

SECTION 02920 - SODDING AND SEEDING

1. DESCRIPTION

- A. FURNISH ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, AND SERVICES FOR ALL SODDING AND/OR SEEDING WITHIN DISTURBED AREAS, IN ACCORDANCE WITH THE PROVISIONS OF THE CONTRACT DOCUMENTS.
- B. COMPLETELY COORDINATE WITH WORK OF ALL OTHER TRADES.
- C. LOCATION OF WORK
 - 1. ESTABLISH LAWNS BY SODDING ON ALL DISTURBED AREAS, AS INDICATED ON THE CONSTRUCTION PLANS, WHICH ARE NOT OCCUPIED BY OTHER PLANTING OR CONSTRUCTION.
 - 2. ALL DISTURBED AREAS NOT INDICATED TO BE SODDED ON THE CONSTRUCTION PLANS SHALL BE SEEDED AND MULCHED.
 - 3. EXISTING SODDED AREAS WHICH ARE DISTURBED DURING CONSTRUCTION SHALL BE RE-SODDED TO MATCH EXISTING.

2. QUALITY ASSURANCE

- A. ALL SEED USED SHALL BE LABELED IN ACCORDANCE WITH U.S. DEPARTMENT OF AGRICULTURE RULES AND REGULATIONS UNDER THE FEDERAL SEED ACT IN EFFECT ON THE DATE OF INVITATION FOR BIDS. ALL SEED SHALL BE FURNISHED IN SEALED STANDARD CONTAINERS, UNLESS EXCEPTION IS GRANTED IN WRITING BY THE OWNER. SEED WHICH HAS BECOME WET, MOLDY, OR OTHERWISE DAMAGED IN TRANSIT OR IN STORAGE SHALL NOT BE USED.
- B. FERTILIZER SHALL BE DELIVERED TO THE SITE IN THE ORIGINAL, UNOPENED CONTAINERS, EACH BEARING THE MANUFACTURER'S GUARANTEED ANALYSIS. ANY FERTILIZER WHICH BECOMES CAKE OR OTHERWISE DAMAGED, MAKING IT UNSUITABLE FOR USE, SHALL NOT BE USED.
- C. SOD, SEED, FERTILIZER AND OTHER GRASSING MATERIALS SHALL BE STORED UNDER COVER AND PROTECTED FROM DAMAGE WHICH WOULD MAKE THEN UNACCEPTABLE FOR USE.

3. SUBMITTALS

- A. CERTIFICATES FOR SOD AND SEED STATING BOTANICAL AND COMMON NAMES AND PERCENTAGES OF EACH SPECIES PERCENTAGE OF EACH SPECIES PERCENTAGE OF PURITY. CERTIFICATE OF QUALITY.
- B. GUARANTEE.

4. **MATERIALS**

- A. TOPSOIL: IF THE QUANTITY OF EXISTING STORED OR EXCAVATED TOPSOIL IS INADEQUATE FOR PLANTING, SUFFICIENT ADDITIONAL TOPSOIL SHALL BE FURNISHED. TOPSOIL FURNISHED SHALL BE A NATURAL, FERTILE, FRIABLE SOIL, POSSESSING CHARACTERISTICS OF REPRESENTATIVE PRODUCTIVE SOILS IN THE VICINITY. IT SHALL BE OBTAINED FROM NATURALLY WELL-DRAINED AREAS. TOPSOIL SHALL BE WITHOUT ADMIXTURE OF SUBSOIL AND FREE FROM JOHNSON GRASS (SORGHUM HALEPENSE), NUT GRASS (CYPERUS ROTUNDUS) AND OBJECTIONABLE WEEDS AND TOXIC SUBSTANCES
- B. SOIL AMENDMENTS
1. LIME: GROUND LIMESTONE (DOLOMITE) SHALL CONTAIN NOT LESS THAN 85 PERCENT OF TOTAL CARBONATES, AND SHALL BE GROUND TO SUCH A FINENESS THAT 50 PERCENT WILL PASS A 100-MESH SIEVE AND 90 PERCENT WILL PASS A 20-MESH SIEVE.
 2. FERTILIZER: FERTILIZER SHALL BE 16-16-16 FORMULATION. THE NITROGEN SHALL BE 60% UREA-FORMALDEHYDE FORM. FERTILIZER SHALL CONFORM TO THE APPLICABLE STATE FERTILIZER LAWS AND SHALL BE GRANULATED SO THAT 80 PERCENT IS HELD ON A 16-MESH SCREEN, UNIFORM IN COMPOSITION, DRY AND FREE-FLOWING.
 3. MULCH: CLEAN HAY OR FRESH STRAW MULCH.
- C. SOD: THE SOD SHALL BE CENTIPEDE. THE SOD SHALL BE LIVE, FRESH, AND UNINJURED AT THE TIME OF PLANTING AND SHALL HAVE A THICK MAT OF ROOTS WITH ENOUGH ADHERING SOIL TO ASSURE GROWTH. APPLY SOD WITHIN 48 HOURS OF CUTTING OR STACK AND KEEP MOIST. DO NOT PLANT DORMANT SOD OR IF GROUND IS FROZEN. RYE GRASS OF ANY OTHER SEEDS ARE NOT TO BE USED TO OVERCAST OR REPAIR SOD.
- D. GRASS SEED
1. SEED SHALL MEET FEDERAL SPECIFICATIONS JJJ-S-18 AND SHALL SATISFY THE FOLLOWING REQUIREMENTS:

<u>SEED</u>	<u>PURE SEED</u>	<u>HARD SEED</u>	<u>WEED SEED</u>
PENSACOLA BAHIA	85%	15%	0.25%
(80% MIN. GERMINATION)			
 2. SEED FAILING TO MEET THE PURITY OR GERMINATION REQUIREMENTS BY NOT MORE THAN TWENTY-FIVE PERCENT MAY BE USED, BUT THE QUANTITY SHALL BE INCREASED TO YIELD THE REQUIRED RATE OF PURE LIVE SEED. SEED FAILING TO MEET THE WEED SEED REQUIREMENTS SHALL NOT BE USED.
- E. WATER: POTABLE, FREE OF SUBSTANCES HARMFUL TO GROWTH.

5. **JOB CONDITIONS**

- A. PERFORM SODDING AND SEEDING DURING CONDITIONS CONDUCTIVE TO SUCCESSFUL RESULTS.
- B. PROVIDE PROPER AND ADEQUATE PROTECTION.

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- C. DO NOT SOD OR SEED WHEN TEMPERATURE IS BELOW 32°F.
- D. DO NOT SOD OR SEED ON FROZEN OR DRIED SOIL.
- E. DO NOT SOD OR SEED IF IRRIGATION SYSTEM IS NOT OPERATIONAL.

6. SOIL PREPARATION

- A. LIMIT PREPARATION TO AREAS WHICH WILL BE PLANTED OR GRASSED SOON AFTER PREPARATION.
- B. LOOSEN SURFACE TO MINIMUM DEPTH OF 4 INCHES (100 MM).
- C. REMOVE STONES AND DEBRIS OVER 1 INCH (25 MM) IN ANY DIMENSION.
- D. SPREAD LIME UNIFORMLY OVER APPROPRIATE AREAS AT RATE OF 50 LB./1000 SF (0.23 KG/SM) AND INCORPORATE WITH TOPSOIL.
- E. DISTRIBUTE FERTILIZER UNIFORMLY OVER AREAS TO BE SEEDED AT RATE OF 30 LB./1000 SF (0.14 KG/SM).
 - 1. INCORPORATE FERTILIZER INTO SOIL TO DEPTH OF AT LEAST 2 INCHES.
- F. CLEAN SURFACE OF SUBSTANCES WHICH WILL INTERFERE WITH TURF DEVELOPMENT OR SUBSEQUENT MOWING OPERATIONS.
- G. GRADE SWALE AREAS TO SMOOTH, EVEN SURFACE WITH LOOSE, UNIFORMLY FINE TEXTURE.
 - 1. ROLL AND RAKE, REMOVE RIDGES AND FILL DEPRESSIONS, AS REQUIRED TO MEET FINISH GRADES.
 - 2. FINE GRADE JUST PRIOR TO PLANTING.
- H. RESTORE LAWN AREAS TO SPECIFIED CONDITION IF ERODED OR OTHERWISE DISTURBED BETWEEN FINE GRADING AND PLANTING.
- I. IF FERTILIZER APPLICATION RATE IS DETERMINED (BY INVOICES SUBMITTED) TO BE LESS THAN REQUIRED, APPLY ADDITIONAL FERTILIZER.

7. INSTALLATION

- A. SOD
 - 1. WITHIN 24 HOURS AFTER SOIL PREPARATION HAS BEEN COMPLETED, THE SOD SHALL BE PLACED FIRMLY AND CAREFULLY BY HAND. EACH PIECE OF SOD SHALL BE PACKED TIGHTLY AGAINST THE EDGE OF ADJACENT PIECES SO THAT THE FEWEST POSSIBLE GAPS WILL BE LEFT BETWEEN THE PIECES. UNAVOIDABLE GAPS SHALL BE CLOSED WITH SMALL PIECES OF SOD.
 - 2. SOD SHALL BE PLACED BEGINNING AT THE TOE OF THE SLOPE WITH THE LONG EDGE HORIZONTAL AND WITH STAGGERED VERTICAL JOINTS. THE EDGE OF THE SOD SHALL BE TURNED SLIGHTLY INTO THE GROUND AT THE TOP OF A SLOPE AND A LAYER OF EARTH PLACED OVER IT AND COMPACTED SO AS TO CONDUCT THE SURFACE WATER OVER AND ONTO THE TOP OF THE SOD.

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3. ON ALL SLOPES 4:1 OR STEEPER, IN DRAINAGE CHANNELS, AND ON ANY AREAS THAT ARE IN SUCH CONDITION THAT THERE IS DANGER OF SOD SLIPPING, SOD SHALL BE STAKED IN PLACE BY DRIVING STAKES FLUSH WITH THE SOD. STAKING SHALL BE DONE CONCURRENTLY WITH SOD PLACEMENT AND PRIOR TO TAMPING BY THE USE OF SOUND WOODEN STAKES APPROXIMATELY 1 INCH SQUARE OR 1 INCH IN DIAMETER AND NOT LESS THAN 12 INCHES IN LENGTH. THE NUMBER OF STAKES SHALL BE SUFFICIENT TO PREVENT SLIPPING OR DISPLACEMENT OF THE SOD. STAKES SHALL BE DRIVEN PERPENDICULAR TO THE SLOPE. WHERE BACKFILL IS NECESSARY ON CUT SLOPES TO OBTAIN A UNIFORM SODDING AREA, STAKES SHALL BE OF SUFFICIENT LENGTH TO REACH A MINIMUM OF 3 INCHES INTO THE SOLID EARTH UNDERNEATH THE BACKFILL.
4. AFTER THE SOD HAS BEEN PLACED, AND STAKED WHERE NECESSARY, IT SHALL THEN BE TAMPED CAREFULLY AND FIRMLY BY COMMONLY ACCEPTED MEANS. EXTREME CARE SHALL BE TAKEN TO PREVENT THE INSTALLED SOD FROM BEING TORN OR DISPLACED.

B. SEED

1. SHALL BE APPLIED AT THE RATE OF 6 LBS./1000 SQ. FT.
2. SEEDED AREAS SHALL BE MULCHED AT THE RATE OF NOT LESS THAN 1-1/2" LOOSE MEASUREMENT OVER ALL SEEDED AREAS. SPREAD BY HAND, BLOWER, OR OTHER SUITABLE EQUIPMENT. MULCH SHALL BE CUT INTO THE SOIL WITH EQUIPMENT CAPABLE OF CUTTING THE MULCH UNIFORMLY INTO THE SOIL. MULCHING SHALL BE DONE WITHIN 24 HOURS OF THE TIME SEEDING IS COMPLETED.
3. ROLLING: AFTER SEEDING AND MULCHING, A CULTIPACKER, TRAFFIC ROLLER, OR OTHER SUITABLE EQUIPMENT SHALL BE USED FOR ROLLING THE GRASSED AREAS. AREAS SHALL THEN BE WATERED WITH A FINE SPRAY.

8. MAINTENANCE

A. MAINTAIN LAWNS UNTIL FINAL ACCEPTANCE AFTER PLANTING.

1. WATER, FERTILIZATION, WEED, MOW, EDGE, TRIM, ROLL, RE-GRADE, REPLANT AS REQUIRED. SOD THAT IS BROWN OR SPARSELY COVERED 10 DAYS AFTER LAYING WILL NOT BE ACCEPTED AND MUST BE REPLACED.
2. ESTABLISH A SMOOTH, HEALTHY, UNIFORM, CLOSE STAND, FREE OF ERODED OR BARE AREAS, WEEDS, AND SURFACE IRREGULARITIES.

B. MOW LAWNS AS SOON AS THERE IS ENOUGH TOP GROWTH TO CUT WITH MOWER SET AT RECOMMENDED HEIGHT.

1. REPEAT MOWING AS REQUIRED TO MAINTAIN HEIGHT. BOARD WILL ASSUME MOWING AT TIME OF SOD ACCEPTANCE.
2. DO NOT MOW WHEN GRASS IS WET.
3. DO NOT MOW LOWER THAN 1 1/2".

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- C. RE-SOD, RE-SEED OR SEED BARE, DEAD, OR DYING AREAS USING SAME MATERIALS SPECIFIED.
- D. THE SCHOOL BOARD OF SANTA ROSA COUNTY RESERVES THE RIGHT TO EXCLUDE FROM FUTURE BIDS, SOD AND GRASSING SUBCONTRACTORS WHO INSTALL SPARSE OR DYING SOD AND DO NOT REPLACE IT WITHIN 10 DAYS OF NOTICE. SUBCONTRACTORS CAN ALSO BE EXCLUDED FOR FAILURE TO FOLLOW SPECIFICATIONS TO INCLUDE POOR JOINING OF SOD.

END OF SECTION