GOVERNMENT OF THE DISTRICT OF COLUMBIA
PERMIT OPERATIONS DIVISION
PLANS APPROVED
Permit No. BCIV2300110 Date 11/16/23

These plans are conditionally approved as submitted or noted during plan review and are subject to field inspection. Approved plans must be kept on site and are needed for all inspections. No changes or modifications to these plans. Changes require a revision permit with the revised plans. Trade Permits are required for trade work, e.g. Electrical or Plumbing

Structural Review - Glenn Kechejian - 11-16-2023
DDOT Review - Shawntanishia Zackery - 11-16-2023
DOEE SE-SW Review - Saba Gharavi - 11-16-2023
HPRB Review - Timothy Dennee - 11-16-2023
DC Water Review - Vahid Bilvardi - 11-16-2023

VEGETATIVE STABILIZATION (cont'd)

Mix	Recommended Cultivar	Seeding Rate[1] lb/ac	Seeding Rate[1] lb/1,000 ft²	Soil Drainage Class[2]	Max. Height (in.)	Maint. Level[3]	Remarks
Warm-Season/Cool-Season Grass Mixes							
3. SELECT THREE GRASSES:							
Deertongue (*Dichanthelium clandestinum*)	Tioga	20	0.46	E–MW	4–8	C–D	Excellent for excessively droughty, low pH (acidic) soils.
Canada Wild Rye (*Elymus canadensis*)	Common	3	0.07				
Redtop (*Agrostis gigantean*)	Streaker	1	0.02				Canada wild rye and redtop are cool-season grasses that will provide erosion protection while the warm-season grass (deertongue) is becoming established.
PLUS THE FOLLOWING LEGUME:							
Common Lespedeza (*Lespedeza striata*)	Kobe	10	0.23				Common lespedeza ('Kobe' variety) is a reseeding annual.
4. Deertongue (*Dichanthelium clandestinum*)	Tioga	15	0.34	W–P	2–3	C–D	
Creeping Red Fescue (*Festuca rubra var. rubra*)	Navigator II	20	0.46				
Virginia Wild Rye (*Elymus virginicus*)	Common	5	0.11				Use Virginia wild rye on moist, shady sites. Use Canada wild rye on droughty sites.
OR Canada Wild Rye (*Elymus canadensis*)	Common	5	0.11				
Cool-Season Grass Mixes							
5. SELECT TWO GRASSES: Creeping Red Fescue (*Festuca rubra var. rubra*)	Navigator II	20	0.46	E–SP	2–3	B–D	Use creeping red fescue in heavy shade and on moist sites.
OR							
Hard Fescue (*Festuca trachyphylla*)	Beacon, Gotham, Spartan II, Sword	20	0.46				Perennial ryegrass and redtop will establish more rapidly than either fescue. Redtop tolerates wet sites better than ryegrass.
Perennial Ryegrass (*Lolium perenne*)	Blazer (II), Pennfine	10	0.23				
OR							
Redtop (*Agrostis gigantean*)	Streaker	1	0.02				Flatpea will suppress woody vegetation. Plant in the spring, or as a dormant seeding in late fall or winter. It must be incorporated into the soil or covered with mulch. It may not be winter-hardy if planted late summer to fall. Caution: Flatpea can spread aggressively, and can be toxic to livestock.
AND ADD THE FOLLOWING LEGUME:							
Flatpea (*Lathyrus sylvestris*)	Lathco	15	0.34				

Mix	Recommended Cultivar	Seeding Rate[1] lb/ac	Seeding Rate[1] lb/1,000 ft²	Soil Drainage Class[2]	Max. Height (in.)	Maint. Level[3]	Remarks
Cool-Season Grass Mixes							
6. Tall Fescue (*Lolium arundinaceum*) (*formerly Festuca arundinacea*)	Recommended turf-types[4]	40	0.93	W–SP	2–3	C–D	
Perennial Ryegrass (*Lolium perenne*)	Blazer (II), Pennfine	25	0.57				
PLUS THE FOLLOWING LEGUME:							
White Clover (*Trifolium repens*)	Common	5	0.11				
7. Creeping Red Fescue (*Festuca rubra var. rubra*)	Navigator II	60	1.38	W–MW	1–2	C–D	This mix has good shade tolerance.
Kentucky Bluegrass (*Poa pratensis*)	Recommended turf-types[4]	15	0.34				
8. Tall Fescue (*Lolium arundinaceum*) (formerly *Festuca arundinacea*)	Recommended turf-types[4]	100	2.3	E–SP	2–3	A–D	Tall fescue produces a dense turf if frequently mowed, but tends to be clumpy if mowed only occasionally. For best results, recommend using a blend of 3 cultivars. Use low-endophyte cultivars in areas where livestock may graze.
9. SELECT ONE SPECIES OF FESCUE: Tall Fescue (*Lolium arundinaceum*) (formerly *Festuca arundinacea*)	Recommended turf-types[4]	60	1.38	W–SP	2–3	A–B	Good for highly managed athletic fields. Tall fescue is more suitable for compacted, high use areas and on moist sites.
OR Hard Fescue (*Festuca trachyphylla*)	Beacon, Gotham, Spartan II, Sword	40	0.92				Hard fescue produces finer-textured turf with more shade tolerance.
AND ADD:							
Kentucky Bluegrass (*Poa pratensis*)	Recommended turf-types[4]	40	0.92				Use tall fescue instead of hard fescue for wastewater treatment strips and areas.
Perennial Ryegrass (*Lolium perenne*)	Blazer (II), Pennfine	20	0.46				For best results, recommend using a blend of 3 cultivars each for tall fescue and Kentucky bluegrass.

Mix	Recommended Cultivar	Seeding Rate[1] lb/ac	Seeding Rate[1] lb/1,000 ft²	Soil Drainage Class[2]	Max. Height (in.)	Maint. Level[3]	Remarks
Cool-Season Grass Mixes							
10. Orchardgrass (*Dactylis glomerata*)	Any	25	0.57	W–SP	2–3	C–D	Low maintenance mix that is easy to establish.
Creeping Red Fescue (*Festuca rubra var. rubra*)	Navigator II	10	0.23				
Redtop (*Agrostis gigantean*)	Streaker	1	0.02				
Alsike Clover (*Trifolium hybridum*)	Common	3	0.07				Alsike clover can be toxic to horses.
White Clover (*Trifolium repens*)	Common	3	0.07				Omit the clovers if using this mix for wastewater treatment strips and areas.
11. Creeping Red Fescue (*Festuca rubra var. rubra*)	Navigator II	30	0.69	E–MW	2–3	B–D	
Chewings Fescue (*Festuca rubra ssp. commutata*)	Radar	30	0.69				
Kentucky Bluegrass (*Poa pratensis*)	Recommended turf-types[4]	20	0.46				
OPTIONAL ADDITION Rough Bluegrass (*Poa trivialis*)	Common	15	0.34				Add rough bluegrass in moist, shady conditions.
12. Creeping Red Fescue (*Festuca rubra var. rubra*)	Navigator II	25	0.57	E–MW	2–3	C–D	Attractive mix of fine fescues and wildflowers for low maintenance conditions. Once well-established, the grasses may tend to outcompete the wildflowers.
Hard Fescue (*Festuca trachyphylla*)	Beacon, Gotham, Spartan II, Sword	25	0.57				
Sheep Fescue (*Festuca ovina*)	Common or Bighorn	25	0.57				Wildflowers are best established by broadcasting and cultipacking on a prepared seedbed. Drilling can be also used, but care must be taken so that seeds are not drilled too deep.
PLUS WILDFLOWER MIX:							
Black-eyed Susan (*Rudbeckia hirta*)	Common	2	0.05				
Lance-leaved Coreopsis (*Coreopsis lanceolata*)	Common	2	0.05				Hydroseeding is not recommended for this mix if wildflowers are used. (They have very small seeds.)
Partridge Pea (*Chamaecrista fasciculate*)	Common	5	0.11				
OR ADD CLOVER MIX:							
White Clover (*Trifolium repens*)	Common	3	0.07				
Red Clover (*Trifolium pretense*)	Any	3	0.07				

Mix	Recommended Cultivar	Seeding Rate[1] lb/ac	Seeding Rate[1] lb/1,000 ft²	Soil Drainage Class[2]	Max. Height (in.)	Maint. Level[3]	Remarks
Cool-Season Grass Mixes							
13. Alkali Saltgrass (*Puccinellia distans*)	Fults or Salty	20	0.46	W–P	2–3	B–D	This is the recommended mix for saline sites. Saltgrass will persist only under saline conditions.
Creeping Red Fescue (*Festuca rubra var. rubra*)	Navigator II	15	0.34				
Fowl Meadowgrass (*Poa palustris*)	Common	2	0.05				For best results, use only the 'Dawson' variety of creeping red fescue. It is a salt-tolerant variety.
OPTIONAL ADDITION Creeping Bentgrass (*Agrostis stolonifera*)	Seaside	2	0.05				Add bentgrass for wetter conditions.

Notes:
1. Seeding Rates: Seeding rates for the warm-season grasses are in pounds of Pure Live Seed (PLS). Actual planting rates must be adjusted to reflect percent seed germination and purity, as tested. Adjustments are usually not needed for the cool-season grasses, legumes, or wildflowers. All legume seeds must be inoculated before planting with the appropriate Rhizobium bacteria. When feasible, scarify hard-seeded legumes scarified to improve germination.
2. Soil Drainage Class (refer to the county soil survey for further information):
   E - Excessively Drained; W - Well Drained; MW - Moderately Well Drained; SP - Somewhat Poorly Drained; P - Poorly Drained.
3. Maintenance Level:
   A - Intensive mowing (every 2–4 days), fertilization, lime, insect and weed control, and watering (examples: high maintenance lawns and athletic fields).
   B - Frequent mowing (every 4–7 days), occasional fertilization, lime, pest control, and watering (examples: residential, school, and commercial lawns).
   C - Periodic mowing (every 7–14 days), occasional fertilization and lime (examples: residential lawns, parks).
   D - Infrequent or no mowing, fertilization, or lime after the first year of establishment (examples: wildlife areas, roadsides, steep banks).
4. Turf-type cultivars of tall fescue and Kentucky bluegrass must be selected based on recommendations of the Maryland-Virginia Turfgrass Variety Recommendation Work Group.
   Kentucky Bluegrass – Individual varieties selected must make up not less than 10%, nor more than 35% of the total mixture on a weight basis. All varieties must be certified. Selections can be made from Category I alone or various combinations of Categories I and II. Kentucky bluegrasses listed as "Promising" (Category II below) can account for no more than 35% of the blend by weight).
   Category I – Recommended Kentucky Bluegrass Varieties (65% to 100% of blend by weight). Aries, Blue Bank, Blue Coat, Blue Note, Bolt, Full Back, Hampton, Legend, Midnight, Noble, Skye, and Sudden Impact[3].
   Category II – Promising Kentucky Bluegrasses (10% to 35% on a weight basis). Aramintha, Barvette HGT, Endurance, Heidi, Keeneland, Mazama, Merlot, NuChicago, Oasis, Skye, and Wildhorse[1] (Wildhorse is only for mixing with tall fescue).
   Tall Fescue – Both recommended and promising varieties can be used in the VCIA Sod Certification Program.
   Category I – Recommended Tall Fescue Varieties (90% to 100% on a weight basis). Annapolis, Avenger II, Black Tail, Bladerunner II[4], Bullseye, Catalyst, Dakota[4], Embrace, Falcon V, Firecracker SLS[2], Guardian 41[4], Gazelle II, Golconda[4], Gold Medallion, GTO, Hemi[3], Inferno, Integrity, Justice, Leonardo[2], Maestro, Michelangelo, Mustang 4, Penn RK4, Persuasion[4], Raptor III, Rebel IV, Reflection, Regenerate, Rendition RX, Rockwell, Saltillo, Screamer LS, Speedway[4], Spyder LS, SR 8650[4], Sunset Gold, Supersonic, Technique, Temple, Thor, Titanium 2LS, Titan Rx, Turbo, Turbo RZ[4], Xtender, and Xtremegreen.
   Category II – Promising tall fescue varieties (may be 90% to 100% of the mixture on a weight basis): 4th Millennium, Amity, Bloodhound, Crossfire 4, Fantasia, Fayette, Fesnova, Firebird 2, Firewall, Foxhound, Grande 3, Hot Rod, Houndog 8, Hover, Maestro, Nightcrawler, Paramount, Persuasion, Rebel V, Rebounder, Rhambler 2 SRP, Rhizing Moon, Rowdy, Swagger, Terrano, Traverse II SRP, Trinity, Turfway, Valkyrie LS, and Wichita.
   Kentucky bluegrass varieties recommended for mixing with tall fescue sod to enhance sod strength (up to 10% of the seed mixture by weight): All cultivars in Categories I and II above. Note recommendation of hybrid bluegrasses as promising varieties for mixtures with turf-type tall fescues in the traditionally warmer climates of Virginia.
   Varieties marked with superscript notations denote the following:
   1. To be considered for removal in 2018 due to declining performance relative to other varieties.
   2. To be considered for removal in 2018 due to declining seed quality.
   3. To be considered for removal in 2018 due to the absence of recent testing of certified seed lots in MD and VA.
   4. To be considered for removal in 2018 due to lack of recent testing in MD and VA.

SOD GRASS
1. CLASS OF TURFGRASS SOD MUST COMPLY WITH THE GRASS VARIETIES LISTED IN TABLE 2.7. MAKE SOD LABELS AVAILABLE TO THE JOB FOREMAN AND INSPECTOR.
2. MACHINE CUT SOD AT A UNIFORM SOIL THICKNESS OF ¾in. , AT THE TIME OF CUTTING. MEASUREMENT FOR THICKNESS MUST EXCLUDE TOP GROWTH AND THATCH. INDIVIDUAL PIECES OF SOD MUST BE CUT TO SUPPLIER'S WIDTH AND LENGTH. MAXIMUM ALLOWABLE DEVIATION FROM STANDARD WIDTHS AND LENGTHS IS 5%. BROKEN PADS AND TORN OR UNEVEN ENDS WILL NOT BE ACCEPTABLE.
3. STANDARD SIZE SECTIONS OF SOD MUST BE STRONG ENOUGH TO SUPPORT THEIR OWN WEIGHT AND RETAIN THEIR SIZE AND SHAPE WHEN SUSPENDED VERTICALLY WITH A FIRM GRASP ON THE UPPER 10% OF THE SECTION.
4. DO NOT HARVEST OR TRANSPLANT SOD WHEN MOISTURE CONTENT(EXCESSIVELY DRY OR WET) MAY ADVERSELY AFFECT ITS SURVIVAL.
5. HARVEST, DELIVER, AND INSTALL SOD WITHIN A PERIOD OF 36 HOURS. SOD NOT TRANSPLANTED WITHIN THIS PERIOD MUST BE APPROVED BY AN AGRONOMIST OR SOIL SCIENTIST PRIOR TO ITS INSTALLATION.

PLANTING DATES
THE RECOMMENDED PLANTING DATES FOR PERMANENT COVER CAN BE FOUND IN TABLE 2.8

Table 2.8 Recommended Planting Dates for Permanent Cover

Type of Plant Material	Planting Dates
Seeds - Cool-Season Grasses (includes mixes with forbs and/or legumes)	Feb 15 to Apr 30 Aug 15 to Oct 31 Nov 1 to Nov 30[3]
Seeds - Warm-Season/Cool-Season Grass Mixes (includes mixes with forbs and/or legumes)	Feb 15 to Apr 30[4] May 1 to May 31[5]
Sod - Cool-Season	Feb 15 to Apr 30 May 1 to Sep 30[5] Oct 1 to Dec 1[5, 6]

Notes:
1. When seeding toward the end of the listed planting dates, or when conditions are expected to be less than optimal, select an appropriate nurse crop from Table 2.4 Temporary Seeding for Site Stabilization and plant together with the permanent seeding mix.
2. When planted during the growing season, most of these materials must be purchased and kept in a dormant condition until planting.
3. Recommend adding a nurse crop, as noted above, if planting during this period.
4. Warm-season grasses need a soil temperature of at least 50 degrees F in order to germinate. If soil temperatures are colder than 50 degrees, or moisture is not adequate, the seeds will remain dormant until conditions are favorable. In general, planting during the latter portion of this period allows more time for weed emergence and weed control prior to planting. When selecting a planting date, consider the need for weed control vs. the likelihood of having sufficient moisture for later plantings, especially on droughty sites.
5. Additional planting dates during which supplemental watering may be needed to ensure plant establishment.
6. Frequent freezing and thawing of wet soils may result in frost-heaving of materials planted in late fall, if plants have not sufficiently rooted in place. Sod usually needs 4 to 6 weeks to become sufficiently rooted.

MINIMUM SOIL CRITERIA
MINIMUM SOIL CONDITIONS REQUIRED FOR PERMANENT VEGETATIVE ESTABLISHMENT INCLUDE THE FOLLOWING:
1. SOIL pH MUST BE BETWEEN 6.0 AND 7.0
2. SOLUBLE SALTS MUST BE LESS THAN 500 PARTS PER MILLION (ppm).
3. THE SOIL MUST CONTAIN LESS THAN 40% CLAY BUT ENOUGH FINE GRAINED MATERIAL(>30% SILT PLUS CLAY) TO PROVIDE THE CAPACITY TO HOLD A MODERATE AMOUNT OF MOISTURE. AS AN EXCEPTION, IT IS ACCEPTABLE TO PLANT LOVEGRASS OR SERECIA LESPEDEZA IN SANDY SOIL (<30% SILT PLUS CLAY).
4. SOIL MUST CONTAIN 1.5% MINIMUM ORGANIC MATTER BY WEIGHT.
5. SOIL MUST CONTAIN SUFFICIENT PORE SPACE TO PERMIT ADEQUATE ROOT PENETRATION.
6. IF THESE CONDITIONS CANNOT BE MET BY SOILS ON SITE, TOPSOIL MUST BE ADDED AS REQUIRED IN SECTION 2.6 TOPSOILING.

SOIL AMENDMENTS (FERTILIZER AND LIME SPECIFICATIONS)
1. SOIL TEST MUST BE PERFORMED TO DETERMINE THE EXACT RATIOS AND APPLICATION RATES FOR BOTH LIME AND FERTILIZER ON SITES WITH DISTURBED AREAS OVER 5 ACRES. SOIL ANALYSIS MAY BE PERFORMED BY THE UNIVERSITY OF THE DISTRICT OF COLUMBIA OR A CERTIFIED COMMERCIAL LABORATORY. SOIL SAMPLES TAKEN FOR ENGINEERING PURPOSES MAY BE USED FOR CHEMICAL ANALYSES.
2. FERTILIZERS MUST BE UNIFORM IN COMPOSITION, FREE FLOWING, AND SUITABLE FOR ACCURATE APPLICATION BY APPROVED EQUIPMENT. MANURE MAY BE SUBSTITUTED FOR FERTILIZER WITH PRIOR APPROVAL FROM DOEE. DELIVER ALL FERTILIZERS TO THE SITE FULLY LABELED PER APPLICABLE LAWS AND BEAR THE NAME, TRADE NAME OR TRADEMARK, AND WARRANTY OF THE PRODUCER.
3. LIME MATERIALS MUST BE GROUND LIMESTONE (HYDRATED OR BURNT LIME MAY BE SUBSTITUTED) CONTAINING AT LEAST 50% TOTAL OXIDES (CALCIUM OXIDE PLUS MAGNESIUM OXIDE). LIMESTONE MUST BE GROUND TO SUCH FINENESS THAT AT LEAST 505 WILL PASS THROUGH A #100 MESH SIEVE AND 98% TO 100% WILL PASS THOUGH A #20 MESH SIEVE.

V. CONSTRUCTION SPECIFICATIONS

SITE PREPARATION
1. INSTALL EROSION AND SEDIMENT CONTROL STRUCTURES (EITHER TEMPORARY OR PERMANENT) SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, BERMS, WATERWAYS, OR SEDIMENTS CONTROL BASINS.
2. PERFORM ALL GRADING OPERATIONS AT RIGHT ANGLES TO THE SLOPE. FINAL GRADING AND SHAPING IS NOT USUALLY NECESSARY FOR TEMPORARY SEEDING.
3. SCHEDULE REQUIRED SOIL TESTS TO DETERMINE SOIL AMENDMENT COMPOSITION AND APPLICATION RATES FOR SITES HAVING DISTURBED AREA OVER 5 ACRES.
4. DISTRIBUTE LIME AND FERTILIZER EVENLY AND INCORPORATE THEM INTO TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.
5. WHERE THE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, SPREAD GROUND LIMESTONE AT THE RATE OF 4 TO 8 TONS PER ACRE (200 TO 400 LBS PER 1000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL.

SEEDBED PREPARATION
1. TEMPORARY SEEDING
a. SEEDBED PREPARATION MUST CONSIST OF LOOSENING SOIL TO A DEPTH OF 3 TO 5 INCHES BY MEANS OF SUITABLE AGRICULTURAL OR CONSTRUCTION EQUIPMENT, SUCH AS DISC HARROWS OR CHISEL PLOWS OR RIPPERS MOUNTED ON CONSTRUCTION EQUIPMENT. TRACK SLOPED AREAS (GREATER THAN 3:1) LEAVING THE SURFACE IN AN IRREGULAR CONDITION WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE.
b. APPLY FERTILIZER AND LIME AS PRESCRIBED ON THE PLANS.
c. INCORPORATE LIME AND FERTILIZER INTO TOP 3 TO 5 INCHES OF SOIL DISKING OR OTHER SUITABLE MEANS.

2. PERMANENT SEEDING – MAINTAIN AREAS PREVIOUSLY GRADED IN CONFORMANCE WITH THE DRAWINGS IN A TRUE AND EVEN GRADE, THEN SCARIFIED OR OTHERWISE LOOSENED TO A DEPTH OF 3 TO 5 INCHES TO PERMIT BONDING OF THE TOPSOIL TO THE SURFACE AREA AND TO CREATE HORIZONTAL EROSION CHECK SLOTS TO PREVENT TOPSOIL FROM SLIDING DOWN A SLOPE.

APPLY SOIL AMENDMENTS AS PER SOIL TEST AS INCLUDED ON THE PLANS.

MIX SOIL AMENDMENTS INTO THE TOP 3 TO 5 INCHES OF TOPSOIL BY DISKING OR OTHER SUITABLE MEANS. RAKE LAWN AREAS TO SMOOTH THE SURFACE, REMOVE LARGE OBJECTS LIKE STONES AND BRANCHES, AND READY THE AREA FOR SEED APPLICATION. WHERE SITE CONDITIONS WILL NOT PERMIT NORMAL SEEDBED PREPARATION, LOOSEN SURFACE SOIL BY DRAGGING WITH HEAVY CHAIN OR OTHER EQUIPMENT TO ROUGHEN THE SURFACE. TRACK STEEP SLOPED (STEEPER THAN 3:1) BY A DOZER LEAVING THE SOIL IN AN IRREGULAR CONDITION WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE. THE TOP 1 TO 3 INCHES OF SOIL SHOULD BE LOOSE AND FRIABLE. SEEDBED LOOSENING MAY NOT BE NECESSARY ON NEWLY DISTRIBUTED AREAS.

3. METHODS OF SEEDING – APPLY SEED UNIFORMLY WITH HYDROSEEDER (SLURRY INCLUDES SEED, FERTILIZER AND MULCH), BROADCAST OR DROP SEEDER, OR A CULTIPACKER SEEDER.
a. HYDROSEEDING
i. IF FERTILIZER IS BEING APPLIED AT THE TIME OF SEEDING, THE APPLICATION RATES WILL NOT EXCEED THE FOLLOWING: NITROGEN, MAXIMUM OF 100 LBS PER ACRE TOTAL OF SOLUBLE NITROGEN; P205 (PHOSPHOROUS), 200 LBS PER ACRE; K20 (POTASSIUM), 200 LBS PER ACRE.
ii. LIME – USE ONLY GROUND AGRICULTURE LIMESTONE, (UP TO 3 TONS PER ACRE MAY BE APPLIED BY HYDROSEEDING). NORMALLY, NOT MORE THAN 2 TONS PER ACRE ARE APPLIED BY HYDROSEEDING AT ANY ONE TIME. DO NOT USE BURNT OR HYDRATED LIME WHEN HYDROSEEDING.
iii. SEED AND FERTILIZER MUST BE MIXED ON SITE AND SEEDING MUST BE DONE IMMEDIATELY AND WITHOUT INTERRUPTION.
iv. FIBER MULCH MAY BE INCORPORATED INTO THE HYDROSEEDING MIXTURE. CONSULT SECTION 2.7 MULCHING FOR STANDARDS AND SPECIFICATIONS FOR MULCH MATERIALS.
b. DRY SEEDING – THIS INCLUDES USE OF CONVENTIONAL DROP OR BROADCAST SPREADERS.
i. INCORPORATE SEED SPREAD DRY INTO THE SUBSOIL AT THE RATES PRESCRIBED ON THE TEMPORARY OR PERMANENT SEEDING SUMMARIES OR TABLE 2.4 AND 2.7. THE SEEDED AREA MUST THEN BE ROLLED WITH A WEIGHTED ROLLER TO PROVIDE GOOD SEED TO SOIL CONTACT.
ii. WHERE PRACTICAL, APPLY SEED IN TWO DIRECTIONS PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION.
c. DRILL OR CULTIPACKER SEEDING – MECHANIZED SEEDERS THAT APPLY AND COVER SEED WITH SOIL.
i. CULTIPACKING SEEDERS ARE REQUIRED TO BURY THE SEED IN SUCH A FASHION AS TO PROVIDE AT LEAST ¼ INCHES OF SOIL COVERING. SEEDBED MUST BE FIRM AFTER PLANTING.
ii. WHERE PRACTICAL, APPLY SEED IN TWO DIRECTIONS PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION.

4. SOD INSTALLATION – DURING PERIODS OF EXCESSIVELY HIGH TEMPERATURE OR IN AREAS HAVING DRY SUBSOIL, THE SUBSOIL MUST BE LIGHTLY IRRIGATED IMMEDIATELY PRIOR TO LAYING THE SOD.
THE FIRST ROW OF SOD MUST BE LAID IN A STRAIGHT LINE WITH SUBSEQUENT ROWS PLACED PARALLEL TO TIGHTLY WEDGED AGAINST EACH OTHER. LATERAL JOINTS MUST BE STAGGERED TO PROMOTE MORE UNIFORM GROWTH AND STRENGTH. ENSURE THAT SOD D IS NOT STRETCHED OR OVERLAPPED AND ALL JOINTS ARE BUTTED TIGHT IN ORDER TO PREVENT VOIDS, WHICH WOULD CAUSE AIR DRYING OF THE ROOTS.
WHEREVER POSSIBLE, LAY SOD WITH THE LONG EDGES PARALLEL TO THE CONTOUR AND WITH STAGGERING JOINTS. ROLL AND TAMP, PEG, OR OTHERWISE SECURE SOD TO PREVENT SLIPPAGE ON SLOPED AND TO ENSURE SOLID CONTACT BETWEEN SOD ROOTS AND THE UNDERLYING SOIL SURFACE.
IMMEDIATELY WATER SOD FOLLOWING ROLLING OR TAMPING UNTIL THE UNDERSIDE OF THE NEW SOD PAD AND SOIL SURFACE BELOW THE SOD ARE THOROUGHLY WET. COMPLETE THE OPERATION OF LAYING, TAMPING AND IRRIGATING FOR ANY PIECE OF SOD WITHIN 8HOURS.

5. INCREMENTAL STABILIZATION – CUT SLOPES
DRESS, PREPARE, SEED, AND MULCH ALL CUT SLOPES AS THE WORK PROGRESSES. EXCAVATE AND STABILIZE SLOPES IN EQUAL INCREMENTS NOT TO EXCEED 15 FT.
THE CONSTRUCTION SEQUENCE IS AS FOLLOWS (REFER TO FIGURE 2.1):
a. EXCAVATE AND STABILIZE ALL TEMPORARY SWALES, SIDE DITCHES, OR BERMS THAT WILL BEUSED TO CONVEY RUNOFF FROM THE EXCAVATION.
b. PERFORM PHASE 1 EXCAVATION, DRESS, AND STABILIZE
c. PERFORM PHASE 2 EXCAVATION, DRESS, AND STABILIZE. OVERSEED PHASE 1 AREAS IF NECESSARY.
d. PERFORM FINAL EXCAVATION, DRESS, AND STABILIZE. OVERSEED PREVIOUSLY SEEDED AREAS IF NECESSARY.
NOTE: ONCE THE PLACEMENT OF FILL HAS BEGUN THE OPERATION SHOULD BE CONTINUOUS FROM GRUBBING THROUGH THE COMPLETION OF GRADING AND PLACEMENT OF TOPSOIL (IF REQUIRED AND PERMANENT SEED AND MULCH. ANY INTERRUPTIONS IN THE OPERATION OF COMPLETING THE OPERATION OUT OF THE SEEDING SEASON WILL NECESSITATE THE APPLICATION OF TEMPORARY STABILIZATION.

Chapter 2 Soil Stabilization

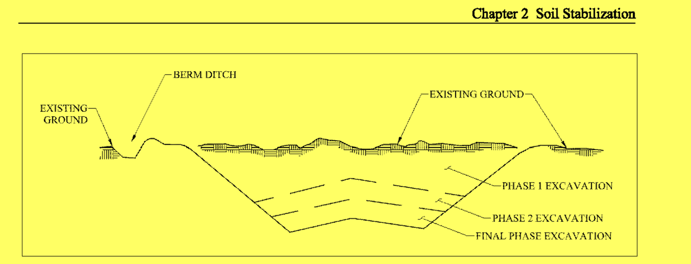

Figure 2.1 Incremental stabilization – cut.

6. INCREMENTAL STABILIZATION OF EMBANKMENTS – FILL SLOPES
CONSTRUCT EMBANKMENTS IN LIFTS AS PRESCRIBED ON THE PLANS.
IMMEDIATELY STABILIZE SLOPES WHEN THE VERTICAL HEIGHT OF THE MULTIPLE LIFTS REACHES 15 FT, OR WHEN THE GRADING OPERATION CEASES AS PRESCRIBED IN THE PLANS.
AT THE END OF EACH DAY, CONSTRUCT TEMPORARY BERMS AND PIPE SLOPE DRAINS ALONG THE TOP EDGE OF THE EMBANKMENT TO INTERCEPT SURFACE RUNOFF AND CONVEY IT DOWN THE SLOPE IN A NON-EROSIVE MANNER TO A SEDIMENT TRAPPING DEVICE.
THE CONSTRUCTION SEQUENCE IS AS FOLLOWS (REFER TO FIGURE 2.2):
a. EXCAVATE AND STABILIZE ALL TEMPORARY SWALES, SIDE DITCHES, OR BERMS THAT WILL BE USED TO DIVERT RUNOFF AROUND THE FILL. CONSTRUCT SLOPE SILT FENCE ON LOW SIDE OF FILL AS SHOWN IN FIGURE 2.2, UNLESS OTHER METHODS SHOWN ON THE PLANS ADDRESS THIS AREA.
b. PLACE PHASE 1 EMBANKMENT, DRESS AND STABILIZE.
c. PLACE PHASE 2 EMBANKMENT, DRESS AND STABILIZE.
PLACE FINAL PHASE EMBANKMENT, DRESS AND STABILIZE. OVERSEED PREVIOUSLY SEEDED AREAS AS NECESSARY.
NOTE: ONCE THE PLACEMENT OF FILL HAS BEGUN THE OPERATION SHOULD BE CONTINUOUS FROM GRUBBING THROUGH THE COMPLETION OF GRADING PLACEMENT OF TOPSOIL (IF REQUIRED) AND PERMANENT SEED AND MULCH. ANY INTERRUPTIONS IN THE OPERATION OR COMPLETING THE OPERATION OUT OF THE SEEDING SEASON WILL NECESSITATE THE APPLICATION OF TEMPORARY STABILIZATION.

Chapter 2 Soil Stabilization

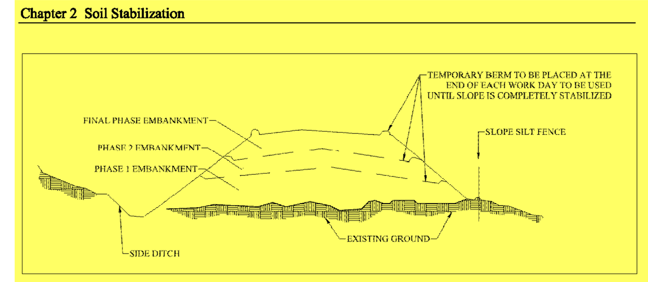

Figure 2.2 Incremental stabilization – fill.

VI. MAINTENANCE

GRASS MAINTENANCE
1. INSPECT ALL SEEDED AREAS FOR FAILURE AND MAKE NECESSARY REPAIRS, REPLACEMENTS, AND RESEEDINGS WITHIN THE PLANNING SEASON,
2. ONCE THE VEGETATION IS ESTABLISHED, THE SITE MUST HAVE 95% GROUND COVER TO BE CONSIDERED ADEQUATELY STABILIZED.
3. IF THE STAND PROVIDES BETWEEN 40% GROUND COVERAGE, REESTABLISH FOLLOWING ORIGINAL LIME, FERTILIZER, SEEDBED PREPARATION AND SEEDING RECOMMENDATION.
4. IF THE STAND PROVIDES BETWEEN 40% AND 94% GROUND COVERAGE, OVERSEEDING AND FERTILIZING USING HALF OF THE RATES ORIGINALLY APPLIED MAY BE NECESSARY
5. MAINTENANCE FERTILIZER RATES FOR PERMANENT SEEDINGS ARE SHOWN IN TABLE 2.9.

Table 2.9 Maintenance Fertilization for Permanent Seeding

Seeding Mixture	Type	Seeding Rate lb/ac	Seeding Rate lb/1,000 ft²	Time	Mowing
Tall fescue makes up 70% or more of cover.	10-10-10	500	11.5	Yearly or as needed.	Not closer than 3 inches, if occasional mowing is desired.
	30-10-10	400	9.2	Fall	
Birdsfoot trefoil.	0-20-0	400	9.2	Spring, the year following establishment, and every 4 to 5 years, after.	Mow no closer than 2 inches.
Fairly uniform stand of tall fescue or birdsfoot trefoil.	5-10-10	500	11.5	Fall, the year following establishment, and every 4 to 5 years, after.	Not required, no closer than 4 inches in the fall after seed has matured.
Weeping lovegrass fairly uniform plant distribution.	5-10-10	500	11.5	Spring, the year following establishment, and every 3 to 4 years, after.	Not required, not closer than 4 inches in fall after seed has matured.
Red & chewings fescue, Kentucky bluegrass, hard fescue mixtures.	20-10-10	250	5.8	September, 30 days later.	Mow no closer than 2 inches for red fescue and Kentucky bluegrass, 3 inches for fescue.
		100	2.3	December, May 20, June 30, if needed.	
Red & chewings fescue, Kentucky bluegrass, hard fescue mixtures.	20-10-10	250	5.8	September, 30 days later.	Mow no closer than 2 inches for red fescue and Kentucky bluegrass, 3 inches for fescue.
		100	2.3	December, May 20, June 30, if needed.	

SOD MAINTENANCE
1. IN THE ABSENCE OF ADEQUATE RAINFALL, PERFORM WATERING DAILY OR AS OFTEN AS NECESSARY DURING THE FIRST WEEK AND IN SUFFICIENT QUANTITIES TO MAINTAIN MOIST SOIL TO A DEPTH OF 4 INCHES. WATER DURING THE HEAT OF THE DAY TO PREVENT WILTING.
2. AFTER THE FIRST WEEK, SOD WATERING IS REQUIRED AS NECESSARY TO MAINTAIN ADEQUATE MOISTURE CONTENT.
3. DO NOT ATTEMPT THE FIRST MOWING OF SOD UNTIL THE SOD IS FIRMLY ROOTED. DO NOT REMOVE MORE THAN A THIRD OF THE GRASS LEAF BY THE INITIAL CUTTING OR SUBSEQUENT CUTTINGS. MAINTAIN GRASS HEIGHT BETWEEN 2 AND 3 INCHES UNLESS OTHERWISE SPECIFIED.

VIKA CAPITOL
ENGINEERS ★ PLANNERS ★ LANDSCAPE ARCHITECTS ★ SURVEYORS ★ GEOMATICS
PROJECT COORDINATOR: BRIAN RUHL
ruhl@vikacapitol.com
★ VIKA CAPITOL, LLC ★ 4910 MASSACHUSETTS AVENUE, NW SUITE 16 ★
★ WASHINGTON, DC 20016 ★ PHONE: 202.244.4140 ★
★ W W W . V I K A C A P I T O L . C O M ★

MARET SCHOOL
PROPOSED ATHLETIC FIELDS
SQUARE 2319, LOT 832
5901 UTAH AVE NW
WASHINGTON, D.C. 20015

SEDIMENT AND EROSION CONTROL NOTES AND DETAILS

VIKA CAPITOL REVISIONS

#	DATE	DESCRIPTION

**NOTE
THE INFORMATION, DESIGN AND CONTENT OF THE DRAWINGS OR DOCUMENTS ATTACHED HERETO ARE PROPRIETARY TO VIKA CAPITOL, LLC AND CONSTITUTE ITS PROPRIETARY INTELLECTUAL PROPERTY. THE ATTACHED DRAWINGS AND/OR DOCUMENTS MUST NOT BE FORWARDED, SHARED, COPIED, DIGITALLY CONVERTED, MODIFIED, OR USED FOR ANY PURPOSE, IN ANY FORMAT, WITHOUT PRIOR WRITTEN AUTHORIZATION FROM VIKA CAPITOL, LLC. VIOLATIONS MAY RESULT IN PROSECUTION. ONLY APPROVED, SIGNED AND SEALED PLANS OR DRAWINGS MAY BE UTILIZED FOR CONSTRUCTION PURPOSES.

DISTRICT OF COLUMBIA ★ KYLE U. OLIVER ★ PE900770 ★ CIVIL ★ PROFESSIONAL ENGINEER 3/17/2023

DATE: 23-FEB-2023
DES. KUO DWN. BJR
SCALE: AS SHOWN
PROJECT/FILE NO. VC0626D
SHEET NO. CIV0820

Board of Zoning Adjustment
District of Columbia
CASE NO.21100
EXHIBIT NO.23L