SECTION 02900

LANDSCAPE FINISH GRADING,
PLANTING, AND ESTABLISHMENT PERIOD

PART 1 GENERAL

1.1
DESCRIPTION

1.1.1
THE GENERAL AND SPECIAL CONDITIONS OF THE CONTRACT APPLY TO THE WORK OF THIS SECTION THE SAME AS THOUGH WRITTEN HEREIN.

1.2
SCOPE OF WORK

1.2.1
THE WORK INCLUDES ALL LABOR, MATERIALS, AND EQUIPMENT TO PERFORM THE WORK HEREIN AND AS REQUIRED TO COMPLETE THE CONTRACT PROPERLY.

1.2.2
THE LANDSCAPE CONTRACTOR SHALL ADEQUATELY PROTECT THE WORK, ADJACENT PROPERTY, AND THE PUBLIC, AND SHALL BE RESPONSIBLE FOR ANY DAMAGE, INJURY, AND LOSS DUE TO HIS ACTS OR NEGLECT. LANDSCAPE CONTRACTOR SHALL CONTINUOUSLY PROTECT AND MAINTAIN ALL AREAS INCLUDED IN THE CONTRACT DURING THE PROGRESS OF THE WORK, THROUGH THE ESTABLISHMENT PERIOD, AND UNTIL FINAL ACCEPTANCE OF THE WORK. LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR ALL REPAIRS OR REPLACEMENTS CAUSED BY ACTS OF VANDALISM, INCLUDING REMOVAL OF GRAFFITI, AND/OR REFINISHING, AS REQUIRED.

1.2.3
THE LANDSCAPE ARCHITECT SHALL BE NOTIFIED OF ANY DISCREPANCIES BETWEEN THE RECOMMENDATIONS ON THE CONTRACT DOCUMENTS AND SITE CONDITIONS.

1.2.4
THE LANDSCAPE CONTRACTOR SHALL EMPLOY ONLY CERTIFIED LANDSCAPE TECHNICIANS (CLT'S) REGISTERED WITH THE CALIFORNIA LANDSCAPE CONTRACTORS ASSOCIATION (CLCA), AS FOREMEN FOR ALL PLANTING INSTALLATION WORK.

1.3
RELATED WORK

1.3.1
SECTION 02811 – IRRIGATION SYSTEM

1.3.2
SECTION 2.10 – TREE ROOT BARRIERS

1.3.3
SECTION 4.1–4.3 – MAINTENANCE PERIOD

1.4
SUBMITTALS, TESTS, AND INSPECTIONS

1.4.1
SUBMIT SAMPLES AND/OR DESCRIPTIVE LITERATURE AND SPECIFICATIONS FOR THE FOLLOWING:

A. ORGANIC SOIL AMENDMENTS.

B. PRE–EMERGENT HERBICIDE(S).

C. ALL INORGANIC SOIL AMENDMENTS, FERTILIZERS, AND CHEMICALS.

D. ALL PLANT MATERIALS: TREES, SHRUBS, SOD, AND GROUND COVERS

E. ORGANIC AND INORGANIC MULCH MATERIALS.

F. HYDRO SEEDING MATERIALS AND SEEDS.

G. POTTERY AND OTHER LANDSCAPE FURNISHINGS CALLED FOR ON THE DRAWINGS.

1.4.1.2
ANY MATERIALS THAT DIFFER FROM THAT SPECIFIED, WHEN A BRAND NAME IS CALLED FOR ON THE DRAWINGS OR IN THESE SPECIFICATIONS.

1.4.2
LANDSCAPE CONTRACTOR SHALL SUBMIT TO THE LANDSCAPE ARCHITECT PHOTOCOPIES OF CURRENT CLT REGISTRATION FOR ALL FOREMEN PERFORMING WORK ON THIS PROJECT.

1.4.2.1
ANY SAMPLING, TESTING, OR INSPECTION COSTS OF MATERIAL ARE TO BE BORNE BY THE LANDSCAPE CONTRACTOR, AND COPIES OF INSPECTION CERTIFICATES, REQUIRED BY LAW, SHALL BE FURNISHED WITHOUT ADDITIONAL CHARGE.

1.4.2.2
SUBMIT, TO THE OWNER OR THE OWNER'S REPRESENTATIVE, ORIGINAL (NOT PHOTOCOPIED) DELIVERY TICKETS FOR ALL MATERIALS DELIVERED TO THE JOBSITE. IT IS THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR TO MAINTAIN COPIES OF TRIP TICKETS FOR HIS USE. THIS REQUIREMENT MUST BE SATISFIED PRIOR TO COMMENCEMENT OF THE ESTABLISHMENT PERIOD.

1.4.3
PLANT MATERIAL 15 GALLON AND LARGER SHALL BE APPROVED AND TAGGED AT THE SOURCE PRIOR TO DELIVERY. WHEN THIS IS NOT PRACTICAL, AND APPROVED BY THE LANDSCAPE ARCHITECT, PHOTOS SHALL BE SUBMITTED FOR APPROVAL. SUBMIT SOURCE FOR ALL 5 GALLON AND SMALLER PLANT MATERIALS. REGARDLESS OF WHICH METHOD IS USED, FINAL APPROVAL OF PLANT MATERIAL SHALL OCCUR AT THE SITE. ANY PLANT MATERIAL THAT IS NOT ACCEPTED SHALL BE IMMEDIATELY REMOVED FROM THE SITE AT LANDSCAPE CONTRACTOR'S EXPENSE.

PART 2 PRODUCTS

2.1
BOXED TREES, CONTAINER TREES, AND OTHER PLANT MATERIAL

2.1.1
NOMENCLATURE: SEE LIST OF PLANT MATERIALS ON LANDSCAPE PLANTING PLAN. PLANT SPECIES' NAMES SHALL BE PER 2003 EDITION OF SUNSET WESTERN GARDEN BOOK. BOTANICAL NAMES SHALL TAKE PRECEDENCE OVER COMMON NAMES.

2.1.2
CONDITIONS: PLANTS SHALL BE SYMMETRICAL, TYPICAL FOR VARIETY AND SPECIES, SOUND, HEALTHY, VIGOROUS, FREE FROM PLANT DISEASE, INSECT PESTS OR THEIR EGGS, EXCESSIVE ABRASIONS OR OTHER OBJECTIONABLE DISFIGUREMENTS, AND SHALL HAVE HEALTHY, NORMAL ROOT SYSTEMS, WELL–FILLING THEIR CONTAINERS, BUT NOT TO THE POINT OF BEING ROOT BOUND. TREE TRUNKS SHALL BE STURDY AND WELL HARDENED–OFF. PLANTS SHALL NOT BE PRUNED PRIOR TO DELIVERY EXCEPT AS AUTHORIZED BY THE LANDSCAPE ARCHITECT.

2.1.3
GROUNDCOVER PLANTS (ROOTED CUTTINGS) SHALL HAVE BEEN GROWN IN FLATS AND SHALL REMAIN IN THOSE FLATS UNTIL TIME FOR TRANSPLANTING. AT TIME OF TRANSPLANTING, THE FLAT SOIL SHALL CONTAIN SUFFICIENT MOISTURE SO THAT THE SOIL DOES NOT FALL APART WHEN LIFTING PLANTS FROM FLAT. EACH PLANT SHALL BE PLANTED WITH ITS PROPORTIONATE AMOUNT OF THE FLAT SOIL IN A MANNER THAT WILL ENSURE A MINIMUM OF DISTURBANCE TO THE ROOT SYSTEM. PLANTS SHALL BE FULLY DEVELOPED AND HARDENED OFF AND SHALL BE FILLING THE FLAT.

2.1.4
IN NO CASE SHALL TREES OR SHRUBS BE TOPPED OR PRUNED WITHIN 6 MONTHS PRIOR TO DELIVERY. PLANTS SHALL BE GROWN IN NURSERIES THAT HAVE BEEN INSPECTED BY THE STATE DEPARTMENT OF AGRICULTURE AND HAVE COMPLIED WITH ITS REGULATIONS.

2.1.5
IDENTIFICATION: PLANTS SHALL BE OF THE VARIETY AND SIZE SHOWN ON THE DRAWINGS, AND SHALL CONFORM TO THE REQUIREMENTS HEREIN. ONE OF EACH BUNDLE OR LOT SHALL BE TAGGED WITH PLANT NAME IN ACCORDANCE WITH RECOMMENDATIONS OF THE AMERICAN ASSOCIATION OF NURSERYMEN.

2.1.6
SUBSTITUTIONS: THE LANDSCAPE CONTRACTOR SHALL NOT SUBSTITUTE ANY PLANT MATERIAL WITHOUT AUTHORIZATION BY THE LANDSCAPE ARCHITECT. WITHIN 10 CALENDAR DAYS OF NOTICE TO PROCEED, LANDSCAPE CONTRACTOR SHALL SUBMIT COPIES OF ALL PAPERWORK TO THE LANDSCAPE ARCHITECT STATING LOCATION OF PLANT MATERIAL TO BE PURCHASED AND TO BE INSTALLED ON THIS PROJECT. WORK SHALL NOT PROCEED WITHOUT RECEIPT OF THIS PAPERWORK. SUBSTITUTIONS FOR THE INDICATED PLANT MATERIALS WILL BE PERMITTED PROVIDED THE

LANDSCAPE CONTRACTOR BEING AWARDED THE PROJECT NOTIFIED THE LANDSCAPE ARCHITECT OF LACK OF AVAILABILITY DURING THE BIDDING PROCESS. THE LANDSCAPE ARCHITECT MAY ALLOW THE REQUESTED SUBSTITUTIONS AS LONG AS THE SUBSTITUTIONS ARE MADE AT NO ADDITIONAL COST TO THE OWNER. EXCEPT FOR THE VARIATIONS SO AUTHORIZED, SUBSTITUTED PLANT MATERIALS SHALL CONFORM TO THE REQUIREMENTS OF THESE SPECIFICATIONS. IF ACCEPTED SUBSTITUTE MATERIALS ARE LESS VALUE THAN THOSE INDICATED OR SPECIFIED, THE CONTRACT PRICE WILL BE ADJUSTED IN ACCORDANCE WITH THE PROVISIONS OF THE CONTRACT. SHOULD THE LANDSCAPE CONTRACTOR FAIL TO PROCURE THE REQUIRED PLANT MATERIAL CALLED FOR IN THE DRAWINGS AFTER SUBMITTING THE PAPERWORK CALLED FOR ABOVE INDICATING THE PLANT MATERIAL WAS AVAILABLE AND SET ASIDE FOR THIS PROJECT, THE LANDSCAPE CONTRACTOR SHALL INSTALL THE NEXT SIZE UP AT NO ADDITIONAL COST TO THE OWNER.

2.1.7
CONTAINER PLANT INSPECTION AND REJECTION: ROOT CONDITION OF CONTAINER PLANTS WILL BE DETERMINED BY THE LANDSCAPE ARCHITECT THROUGH THE REMOVAL OF PLANTS FROM THEIR CONTAINERS OF AT LEAST TWO PLANTS BUT NOT MORE THAN 2% OF THE TOTAL NUMBER EACH SPECIES FROM EACH SOURCE AND EACH SIZE.

2.1.8
LANDSCAPE ARCHITECT WILL INSPECT TREES UPON DELIVERY. TREES AND/OR SHRUBS WILL BE REJECTED IF ANY ONE OF THE FOLLOWING CHARACTERISTICS ARE PRESENT:

A. ENLARGED CANKERS OR GALLS AT THE BASE OF THE TRUNK, JUST ABOVE THE SOIL LEVEL.

B. CROOKED TRUNKS.

C. SCARS OR TRUNK DAMAGE, BROKEN BRANCHES, ETC.

D. ASYMMETRICAL BRANCHING.

E. ROOT BOUND CONDITION.

F. ANY TREES THAT HAVE BEEN RECENTLY PRUNED BACK.

2.1.8.1
ALL TREES SHALL BE MATCHING IN SIZE AND SHAPE.

2.1.9
QUANTITIES: IN ALL CASES, PLANT MATERIAL SHALL BE FURNISHED AS NEEDED TO COMPLETE WORK AS INDICATED ON THE DRAWINGS, INCLUDING RESEEDING, REPLANTING, AND MAINTENANCE (REPLACEMENTS) DURING THE CONTRACT PERIOD. LANDSCAPE ARCHITECT IS NOT RESPONSIBLE FOR PLANT QUANTITIES SHOWN.

2.1.10
SIZES AND CALIPER: MINIMUM HEIGHT (ABOVE SOIL LEVEL), WIDTH (AVERAGE DIAMETER OF DRIP LINE), AND CALIPER (TREES ONLY, MEASURED AT 30" ABOVE THE SOIL LEVEL) OF PLANT MATERIALS SHALL BE AS NOTED IN THE LEGEND.

2.1.11 N/A

2.1.12
ALL PLANT MATERIAL SHALL BE ACCLIMATED TO THE SITE PRIOR TO DELIVERY TO THE SITE. DAMAGE OF ANY PLANT MATERIAL DUE TO THE LANDSCAPE CONTRACTOR'S FAILURE TO INSURE SUCH ACCLIMATIZATION SHALL BE REPLACED AT NO COST TO THE OWNER.

2.2
SOIL AMENDMENTS

2.2.1
ALL AREAS TO BE PLANTED AND IRRIGATED SHALL RECEIVE SOIL AMENDMENTS, EXCEPT WHERE SPECIFICALLY NOTED OTHERWISE ON THE DRAWINGS.

2.2.2
THE FOLLOWING SOIL AMENDMENTS ARE TO BE USED AS THE BASIS FOR BIDS. ONCE ALL SITE IMPROVEMENTS ARE IN PLACE AND APPROXIMATE FINISH GRADES ESTABLISHED, THE LANDSCAPE CONTRACTOR SHALL FURNISH TO THE LANDSCAPE ARCHITECT A SOILS REPORT MADE FROM THE SURFACE AND SUBSURFACE (18" BELOW GRADE) SOIL BY AN APPROVED AGRICULTURAL LAB. THE REPORT SHALL INCLUDE PH, N–P–K, SAR, ECE, BORON LEVELS, AND SOIL PARTICLE SIZE AND TEXTURAL EVALUATION. LANDSCAPE ARCHITECT SHALL REVIEW THIS REPORT PRIOR TO COMMENCEMENT OF SOIL PREPARATION OR PLANTING, AND RECOMMEND ADJUSTMENTS TO THE LANDSCAPE CONTRACTOR, IF REQUIRED. LOCATIONS OF SOIL TESTING SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT IN THE FIELD. A MINIMUM OF 5 (FIVE) SUCH TESTS SHALL BE PERFORMED BY THE LANDSCAPE CONTRACTOR.

2.2.2.1
SOIL PREPARATION FOR TURF AREAS, AMOUNT PER 1000 SQUARE FEET:

3 CU. YDS. SEA–SOIL, COMPOSTED KELP ORGANIC AMENDMENT (AVAILABLE FROM BUTLER'S MILL, SAN DIEGO, CA, (619)) OR APPROVED EQUAL

75 LBS. Tri–C HUMATE PLUS

25 LBS. 16–6–8 GRANULAR FERTILIZER

100 LBS. AGRICULTURAL GYPSUM

10 LBS. SOIL SULFUR

2.2.2.2
GENERAL SOIL PREPARATION FOR AREAS WHICH ARE LESS THAN 2:1 SLOPE ASPECT RATIO, AMOUNT PER 1000 SQUARE FEET:

4 CU. YDS. COMPOSTED ORGANIC SOIL AMENDMENT (PER SECTION 2.2.3).

75 LBS. HUMATE PLUS, (AVAILABLE FROM TRI–C ENTERPRISES, CHINO, CA, (800) 927–3311)

25 LBS. 16–6–8 GRANULAR FERTILIZER

100 LBS. AGRICULTURAL GYPSUM

10 LBS. SOIL SULFUR

2.2.2.3 N/A

2.2.3
COMPOSTED ORGANIC SOIL AMENDMENT

2.2.3.1
SHALL BE RECYC COMPOST SOIL CONDITIONER (AVAILABLE FROM RECYC, INC. 114 BUSINESS CENTER DRIVE, CORONA, CA 91720–1724, (919) 71–3929), OR APPROVED EQUAL.

– OR –

SHALL BE EARTHWISE ECO–HUMUS SOIL AMENDMENT (AVAILABLE FROM A.J. ECOLOGY INDUSTRIES, INC., RANCHO SANTA FE, CA, (619) 744–0942), OR APPROVED EQUAL.

2.2.3.2
PRODUCT SHALL CONSIST OF A BLEND OF SEWAGE SLUDGE, RECYCLED GARDEN WASTE, AND WOOD BY– PRODUCTS. IT SHALL BE PROPERLY CURED FOR A MINIMUM OF 150 DAYS, AND BE FREE FROM ANY TRASH, DELETERIOUS MATERIALS, AND/OR TOXIC CHEMICALS. PRODUCT SHALL BE NON–HAZARDOUS, AND CONFORM WITH US ENVIRONMENTAL PROTECTION AGENCY 40 CFR 503 CRITERIA FOR "CLASS A" PRODUCT. IT SHALL EXCEED STANDARDS AND SPECIFICATIONS FOR UNRESTRICTED APPLICATION AS A LANDSCAPING AND AGRICULTURAL SOIL AMENDMENT.

2.2.3.3
PRODUCT SHALL BE RICH FULLY COMPOSTED 100 % RECYCLED ORGANIC PRODUCT CONSISTING OF 35% DIGESTED, CENTRIFUGED, COMPOSTED BIO–SOLIDS PRODUCT, AND 65 % AGED WOOD FIBERS.

TOTAL NITROGEN 0.50%
(1) ORGANIC N 0.40%
(2) AMMONIUM / N 0.09%
(3) NITRATE N 0.01%
PHOSPHORUS (AS P205)8,684PPM
POTASSIUM (AS K20) 5,485PPM
CALCIUM 25,783PPM
COPPER 195PPM
IRON 17,562PPM
MAGNESIUM 4,413PPM
MANGANESE 283PPM
SULFUR 4,927PPM
ZINC 362PPM
BORON LESS THAN 1.00PPM
CARBON TO NITROGEN RATIO 20:01
ORGANIC MATTER (DRY WT BASIS) 40%
ECE LESS THAN 10.50 MMHOS/CMPH RANGE 7.2–7.8
MOISTURE CONTENT 45–50%
BULK DENSITY1,100 LBS. PER CU. YD.

2.2.3.4
FOR EACH PRODUCT TO BE USED, LANDSCAPE CONTRACTOR SHALL SUBMIT A SAMPLE AND SPECIFICATION SHEET, INCLUDING PARTICLE SIZE EVALUATION, TOTAL N (NITROGEN), NH4–N (AMMONIA), NO3–N (NITRATE), ECE, PH, MICRO NUTRIENTS, AND METALS. GUARANTEED ANALYSIS SHALL CONFORM TO THE FOLLOWING, WITH A ± 10% VARIANCE ALLOWABLE.

2.2.3.5
PARTICLE SIZE SHALL BE 100 % PASSING A 1/2" SCREEN.

2.2.4
THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR CORRECTION OF SOIL PH, NUTRIENT LEVELS, AND CHEMICAL BALANCE UNTIL FINAL ACCEPTANCE BY THE OWNER. THE LANDSCAPE CONTRACTOR SHALL TAKE SOIL SAMPLES FROM FIVE SEPARATE LOCATIONS AS DIRECTED BY THE LANDSCAPE ARCHITECT, AND PREPARE SOILS REPORTS BY A TESTING SERVICE APPROVED BY THE LANDSCAPE ARCHITECT. PREPARE SOILS REPORTS BEFORE PREPARING SOIL, AT THE START OF THE ESTABLISHMENT PERIOD, ON THE 45TH DAY OF ESTABLISHMENT PERIOD, AND ON THE 80TH DAY OF ESTABLISHMENT PERIOD. CORRECT ANY DEFICIENCIES IDENTIFIED AT TESTING INTERVALS BY AMENDING OR TOP DRESSING AS REQUIRED, AT NO ADDITIONAL COST TO THE OWNER.

2.3
SOD

2.3.1
SOD SHALL BE AS SPECIFIED IN DRAWINGS.

2.3.2
SOD SHALL BE MACHINE CUT AT A UNIFORM SOIL THICKNESS OF 5/8" PLUS OR MINUS 1/4". MEASUREMENTS FOR THICKNESS SHALL EXCLUDE TOP GROWTH AND THATCH. INDIVIDUAL PIECES OF SOD SHALL BE CUT TO THE SUPPLIER'S STANDARD WIDTH AND LENGTH. MAXIMUM ALLOWABLE DEVIATION FROM STANDARD WIDTH AND LENGTHS SHALL BE 2%. BROKEN ROLLS OR SLABS AND TORN OR UNEVEN ENDS WILL NOT BE ACCEPTABLE. STANDARD SIZE SECTIONS OF SOD SHALL BE STRONG ENOUGH TO SUPPORT THEIR OWN WEIGHT AND RETAIN THEIR SIZE AND SHAPE WHEN SUSPENDED VERTICALLY FROM A FIRM GRASP ON THE UPPER 10% OF THE SECTION.

2.3.3
INSTALL SOD GREEN SIDE UP.

2.4
ARTIFICIAL TURF

2.4.1 N/A

2.4.2 N/A

2.4.3 N/A

2.5 N/A

2.5.1 N/A

2.6
HEADER MATERIAL

2.6.1
CONCRETE HEADERS AND MOW CURBS SHALL BE INSTALLED ACCORDING TO THE DETAILS AND IN STRICT ADHERENCE TO THE DIMENSIONING PLAN. FORMS FOR THE ABOVE SHALL BE STAKED AT 4 FEET MAXIMUM INTERVALS AND ALL FORMING SHALL BE APPROVED IN THE FIELD BY THE LANDSCAPE ARCHITECT PRIOR TO POURING CONCRETE. MOW CURBS MAY BE EXTRUDED IF THE LANDSCAPE ARCHITECT APPROVES SUCH METHODS IN ADVANCE.

2.6.2
FORMING STAKES SHALL BE AT LEAST ONE INCH BY TWO INCHES ACTUAL DIMENSIONS, OF LENGTH NECESSARY TO EXTEND INTO SOLID EARTH A MINIMUM OF TWELVE (12) INCHES.

2.7
TREE STAKES

2.7.1
TREE STAKES SHALL BE 2" IN DIAMETER BY 8' OR 10' LONG NEW PINE LODGE POLES TREATED WITH COPPER NAPTHENATE, PER DETAILS.

2.7.2
TREE STAKES FOR 30" BOX OR LARGER TREES SHALL BE 3" IN DIAMETER.

2.8
TIES

2.8.1
TREE TIES SHALL BE "CINCH–TIE" AS MANUFACTURED BY V.I.T. PRODUCTS, ESCONDIDO, CA (800) 729–1314, OR APPROVED EQUAL.

2.8.2
USE 30" LONG TIES FOR 5 & 15 GALLON TREES, 36" LONG FOR 24" BOX AND LARGER.

2.8.3
USE 1–1/4" OR 1–1/2" LONG GALVANIZED ROOFING NAILS TO SECURE TIES.

2.8.4
ESPALIER TO WOOD SURFACE: GALVANIZED 1" STAPLE AND 1/2" WIDE "TYE–ALL" TIE.

2.8.5
ESPALIER TO CONCRETE OR STUCCO SURFACE: 7/8" DIAMETER ALUMINUM FLAT WASHER OR CLEAR PLASTIC "BUTTON" WITH WIRE HOOK SECURED TO SURFACE WITH G.E. CLEAR SILICONE RUBBER AND 1/2" WIDE "TYE–ALL" TIE.

2.9
TREE GUYING MATERIALS

2.9.1
ANCHORS SHALL BE DUCKBILL, EARTH ANCHOR SYSTEMS, AS MANUFACTURED BY FORESIGHT PRODUCTS, INC., OR APPROVED EQUAL. CABLE SHALL BE NON–COATED, STAINLESS STEEL BRAIDED CABLE, SIZED PER MANUFACTURER'S RECOMMENDATIONS.

2.9.2
ANCHOR
3.3 AND CABLE SIZING SHALL BE PER THE FOLLOWING SCHEDULE: TREE CALIPER ANCHOR CABLE SIZE RATED CAPACITY UP TO 3", USE A #40 AND 1/16th INCH CABLE WITH A RATED CAPACITY OF "300 LBS. 3" TO 6", USE A #68 AND 1/8th INCH CABLE AND WITH A RATED CAPACITY OF 1,100 LBS. 6" TO 11", USE A #88 AND 3/16th INCH CABLE AND WITH A RATED CAPACITY OF 3,000 LBS.

2.9.3
HOSE CABLE GUARDS SHALL BE NEW 5/8" RUBBER, BROWN OR RED.

2.9.4
CABLE SLEEVES SHALL BE NEW 1/2" WHITE SCHEDULE 40 PVC PIPE. CUT TO LENGTH PROVIDED BY MANUFACTURES RECOMMENDATIONS.

2.9.5
CABLE CLAMPS SHALL BE HOT DIP GALVANIZED. WEDGED FITTINGS ARE NOT ALLOWED, EXCEPT AT ANCHOR.

2.10
ROOT BARRIERS

2.10.1
ROOT BARRIERS SHALL BE AS CALLED FOR ON PLANS AND DETAILS.

2.10.2
THE CONTRACTOR SHALL FURNISH AND INSTALL TREE ROOT BARRIERS AS SPECIFIED. THE TREE ROOT BARRIERS SHALL BE PRODUCT # UB 18–2 AS MANUFACTURED BY DEEP ROOT PARTNERS, L.P., 81 LANGTON ST. #4, SAN FRANCISCO, CA (800–458–7668),OR APPROVED EQUAL. THE BARRIER SHALL BE BLACK, INJECTION MOLDED PANELS, OF .080" (2.03MM) WALL THICKNESS IN MODULES 24" (61CM) LONG BY 18" (46CM) DEEP; MANUFACTURED WITH A MINIMUM 50% POST CONSUMER RECYCLED POLYPROPYLENE PLASTIC WITH ADDED ULTRAVIOLET INHIBITORS; RECYCLABLE.

EACH PANEL SHALL HAVE: NOT LESS THAN 4 MOLDED INTEGRAL VERTICAL ROOT DEFLECTING RIBS OF AT LEAST 0.06"(1.52MM) THICKNESS PROTRUDING 1/2"(12.7MM) AT 90° FROM INTERIOR OF THE BARRIER PANEL, SPACED 6"(15.24MM) APART.

A DOUBLE TOP EDGE CONSISTING OF TWO PARALLEL, INTEGRAL, HORIZONTAL RIBS AT THE TOP OF THE PANEL OF A MINIMUM 0.06"(1.52MM) THICKNESS 3/8"(9.53MM) WIDE AND 1/4"(6.35MM) APART WITH THE LOWER RIB ATTACHED TO THE VERTICAL ROOT DEFLECTING RIBS.

A MINIMUM OF 9 ANTI–LIFT GROUND LOCK TABS CONSISTING OF INTEGRAL HORIZONTAL RIDGES OF A MINIMUM 0.06"(1.52MM) THICKNESS IN THE SHAPE OF A SEGMENT OF A CIRCLE, THE 2 1/4"(57MM) CHORD OF THE SEGMENT JOINING THE PANEL WALL AND THE SEGMENT, PROTRUDING 3/8" (9.53MM) FROM THE PANEL. THE NINE GROUND LOCKS ON EACH PANEL SHALL BE ABOUT EQUALLY SPACED BETWEEN EACH OF THE VERTICAL ROOT DEFLECTING RIBS (3 BETWEEN EACH SET OF RIBS, SEE MANUFACTURERS SPECIFICATIONS).

AN INTEGRATED ZIPPER JOINING SYSTEM PROVIDING FOR INSTANT ASSEMBLY BY SLIDING ONE PANEL INTO ANOTHER.

2.11
IMPORT SOIL OR TOPSOIL

2.11.1
IMPORT SOIL SHALL BE CLASS A TOPSOIL NATURAL, FRIABLE, WELL–DRAINING SOIL. PROVIDE SOIL FREE FROM SUBSOIL, BRUSH, OBJECTIONABLE WEEDS, SEEDS, ROCKS, ORGANIC OR INORGANIC DEBRIS, SILT, AND CLAY. THE SOIL SHALL BE FREE OF ANY TOXIC SUBSTANCE, ORGANIC OR INORGANIC, SOIL STERILANTS, SALTS, AND NO SOIL REMOVED FROM ROAD BED EXCAVATIONS.

2.11.2
THE LANDSCAPE CONTRACTOR SHALL FURNISH, UPON THE REQUEST OF THE LANDSCAPEARCHITECT, A SOILS REPORT MADE FORM THE INTENDED IMPORT BY AN APPROVED AGRICULTURAL LAB. THE REPORT SHALL INCLUDE PH, N–P–K, SAR, MINERALS, MICRO–NUTRIENTS, ECE, BORON LEVELS, SOIL PARTICLE SIZE, AND TEXTURAL ELEVATION. SOIL IMPORTED TO SITE AND FOUND TO BE UNSUITABLE BY THE LANDSCAPE ARCHITECT SHALL BE REMOVED FROM THE SITE AND REPLACED WITH AN APPROVED SOIL AT THE LANDSCAPE CONTRACTOR'S EXPENSE. THE LANDSCAPE CONTRACTOR SHALL PAY ALL EXPENSES FOR SOIL TESTING OF IMPORT MATERIALS.

2.12
LIGHT WEIGHT SOIL FOR PLANTERS AND POTS

2.12.1
A–1–87 LIGHTWEIGHT SOIL, A LIGHTWEIGHT SOIL MIXTURE, AVAILABLE AT A–1 SOILS, SAN DIEGO, (619) 566–2000, OR EQUIVALENT. SOIL BLEND OF THE FOLLOWING COMPOSITION SHALL BE USED FOR IMPORT SOIL TO FILL RAISED PLANTERS AND POTS. SOIL SHALL BE PREMIXED BY MACHINE BLENDER PRIOR TO DELIVERY TO SITE: PH 6.8 – 7.2 EcE 1.7 – 2.0 MMHOS/CM BULK DENSITY (AT SATURATION) 86 LBS/CU. FT.

2.12.2
THE COMPONENTS OF THIS MIXTURE SHALL BE LONG–LASTING, THEREBY MINIMIZING UNDESIRABLE SHRINKAGE AND SETTLING WHICH ARE OFTEN FOUND WITH PRODUCTS CONTAINING RAPIDLY DECOMPOSING COMPONENTS.

2.12.3
THE MIX SHALL CONTAIN A LONG–LASTING FORM OF IRON AND A NON–IONIC WETTING AGENT.

2.13
ORGANIC MULCH MATERIAL

2.13.1
SHALL BE AS SPECIFIED IN DRAWINGS. CONTRACTOR TO PROVIDE 1 CU. FT. SAMPLE, NAME, AND CONTACT INFORMATION TO LANDSCAPE ARCHITECT FOR APPROVAL.

2.13.2
MULCH SHALL CONSIST OF 100% RECYCLED ABOVE GROUND TREE PRODUCTS. MULCH SHALL CONTAIN NO DEMOLITION WOOD WASTE, GRASS, WEED SEED, YUCCA, PALM, BAMBOO, OR OTHER SUCCULENTS OR CONTAMINANTS. MULCH SHALL BE NITROGEN STABILIZED AND SHALL CONTAIN NO TRASH, HAZARDOUS WASTE, OR TOXIC MATERIALS.

2.13.3
MULCH SHALL BE GROUND AND SCREENED TO PRODUCE A 3/8" TO 3" PARTICLE SIZE.

2.14
PRE–EMERGENT HERBICIDE (SHRUB AND PLANTED GROUNDCOVER AREAS ONLY)

2.14.1
PRE–EMERGENT HERBICIDES SHALL BE WETTABLE POWDER OR GRANULAR TYPE.

2.14.2
SELECT PRE–EMERGENT HERBICIDE APPROPRIATE TO SITE AREA, SOIL TYPE, INDIGENOUS WEEDS TO BE CONTROLLED, AND TYPE OF GROUND COVER TO BE PLANTED.

2.14.3
DO NOT USE PRE–EMERGENT HERBICIDES IN AREAS TO BE HYDROSEEDED OR STOLONIZED.

2.14.4
FOLLOW ALL MANUFACTURER'S PRECAUTIONS AND LABEL INSTRUCTIONS. COMPLY WITH ALL LOCAL JURISDICTIONAL RESTRICTIONS AND ORDINANCES.

2.15
TRI–C MYCO PAKS

2.15.1
PAKS SHALL BE "TRI–C MYCO" AS DISTRIBUTED BY TRI–C ENTERPRISES, LLC @ 800–927–3311

2.15.2
TRI–C MYCO PAKS 7 GRAM

PART 3 EXECUTION

3.1
SCHEDULING

3.1.1
INSPECTION

3.1.1.1
PRIOR TO WORK OF THIS SECTION, CAREFULLY INSPECT PREVIOUSLY INSTALLED WORK. VERIFY ALL SUCH WORK IS COMPLETE TO THE POINT WHERE THIS INSTALLATION MAY PROPERLY COMMENCE.

3.1.1.2
VERIFY THAT WORK OF THIS SECTION MAY BE INSTALLED IN STRICT ACCORDANCE WITH THE ORIGINAL DESIGN, ALL PERTINENT CODES AND REGULATIONS, AND ALL PERTINENT PORTIONS OF THE REFERENCED STANDARDS.

3.1.1.3
DO NOT PROCEED WITH INSTALLATION IN AREAS OF DISCREPANCY UNTIL ALL SUCH DISCREPANCIES HAVE BEEN FULLY RESOLVED.

3.1.2
PLANTING OPERATIONS SHALL NOT COMMENCE UNTIL COMPLETION OF ALL CONSTRUCTION WORK, GRADING, SOIL PREPARATION, WEED CONTROL, AND SPRINKLER INSTALLATION.

3.2
SOIL PREPARATION

3.2.1
FOR AREAS TO RECEIVE HYDROSEEDING, SOD, STOLONS, OR FLATTED GROUNDCOVERS ONLY: IRRIGATE SITE NORMALLY FOR TWO WEEKS TO GERMINATE WEEDS. APPLY CONTACT HERBICIDE PER MANUFACTURER. REPEAT PROCESS IF REQUIRED BY LANDSCAPE ARCHITECT.

3.2.2
RIP IN TWO DIRECTIONS, ALL AREAS TO RECEIVE SOIL AMENDMENTS TO A MINIMUM DEPTH OF 12 INCHES. ROTOTILL TOP 6" OF SOIL TO A LOOSE AND FRIABLE CONSISTENCY. APPLY SOIL AMENDMENTS AS SPECIFIED, EVENLY AND AT THE SPECIFIED APPLICATION RATES.

3.2.3
FINISH GRADE TO CONTOURS AND SPOT ELEVATIONS SHOWN ON DRAWINGS.

3.2.4
AT TIME OF PLANTING, TOP 3" OF SOIL IN ALL AREAS TO BE PLANTED OR SEEDED SHALL BE FREE OF STONES, STUMPS, ROOTS, OR OTHER DELETERIOUS MATTER 1" IN DIAMETER OR LARGER AND SHALL BE FREE FROM ALL WIRE, PLASTER, OR SIMILAR OBJECTS THAT WOULD BE A POTENTIAL HAZARD OR HINDRANCE TO PLANTING OR MAINTENANCE.

3.3
LANDSCAPE FINISH GRADING

3.3.1
FINISH GRADING AFTER SOIL PREPARATION SHALL ESTABLISH FINAL FLOW LINES AND GRADIENTS FOR UNIFORM WATER DRAINAGE. FLOW LINES AND GRADIENTS SHALL BE ESTABLISHED FROM THE HIGH POINT TO THE DRAINAGE OUTLET OR AN INLET STRUCTURE.

MICHAEL HOLMES No. 5185

CALL:1-800-227-2600

PINNACLE Civil Engineering, Inc.
2161 Saturn Court, Bakersfield, CA 93308
Phone: (661) 869-0184 Fax: (661) 377-0076

MICHAEL HOLMES LA 5185 EXP. 4/30/09

REVISIONS	DATE
DELETED NORTH PORTION OF SITE SPECIFIED TREES AND IRRIGATION COMPONENTS	7-14-09

LANDSCAPE SPECIFICATIONS
BCSD–WAYSIDE ELEMENTARY
LANDSCAPING SPECIFICATIONS
BAKERSFIELD, CALIFORNIA

JOB No.: 07-320
DWG NO.: 07-320GRBM
DATE: 04/07/08
DRAWN BY: MH
CHECKED BY: MH
SHEET 2 OF 7 SHEETS