LANDSCAPE SPECIFICATIONS

SECTION 02900

PART 1 GENERAL

1.1 REFERENCED DOCUMENTS
A. REFER TO BIDDING REQUIREMENTS, SPECIAL PROVISIONS, AND SCHEDULES FOR ADDITIONAL REQUIREMENTS.

1.2 DESCRIPTION OF WORK
A. WORK INCLUDED: FURNISH ALL SUPERVISION, LABOR, MATERIALS, SERVICES, EQUIPMENT AND APPLIANCES REQUIRED TO COMPLETE THE WORK COVERED IN CONJUNCTION WITH THE LANDSCAPING COVERED IN THE SPECIFICATIONS AND LANDSCAPE PLANS, INCLUDING:
1. PLANTING ( TREES, SHRUBS, GROUND COVERS, PERENNIALS, GRASS )
2. BED PREPARATIONS AND FERTILIZATION
3. NOTIFICATION OF SOURCES OF PLANT MATERIALS AND AMENDMENTS
4. WATER AND MAINTENANCE UNTIL FINAL ACCEPTANCE
5. GUARANTEE PERIOD DESCRIBED ON DRAWINGS

1.3 REFERENCE STANDARDS
A. AMERICAN STANDARD FOR NURSERY STOCK PUBLISHED BY AMERICAN ASSOCIATION OF NURSERYMEN; OCTOBER 27, 1980, EDITION; BY AMERICAN NATIONAL STANDARDS INSTITUTE, INC. (Z60.1)– PLANT MATERIAL.
B. AMERICAN JOINT COMMITTEE ON HORTICULTURE NOMENCLATURE : ADDITION 1942 EDITION STANDARDIZED PLANT NAMES
C. TEXAS ASSOCIATION OF NURSERYMEN, GRADES AND STANDARDS
D. HORTIS THIRD 1976 – CORNELL UNIVERSITY

1.4 NOTIFICATION OF SOURCES AND SUBMITTALS
A. THE CONTRACTOR SHALL, WITHIN TEN (10) DAYS FOLLOWING ACCEPTANCE OF BID, NOTIFY THE LANDSCAPE ARCHITECT/ENGINEER/OWNER OF THE SOURCES OF PLANT MATERIALS AND BED PREPARATION REQUIRED FOR THE PROJECT.
B. SAMPLES: PROVIDE REPRESENTATIVE QUANTITIES OF SANDY LOAM SOIL, MULCH, BED MIX MATERIAL, PEA GRAVEL, DRAIN GRAVEL, DECOMPOSED GRANITE, STEEL EDGING, HARDWOOD MULCH,JUTTE MESH, SOIL SEPARATOR, STONE NOTED ON DRAWINGS. SAMPLES SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT/ENGINEER/OWNER BEFORE USE ON THE PROJECT.
C. PRODUCT DATA: SUBMIT COMPLETE PRODUCT DATA AND SPECIFICATION ON ALL OTHER SPECIFIED MATERIALS.
D. SUBMIT THREE REPRESENTATIVE SAMPLES, JPG FILE PHOTOGRAPHS, OF EACH VARIETY OF LARGE TREES, ORNAMENTAL TREES, SHRUBS, GROUND COVER, PERENNIALS FOR LANDSCAPE ARCHITECT/ENGINEER/OWNER APPROVAL, WHEN APPROVED, TAG, INSTALL, AND MAINTAIN AS REPRESENTATIVE SAMPLES FOR FINAL INSTALLED PLANT MATERIALS.
E. FILE CERTIFICATES OF INSPECTION OF PLANT MATERIAL BY STATE, COUNTY, AND FEDERAL AUTHORITIES WITH LANDSCAPE ARCHITECT/ENGINEER/OWNER , IF REQUIRED.
F. SOIL ANALYSIS: PROVIDE AN EXISTING SOIL ANALYSIS FROM THE SITE WITH RECOMMENDATIONS ON AMENDING THE SOIL BY A LICENSED SOILS AND PLANT LAB. PROVIDED SOILS ANALYSIS TO LANDSCAPE ARCHITECT/ENGINEER/OWNER.

1.5 JOB CONDITIONS:
A. GENERAL CONTRACTOR TO COMPLETE THE FOLLOWING PUNCH LIST: PRIOR TO THE LANDSCAPE CONTRACTOR INITIATING ANY PORTION OF THE LANDSCAPE INSTALLATION, GENERAL CONTRACTOR SHALL LEAVE PLANTING BED AREAS THREE (3") INCHES BELOW FINISHED GRADE OF SIDEWALKS, DRIVES, AND CURBS AS SHOWN ON THE DRAWINGS. ALL LAWN AREAS TO RECEIVE SOLID SOD SHALL BE LEFT ONE (1") INCH BELOW THE FINISHED GRADE AT SIDEWALKS, DRIVES AND CURBS. ALL CONSTRUCTION DEBRIS SHALL BE REMOVED PRIOR TO LANDSCAPE CONTRACTOR BEGINNING WORK.
B. GENERAL CONTRACTOR SHALL PROVIDE TOPSOIL AS DESCRIBED IN SECTION 02200 – EARTHWORK.
C. STORAGE OF MATERIALS AND EQUIPMENT AT THE JOB SITE WILL BE AT THE RISK OF THE LANDSCAPE CONTRACTOR. THE OWNER CAN NOT BE HELD RESPONSIBLE FOR THEFT OR DAMAGE.

1.6 MAINTENANCE AND GUARANTEE
A. MAINTENANCE
1. THE LANDSCAPE CONTRACTOR WILL BE HELD RESPONSIBLE FOR THE MAINTENANCE OF ALL WORK FROM THE TIME OF PLANTING UNTIL FINAL ACCEPTANCE BY THE LANDSCAPE ARCHITECT/ENGINEER/OWNER. NO TREES, SHRUBS, GROUND COVERS OR GRASS TO BE ACCEPTED UNLESS THEY SHOW A HEALTHY GROWTH AND SATISFACTORY FOLIAGE CONDITION.
2. MAINTENANCE SHALL INCLUDE WATERING OF TREES AND PLANTS, CULTIVATION, WEEDING, SPRAYING, PRUNING OF TREES AND SHRUBS, MOWING OF GRASS WEEKLY, SITE LANDSCAPE BED MULCHING, DEBRIS AND TRASH CLEANING UP WEEKLY AND ALL OTHER WORK NECESSARY OF MAINTENANCE.
3. WRITTEN NOTICE REQUESTING FINAL INSPECTION AND FINAL ACCEPTANCE SHOULD BE SUBMITTED TO THE OWNER AT LEAST SEVEN (7) DAYS PRIOR TO COMPLETION. AN ON–SITE INSPECTION BY THE OWNER AND LANDSCAPE CONTRACTOR WILL BE COMPLETED PRIOR TO WRITTEN ACCEPTANCE.
4. AFTER FINAL ACCEPTANCE LANDSCAPE INSTALLATION, THE LANDSCAPE CONTRACTOR WILL NOT BE REQUIRED TO DO ANY OF THE ABOVE MAINTENANCE WORK AS PART OF THESE PLANS.

B. GUARANTEE
1. TREES SHALL BE GUARANTEED FOR TWELVE (12) MONTH PERIOD AFTER FINAL ACCEPTANCE. SHRUBS AND GROUND COVERS SHALL BE GUARANTEED FOR A PERIOD OF TWELVE (12) MONTHS AFTER FINAL ACCEPTANCE. THE CONTRACTOR SHALL REPLACE ALL DEAD PLANT MATERIALS AS SOON AS WEATHER PERMITS AND UPON NOTIFICATION OF THE OWNER. PLANTS, INCLUDING TREES, WHICH HAVE PARTIALLY DIED SO THAT SHAPE, SIZE, OR SYMMETRY HAS BEEN DAMAGED, SHALL BE CONSIDERED SUBJECT TO REPLACEMENT UNDER THE GUARANTEE PERIOD. IN ANY AND ALL CASES THE FINDINGS OF THE OWNER OR OWNER REPRESENTATIVE SHALL BE FINAL.
A. PLANTS USED AS REPLACEMENT SHALL BE OF SAME KIND AND SIZE AS THOSE ORIGINALLY PLANTED AND SHALL BE PLANTED AS ORIGINALLY SPECIFIED, UNLESS APPROVED BY THE OWNER AND ALLOWED ON THE CITY APPROVED LANDSCAPE PLAN MATERIAL LIST. ALL WORK, INCLUDING DEMOLITION OF DEAD PLANTS, MATERIALS, LABOR AND EQUIPMENT USED IN REPLACEMENTS, SHALL CARRY A TWELVE (12) MONTH GUARANTEE FROM TIME OF ACCEPTANCE OF THE REPLACEMENTS. ANY DAMAGE, INCLUDING RUTS, IN LAWN OR BED AREAS, INCURRED AS A RESULT OF MAKING REPLACEMENTS SHALL BE IMMEDIATELY REPAIRED.
B. AT THE DIRECTION OF THE OWNER, PLANTS MAY BE REPLACED AT THE START OF THE NEXT YEAR'S PLANTING SEASON, IN SUCH CASES, DEAD PLANTS SHALL BE REMOVED FROM THE PREMISES WITHIN TEN (10) DAYS OF NOTIFICATION BY THE OWNER.
C. WHEN PLANT REPLACEMENTS ARE MADE, PLANTS, SOIL MIX, FERTILIZER AND MULCH ARE TO BE UTILIZED AS ORIGINALLY SPECIFIED AND RE INSPECTED FOR FULL COMPLIANCE WITH THE CONTRACT REQUIREMENTS. ALL REPLACEMENTS ARE TO BE INCLUDED UNDER "WORK" OF THIS SECTION.
2. THE OWNER AGREES THAT FOR THE GUARANTEE TO BE EFFECTIVE, HE WILL WATER PLANTS AT LEAST TWICE A WEEK DURING DRY PERIODS AND CULTIVATE BEDS ONCE A MONTH AFTER FINAL ACCEPTANCE.
3. THE ABOVE GUARANTEE SHALL NOT APPLY WHERE PLANTS DIE AFTER FINAL ACCEPTANCE BECAUSE OF INJURY BY STORMS, HEAT STRESS, HAIL, FREEZE, INSECTS, DISEASE, INJURY BY HUMANS, MACHINES OR THEFT.
4 ACCEPTANCE FOR ALL LANDSCAPE WORK SHALL BE GIVEN AFTER FINAL INSPECTION BY THE LANDSCAPE ARCHITECT/ENGINEER/OWNER PROVIDED THE JOB IS IN A COMPLETED, UNDAMAGED CONDITION, AND THERE IS A STAND OF GRASS IN ALL LAWN AREAS. AT THIS TIME, THE OWNER WILL ASSUME MAINTENANCE ON THE ACCEPTED WORK.

1.7 QUALITY ASSURANCE
A. GENERAL: COMPLY WITH APPLICABLE FEDERAL, STATE, COUNTY, AND LOCAL REGULATIONS GOVERNING LANDSCAPE MATERIALS AND WORK.
B. PERSONNEL: EMPLOY ONLY EXPERIENCED PERSONNEL WHO ARE FAMILIAR WITH THE REQUIRED WORK. PROVIDE FULL–TIME SUPERVISION BY QUALIFIED FOREMAN ACCEPTABLE TO LANDSCAPE ARCHITECT/ENGINEER/OWNER.
C. SELECTION OF PLANT MATERIALS:
1. MAKE CONTACT WITH SUPPLIERS IMMEDIATELY UPON OBTAINING NOTICE OF CONTRACT ACCEPTANCE TO SELECT AND BOOK MATERIALS. DEVELOP A PROGRAM OF MAINTENANCE (PRUNING AND FERTILIZATION) WHICH WILL INSURE THE PURCHASED MATERIALS WILL MEET AND OR EXCEED PROJECT SPECIFICATIONS.
2. LANDSCAPE ARCHITGECT/ENGINEER WILL PROVIDE A KEY IDENTIFYING EACH TREE LOCATION ON SITE. WRITTEN VERIFICATION WILL BE REQUIRED TO DOCUMENT MATERIAL SELECTION, SOURCE AND DELIVERY SCHEDULE TO SITE.
3. OWNER AND OR LANDSCAPE ARCHITECT/ENGINEER SHALL INSPECT ALL PLANT MATERIALS, WHEN REASONABLE AT PLACE OF GROWTH FOR COMPLIANCE WITH REQUIREMENTS FOR GENUS, SPECIES, CULTIVAR/VARIETY, SIZE, AND QUALITY.
4. OWNER AND OR LANDSCAPE ARCHITECT/ENGINEER RETAINS THE RIGHT TO FURTHER INSPECT ALL PLANT MATERIALS UPON ARRIVAL AT THE SITE AND DURING INSTALLATION FOR SIZE AND CONDITION OF ROOT BALLS, LIMBS, BRANCHING HABIT, INSECTS, INJURIES, AND LATENT DEFECTS.
5. OWNER AND OR LANDSCAPE ARCHITECT/ENGINEER MAY REJECT UNSATISFACTORY OR DEFECTIVE MATERIAL AT ANY TIME DURING THE PROCESS OF WORK. REMOVE REJECTED MATERIALS FROM THE SITE IMMEDIATELY. PLANTS DAMAGED IN TRANSIT OR AT JOB SITE SHALL BE REJECTED.

1.8 PRODUCT DELIVERY, STORAGE AND HANDLING
A. PREPARATION:
1. BALLED AND BURLAPPED (B&B) PLANTS: DIG AND PREPARE SHIPMENT IN A MANOR THAT WILL NOT DAMAGE ROOTS, BRANCHES, SHAPE AND FUTURE DEVELOPMENT.
2. CONTAINER GROWN PLANTS: DELIVER PLANTS IN RIGID CONTAINER TO HOLD BALL SHAPE PROTECT ROOT MASS.
B. DELIVERY:
1. DELIVER PACKAGED MATERIALS IN SEALED CONTAINERS SHOWING WEIGHT, ANALYSIS AND NAME OF MANUFACTURER. PROTECT MATERIALS FROM DETERIORATION DURING DELIVERY.
2. DELIVER ONLY PLANT MATERIALS THAT CAN BE PLANTED IN ONE DAY UNLESS ADEQUATE STORAGE AND WATERING FACILITIES ARE AVAILABLE ON JOB SITE.
3. PROTECT ROOT BALLS BY HEELING IN WITH SAWDUST OR OTHER APPROVED MOISTURE RETAINING MATERIAL IF NOT PLANTED WITHIN 24 HOURS OF DELIVERY.
4. PROTECT PLANTS DURING DELIVERY TO PREVENT DAMAGE TO ROOT BALLS OR DESICCATION OF LEAVES. KEEP PLANTS MOIST AT ALL TIMES. COVER ALL MATERIALS DURING TRANSPORT.
5. NOTIFY LANDSCAPE ARCHITGECT/ENGINEER/OWNER OF DELIVERY SCHEDULE 72 HOURS IN ADVANCE SO PLANT MATERIAL MAY BE OBSERVED UPON ARRIVAL AT JOB SITE.
6. REMOVE REJECTED PLANT MATERIALS IMMEDIATELY FROM SITE.
7. TO AVOID DAMAGE OR STRESS, DO NOT LIFT, MOVE, ADJUST TO PLUMB, OR OTHERWISE MANIPULATE PLANTS BY TRUNK OR STEMS.

PART 2 – PRODUCTS

2.1 PLANTS
A. GENERAL: WELL FORMED NO. 1 GRADE OR BETTER NURSERY GROWN STOCK. LISTED PLANT HEIGHTS ARE FROM TOPS OF ROOT BALLS TO NOMINAL TOPS OF PLANTS. PLANT SPREAD REFERS TO NOMINAL OUTER WIDTH OF THE PLANT, NOT TO THE OUTER LEAF TIPS. PLANTS WILL BE INDIVIDUALLY APPROVED BY THE LANDSCAPE ARCHITECT/ENGINEER AND THAT DECISION AS TO THEIR ACCEPTABILITY SHALL BE FINAL.
B. QUANTITIES: THE DRAWINGS AND SPECIFICATIONS AND COMPLIMENTARY; ANYTHING CALLED FOR ON ONE AND NOT THE OTHER IS A BINDING AS IF SHOWN AND CALLED FOR ON BOTH. THE PLANT SCHEDULE IS AN AID TO BIDDERS ONLY. CONFIRM ALL QUANTITIES ON THE PLAN.
C QUALITY AND SIZE: PLANT MATERIALS SHALL CONFIRM TO THE SIZE GIVEN ON THE PLAN, AND SHALL BE HEALTHY, SYMMETRICAL, WELL SHAPED, FULL BRANCHED, AND WELL ROOTED. THE PLANTS SHALL BE FREE FROM INJURIOUS INSECTS, DISEASES, INJURIES TO THE BARK OR ROOTS, BROKEN BRANCHES, OBJECTIONABLE DISFIGUREMENTS, INSECT EGGS AND LARVAE AND ARE TO BE SPECIMEN QUALITY.
E. TREES SHALL BE HEALTHY, FULL BRANCHED, WELL SHAPED, AND SHALL MEET THE TRUNK DIAMETER AND HEIGHT REQUIREMENTS OF THE PLANT SCHEDULE. BALLED AND BURLAPPED SHALL BE FIRM, NEAT, SLIGHTLY TAPERED, AND WELL WRAPPED IN BURLAP. ANY TREE LOOSE IN THE BALL OR WITH BROKEN BALL AT TIME OF PLANTING WILL BE REJECTED. BALLS SHALL BE TEN (10") INCHES IN DIAMETER FOR EACH ONE (1") INCH OF TRUNK DIAMETER, MEASURED SIX (6") INCHES ABOVE THE TOP OF BALL.
1. NOMENCLATURE CONFORMS TO CUSTOMARY NURSERY USAGE; FOR CLARIFICATION, THE TERM "MULTI – TRUNK" DEFINES A PLANT HAVING THREE (3) OR MORE TRUNKS OF NEARLY EQUAL DIAMETER. TO CALCULATE THE TOTAL CALIPER OF MULTI TRUNK TREES, ADD THE CALIPER OF THE LARGEST TRUNK IN INCHES TO THE REMAINING CALIPER IN INCHES DIVIDED BY 2. THEN ADD THAT TOTAL CALIPER INCHES OF TRUNKS FOR THE TOTAL SPECIFIED CALIPER INCHES PROVIDED ON THE MULTI – TRUNK PLANT.
F. PRUNING: ALL PRUNING OF TREES AND SHRUBS, AS DIRECTED BY LANDSCAPE ARCHITECT/ENGINEER, SHALL BE EXECUTED BY LANDSCAPE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

2.2 SOIL PREPARATION MATERIALS

A. SANDY LOAM:
1. FRIABLE, FERTILE, DARK, LOAMY SOIL, FREE OF CLAY LUMPS, SUBSOIL, GRASS, STONES OVER ONE (1") INCH AND OTHERS EXTRANEOUS MATERIAL AND REASONABLY FREE OF WEEDS AND FOREIGN GRASS. LOAM CONTAINING DALLAS GRASS OR NUT GRASS SHALL BE REJECTED.
2. PHYSICAL PROPERTIES AS FOLLOWS
CLAY – BETWEEN 7–27 PERCENT
SILT – BETWEEN 15–25 PERCENT
SAND – LESS THEN 52 PERCENT
3. ORGANIC MATTER SHALL BE 3%–10% OF TOTAL DRY WEIGHT.
4. IF REQUESTED, PROVIDE A CERTIFIED SOIL ANALYSIS CONDUCTED BY AN APPROVED SOIL TESTING LABORATORY VERIFYING THAT THE SANDY LOAM MEETS THE ABOVE REQUIREMENTS.
B. ORGANIC MATERIAL: COMPOST WITH A MIXTURE OF 80% VEGETIVE MATTER AND 20% ANIMAL WASTE. INGREDIENTS SHOULD BE A MIX OF COURSE AND FINE TEXTURED MATERIAL.
C. PREMIXED BEDDING SOIL AS SUPPLIED BY VITAL EARTH RESOURCES, GLADEWATER, TEXAS: PROFESSIONAL BEDDING SOIL AS SUPPLIED BY LIVING EARTH TECHNOLOGY, DALLAS, TEXAS OR ACID GRO MUNICIPAL MIX AS SUPPLIED BY SOIL BUILDING SYSTEMS, DALLAS, TEXAS OR APPROVED EQUAL.
D. SHARP SAND: SHARP SAND MUST BE FREE OF SEEDS, SOIL PARTICLES AND WEEDS.
E. MULCH: DOUBLE SHREDDED HARDWOOD MULCH, PARTIALLY DECOMPOSED, DARK BROWN, LIVING EARTH TECHNOLOGY OR APPROVED EQUAL.
F. ORGANIC FERTILIZER: SUSTANE, FERTILAID, OR GREEN SENSE OR EQUAL. AS RECOMMENDED FOR REQUIRED APPLICATIONS. FERTILIZER SHALL BE DELIVERED TO THE SITE IN ORIGINAL UNOPENED CONTAINERS, EACH BEARING THE MANUFACTURER'S GUARANTEED STATEMENT OF ANALYSIS.
G. COMMERCIAL FERTILIZER: 10–20–10 OR SIMILAR ANALYSIS. NITROGEN SOURCE TO BE A MINIMUM 50% SLOW RELEASE ORGANIC NITROGEN (SCU OR UF) WITH A MINIMUM OF 8% SULFUR AND 4% IRON, PLUS MICRONUTRIENTS.
H. PEAT: COMMERCIAL SPHAGNUM PEAT MOSS OR PARTIALLY DECOMPOSED SHREDDED PINE BARK OR OTHER APPROVED ORGANIC MATERIAL.

2.3 MISCELLANEOUS MATERIALS

A. STEEL EDGING: SHALL BE RYERSON "ESTATE CURBING", DARK GREEN, 1/8" X 4" WITH STAKES FOUR (4') FEET ON CENTER OR APPROVED EQUAL.
B. TREE STAKING MATERIAL FOR SHADE TREES:
1. POST; STUDDED "T"– POST, NO 1 ARMCO WITH ANCHOR PLATE; SIX (6') FEET IN LENGTH, PAINT FLAT BLACK, PRIOR TO INSTALLING.
2. WIRE: 12 GAUGE, SINGLE STRAND, GALVANIZED WIRE.
3. RUBBER HOSE: 2 PLY, FIBER REINFORCED HOSE, MINIMUM HALF (.5") INCH INSIDE DIAMETER. COLOR BLACK.
C. GRAVEL: WASHED NATIVE PEA GRAVEL, GRADED ONE (1") INCH TO ONE AND HALF (1.5") INCH
D. FILTER FABRIC: MIRAFI 140N CELANESE FIBERS MARKETING COMPANY, AVAILABLE AT CMC REBAR CO., (214)–631–5250 OR AS APPROVED.

PART 3 – EXECUTION

3.1 BED FERTILIZER AND FERTILIZATION

A. LANDSCAPE CONTRACTOR TO INSPECT ALL EXISTING CONDITIONS AND REPORT ANY DEFICIENCIES TO THE LANDSCAPE ARCHITECT/ENGINEER/OWNER.
B. ALL PLANTING AREAS SHALL BE CONDITIONED AS FOLLOWS:
1. PREPARE NEW PLANTING BED BY SCRAPING AWAY EXISTING GRASS AND WEEDS AS NECESSARY. IN ADDITION AT BACK OF CURBS AND EDGES OF PAVING REMOVE THE EXISTING SOIL TO A DEPTH OF SIX (6") INCHES TO ALLOW FOR THE AMENDMENTS. THEN TILL EXISTING SOIL TO A DEPTH OF SIX (6") INCHES PRIOR TO FERTILIZER AND COMPOST APPLICATION. FINAL CONDITION OF EXISTING SOIL TO BE FINE, FRIABLE, CONSISTENT DEPTH, AND FREE OF ROCKS AND ROOTS AND ALL CLODS WHEN COMPLETELY TILLED. APPLY FERTILIZER AS PER MANUFACTURER RECOMMENDATIONS. ADD SIX (6") INCHES OF COMPOST AND TILL INTO A DEPTH OF SIX (6") INCHES OF EXISTING SOIL. APPLY ORGANIC FERTILIZER SUCH AS SUSTANE OR GREEN SENSE AT THE RATE OF TWENTY (20) POUNDS PER ONE THOUSAND (1,000) SQUARE FEET.
2. ALL PLANTING BED AREAS SHALL RECEIVE A THREE (3") INCH LAYER OF SPECIFIED MULCH.
3. BACKFILL FOR TREE PITS SHALL BE AS FOLLOWS: USE EXISTING TOP SOIL ON SITE, FREE FROM LARGE CLUMPS, ROCK, DEBRIS, CALICHE, SUBSOIL, ETC., PLACED IN NINE (9") INCH LAYERS AND WATERED IN THOROUGHLY.
C. GRASS AREA:
1. AREAS TO BE SOLID SOD GRASS TYPES SPECIFIED; BLOCKS OF SOD SHOULD BE LAID END TO END ( WITH STAGGERING JOINTS ) AFTER FERTILIZING THE GROUND FIRST. WATER AND ROLL GRASS AREAS TO ACHIEVE A SMOOTH, EVEN SURFACE. ROLLING IS TO BE COMPLETED WITHIN 24 HOURS OF INSTALLING THE SOD. THE LANDSCAPE ARCHITECT/ENGINEER/OWNER MAY REQUEST ADDITIONAL ROLLING BY THE LANDSCAPE CONTRACTOR OVER GRASS AREAS TO ACHIEVE THE FINAL SMOOTH SURFACE. THE JOINTS BETWEEN THE BLOCKS OF SOD SHOULD BE FILLED WITH TOP SOIL WHERE THEY ARE EVIDENTLY GAPED OPEN, THEN WATERED THOROUGHLY.
2. AREAS TO BE HYDRO MULCHED GRASS SEED: HYDRO MULCH WITH SPECIFIED SEED OR COMMON BERMUDA GRASS SEED AT A RATE OF TWO (2) POUNDS PER ONE THOUSAND (1,000) SQUARE FEET. USE A FOUR (4') FOOT X EIGHT (8') FOOT BATTER BOARD AGAINST BED AREAS TO REDUCE OVER SPRAY.

3.2 INSTALLATION

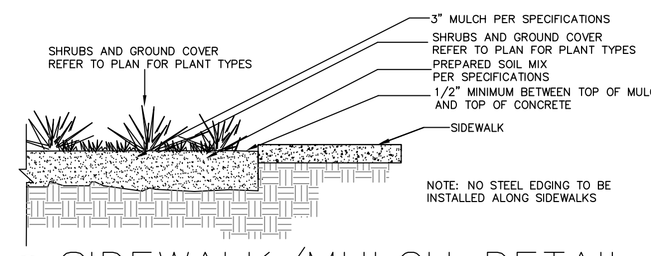
A. MAINTENANCE OF PLANT MATERIALS SHALL BEGIN IMMEDIATELY AFTER EACH PLANT IS DELIVERED TO SITE AND SHALL CONTINUE UNTIL ALL CONSTRUCTION HAS BEEN SATISFACTORILY ACCOMPLISHED.
B. PLANT MATERIALS SHALL BE DELIVERED TO THE SITE ONLY AFTER THE BEDS ARE PREPARED AND ARE READY FOR PLANTING. ALL SHIPMENTS OF NURSERY MATERIALS SHALL BE THOROUGHLY PROTECTED FROM DRYING WINDS DURING TRANSIT. ALL PLANTS, WHICH CANNOT BE PLANTED AT ONCE, AFTER DELIVERY TO SITE, SHALL BE WELL PROTECTED AGAINST POSSIBILITY OF DRYING BY WIND AND SUN. BALLS OF EARTH OF B & B PLANTS SHALL BE KEPT COVERED WITH SAWDUST OR OTHER ACCEPTABLE MATERIAL. ALL PLANTS REMAIN THE PROPERTY OF THE CONTRACTOR UNTIL FINAL ACCEPTANCE.
C. POSITION THE TREES AND SHRUBS IN THEIR INTENDED LOCATION AS PER PLAN.
D. NOTIFY THE LANDSCAPE ARCHITECT/ENGINEER FOR INSPECTION AND APPROVAL OF ALL POSITIONING OF PLANT MATERIALS.
E. EXCAVATE PITS WITH VERTICAL SIDES AND HORIZONTAL BOTTOM. TREE PITS SHALL BE LARGE ENOUGH TO PERMIT HANDLING AND PLANTING WITHOUT INJURY TO BALLS OR EARTH OR ROOTS AND SHALL BE OF SUCH DEPTH THAT, WHEN PLANTED AND SETTLED, THE CROWN OF THE PLANT SHALL BEAR THE SAME RELATION TO THE FINISH GRADE THAT IT DID TO SOIL SURFACE IN PLACE OF GROWTH. NOTE TO ALLOW AS MUCH AS TWO (2') FEET FOR SETTLEMENT IN CLAY SOIL.
F. SHRUB AND TREE PITS SHALL BE NO LESS THAN TWO (2') FEET, TWENTY–FOUR (24") INCHES WIDER THAN THE LATERAL DIMENSION OF THE EARTH BALL AND SIX (6") INCHES DEEPER THAN ITS VERTICAL DIMENSION. REMOVE AND HAUL FROM SITE ALL ROCKS OR STONES OVER ONE (1") INCH IN DIAMETER. PLANTS SHOULD BE THOROUGHLY MOIST BEFORE REMOVING FROM CONTAINERS.
G. DIG A WIDE, ROUGH SIDED HOLE EXACTLY THE SAME DEPTH AS THE HEIGHT OF THE BALL, ESPECIALLY AT THE SURFACE OF THE GROUND. THE SIDES OF THE HOLE SHOULD BE ROUGH AND JAGGED, NEVER SLICK OR GLAZED. DO NOT DRILL OR AUGER HOLES IN CLAY SOILS.
H. PERCOLATION TEST: FILL THE HOLE WITH WATER. IF THE WATER LEVEL DOES NOT PERCOLATE WITHIN TWENTY FOUR (24) HOURS, THE TREE NEEDS TO BE MOVED TO ANOTHER LOCATION OR HAVE TWO FOUR (4') FOOT DEEP PIER HOLE DRAINAGE ADDED.
I. BACKFILL ONLY WITH 5 PARTS EXISTING SOIL ON SANDY LOAM AND ONE (1) PART BED PREPARATION. WHEN HOLE IS DUG IN SOLID ROCK, TOPSOIL FROM THE SAME AREA SHOULD NOT BE USED. CAREFULLY SETTLE BY WATERING TO PREVENT AIR POCKETS. REMOVE THE BURLAP FROM THE TOP THIRD OF THE BALL, AS WELL AS THE NYLON, PLASTIC STRING AND WIRE MESH FROM THE BURLAP. BE AWARE OF SOIL PLACED ON TOP OF THE ROOT BALL DURING DIGGING. THIS SOIL TO BE REMOVED ALONG WITH ANY GRASS, WEEDS, VINES TO EXPOSE THE ROOT FLARE AND NATIVE TOP SOIL.
J. DO NOT WRAP TREES.
K. DO NOT PRUNE TREES. UNLESS DIRECTED BY LANDSCAPE ARCHITECT/ENGINEER.
L. MULCH THE TOP OF THE BALL. DO NOT PLANT GRASS ALL THE WAY TO THE TREE TRUNK OF THE TREE. LEAVE THE AREA ABOVE THE TOP OF THE BALL UNPLANTED AND MULCH WITH AT LEAST THREE (3") INCHES OF SPECIFIED AND APPROVED MULCH.

3.2 INSTALLATION (CONTINUED)

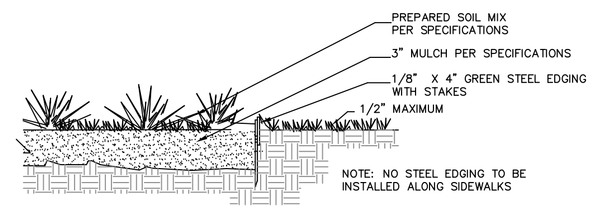
M. ALL PANT BEDS AND TREES TO BE MULCHED WITH A MINIMUM SETTLED THICKNESS OF THREE (3") INCHES OVER THE ENTIRE BED OR PIT.
N. OBSTRUCTION BELOW GROUND: IN THE EVENT ROCK OR UNDERGROUND CONSTRUCTION WORK OR OBSTRUCTIONS ARE ENCOUNTERED IN ANY PLANT PIT EXCAVATION WORK TO BE DONE UNDER THIS SECTION, ALTERNATE LOCATIONS MAY BE SELECTED BY THE LANDSCAPE ARCHITECT/ENGINEER/OWNER. WHERE LOCATIONS CAN NOT BE CHANGED, THE OBSTRUCTION SHALL BE REMOVED TO A DEPTH OF NOT LESS THAN THREE (3') FEET BELOW GRADE AND NO LESS THAN SIX (6") INCHES BELOW BOTTOM OF THE BALL WHEN PLAN IS PROPERLY SET AT THE REQUIRED GRADE. THE WORK OF THIS SECTION SHALL INCLUDE THE REMOVAL FROM THE SITE SUCH ROCK OR UNDERGROUND OBSTRUCTIONS ENCOUNTERED AT THE COST OF THE LANDSCAPE CONTRACTOR.
O. TREES AND LARGE SHRUBS SHALL BE STAKED AS SITE CONDITIONS REQUIRE. POSITION STAKES TO SECURE TREE AGAINST SEASONAL WINDS. LANDSCAPE CONTRACTOR TO INSPECT AND MAINTAIN STAKES IN A SECURED CONDITION DURING CONSTRUCTION UNTIL FINAL ACCEPTANCE.
P. PRUNING AND MULCHING: EACH AREA SHALL BE PRUNED IN ACCORDANCE WITH STANDARD HORTICULTURAL PRACTICE TO PRESERVE THE NATURAL CHARACTER OF THE PLANT AND IN THE MANNER FITTING ITS USE IN THE LANDSCAPE DESIGN.
1. DEAD WOOD OR SUCKERS AND BROKEN OR BADLY BRUISED BRANCHES SHALL BE REMOVED ; GENERAL TIPPING OF ALL BRANCHES IS NOT PERMITTED.
2. PRUNING SHALL BE DONE WITH CLEAN SHARP TOOLS.
3. IMMEDIATELY AFTER PLANTING OPERATIONS ARE COMPLETED, ALL TREE PITS SHALL BE COVERED WITH LAYER OF SPECIFIED MULCH THREE (3") INCHES IN DEPTH. THIS LIMIT OF SPECIFIED MULCH FOR TREES SHALL BE THE DIAMETER OF THE PLANT PIT. ALLOW A SPACE OF THREE (3") INCHES FROM TREE BARK TO THE MULCHED SURFACE.
Q. STEEL CURBING INSTALLATION:
1. CURBING SHALL BE ALIGNED AS INDICATED ON DRAWINGS.
2. ALL STEEL CURBING SHALL BE FREE OF KINKS OR ABRUPT BENDS.
3. TOP OF STEEL CURBING SHALL BE ONE (1") HIGHER THAN EXISTING GRADE.
4. STAKES ARE TO BE INSTALLED ON THE PLANTING BED SIDE OF THE CURBING, AS OPPOSED TO THE GRASS SIDE.
5. DO NOT INSTALL STEEL EDGING ALONG SIDEWALKS OR BACK OF CURBS.
6. CUT AN EDGE ON THE STEEL CURBING AT 45 DEGREE ANGLE WHERE EDGING MEETS PAVING EDGES. FILE EDGES CUT TO BE ROUNDED, SMOOTH AND NOT SHARP.

3.3 CLEANUP AND FINAL ACCEPTANCE

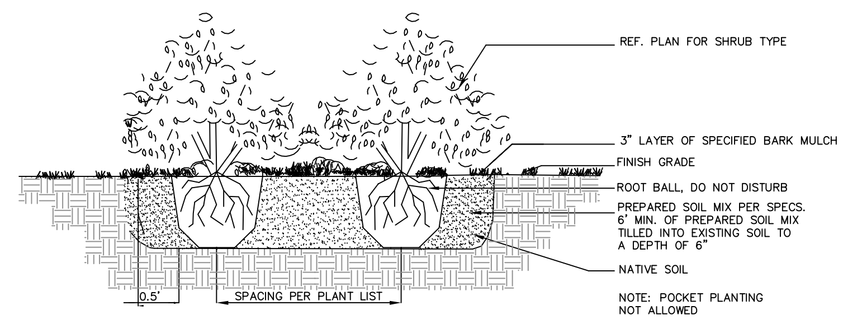
A. CLEANING: DURING THE WORK, THE PREMISES SHALL BE KEPT NEAT AND ORDERLY AT ALL TIMES. STORAGE AREA FOR ALL MATERIALS SHALL BE ORGANIZED THAT THEY, TOO, ARE NEAT AND ORDERLY. ALL TRASH AND DEBRIS SHALL BE REMOVED FROM SITE AS WORK PROGRESSES. KEEP PAVED AREAS CLEAN BY SWEEPING OR HOSING AT END OF EACH DAY'S WORK.
1. ON LEED APPLIED FOR OR PROJECTS TO BE LEED CERTIFIED COORDINATE WITH THE GENERAL CONTRACTOR FOR ACCEPTABLE DISPOSAL OF TRASH, WASTE, SOILS, PLANT MATERIALS, FERTILIZERS SO AS RECYCLE CREDITS MAYBE TRACKED BY VOLUME.



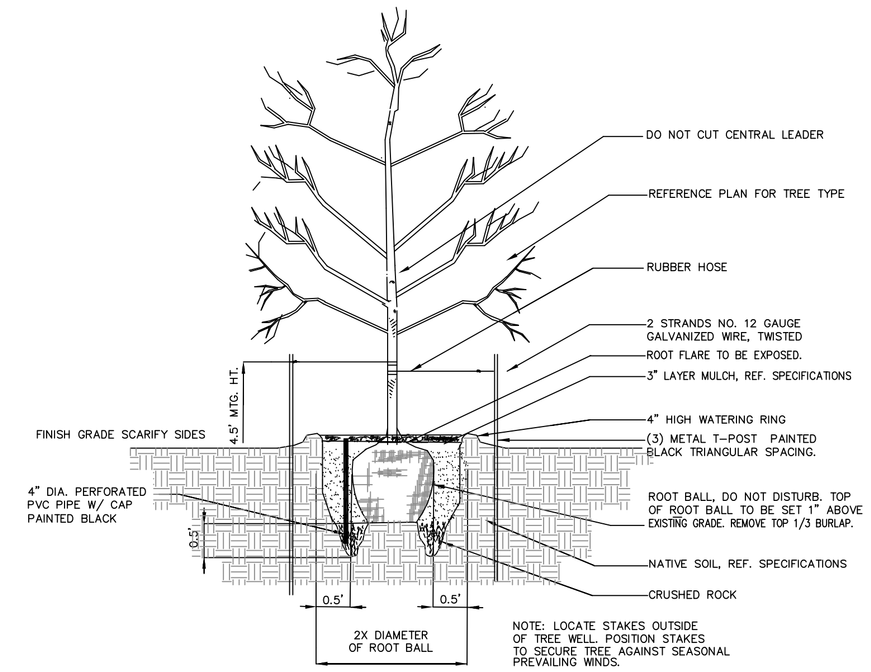

1 SIDEWALK/MULCH DETAIL
NOT TO SCALE




2 STEEL EDGING DETAIL
NOT TO SCALE




3 SHRUB/GROUNDCOVER DETAIL
NOT TO SCALE




4 TREE P