

NORTH

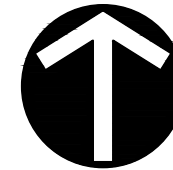
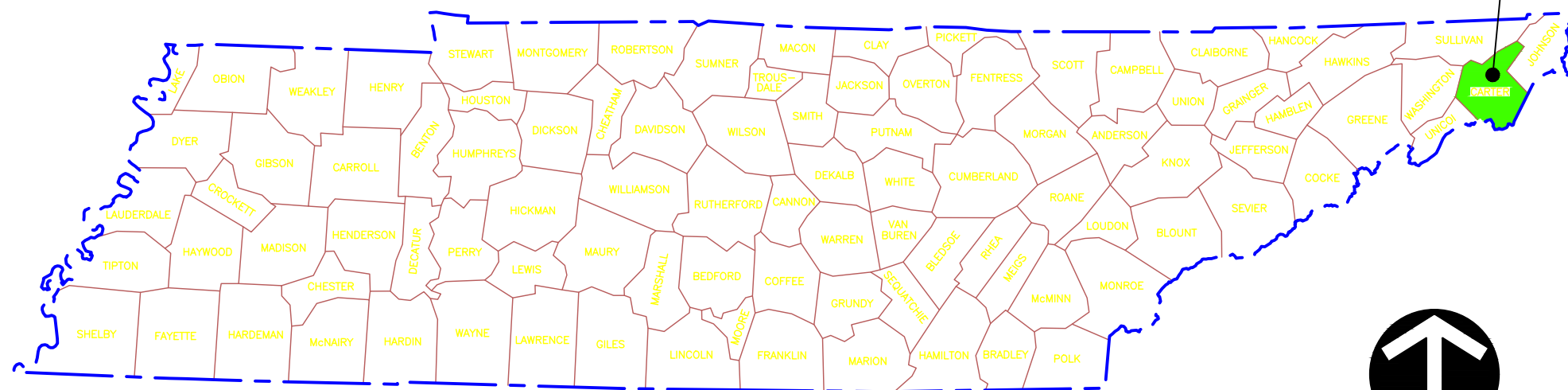
WATAUGA RIVER SLOPE STABILIZATION PLAN

CONSTRUCTION DRAWINGS

SYCAMORE SHOALS STATE PARK (GREENE PROPERTY)
ELIZABETHTON, TENNESSEE

MAY 2025

SITE LOCATION



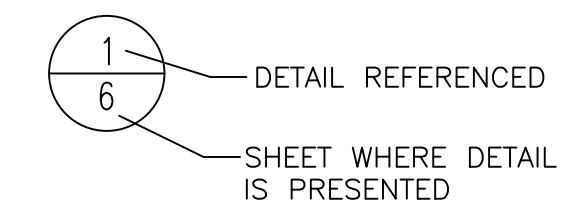
NORTH
N.T.S.



SITE LOCATION MAP
NOT TO SCALE

SHEET LIST TABLE	
SHEET NUMBER	SHEET TITLE
C000	COVER
C001	GENERAL NOTES
C100	EXISTING CONDITIONS
C300	PROPOSED GRADING
C301	EPSC PLAN
C600	DETAILS
C601	DETAILS (2)
C602	DETAILS (3)
C710	POINT TABLE

STANDARD DETAIL CALLOUT



DETAIL REFERENCED
SHEET WHERE DETAIL
IS PRESENTED

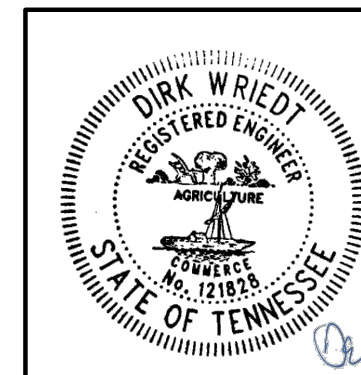
STANDARD REVISION CALLOUT



SHEET SET
REVISION NUMBER

ISSUED FOR CONSTRUCTION

DATE: 05/12/25 BY: DW



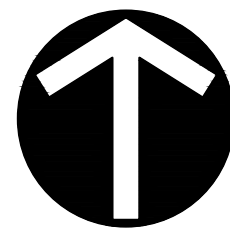
TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
BUREAU OF PARKS AND CONSERVATION & DIVISION OF REMEDIATION
NASHVILLE, TENNESSEE

DRAWN BY: DW CHECKED BY: AQ APPROVED BY: DW
DATE: MAY 2025 DWG SCALE: N/A PROJECT NO:

COVER

DRAWING NO.:
C000

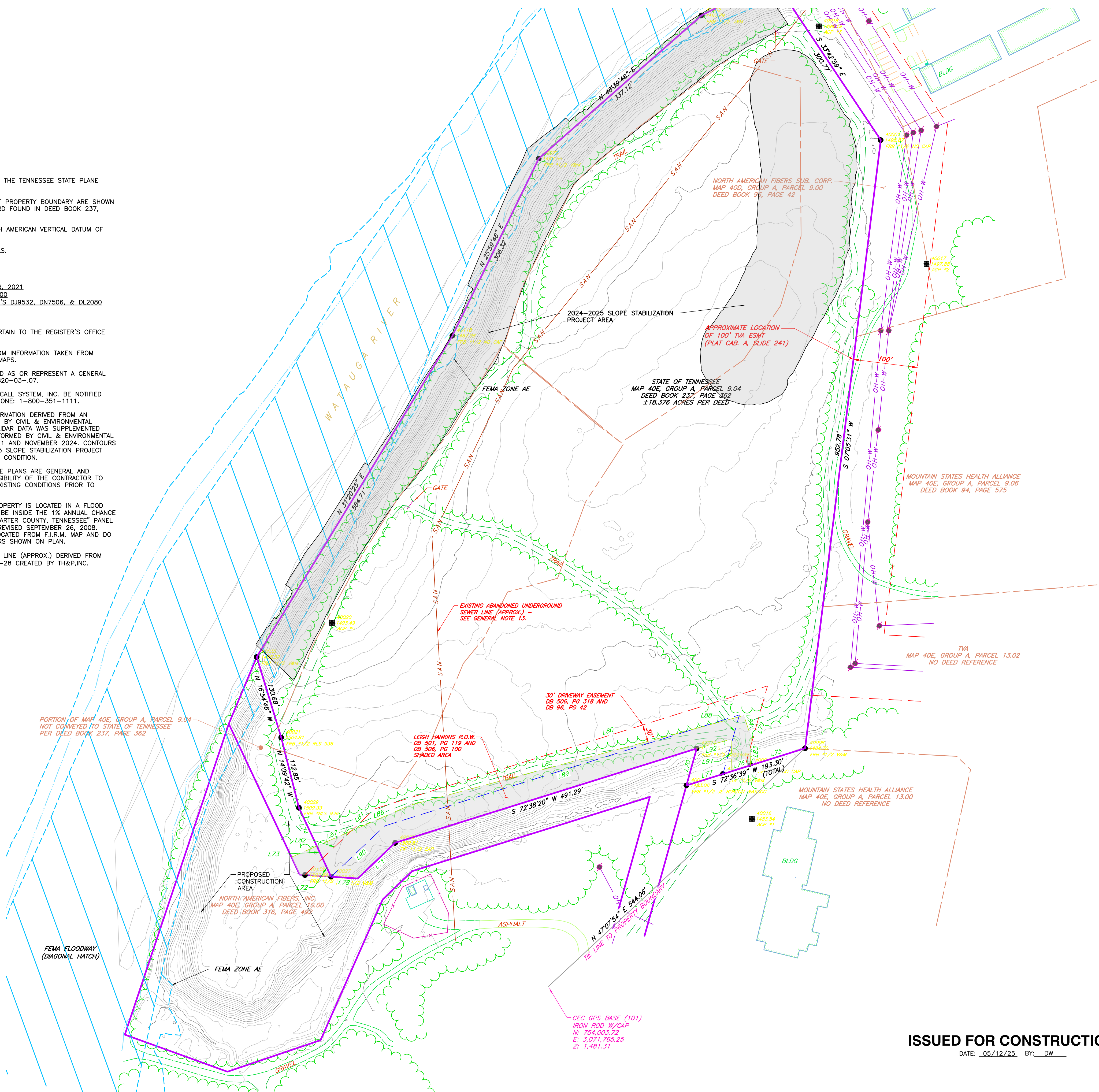
SHEET 1 OF 9



SCALE IN FEET
0 80 160

GENERAL NOTES:

- BEARINGS AND COORDINATES ARE BASED ON THE TENNESSEE STATE PLANE COORDINATE SYSTEM (NAD83)(2011).
- BEARINGS AND DISTANCES FOR THE SUBJECT PROPERTY BOUNDARY ARE SHOWN HEREON PER THE CURRENT DEED OF RECORD FOUND IN DEED BOOK 237, PAGE 362.
- ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
- CONTOURS ARE SHOWN AT 2 FOOT INTERVALS.
- GPS SURVEY DATA
(A) TYPE OF GPS SURVEY: RTK & OPUS
(B) POSITIONAL ACCURACY: 0.05 FEET
(C) COMPLETION DATE OF SURVEY: JANUARY 06, 2021
(D) DATUM/EPOCH: NAD83(2011) EPOCH 2010.00
(E) PUBLISHED/FIXED CONTROL USED: NGS PID'S DJ9532, DN7506, & DJ2080
(F) GEOID MODEL: GEOID 18
(G) COMBINED GRID FACTOR: 0.99992241
- ALL DEED BOOK AND PLAT REFERENCES PERTAIN TO THE REGISTER'S OFFICE FOR CARTER COUNTY, TENNESSEE.
- PROPERTY LINES SHOWN WERE PLOTTED FROM INFORMATION TAKEN FROM EITHER DEED DESCRIPTION, PLATS, OR TAX MAPS.
- THIS DRAWING IS NOT INTENDED TO BE USED AS OR REPRESENT A GENERAL PROPERTY SURVEY AS DEFINED BY T.C.A. 0820-03-07.
- IT IS RECOMMENDED THAT TENNESSEE ONE-CALL SYSTEM, INC. BE NOTIFIED BEFORE ANY EXCAVATION IS CONDUCTED. PHONE: 1-800-351-1111.
- EXISTING CONTOURS AND TOPOGRAPHIC INFORMATION DERIVED FROM AN UNMANNED AERIAL LIDAR FLIGHT PERFORMED BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC. ON JANUARY 6, 2021. LIDAR DATA WAS SUPPLEMENTED WITH RIVER/RIVERBANK SURVEY SHOTS PERFORMED BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC. ON AUGUST 23-24, 2021 AND NOVEMBER 2024. CONTOURS THAT CHANGED AS PART OF THE 2024/2025 SLOPE STABILIZATION PROJECT ARE DEPICTED IN THEIR PRE-CONSTRUCTION CONDITION.
- EXISTING CONDITIONS AS DEPICTED ON THESE PLANS ARE GENERAL AND ILLUSTRATIVE IN NATURE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO EXAMINE THE SITE AND BE FAMILIAR WITH EXISTING CONDITIONS PRIOR TO CONSTRUCTION ON THIS PROJECT.
- AS SHOWN HEREON, A PORTION OF THE PROPERTY IS LOCATED IN A FLOOD HAZARD ZONE "AE" (AREAS DETERMINED TO BE INSIDE THE 1% ANNUAL CHANCE FLOODPLAIN) ACCORDING TO F.I.R.M. MAP "CARTER COUNTY, TENNESSEE" PANEL 160 OF 400, MAP NUMBER 4701900160E, REVISED SEPTEMBER 26, 2008. FLOODWAY AND HAZARD ZONES WERE GEOLOCATED FROM F.I.R.M. MAP AND DO NOT NECESSARILY CORRELATE WITH CONTOURS SHOWN ON PLAN.
- EXISTING ABANDONED UNDERGROUND SEWER LINE (APPROX.) DERIVED FROM PDF "TOPOGRAPHIC OF LANDFILL" DWG. #96-28 CREATED BY TH&P, INC. SEPTEMBER 01, 1987.



REVISION RECORD		
NO	DATE	DESCRIPTION

Line Table		
Line #	Length	Direction
L1	88.94	S72°36'39"W
L2	31.71	S72°36'39"W
L3	72.65	S72°36'39"W
L4	59.58	N15°33'59"E
L5	80.13	S46°12'47"W
L6	41.65	N86°11'13"W
L7	31.62	N24°59'51"W
L8	20.97	N24°59'51"W
L9	65.61	N24°59'51"W
L10	131.06	N15°34'04"E
L11	639.70	S72°37'14"W
L12	49.85	S46°35'05"W
L13	61.98	S46°35'05"W
L19	95.32	N15°34'04"E
L20	577.57	S72°37'14"W
L21	114.87	S46°35'05"W
L14	43.11	N01°33'38"E
L15	36.27	N18°32'51"W
L16	537.67	S74°57'07"W
L17	98.98	S66°21'04"W
L18	58.82	S66°21'04"W
L22	50.41	N01°33'38"E
L23	56.66	S74°57'07"W

- LEGEND:**
- EXISTING PROPERTY LINE
 - EXISTING ADJACENT PROPERTY LINE
 - EXISTING EASEMENT
 - EXISTING INDEX CONTOUR
 - EXISTING INTERMEDIATE CONTOUR
 - EDGE OF WATER (AS OF AUGUST 23-24, 2021)
 - EXISTING OVERHEAD WIRE
 - EXISTING FENCE
 - EXISTING TREELINE
 - IRON PIN FOUND
 - AERIAL CONTROL POINT
 - GPS STATION
 - UTILITY POLE
 - GUY WIRE



TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
BUREAU OF PARKS AND CONSERVATION & DIVISION OF REMEDIATION
NASHVILLE, TENNESSEE

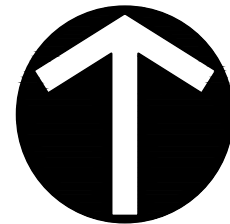
DRAWN BY: DW | CHECKED BY: AQ | APPROVED BY: DW
DATE: MAY 2025 | DWG SCALE: | PROJECT NO:

EXISTING CONDITIONS

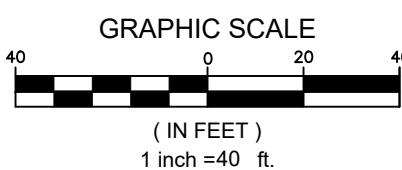
DRAWING NO.:
C100
SHEET 3 OF 9

ISSUED FOR CONSTRUCTION

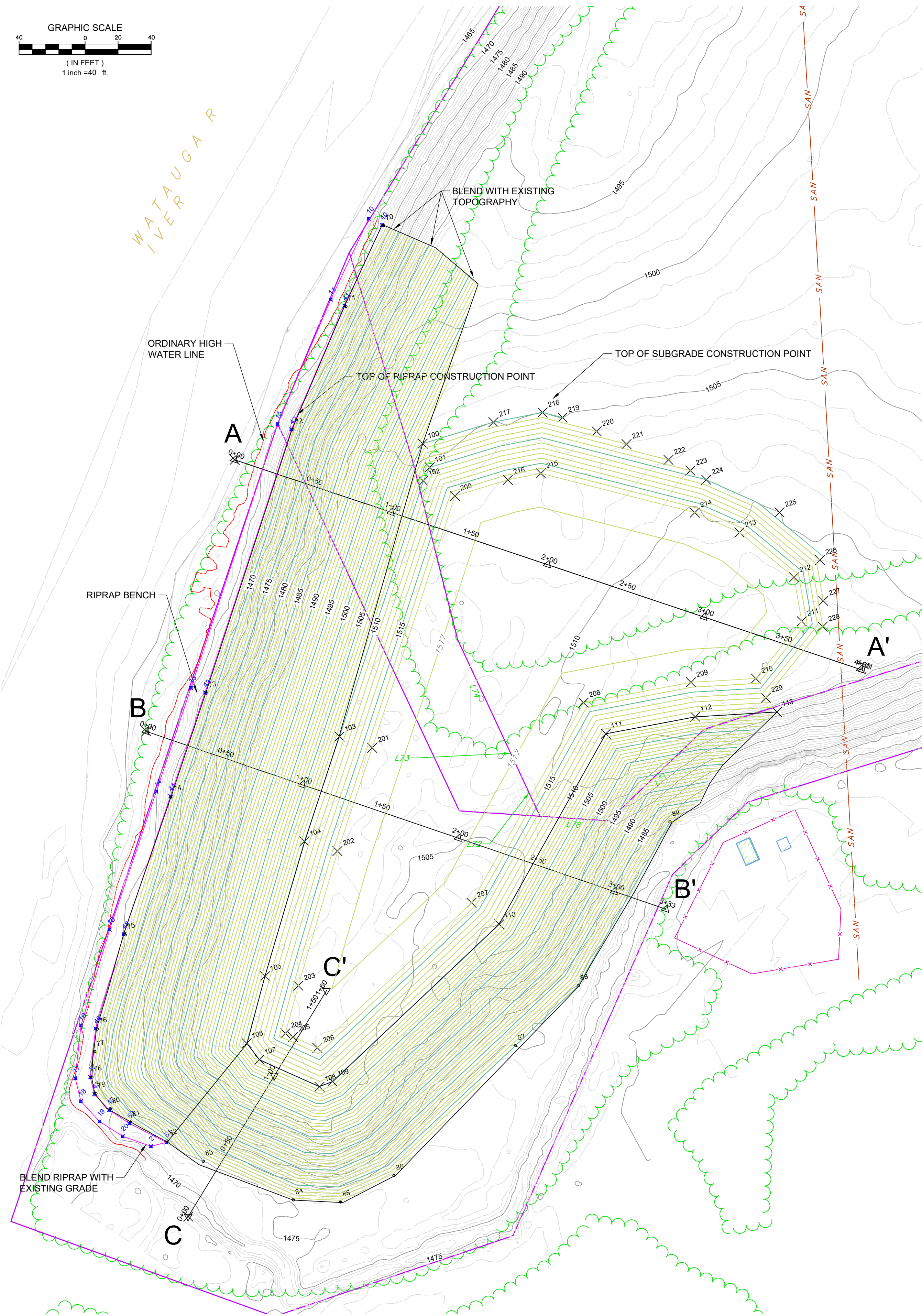
DATE: 05/12/25 BY: DW



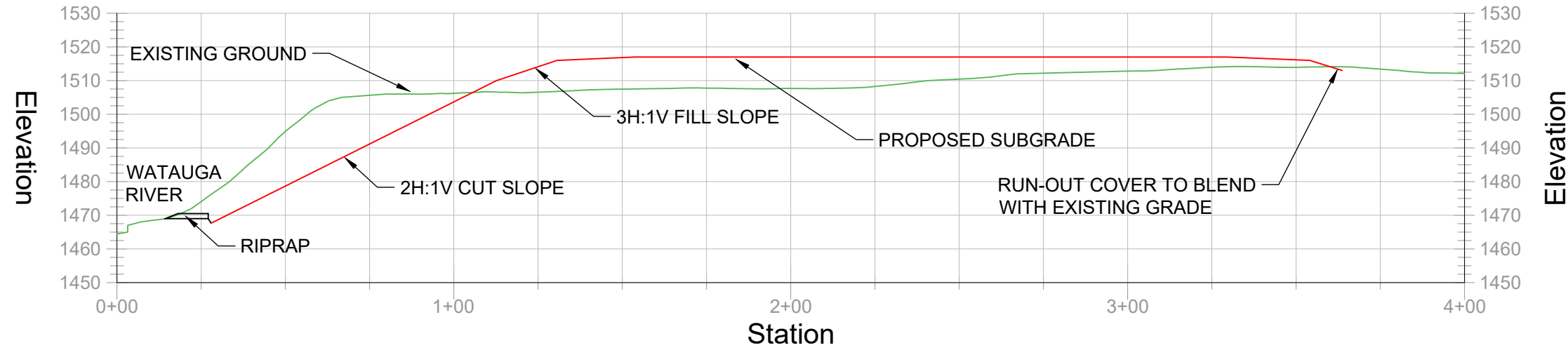
NORTH



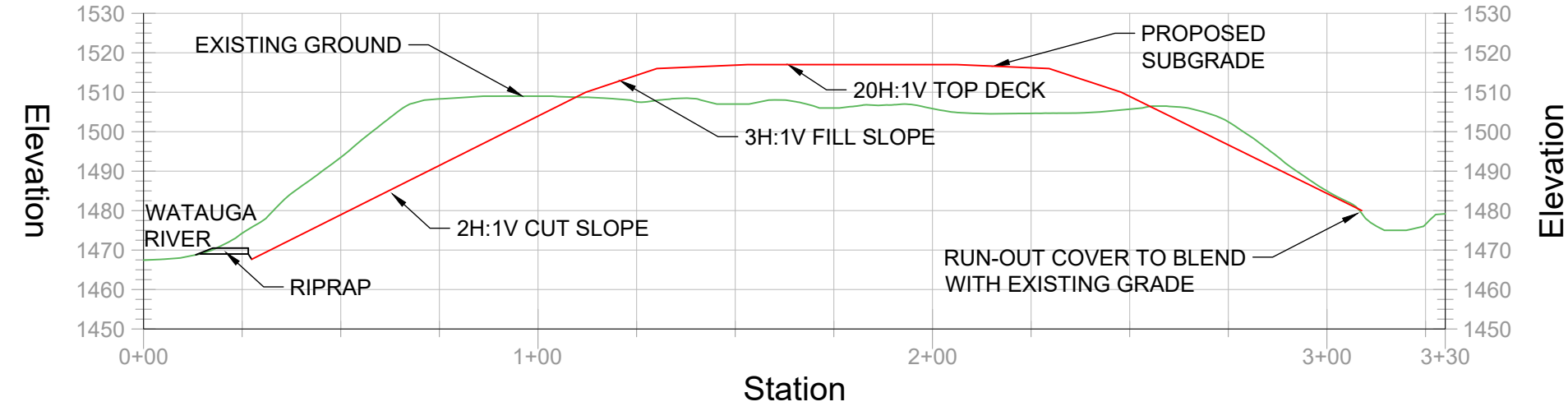
WATAUGA RIVER



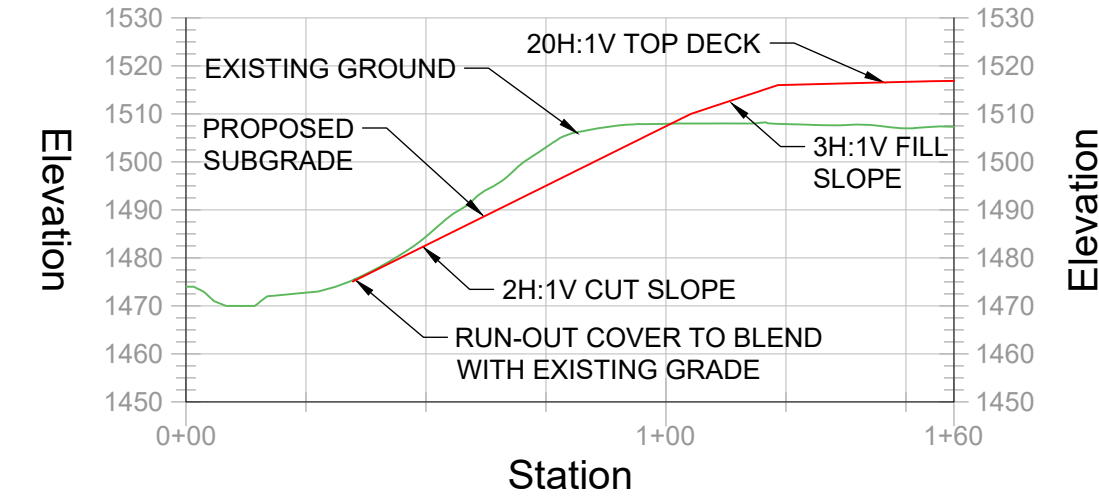
CROSS SECTION AA'



CROSS SECTION BB'



CROSS SECTION CC'



REVISION RECORD		
NO	DATE	DESCRIPTION

- LEGEND:
- EXISTING PROPERTY LINE
 - EXISTING ADJACENT PROPERTY LINE
 - EXISTING EASEMENT
 - EXISTING INDEX CONTOUR
 - EXISTING INTERMEDIATE CONTOUR
 - EDGE OF WATER (AS OF AUGUST 23-24, 2021)
 - OH-W EXISTING OVERHEAD WIRE
 - EXISTING FENCE
 - PROPOSED SUBGRADE INDEX CONTOUR
 - PROPOSED SUBGRADE INTERMEDIATE CONTOUR

ISSUED FOR CONSTRUCTION

DATE: 05/12/25 BY: DW

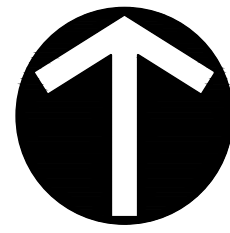


TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
BUREAU OF PARKS AND CONSERVATION & DIVISION OF REMEDIATION
NASHVILLE, TENNESSEE

DRAWN BY: DW CHECKED BY: AQ APPROVED BY: DW
DATE: MAY 2025 DWG SCALE: PROJECT NO:

PROPOSED GRADING

DRAWING NO.:
C300
SHEET 4 OF 9



NORTH



REVISION RECORD		
NO	DATE	DESCRIPTION

- LEGEND:**
- EXISTING PROPERTY LINE
 - EXISTING ADJACENT PROPERTY LINE
 - EXISTING EASEMENT
 - EXISTING INDEX CONTOUR
 - EXISTING INTERMEDIATE CONTOUR
 - EDGE OF WATER (AS OF AUGUST 23-24, 2021)
 - EXISTING OVERHEAD WIRE
 - EXISTING FENCE
 - EXISTING TREELINE
 - PROPOSED TOPSOIL/STOCKPILE INDEX CONTOUR
 - PROPOSED TOPSOIL/STOCKPILE INTERMEDIATE CONTOUR
 - PROPOSED RIPRAP INDEX CONTOUR
 - PROPOSED RIPRAP INTERMEDIATE CONTOUR
 - PROPOSED EROSION CONTROL MAT
 - PROPOSED SILT FENCE
 - UTILITY POLE
 - GUY WIRE

PLACE ECO-BLOCKS IMMEDIATELY ON THE RIVER SIDE OF SILT FENCE TO KEEP BOULDERS AND OTHER DEBRIS FROM DAMAGING SILT FENCE

PROPOSED EROSION CONTROL MAT, OR APPROVED EQUAL (TO BE INSTALLED ON FINISHED 2:1 SLOPE IMMEDIATELY FOLLOWING PLACEMENT OF TOPSOIL)

PLACE A UNIFORM LAYER OF SITE DERIVED WOOD CHIPS ON FLAT PORTION PRIOR TO ASH PLACEMENT.

PROPOSED SILT FENCE (TO BE INSTALLED JUST UPSLOPE OF RIPRAP BENCH IMMEDIATELY AFTER PLACING RIPRAP IF GRASS IS NOT SUFFICIENTLY ESTABLISHED)

ISSUED FOR CONSTRUCTION

DATE: 05/12/25 BY: DW



TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
BUREAU OF PARKS AND CONSERVATION & DIVISION OF REMEDIATION
NASHVILLE, TENNESSEE

DRAWN BY: DW | CHECKED BY: AO | APPROVED BY: DW
DATE: MAY 2025 | DWG SCALE: 1"=40' | PROJECT NO:

EPSC PLAN

C301

SHEET 5 OF 9

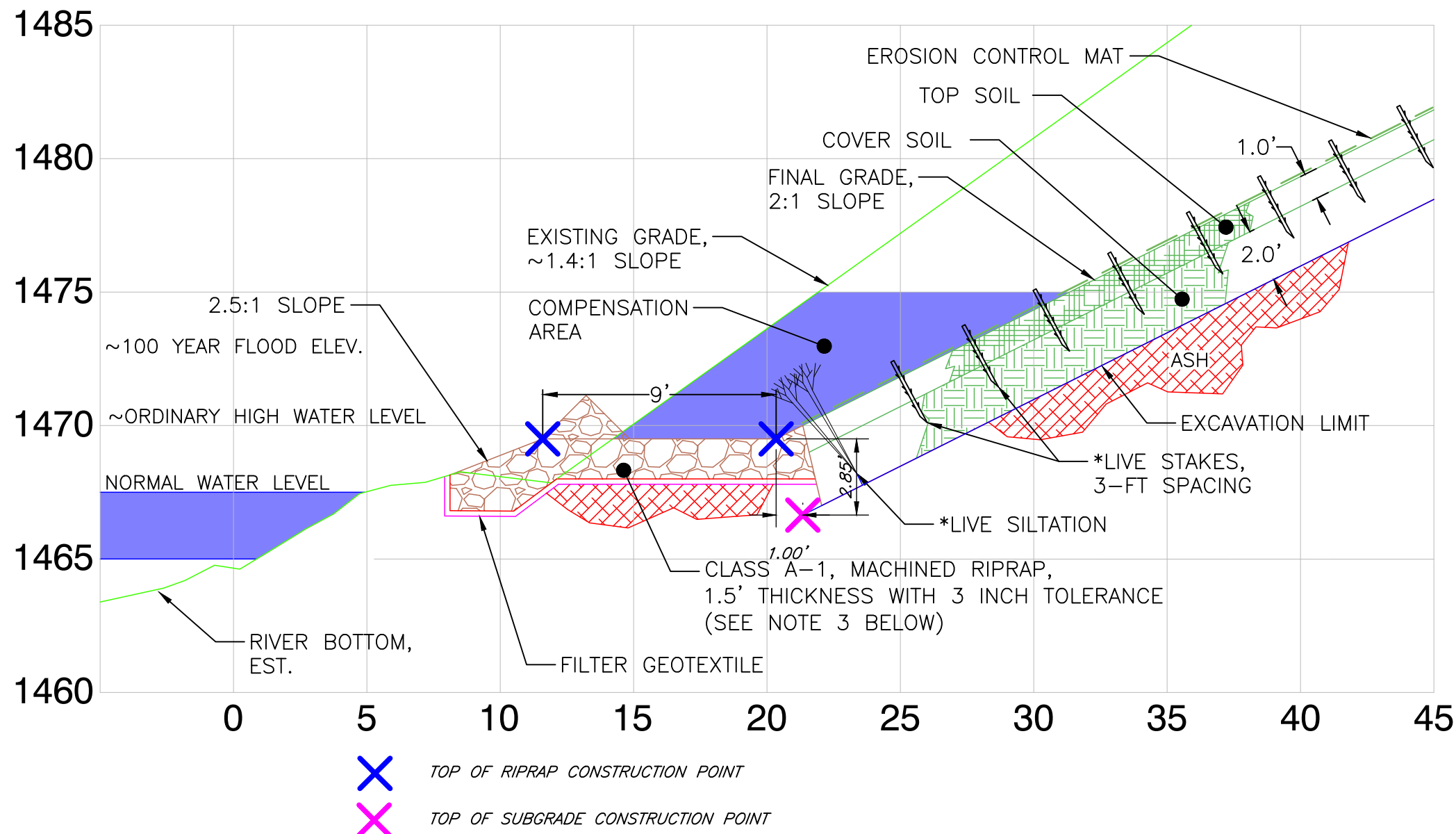
REVISION RECORD		
NO	DATE	DESCRIPTION

100-YR FLOOD ELEVATION
NORTH END OF SITE = ~1472.4 FT +MSL (APPROX)
SOUTH END OF SITE = ~1471.2 FT +MSL (APPROX)

ORDINARY HIGH WATER LEVEL
NORTH END OF SITE = ~1469 FT +MSL (APPROX)
SOUTH END OF SITE = ~1468 FT +MSL (APPROX)

NORMAL WATER LEVEL
1465 FT +MSL (APPROX)

ASSUMED RIVER BOTTOM
NORTH END OF SITE = 1463 FT +MSL (APPROX)
SOUTH END OF SITE = 1462 FT +MSL (APPROX)



1 TYPICAL LONGITUDINAL STONE TOE - WITH KEY
N.T.S.

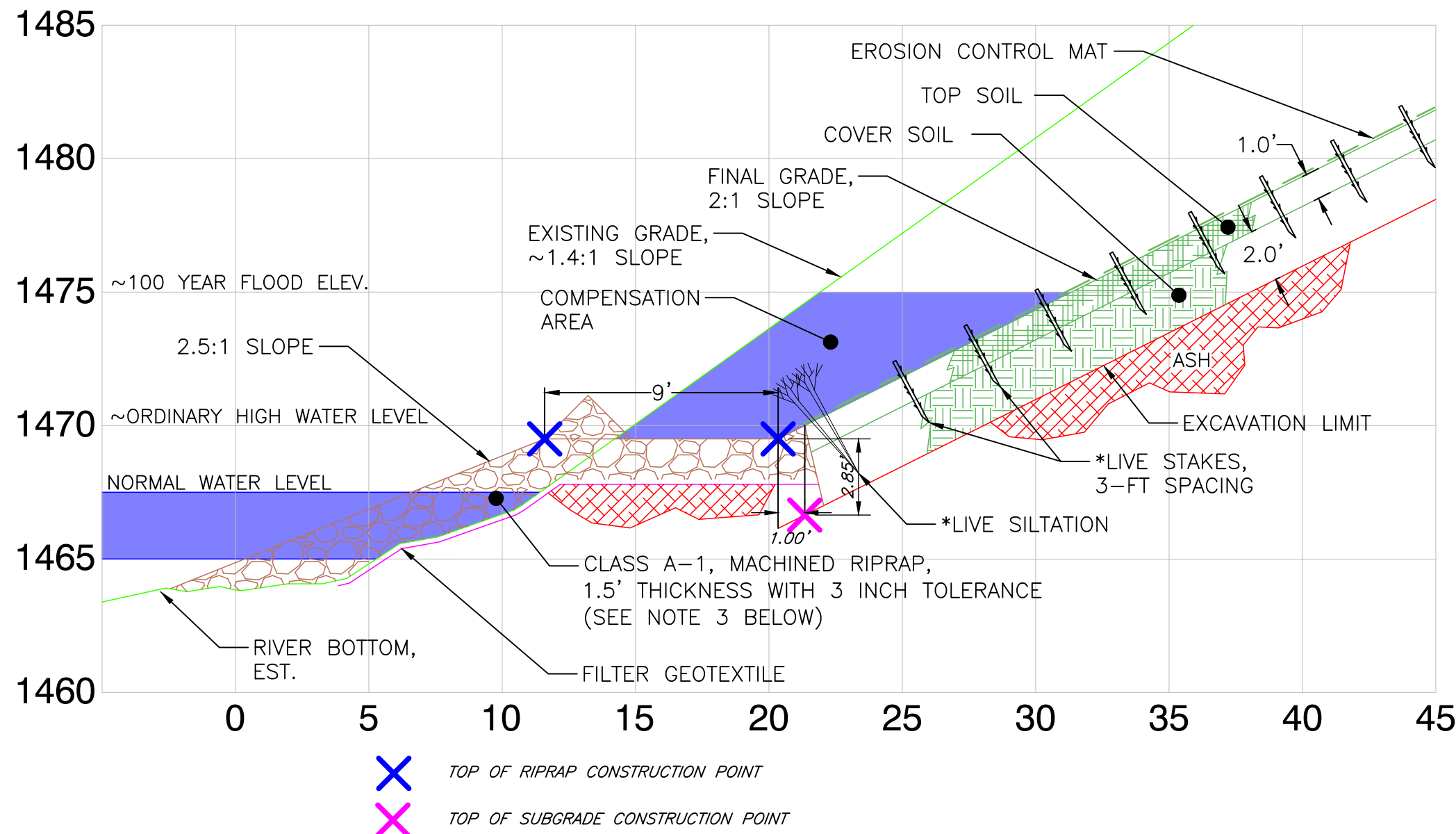
***LIVE SILTATION/ STAKES**

LIVE SILTATION (MIN. 25 BRANCHES OF LIVE CUTTINGS OF MIXED SPECIES PER THREE (3) LINEAR FEET)

LIVE STAKES

FIRST ROW

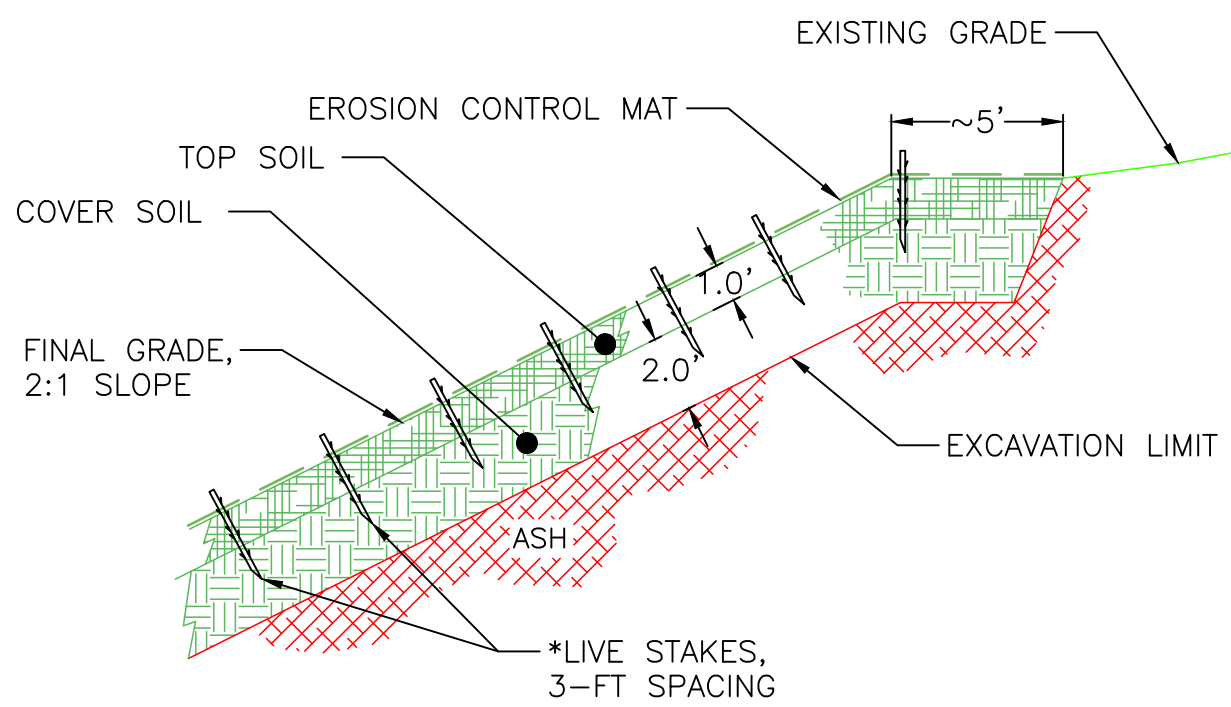
REST OF BANK



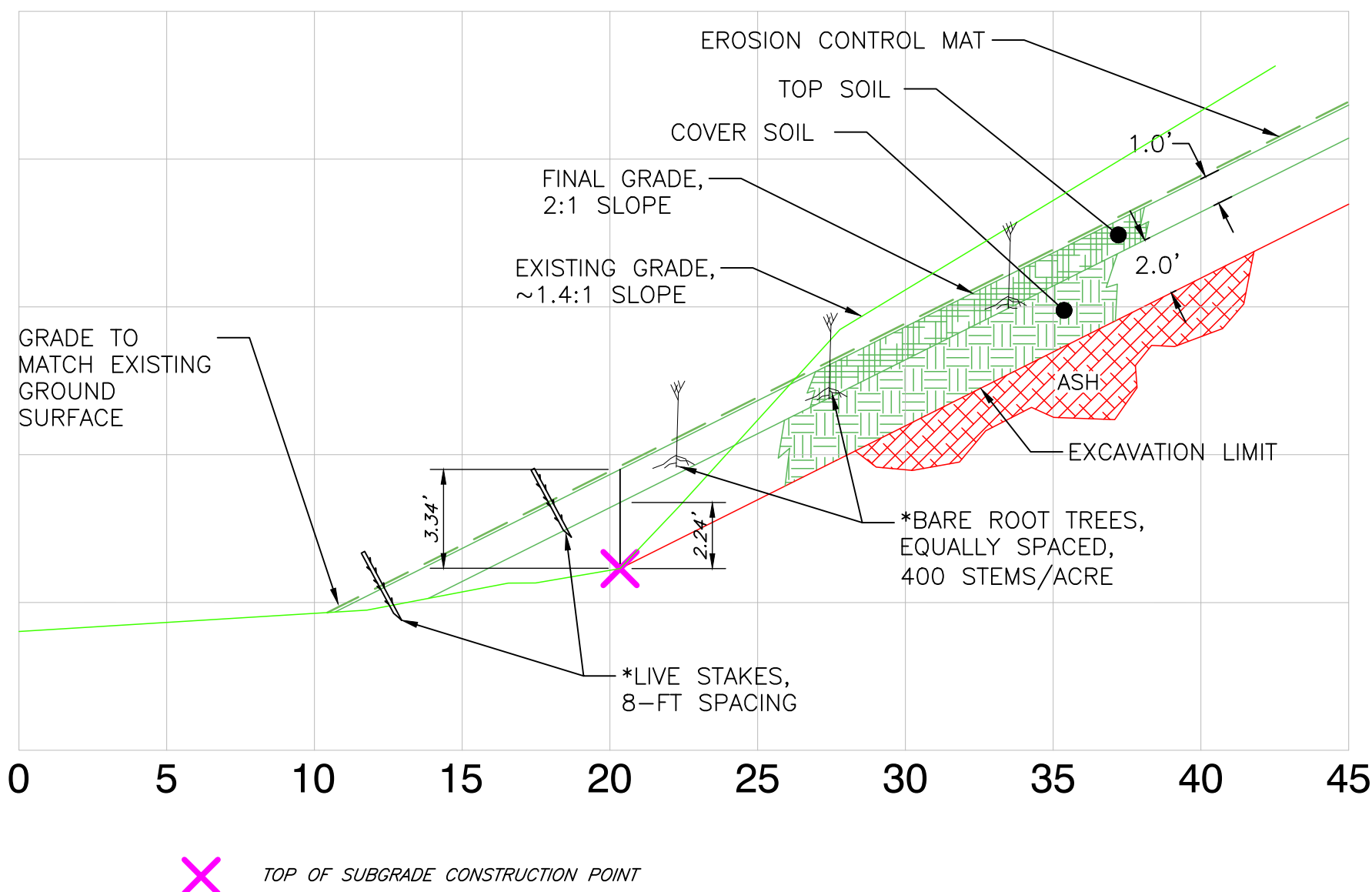
2 TYPICAL LONGITUDINAL STONE TOE - WITHOUT KEY
N.T.S.

NOTES:

- KEY IN RIPRAP WHERE RIPRAP TOE IS ABOVE WATER LEVEL AT TIME OF EXCAVATION.
- PLACE GEOTEXTILE AND RIPRAP ON THE SAME DAY AS EXCAVATION.
- MACHINED RR, CLASS A-1, SEC. 709-02, 709-03-3a



3 TOP OF EXCAVATION SLOPE TIE-IN TO EXISTING GRADE
N.T.S.



4 TYPICAL EXCAVATION TOE OUTSIDE OF FLOOD PLAIN
N.T.S.

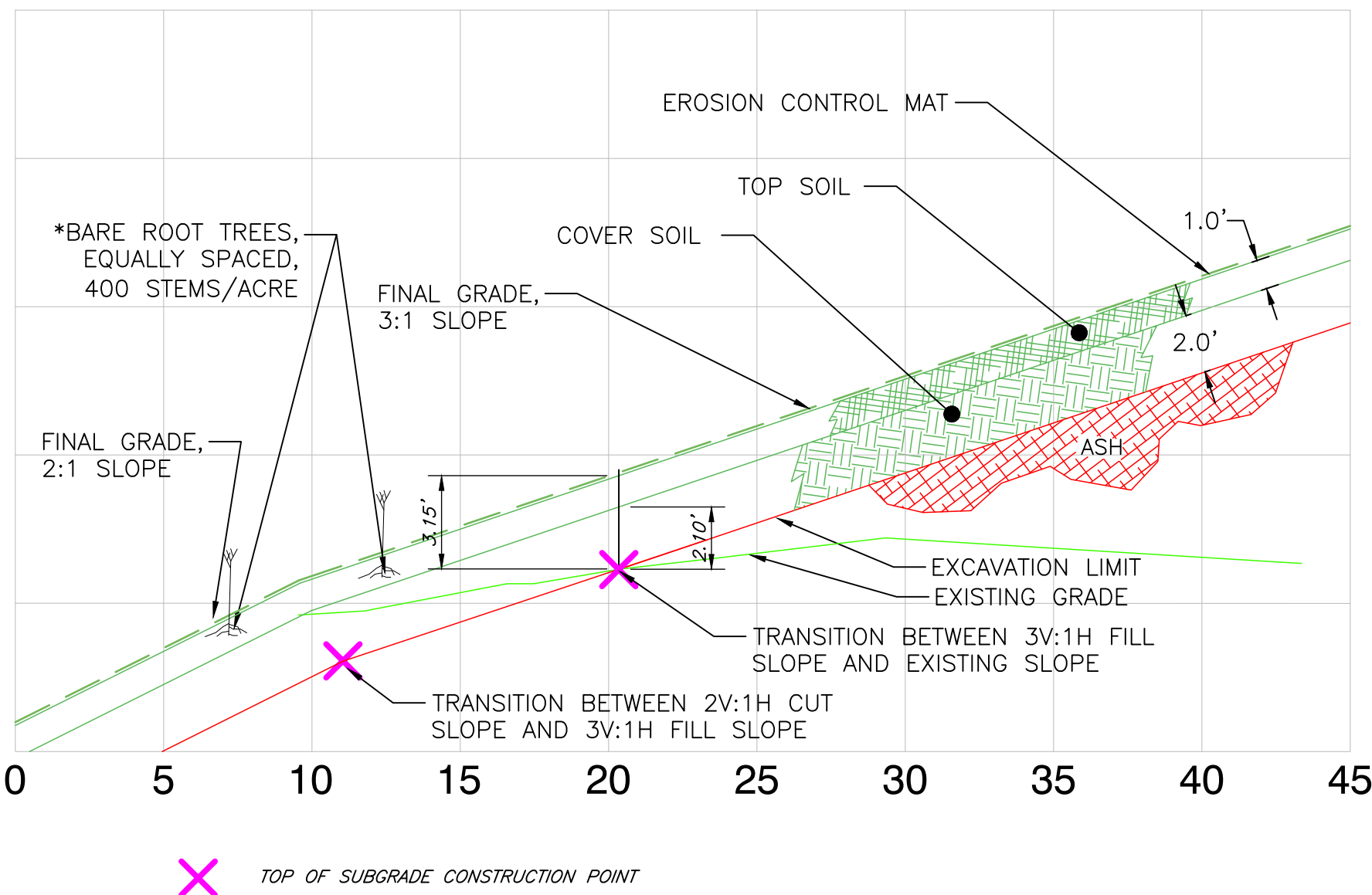
***LIVE STAKES & BARE ROOT TREES**

LIVE STAKES

BARE ROOT TREES, EVENLY SPACED 400 STEMS/ACRE

FIRST TWO ROWS

REST OF 2V:1H BANK



5 TYPICAL ASH FILL COVER TOE
N.T.S.

NOTES:

- ANY SOIL REQUIRED FROM OFFSITE SOURCES WILL BE RESPONSIBILITY OF CONTRACTOR.
- CONTRACTOR TO SUBMIT SAMPLE OF CLAY-LIKE MATERIAL TO DESIGN ENGINEER PRIOR TO APPROVAL.
- NO LIVE STAKES OR TREES ON SLOPES FLATTER THAN 2H:1V. 3H:1V SLOPES AND FLATTER TO BE SEEDD ONLY.

ISSUED FOR CONSTRUCTION

DATE: 05/12/25 BY: DW



TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
BUREAU OF PARKS AND CONSERVATION & DIVISION OF REMEDIATION
NASHVILLE, TENNESSEE

DRAWN BY: DW CHECKED BY: AQ APPROVED BY: DW
DATE: MAY 2025 DWG SCALE: N.T.S. PROJECT NO:

DETAILS

C600

SHEET 6 OF 9

8

7

6

5

4

3

2

1

REVISION RECORD

NO	DATE	DESCRIPTION
△		
△		
△		
△		

CONSTRUCTION SPECIFICATIONS FOR LIVE SILTATION/STAKES

1. HARVESTING:

A. LIVE SILTATION/STAKES MUST CONSIST OF A COMBINATION OF SPECIES LISTED IN THE PLANT SCHEDULE ON THIS SHEET. FIRST ROW (LIVE SILTATION) TO BE A FASCINE OF 25 BRANCHES (MINIMUM) PER THREE (3) LINEAR FEET.

B. STAKES SHOULD BE HARVESTED AND PLANTED WHEN THE WILLOWS OR OTHER CHOSEN SPECIES ARE DORMANT. THIS PERIOD IS GENERALLY FROM LATE FALL TO EARLY SPRING, OR BEFORE THE BUDS START TO BREAK.

C. WHEN HARVESTING CUTTINGS, SELECT HEALTHY, LIVE WOOD THAT IS REASONABLY STRAIGHT.

D. USE LIVE WOOD AT LEAST 1 YEAR OLD OR OLDER. THE BEST WOOD IS 2 TO 5 YEARS OLD WITH SMOOTH BARK THAT IS NOT DEEPLY FURROWED.

E. MAKE CLEAN CUTS WITH UNSPLIT ENDS. TRIM BRANCHES FROM CUTTING AS CLOSE AS POSSIBLE. CUT THE BUTT END OF THE CUTTING AT AN ANGLE (~45 DEGREES) AND THE TOP END PERPENDICULAR (90 DEGREES)

F. THE TOP (SQUARE CUT END) SHOULD BE PAINTED AND SEALED BY DIPPING THE TOP 1–INCH TO 2–INCHES INTO A 50–50 MIX OF LIGHT COLORED LATEX PAINT AND WATER. ASSSURE THE STAKES ARE PLANTED WITH THE TOP UP.

G. CUTTINGS SHOULD GENERALLY BE BETWEEN 0.75–INCHES TO 2–INCHES IN DIAMETER BUT CAN BE LARGER DEPENDING ON THE SPECIES. LARGER DIAMETER CUTTINGS ARE NEEDED FOR PLANTING INTO ROCK RIPRAP.

H. CUTTINGS OF SMALL DIAMETER (UP TO 1.5–INCHES) SHOULD BE 18 INCHES LONG MINIMUM. THICKER CUTTINGS SHOULD BE LONGER.

I. STAKES SHOULD BE CUT SO A TERMINAL BUD SCAR IS WITHIN 1–INCH TO 4–INCHES OF THE TOP. AT LEAST TWO BUDS AND/OR BUD SCARS SHOULD BE ABOVE THE GROUND AFTER PLANTING.

J. SPECIES SELECTION/COMPOSITION SUBJECT TO LOCAL NURSERY AVAILABILITY AT TIME OF PLANTING.

2. INSTALLATION:

A. STAKES MUST BE PLANTED WITH BUTT–ENDS INTO THE GROUND. LEAF BUD SCARS OR EMERGING BUDS SHOULD ALWAYS POINT UP. LIVE BRANCH CUTTINGS SHALL BE PLACED WITH BASAL ENDS DOWN.

B. USE AN IRON STAKE OR BAR TO MAKE A PILOT HOLE IN FIRM SOIL OR BETWEEN RIPRAP. DRIVE LIVE STAKES INTO THE SOIL WITH A RUBBER Mallet OR DEAD–BLOW HAMMER.

C. STAKES/SILTATION MUST NOT BE ALLOWED TO DRY OUT. THE CUTTINGS NOT PLANTED THE DAY THEY ARE HARVESTED SHOULD BE SOAKED IN WATER FOR A MINIMUM OF 24 HOURS.

D. SET THE STAKE AS DEEP AS POSSIBLE INTO THE SOIL, PREFERABLY WITH 80 PERCENT OF ITS LENGTH BURIED BUT NO LESS THAN ONE–HALF OF THE TOTAL LENGTH BURIED.

E. TAMP THE SOIL AROUND THE CUTTING.

F. FOR LIVE SILTATION ENOUGH BRANCHES SHALL BE USED TO FORM A CONTINUOUS LINEAR BRANCH WALL PARALLEL TO THE STREAM. GAPS SHOULD BE MINIMIZED.

CONSTRUCTION SPECIFICATIONS FOR BARE ROOT TREES

QUALITY:

1. BARE ROOT TREES SHALL BE HIGH QUALITY NURSERY GROWN REPRESENTATIVES OF THEIR NORMAL SPECIES AND VARIETIES AS LISTED IN THE BARE ROOT TREE SCHEDULE IN EQUAL PROPORTIONS. SPECIES SELECTION/COMPOSITON SUBJECT TO LOCAL NURSERY AVAILABILITY AT TIME OF PLANTING.

2. BARE ROOT TREES SHALL HAVE A HEAVY FIBROUS ROOT SYSTEM THAT HAS BEEN DEVELOPED BY PROPER CULTURAL TREATMENT, TRANSPLANTING AND ROOT PRUNING.

3. BARE ROOT TREES SHALL BE FREE FROM INSECTS, DISEASES, AND SUNSCALD.

SHIPMENT:

1. ALL PRECAUTIONS THAT ARE CUSTOMARY IN GOOD TRADE PRACTICE SHALL BE TAKEN TO ENSURE THE ARRIVAL OF THE PLANTS IN GOOD CONDITION.

2. THE ROOTS OF BARE ROOT TREES SHALL BE CAREFULLY PROTECTED WITH WET STRAW OR OTHER SUITABLE MATERIAL TO ENSURE THE ARRIVAL OF THE TREES WITH ROOTS IN MOIST CONDITION.

3. WHEN SHIPMENT IS MADE BY ENCLOSED VEHICLE, THE VEHICLE SHALL BE ADEQUATELY VENTILATED TO PREVENT ANY "HEATING" IN TRANSIT.

4. ALL STOCK FURNISHED MUST BE LEGIBLY TAGGED WITH THE NAME AS INDICATED ON THE PLANS.

5. BARE ROOT TREES MAY REMAIN ON THE SITE ONLY 24 HOURS PRIOR TO BEING PLANTED OR PLACED IN STORAGE.

PLANTING:

1. TREE PLANTING SHALL BE PERFORMED ONLY WHEN WATER AND SOIL CONDITIONS ARE FAVORABLE FOR SUCH OPERATIONS. OPERATIONS WILL BE SUSPENDED OR POSTPONED WHENEVER CONDITIONS ARE UNFAVORABLE FOR SUCH WORK.

2. REGARDLESS OF CALENDAR DATE, PLANTS MUST BE DORMANT AT THE TIME THEY ARRIVE AT THE SITE.

3. ALL BARE ROOT PLANT MATERIAL SHALL BE PLANTED DURING THE WINTER DORMANT SEASON. IT SHALL BE PLANTED ONLY WHEN THE TEMPERATURE IS BETWEEN 35 AND 60 DEGREES F.

4. PLANTINGS SHALL NOT BE MADE IN FROZEN GROUND.

5. BARE ROOT TREES SHALL BE PLANTED IN THE PLUMB POSITION. BARE ROOT TREES WILL BE SET AT THE SAME DEPTH OR UP TO ONE INCH DEEPER THAN THEY GREW IN THE NURSERY.

6. WHEN PLANTING IN A SLOT MADE WITH A TREE PLANTING MACHINE, PLANTING BAR OR SIMILAR IMPLEMENT, THE SLOT SHALL BE OF ADEQUATE DEPTH TO ALLOW THE ROOTS TO BE FULLY EXTENDED VERTICALLY WHEN THE SEEDLING IS PLACED IN THE SLOT AT THE PROPER DEPTH. CARE SHALL BE TAKEN WHEN PLANTING TO PREVENT THE END OF THE ROOTS FROM BEING TURNED UPWARD.

7. AFTER PLACING THE SEEDLING IN THE SLOT AT THE PROPER DEPTH, THE SLOT SHALL BE COMPLETELY CLOSED TO ELIMINATE ALL AIR POCKETS.

LIVE SILTATION/STAKES PLANT SCHEDULE

BOTANICAL NAME	COMMON NAME
PLATANUS OCCIDENTALIS	AMERICAN SYCAMORE
CORNUS AMOMUM	SILKY DOGWOOD
SALIX NIGRA	BLACK WILLOW
SAMBUCUS CANADENSIS	ELDERBERRY
VIBURNUM DENTATUM	ARROWOOD

BARE ROOT TREE PLANT SCHEDULE

BOTANICAL NAME	COMMON NAME
PLATANUS OCCIDENTALIS	AMERICAN SYCAMORE
ACER RUBRUM	RED MAPLE
LIQUIDAMBAR STYRACIFLUA	SWEETGUM
QUERCUS RUBRA	RED OAK
QUERCUS ALBA	WHITE OAK

MIN. 2 BUDS AND/OR BUD SCARS ABOVE GROUND

48"

24" – 36"

18" – 24"

18" – 24"

18" – 24"

LIVE SILTATION/STAKES & BARE ROOT TREES SPECIFICATIONS

N.T.S.

TEMPORARY SEEDING CONSTRUCTION SPECIFICATIONS

GRADING AND SHAPING:

Excessive water runoff shall be reduced by properly designed and installed erosion control practices such as ditches, dikes, diversions, and sediment basins. No shaping or grading is required if slopes can be stabilized by hand–seeded vegetation or if hydraulic seeding equipment is to be used.

SEEDBED PREPARATION:

Good seedbed preparation is essential to successful plant establishment. A good seedbed is well pulverized, loose and uniform. Where hydroseeding methods are used, the surface may be left with a more irregular surface of large clods and stones.

LIMING:

Apply lime according to soil test recommendations. Apply limestone uniformly and incorporate into the top 4–6 inches of soil. Soils with a pH of 6 or higher do not need to be limed.

FERTILIZER:

Base application rates on soil tests. Both fertilizer and lime should be incorporated into the top 4–6 inches of soil. If a hydraulic seeder is used, do not mix seed and fertilizer more than 30 minutes before the application.

SURFACE ROUGHENING:

If recent tillage operations have resulted in a loose surface, additional roughening may not be necessary, except to break up large clods. If rainfall caused the surface to become sealed or crusted, loosen it just prior to seeding by disking, raking, harrowing, or other suitable methods.

SEEDING:

Select a non–invasive grass or grass–legume mixture suitable to the area and season of the year. See Figures for suggestions of temporary seeding species. Seed shall be applied uniformly by hand, cyclone seeder, drill, cultipacker seeder, or hydraulic seeder. Drill or cultipacker seeders should normally place seed ¼ to ½ inches deep. Appropriate depth of planting is 10 times the seed diameter. Soil should be raked lightly to cover seed with soil if seeded by hand.

IRRIGATION:

During times of drought, water shall be applied at a rate not causing runoff and erosion. The soil shall be thoroughly wetted to a depth that will ensure germination of the seed. Subsequent applications should be made as needed. Newly seeded areas require more water than more mature plants.

PERMANENT SEEDING CONSTRUCTION SPECIFICATIONS

GRADING AND SHAPING:

Grading and shaping may not be required where hydraulic seeding and fertilizing equipment is to be used. Vertical banks shall be sloped to enable plant establishment.

When conventional seeding and fertilizing are to be done, grade and shape the slope, where feasible and practical, so that equipment can be used safely and efficiently during seedbed preparation, seeding, mulching, and maintenance of vegetation.

Concentrations of water that could cause excessive soil erosion should be diverted to a safe outlet. Diversions and other treatment practices must conform to the appropriate standards and specifications.

PLANT SELECTION:

Only certified seed shall be used. Refer to Table for suggested species.

SEEDBED PREPARATION:

When conventional seeding is to be used, topsoil should be applied to any area where the disturbance results in subsoil at the final grade surface. A minimum depth of 12" is required. Soil pH should be above 5 – preferably between 6.0 and 6.5. Soil on the site should be tested to determine lime and fertilizer rates. Soil should be submitted to a soils specialist or County Agricultural Extension agent for testing and soil amendment recommendations.

PERMANENT SEEDING CONSTRUCTION SPECIFICATIONS (CONT'D)

Broadcast Seeding:

Seedbed preparation may not be required where hydraulic seeding equipment is to be used.

Tillage, at a minimum, shall adequately loosen the soil to a depth of 4 to 6 inches; alleviate compaction; incorporate topsoil, lime, and fertilizer; smooth and firm the soil; allow for the proper placement of seed, sprigs, or plants; and allow for the anchoring of straw or hay mulch if a crimper is to be used.

Tillage may be done with any suitable equipment.

Tillage should be done parallel to the contour where feasible.

No–TILL SEEDING:

No–till seeding is permissible into annual cover crops when planting is done following maturity of the cover crop or if the temporary cover stand is sparse enough to allow adequate growth of the permanent (perennial) species. No–till seeding shall be done with appropriate no–till seeding equipment. The seed must be uniformly distributed and planted at the proper depth.

MAINTENANCE AND INSPECTION POINTS:

Any areas that have washed out due to high stormwater flows, areas that have been disturbed by blowing wind, and areas that do not show good germination should be retreated.

Inspect seeded areas for failure and make necessary repairs and reseedings within the same season, if possible.

RESEEDING:

If a stand has inadequate cover, re–evaluate choice of plant materials and quantities of lime and fertilizer in cooperation with the owner. Re–establish the stand after seedbed preparation or over–seed the stand. Consider seeding temporary, annual species if the time of year is not appropriate for permanent seeding

TEMPORARY COVER SEEDING MIXTURES

SEEDING DATES	GRASS SEED	SOIL AMENDMENTS	MAINTENANCE
JANUARY 1 TO MAY 1	RYE (120 LBS/ACRE)	FOLLOW RECOMMENDATIONS OF SOIL TESTS.	REFERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, REFERTILIZE AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.
MAY 1 TO AUGUST 15	OATS (60 LBS/ACRE)		
	BROWN TOP MILLET (30 LBS/ACRE)		
AUGUST 15 – DECEMBER 31	OATS (30 LBS/ACRE)		
	WINTER WHEAT (30 LBS/ACRE)		

PERMANENT COVER SEEDING MIXTURES

TYPE	PREFERRED RATE/MIX (lb/ac PLS)
ROUNDSTONE NATIVE SEED, LLC MIX 168 – SOUTHERN RIPARIAN BUFFER MIX OR EQUIVALENT	REFER TO ROUNDSTONE SPECIFICATION

SEEDING SPECIFICATIONS

ISSUED FOR CONSTRUCTION

DATE: 05/12/25 BY: DW

EIL

ENVIRONMENTAL INFORMATION LOGISTICS, LLC

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION

BUREAU OF PARKS AND CONSERVATION & DIVISION OF REMEDIATION

NASHVILLE, TENNESSEE

DRAWN BY: DW | CHECKED BY: AQ | APPROVED BY: DW

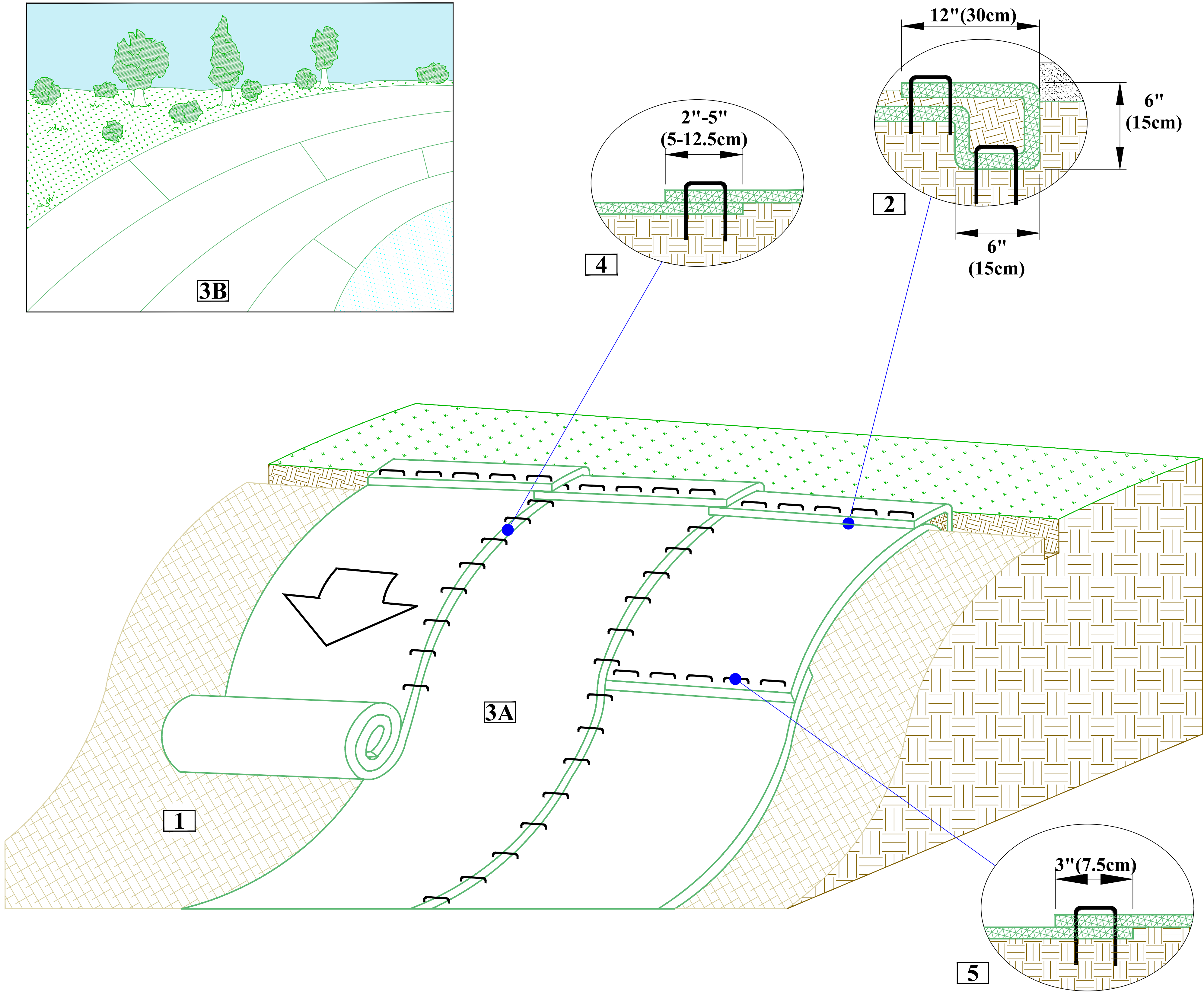
DATE: MAY 2025 | DWG SCALE: N.T.S. | PROJECT NO:

DETAILS (2)

DRAWING NO.: C601

SHEET 7 OF 9

REVISION RECORD		
NO	DATE	DESCRIPTION




SLOPE INSTALLATION DETAIL

1. Begin at the top of the slope by anchoring the ECM in a 6"(15cm) deep X 6"(15cm) wide trench with approximately 12" (30cm) of ECM extended beyond the up-slope portion of the trench. Anchor the ECM with a row of staples/stakes approximately 12" (30cm) apart in the bottom of the trench. Backfill and compact the trench after stapling. Fold the remaining 12"(30cm) portion of ECM back over the compacted soil. Secure ECM over compacted soil with a row of staples/stakes spaced approximately 12"(30cm) apart across the width of the ECM.
2. Roll the ECM (A) down or (B) horizontally across the slope. ECM will unroll with appropriate side against the soil surface. All ECMs must be securely fastened to soil surface by placing staples/stakes in appropriate locations as shown in the staple pattern guide.
3. The edges of parallel ECMs must be stapled with approximately 2" - 5" (5-12.5cm) overlap depending on the ECM type.
4. Consecutive ECMs spliced down the slope must be end over end (Shingle style) with an approximate 3"(7.5cm) overlap. Staple through overlapped area, approximately 12"(30cm) apart across entire ECM width.
5. Apply live stakes to the bank per instructions on Drawing C601.

*NOTE:
In loose soil conditions, the use of staple or stake lengths greater than 6"(15cm) may be necessary to properly secure the ECM.

5 EROSION CONTROL MAT (TYP.)
N.T.S.

ISSUED FOR CONSTRUCTION
DATE: 05/12/25 BY: DW



ENVIRONMENTAL
INFORMATION
LOGISTICS, LLC

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
BUREAU OF PARKS AND CONSERVATION & DIVISION OF REMEDIATION
NASHVILLE, TENNESSEE

DRAWN BY: DW	CHECKED BY: AQ	APPROVED BY: DW
DATE: APRIL 2025	DWG SCALE: N.T.S.	PROJECT NO:

DETAILS (3)

DRAWING NO.: C602
SHEET 8 OF 9

