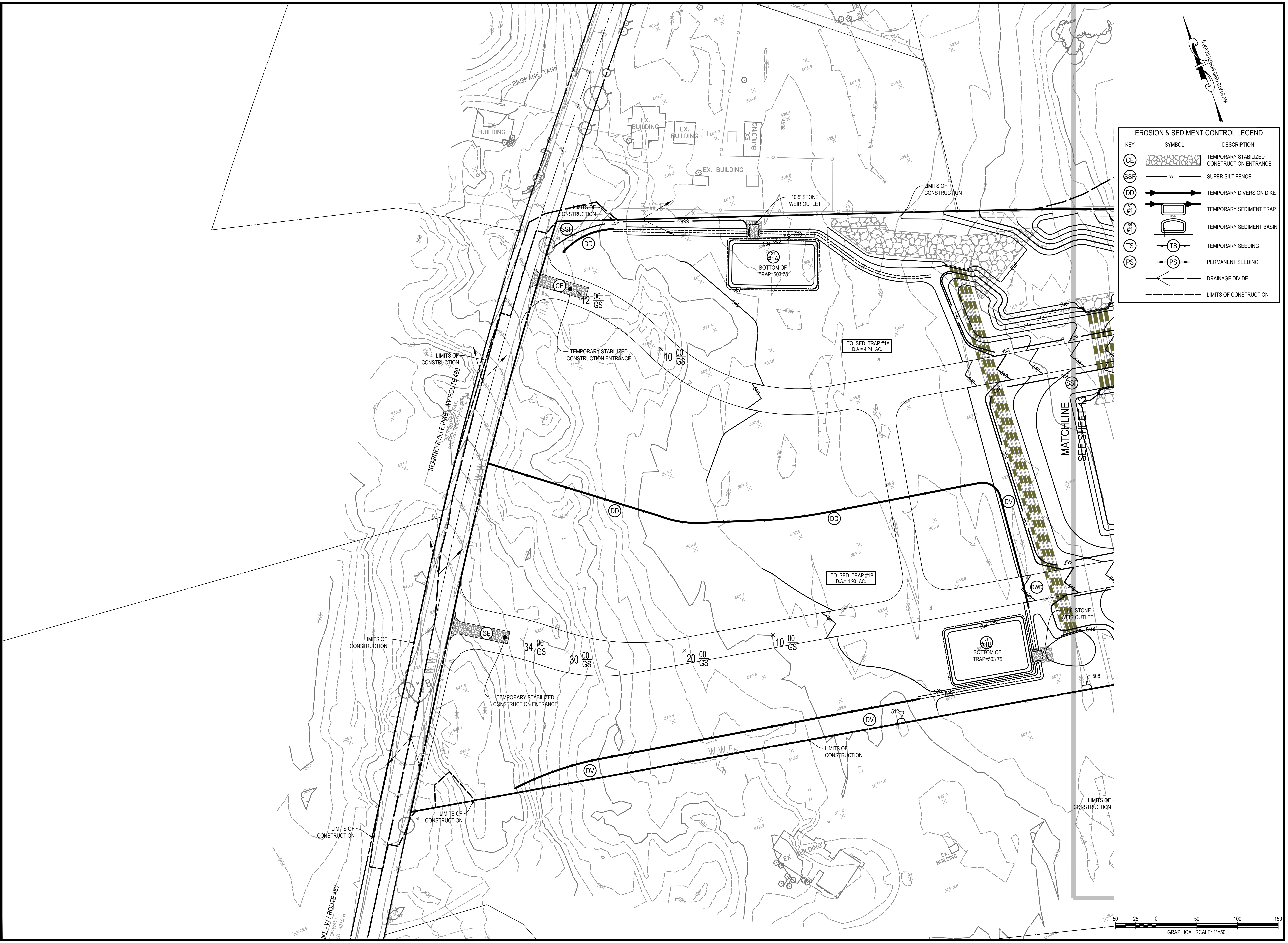

EROSION & SEDIMENT CONTROL LEGEND

KEY	SYMBOL	DESCRIPTION
CE	▨	TEMPORARY STABILIZED CONSTRUCTION ENTRANCE
SSF	—— SSF ——	SUPER SILT FENCE
DD	—▶——▶—	TEMPORARY DIVERSION DIKE
ST #1	—▶▭▶—	TEMPORARY SEDIMENT TRAP
SB #1	▭	TEMPORARY SEDIMENT BASIN
TS	◀—TS—▶	TEMPORARY SEEDING
PS	◀—PS—▶	PERMANENT SEEDING
	—<— — —	DRAINAGE DIVIDE
	— — — — —	LIMITS OF CONSTRUCTION

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EROSION AND SEDIMENT CONTROL PHASE I

BIRDHILL MEADOWS SUBDIVISION PHASE 1

TAX MAP 3, PARCEL 29; D.B. 1291, PG. 381
MIDDLEWAY TAX DISTRICT
JEFFERSON COUNTY, WEST VIRGINIA

J.C. FILE #24-12-SD

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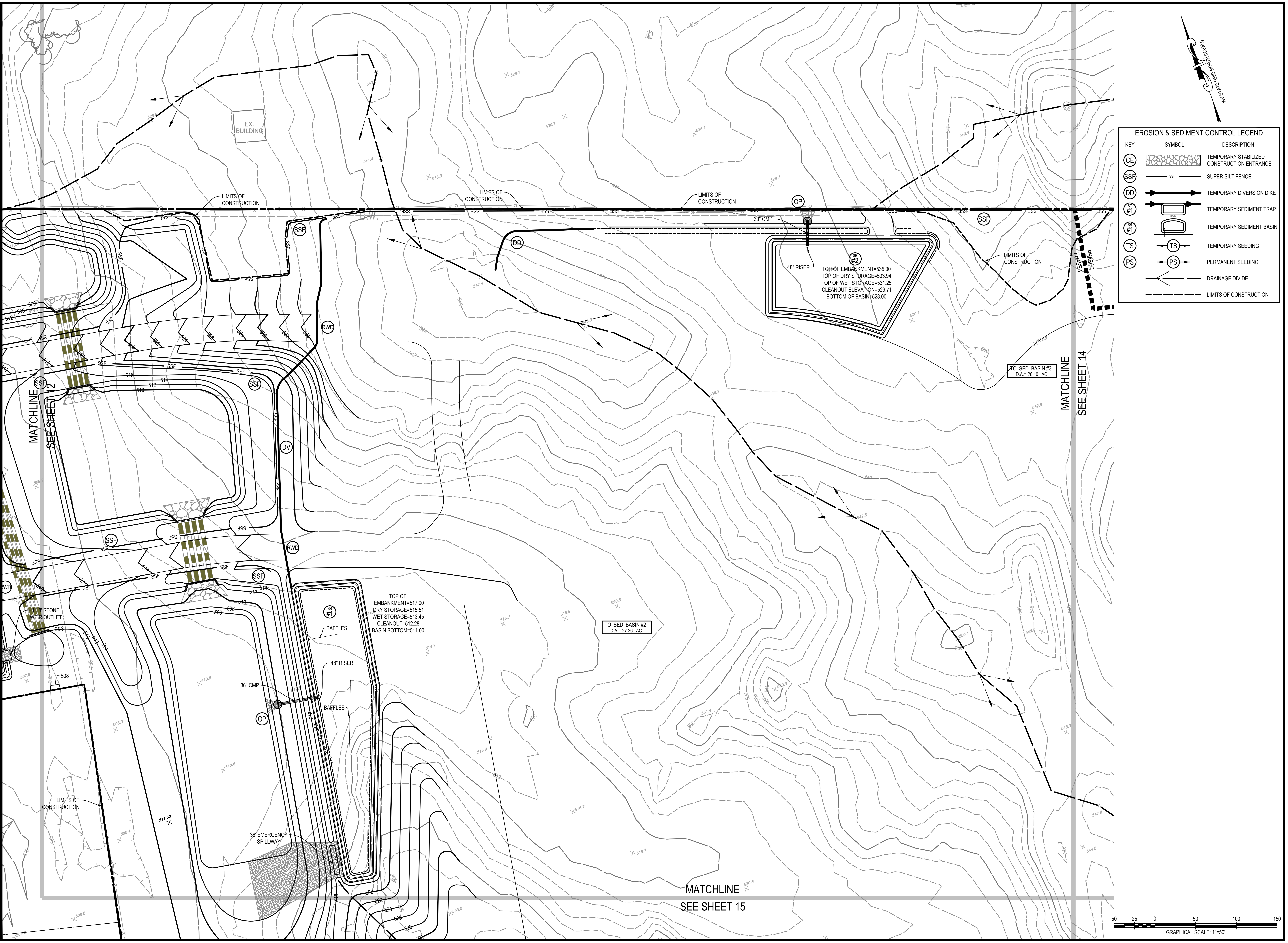

EROSION & SEDIMENT CONTROL LEGEND

KEY	SYMBOL	DESCRIPTION
CE	▨	TEMPORARY STABILIZED CONSTRUCTION ENTRANCE
SSF	— SSF —	SUPER SILT FENCE
DD	—▶——▶—	TEMPORARY DIVERSION DIKE
ST #1	—▶▭▶—	TEMPORARY SEDIMENT TRAP
SB #1	▭	TEMPORARY SEDIMENT BASIN
TS	◀—TS—▶	TEMPORARY SEEDING
PS	◀—PS—▶	PERMANENT SEEDING
	—<— — —	DRAINAGE DIVIDE
	— — — —	LIMITS OF CONSTRUCTION

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No. 19127
STATE OF
WEST VIRGINIA
PROFESSIONAL ENGINEER
12-13-24

SEAL:

REVISIONS
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2. 12/13/2024 - JEFFERSON COUNTY AND CTUB PUMP STATION COMMENTS

EROSION AND SEDIMENT CONTROL PHASE I

BIRDHILL MEADOWS
SUBDIVISION PHASE 1

TAX MAP 3, PARCEL 29; D.B. 1291, PG. 381
MIDDLEWAY TAX DISTRICT
JEFFERSON COUNTY, WEST VIRGINIA

J.C. FILE #24-12-SD

SCALE: HORIZ.: 1"=50'
VERT.: N/A
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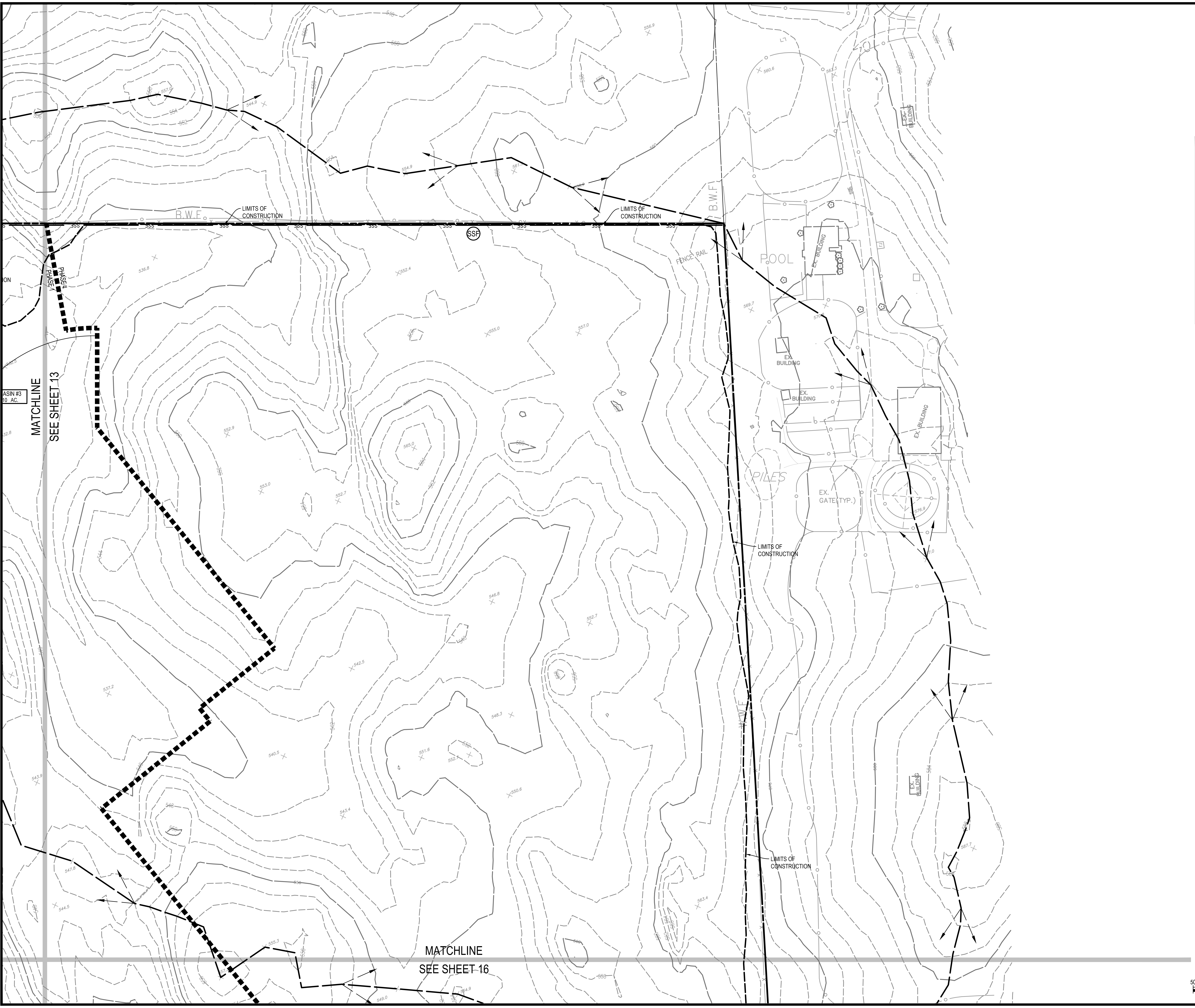
13 OF 147



WV STATE GRID NORTH (NAD83)

EROSION & SEDIMENT CONTROL LEGEND

KEY	SYMBOL	DESCRIPTION
CE	▨	TEMPORARY STABILIZED CONSTRUCTION ENTRANCE
SSF	— SSF —	SUPER SILT FENCE
DD	—▶——▶—	TEMPORARY DIVERSION DIKE
ST #1	▭	TEMPORARY SEDIMENT TRAP
SB #1	▭	TEMPORARY SEDIMENT BASIN
TS	←TS→	TEMPORARY SEEDING
PS	←PS→	PERMANENT SEEDING
	—<—— ——	DRAINAGE DIVIDE
	— — — —	LIMITS OF CONSTRUCTION

50 25 0 50 100 150

GRAPHICAL SCALE: 1"=50'

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STATE OF WEST VIRGINIA
PROFESSIONAL ENGINEER
12-13-24

SEAL:

REVISIONS

1. 10/23/2024 - JEFFERSON COUNTY, WVDOH, CTUB, AND WVAW COMMENTS
2. 12/13/2024 - JEFFERSON COUNTY AND CTUB PUMP STATION COMMENTS

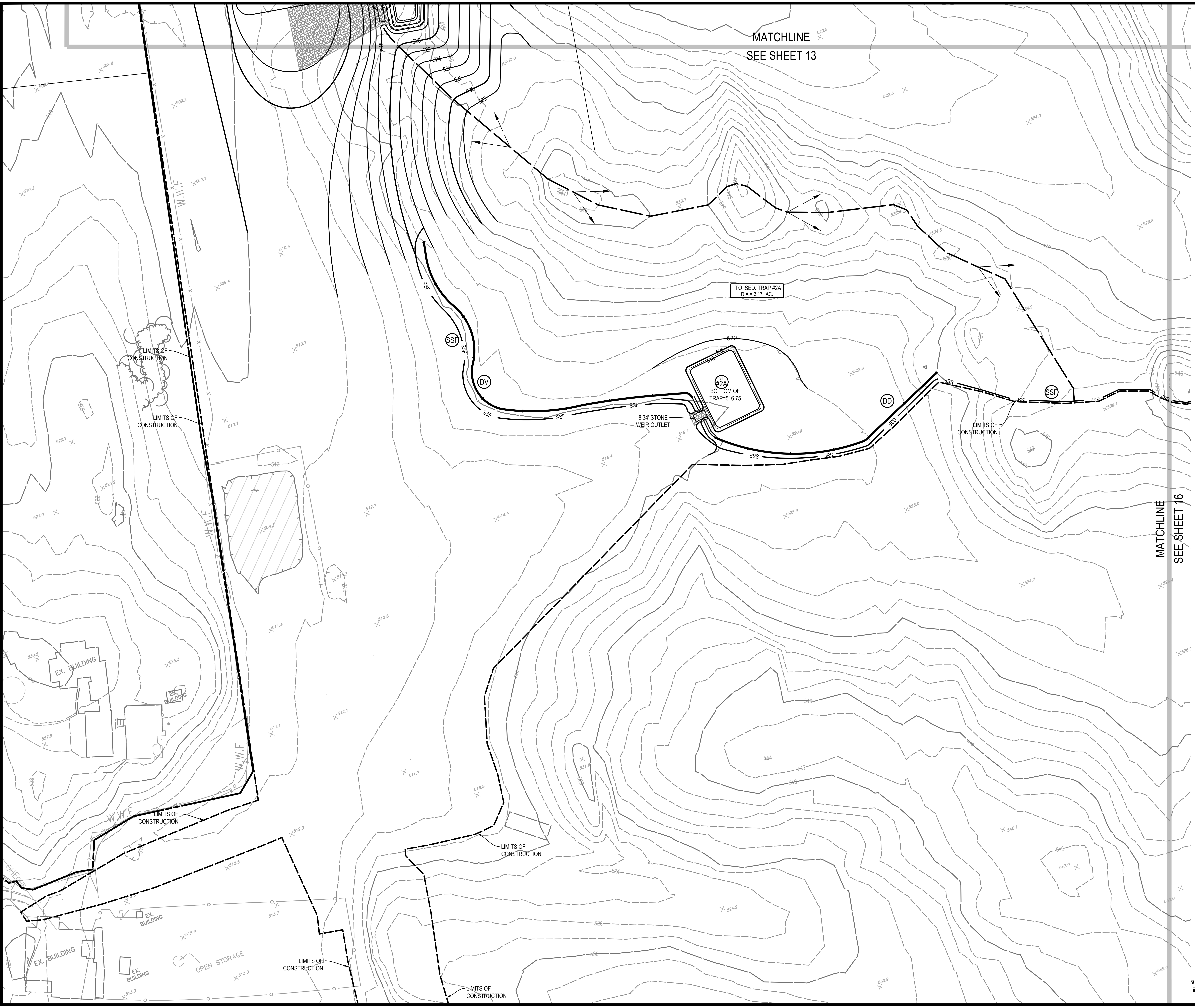
EROSION AND SEDIMENT CONTROL PHASE I

BIRDHILL MEADOWS SUBDIVISION PHASE 1

TAX MAP 3, PARCEL 29; D.B. 1291, PG. 381
MIDDLEWAY TAX DISTRICT
JEFFERSON COUNTY, WEST VIRGINIA

J.C. FILE #24-12-SD

SCALE:	HORIZ.: 1"=50' VERT.: N/A
DATE: JULY 2024	
JOB: 3568-0301	
DRAWN: JMM	CHECK: JPG
CADD: C-GC-101.DWG	
NCS:	
SHEET: 14 OF 147	



EROSION & SEDIMENT CONTROL LEGEND

KEY	SYMBOL	DESCRIPTION
CE	▨	TEMPORARY STABILIZED CONSTRUCTION ENTRANCE
SSF	—— SSF ——	SUPER SILT FENCE
DD	▶——▶	TEMPORARY DIVERSION DIKE
ST #1	▭	TEMPORARY SEDIMENT TRAP
SB #1	▭	TEMPORARY SEDIMENT BASIN
TS	←TS→	TEMPORARY SEEDING
PS	←PS→	PERMANENT SEEDING
	—<— —	DRAINAGE DIVIDE
	— — — —	LIMITS OF CONSTRUCTION

50 25 0 50 100 150
GRAPHIC SCALE: 1"=50'

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JEFFERSON COUNTY, WEST VIRGINIA

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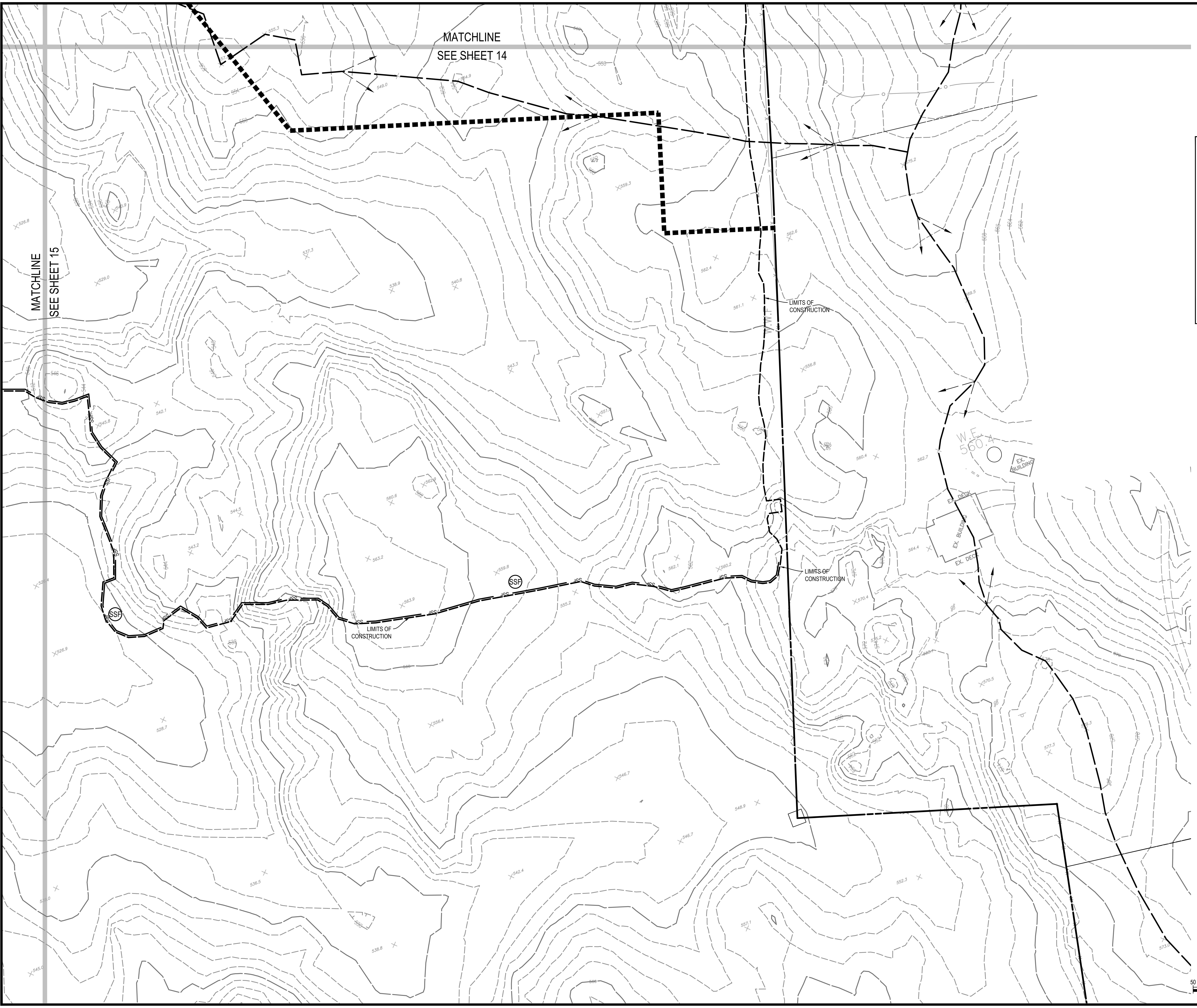

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CE	▨	TEMPORARY STABILIZED CONSTRUCTION ENTRANCE
SSF	—— SSF ——	SUPER SILT FENCE
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50 25 0 50 100 150

GRAPHICAL SCALE: 1"=50'

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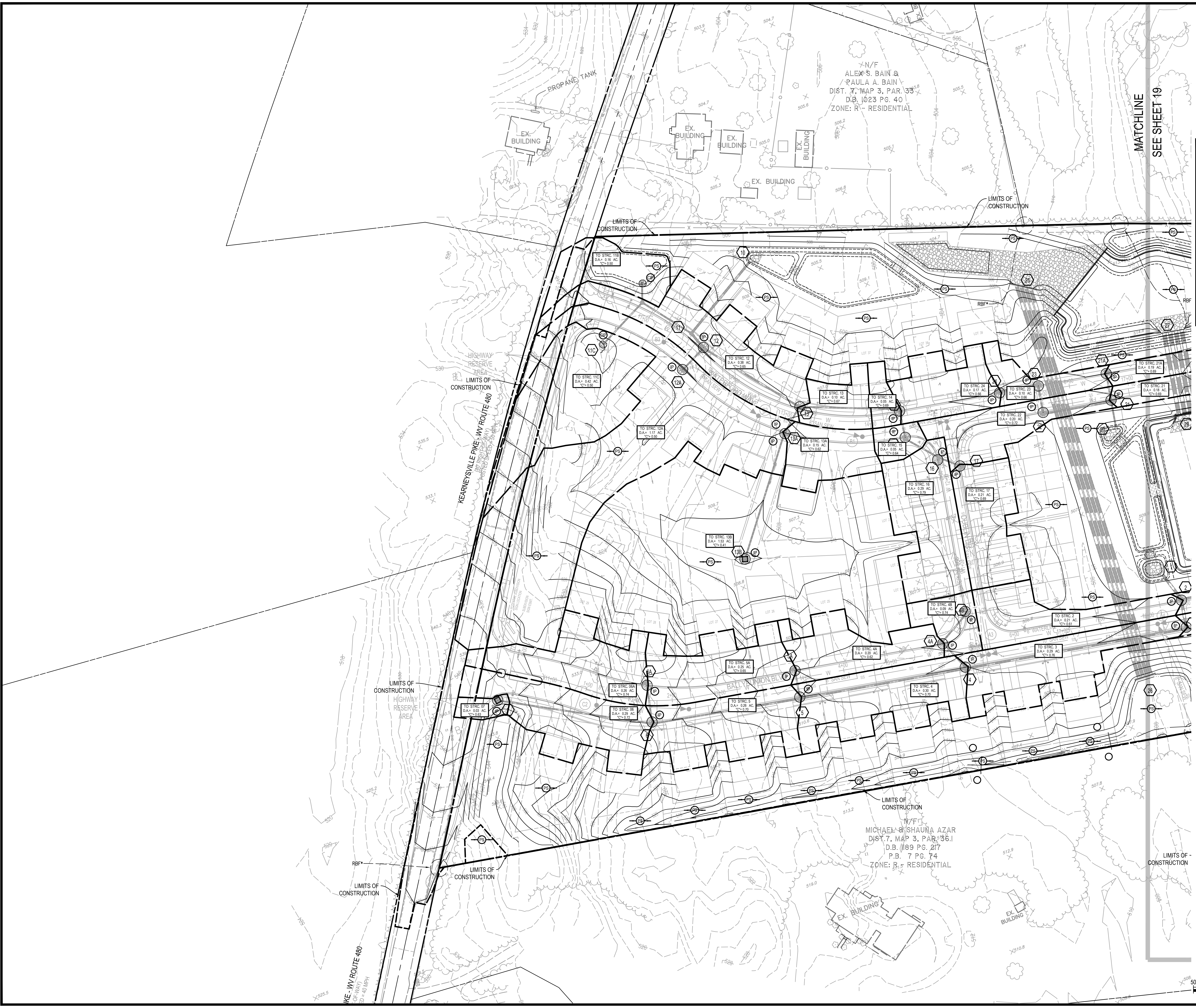
NCS:
SHEET:
15 OF 147



WV STATE GRID NORTH (NAD83)

EROSION & SEDIMENT CONTROL LEGEND

KEY	SYMBOL	DESCRIPTION
CE	▨	TEMPORARY STABILIZED CONSTRUCTION ENTRANCE
SSF	—— SSF ——	SUPER SILT FENCE
IP	◉ ◉ ◉	INLET PROTECTION
CIP	◉	CULVERT INLET PROTECTION
OP	◉	OUTLET PROTECTION
TS	←(TS)→	TEMPORARY SEEDING
PS	←(PS)→	PERMANENT SEEDING
	—<— — —	DRAINAGE DIVIDE
	— — — —	LIMITS OF CONSTRUCTION

50 25 0 50 100 150

GRAPHICAL SCALE: 1"=50'

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EROSION AND SEDIMENT CONTROL PHASE II

BIRDHILL MEADOWS SUBDIVISION PHASE 1

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MIDDLEWAY TAX DISTRICT
JEFFERSON COUNTY, WEST VIRGINIA

J.C. FILE #24-12-SD

SCALE:	HORIZ.: 1"=50' VERT.: N/A
DATE:	JULY 2024
JOB:	3568-0301
DRAWN: JMM	CHECK: JPG
CADD:	C-GC-201.DWG
NCS:	
SHEET:	18 OF 147

EROSION & SEDIMENT CONTROL LEGEND

KEY	SYMBOL	DESCRIPTION
CE	▨	TEMPORARY STABILIZED CONSTRUCTION ENTRANCE
SSF	— SSF —	SUPER SILT FENCE
IP	● ● ●	INLET PROTECTION
CIP	●	CULVERT INLET PROTECTION
OP	●	OUTLET PROTECTION
TS	←TS→	TEMPORARY SEEDING
PS	←PS→	PERMANENT SEEDING
	— — —	DRAINAGE DIVIDE
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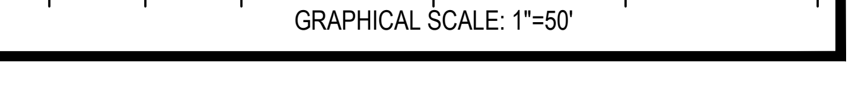

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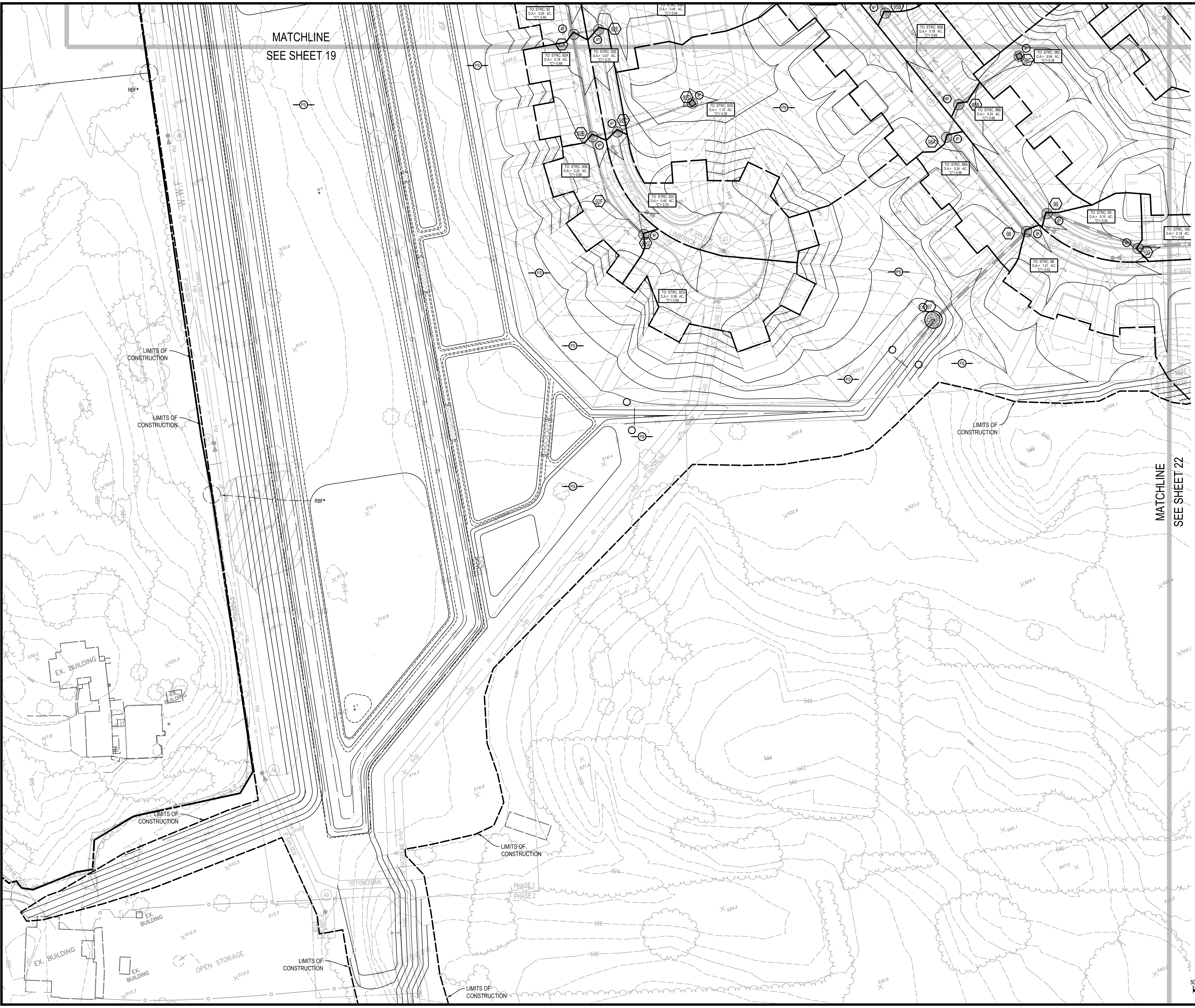

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EROSION & SEDIMENT CONTROL LEGEND

KEY	SYMBOL	DESCRIPTION
CE		TEMPORARY STABILIZED CONSTRUCTION ENTRANCE
SSF	SSF	SUPER SILT FENCE
IP		INLET PROTECTION
CIP		CULVERT INLET PROTECTION
OP		OUTLET PROTECTION
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NCS:	
SHEET: 21 OF 147	

TEMPORARY SEDIMENT BASIN DESIGN DATA SHEET

PROJECT: Birdhill Meadows
BASIN ID NO.: SB#1
TOTAL DRAINAGE AREA: 27.26 AC.
"C" FACTOR: 0.50

Basin Volume Design

Wet Storage

1. Minimum Required Volume = **1,800** Cu. Ft. x Total Drainage Area (Ac.)
1800 Cu. Ft. x **27.26** Acres = **49,068** Cu. Ft.
= **1.13** Ac-Ft.

2. Available Basin Volume = **48,862** Cu. Ft. At Elevation **513.45**
(From Storage - Elevation Curve)

3. Excavate **48,862** Cu. Ft. to Obtain Required Volume*.

* Elevation Corresponding to Required Volume = Invert of Dewatering Orifice.

4. Available Volume Before Cleanout Required = **24,431** Cu. Ft.
(1/2 Wet Storage Volume)

5. Elevation Corresponding to Cleanout Level = **512.41**
(From Storage - Elevation Curve)

6. Distance From Invert of The Dewatering Orifice to Cleanout Level = **1.0'**
(Min. = 1.0 Ft.)

Dry Storage

7. Minimum Required Volume = **1800** Cu. Ft. x Total Drainage Area (Ac.)
1,800 Cu. Ft. x **27.26** Acres = **49,068** Cu. Ft.
= **1.13** Ac-Ft.

8. Total Required Volume = **48,862** Cu. Ft. + **49,068** Cu. Ft.
= **97,930** Cu. Ft.
= **2.25** Ac-Ft.

9. Total Available Basin Volume at Crest of Riser = **97,713** Cu. Ft. at Elevation **515.51**
(From Storage - Elevation Curve)

Orifice Calculation Breakdown

10. A = (Dry Storage/T)/(64.32*h)^0.5(0.6)
Drawdown Time (T) = **48** Hours
Head (h) = **1.030514**
Required Area (A) = **0.02083** Sq.In.
Maximum Diameter = **1.95** In.
Diameter of Dewatering Orifice = **3.00** In.

11. Diameter of Flexible Tubing = **5.00** In. (Min.)
(Dia. of Dewatering Orifice + 2")

Preliminary Design Elevations

12. Crest of Riser = **515.51**
Top of Dam = **518.00**
Design High Water = **516.51**
Upstream Toe of Dam = **511.00**
Crest of Emergency Spillway = **516.51**

Basin Shape

13. Length of Flow = / Effective Width = L / We = **225.00** / **113.18** = **1.99** Length-to-width Ratio
If L/We > 2, Baffles Are Not Required
If L/We < 2, Baffles Are Required

Runoff

14. Q_2 = **42.3** cfs.

15. Q_{25} = **77.7** cfs.

Principal Spillway Design

17. With Emergency Spillway, Required Spillway Capacity Qp = Q_2 = **42.3** cfs.
(Riser and Barrel)

Without Emergency Spillway, Required Spillway Capacity Qp = Q_{25} = **N/A** cfs.
(Riser and Barrel)

18. With Emergency Spillway:
Assumed Available Head (h) = **1.0** (Using Q_2)
h = Crest of Emergency Spillway Elevation - Crest of Riser Elevation

Without Emergency Spillway:
Assumed Available Head (h) = **N/A** (Using Q_{25})
h = Design High Water Elevation - Crest of Riser Elevation

19. Riser Dimensions = **4' x 4'**
Actual Head (h) = **1.00'**
Note: Avoid Orifice Flow Conditions

20. Barrel Length (L) = **45'**
Invert In = **511.00** Invert Out = **510.50**
Head (H) on Barrel Through Embankment = **6.01'**

21. Barrel Diameter = **36"** **No. of Barrels = 1**

22. Trash Rack and Anti-Vortex Device
Dimensions = **N/A**
Height = **N/A**

Emergency Spillway Design

23. Required Spillway Capacity Qe = Q25 - Qp = **35.44** cfs.

24. Bottom Width (B) = **36'**
Slope of The Exit Channel (S) = **5.5** Ft./Ft.
Minimum Length of The Exit Channel (X) = **50'**

Anti-Seep Collar Design

25. Depth of Water at Principal Spillway Crest (Y) = **6.0'**
Slope of Upstream Face of Empankment (Z) = **3:1**
Slope of Principal Spillway Barrel (Sb) = **1.11%**
Length of Barrel in Saturated Zone (Ls) = **44.01'**

26. Number of Collars Required = **0** Dimensions = **N/A**

Finial Design Elevations

27. Top of Dam = **518.00**
Design High Water = **516.51**
Emergency Spillway Crest = **516.51**
Principal Spillway Crest = **515.51**
Dewatering Orifice Invert = **513.45**
Cleanout Elevation = **512.41**

TEMPORARY SEDIMENT BASIN DESIGN DATA SHEET

PROJECT: Birdhill Meadows
BASIN ID NO.: SB#2
TOTAL DRAINAGE AREA: 28.10 AC.
"C" FACTOR: 0.50

Basin Volume Design

Wet Storage

1. Minimum Required Volume = **1,800** Cu. Ft. x Total Drainage Area (Ac.)
1800 Cu. Ft. x **28.10** Acres = **50,580** Cu. Ft.
= **1.16** Ac-Ft.

2. Available Basin Volume = **50,474** Cu. Ft. At Elevation **531.25**
(From Storage - Elevation Curve)

3. Excavate **50,474** Cu. Ft. to Obtain Required Volume*.

* Elevation Corresponding to Required Volume = Invert of Dewatering Orifice.

4. Available Volume Before Cleanout Required = **25,237** Cu. Ft.
(1/2 Wet Storage Volume)

5. Elevation Corresponding to Cleanout Level = **529.71**
(From Storage - Elevation Curve)

6. Distance From Invert of The Dewatering Orifice to Cleanout Level = **1.5'**
(Min. = 1.0 Ft.)

Dry Storage

7. Minimum Required Volume = **1800** Cu. Ft. x Total Drainage Area (Ac.)
1,800 Cu. Ft. x **28.1** Acres = **50,580** Cu. Ft.
= **1.16** Ac-Ft.

8. Total Required Volume = **50,474** Cu. Ft. + **50,580** Cu. Ft.
= **101,054** Cu. Ft.
= **2.32** Ac-Ft.

9. Total Available Basin Volume at Crest of Riser = **101,024** Cu. Ft. at Elevation **533.94**
(From Storage - Elevation Curve)

Orifice Calculation Breakdown

10. A = (Dry Storage/T)/(64.32*h)^0.5(0.6)
Drawdown Time (T) = **48** Hours
Head (h) = **1.345157**
Required Area (A) = **0.01887** Sq.In.
Maximum Diameter = **1.86** In.
Diameter of Dewatering Orifice = **3.00** In.

11. Diameter of Flexible Tubing = **5.00** In. (Min.)
(Dia. of Dewatering Orifice + 2")

Preliminary Design Elevations

12. Crest of Riser = **533.94**
Top of Dam = **535.00**
Design High Water = **534.94**
Upstream Toe of Dam = **528.00**
Crest of Emergency Spillway = **534.94**

Basin Shape

13. Length of Flow = / Effective Width = L / We = **201.00** / **101.20** = **1.99** Length-to-width Ratio
If L/We > 2, Baffles Are Not Required
If L/We < 2, Baffles Are Required

Runoff

14. Q_2 = **43.6** cfs.

15. Q_{25} = **80.1** cfs.

Principal Spillway Design

17. With Emergency Spillway, Required Spillway Capacity Qp = Q_2 = **43.6** cfs.
(Riser and Barrel)

Without Emergency Spillway, Required Spillway Capacity Qp = Q_{25} = **N/A** cfs.
(Riser and Barrel)

18. With Emergency Spillway:
Assumed Available Head (h) = **1.0** (Using Q_2)
h = Crest of Emergency Spillway Elevation - Crest of Riser Elevation

Without Emergency Spillway:
Assumed Available Head (h) = **N/A** (Using Q_{25})
h = Design High Water Elevation - Crest of Riser Elevation

19. Riser Dimensions = **48"**
Actual Head (h) = **1.00'**
Note: Avoid Orifice Flow Conditions

20. Barrel Length (L) = **27'**
Invert In = **528.00** Invert Out = **529.00**
Head (H) on Barrel Through Embankment = **5.94'**

21. Barrel Diameter = **30"** **No. of Barrels = 1**

22. Trash Rack and Anti-Vortex Device
Dimensions = **N/A**
Height = **N/A**

Emergency Spillway Design

23. Required Spillway Capacity Qe = Q25 - Qp = **36.53** cfs.

24. Bottom Width (B) = **30'**
Slope of The Exit Channel (S) = **2.0** Ft./Ft.
Minimum Length of The Exit Channel (X) = **20'**

Anti-Seep Collar Design

25. Depth of Water at Principal Spillway Crest (Y) = **5.9'**
Slope of Upstream Face of Empankment (Z) = **3:1**
Slope of Principal Spillway Barrel (Sb) = **-3.70%**
Length of Barrel in Saturated Zone (Ls) = **36.24'**

26. Number of Collars Required = **0** Dimensions = **N/A**

Finial Design Elevations

27. Top of Dam = **535.00**
Design High Water = **534.94**
Emergency Spillway Crest = **534.94**
Principal Spillway Crest = **533.94**
Dewatering Orifice Invert = **531.25**
Cleanout Elevation = **529.71**

TEMPORARY STONE OUTLET SEDIMENT TRAP COMPUTATIONS

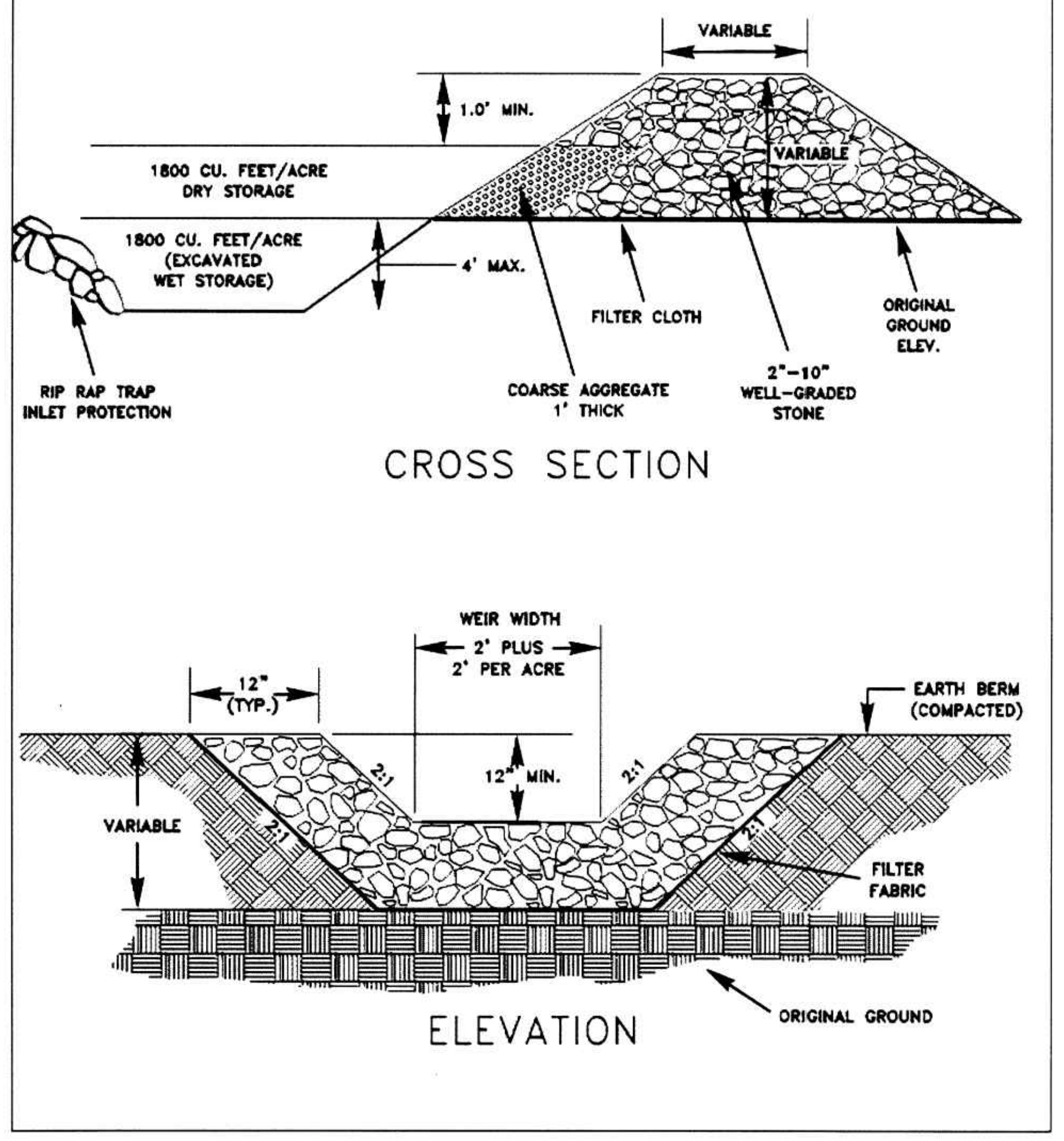
TRAP ID NO.	TOTAL DRAINAGE AREA (AC.)	TOTAL DRAINAGE AREA (SQ. FT.)	STORAGE REQUIRED (CU. FT.)	STORAGE PROVIDED (CU. FT.)	WET STORAGE					DRY STORAGE						TRAP DESIGN ELEVATIONS				EMBANKMENT			STONE WEIR WIDTH (FT.)	SIDE SLOPE
					DEPTH (D1) (FT.)	AREA (A1) (SQ. FT.)	VOLUME REQ'D (V1) (CU. FT.)	VOLUME PROV'D (V1) (CU. FT.)	APPROX. BOTTOM DIMENSION (FT. x FT.)	DEPTH (D2) (FT.)	AREA (A2) (SQ. FT.)	MINIMUM AREA REQ'D (SQ. FT.)	VOLUME REQ'D (V2) (CU. FT.)	VOLUME PROV'D (V2) (CU. FT.)	APPROX. SURFACE DIMENSION (FT. x FT.)	BOTTOM OF TRAP (FT.)	CLEANOUT LEVEL (FT.)	TOP OF WET STORAGE (FT.)	TOP OF DRY STORAGE (FT.)	ELEVATION (FT.)	HEIGHT (FT.)	TOP WIDTH (FT.)		
1A	4.24	184,617.96	15,258	17,722	2.0	5,000	7,629	8,500	100.0 x 50.0	1.5	7,296	5,172	7,629	9,222	114.0 x 64.0	± 503.75	± 504.75	± 505.75	± 507.25	± 509.00	3.25	3.00	10.48	2:1
1B	4.90	213,436.05	17,639	19,002	2.0	5,400	8,820	9,180	90.0 x 60.0	1.5	7,696	6,360	8,820	9,822	104.0 x 74.0	± 503.75	± 504.75	± 505.75	± 507.25	± 509.00	3.25	3.00	11.80	2:1
2A	3.13	136,428.93	11,275	12,607	2.0	3,500	5,638	5,950	70.0 x 50.0	1.5	5,376	4,017	5,638	6,657	84.0 x 64.0	± 516.75	± 517.75	± 518.75	± 520.25	± 522.00	3.25	3.00	8.26	2.1

REQUIRED STORAGE = 3,600 CUBIC FEET PER ACRE
V1= 0.85 x D1 x A1; V2=[(A1 + A2)/2] x D2
OUTLET WIDTH=2' PLUS 2' PER ACRE. MINIMUM OUTLET CHANNEL WIDTH=4'.

NOTES:
1. SURFACE DIMENSIONS ARE APPROXIMATE AREAS USED TO SIZE THE SEDIMENT TRAP, EXACT DIMENSIONS AND/OR SHAPE MAY VARY WITH CURRENT FIELD CONDITIONS.
2. IF CHANGES ARE MADE TO THE SEDIMENT TRAP, THE REQUIRED WET AND DRY STORAGE VOLUMES MUST BE MET.
3. SEDIMENT MUST BE REMOVED FROM TRAP WHEN THE TRAP'S WET STORAGE VOLUME IS REDUCED BY ONE-HALF.
4. ALL DISTURBED AREAS ASSOCIATED WITH THE INSTALLATION OF THE SEDIMENT TRAP SHOULD BE SEEDED AND MULCHED IMMEDIATELY AFTER INSTALLATION.

FIGURE 3.29.1

ROCK OUTLET SEDIMENT TRAP

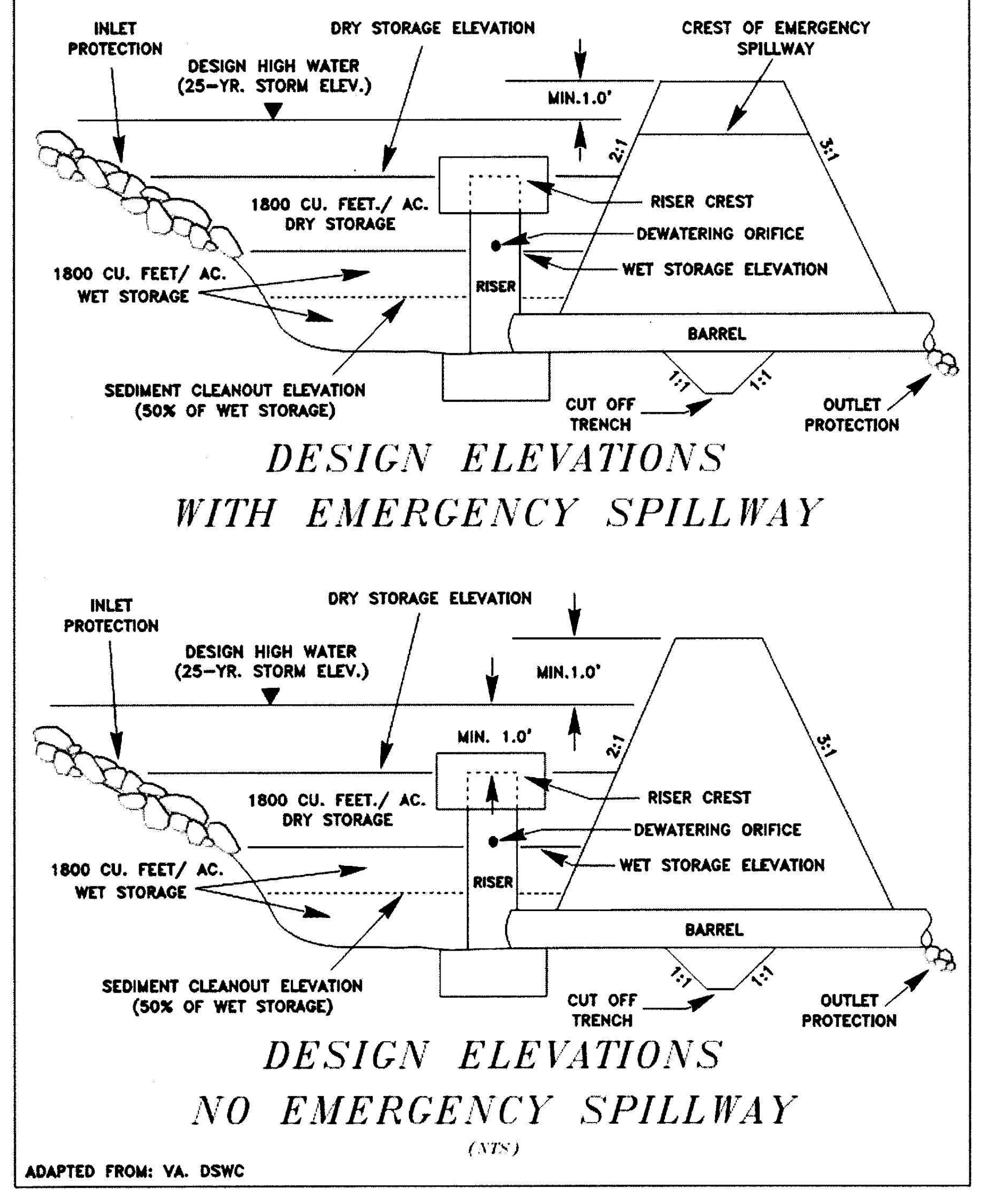


3.29-6

ST #1

FIGURE 3.30.2

SEDIMENT BASIN

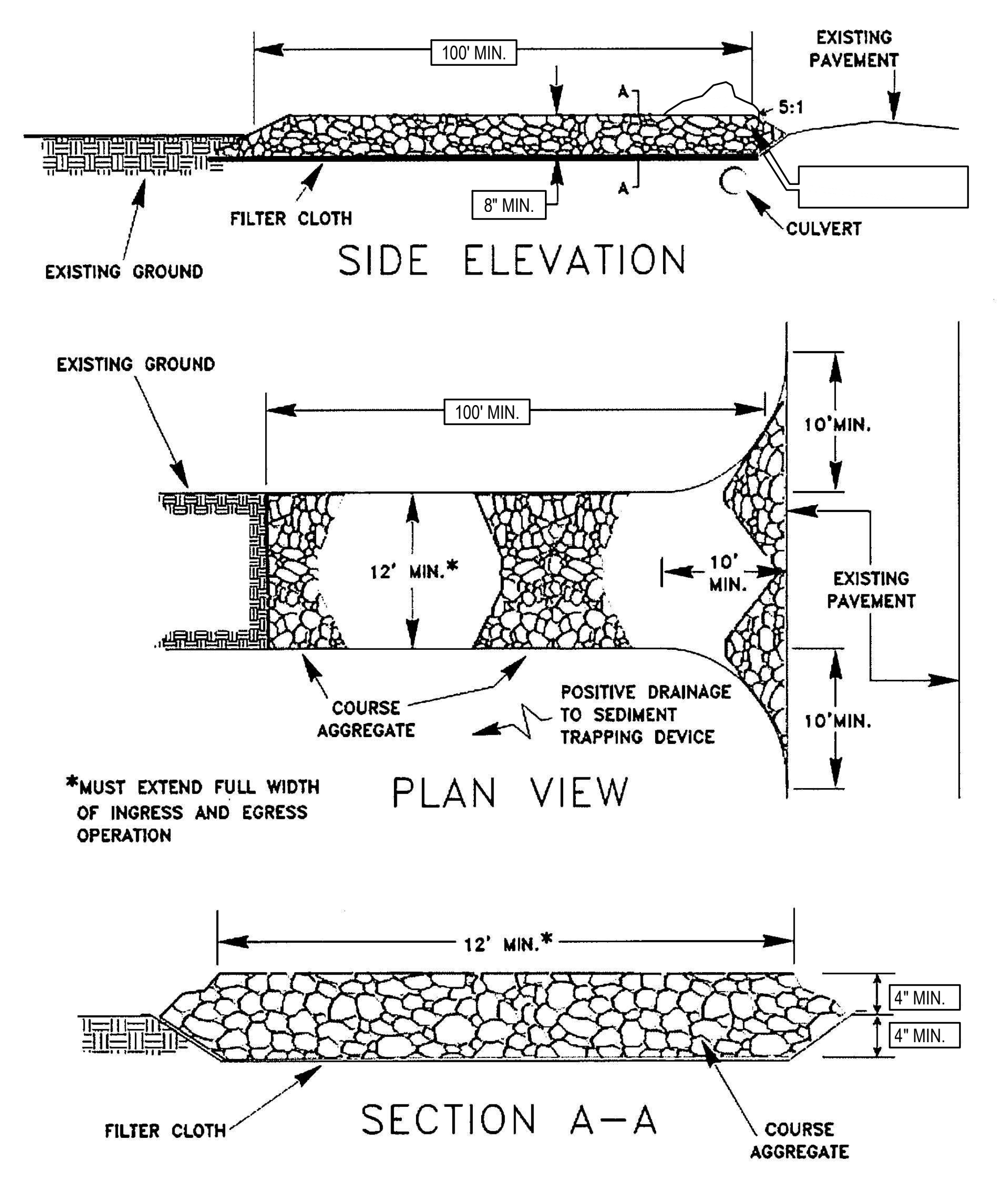


ADAPTED FROM: VA. DSWC

SB #1

FIGURE 3.02.1

STONE CONSTRUCTION ENTRANCE



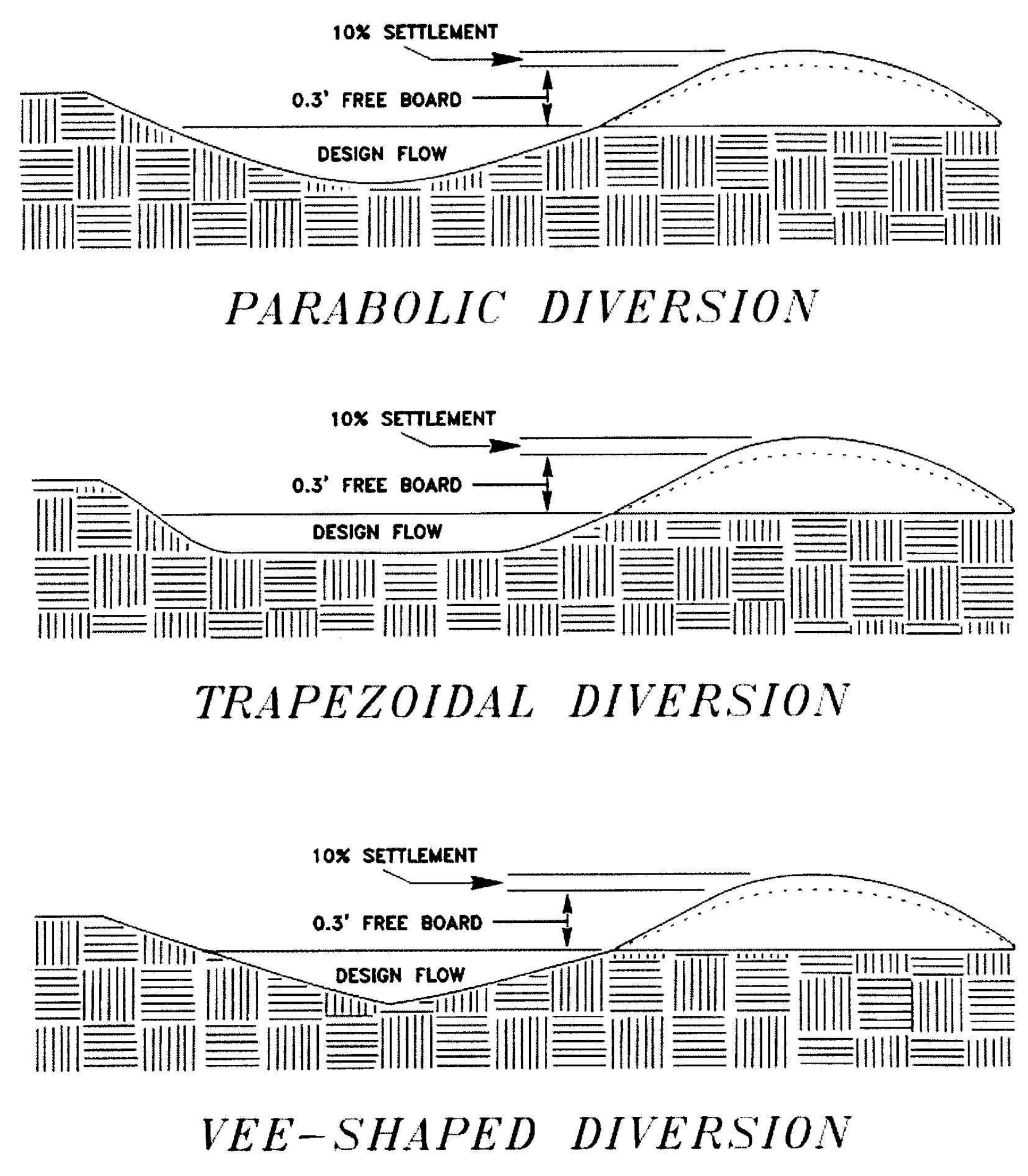
SOURCE: ADAPTED from 1983 Maryland Standards for Soil Erosion and Sediment Control and Va. DSWC

3.02-2

CE

FIGURE 3.15.1

TYPICAL DIVERSIONS



Source: VIRGINIA DCR–DSWC

NOTES:
- MINIMUM CONSTRUCTED DEPTH SHALL BE 1.5' (2:1 SIDE SLOPES)

DD

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SEAL:
JASON P. GERHART
No. 19127
12-13-24

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EROSION AND SEDIMENT CONTROL COMPUTATIONS & DETAILS
\#

BIRDHILL MEADOWS SUBDIVISION PHASE 1

TAX MAP 3, PARCEL 29; D.B. 1291, PG. 381
MIDDLEWAY TAX DISTRICT
JEFFERSON COUNTY, WEST VIRGINIA

J.C. FILE #24-12-SD

SCALE:	HORIZ.: N/A VERT.: N/A
DATE:	JULY 2024
JOB:	3568-0301
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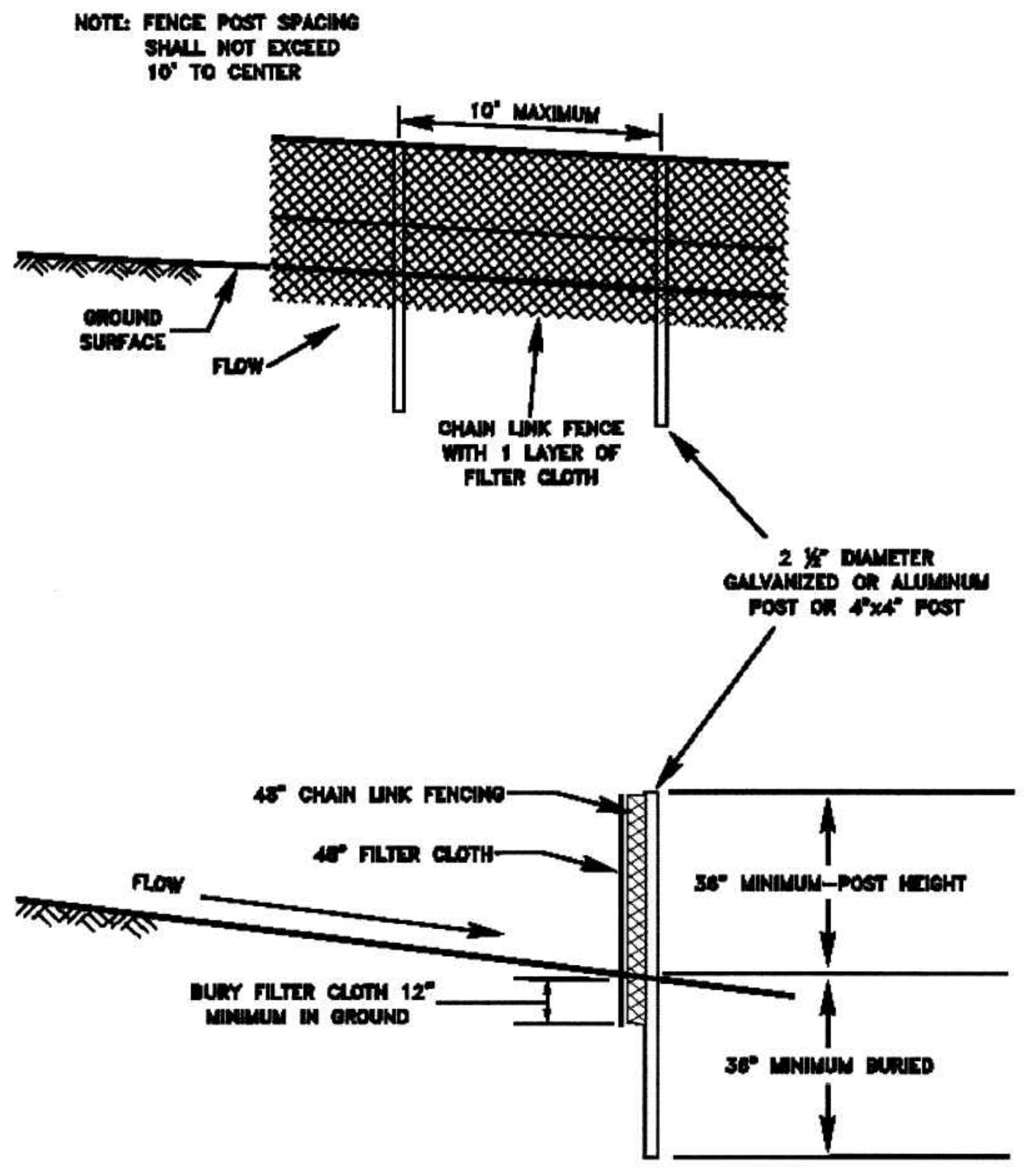
CADD:	C-GC-501.DWG
NCS:	
SHEET:	23 OF 147

FILE PATH: G:\PROJECT\GENERAL\3568-0301 MILLER PROPERTY PHASE 1\ENGIN\PLANS\C-GC-501.DWG

FIGURE 3.28.1

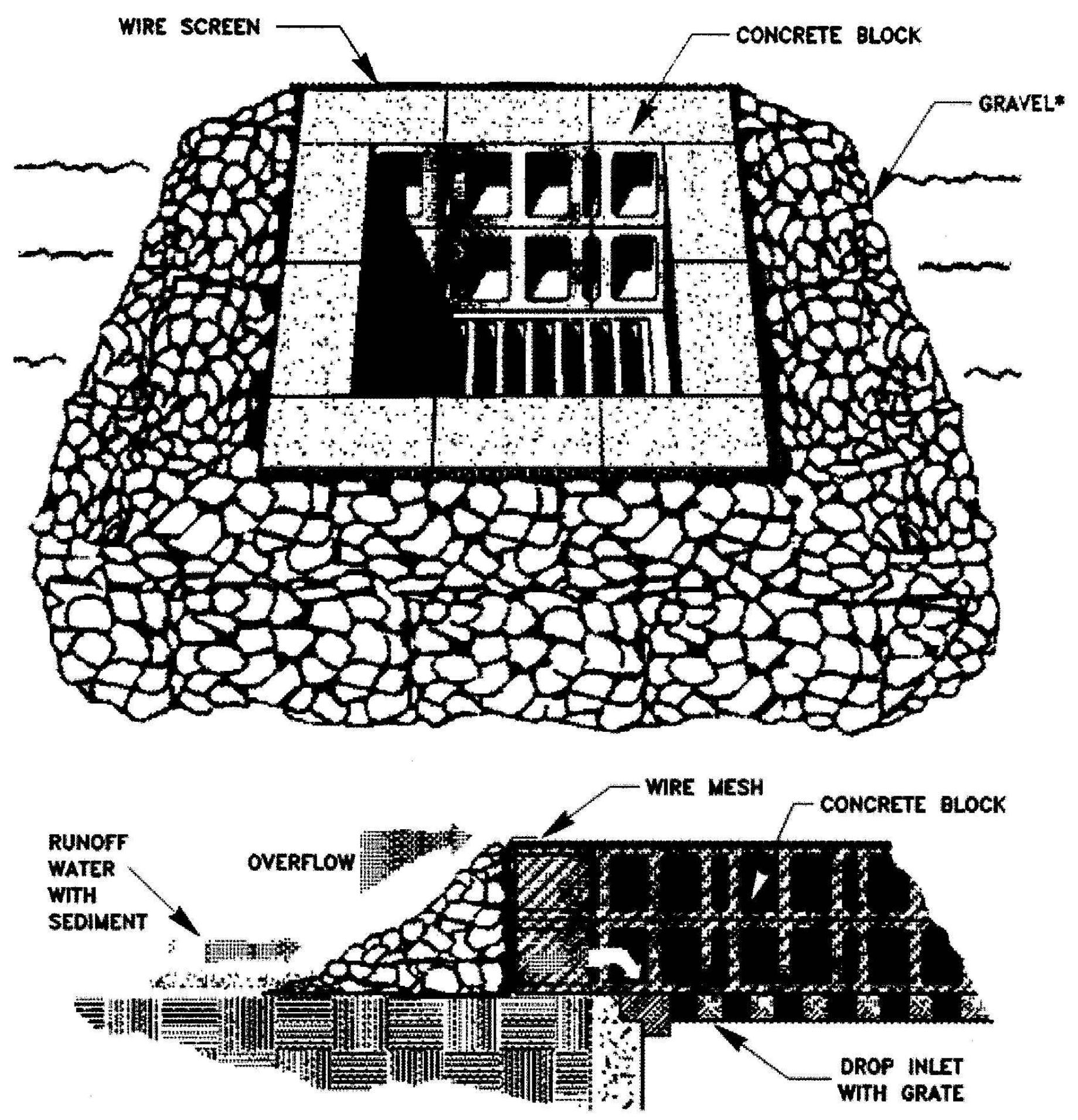
SUPER SILT FENCE



SSF

FIGURE 3.33.3

BLOCK AND GRAVEL DROP INLET SEDIMENT FILTER



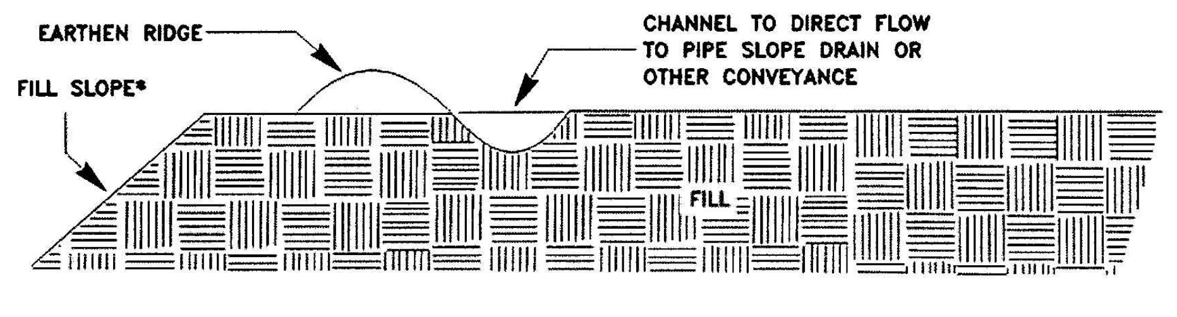
SIDE ELEVATION

* GRAVEL SHALL BE CLEAN 3/4" TO 2" COARSE AGGREGATE

IP

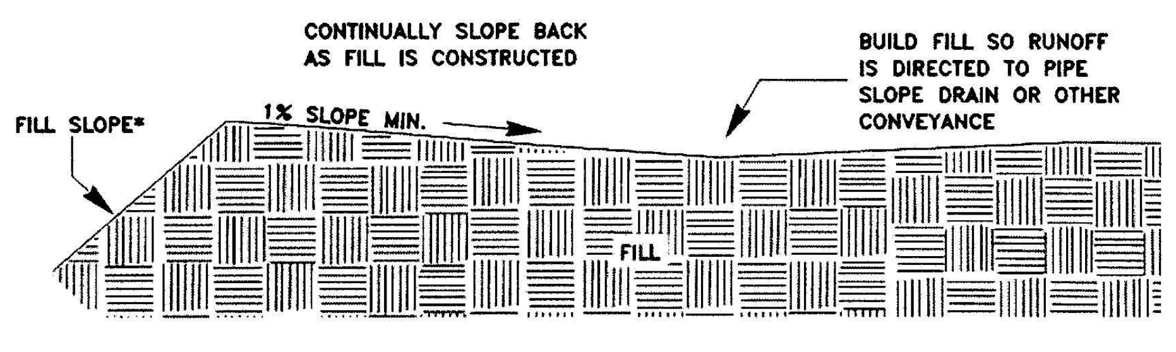
FIGURE 3.15.2

TEMPORARY FILL DIVERSIONS



TEMPORARY BERM

*SEED AND MULCH FILL SLOPE EVERY 10 FEET OF FILL OR EVERY 7 DAYS, WHICHEVER COMES FIRST



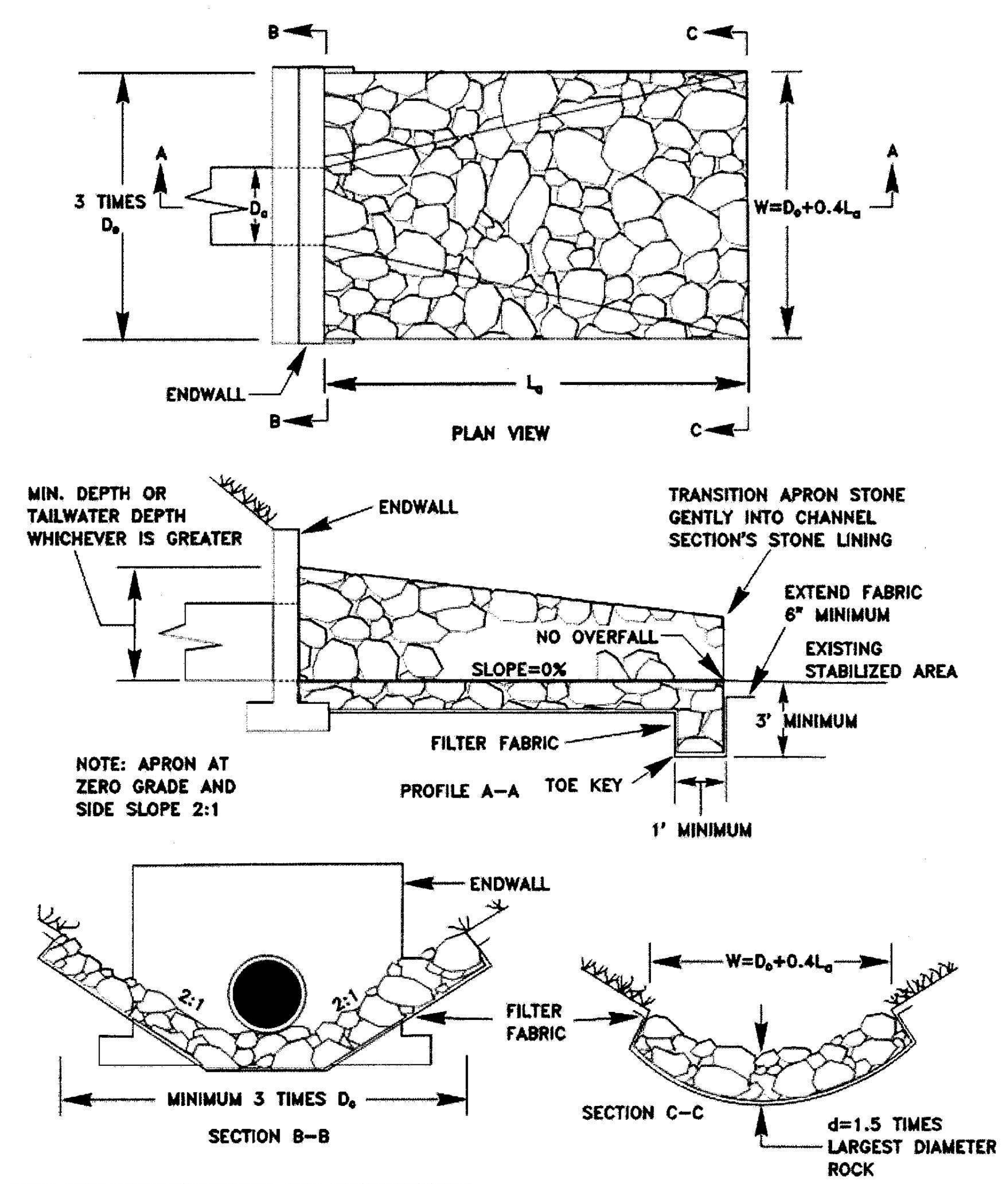
GRADING

DD

FIGURE 3.17.5

OUTLET PROTECTION

DISCHARGE TO SEMI-CONFINED SECTION
(MAXIMUM TAILWATER)

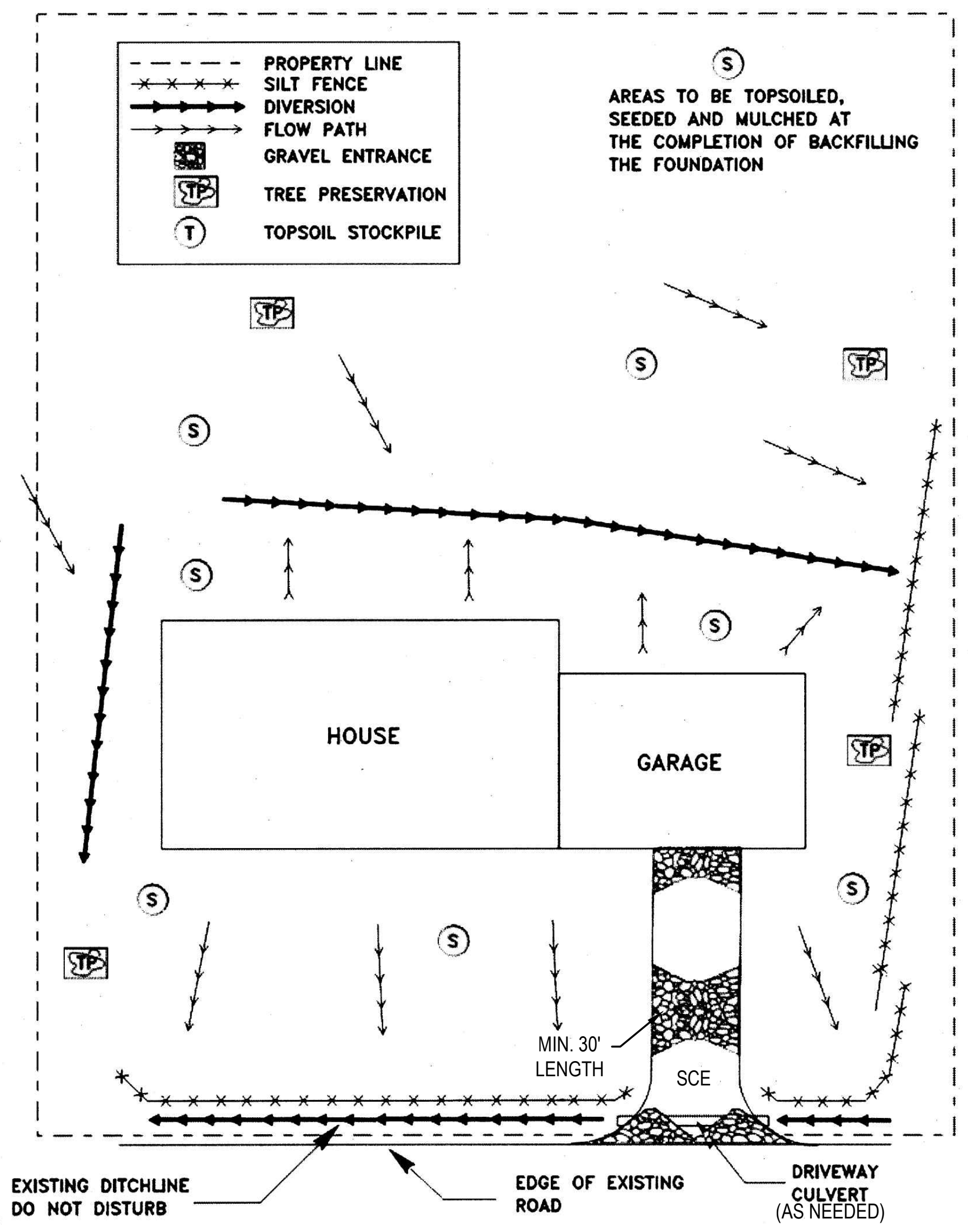


FROM NEW YORK STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL

OP

FIGURE 6.1

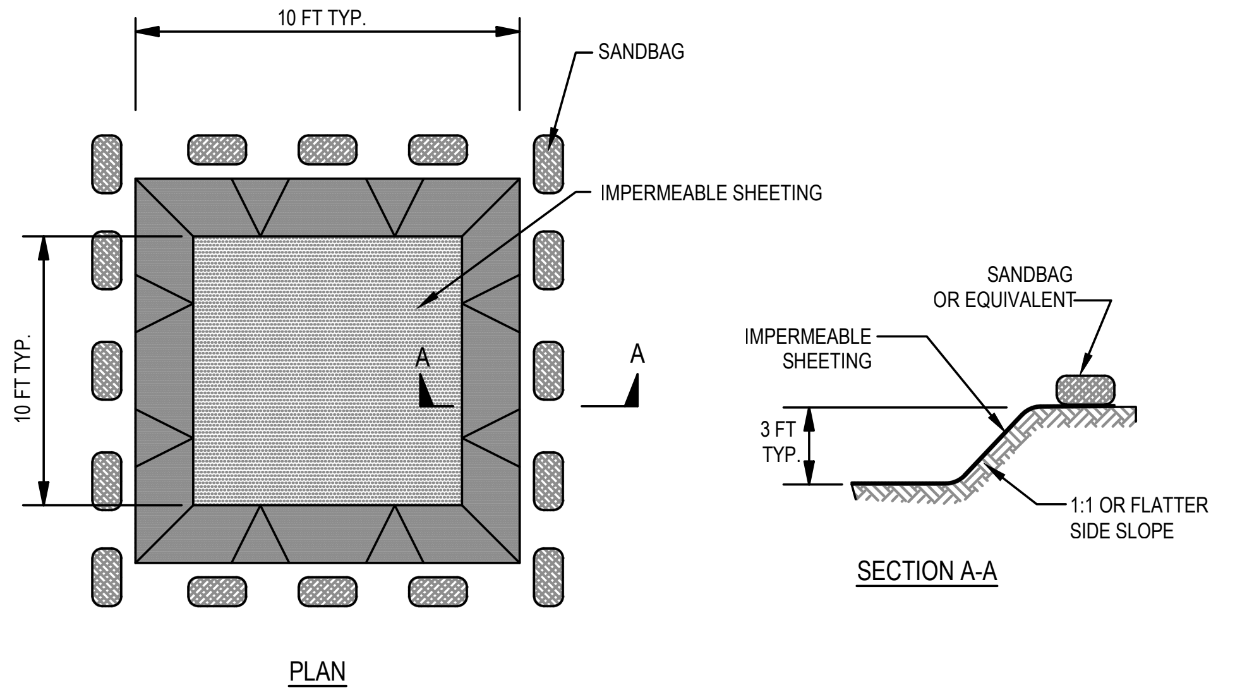
INDIVIDUAL HOUSE LOT SEDIMENT CONTROL PLAN



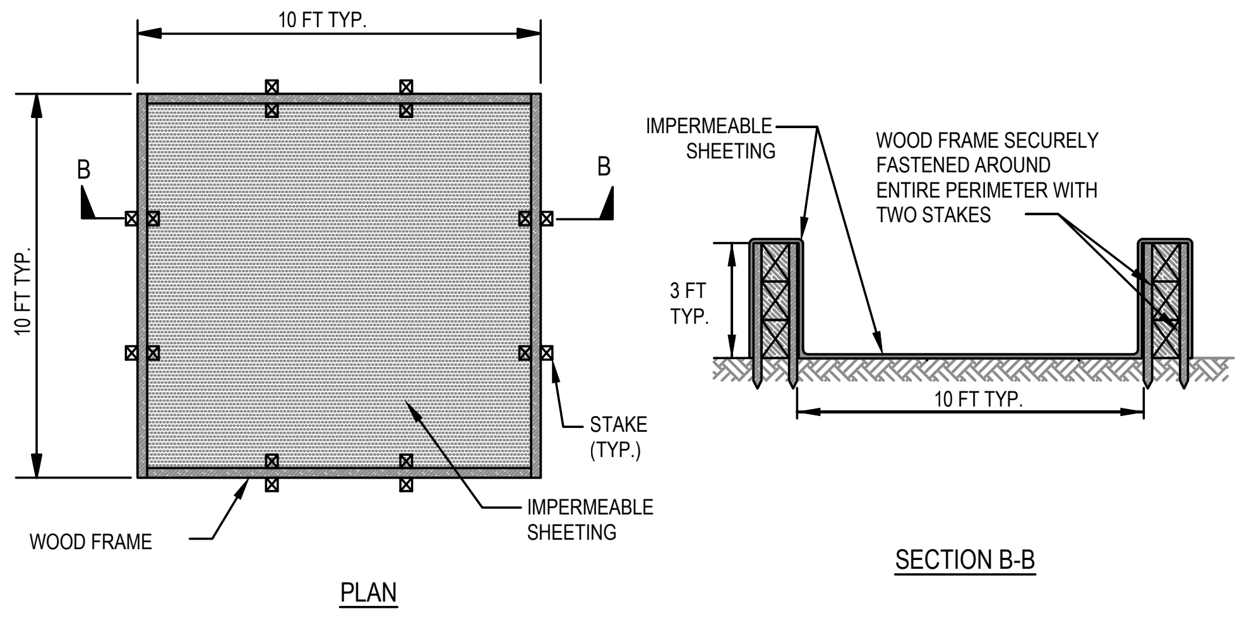
NOTES:
1. FINAL LIMITS OF CONSTRUCTION WILL BE DETERMINED DURING HOUSE SITING.
2. AREAS OF DISTURBANCE ARE TO BE TOPSOILED, SEEDED AND MULCHED AT THE COMPLETION OF BACKFILLING THE FOUNDATION.

DETAIL H-6 ONSITE CONCRETE WASHOUT STRUCTURE

STANDARD SYMBOL
CWS



EXCAVATED WASHOUT STRUCTURE



WASHOUT STRUCTURE WITH WOOD PLANKS

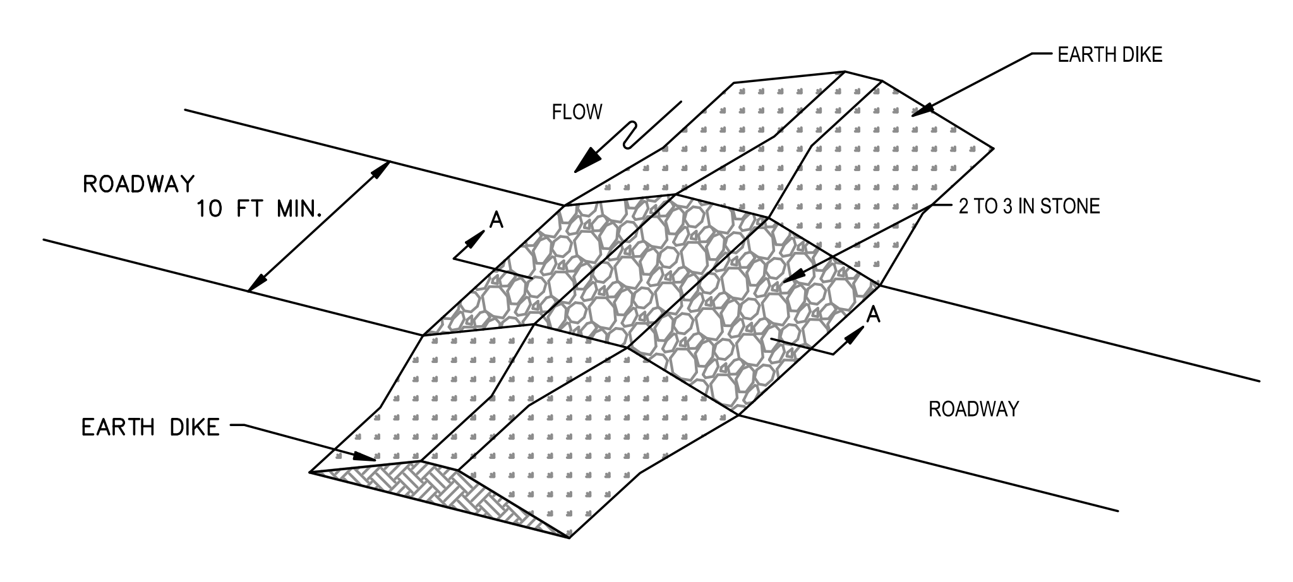
1 OF 2

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL		
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

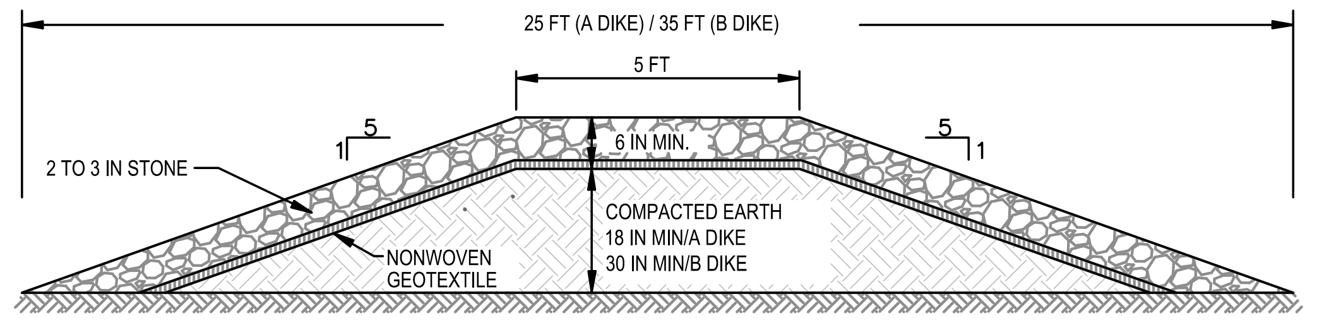
CWS

DETAIL C-8 MOUNTABLE BERM

STANDARD SYMBOL
MB



ISOMETRIC VIEW



SECTION A-A

CONSTRUCTION SPECIFICATIONS

1. USE MINIMUM WIDTH OF 10 FEET TO ALLOW FOR VEHICULAR PASSAGE.
2. PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, OVER THE EARTH MOUND PRIOR TO PLACING STONE.
3. PLACE 2 TO 3 INCH STONE OR EQUIVALENT RECYCLED CONCRETE AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE MOUNTABLE BERM.
4. MAINTAIN LINE, GRADE, AND CROSS SECTION. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN SPECIFIED DIMENSIONS. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. MAINTAIN POSITIVE DRAINAGE.

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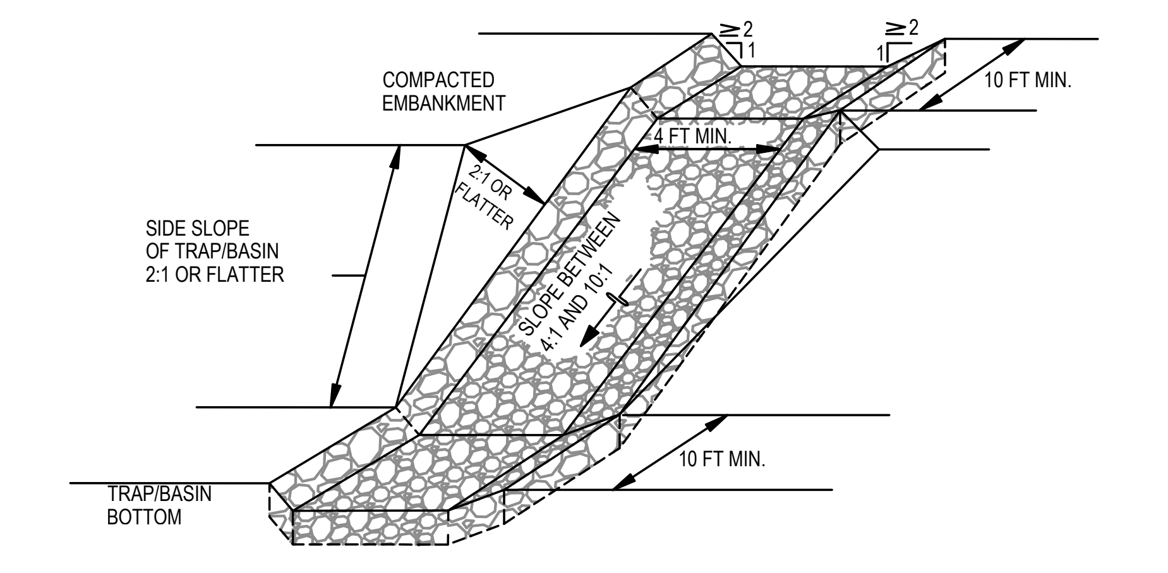
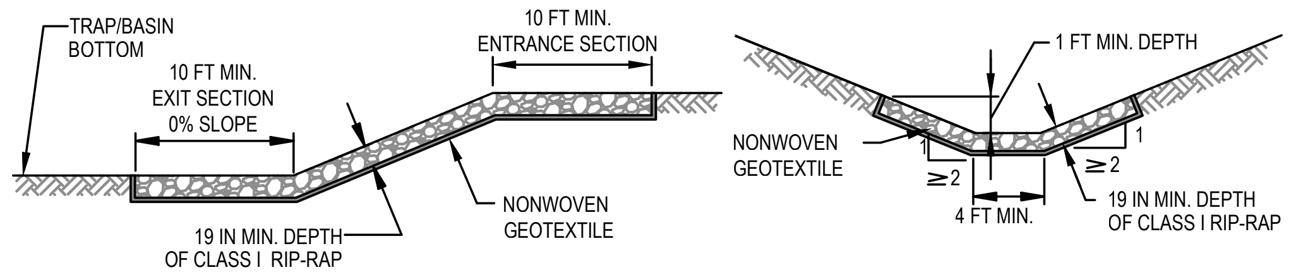
MB

DETAIL D-3-1 RIPRAP INFLOW PROTECTION

STANDARD SYMBOL
RRP



ISOMETRIC VIEW



PROFILE ALONG CENTERLINE

CROSS SECTION

CONSTRUCTION SPECIFICATIONS

1. PROVIDE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, UNDER THE BOTTOM AND ALONG SIDES OF ALL RIPRAP.
2. CONSTRUCT INFLOW CHANNEL WITH CLASS I RIPRAP OR EQUIVALENT RECYCLED CONCRETE LINING TO A MINIMUM DEPTH OF 19 INCHES (2 x D_{50}) AND A 1 FOOT DEEP FLOW CHANNEL. INFLOW RIPRAP PROTECTION CHANNEL MUST HAVE A TRAPEZOIDAL CROSS SECTION WITH 2:1 OR FLATTER SIDE SLOPES AND A 4 FOOT MINIMUM BOTTOM WIDTH.
3. INSTALL ENTRANCE AND EXIT SECTIONS AS SHOWN ON THE PROFILE.
4. BLEND RIPRAP INTO EXISTING GROUND.
5. MAINTAIN LINE, GRADE, AND CROSS SECTION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. KEEP POINTS OF INFLOW AND OUTFLOW FREE OF EROSION.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL		
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BIRDHILL MEADOWS
SUBDIVISION PHASE 1
TAX MAP 3, PARCEL 29; D.B. 1291, PG. 381
MIDDLEWAY TAX DISTRICT
JEFFERSON COUNTY, WEST VIRGINIA

J.C. FILE #24-12-SD

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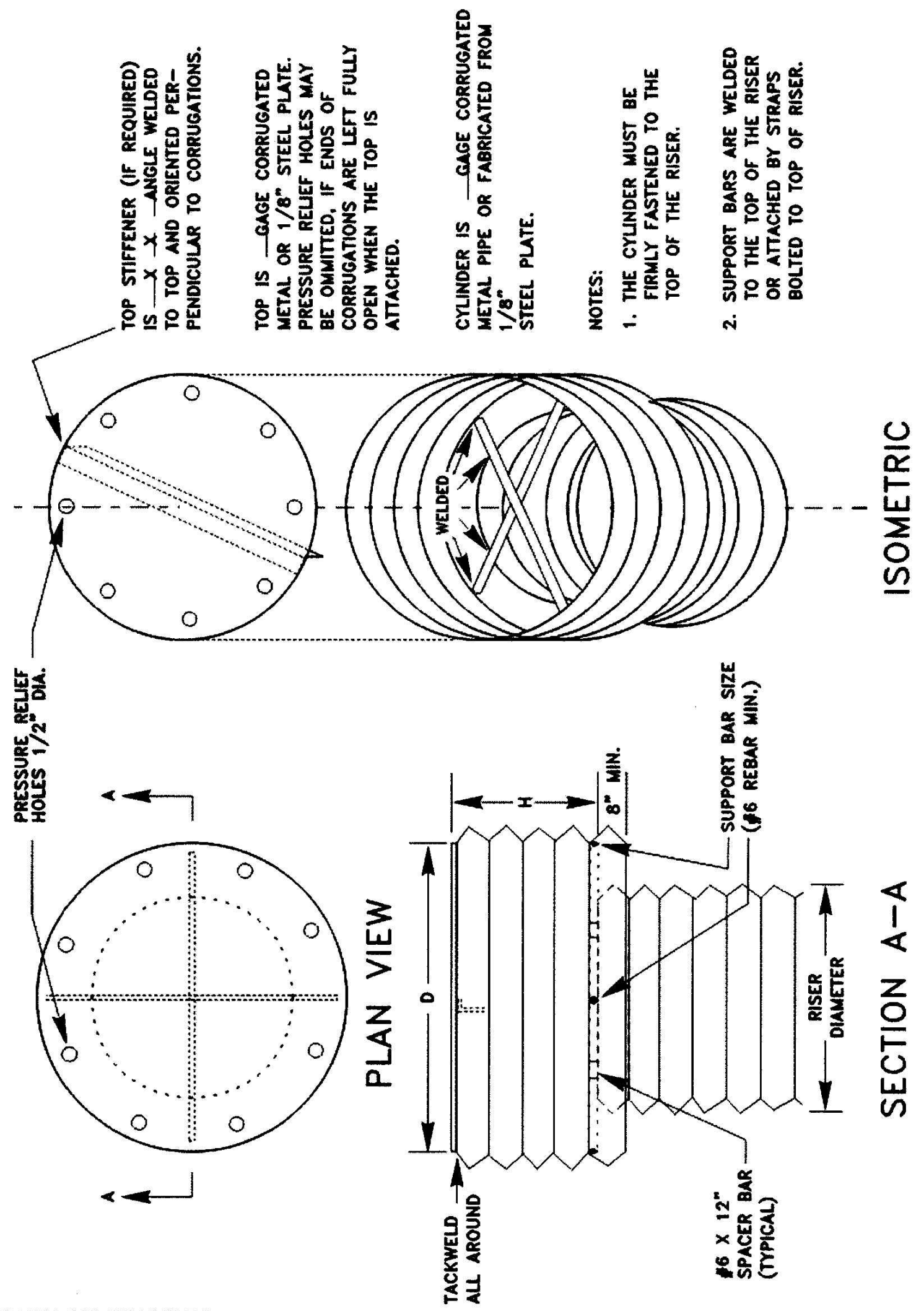
FIGURE 3.30.6

TRASH RACK

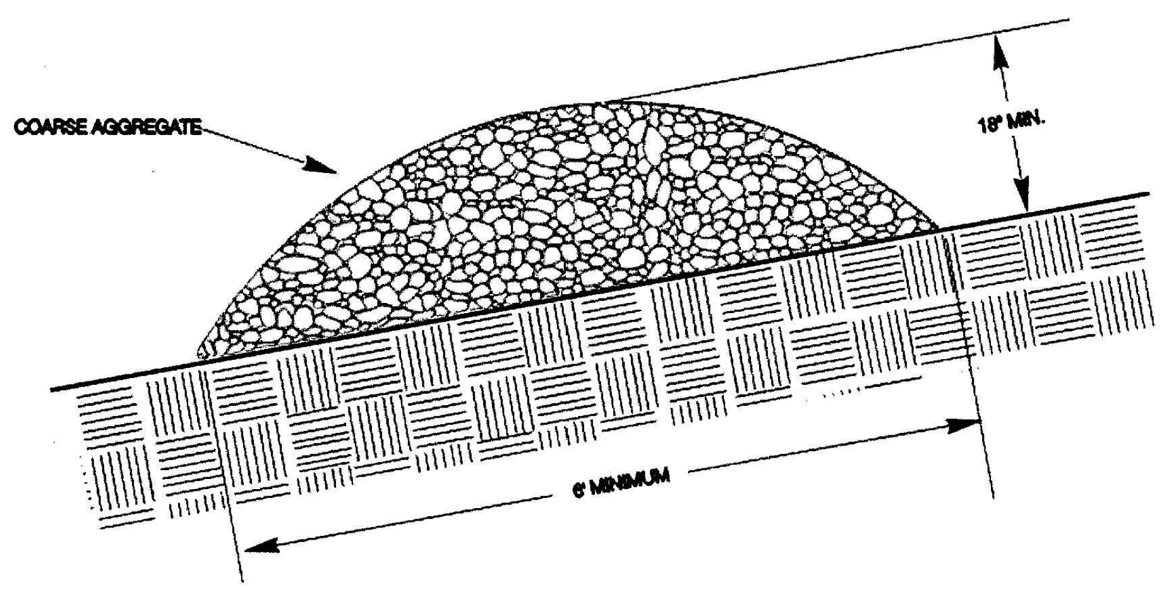


SOURCE: USDA-SCS AND VA DNRC

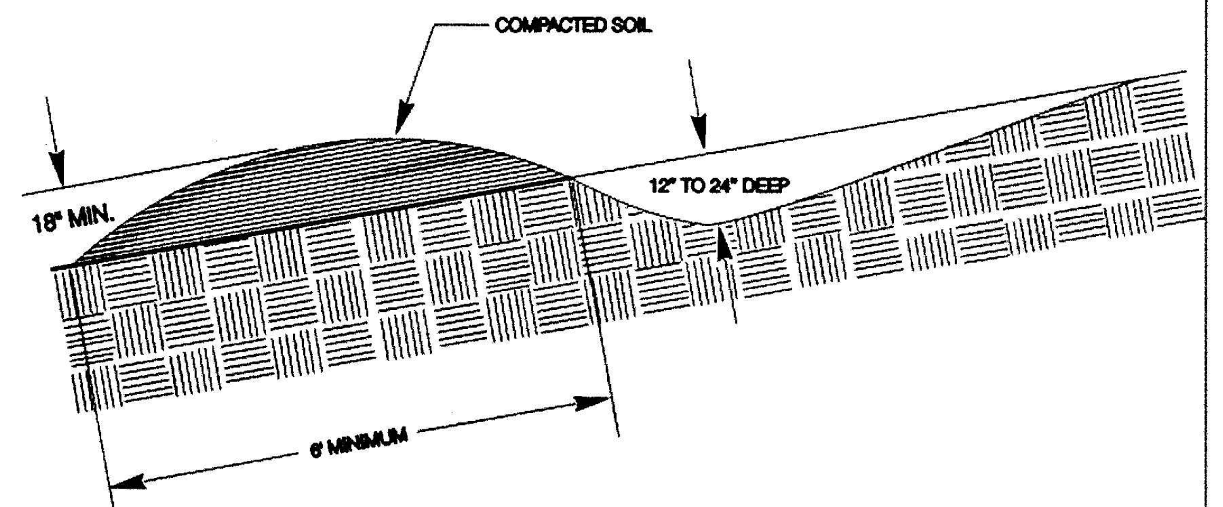
3.30-17

FIGURE 3.18.1

RIGHT-OF-WAY DIVERSIONS



TYPICAL GRAVEL STRUCTURE



TYPICAL EARTHEN STRUCTURE

Source: Va. SWCC

RWD

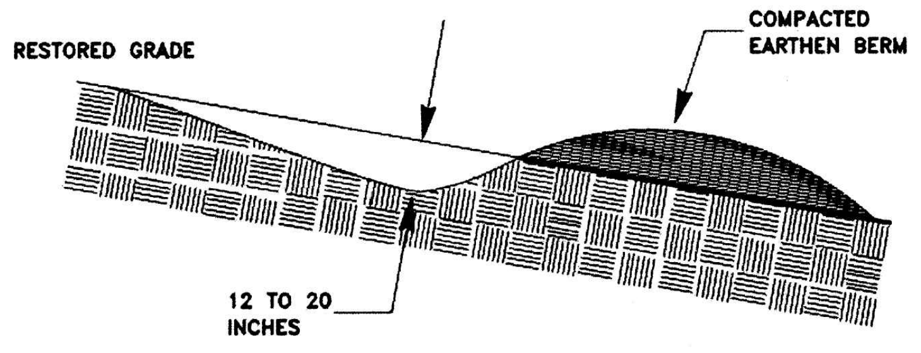
Table 3.13.4 PERMISSIBLE VELOCITIES FOR GRASS-LINED CHANNELS

Channel Slope	Lining	Velocity* (ft./sec.)
0 - 0.5%	Bermudagrass	6
	Reed canarygrass Tall fescue Kentucky bluegrass	5
	Grass-legume mixture	4
	Red fescue Redtop Sericea lespedeza Annual lespedeza Small grains Temporary vegetation	2.5
5 - 10%	Bermudagrass	5
	Reed canarygrass Tall fescue Kentucky bluegrass	4
	Grass-legume mixture	3
Greater than 10%	Bermudagrass	4
	Reed canarygrass Tall fescue Kentucky bluegrass	3

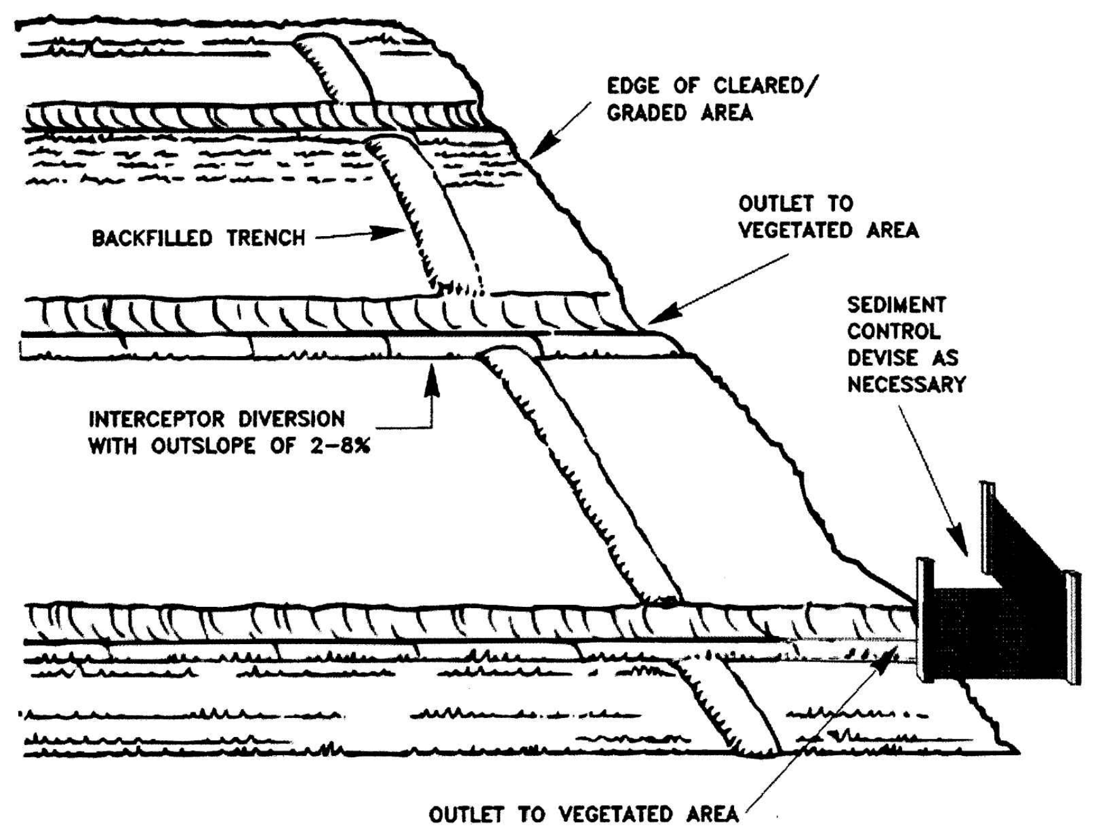
* For highly erodible soils, decrease permissible velocities by 25%.

FIGURE 3.18.2

RIGHT-OF-WAY DIVERSION

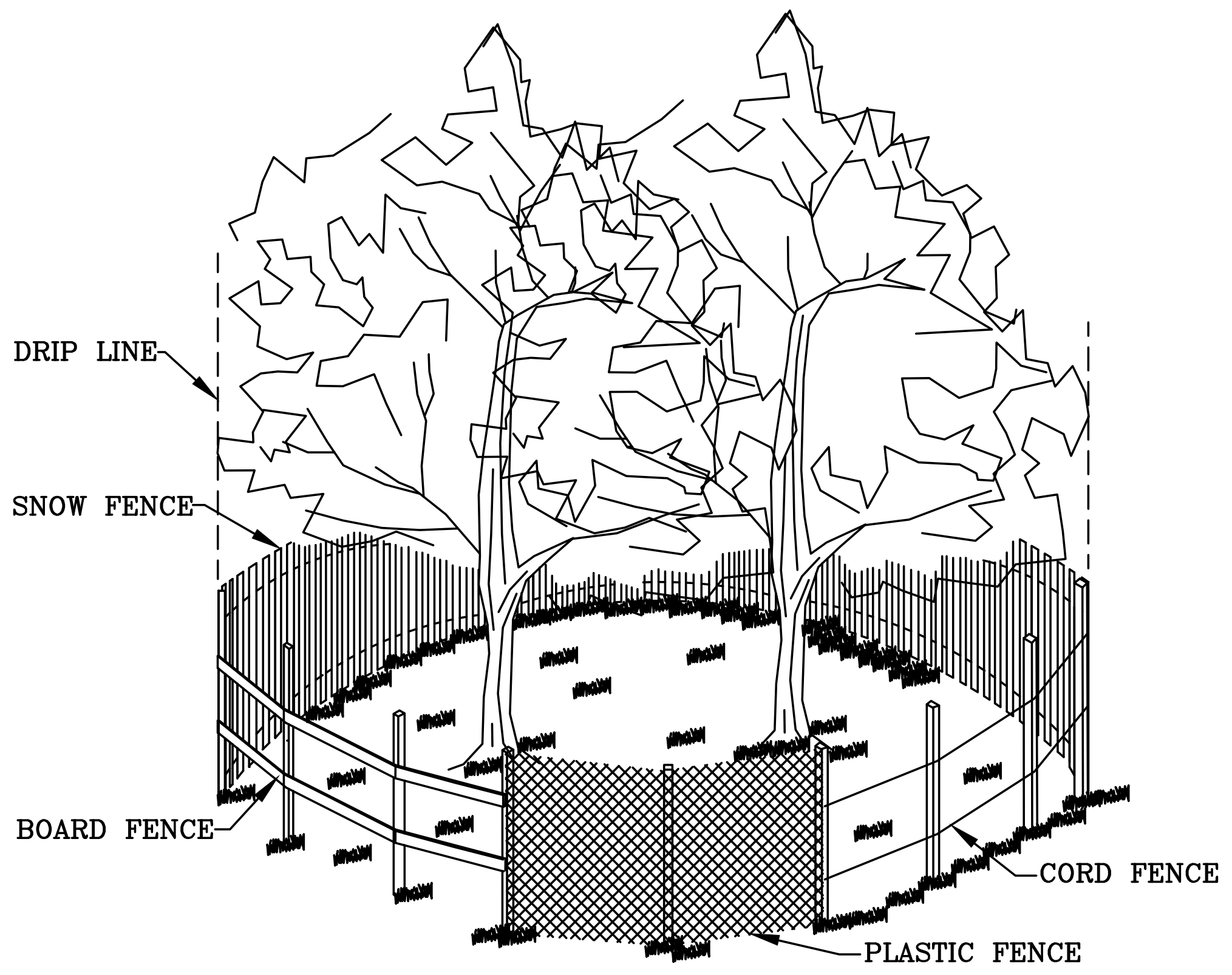


FINAL DIVERSION CROSS-SECTION

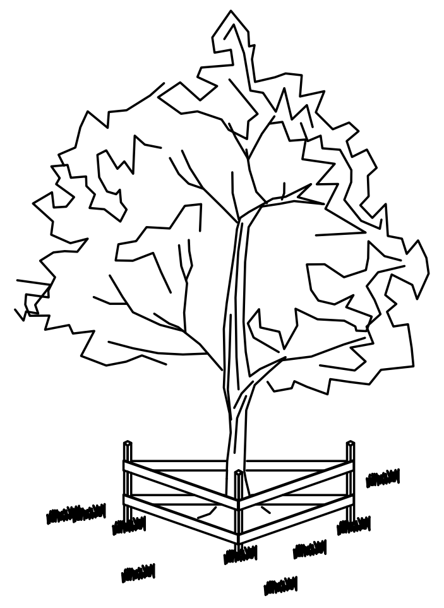


RWD

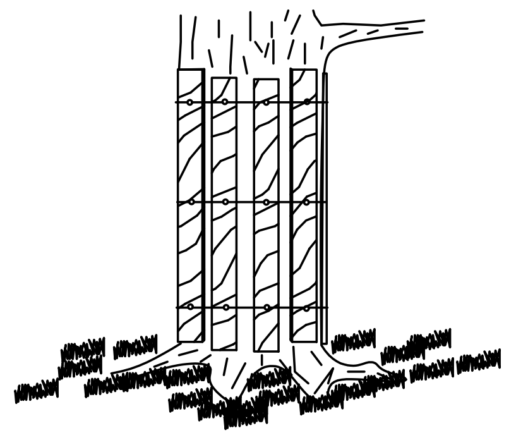
FENCING AND ARMORING



CORRECT METHODS OF TREE FENCING



TRIANGULAR BOARD FENCE

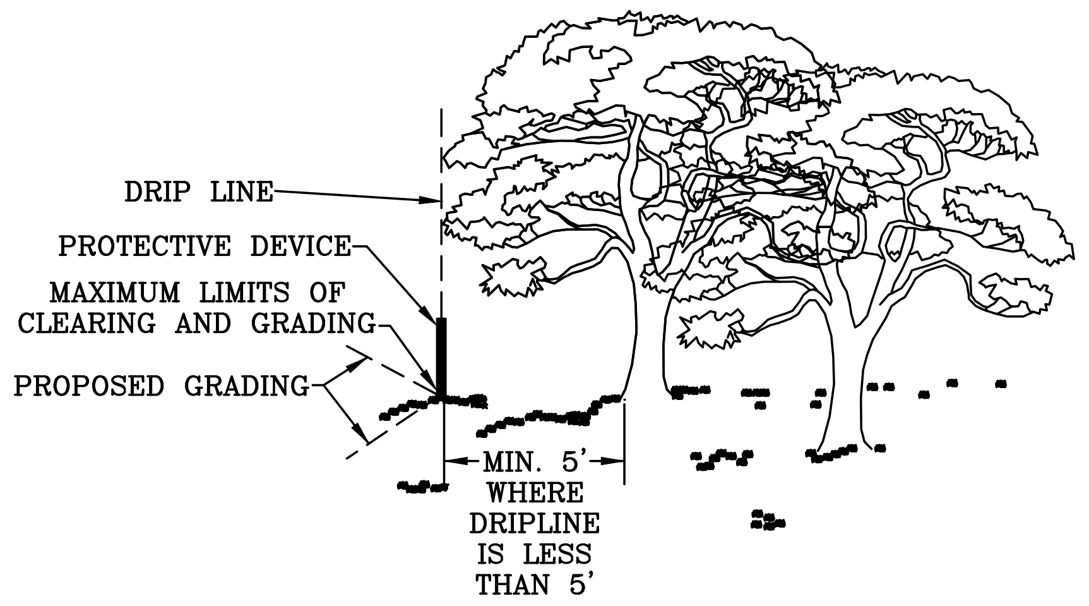


CORRECT TRUNK ARMORING

VESCH PLATE 3.38-2

TP

CONSTRUCTION OPERATIONS RELATIVE TO THE LOCATION OF PROTECTED TREES

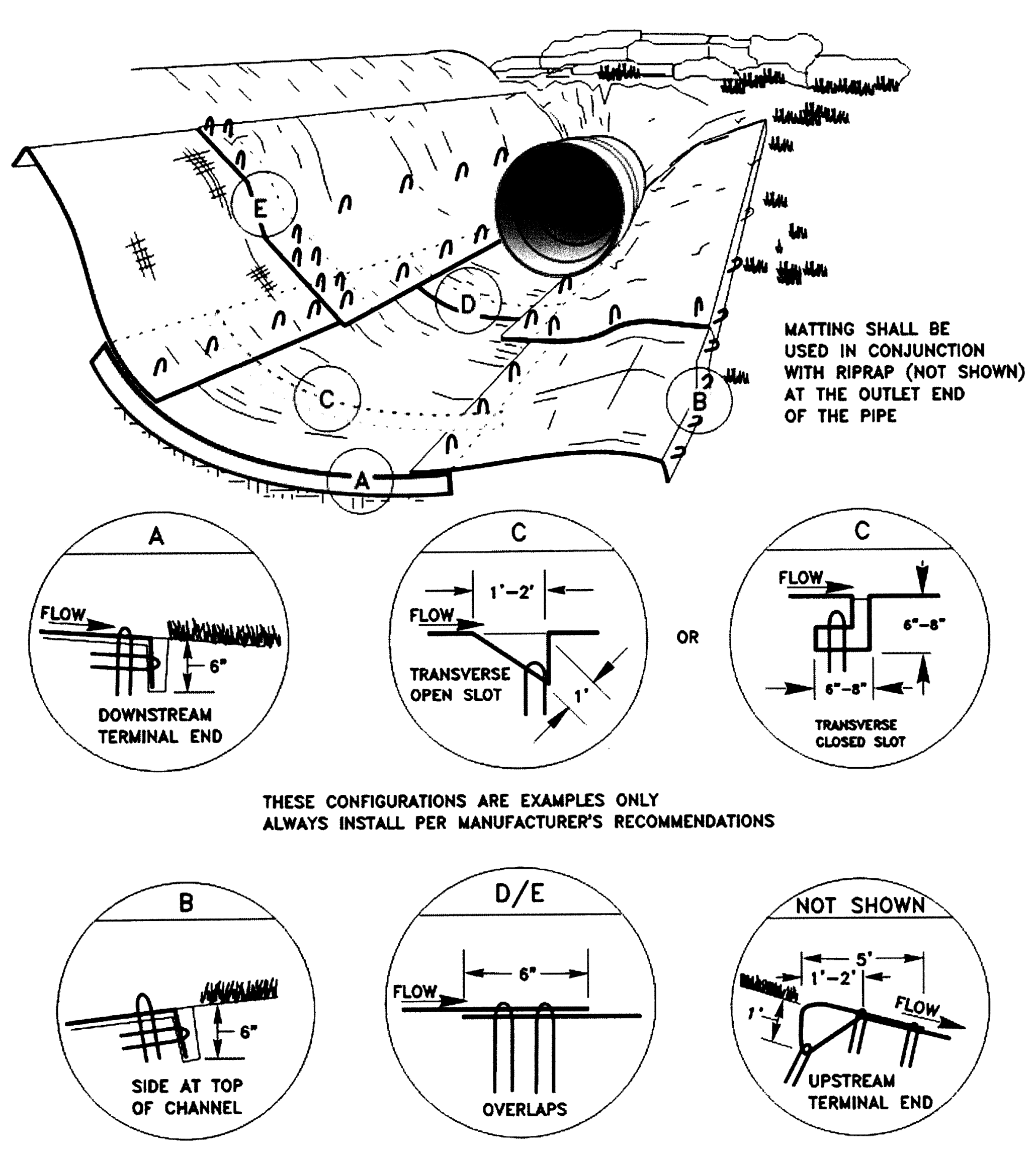


VESCH PLATE 3.38-1

TP

FIGURE 3.13.1

TYPICAL RECP CHANNEL INSTALLATION



SOURCE: VIRGINIA DCR-DSWC AND NORTH AMERICAN GREEN

3.13-12

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