

PLANTING NOTES:

THE CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, ETC. NECESSARY TO COMPLETE ALL PLANTING AS SHOWN ON THESE DRAWINGS, AS SPECIFIED HEREIN OR IN SUPPLEMENTAL SPECIFICATIONS AND/OR AS REQUIRED BY JOB CONDITIONS. THE WORK IN GENERAL INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING:

- (1) SOIL PREPARATION;
- (2) PROVIDING TOPSOIL AND ALL SOIL AMENDMENTS;
- (3) EXCAVATION OF PLANT PITS;
- (4) PROVIDING ALL PLANT MATERIAL AND MULCH AS INDICATED ON PLANS;
- (5) FERTILIZING;
- (6) STAKING;
- (7) CHEMICAL APPLICATION;
- (8) MAINTENANCE AND GUARANTEE;
- (9) SEEDING;
- (10) SODDING;
- (11) ALL OTHER ITEMS NECESSARY TO MAKE WORK COMPLETE.

THE PLANTING CONTRACTOR IS RESPONSIBLE FOR COORDINATING WORK WITH THE IRRIGATION CONTRACTOR AND OTHER CONTRACTORS. THIS PLAN DOES NOT GUARANTEE THE EXISTENCE OR NON-EXISTENCE OF ANY UTILITIES. PRIOR TO ANY CONSTRUCTION, EXCAVATION, OR ROTO-TILLING THE CONTRACTOR SHALL ASSUME THE RESPONSIBILITY OF VERIFYING THE LOCATIONS OF ALL UTILITIES, ABOVE AND/OR BELOW GROUND, PUBLIC AND/OR PRIVATE THAT MAY EXIST AND CROSS THROUGH THE AREAS OF CONSTRUCTION. MAINTAIN GRADE STAKES SET BY OTHERS UNTIL REMOVAL IS MUTUALLY AGREED UPON BY PARTIES CONCERNED.

(1) SOIL PREPARATION

(1.1) DUE TO SOIL COMPACTION DURING CONSTRUCTION, ALL PLANTING AREAS SHALL BE ROTO-TILLED TO A DEPTH OF 18" AND 3x THE WIDTH OF THE ROOT BALL OF ANY TREE, SHRUB, OR GROUNDCOVER, OR AS DIRECTED BY THE OWNER'S REPRESENTATIVE. A PLANTING AREA IS DEFINED AS ANY AREA IN WHICH NEW PLANTING OCCURS. ROTO-TILL THE ENTIRE PLANTING AREA DEFINED ABOVE. REMOVE UNSUITABLE SOIL MATERIAL SPECIFIED IN 1.2 AND 1.3 OR AS DIRECTED BY THE OWNER OR THE OWNER'S REPRESENTATIVE.

(1.2) WHENEVER POSSIBLE, THE EXCAVATED SOIL SHOULD BE USED AS BACKFILL MATERIAL IN ORDER TO ELIMINATE OR MINIMIZE THE OCCURRENCE OF HYDROLOGIC DISCONTINUITIES, AND/OR SOIL INTERFACE PROBLEMS COMMON TO PLANTING BEDS CONTAINING SOILS OF DIFFERENT TEXTURE. IF THE TEXTURE OF THE EXISTING SOIL IS UNDESIRABLE FOR THE PLANT SPECIES BEING PLANTED (i.e. HEAVY CLAY, PURE SAND) AND WHERE THE pH OF THE EXISTING SOIL IS SUITABLE FOR THE SPECIFIED PLANT, THE SOIL SHALL BE BLENDED 66% EXISTING SOIL WITH 33% AMENDED SOIL. SEE BELOW FOR AMENDED SOIL.

(1.3) WHERE IT IS DETERMINED THAT THE EXISTING SOIL EXCAVATED IS TOTALLY UNSUITABLE FOR USE, BACKFILL MATERIAL DUE TO THE PRESENCE OF PRESENCE OF DEBRIS OR OTHER DELETERIOUS MATTER, THE BACKFILL MATERIAL SHALL BE 100% AMENDED SOIL MIXTURE AS DESCRIBED BELOW WITH THE ADDITION OF 1/2 PART SAND:

AMENDED SOIL, PLANTING SOIL FOR AMENDING BACKFILL SHALL BE 100% TOPSOIL WITH AMENDMENTS ADDED ACCORDING TO THE RECOMMENDATIONS OF THE SOILS TEST REPORT TO BRING THE pH VALUE OF THE PLANTING BACKFILL MIXTURE WITHIN THE RANGES DESCRIBED BELOW. THE TOPSOIL, AND AMENDMENTS, SHALL BE MIXED AT AN ON-SITE LOCATION. PLANTING SOIL SHALL NOT BE MIXED AT INDIVIDUAL PLANT LOCATIONS.

(2) TOPSOIL AND ALL SOIL AMENDMENTS

(2.1) NECESSARY QUANTITIES OF TOPSOIL SHALL BE SUPPLIED BY THE CONTRACTOR AND APPROVED BY THE OWNER OR HIS REPRESENTATIVE. THE CONTRACTOR SHALL APPLY TOPSOIL ONLY AFTER SECURING SOIL TEST (V.P.I.), APPLYING RECOMMENDED TREATMENT THEREOF, AND SUBMITTING FOR APPROVAL.

(2.2) ON-SITE TOPSOIL MEETING THE CONDITIONS FOR THESE NOTES MAY BE USED, OR IF INSUFFICIENT QUANTITIES ARE AVAILABLE, TOPSOIL MEETING THE FOLLOWING CRITERIA SHALL BE PROVIDED:

(2.3) ON-SITE TOPSOIL SHALL BE STOCKPILED TOPSOIL THAT HAS BEEN SALVAGED IN ACCORDANCE WITH SECTION 303.04(a) OF THE V.D.O.T. SPECIFICATIONS. IT SHALL BE FREE FROM REFUSE, OR ANY MATERIAL TOXIC TO PLANT GROWTH, AND REASONABLY FREE FROM SUBSOIL, STUMPS, RUBBISH, STONES, CLAY LUMPS, OR SIMILAR OBJECTS LARGER THAN 3" IN ANY DIMENSION.

(2.4) OFF-SITE TOPSOIL, IF NEEDED, SHALL BE TOPSOIL FURNISHED FROM SOURCES OUTSIDE THE PROJECT LIMITS AND SHALL BE THE ORIGINAL TOP LAYER OF A SOIL PROFILE FORMED UNDER NATURAL CONDITIONS, TECHNICALLY DEFINED AS THE "A" HORIZON OF THE SOIL SCIENCE SOCIETY OF AMERICA. IT SHALL CONSIST OF NATURAL, FRIABLE, LOAMY SOIL WITHOUT ADMIXTURES OF SUBSOIL, OR OTHER FOREIGN MATERIALS, AND SHALL BE REASONABLY FREE FROM STUMPS, RUBBISH, STONES, CLAY LUMPS, STONE, NOXIOUS WEEDS, BRUSH, OR OTHER LITTER. IT SHALL HAVE DEMONSTRATED BY EVIDENCE OF HEALTHY VEGETATION GROWING, OR HAVING GROWN AT IT PRIOR TO STRIPPING, THAT IT IS REASONABLY WELL DRAINED AND DOES NOT CONTAIN SUBSTANCES TOXIC TO PLANTS.

(2.4.1) "A" HORIZON: "A" HORIZON SHALL BE MINERAL HORIZONS CONSISTING OF (1) HORIZONS OR ORGANIC MATTER ACCUMULATION FORMED OR FORMING AT OR ADJACENT TO THE SURFACE, (2) HORIZONS THAT HAVE LOST CLAY, IRON, OR ALUMINUM WITH RESISTANT CONCENTRATIONS OF QUARTZ OR OTHER RESISTANT MINERALS OF SAND OR SILT SIZE, OR (3) HORIZONS DOMINATED BY 1 OR 2 ABOVE BUT TRANSITIONAL TO AN UNDERLYING B OR C.

(2.4.2) "A" HORIZON SUBDIVISIONS: AT HORIZONS SHALL BE MINERAL HORIZONS, FORMED OR FORMING AT OR ADJACENT TO THE SURFACE, IN WHICH THE FEATURE EMPHASIZED IS AN ACCUMULATION OF HUMIFIED OR ORGANIC MATTER INTIMATELY ASSOCIATED WITH THE MINERAL FRACTION. THE SOIL IS A DARK OR DARKER THAN UNDERLYING HORIZONS BECAUSE OF THE PRESENCE OF ORGANIC MATTER. THE ORGANIC MATTER IS ASSIGNED TO BE DERIVED FROM PLANT AND ANIMAL REMAINS DEPOSITED ON THE SURFACE OF THE SOIL OR DEPOSITED WITHIN THE HORIZON WITHOUT APPRECIABLE TRANSLLOCATION.

(2.4.3) "A2" HORIZONS SHALL BE MINERAL HORIZONS IN WHICH THE FEATURE EMPHASIZED IS LOSS OF CLAY, IRON OR ALUMINUM, WITH RESULTANT CONCENTRATION OF QUARTZ OR OTHER RESISTANT MINERALS IN SAND AND SILT SIZES.

(2.4.4) "A" HORIZON TOPSOIL CONTENT: "A" HORIZON TOPSOIL SHALL BE IN ACCORDANCE WITH THE FOLLOWING MATERIALS BY PERCENTAGE OF VOLUME:

SILT	42-58%
SAND	15-20%
CLAY	15-20%
ORGANIC MATERIAL	12-18%

(2.5) TOPSOIL SHALL HAVE A pH IN THE RANGE OF 5.8 TO 7.0 PRIOR TO MIXING WITH AMENDMENTS. IF THE pH IS NOT WITHIN THIS RANGE, THE pH SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE OR A DIFFERENT SOURCE OF SUPPLY SHALL BE SELECTED. TOPSOIL SHALL BE SUBJECT TO INSPECTION BY THE OWNER OR THE OWNER'S REPRESENTATIVE AT THE SOURCE OF SUPPLY AND IMMEDIATELY PRIOR TO USE IN THE PLANTING OPERATIONS.

(2.6) PLANTING SOIL AFTER AMENDING FOR DECIDUOUS PLANTS SHALL HAVE A pH VALUE BETWEEN 6.0 AND 7.0, AND FOR EVERGREEN OR SEMI-EVERGREEN PLANTS SHALL HAVE A pH VALUE BETWEEN 5.0 AND 6.0. A REPRESENTATIVE SAMPLE FROM THE EXCAVATED SOIL SHALL BE FIELD TESTED FOR pH UTILIZING A RELIABLE SOIL pH METER OR SOIL pH TEST KIT. THE pH VALUE OF THE NATURAL SOIL BACKFILL MIXTURE MAY BE AMENDED BY ADDING LIMESTONE OR ALUMINUM SULFATE AS NEEDED.

(3) EXCAVATION OF PLANT PITS

(3.1) PRIOR TO EXCAVATION OF PLANT PITS, A DIAMETER EQUAL TO TEN TIMES THE DIAMETER OF THE ROOT BALL OF THE PLANT BEING PLANTED SHALL BE DRIVEN VERTICALLY INTO THE GROUND TO A DEPTH OF 2 1/2" TO 3", ON OPPOSITE SIDES OF THE TREE, IN SUCH A MANNER AS NOT TO INJURE THE ROOT BALL OR ROOTS. STAKES FOR SUPPORTING TREES SHALL BE 2" SQUARE OR ROUND, BY 8'. THE STAKES SHOULD BE SOUND WOOD TREATED WITH A SUITABLE WOOD PRESERVATIVE. A SINGLE BURLAP LOOP SHALL BE PLACED AROUND THE TRUNK, ABOVE THE FIRST MAJOR BRANCH, AND TACKED TO ONE OF THE WOODEN STAKES. ANOTHER SINGLE BURLAP LOOP SHALL ALSO BE PLACED AROUND THE TRUNK, ABOVE THE FIRST MAJOR BRANCH, AND TACKED TO THE OTHER WOODEN STAKE. THE BURLAP SHOULD BE TAUGHT.

(3.2) IN CONTINUOUS SHRUB AND GROUND COVER BEDS, THE ROTO-TILLED PERIMETER SHOULD EXTEND TO A DISTANCE OF 5 TIMES THE DIAMETER OF A SINGLE ROOT BALL FROM THE PLANTED AREA. THE BED SHALL BE TILLED TO A DEPTH OF 18".

(3.3) PLANT PITS FOR WELL DRAINED SOILS SHALL BE DUG SO THAT THE BOTTOM OF THE ROOT BALL WILL REST ON UNDISTURBED SOIL. THE TOP OF THE ROOT BALL SHALL BE 2" ABOVE FINISHED GRADE. PLANT PIT WALLS SHALL BE SCARIFIED PRIOR TO PLANT INSTALLATION.

(3.4) PLANT PITS IN POORLY DRAINED SOILS SHALL CONTAIN TWO GRAVEL SUMPS. THE GRAVEL SUMPS SHALL BE PLACED OPPOSITE ONE ANOTHER IN THE LAYER OF UNDISTURBED SOIL AT A DISTANCE OF 3 TIMES THE DIAMETER OF THE ROOT BALL. A 1" VERTICAL PIPE SHALL BE INSTALLED AT EACH SUMP AND SHALL BE FILLED WITH GRAVEL. THE PIPE SHALL EXTEND TO A LEVEL EQUAL TO THE TOP OF THE MULCH.

(3.5) ALL AIR POCKETS SHALL BE REMOVED FROM PLANT PIT UPON BACK FILLING WITH PLANTING SOIL BY FILLING APPROXIMATELY 1/2 TO 2/3 OF THE PIT WITH PLANTING BACKFILL MATERIAL AND THEN WATERING THE BACKFILL MATERIAL TO ENSURE SETTLEMENT OF THE MATERIAL. BACKFILL MATERIAL SHALL THEN BE PLACED WITHIN THE REMAINING CAVITIES OF THE PLANT PIT AND WATERED AGAIN TO ENSURE SETTLEMENT OF THE BACKFILL MATERIAL UNDER NO CIRCUMSTANCES SHALL ANY SOIL OR BACKFILL MATERIAL BE APPLIED ABOVE THE ROOT COLLAR OF THE PLANTS.

(3.6) GROUND COVERS SHALL BE PLANTED IN BEDS HAVING A MINIMUM DEPTH OF 4" BELOW PROPOSED FINISH GRADE. PLANTS SHALL BE EVENLY SPACED AND SET TO MAINTAIN THE ORIGINAL GROWING DEPTH WHILE ALLOWING FOR A 3" TOP DRESSING OF MULCH.

(4) PLANT MATERIAL AND MULCH

(4.1) THE NAMES OF PLANTS REQUIRED UNDER THIS CONTRACT CONFORM TO THOSE GIVEN IN L.H. BAILEY'S HORTUS THIRDO, 1976 EDITION. NAMES OF VARIETIES NOT INCLUDED THEREIN CONFORM GENERALLY WITH NAMES ACCEPTED IN THE NURSERY TRADE. ALL PLANTS SHALL HAVE A HABIT OF GROWTH THAT IS NORMAL FOR THEIR SPECIES AND THEY SHALL BE SOUND, HEALTHY AND VIGOROUS, WITH WELL DEVELOPED ROOT SYSTEMS. ALL PLANT MATERIAL SHALL BE FREE FROM INSECT PESTS, PLANT DISEASES, AND INJURIES. ALL PLANTS SHALL BE HEALTHY, VIGOROUS, AND OF GOOD COLOR. ONLY DAMAGED OR BROKEN BRANCHES OF PLANT MATERIAL MAY BE PRUNED AND ANY NECESSARY PRUNING SHALL BE DONE AT THE TIME OF PLANTING. HOWEVER, UNDER NO CIRCUMSTANCES SHALL THE CENTRAL LEADER OF A PLANT BE PRUNED. BALLING AND BURLAPPING OF PLANTS SHALL FOLLOW THE CODE OF STANDARDS CURRENTLY RECOMMENDED BY THE AMERICAN STANDARD FOR NURSERY STOCK.

(4.2) ALL TAGS, STRINGS OR ANY OTHER MATERIAL ATTACHED TO THE PLANTS SHALL BE REMOVED AT THE TIME OF THE PLANTING. LATE, AT LEAST ONE TREE, SHRUB AND GROUNDCOVER OF EACH VARIETY WITH A SECURELY ATTACHED WATERPROOF TAG BEARING LEGIBLE DESIGNATION OF BOTANICAL NAME AND THE SIZE AS SPECIFIED IN THE PLANT LIST OF REQUIRED PLANTS. LABELS SHALL BE SECURELY ATTACHED TO PLANTS AND SHALL BE LEGIBLE FOR 60 DAYS AFTER DELIVERY TO THE PLANTING SITE. WIRE IDENTIFICATION TAGS SHALL NOT BE USED.

(4.3) SUBSTITUTIONS WILL BE PERMITTED ONLY UPON SUBMISSION OF PROOF THAT ANY PLANT IS NOT OBTAINABLE. ALL SUBSTITUTIONS MUST BE AUTHORIZED BY THE OWNER OR THE OWNER'S REPRESENTATIVE IN WRITING PROVIDING FOR USE OF THE NEAREST EQUIVALENT OBTAINABLE SIZE OR VARIETY OF PLANT HAVING THE SAME ESSENTIAL CHARACTERISTICS AS THE ORIGINAL VARIETY WITH AN EQUIVALENT ADJUSTMENT OF CONTRACT PRICE.

(4.4) BALLED AND BURLAPPED PLANTS (B&B) SHALL BE DUG WITH FIRM, NATURAL BALLS OF EARTH OF SUFFICIENT DIAMETER AND DEPTH TO ENCOMPASS THE FIBROUS AND FEEDING ROOT SYSTEM NECESSARY FOR FULL RECOVERY OF THE PLANT. BALLS SHALL BE PRIMARILY WRAPPED WITH BURLAP AND BOUND WITH TWINE OR CORD. BURLAP SHALL NOT BE PULLED OUT FROM UNDER BALLS DURING PLANTING OPERATIONS. BALLS WHICH CANNOT BE PLANTED IMMEDIATELY ON DELIVERY SHALL BE COVERED WITH MOIST SOIL, MULCH, OR OTHER MATERIAL TO PROVIDE PROTECTION FROM DRYING WINDS AND SUN.

(4.5) PLANTS NOTED "CONTAINER" ON THE PLANT LIST MUST BE CONTAINER GROWN WITH WELL ESTABLISHED ROOT SYSTEMS. LOOSE CONTAINERIZED PLANT MATERIAL WILL NOT BE ACCEPTED. ALL PLANTS INJURED AND PLANTS WITH ROOT BALLS BROKEN DURING TRANSPORT OR PLANTING OPERATIONS WILL BE REJECTED. BARE-ROOTED PLANTS (BR) SHALL BE PLANTED OR HEeled-IN IMMEDIATELY UPON DELIVERY. ALL PLANTS SHALL BE WATERED AS NECESSARY UNTIL PLANTED.

(4.6) NEW PLANTINGS SHALL BE LOCATED WHERE SHOWN ON THE PLAN EXCEPT WHERE OBSTRUCTIONS BELOW GROUND ARE ENCOUNTERED OR WHERE CHANGES HAVE BEEN MADE IN THE PROPOSED CONSTRUCTION. NECESSARY ADJUSTMENTS SHALL BE MADE ONLY BY THE OWNER OR THE OWNER'S REPRESENTATIVE. WHERE CHANGES ARE MADE, CARE SHALL BE EXERCISED TO HAVE PLANTING PITS DUG AND SOIL PREPARED PRIOR TO MOVING PLANTS TO THEIR RESPECTIVE LOCATIONS TO ENSURE THAT THEY WILL NOT BE UNNECESSARILY EXPOSED TO DRYING OR PHYSICAL DAMAGE.

(4.7) A LIST OF PLANTS, INCLUDING SIZES, QUANTITIES AND OTHER REQUIREMENTS, IS SHOWN ON THE DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE QUANTITIES AS SHOWN ON THE DRAWINGS. IF DISCREPANCIES OCCUR IN THE QUANTITIES SHOWN, THE PLANTING PLANS SHALL GOVERN.

(4.8) THE PLANTING CONTRACTOR WILL BE NOTIFIED BY THE GENERAL CONTRACTOR WHEN OTHER DIVISIONS OF THE WORK HAVE PROCEEDED SUFFICIENTLY TO COMMENCE WORK ON THE PLANTING OPERATION. THEREAFTER, PLANTING OPERATIONS SHALL BE CONDUCTED UNDER FAVORABLE WEATHER CONDITIONS DURING THE NEXT SEASON OR SEASONS WHICH ARE NORMAL FOR SUCH WORK. REMOVAL OF ROCK OR OTHER UNDERGROUND OBSTRUCTIONS, RELOCATIONS TO AVOID OBSTRUCTIONS, AND PROVISION OF DRAINAGE FOR PLANTING AREAS SHALL BE DONE ONLY AS APPROVED BY THE OWNER OR THE OWNER'S REPRESENTATIVE.

(4.9) ALL PLANTS SHALL BE PLANTED UPRIGHT AND FACED TO GIVE THE BEST APPEARANCE OR RELATIONSHIP TO ADJACENT STRUCTURES. ROOTS SHALL BE SPREAD IN THEIR NORMAL POSITION. ALL BROKEN OR FRAYED ROOTS SHALL BE CUT OFF CLEANLY. PLANTS WITH GROUNDING ROOTS SHALL NOT BE ACCEPTED. OVERLAP TWINE AND OTHER FASTENING MATERIAL SHALL BE CUT AND PUSHED TO THE BOTTOM OF THE PLANT PIT PRIOR TO BACKFILL MATERIAL BEING PLACED. THE PLANT SHALL NOT BE ROCKED BACK AND FORWTH TO ENTIRELY REMOVE THE WRAPPING MATERIAL. NO OTHER PRACTICE BE PERFORMED WHICH COULD CAUSE THE ROOT BALL TO BREAK APART. WHEN BURET BASKETS ARE USED ON THE ROOT BALL OF PLANTS THE WIRE SHALL BE REMOVED TO AT LEAST 12" BELOW THE TOP OF THE ROOT BALL.

(4.10) AT THE TIME OF PLANTING, AND AS MANY TIMES LATER AS SEASONAL CONDITIONS REQUIRE, EACH PLANT AND THE SOIL AROUND IT SHALL BE THOROUGHLY WATERED. CARE SHOULD BE EXERCISED WHEN WATERING TO AVOID FLOODING OF PLANTS AND BEDS, DISPLACEMENT OF MULCH MATERIAL AND EROSION OF SOIL. AVOID USE OF HIGH PRESSURE HOSES. THE CONTRACTOR SHALL MAKE AT HIS EXPENSE, WHATEVER ARRANGEMENTS MAY BE NECESSARY TO ENSURE AN ADEQUATE SUPPLY OF WATER TO MEET THE NEEDS OF THIS CONTRACT DURING INSTALLATION. THE CONTRACTOR SHALL ALSO FURNISH ALL NECESSARY HOSE, EQUIPMENT ATTACHMENTS AND ACCESSORIES FOR THE ADEQUATE WATERING OF PLANTED AREAS AS MAY BE REQUIRED UNTIL ACCEPTANCE BY THE OWNER OR THE OWNER'S REPRESENTATIVE.

(4.11) MULCH SHALL BE CLEAN, GROUND OR SHREDDED BARK OR HARDWOOD MULCH. IN PLANTING AREAS WHERE SLOPES EXCEED 3:1 AND AT DRAINAGE DISPERSION POINTS OR ALONG NATURAL WATERWAYS WHERE CONCENTRATIONS OF SURFACE WATER EMPTY FROM CULVERTS OR PAVED DITCHES, HEAVY JUTE MESH SHALL BE INSTALLED. SHREDDED HARDWOOD OR BARK MULCH SHALL HAVE BEEN COMPOSED OF AT LEAST TWO MONTHS PRIOR TO APPLICATION. FRESHLY GROUND MULCH WILL NOT BE ACCEPTED. FINELY GROUND MULCH WHICH INHIBITS DRAINAGE, ENCOURAGES WEED GROWTH OR BECOMES WATERLOGGED WILL NOT BE ACCEPTED. MULCH SHALL BE COMPOSED OF SIMILAR SIZED FRAGMENTS AND SHALL NOT CONTAIN STICKS, CONES, LEAVES, UNSHREDDED PIECES, OR OTHER DELETERIOUS MATTER. ALL AZALEA AND CAMELLIA PLANTING BEDS SHALL HAVE 1" OF FINE STRAW MULCH UNDER 2" OF BARK OR SHREDDED HARDWOOD MULCH.

(4.12) ALL PLANTS SHALL BE MULCHED IMMEDIATELY AFTER PLANTING. GROUND COVERS SHALL BE MULCHED WITH A 3" LAYER OF SHREDDED HARDWOOD OR BARK MULCH. ALL OTHER PLANTING BEDS, SHRUBS AND TREES, INCLUDING SHALL BE MULCHED WITH A 3" MINIMUM LAYER OF MULCH. THIS MULCH SHALL ENTIRELY COVER THE AREA OF THE PLANTING PIT, BED, OR EARTH BED AROUND EACH PLANT WITH THE EXCEPTION OF THE AREA IMMEDIATELY ADJACENT TO THE PLANT TRUNK OR TRUNKS. THE AREA IMMEDIATELY ADJACENT TO THE PLANT TRUNK OR TRUNKS SHALL BE LEFT FREE OF ANY MULCH.

(5) FERTILIZING

(5.1) THE FERTILIZER SHOULD BE A DRY SOLID RELEASE FORM OF FERTILIZER. IT SHOULD CONTAIN AT LEAST 25-50% WATER INSOLUBLE NITROGEN. THE FERTILIZER SELECTED SHOULD ALSO HAVE A LOW ADJUSTED SALT INDEX TO PREVENT BURNING. THE N-P-K RATIO SHOULD NOT EXCEED 3-1-2 UNLESS THE SOIL TEST REVEALS THAT ADDITIONAL LEVELS OF P AND K ARE NECESSARY.

(5.2) FOR DECIDUOUS TREES, USE OSMOCOTE (18-6-12) AT THE RATE EQUIVALENT TO 4 LBS ACTUAL N/1000 SQ FT OF ROOT ZONE AREA/YEAR. FOR EVERGREEN TREES USE 2 LBS ACTUAL N/1000 SQ FT OF ROOT ZONE AREA/YEAR.

(5.3) MIX THE FERTILIZER INTO THE BACKFILL SOIL OF THE TREE PITS. FOR SHRUB BEDS, MIX THE FERTILIZER INTO THE AREA THAT HAS BEEN ROTO-TILLED FOR THE PLANTS.

(5.4) THE FERTILIZER RATE FOR CONTINUOUS GROUND COVER AND SHRUB BEDS SHOULD BE 1/2 LBS ACTUAL N/1000 SQ FT OF ROOT ZONE AREA/YEAR. THE RATE FOR PLANTING AREAS IS FOUND BY MEASURING THE AREA CONTAINING THE MULTIPLE PLANT BEDS. USE OSMOCOTE (18-6-12) AT A RATE EQUIVALENT TO 2 LBS OF N/1000 SQ FT OF ROOT ZONE AREA. THE FERTILIZER SHOULD BE EVENLY DISTRIBUTED WITHIN THE SHRUB BED SOIL.

(5.5) ALWAYS BE SURE THAT ADEQUATE MOISTURE IS AVAILABLE WHEN FERTILIZING SO THAT THE FERTILIZER WILL BE DISSOLVED INTO THE SOIL SOLUTION FOR ROOT UPTAKE AND TO AVOID BURNING THE ROOTS.

(6) STAKING

(6.1) TREES REQUIRING SUPPORT WILL BE INDICATED IN THE COMMENTS SECTION OF THE PLANTING SCHEDULE. ALL TREES REQUIRING SUPPORT SHALL BE STAKED ACCORDING TO THE DETAILS PROVIDED.

(6.2) TWO STAKES SHALL BE REQUIRED PER TREE. THE STAKES SHALL BE DRIVEN VERTICALLY INTO THE GROUND TO A DEPTH OF 2 1/2" TO 3", ON OPPOSITE SIDES OF THE TREE, IN SUCH A MANNER AS NOT TO INJURE THE ROOT BALL OR ROOTS. STAKES FOR SUPPORTING TREES SHALL BE 2" SQUARE OR ROUND, BY 8'. THE STAKES SHOULD BE SOUND WOOD TREATED WITH A SUITABLE WOOD PRESERVATIVE. A SINGLE BURLAP LOOP SHALL BE PLACED AROUND THE TRUNK, ABOVE THE FIRST MAJOR BRANCH, AND TACKED TO ONE OF THE WOODEN STAKES. ANOTHER SINGLE BURLAP LOOP SHALL ALSO BE PLACED AROUND THE TRUNK, ABOVE THE FIRST MAJOR BRANCH, AND TACKED TO THE OTHER WOODEN STAKE. THE BURLAP SHOULD BE TAUGHT.

(6.3) WOODEN STAKES AND BURLAP TIES SHOULD BE REMOVED AFTER ONE YEAR.

(7) CHEMICAL APPLICATION

(7.1) ALL PESTICIDES SHALL BE PRODUCTS OF RECOGNIZED COMMERCIAL MANUFACTURERS, AND SHALL CONFORM TO ALL APPLICABLE FEDERAL, STATE, AND LOCAL PESTICIDE LAWS. PESTICIDES SHALL BE APPLIED WITH CALIBRATED EQUIPMENT ACCORDING TO EPA LABEL DIRECTIONS AND ALL APPLICABLE REGULATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER APPLICATION OF PESTICIDES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER APPLICATION OF PESTICIDES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER APPLICATION OF PESTICIDES.

(7.2) PESTICIDES SHOULD BE USED ONLY WHEN NECESSARY TO TREAT AN OUTBREAK OF A HARMFUL PEST OR DISEASE. THE OWNER OR THE OWNER'S REPRESENTATIVE SHALL BE NOTIFIED 24 HOURS PRIOR TO THE APPLICATION OF ANY PESTICIDE.

(8) MAINTENANCE AND GUARANTEE

(8.1) THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING HIS WORK FOR THE PERIOD OF ONE YEAR AFTER THE COMPLETION OF THE INSTALLATION PERIOD. MAINTENANCE SHALL INCLUDE WATERING, WEEDING, CULTIVATING, MULCHING, REMOVAL OF DEAD MATERIALS, RESETTLEMENT OF PLANTS TO PROPER GRADES OR UPRIGHT POSITIONS, RESTORATION OF EARTH BEDS, AND ANY OTHER NECESSARY OPERATIONS. ADEQUATE PROTECTION FOR LAWN AREAS AGAINST TRESPASSING DURING PLANTING OPERATIONS AND AGAINST DAMAGE OF ANY KIND SHALL BE PROVIDED. NOTHING IN THESE NOTES IS INTENDED TO RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY TO REPAIR EXISTING LAWN AREAS DAMAGED BY WORKMEN ENGAGED IN THE COMPLETION OF THIS PROJECT.

(8.2) INSPECTION OF THE WORK TO DETERMINE COMPLETION OF THE CONTRACT EXCLUSIVE OF THE POSSIBLE REPAIR/REPLACEMENT OF PLANTINGS, WILL BE MADE BY THE OWNER OR THE OWNER'S REPRESENTATIVE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER APPLICATION OF PESTICIDES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER APPLICATION OF PESTICIDES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER APPLICATION OF PESTICIDES.

(8.3) NURSERY STOCK SHALL BE FULLY GUARANTEED FOR ONE FULL YEAR. ALL PLANTS THAT FAIL TO MAKE NEW GROWTH FROM A DORMANT CONDITION OR THAT DIE DURING THE FIRST YEAR AFTER PLANTING SHALL BE REPLACED. ALL REPLACEMENTS SHALL CONFORM WITH THE ORIGINAL SPECIFICATIONS AS TO SIZE AND TYPE. ALL COSTS OF REPLACEMENTS SHALL BE BORNE BY THE CONTRACTOR.

(9) ALL OTHER ITEMS NECESSARY TO MAKE WORK COMPLETE

(9.1) ANY PLANT MATERIAL NOT PLANTED SHALL BE REMOVED FROM THE SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL UNUSED RUBBISH AND DEBRIS FROM THE SITE UPON COMPLETION OF HIS WORK.

(10) SEEDING

(10.1) THIS SECTION INCLUDES, BUT IS NOT LIMITED TO: TILLAGE, pH BALANCING, FERTILIZING, WATERING, SEEDING, MAINTENANCE MOVING, AND MULCHING OF ALL DISTURBED AREAS WITHIN THE CONTRACT LIMITS UNLESS NOT OCCUPIED BY STRUCTURES, PAVEMENT, BUMPS, OR PLANTING BEDS.

(10.2) QUALITY ASSURANCE: SEEDING WORK SHALL BE PERFORMED BY A SINGLE FIRM SPECIALIZING AND EXPERIENCED IN LANDSCAPE WORK.

(10.2.1) SHIP MATERIALS WITH CERTIFICATES OF INSPECTION REQUIRED BY GOVERNING AUTHORITIES. COMPLY WITH REGULATIONS APPLICABLE TO LANDSCAPE MATERIALS.

(10.2.2) TOPSOIL ANALYSIS: PROVIDE FOR THE SERVICES OF A TESTING AGENCY TO PERFORM AN ANALYSIS OF TOPSOIL TO BE USED, AND A DETERMINATION OF NUTRITIONAL REQUIREMENTS OF SOIL FOR ESTABLISHMENT OF LAWNS AS SPECIFIED BELOW.

(10.3) SUBSTANCES: SUBMIT SEED VENDOR'S CERTIFIED STATEMENT FOR EACH GRASS SEED MIXTURE REQUIRED, STATING BOTANICAL AND COMMON NAME, PERCENTAGE BY WEIGHT, AND PERCENTAGES OF PURITY, GERMINATION, AND WEED SEED FOR EACH GRASS SEED SPECIES.

(10.4) FERTILIZER, STORAGE, AND HANDLING: FERTILIZER, SOIL AMENDMENTS, AND SEED SHALL BE DELIVERED TO THE SITE IN THE ORIGINAL, UNOPENED CONTAINERS BEARING THE MANUFACTURER'S GUARANTEED ANALYSIS, NAME, TRADEMARK, AND STATEMENT OF PERFORMANCE. TO STORE AND REFRIGERATE LAWN SEED, FERTILIZER, AND SOIL AMENDMENTS MAY BE FURNISHED IN BULK WITH A MANUFACTURER'S CERTIFICATE INDICATING THE ABOVE INFORMATION ACCOMPANYING EACH DELIVERY. DURING DELIVERY, SEED, FERTILIZER, AND AMENDMENTS SHALL BE KEPT IN DRY STORAGE AWAY FROM CONTAMINANTS. PRECAUTIONS SHALL BE TAKEN TO PROTECT CONTAINERS FROM RUPTURE PRIOR TO USE.

(10.5) JOB CONDITIONS:

(10.5.1) PRIOR TO BEGINNING THE WORK OF THIS SECTION, VERIFY THAT THE SITE WORK HAS COMPLETED THE FINISH GRADING. AT THE POINT, 4" OF TOPSOIL SHALL BE IN PLACE AND ROUGH GRADE LEVELS SHALL BE AT THE FINISH GRADE LEVEL, IN ALL LANDSCAPE AREAS, INCLUDING AREAS TO BE ESTABLISHED IN TURF.

(10.5.2) PRIOR TO TOPSOIL PLACEMENT ALL AREAS TO RECEIVE TOPSOIL SHALL BE CLEARED OF ALL DEBRIS. ANY DEBRIS SHALL BE REMOVED FROM THE SITE. TO CREATE A TRANSITION ZONE BETWEEN UNDERLYING SOIL AND NEW SOIL, TOPSOIL SHALL BE PLACED IN TWO (2) 12" INCH (2") LAYERS. THE FIRST LAYER SHALL BE PLACED AND THOROUGHLY TILLED IN PRIOR TO PLACEMENT OF SECOND LAYER.

(10.5.3) THE LANDSCAPE CONTRACTOR SHALL PLACE A FOUR INCH (4") COMPACTED LAYER OF TOPSOIL OVER ALL AREAS TO BE ESTABLISHED IN TURF. THE TOPSOIL LAYER SHALL BRING ALL TURF AREAS AND SHRUB BEDS TO FINISH GRADE.

(10.5.4) DETERMINE LOCATIONS OF ALL UNDERGROUND UTILITIES AND PERFORM WORK IN A MANNER WHICH WILL AVOID DAMAGE. ALL UTILITIES ARE NOT NECESSARILY SHOWN ON DRAWINGS, AND CONTRACTOR SHALL ASSUME RESPONSIBILITY OF DETERMINING EXISTENCE, OR NON-EXISTENCE, OF ALL UTILITIES. MAINTAIN GRADE STAKES SET BY OTHERS UNTIL REMOVAL IS MUTUALLY AGREED UPON BY PARTIES CONCERNED.

(10.5.5) WHEN CONDITIONS DETRIMENTAL TO LAWN ESTABLISHMENT, GROWTH AND MAINTENANCE ARE ENCOUNTERED, SUCH AS RUBBLE FILL, ADVERSE DRAINAGE CONDITIONS OR OBSTRUCTIONS, NOTIFY THE OWNER'S REPRESENTATIVE BEFORE BEGINNING WORK.

(10.6) WARRANTY LAWNS: THE ESTABLISHMENT PERIOD FOR LAWN AREAS SHALL BE FROM THE TIME OF INSTALLATION UNTIL THE THIRD CUTTING OF AN ESTABLISHED LAWN. AN ESTABLISHED STAND SHALL BE UNIFORM IN COVERAGE AND OF THE SPECIFIED MIXTURE. NO INDIVIDUAL LAWN AREA SHALL HAVE UNACCEPTABLE PORTIONS IN EXCESS OF ONE PERCENT OF THE INDIVIDUAL LAWN AREA. ALL REPLACEMENTS SHALL BE SUBJECT TO THE WARRANTY REQUIREMENTS AS THE ORIGINAL STOCK. ANY DAMAGE DONE DURING REPLACEMENT OPERATIONS SHALL BE THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR.

(10.7) SOIL AMENDMENTS:

(10.7.1) LIME: TO pH BALANCE SOIL, NATURAL DOLOMITIC LIMESTONE CONTAINING NOT LESS THAN 95% OF TOTAL CARBONATES WITH A MINIMUM OF 30% MAGNESIUM CARBONATES, GROUND SO THAT NOT LESS THAN 90% PASSES A 20-MESH SIEVE AND NOT MORE THAN 10% PASSES A 100-MESH SIEVE.

(10.7.2) ALUMINUM SULFATE: TO pH BALANCE SOIL, COMMERCIAL GRADE IN DRY POWDER FORM.

(10.7.3) SUPERPHOSPHATE: SOLUBLE MIXTURE OF TREATED MINERALS, 20% AVAILABLE PHOSPHORIC ACID.

(10.8) FERTILIZER: GRANULAR OR PELLET FORM, HORTICULTURAL GRADE COMPLETE FORMULAS, DRY AND FREE-FLOWING, UNIFORM IN COMPOSITION, AND SUITABLE FOR APPLICATION BY APPLICABLE EQUIPMENT. THE FERTILIZER SHALL CONFORM TO THE APPLICABLE STATE FERTILIZER LAWS.

(10.9) SEED: STATE-CERTIFIED SEED OF THE LATEST SEASON'S CROP COMMON TO THE SITE LOCATION. PROVIDE FRESH, CLEAN, NEW-CROP SEED COMPLYING WITH ESTABLISHED TOLERANCE STANDARDS FOR SEED PURITY AND GERMINATION. THE U.S. DEPARTMENT OF AGRICULTURE RULES AND REGULATIONS UNDER THE LATEST EDITION OF THE FEDERAL SEED ACT. SEED SHALL BE MIXED BY THE DEALER AND SHALL BE DELIVERED TO THE SITE IN SEALED CONTAINERS WHICH SHALL BEAR THE DEALER'S GUARANTEED ANALYSIS. SEED THAT HAS BECOME WET, MOLDY, OR OTHERWISE DAMAGED WILL NOT BE ACCEPTABLE. SEEDING:

RATE: 6 LBS/1000 SF
SEEDING DATES: 4/1-5/31 OR 8/16-12/30

MIXTURE CONTAINS:

% BY DESCRIPTION	% PURITY	GERMINATION RATE
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FESTUCA ARUNDINACEA REBEL 30" - REBEL 30" TALL FESCUE	90-97%	7-12 DAYS
LOULIM PERENNE "PALMER II" - "PALMER II" PERENNIAL RYEGRASS	90-98%	3-7 DAYS
POA PRATENSIS - KENTUCKY BLUEGRASS	80-85%	10-21 DAYS

(10.10) STRAW MULCH: STRAW SHALL BE STALKS FROM OATS, WHEAT, RYE, BARLEY OR RICE THAT ARE FREE FROM NOXIOUS WEEDS, CHEMICALS, MOLD OR OTHER OBJECTIONABLE MATERIALS WITH A WATCH TAG ATTACHED. STRAW SHALL BE IN A BULK CONDITION SUITABLE FOR PLACING. STRAW SUPPLIED FOR MECHANICAL APPLICATION SHALL BE CHOPPED.

(10.11) WOOD CELLULOSE FIBER:

(10.11.1) MULCH SUPPLIED FOR USE WITH HYDRAULIC APPLICATION OF GRASS SEED AND FERTILIZER SHALL CONSIST OF CLEAN, WHITE, UNADDED WOOD CELLULOSE FIBER. TACOMA, WA (800)443-9174 OR EQUIVALENT. WOOD CELLULOSE FIBER SHALL NOT BE UTILIZED HOWEVER FROM 6/1 TO 8/15. DURING THIS TIME, STRAW MULCH SHALL BE UTILIZED.

(10.11.2) PROCESSING OF WOOD CELLULOSE FIBER SHALL BE IN SUCH A MANNER THAT IT WILL NOT CONTAIN GERMINATION OR GROWTH INHIBITING ELEMENTS.

(10.11.3) WOOD CELLULOSE FIBER SHALL BE DYED AN APPROPRIATE COLOR TO ALLOW VISUAL METERING OF ITS APPLICATION.

(10.11.4) WOOD CELLULOSE FIBER SHALL HAVE THE PROPERTY OF BECOMING EVENLY DISPERSED AND SUSPENDED WHEN AGITATED IN WATER. WHEN SPRAYED UNIFORMLY ON THE SURFACE OF THE SOIL, THE FIBERS SHALL FORM A BLOTTER-LIKE GROUND COVER WHICH READILY ABSORBS WATER AND ALLOWS INFILTRATION TO THE UNDERLYING SOIL.

(10.11.5) WEIGHT SPECIFICATIONS FROM SUPPLIERS FOR APPLICATIONS SHALL REFER TO AIR-DRY WEIGHT OF THE FIBER, A STANDARD EQUIVALENT TO 10 PERCENT MOISTURE.

(10.12) THE LANDSCAPE CONTRACTOR SHALL CAREFULLY CORRELATE HIS WORK WITH THAT OF OTHER SITE DEVELOPERS. THE LANDSCAPE CONTRACTOR IS REQUIRED TO INSTALL AND MAINTAIN HIS FINISHED WORK AT HIS EXPENSE.

(10.13) SEED BED PREPARATION:

(10.13.1) SEEDING SHALL NOT BE DONE WHEN THE GROUND IS FROZEN, SNOW COVERED, SATURATED, OR IN ANY OTHER CONDITION WHICH WOULD MAKE ESTABLISHMENT AND SURVIVAL OF LAWNS UNLIKELY.

(10.13.2) AT THE TIME OF BEGINNING SEED BED PREPARATION, TOPSOIL SHALL BE IN A LOOSE, FRIABLE CONDITION, FREE FROM STONES IN ANY DIMENSION, STOKES, ROOTS AND OTHER EXTRANEOUS MATTER. IF TOPSOIL HAS BECOME CRUSTY, HARDENED OR CROOKED SHOWN ACCORDING TO EPA LABEL DIRECTIONS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER APPLICATION OF PESTICIDES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER APPLICATION OF PESTICIDES.

(10.13.3) SPREAD FERTILIZER AT THE RATE OF 4 LBS/1000 SF 4 TIMES PER YEAR. ADD pH BALANCING AGENTS BY THE RATE OF 1/2 LBS PER 1000 SF OF TOPSOIL TO ACHIEVE A pH OF 5.5 TO 6.8. BLEND ADDITIVES THOROUGHLY INTO UPPER 4" OF TOPSOIL. REMOVE ANY ROOT OR OTHER DEBRIS WHICH MAY SURFACE. TILL AREAS UNTIL SOIL IS LOOSE AND FRIABLE AND ALL SOIL AMENDMENTS ARE UNIFORMLY DISTRIBUTED.

(10.13.4) WORK ALL AREAS TO A SMOOTH EVEN SURFACE FREE FROM IRREGULARITIES, RIDGES, OR DEPRESSIONS. PREPARED AREAS SHALL MEET REQUIRED FINISH GRADE ELEVATIONS AND SHALL DRAIN ADEQUATELY. REPAIR ALL WASHED AND ERODED PORTIONS.

(10.13.5) MOISTEN PREPARED AREAS IF SOIL IS DRY. WATER THOROUGHLY, THEN ALLOW SURFACE MOISTURE TO EVAPORATE. DO NOT CREATE MUDDY SOIL CONDITIONS.

(10.13.6) SOO SEED USING A SPREADER OR SEEDING MACHINE AT THE RATE OF 6 LBS/1000 SF. DO NOT SEED WHEN WIND VELOCITY EXCEEDS 5 MI. PER HOUR. DISTRIBUTE SEED OVER ENTIRE AREA BY SOWING EQUAL QUANTITY IN 2 DIRECTIONS AT RIGHT ANGLES TO EACH OTHER. OVERSEED EVERY YEAR AT A RATE OF 8 LBS/1000 SF.

(10.13.7) RAKE SEED LIGHTLY INTO TOP 1/4" OF SOIL, FIRM ENTIRE AREA WITH A ROLLER NOT EXCEEDING 160 LBS. PER FOOT OF ROLLER WIDE AND WATER WITH A FINE SPRAY.

(10.13.8) UNLESS INDICATED OTHERWISE ON THE DRAWINGS, PROTECT NEWLY SEEDD AREAS BY SPREADING MULCH TO A UNIFORM AND CONTINUOUS DEPTH OF 1-1/2" LOOSE MEASUREMENT (70-90 LBS/1000 SF.)

(10.14) MAINTENANCE DURING ESTABLISHMENT PERIOD:

(10.14.1) IT IS THE LANDSCAPE CONTRACTOR'S RESPONSIBILITY TO DETERMINE WATER APPLICATION RATES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER APPLICATION OF PESTICIDES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER APPLICATION OF PESTICIDES.

(10.14.2) THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MAINTENANCE