

**GENERAL NOTES FOR PROJECT SEEDING**

SUBMITTALS

PRODUCT DATA: FOR EACH TYPE OF PRODUCT INDICATED.

CERTIFICATION OF GRASS SEED: FROM SEED VENDOR FOR EACH GRASS-SEED MIXTURE STATING THE BOTANICAL AND COMMON NAME AND PERCENTAGE BY WEIGHT OF EACH SPECIES AND VARIETY, AND PERCENTAGE OF PURITY, GERMINATION, AND WEED SEED. INCLUDE THE YEAR OF PRODUCTION AND DATE OF PACKAGING.

PRODUCT CERTIFICATES: FOR SOIL AMENDMENTS, SIGNED BY PRODUCT MANUFACTURER.

MATERIAL TEST REPORTS: FOR EXISTING SURFACE SOIL AND IMPORTED TOPSOIL.

PLANTING SCHEDULE: INDICATING ANTICIPATED PLANTING DATES FOR SEED INSTALLATION.

QUALITY ASSURANCE

INSTALLER QUALIFICATIONS: A QUALIFIED LANDSCAPE INSTALLER WHO'S WORK HAS RESULTED IN SUCCESSFUL NATIVE GRASS ESTABLISHMENT.

INSTALLER'S FIELD SUPERVISION: REQUIRE INSTALLER TO MAINTAIN AN EXPERIENCED SUPERVISOR ON PROJECT SITE WHEN PLANTING IS IN PROGRESS.

DELIVERY, STORAGE, AND HANDLING

SEED: DELIVER SEED IN ORIGINAL SEALED, LABELED, AND UNDAMAGED CONTAINERS.

NATIVE GRASS ESTABLISHMENT & MAINTENANCE

BEGIN MAINTENANCE IMMEDIATELY AFTER EACH AREA IS PLANTED AND CONTINUE UNTIL ACCEPTABLE STAND IS ESTABLISHED, BUT FOR NOT LESS THAN THROUGH ONE COMPLETE GROWING SEASON AND A LATE WINTER MOWING THE FOLLOWING YEAR.

CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE FOR ONE FULL GROWING SEASON (APRIL 15TH THROUGH OCTOBER 15TH) AFTER SUBSTANTIAL COMPLETION

MOWING SHALL NOT OCCUR AFTER AUGUST 1ST OF THE FIRST GROWING SEASON.

AT THE BEGINNING OF THE FOLLOWING SEASON (MARCH 1 - APRIL), THE NATIVES SHALL BE MOWN TO THE GROUND.

ONCE SOIL TEMPERATURES REACH 60 DEGREES GERMINATION SHOULD BEGIN TO OCCUR. PLANTINGS SHALL BE KEPT MOIST DURING EARLY STAGES OF DEVELOPMENT. A LIGHT WATERING 3 OR 4 TIMES A WEEK WILL ENSURE OPTIMUM GERMINATION. A CRITICAL POINT FOR SEEDLINGS IS ABOUT 2 WEEKS AFTER EMERGENCE. IF HOT, DRY CONDITIONS PERSIST, PROVIDE SUPPLEMENTAL WATERING. DO NOT OVER WATER AS THIS CAN PROMOTE WEEDS AND DISEASE.

MAINTAIN AND ESTABLISH NATIVES BY, WEEDING, MOWING, REPLANTING, AND OTHER OPERATIONS. REGRADE, PREP, AND REPLANT BARE OR ERODED AREAS TO PRODUCE A UNIFORM STAND.

WEED CONTROL THE FIRST TWO YEARS IS ESSENTIAL. WEED COMPETITION IS THE NUMBER ONE CAUSE OF FAILURE. MOW BROADLEAF WEEDS AND ALL AREAS WITH WEED COMPETITION WHEN WEED HEIGHTS REACH 8 INCHES OR SOONER AS NEEDED TO PREVENT ANNUAL GRASS SEED PRODUCTION. DO NOT SCALP GROUND OR MOW SHORTER THAN 3 INCHES. MINIMUM MOW HEIGHT SHALL BE 3 INCHES. MOW REGULARLY THE FIRST YEAR TO COMPLY WITH DEFINED CRITERIA ABOVE. EARLY SPRING MOWING DURING THE FIRST TWO YEARS OF ESTABLISHMENT IS MOST CRITICAL.

NATIVE GRASS SEED MIX

<b>DRAINAGE SWALE PLANT MIX</b>	
COMMON NAME	BOTANICAL NAME
WET PRAIRIE MIX	
BIG BLUESTEM	ANDROPOGON GERARDII
BUR MARIGOLD	BIDENS ARISTOSA
SHORTBREAK SEDGE	CAREX BREVIOR
FOX SEDGE	CAREX VULPINOIDEA
BAND COREOPSIS	COREOPSIS LANCEOLATA
VIRGINIA WILD RYE	ELYMUS VIRGINICUS
BONESET	EUPATORIUM PERFOLIATUM
PRAIRIE BLAZING STAR	LIATRIS PCHONOSTACHYA
BEE BALM	MONARDA FISTULOSA
SWITCHGRASS	PANICUM VIRGATUM
GREY HEADED CONEFLOWER	RATIBA PINNATA
BLACK EYED SUSAN	RUDBECKIA HIRTA
SWEET BLACK EYED SUSAN	RUDBECKIA SUBTOMENTOSA
INDIAN GRASS	SORGHASTRUM NUTANS
PRAIRIE CORDGRASS	SPARTINA PECTINATA
NEW ENGLAND ASTER	SYMPHYOTRICHUM NOVAE-ANGLIAE
BLUE VERVAIN	VERBENA HASTATA

OBTAIN SEED MIX FROM APPLIED ECOLOGICAL SERVICES, INC. (AES) - TEL. (785) 842-3300. DRILL AT A DEPTH OF 1/4 INCH. SEEDING RATES: ALL SEED SHOULD BE PLACED AT A UNIFORM RATE OVER THE DELINEATED AREA SPECIFIED AT THE SPECIFIED RATE ACCORDING TO THE DIRECTIONS OF THE SEED SUPPLIER AT A MINIMUM OF 40LBS PER ACRE FOR GRASSES AND 20LBS PER ACRE FOR WILDFLOWERS.

NATIVE GRASS SEED MIX (CONT.)

PROTECT STRUCTURES, UTILITIES, SIDEWALKS, PAVEMENTS, AND OTHER FACILITIES, TREES, SHRUBS, AND PLANTINGS FROM DAMAGE CAUSED BY PLANTING OPERATIONS.

PROVIDE EROSION-CONTROL MEASURES TO PREVENT EROSION OR DISPLACEMENT OF SOILS AND DISCHARGE OF SOIL-BEARING WATER RUNOFF OR AIRBORNE DUST TO ADJACENT PROPERTIES AND WALKWAYS.

BROADCAST AND RAKE INTO BARE SOILS IN AREAS INACCESSIBLE TO A DRILL. IT IS SUGGESTED THAT THE CONTRACTOR WATER IN NEWLY PLANTED AREAS THAT ARE BROADCAST FOR BEST RESULTS IN ENSURING A GOOD STAND, IF RAINFALL DOESN'T OCCUR WITHIN 2 WEEKS AFTER SEEDING. TEMPORARY WATERING IS CONSIDERED SUBSIDIARY TO PROJECT.

PLANT SEED BETWEEN MARCH 25TH AND APRIL 10TH (PREFERRED) BETWEEN FEBRUARY 15TH AND MAY 1ST (ACCEPTABLE).

PLANTING ACCESSORIES

HERBICIDES: EPA REGISTERED AND APPROVED, OF TYPE RECOMMENDED BY MANUFACTURER FOR APPLICATION. HERBICIDES ARE NOT RECOMMENDED. IF NECESSARY HERBICIDES MAY BE APPLIED USING A WICK APPLICATOR.

EXAMINATION

EXAMINE AREAS TO RECEIVE NATIVE GRASS FOR COMPLIANCE WITH REQUIREMENTS AND OTHER CONDITIONS AFFECTING PERFORMANCE. PROCEED WITH INSTALLATION ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.

PREPARATION

PROTECT STRUCTURES, UTILITIES, SIDEWALKS, PAVEMENTS, AND OTHER FACILITIES, TREES, SHRUBS, AND PLANTINGS FROM DAMAGE CAUSED BY PLANTING OPERATIONS.

PROVIDE EROSION-CONTROL MEASURES TO PREVENT EROSION OR DISPLACEMENT OF SOILS AND DISCHARGE OF SOIL-BEARING WATER RUNOFF OR AIRBORNE DUST TO ADJACENT PROPERTIES AND WALKWAYS.

UNLESS NO-TILL DRILLING INTO AN APPROVED COVER CROP ELIMINATE COMPETING GRASS VEGETATION IN ALL AREAS TO BE IMPROVED WITH "ROUNDUP" OR AN APPROVED EQUAL ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS. SEVERAL APPLICATIONS MAY BE NECESSARY. WORK TO REMOVE COMPETING VEGETATION, PARTICULARLY BERMUDA GRASS, SHALL BEGIN SEVERAL MONTHS BEFORE SEEDING OPERATIONS COMMENCE.

TEMPORARY COVER CROP:

A TEMPORARY COVER CROP SHALL BE PLANTED ON ALL DISTURBED AREAS WITHIN 20 DAYS OF NO ACTIVITY. TEMPORARY COVER CROPS SHALL ONLY BE PLANTED WHEN THE SEEDING DATES ARE OUTSIDE OF THE NATIVE GRASS ACCEPTABLE PLANTING DATE PERIOD. THE TEMPORARY COVER CROP SHALL BE ESTABLISHED WITH "REGREEN" STERILE WHEAT (OR APPROVED EQUAL) AT 30LBS PER ACRE OR APPROVED EQUAL.

NATIVE GRASS SEEDBED PREPARATION (BARE SOIL)

LIMIT SEED PREPARATION TO AREAS TO BE PLANTED.

DETERMINE THROUGH SOIL TESTING THAT LONG-RESIDUAL HERBICIDES ARE NOT PRESENT IN THE SOIL. PRESENT FINDINGS TO THE OWNER'S REPRESENTATIVE BEFORE PROCEEDING. RESIDUAL HERBICIDES COULD RESULT IN SEEDLING DAMAGE.

PREPARE SURFACE SOIL AS FOLLOWS:

1. REMOVE EXISTING GRASS, VEGETATION, AND TURF. DO NOT MIX INTO SURFACE SOIL.
2. LOOSEN SURFACE SOIL TO A DEPTH OF AT LEAST OF 6 INCHES. TILL SOIL TO A HOMOGENEOUS MIXTURE OF FINE TEXTURE.
3. REMOVE STONES LARGER THAN 1 INCH IN ANY DIMENSION AND STICKS, ROOTS, TRASH, AND OTHER EXTRANEIOUS MATTER.
4. LEGALLY DISPOSE OF WASTE MATERIAL, INCLUDING GRASS, VEGETATION, AND TURF, OFF OWNER'S PROPERTY.

A FIRM WEED-FREE SEEDBED IS PREFERRED.

FINISH GRADING: GRADE PLANTING AREAS TO A SMOOTH, UNIFORM SURFACE PLANE WITH LOOSE, UNIFORMLY FINE TEXTURE. GRADE TO WITHIN PLUS OR MINUS 2 INCHES OF FINISH ELEVATION. ROLL AND RAKE, REMOVE RIDGES, AND FILL DEPRESSIONS TO MEET FINISH GRADES. LIMIT FINE GRADING TO AREAS THAT CAN BE PLANTED IN THE IMMEDIATE FUTURE.

RESTORE AREAS IF ERODED OR OTHERWISE DISTURBED AFTER FINISH GRADING AND BEFORE PLANTING.

DRILL NATIVE SEED INTO EXISTING COVER CROP AT SPECIFIED RATES. USE A DRILL SPECIFICALLY SUITED FOR FLUFFY NATIVE SEED. USE A NATIVE GRASS DRILL WITH A PACKER WHEELS OR A CULTIPACKER ROLLER BEHIND THEM TO FIRM THE SOIL AFTER THE SEED IS PLANTED. A CONVENTIONAL DRILL WILL NOT WORK AND SHOULD NOT BE USED.

1. SEEDING DEPTH SHOULD BE 1/4 INCH.
2. A LAWN STARTER FERTILIZER SHOULD BE APPLIED AT THE MANUFACTURER'S RECOMMENDED RATE.
3. APPLY PRAIRIE HAY MULCH IMMEDIATELY AFTER DRILLING/BROADCASTING AT 2 TONS/ACRE. ANCHOR MULCH BY CRIMPING INTO TOPSOIL WITH SUITABLE MECHANICAL EQUIPMENT.

NATIVE GRASS ESTABLISHMENT (NO-TILL INTO EXISTING COVER CROP)

LIMIT SEED PREPARATION TO AREAS TO BE PLANTED. SEEDBED GRADES SHOULD CONFORM TO CRITERIA IN SECTION ABOVE IN ORDER TO UTILIZE THIS METHOD.

MOW ANNUAL RYE COVER CROP DURING PREVIOUS GROWING SEASON TO ENSURE NO SEED IS PRODUCED THAT WILL GERMINATE THE FOLLOWING SEASON AND COMPETE WITH NATIVE SEEDING.

APPROVED SHORT-TERM HERBICIDES MAY BE USED IF WEED GROWTH BEGINS BEFORE SEEDING

MOW EXCESS COVER CROP (4 INCHES HIGH IF ANNUAL RYE) (12-18 INCHES HIGH IF COVER CROP IS A GRAIN SORGHUM OF SOME TYPE)

1. A MINIMUM OF 14 DAYS BEFORE PLANTING THE PERMANENT NATIVE AND WILDFLOWER SEED APPLY ROUND-UP HERBICIDE TO THE ANNUAL RYE (COOL SEASON GRASS) COVER CROP. WAIT AS NECESSARY FOR THE RYE TO BE GREENED UP BEFORE SPRAYING TO GET A GOOD KILL SO THAT IT POSES NO COMPETITION TO THE PERMANENT SEED BY COMPETING FOR MOISTURE AND NUTRIENTS.

NO-TILL DRILL NATIVE SEED INTO EXISTING COVER CROP AT SPECIFIED RATES. USE A NO-TILL DRILL SPECIFICALLY SUITED FOR FLUFFY NATIVE SEED. USE A NATIVE GRASS NO-TILL DRILL WITH A PACKER WHEELS OR A CULTIPACKER ROLLER BEHIND THEM TO FIRM THE SOIL AFTER THE SEED IS PLANTED. A CONVENTIONAL DRILL WILL NOT WORK AND SHOULD NOT BE USED.

1. SEEDING DEPTH SHOULD BE 1/4 INCH.
2. A LAWN STARTER FERTILIZER SHOULD BE APPLIED AT THE MANUFACTURER'S RECOMMENDED RATE.

MULCHING

ALL AREAS DESIGNATED SHALL BE IMMEDIATELY MULCHED WITH PRAIRIE HAY AT A RATE OF 2 TONS/ACRE. ALL MULCH SHALL BE ANCHORED BY CRIMPING INTO TOPSOIL WITH SUITABLE MECHANICAL EQUIPMENT. ANCHORING OF MULCH SHALL BE SUFFICIENT TO PREVENT BLOWING OR WASHING OF MATERIAL PLACED.

SATISFACTORY NATIVES STAND

SATISFACTORY NATIVE STANDS: WITHIN ONE FULL GROWING SEASON AND AT END OF THE MAINTENANCE PERIOD, A HEALTHY, WELL-ROOTED, VIABLE NATIVE STAND HAS BEEN ESTABLISHED, FREE OF BARE AREAS GREATER THAN TWO SQUARE FEET IN SIZE AND AREAS FAILING TO ACHIEVE 85% COVERAGE.

REESTABLISH NATIVE STANDS THAT DO NOT COMPLY WITH REQUIREMENTS AND CONTINUE MAINTENANCE UNTIL NATIVE STANDS ARE SATISFACTORY.

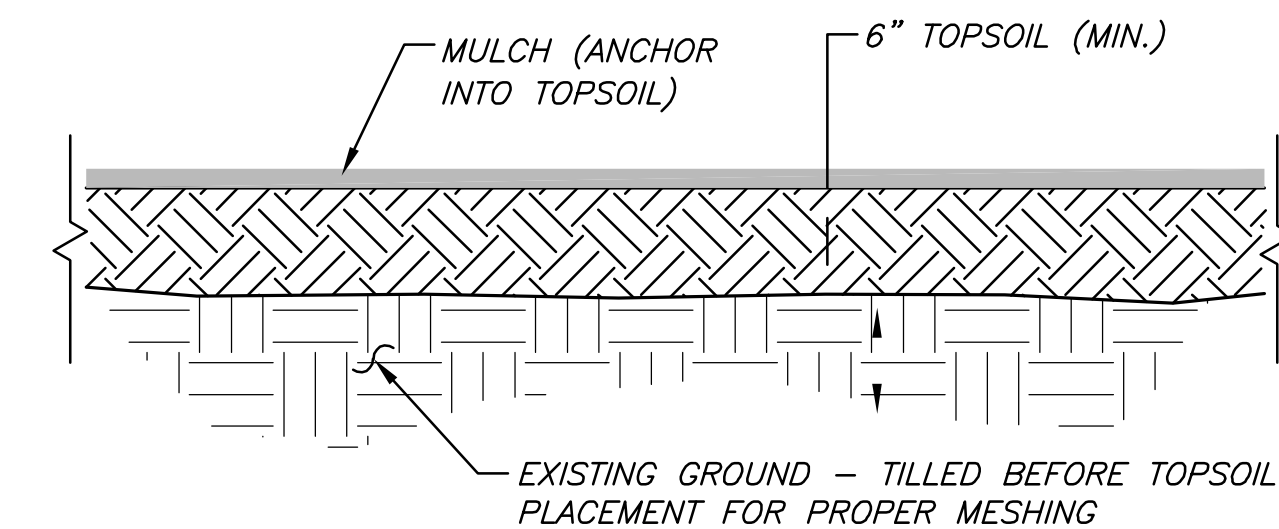
CLEANUP AND PROTECTION

PROMPTLY REMOVE SOIL AND DEBRIS CREATED BY LAWN WORK FROM PAVED AREAS. CLEAN WHEELS OF VEHICLES BEFORE LEAVING SITE TO AVOID TRACKING SOIL ONTO ROADS, WALKS, OR OTHER PAVED AREAS.

ERECT BARRICADES AND WARNING SIGNS AS REQUIRED TO PROTECT NEWLY PLANTED AREAS FROM TRAFFIC. MAINTAIN BARRICADES THROUGHOUT MAINTENANCE PERIOD AND REMOVE AFTER LAWN IS ESTABLISHED.

TOPSOIL REQUIREMENTS

TOPSOIL MATERIAL SHALL BE CLAY LOAM AS SPECIFIED BY THE U.S. DEPARTMENT OF AGRICULTURE, WITH 20%-30% CLAY CONTENT. THE CONTRACTOR SHALL PROVIDE INDEPENDENT TEST REPORTS FOR ALL TOPSOIL MATERIAL IMPORTED, WITH A MINIMUM OF FIVE (5) INDIVIDUAL TESTS PERFORMED INCREMENTALLY THROUGHOUT THE TOTAL QUANTITY IMPORTED. EACH LOAD OF TOPSOIL DELIVERED TO THE PROJECT SITE SHALL BE ACCOMPANIED BY BATCH TICKETS SHOWING COMPLIANCE WITH PROJECT SPECIFICATIONS.



**TYPICAL FILL SECTION**

**PROJECT SEEDING  
GENERAL NOTES**

SHEET TITLE  
468-84771  
PROJECT NUMBER

DFL / DM / GJA  
DESIGNED / DRAWN / CHECKED

ISSUED  
August 2011

REVISED

SHEET NO.