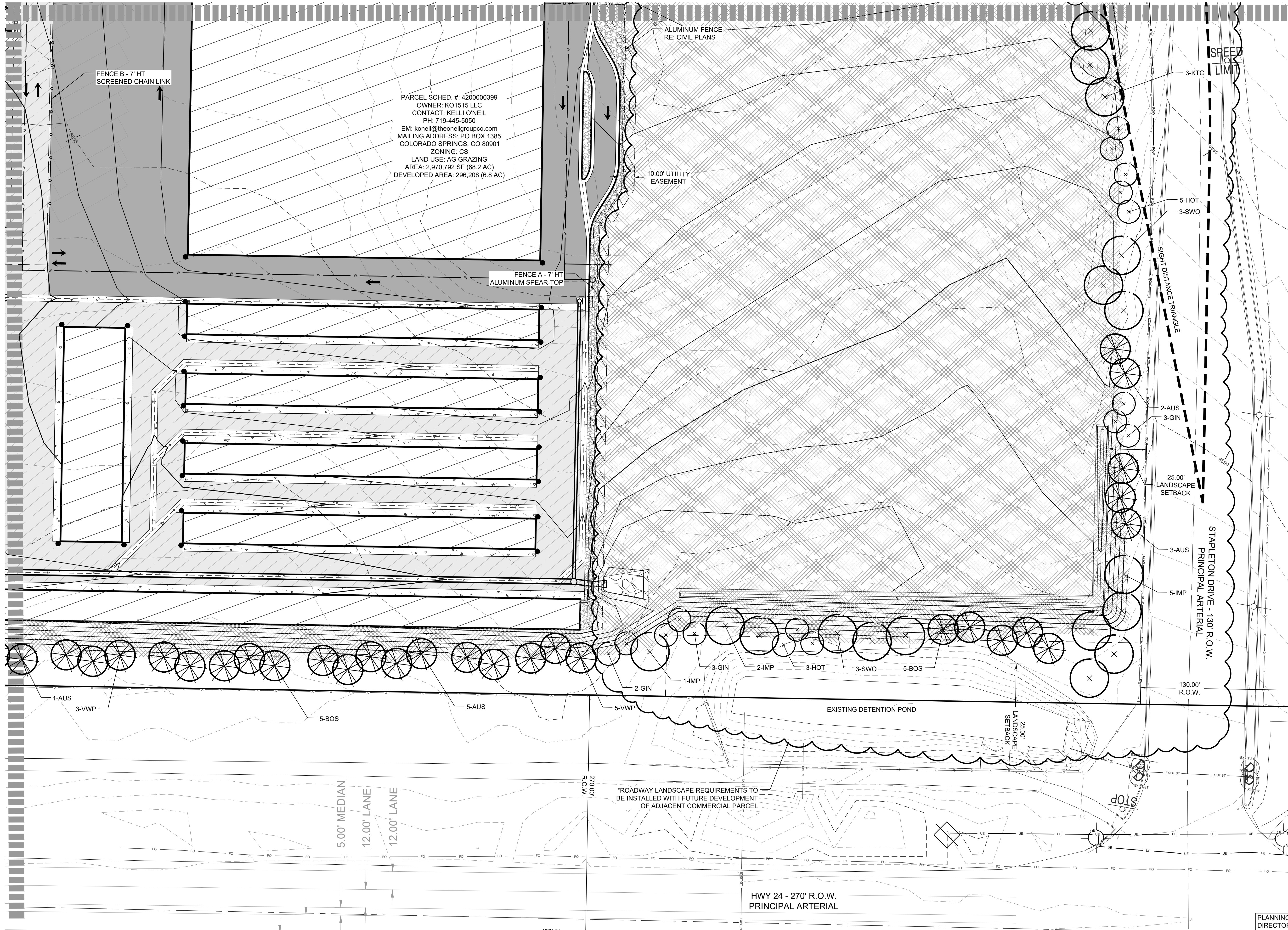




SEE SHEET LS3



- LEGEND**
- DECIDUOUS TREE
  - EVERGREEN TREE
  - ORNAMENTAL TREE
  - DECIDUOUS SHRUB
  - STEEL EDGER
  - ALL PURPOSE LOW GROW SEED MIX
  - ALL PURPOSE SEED MIX
  - 1 1/2" RIVER ROCK MULCH

PARCEL SCHED. #: 420000399  
 OWNER: KO1515 LLC  
 CONTACT: KELLY ONEIL  
 PH: 719-445-5050  
 EM: koneil@theonelgroupco.com  
 MAILING ADDRESS: PO BOX 1385  
 COLORADO SPRINGS, CO 80901  
 ZONING: CS  
 LAND USE: AG GRAZING  
 AREA: 2,970,792 SF (68.2 AC)  
 DEVELOPED AREA: 296,208 (6.8 AC)

\*ROADWAY LANDSCAPE REQUIREMENTS TO BE INSTALLED WITH FUTURE DEVELOPMENT OF ADJACENT COMMERCIAL PARCEL

\* ROADWAY LANDSCAPE REQUIREMENTS, CLOUDED ON THE LANDSCAPE PLAN OF THIS SUBMITTAL, SHALL BE INSTALLED WITH THE FUTURE DEVELOPMENT OF THE COMMERCIAL PARCEL ADJACENT TO THE SELF-STORAGE SITE.

1 **LANDSCAPE PLAN**  
 LS2 SCALE: 1" = 30'-0"

PLANNING AND COMMUNITY DEVELOPMENT  
 DIRECTOR APPROVAL:  
 \_\_\_\_\_  
 DIRECTOR DATE

PCD FILE NO: PPR2347

**SMH CONSULTANTS**  
 www.smhconsultants.com  
 Civil Engineering • Land Surveying  
 Landscape Architecture  
 Manhattan, KS - HQ  
 (785) 776-0541  
 Dodge City, KS  
 (620) 255-1952  
 Kansas City  
 (913) 444-9615  
 Colorado Springs, CO  
 (719) 465-2145

**4-WAY COMMERCIAL**  
 CONSTRUCTION DOCUMENTS  
 EL PASO COUNTY, CO

LANDSCAPE PLANS

REVISION DATE	REVISION DESCRIPTION (DESCRIPTION)
00/00/00	

NORTH

30' 15' 0' 30'  
 SCALE: 1" = 30'-0"

PROJECT #: 2412-0471  
 CHECKED BY: KML  
 DRAWN BY: KML

DATE: 06/11/2026

SHEET # **LS2**

TOTAL SHEETS 6

PARCEL SCHED. # 420000399  
OWNER: KO1515 LLC  
CONTACT: KELLI O'NEIL  
PH: 719-445-5050  
EM: koneil@theoneilgroupco.com  
MAILING ADDRESS: PO BOX 1385  
COLORADO SPRINGS, CO 80901  
ZONING: CS  
LAND USE: AG GRAZING  
AREA: 2,970,792 SF (68.2 AC)  
DEVELOPED AREA: 296,208 (6.8 AC)

PARCEL SCHED. # 420000399  
OWNER: KO1515 LLC  
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ZONING: CS  
LAND USE: AG GRAZING  
AREA: 2,970,792 SF (68.2 AC)  
DEVELOPED AREA: 296,208 (6.8 AC)

**LEGEND**

- DECIDUOUS TREE
- EVERGREEN TREE
- ORNAMENTAL TREE
- DECIDUOUS SHRUB
- STEEL EDGER
- ALL PURPOSE LOW GROW SEED MIX
- ALL PURPOSE SEED MIX
- 1 1/2" RIVER ROCK MULCH

\* ROADWAY LANDSCAPE REQUIREMENTS, CLOUDED ON THE LANDSCAPE PLAN OF THIS SUBMITTAL, SHALL BE INSTALLED WITH THE FUTURE DEVELOPMENT OF THE COMMERCIAL PARCEL ADJACENT TO THE SELF-STORAGE SITE.

SEE SHEET LS4

SEE SHEET LS2

LANDSCAPE CALCULATIONS

**1 LANDSCAPE PLAN**  
LS3 SCALE: 1" = 30'-0"

**EL PASO COUNTY ALL PURPOSE SEED MIX**

COMMON NAME	SCIENTIFIC NAME	GROWTH SEASON/FORM	% OF MIX	POUNDS PLS *IRRIGATED BROADCAST *IRRIGATED HYDROSEED (80 SEEDS/SF)	POUNDS PLS *NON-IRRIGATED BROADCAST *NON-IRRIGATED HYDROSEED *IRRIGATED DRILLED (40 SEEDS/SF)	POUNDS PLS *NON-IRRIGATED DRILLED (20 SEEDS/SF)
BIG BLUESTEM	ANDROPOGON GERARDII	WARM, SOD	20	4.4	2.2	1.1
BLUE GRAMA	BOUTELOUA GRACILIS	WARM, BUNCH	10	0.5	0.25	0.13
GREEN NEEDLEGRASS	NASSELLA VIRIDULA	COOL, BUNCH	10	2.0	1.0	0.5
WESTERN WHEATGRASS	PASCOPIRUM SMITHII	COOL, SOD	20	6.4	3.2	1.6
SIDEOATS GRAMA	BOUTELOUA CURTIPENDULA	WARM, BUNCH	10	2.0	1.0	0.5
SWITCHGRASS	PANICUM VIRGATUM	WARM, BUNCH/SOD	10	0.8	0.4	0.2
PRAIRIE SANDREED	CALIMOVILFA LONGIFOLIA	WARM, SOD	10	1.2	0.6	0.3
YELLOW INDIANGRASS	SORGHASTRUM NUTANS	WARM, SOD	10	2.0	1.0	0.5
SEED RATE (LBS PLS/ACRE)				19.3	9.7	4.8

**EL PASO COUNTY ALL PURPOSE LOW GROW SEED MIX**

COMMON NAME	SCIENTIFIC NAME	GROWTH SEASON/FORM	% OF MIX	POUNDS PLS *IRRIGATED BROADCAST *IRRIGATED HYDROSEED (80 SEEDS/SF)	POUNDS PLS *NON-IRRIGATED BROADCAST *NON-IRRIGATED HYDROSEED *IRRIGATED DRILLED (40 SEEDS/SF)	POUNDS PLS *NON-IRRIGATED DRILLED (20 SEEDS/SF)
BUFFALOGRASS	BUCHLOE DACTYLOIDES	WARM, SOD	25	9.6	4.8	2.4
BLUE GRAMA	BOUTELOUA GRACILIS	WARM, BUNCH	20	10.8	5.4	2.7
GREEN NEEDLEGRASS	NASSELLA VIRIDULA	COOL, BUNCH	5	3.2	1.6	0.8
WESTERN WHEATGRASS	PASCOPIRUM SMITHII	COOL, SOD	20	12.0	6.0	3.0
SIDEOATS GRAMA	BOUTELOUA CURTIPENDULA	WARM, BUNCH	29	5.6	2.8	1.4
SAND DROPSEED	SPOROBOLUS CRYPTANDRUS	WARM, BUNCH	1	0.8	0.4	0.2
SEED RATE (LBS PLS/ACRE)				42.0	21.0	10.3

LANDSCAPE CATEGORIES	SQUARE FEET/ LINEAL FEET OF FRONTAGE	REQUIREMENT	TOTAL QUANTITY REQUIRED	TOTAL QUANTITY PROVIDED
HWY 24	894 L.F.	1 TREE / 20 L.F.	44.7 TREES	45 TREES
STAPLETON DRIVE	642 L.F.	1 TREE / 20 L.F.	32.1 TREES	35 TREES
DUMONT DRIVE	720 L.F.	1 TREE / 30 L.F.	24 TREES	24 TREES
SW PROPERTY LINE	395 L.F.	7' FENCE OR 7' LANDSCAPING	7' LANDSCAPE	7' LANDSCAPE 33 TREES 36 SHRUBS
PARKING LOT	9 PARKING SPACES	1 TREE/15 PARKING SPACES	0 TREES	0 TREES
LOT LANDSCAPE AREA	2,198,261 S.F.	5% OF SITE TO BE LANDSCAPED	109,914 S.F.	1,944,846 S.F.
LOT LANDSCAPE TREES	109,914 S.F.	1 TREE/ 500 REQUIRED S.F.	219.9 TREES	137 TREES

**PLANT LIST**

DECIDUOUS TREES	DECIDUOUS SHRUBS
5 IMP IMPERIAL HONEYLOCUST Gleditsia triacanthos inermis 'Imperial'	34 TES TIGER EYES SUMAC Rhus typhina 'Balltiger'
7 AUS AUSTRIAN PINE Pinus nigra	6' HT. SINGLE TRUNK
8 BOS BOSNIAN PINE Pinus heldreichii var. leucodermis	6' HT. SINGLE TRUNK
27 CLJ COLOGREEN JUNIPER Juniperus scopulorum 'Cologreen'	6' HT. SINGLE TRUNK
11 VWP VANDERWOLF PINE Pinus flexilis 'Vanderwolf's Pyramid'	6' HT. SINGLE TRUNK
6 GIN FLAME AMUR MAPLE Acer ginnala 'Flame'	1" CAL. SINGLE TRUNK
6 HOT HOT WINGS MAPLE Acer tataricum	1" CAL. SINGLE TRUNK

PLANNING AND COMMUNITY DEVELOPMENT  
DIRECTOR APPROVAL:

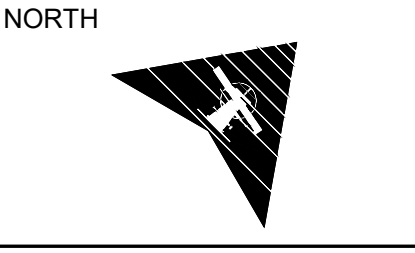
\_\_\_\_\_  
DIRECTOR

\_\_\_\_\_  
DATE

PCD FILE NO: PPR2347

REVISION DESCRIPTION (DESCRIPTION)

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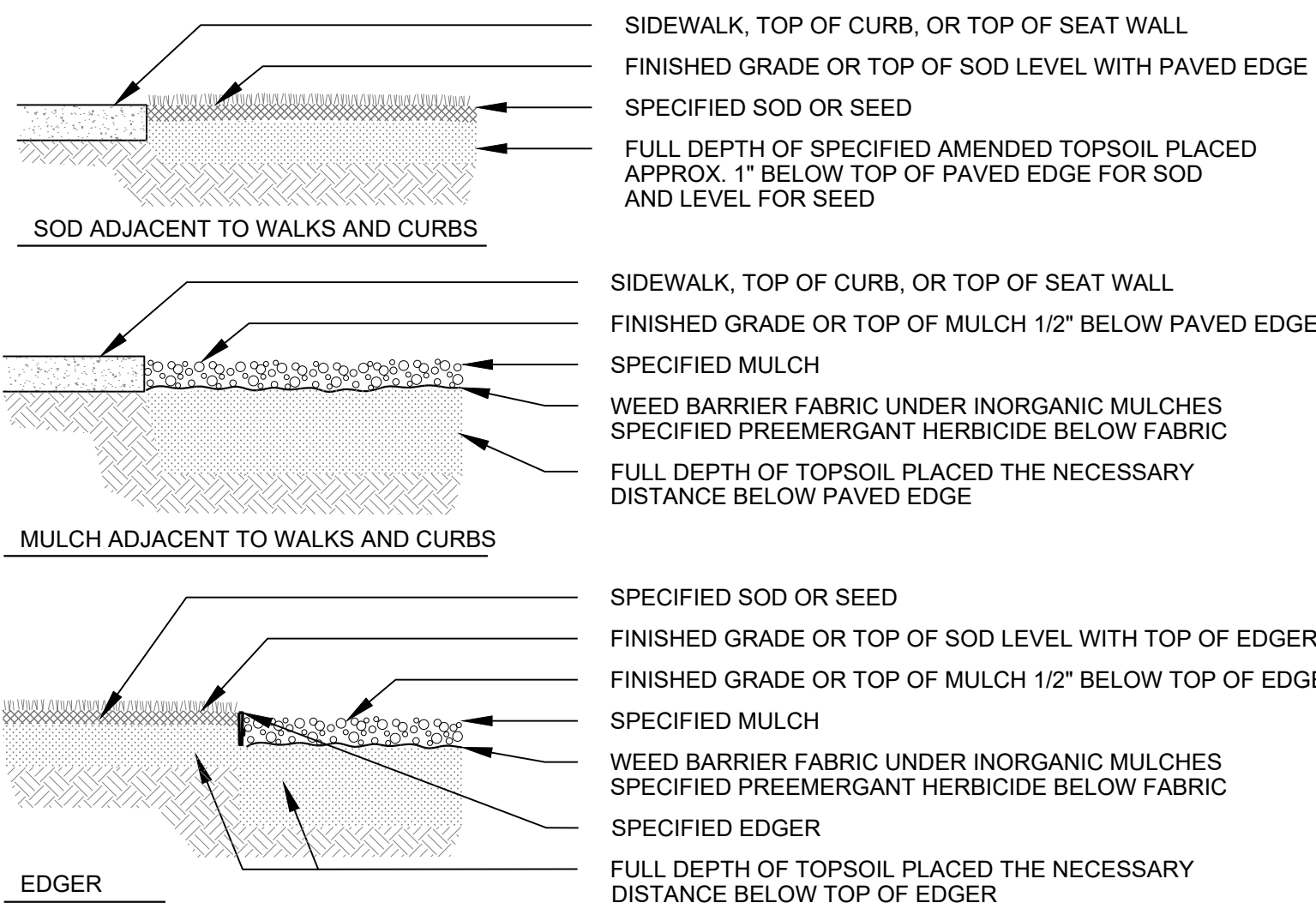
SCALE: 1" = 30'-0"

PROJECT #: 2412-0471  
CHECKED BY: KML  
DRAWN BY: KML

DATE: 06/11/2026

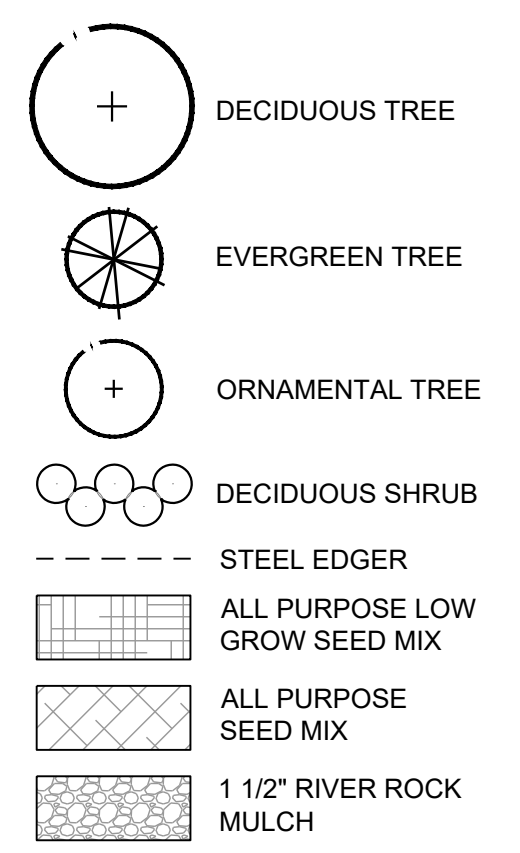
SHEET # **LS3**

TOTAL SHEETS 6



**1 EDGE TREATMENT**  
LS4 NOT TO SCALE

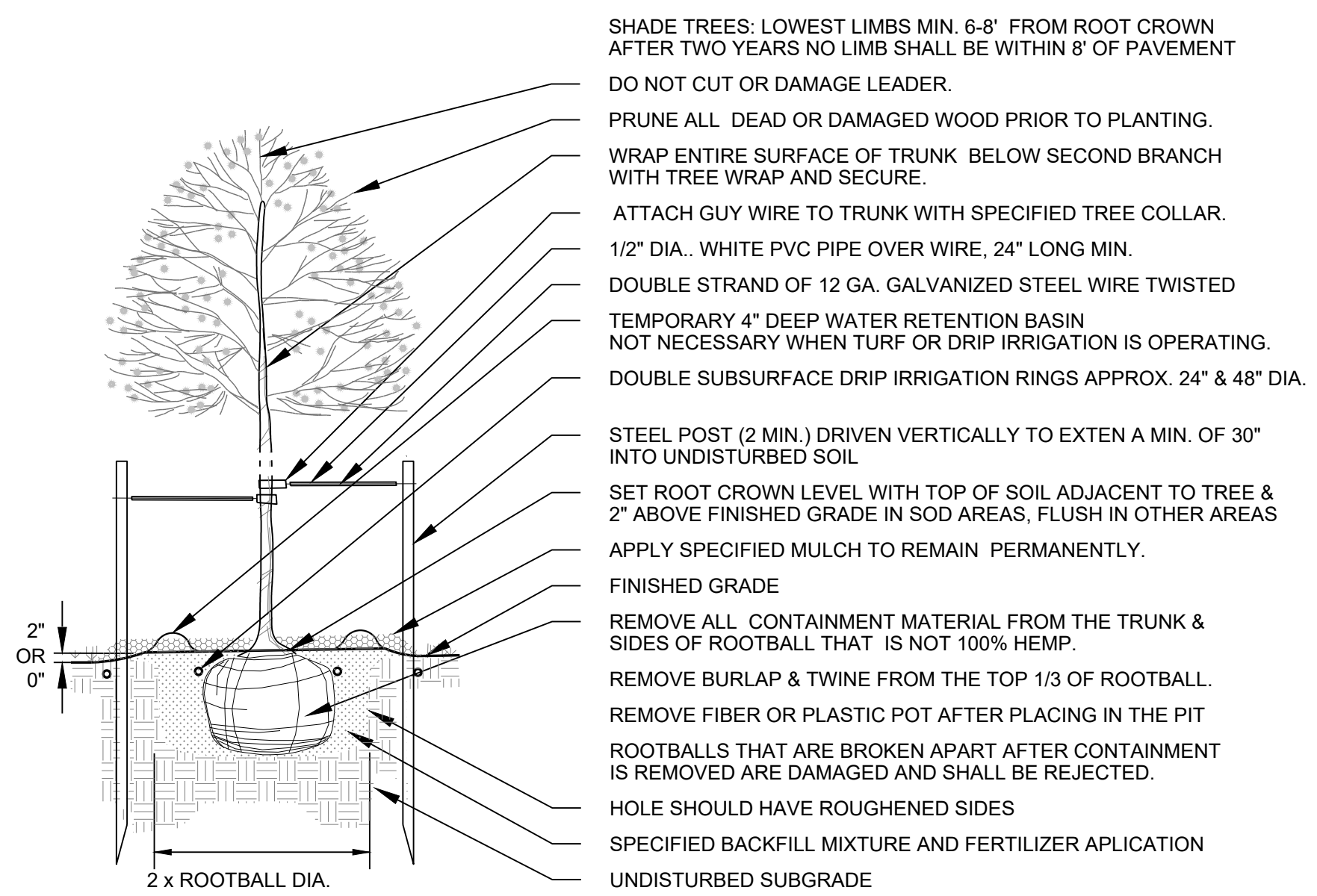
**LEGEND**



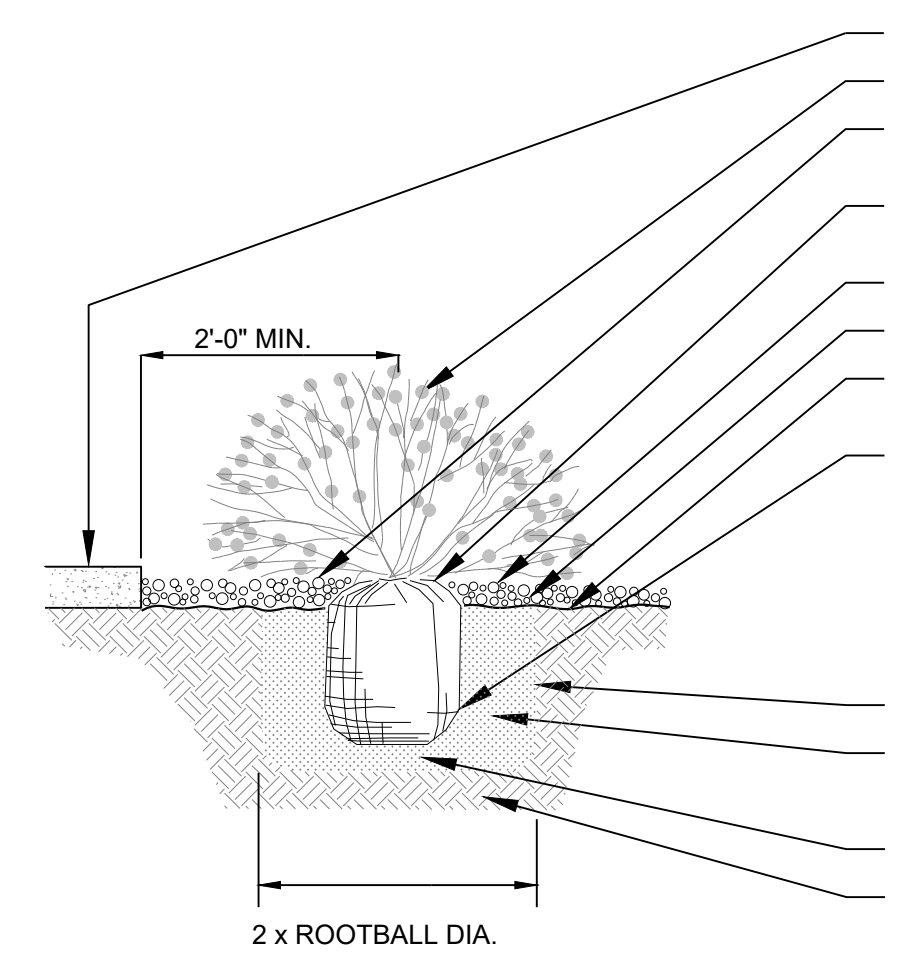
\* ROADWAY LANDSCAPE REQUIREMENTS, CLOUDED ON THE LANDSCAPE PLAN OF THIS SUBMITTAL, SHALL BE INSTALLED WITH THE FUTURE DEVELOPMENT OF THE COMMERCIAL PARCEL ADJACENT TO THE SELF-STORAGE SITE.



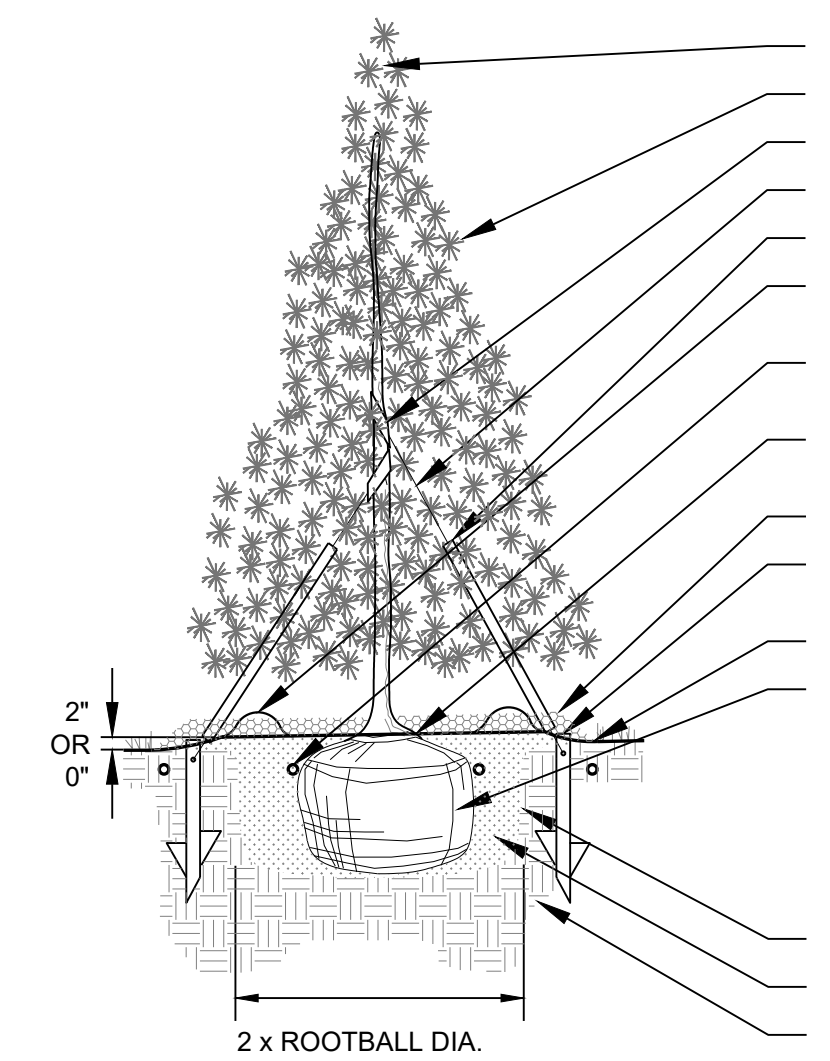
**2 LANDSCAPE PLAN**  
LS4 SCALE: 1" = 30'-0"



**3 DECIDUOUS TREE PLANTING**  
LS4 NOT TO SCALE



**4 SHRUB PLANTING**  
LS4 NOT TO SCALE



**5 EVERGREEN TREE PLANTING**  
LS4 NOT TO SCALE

PLANNING AND COMMUNITY DEVELOPMENT  
DIRECTOR APPROVAL:

\_\_\_\_\_  
DIRECTOR

\_\_\_\_\_  
DATE

PCD FILE NO: PPR2347

REVISION	DATE	DESCRIPTION

NORTH

SCALE: 1" = 30'-0"

PROJECT #: 2412-0471  
CHECKED BY: KML  
DRAWN BY: KML

DATE: 06/11/2026

SHEET # **LS4**

TOTAL SHEETS 6

SECTION 02900  
LANDSCAPING

PART 1 GENERAL

1.1 RELATED DOCUMENTS

A. Provisions established within the General and Supplementary Conditions of the Contract, Division 1 - General Requirements, and the Construction Drawings are collectively applicable to this section.

1.2 SUMMARY

A. Section 02900 includes:

- 1. Topsoil
2. Imported Topsoil
3. Fertilizer
4. Organic Soil Amendment
5. Mulches
6. Staking Material and Tree Wrap
7. Water
8. Geotextile Fabric
9. Edger
10. Sod
11. Seed
12. Plant Materials
13. Herbicide
14. Hydromulch

B. Related Sections:

- 1. Section 02110 - Site Clearing
2. Section 02200 - Earthwork
3. Section 02810 - Landscape Irrigation
4. Section 02970 - Landscape and Irrigation Maintenance

1.3 QUALITY ASSURANCE

A. Contractor Qualifications:

- 1. The Landscape Contractor shall have its primary place of business within one hundred fifty (150) miles of the project site.
2. The Landscape Contractor shall be a local A.N.A or A.L.C.A. certified landscape business capable of performing the work outlined herein.
3. Install work using skilled persons proficient in the trades required for executing the work in a neat orderly and responsible manner with recognized standards of workmanship.
4. Landscape Contractor shall have not less than five years of successful experience with installation of similar work. If requested by the Owner and/or Landscape Architect, submit a list of three projects completed in the last two years of similar complexity to this project with name and location of project, Owner's name and telephone number, and name of landscape architectural firm and telephone number.

B. Reference Standards:

- 1. ANSI Z60.1 "American Standard for Nursery Stock" current edition
2. American Sod Producers Association (ASPA) "Specifications for Turfgrass Sod Materials and Transplanting/Installation"

C. Quality of Work and Materials: The Contractor shall furnish all materials and perform all work in accordance with these specifications, drawings, and instructions provided by the Landscape Architect or Owner's Representative hereafter also referred to as Landscape Architect. The work shall include everything shown on the drawings and required by the specifications and everything to which in the judgment of the Landscape Architect is incidental to what is shown on the drawings or required by the specifications. The Contractor shall cooperate with the Landscape Architect so that no error or discrepancy in the drawings, details or specifications shall cause defective, inappropriate, or incorrect materials to be used or poor workmanship to be allowed and so that the work may proceed in the most efficient and effective manner.

D. Weather Conditions: Work must be carried out only during weather conditions favorable to landscape construction and to the health and welfare of plants. The Landscape Architect shall determine the suitability of such weather conditions.

1.4 SUBMITTALS:

A. Approval of Submittals: Do not proceed with ordering, purchase or delivery of materials prior to receipt of approved submittals, substitutions & tests from Landscape Architect or Owner.

- 1. Required for all items specified herein. Provide 5 copies of all product data sheets, cut sheets or test results and 2 samples of all materials to the Landscape Architect for review.
2. Supply with cut sheets and samples a detailed list of materials proposed in this project, including Description, Manufacturer/Supplier, and Model.

C. Substitutions:

- 1. Substitutions shall be made only with the written approval of the Landscape Architect. Substitutions will not be considered prior to opening of the bids.
2. Substitution of plant material will be made only on the basis of proof of unavailability.
3. Provide 5 copies of a written request for substitution to the Landscape Architect for approval. Do not proceed with purchase or installation of materials prior to receipt of approved substitution from Landscape Architect. Include with the request proof of unavailability, product data, and supplier.

D. Testing: Contractor shall perform and submit the following tests to the Landscape Architect prior to proceeding with soil preparation or installation of plant material.

- 1. Submit soils test for imported topsoil and on site topsoil (stockpiled or unexcavated). Test shall include all macro and micronutrients, organic matter, and amendment recommendations from the testing laboratory. Each test shall be taken from at least three (3) sample locations, to provide an accurate cross section of the soils. The Landscape Architect may require additional testing if any significant discrepancy is shown by the tests
2. Submit soils test for Organic Amendment. Test shall include all macro and micronutrients, organic matter, and carbon nitrogen ratio.

E. Record of Purchases: Package tags and receipts for all topsoil, soil amendments, fertilizers, mulch, fabric, seed, or sod shall be supplied to the Landscape Architect prior to installation.

1.5 PROTECTION

A. Before commencing work, all trees and shrubs that are to be saved must be protected from damage by the placement of snow fencing for visibility or some other suitable protective procedure approved by the Landscape Architect. No work may begin until this requirement is fulfilled.

B. In order to avoid damage to roots, bark or lower branches, no truck or other equipment shall be driven or parked within the drip line of any tree, unless the tree hangs over a paved parking area or traffic lane.

C. The Contractor shall use any and all precautionary measures when performing work around trees, walks, pavements, utilities, and any other features either existing or previously installed under this Contract.

D. The Contractor shall adjust depth of earthwork and soil preparation when working immediately adjacent to any of the aforementioned features in order to prevent disturbing tree roots, undermining walks and pavements, and damage in general to any existing or newly incorporated item.

1.6 FINAL ACCEPTANCE

A. Final Acceptance: Within ten days of Contractor's notification that the entire Project is complete, Landscape Architect will review installation. If Final Acceptance is not given, the Landscape Architect will prepare a punch list of pending items that, upon completion by Contractor and subsequent review and approval, will signify Final Acceptance. The Contractor shall complete and submit the punch list of corrections within 10 calendar days from the date issued.

1.7 RIGHT OF REJECTION

A. The Landscape Architect reserves the right to reject at any time or place prior to Final Acceptance all plant materials, which in the Landscape Architect's opinion fail to meet specifications. Inspection of materials is primarily for quality, size and variety, but other requirements are not waived even though visual inspection results in approval. Plants may be inspected where available; however, inspection at the places of supply shall not preclude the right of rejection at the site or at a later time prior to Final Acceptance. Rejected materials shall be removed from the site within 24 hours.

B. The Contractor shall schedule the inspection and tagging of plants by the Landscape Architect, at the supplier prior to delivery, to be completed in one visit. Any further inspection required due to plants being unavailable or rejected as not meeting specifications shall be charged to the Contractor at the current hourly rate (plus travel expenses if applicable) for Landscape Architect's personnel performing the inspection.

1.8 MAINTENANCE OPERATIONS BEFORE FINAL ACCEPTANCE

A. Plant care shall begin immediately after each plant is satisfactorily installed and shall continue throughout the life of the contract until Final Acceptance of the project or for the minimum time listed in the following instructions, whichever is longer.

B. Trees and Shrubs: Maintenance shall include, but not be limited to, replacing mulch that has been displaced by erosion or other means, repairing and reshaping water rings or saucers, maintaining stakes and guys, watering when needed or directed, and performing any other work required to keep the plants in a healthy condition.

C. Sod: Maintain for not less than 30 days after the date of installation, and longer, as may be required for acceptable establishment.

1. At the end of the 30-day maintenance period, fertilize new sod areas with 1 pound of actual nitrogen per 1000 square feet of sod area.

2. Maintain new sod areas by watering, fertilizing, weeding, mowing, trimming, and other operations such as rolling, regrading, and replanting as required to establish grasses, free of eroded or bare areas. Provide protection against disease and insect damage.

D. Seeded Areas: for not less than 30 days, after the date of installation, and longer as may be necessary for acceptable erosion control and seed germination and emergence.

1. Maintain seeded areas by watering, controlling weed growth, regrading, replanting and re-mulching as required to ensure that seeded areas are in vigorous growing condition and free of eroded areas.

E. Annual, Perennial, and Groundcover Beds: Maintain by watering, controlling weed growth, replanting, re-mulching, fertilizing, and controlling pests as required to ensure vigorous growth and erosion control.

F. Contractor shall remove and replace all dead, defective and/or rejected plants as required before Final Acceptance.

G. Once each month, for the first year of operation following Final Acceptance, provide on-site consultation with Owner's operating personnel. This shall include up to 4 hours time per month.

1.9 WARRANTY

A. The condition of all new plant materials is the responsibility of the Contractor until final acceptance. Any replacement of plant materials that may be necessary shall be at the expense of the Contractor.

B. Warranty the following living plant materials for the specified period after the date of Final Acceptance. Unless noted otherwise on the plan.

1. Trees, Shrubs, Vines, Groundcovers and Perennials: Warranty for a period of one (1) full year from the date of Final Acceptance, against defects including death and unsatisfactory growth.

2. Seeded Areas: Warranty for a period of one (1) year after the date of Final Acceptance.
a. The seeded must have healthy uniform grass growth, with no bare spots greater than one square foot, or exceeding 5% of any seeded area.
b. The seeded areas shall have no major settlement or become waterlogged in settled swales. Should settlement occur, fill and compact settled areas and reseed affected areas.

3. Sodded Areas: Warranty for a period of one (1) year after the date of Final Acceptance.
a. The sodded areas must have healthy uniform grass growth, with no bare spots greater than six square inches.
b. The sodded areas shall have no major settlement or become waterlogged in settled swales. Should settlement occur, fill and compact settled areas and reseed affected areas per these specifications.

4. Annuals: Warranty for a period coinciding with their normal growing season.

C. Replacements:

1. Replacements under this warranty shall be at no additional cost the Owner and shall be determined by the Landscape Architect or Owners Representative.
2. Remove plants that fail during the warranty period immediately. Make replacements during the appropriate planting or growing season. At the end of the warranty period replace any plant material which is in poor health or of doubtful good health as determined by the Landscape Architect, unless, in the opinion of the Landscape Architect it is advisable to extend the warranty period. Another inspection will be conducted at the end of the extended warranty period, if any, to determine acceptance or rejection.

Replacement planting is to be in accordance with these Specifications and Construction Drawings and at the Contractor's expense. All areas damaged by replacement operations are to be fully restored at the Contractor's expense to their original condition as specified.

D. Exemptions:
1. Inadequate or improper maintenance by the Owner shall not be cause for replacement provided the Contractor shall have submitted throughout the warranty period a monthly letter or report to the Owner of improper or inadequate maintenance practices and recommended remedial actions.
2. Defects resulting from neglect by Owner, abuse or damage by others, vandalism, or unusual phenomena or incidents, which are beyond the Contractors control, shall not enforce the warranty.

Replacement planting is to be in accordance with these Specifications and Construction Drawings and at the Contractor's expense. All areas damaged by replacement operations are to be fully restored at the Contractor's expense to their original condition as specified.

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PART 2 PRODUCTS

2.1 TOPSOIL

A. Natural, friable, soil possessing the characteristics of representative topsoils in the vicinity which produces a heavy growth; free of stones over 1 inch in diameter, refuse, plants or their roots, sticks, noxious weeds, salts, soil stenants, toxic substances or other material which would be detrimental to plant growth or hinder planting operations.

B. The Contractor is to verify the quantity and quality of stockpiled topsoil and provide submittals (see 02900, 1.4, D., 1.). The Contractor shall supply any additional topsoil needed at no additional cost. See civil specs & notes for storage and placement of topsoil.

2.2 IMPORTED TOPSOIL

A. Shall be fertile, friable, sandy loam topsoil and shall be obtained from a well-drained site. It shall be without admixture of subsoil and shall be free of stones over 1 inch in diameter, refuse, plants or their roots, sticks, noxious weeds, salts, soil stenants, toxic substances or other material which would be detrimental to plant growth or hinder planting operations.

B. Imported Topsoil shall not be delivered or used while in a frozen or muddy condition.

C. Imported topsoil as delivered to the site shall have an acidity range of pH 6.0 to 7.5 and shall contain not less than 3% organic matter as determined by loss on ignition of moisture-free samples dried at 100E Centigrade. Topsoil shall have salt of less than 2 mmhos/cm and a sodium absorption ration of less than 12.

D. Topsoil shall meet the following mechanical analysis:

Table with 2 columns: Passing %, Retained %. Rows: 1-inch screen (100, 0-3), 1/2-inch screen (97-100, 0-3), No. 100 mesh sieve (60-40, 40-60)

E. The Landscape Architect reserves the right to inspect topsoil at its source to determine whether or not it meets the requirements specified and to approve the depth to which it may be stripped.

2.3 FERTILIZER

A. Fertilizer shall be delivered to the site, mixed as specified, in the original unopened standard size bags showing weight, analysis and name of manufacturer. Containers shall bear the manufacturer's guaranteed statement of analysis or a manufacturer's certificate of compliance covering analysis. These shall be furnished to the Landscape Architect. Store fertilizer in a weatherproof place and in such a manner that it shall be kept dry and its effectiveness shall not be impaired.

B. Superphosphate: Soluble mixture of treated minerals, 16% to 20% available phosphoric acid. Commercial Fertilizer: Complete fertilizer containing the following percentages of available plant nutrients.

- 1. Tablets: For trees and shrubs, provide tightly compressed long lasting, slow release tablets weighing 21 grams with an analysis of 20-10-5, and a potential acidity of not more than 5% by weight.
2. Granular: For lawns, vines, flowers and groundcovers, provide a granular, slow release, commercial fertilizer with an analysis of 20-10-5.

2.4 ORGANIC SOIL AMENDMENT

A. Organic soil amendment shall be a composted organic wood and manure based product with a carbon to nitrogen ratio between 15:1 and 30:1, with a pH of 6 to 8, and salt content below 6 mmhos/cm. Unless noted otherwise on the plan

B. The organic soil amendment shall be free from all viable weed seeds, and be finely shredded to pass 70% through a 1/8" inch mesh.

2.5 ADDITIONAL SOIL AMENDMENT

A. Wetting agents shall be dry form Revive or approved equal.

2.6 MULCHES

- A. Shredded Cedar Mulch; Submit samples.
B. Washed Angular 1 1/2" River Rock; Submit samples.

2.6 STAKING MATERIAL AND TREE WRAP

A. Tree Wrap: Shall be first quality, 4-inch wide, bituminous impregnated tape, corrugated or crepe paper, brown in color, specifically manufactured for tree wrapping.

1. Secure tree wrap with a flexible nylon tape strapping specifically designed for tying plant material. No string, cord, or other non-elastic material will be accepted.

B. Stakes: Shall be either 6 foot x 2-inch diameter wolmanized lodge pole pine or 6 foot green steel "T" posts 1.33 Certified ASTM-A702 with blade, or 30-inch steel "T" posts as determined by the notes, detail, or execution section of these specifications. From Hutchinson Western or Equal

C. Fabric Tree Collars: Trees shall be secured to stakes using minimum 2-inch wide non-stretching webbing with grommets for attachment of wire between strap and stake. Strap shall be of sufficient length in relation to tree caliper so that grommets and wire do not touch trunk.
1. Foresight Industries PS-1, non-stretch tree collar straps, or approved substitution.

D. Wire: Shall be 12 gauge galvanized steel wire.

E. General:

1. Evergreen trees that are eight-feet tall and taller shall have wire guys threaded through rubber or plastic hose sections which are looped around the tree trunk.

2. Fabric tree collars will not be acceptable on evergreen trees taller than eight-feet (8').

3. All wire shall be covered with 1/2" diameter white PVC pipe; refer to details for length.

2.7 WATER

A. The Owner shall provide w\_on\_site water for the execution and maintenance of this work to the Contractor at no expense. The Contractor shall furnish hose and other watering equipment.

2.8 WEED BARRIER FABRIC

A. Weed barrier fabric shall be a 28 mil woven needle punched polypropylene material that shall be at least 70% ultra violet light resistant & have a water flow rate of at least 75 gal./min./s.f. Use Restrictor landscape fabric by Western Landscape & Geotextile Supply or approved equal. Submit sample and product data or approval.

2.9 EDGER

Edger to be steel unless otherwise noted other otherwise on the plan.

A. Steel edger shall be 4-inch depth, 1/8 inch thickness, interlocking steel edge, painted green with a rounded non cut top, staked with metal stakes sufficiently to hold in place, and installed per manufacturer's recommendations. Use Ryerson or approved equal steel edging.

2.10 SOD

A. Sod shall be a locally grown, certified blend, complying with applicable local and Federal regulations and complying with ASPA "Specifications for Turfgrass Sod Materials and Transplanting/Installation". See plan for seed mixture and rates. The sod shall have a vigorous and healthy root system and top growth and shall have been regularly fertilized, watered, mowed, sprayed and shall be free from objectionable weeds and/or grasses. Sod strip shall have from 5/8th inch minimum to one-inch maximum thickness of soil adhering to root system, cut into strips 19-inches maximum width by 4-foot minimum length. Sod that has dried out, or sod with soil, which breaks, tears or crumbles away will not be accepted. Sod cut for more than 36 hours will not be accepted. Sod shall be kept moist, protected from sun, heat or wind in transport and after delivery. Prior to cutting, the sod shall be evenly mowed for a blade length of at least one-inch but not more than 2-inches.

2.11 SEED

A. Seed Mixes shall be purchased from a reputable seed dealer, complying with requirements specified. Each seed type shall be appropriate for the specific region in which it is used. See plan for seed mixture and rates. Seed Mix shall be free from all noxious weeds including Russian or Canadian Thistle, Coarse Fescue, European Bindweed, Johnson Grass and Leaf Spurge. Seed which has become wet, moldy, or otherwise damaged in transit or in storage will not be acceptable.

B. Submit certification tags verifying seed type and purity or a signed statement certifying that the seed furnished is from a lot that has been tested by a recognized laboratory

2.12 EROSION CONTROL FABRIC

A. Erosion control fabric shall be a single net excelsior blanket enclosed in a photodegradable plastic mesh secured with steel wire staples 6 inches long. Install per manufactures specifications. Use "Curlex" single net blankets by American Excelsior Company or approved equal.

2.13 PLANT MATERIALS

A. All Plants: Shall be the species subspecies or cultivar designated on the drawings. No substitutions will be accepted without prior written approval of the Landscape Architect. All plants shall meet or exceed the code of the standards currently recommended by the "Colorado Nursery Act" and established by the American Association of Nursermen as well as the ANSI Z60.1 "American Standard for Nursery Stock" latest version but upgraded to meet the following additional requirements.

1. Unless specifically noted otherwise, all plants shall be of selected specimen quality, exceptionally heavy, symmetrical, tightly knit, so trained or favored in their development and appearance as to be superior in form, number of branches, compactness and symmetry. All plants shall have a normal habit or sound, healthy, vigorous plants with well-developed root system.

2. Plants shall be free of disease, insect pests, eggs or larvae.

3. Plants shall not be pruned before delivery.

4. All plants shall have been grown under climatic conditions similar to those in the locality of the site of the project under construction or have been acclimated to such condition for at least two (2) years.

5. All plants designated balled and burlapped (B&B) must be moved with the root systems as solid units with balls of earth firmly wrapped with burlap pineed tight and secured with hemp twine and a wire basket that has been tightened to the ball. The diameter and depth of the balls of earth must be sufficient to encompass the fibrous root feeding systems necessary for the healthy development of the plant and comply with ANSI Z60.1. No plant shall be accepted when the ball of earth surrounding its roots has been badly cracked or broken preparatory to or during the process of planting. All plants that cannot be planted at once must be heeled, in by setting in the ground and covering the balls with soil or mulch and then watering. Burlap and twine made from hemp is preferable to synthetic fibers such as nylon.

B. Deciduous Shade and Ornamental Trees: Provide B&B trees of sizes listed on the plan. Sizes indicate minimum height or caliper. All deciduous shade and ornamental trees shall have full, well-shaped heads.

1. Trees with abrasion of the bark, sunscalds, disfiguring knots or fresh cuts of limbs over one inch (1") which have not completely calloused shall be rejected.

2. The trunk of each tree shall be a single trunk growing from a single unmulleted crown of roots, unless specified as "olump form".

C. Deciduous Shrubs: Provide shrubs of sizes listed on the plan. Sizes indicate minimum container size, height or spread as labeled. The size in spread shall be used for spreading shrubs and height for more upright types none shall have less than minimum number of canes required by ANSI Z60.1.

1. The thickness of each shrub shall correspond to the trade classification "No. 1". Single stemmed or thin plants shall not be accepted. The side branches must be generous, well twiggged, and the plant as a whole well branched to the ground. The plants must be in moist condition, free from dead wood, bruises or other root or branch injuries.

D. Evergreen Shrubs: Provide shrubs of sizes listed on the plan. Sizes indicate minimum container size, height or spread as labeled. The size in spread shall be used for spreading and semi-spreading type and height for other types, such as globe, dwarf, and cone, pyramidal, broad up right, and columnar.

1. The thickness of each shrub shall correspond to the trade classification "No. 1". Single stemmed or thin plants shall not be accepted. The side branches must be generous, well twiggged, and the plant as a whole well branched to the ground. The plants must be in moist condition, free from dead wood, bruises or other root or branch injuries.

E. Evergreen Trees: Provide evergreen trees of sizes listed on the plan. Sizes indicate minimum height. All evergreen trees shall be unsharred and full to the ground

1. Provide balled and burlapped (B&B) or mechanical, spade-dug evergreen trees.

2. All collected evergreen trees shall have a minimum rootball to trunk caliper ratio of 10 to 1; ten inches of rootball diameter per each one inch of trunk caliper and comply with ANSI Z60.1.

2.14 PRE-EMERGENT HERBICIDE

A. Pre-Emergent Herbicide: Shall be "Treflan" as manufactured by Elanco Company or approved substitution. Apply as per manufacturer's recommendations for weed control.

PART 3: EXECUTION

3.1 TOPSOIL EXCAVATION & STORAGE

See Site Clearing Z230 section 3.04 Topsoil Excavation

3.1 TOPSOIL PLACEMENT

A. Work Included: Place stockpiled or imported topsoil in landscaped areas and to a minimum depth of 6" unless noted otherwise on the plan or specified otherwise here within.

B. Area: All exterior ground within the limit of contract, except surfaces occupied by buildings and structures, paving, and other areas indicated to be undisturbed, shall be topsoiled.

C. Preparation: Disk, drag, harrow or hand rake subgrade to a minimum depth of three inches (3") to provide bond for topsoil.

D. Placement of Topsoil: Place no topsoil until subgrade has been approved. Before placing topsoil, rake subsoil surface clear of stones, debris, and roots. Compact topsoil to form a layer with minimum depth as defined in the notes. If there is any discrepancy the plan will have precedence over the notes and the notes over the details. Topsoil shall be placed so that after final settlement there will be positive drainage and the surface will conform to the elevations shown on the drawings. Contractor is to maintain surfaces and place any additional topsoil necessary to replace that eroded before Final Acceptance.

E. Topsoil, which must be transported across finished walks, shall be delivered in such a manner that no damage will be done to the walks. The Contractor shall be responsible for the repair of such damage.

3.2 FINISH AND FINE GRADING

A. Positive Surface Drainage: The Contractor shall finish and fine grade the project area to establish an even and well-matched grade over the entire surface. Positive surface drainage shall be assured, and there shall be no depressions, subsequent settling or irregularities in the finished grade.

B. Transitional Areas: At any transitional point or line where one plane intersects another, such as from a sloping area or berm to a level area, a smooth and gentle transition shall be made. There shall be no abrupt changes in grade unless specifically noted otherwise. There shall also be a smooth transition between existing turf and new turf.

3.3 AMENDMENTS FOR SOIL PREPARATION

A. Soil Preparation: Schedule of soil mixes and soil amending for various project areas are listed below (for bidding purposes only, final amendment schedule shall be determined by the Landscape Architect based on soils tests provide by the Landscape Contractor (see 02900, 1.4, D., 1.).

1. Permanently Seeded Areas of Dryland, Riparian & Wetland Native, Blends: Provide not less than the following quantities of specified amendment materials. Organic Soil Amendment: 4 cubic yards per 1000 s.f. Commercial Fertilizer (20-10-5): 2 lbs. per 1000 s.f. Superphosphate @ 20% P2O5: 10 lbs. per 1,000 s.f. Potash: add 1.5 lbs actual K2O per 1,000 s.f. Iron: add 0.5 lbs actual Fe per 1,000 s.f.

2. Sodded and Permanently Seeded Areas of Bluegrass & Fescue Blends: Provide not less than the following quantities of specified amendment materials. Other types of sod or seed refer to supplier's recommendations. Organic Soil Amendment: 4 cubic yards per 1000 s.f. Commercial Fertilizer (20-10-5): 10 lbs. per 1000 s.f. Superphosphate @ 20% P2O5: 10 lbs. per 1,000 s.f. Potash: add 1.0 lbs actual K2O per 1,000 s.f. Iron: add 0.5 lbs actual Fe per 1,000 s.f.

3. Shrub, Groundcover and Annual/Perennial Beds: Provide not less than the following quantities of specified amendment materials. Organic Soil Amendment: 5 cubic yards per 1000 s.f. Commercial Fertilizer (20-10-5): 10 lbs. per 1000 s.f. Superphosphate @ 20% P2O5: 10 lbs. per 1,000 s.f. Potash: add 1.0 lbs actual K2O per 1,000 s.f. Iron: add 0.5 lbs actual Fe per 1,000 s.f.

4. Backfill for lower portion of tree and shrub pits below bottom of adjacent amended top soil: Organic Soil Amendment: 1/4 by volume of backfill. Planting Pit Excavated Sub Soil: 3/4 by volume. Fertilizer Tablets: One 21-gram fertilizer tablet for each 1/2 inch of tree trunk caliper and one tablet per 12 inches height, or spread, whichever is greater, of each shrub.

3.4 SOIL PREPARATION

A. The Contractor shall complete finished grading of all landscaped areas.

B. Sodded/Seeded Areas: Spread specified amendment materials evenly over entire area and thoroughly incorporate, by mixing before placing, rototilling or finely discing (max. 1' size), to the full depth of topsoil. The areas shall then be raked and settled, removing all coarse lumps, rocks, sticks, roots and weeds. The soil surface shall be smooth, loose and of fine texture, staying one inch below all paving edges.

C. Shrub, Groundcover and Annual/Perennial Beds: Spread specified amendment materials evenly over bed areas and thoroughly incorporate, by mixing before placing, rototilling or finely discing (max. 1' size), to the full depth of topsoil. If the topsoil is deeper than 12" only incorporate in the top 12". The areas shall then be settled, fine graded and raked to meet the approved finished grade. The surface shall be smooth and loose and of fine texture.

D. Wetting agents shall be incorporated with other amendment material to all clay soils per manufacturer's recommendations. Use in seeded areas, beds & backfill mix.

E. Restore areas to specified condition if eroded or otherwise disturbed after fine grading and prior to planting.

3.5 TREES AND SHRUB PLANTING OPERATIONS

A. Scheduling: Planting operations shall be performed at a steady rate of work unless weather conditions make it impossible to work. No plant material shall be planted in frozen ground.

B. Soil Conditions:

1. If rock or other underground obstruction is encountered, the Landscape Architect may require plant pits to be relocated, the pits enlarged or the plants deleted from the contract.

2. Plant Pit Drainage: In random tree/shrub holes (minimum 20%) throughout the site but in particular in plant pits near the building, fill with water and let stand for twenty-four (24) hours. At the end of twenty-four (24) hours, check hole for drainage of water. Refill the holes and inspect again at twenty-four (24) hours. If the water has not percolated completely into soil, contact Landscape Architect for additional measures to insure proper drainage.

# LANDSCAPE NOTES

1. THIS LANDSCAPE ARCHITECTURAL SITE PLAN IS TO BE USED IN CONJUNCTION WITH THE CIVIL, IRRIGATION, MECHANICAL, ELECTRICAL, AND ARCHITECTURAL CONSTRUCTION DOCUMENTS AND SPECIFICATIONS TO FORM COMPLETE INFORMATION REGARDING THIS SITE. IF A DISCREPANCY OR CONFLICT EXISTS BETWEEN THESE NOTES, PLANS, DETAILS, SPECIFICATIONS, & CITY STANDARDS & SPECIFICATIONS THE CONTRACTOR SHALL COORDINATE WITH THE LANDSCAPE ARCHITECT TO RESOLVE THE DISCREPANCY OR CONFLICT.

2. LANDSCAPE CONSTRUCTION SHALL CONFORM TO ALL APPLICABLE STATE AND LOCAL CODES AND SPECIFICATIONS.

3. ALL MATERIAL AND WORKMANSHIP SHALL BE WARRANTED FOR ONE YEAR, FROM DATE OF FINAL ACCEPTANCE.

4. LANDSCAPE CONTRACTOR SHALL EXAMINE THE SITE CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED AND NOTIFY THE GENERAL CONTRACTOR IN WRITING OF UNSATISFACTORY CONDITIONS. DO NOT PROCEED UNTIL CONDITIONS HAVE BEEN CORRECTED.

5. BEFORE COMMENCING WORK, LANDSCAPE CONTRACTOR SHALL CONTACT APPROPRIATE UTILITY COMPANIES FOR UTILITY LOCATIONS, AND COORDINATE WITH GENERAL CONTRACTOR IN REGARD TO LOCATION OF PROPOSED UTILITIES, IRRIGATION SLEEVES, CONDUITS, ETC.

6. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE SUBMITTALS, CUT SHEETS OF MATERIALS & SOIL TEST RESULTS DIRECTLY TO THE OWNERS REPRESENTATIVE FOR APPROVAL. SEE SPECIFICATIONS FOR DETAILED SUBMITTAL INFORMATION.

7. REMOVE EXCESS SUB GRADE WHERE NECESSARY AND PLACE SPECIFIED TOP SOIL A MINIMUM DEPTH OF SIX INCHES (6") IN TURF AND GRASS AREAS AND TWELVE (12") INCHES IN SHRUB BEDS. DISTRIBUTE STOCKPILED TOPSOIL AND PROVIDE ANY ADDITIONAL TOPSOIL NEEDED.

8. ORGANIC SOIL AMENDMENTS AND FERTILIZERS SHALL BE INCORPORATED IN TO ALL LANDSCAPE AREAS AND PLANTING PITS AS IN THE DETAILS AND SPECIFICATIONS.

9. ALL PLANT MATERIALS SHALL BE AS SPECIFIED AND MEET OR EXCEED SIZE IN SCHEDULES. OWNER'S REPRESENTATIVE RESERVES THE RIGHT TO REFUSE PLANT MATERIALS WHICH DO NOT MEET THE QUALITY REQUIRED FOR THE PROJECT PER SPECIFICATIONS. ALL SHADE TREES MUST NOT HAVE LIMBS THAT ARE LESS THAN 6' FROM THE ROOT CROWN. AFTER TWO YEARS OF GROWTH SHADE TREES SHALL HAVE THE LOWER LIMBS REMOVED SO THAT THERE WILL BE 8' OF CLEARANCE ABOVE ANY PAVED SURFACE. EACH TREE THAT IS LIMBED UP MUST HAVE LIMBS REMOVED ALL THE WAY AROUND THE TREE SO THAT IT IS EVENLY BALANCED.

10. ALL TREE AND SHRUB BED LOCATIONS ARE TO BE STAKED OUT ON SITE FOR APPROVAL BY OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.

11. ALL CONVENTIONAL PLANTING BEDS AND MULCH AREAS ARE TO BE CONTAINED WITH STEEL EDGER AS SHOWN ON THE PLANS AND DEFINED IN THE DETAILS AND SPECIFICATIONS. EDGER IS NOT REQUIRED ADJACENT TO CURBS, WALKS, BUILDINGS OR RETAINING WALLS.

12. SHREDDED CEDAR MULCH IS TO BE SPREAD FOUR (4) INCHES DEEP FOR TREES AND SHRUBS IN GRASS AREAS UNLESS NOTED OTHERWISE ON THE PLAN. MULCH RINGS FOR TREES IN GRASS AREAS SHALL BE FOUR (4) FOOT DIAMETER MIN. FOR SHADE AND EVERGREEN TREES, THREE (3) FOOT DIAMETER MIN. FOR ORNAMENTALS TREES AND ALL SHRUBS. ALL CONVENTIONAL PLANTING BEDS CONTAINED BY EDGER WILL BE UNIFORMLY MULCHED. 1 1/2" WASHED ANGULAR RIVER ROCK IS TO BE SPREAD FOUR (4) INCHES DEEP FOR TREES AND SHRUBS IN PLANTING BEDS UNLESS NOTED OTHERWISE ON THE PLAN. PLACE SPECIFIED WEED BARRIER FABRIC OVER THE SOIL IN ALL PLANTING AREAS NOT TO BE SODDED OR SEEDED. APPLY SPECIFIED PRE-EMERGENT HERBICIDE UNDER THE FABRIC AS DEFINED IN THE SPECIFICATIONS.

13. ALL LANDSCAPE AREAS AND PLANT MATERIALS SHALL BE WATERED BY AN AUTOMATIC UNDERGROUND IRRIGATION SYSTEM UNLESS OTHERWISE NOTED. ALL TURF AREAS LESS THAN 25' IN WIDTH SHALL HAVE A POP-UP SPRAY SYSTEM AND ALL TURF AREAS GREATER THAN 25' SHALL HAVE A ROTARY POP-UP SYSTEM PROVIDING HEAD TO HEAD COVERAGE. ALL SHRUB BEDS SHALL HAVE FULL COVERAGE WITH A BURIED DRIP SYSTEM. ALL TURF AND SHRUB BEDS SHALL BE ZONED SEPARATELY. ALL CONTROLLERS FOR THESE SYSTEMS SHALL BE CONNECTED TO AUTOMATIC SHUTOFF RAIN SENSORS.

14. THE DEVELOPER, HIS SUCCESSORS AND ASSIGNS, SHALL BE RESPONSIBLE FOR INSTALLATION, MAINTENANCE AND REPLACEMENT OF ALL LANDSCAPING MATERIALS SHOWN OR INDICATED ON THE APPROVED SITE PLAN OR LANDSCAPE PLAN ON FILE IN THE PLANNING DEPARTMENT. ALL LANDSCAPING WILL BE INSTALLED AS DEFINED ON THE PLAN, PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY.

## 3.7 MULCH, BREEZE, GRAVEL, ROCK & COBBLE

Apply materials so that the top of their surface is level with adjacent finished grade as detailed and they are the minimum depth specified after settlement and compaction. River rock shall be used unless defined differently in the notes.

A. Specified river rock shall be spread at a minimum four (4) inch depth for shrubs, ornamental grasses, perennials & trees in beds unless defined differently on the plan or in the notes.

## 3.8 SOD

A. Area: All areas outlined on the plan.

B. Preparation for Sodding: Sodded areas shall be free of debris and/or rocks larger than 1/2" which may hinder tilling, sodding, finish grading or subsequent operations. Accumulated debris shall be disposed of off-site. All sodded areas on slopes of three to one (3:1) or greater shall be secured with stakes.

C. Finish Grades: Perform finish grading required to maintain drainage into catch basins, drainage structures, etc., and as required to provide a smooth, well-contoured surface prior to proceeding. Ensure finished grades of sod are such that drainage of storm and irrigation waters will occur and ponding of water will be prevented.

D. Irrigation Heads: Adjust irrigation heads to proper watering height according to depth of the sod material, but lower than compacted grass blade height, to enable lawn mowers to freely cut grass without damage to sprinkler system. Adjust irrigation heads to proper watering height for unmowed areas to prevent mature grass from obstructing the stream of water.

E. Sod Placement:

1. Lay sod on soil that is slightly moist, with ends and sides of sod pieces butted tightly together, and laid in continuous rows with longest dimensions parallel to contours.
2. Stagger vertical joints between sod strips and compact by rolling so sod will be incorporated with ground surface, insure tight joints between adjacent pieces.
3. Cut all rows terminating on designated property lines equally to a straight line.
4. Add topsoil along exposed edges to match adjacent grade. Feather topsoil out approximately 1-foot from edge of sod.
5. Lay sod flush with adjacent walks, curbs, etc.
6. Protection of Sod Areas: Provide barriers as required to prevent pedestrian or vehicular traffic over newly sodded areas until completion and acceptance of work.
7. Sod shall be staked in all areas with a slope greater than 3:1.

F. Watering: Water sod upon completion of convenient work areas until installation is complete and irrigation system can be operated under full control. Water sufficiently to moisten subsoil at least 2" deep, and in manner not to cause erosion or damage to adjacent finished surfaces. Upon completion sod shall be watered by a permanent in ground irrigation system.

## 3.9 SEEDING

A. Area: All areas outlined on the plan, any disturbed areas off-site, and non-disturbed native grass areas.

B. Seed Bed Preparation:

1. Loosen soil to a depth of six inches (6") by approved method of scarification Remove stones or foreign matter over one inch (1") in diameter.
2. Grade areas to finish grades, filling as needed or removing surplus dirt and floating areas to a smooth, uniform grade as indicated on grading plans. All lawn areas shall slope to drain. Where no grades are shown, areas shall have a smooth and continual grade between existing or fixed controls (such as walks, curbs, catch basin, steps in elevation or building) and elevations shown on plans. Roll, scarify, rake and float lawn areas as necessary to obtain true, even lawn surfaces. All finish grades shall meet approval of the Landscape Architect, before grass seed is sown.
3. Seed beds should be permitted to settle or should be firmed by rolling before seedings are made.

C. Seeding shall not be performed in windy weather, or when the ground is frozen.

D. Scheduling:

1. Non-irrigated seeding shall be performed either during the Spring Planting Season or the Fall Planting Season. Planting seasons shall be defined as that period of time in the spring or fall, favoring healthy growth of grasses in the locality in which the seeding is done, in accordance with the recommendations of the local Cooperative Extension Service.

2. In the event that irrigated or non-irrigated seeding operations are completed too late in the Fall for adequate germination and/or growth, maintenance shall continue into the following growing season or until a uniform stand of the specified grasses has been established.

3. Supplemental Irrigation. See Erosion Control Specs.

E. Seeding & Mulching:

1. All seeding rates are for drilled applications, add 50% for broad cast seed and 100% for hydroseed or brillion seeded.
2. Seeding and hydro mulching shall be done in two (2) directions at right angles to each other.
3. In larger areas seed shall be sowed evenly with an approved mechanical drill. Culti-packer or approved similar equipment may be used to cover the seed and to form the seedbed in one operation. Refer to seed supplier for appropriate seeding depth of specific seed mixes. Refer to landscape plan for seed mix and rate. These larger areas shall also have wheat straw crimped into the soil at the rate of two tons per acre.
4. In smaller areas inaccessible to mechanical seeder, the seed shall be broad cast and the seed bed shall be prepared by hand raking. Refer to seed supplier for appropriate seeding depth of specific seed mixes. Refer to landscape plan for seed mix and rate. These smaller areas shall be hydromulched after seeding. Irrigated seed areas are to be hydromulched with 2,000 lbs per acre of hydro mulch and tackifier. Non-irrigated seed areas are to be hydromulched with 4,000 lbs per acre of hydro mulch and tackifier. Watering by hand or with portable equipment is not considered irrigation.
5. Erosion control fabric shall be used on all seeded and hydro mulched slopes 4:1 or greater (steeper). Install per manufacturer recommendations.

F. Watering: Water the seeded areas to provide adequate moisture for germination and to support grass until fully established. All areas of the site shall be watered in such a way as to prevent erosion due to excessive quantities applied over small areas and to avoid damage to the finished surface.

1. The surface layer of soil for all seeded areas must be kept moist during the germination period. Water twice the first week and once per week thereafter with a fine spray. Do so as needed to supplement natural rain and reach a six inch minimum depth each time
2. Make weekly inspections to determine the moisture content of the soil and adjust the watering schedule.

3. Seeded areas may be non-irrigated & watered by portable equipment. The Contractor shall, furnish his own portable tanks, pumps, hose, pipe, connections, nozzles, and any other equipment required to transport the water from the available outlets and apply it to the seeded areas in an approved manner.

4. Seeded areas may be watered by an irrigation system. This system may be supplementary or Temporary. Supplementary irrigation will be permanent and buried in ground. Supplementary systems shall be operated to prevent death or damage during a period of drought in addition to establishment, but not operated on a regular basis after establishment. Temporary irrigation can be above the ground and may be removed & recycled after establishment.

G. After grass growth has started, all areas or parts of areas, which fail to show a uniform stand of grass for any reason whatsoever shall be reseeded in accordance with the plans and as specified herein. Such areas and parts of areas shall be reseeded repeatedly until all areas are covered with a satisfactory growth of grass at no additional cost to the Owner.

H. Protection: Protect seeded area against trespassing while the grass is germinating. Furnish and install fences, signs, barriers or any other necessary temporary protective devices. The Contractor at his expense shall repair damage resulting from trespass, erosion, washout, settlement or other causes.

I. Remove all fences, signs, barriers or other temporary protective devices after Final Acceptance.

## 3.10 RESTORATION AND CLEANING

A. Restoration and Repair: Properly repair sprinkler head or other irrigation system components, or other underground pipe or electric wiring damaged by this work.

B. Excess Materials and Debris: Remove pallets, unused sod, and other debris from the Project site. Clean paved areas over which operations have been conducted.

END OF SECTION

## SECTION 02970 LANDSCAPE AND IRRIGATION MAINTENANCE

PART 1 GENERAL

### 1.1 WORK INCLUDED

A.The Landscape Contractor shall provide with the bid, a written proposal for landscape maintenance with the Owner. If the Landscape Contractor is not A.N.A certified and capable of performing the work the Landscape Contractor shall sub contract with a certified qualified landscape maintenance contractor and shall provide any sub contracting information with the bid. The accepted proposal and maintenance contract will be for a period of 1 year. Maintenance will begin immediately after Final Acceptance of the landscaping and irrigation by the Owner. The Landscape contractor shall provide examples of three other local projects maintained by the Landscape contractor or its subcontractor.

B.Landscape maintenance shall include all necessary watering, cultivation, weeding, pruning, wound dressing, disease and insect pest control, protective spraying, straightening plants which lean or sag, adjustments of plants which settle or are planted too low, mowing of turf areas, replacement of mulch that has been displaced by erosion or other means, filling and or regrading eroded areas, reseeding or replanting any eroded or dead areas, repairing and reshaping of water rings or saucers. Removal of all rubbish, waste, tools, and equipment used in the execution of the contract at the end of each work day, and any other procedure consistent with good horticultural practice necessary to insure normal, vigorous and healthy growth of all plant material are also part of this maintenance contract.

C.During the first year of the maintenance contract, any replacement of plant material shall be the responsibility of the Landscape Contractor as part of the installation contract with exceptions as listed in Section 2900, 1.9. Any other replacement of plant material shall be included in the Maintenance Contract.

D.Landscape maintenance contractor shall purchase and maintain Contractor's general liability insurance in the amounts of \$1,000,000. Certification of such insurance shall be filed with the Owner prior to the commencement of the work.

### 1.2 QUALITY ASSURANCE

A.Work Force: Contractor's representative shall be experienced and A.N.A. certified in landscape maintenance and shall be available on a 24 hour basis for emergency repairs.

B.Materials: All materials used shall conform to the landscape and irrigation specifications (sections 2900 and 2810).

C.If upon notification by the manager action is not taken to correct any problems which affect safety, health of the plants, or property image the manager may take whatever action necessary to remedy the situation. All costs associated with such work shall be deducted from any payments due the Contractor.

### 1.3 MAINTENANCE SCHEDULE

A.Maintenance contractor shall provide as part of the bid a maintenance schedule and report to owner the Landscape Architect. Daily scheduling of maintenance activities shall be coordinated with the owner.

B.The report shall detail all planned and periodic maintenance activities, and all materials and application rates.

C.Any subcontractors shall be listed in the report including certification and insurance information.

## PART 2 EXECUTION

### 2.1 IRRIGATION

A.The irrigation system shall be used by the maintenance contractor for the watering program, but any failure of the system does not eliminate the Contractor's responsibility of maintaining the desired level of moisture necessary to maintain vigorous, healthy growth.

B.The quantity of water applied at one time shall be sufficient to penetrate the soil to a minimum of eight inches (8") in shrub beds and six inches (6") in turf areas at a rate which will prevent saturation of the soil and excessive water runoff (may require multiple short applications timed to allow absorption of water).

C.On\_site water shall be furnished by the Owner. Hose and other watering equipment shall be furnished by the Contractor.

D.Winter Watering: All trees, shrubs and bermuda grass shall be irrigated monthly during the winter. Each tree shall receive a minimum of 20 gallons of water per application, ground cover areas shall receive 1" of water per application, each shrub shall receive a minimum of 2-3 gallons of water per application, and refer to supplier's recommendations for winter watering of the bermuda grass. Water shall be hand applied at a rate that allows the water to soak into the root zone.

1. Do not irrigate when temperatures will fall below 30 degrees within 24 hours.
1. Irrigation system may be used for the water application only when temperatures will remain above freezing for several days. Immediately following irrigation repeat the winter shut down procedure.

### 2.2 WEEDING

A. Maintenance contractor shall keep all planting areas (including tree rings) free from weeds and undesirable grasses by a method and by materials approved by the A.N.A.

### 2.3 MULCHING

A.Mulch shall be maintained at the proper depth in all shrub beds, ground cover areas, annual beds, and tree rings according to the original drawings and specifications.

B.Mulch displaced by erosion, wind, or irrigation activities shall be removed from all walks, drives, and turf areas and replaced in the beds.

C.All bark mulch beds to be top dressed annually.

### 2.4 DISEASE AND INSECT PEST CONTROL

A.Inspect all plant material at least once a month to locate any disease or insect pest infestations. Upon the discovery of any disease or insect pest infestation, identify, or have identified, the nature or species of the infestation. A method of control in accordance with common A.N.A. standards shall be immediately implemented.

B.Apply all pesticides and fungicides according to label directions and take any precautions necessary to protect people and any other plant material from the chemicals.

### 2.5 FERTILIZING

A.Maintenance contractor is to fertilize plant material on a regularly scheduled program to fit the requirements of the plant material to maintain vigorous and healthy plant growth.

B.Shrub beds, ground cover, turf, and annuals shall receive granular fertilizer and trees shall receive fertilizer through a root feeding injection system.

### 2.6 PRUNING AND REPAIR

A.The amount of pruning shall be limited to the minimum necessary to remove dead or injured twigs and branches and to compensate for the loss of roots as a result of transplanting operation and/or to maintain safety in vehicular use areas. Pruning shall be done in such a manner as to not change the natural habit or shape of the plant. All cuts shall be made nearly flush, leaving the swollen collar at the crotch but no stubs.

### 2.7 MOWING

A.Mow all grass areas at regular intervals to maintain the grass at a height of 2" to 3". Mow at intervals so that no more than 1/3 of the blade length or 1" is removed at each mowing.

B.Mow grass areas in such a manner as to prevent clippings from blowing on paved areas, and sidewalks. Cleanup after mowing shall include sweeping or blowing of paved areas and sidewalks to clear them from mowing debris.

C.Edges of curbs and sidewalks shall be trimmed at least twice monthly

D. Irrigation system shall be checked for damage and repaired following each mowing operation.

### 2.8 STAKING AND TREE WRAP

A.Deciduous tree trunks shall be wrapped by Nov. 15 and wrappings shall be removed by May 21.

B.All trees staked or guyed as part of installation shall have stakes or guys removed after 1 year for spring installations or 1.5 years for fall installations.

### 2.9 ANNUALS

A.Annuals shall be installed 3-4 times during the growing season. Color palette, quantity, and specific variety shall be approved by management prior to installation.

### 2.10 CLEAN UP

A.During the course of maintenance or planting, excess waste materials shall be continuously and promptly removed at the end of each work day.

### 2.11 GENERAL IRRIGATION

A.Landscape maintenance contractor shall maintain the irrigation system in good operating condition through monthly inspections of all system components and make repairs as necessary. This includes checking and verifying operation in each zone, the alignment of heads, rain sensors, controller, and check leaks.

B.Landscape maintenance contractor shall make every effort to conserve water by adjusting the programming to allow for weather changes and growth seasons. Irrigation operations should be conducted between Midnight and 6:00 A.M. unless other hours are requested by the management.

## 2.12 WINTER IRRIGATION SHUT DOWN

A.When cold weather approaches and the chance for freezing conditions exist, the system should be drained after each use.

B.Winter shut down procedure as follows:

1. Shut water off at main gate valve
2. Open all manual drain valves
3. Blow out each section twice with compressed air
4. Set controller to cycle through each section the minimum time available, once a day through Winter months
5. If backflow prevention is installed with unions, remove and store out of the weather.

## 2.13 SPRING IRRIGATION START UP

A.Spring start up procedure as follows:

1. Reinstall backflow prevention
2. Close all manual drain valves
3. Slowly turn water on
4. Cycle through each station manually until all air has escaped the system.
5. Check for leaks and proper alignment of heads
6. Repair and adjust system as required for proper operation

## 2.14 IRRIGATION COMPONENT REPLACEMENT

A.If replacement of component parts in the irrigation system becomes necessary after normal use, and after the original period of warranty has expired (Section 2810, 3.03), the Owner is responsible for the expense of these replacement components, if there has been no mishandling of these items on the part of the maintenance contractor.

## 2.15 MAINTENANCE CONTRACT

A.These terms and conditions herein outlined shall be attached and made a part of a maintenance contract with the Owner.

## 2.16 TERMINATION OF THE MAINTENANCE CONTRACT

A.If the Owner fails to make payment for a period of ninety (90) days without written clarification, the maintenance contractor may, upon twelve (12) additional days' written notice to the Owner, terminate the contract and recover from the Owner, payment for all work executed and for any proven loss sustained upon any materials, equipment, or tools, including reasonable profit and damages applicable to the maintenance contract.

B.If the maintenance contractor defaults or persistently fails or neglects to carry out the work in accordance with the maintenance contract, the Owner, after twelve (12) days' written notice to the maintenance contractor, and without prejudice to any other remedy they may have, may make good such deficiencies and deduct the cost thereof, including compensation for additional services made necessary thereby, from the payment then or hereafter due the contractor, or at their option, may terminate the contract.

END OF SECTION

# SMH CONSULTANTS

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4-WAY COMMERCIAL

CONSTRUCTION DOCUMENTS

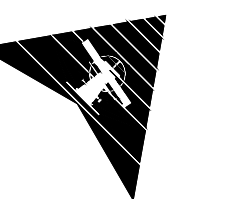
EL PASO COUNTY, CO

REVISION DESCRIPTION  
(DESCRIPTION)

REVISION DATE

000000

NORTH



SCALE: 1" = 30' - 0"

PROJECT #: 2412-0471  
CHECKED BY: KML  
DRAWN BY: KML

DATE: 06/11/2026

SHEET #  
**LS6**

TOTAL SHEETS 6

PLANNING AND COMMUNITY DEVELOPMENT  
DIRECTOR APPROVAL:  
  
DIRECTOR DATE

PCD FILE NO: PPR2347