Please remove checklist from the plan

2880 International Circle, Suite 110
Colorado Springs, CO 80910
Phone 719-520-6300
Fax 719-520-6695
www.elpasoco.com

EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT DEPARTMENT

LANDSCAPE PLAN CHECKLIST

Revised: January 2022

Landscape Plan

The landscape requirements are intended to provide uniform standards for the development and maintenance of the landscaping of private property and public rights-of-way to achieve a balance between the individual right to develop and the general benefit and welfare of the community. The benefits to be achieved and the overall purposes of landscaping are: (1) to create a positive image and visual appeal both along the road which is highly visible and internal properties which provide a working, shopping and living environment; (2) to decrease the scale of parking lots, provide shade, and reduce heat, glare and noise; (3) to separate circulation systems; to soften and reduce the mass of buildings; to screen and buffer lower intensity uses from higher intensity uses and protect residential privacy; and (4) to create an overall pleasant and attractive surrounding. The landscape plan shall meet the requirements of Chapter 6 of Land Development Code.

The PCD Director may modify the applicable requirements, including requiring additional items or removing items, based upon the project and site-specific circumstances.

		Applicant	PCD
	NOTE: Please confirm each item below has been included by placing a check mark in the "Applicant" column. See right for an example. The "PCD" column is for office use only.	√	Office use only
1	Owner name, contact telephone number, and email	x	
2	Applicant name (if not owner), contact telephone number, and email	x	
3	Plan preparer contact telephone number and email	x	
4	Date, north arrow, and a graphic scale	x	
5	Vicinity map showing the subdivision in relation to section lines and existing or proposed arterial or collector roadways.	x	
6	Location and dimension of the all property lines, rights-of-way, and all existing and proposed easements	na	
7	Location and classification of all existing and proposed internal and adjacent roadway(s).	x	
8	The outlines of all structures, parking areas, outside storage areas, loading areas, and refuse collection area(s) in relation to the landscaping.	x	
9	The existing zoning of the subject property and the existing zoning of surrounding properties.	x	
10	Location and species of all plantings and the location and design of any proposed irrigation infrastructure for proposed landscaping in the rights-of-way, if pre-approved. (license agreement required)	x	
11	The location of all utilities, walls, fences, exterior parking and loading areas, pedestrian walks or paths, pedestrian-oriented areas, vehicular drives, storm water detention areas, and other manmade elements. Detail drawings of all required structures used for screening purposes (Example: refuse areas, equipment screening, and/or gates).	x	
12	Sight distance triangles and any plantings, signs, walls, structures, or other visual obstructions within the triangles where applicable.	na	
13	The location, type, size, and quantity of major existing plant materials meeting the plant type requirements, including all vegitated groundcover areas, shrubs, and trees, with information as to which materials are poposed to be removed and which shall be retained or relocated.	x	
14	All proposed ground cover areas shall be identified, including the types and amounts of living plant materials to be used and the size and depth of non-living materials. The manner in which any lawn areas are to be established (for example, by sodding or seeding) shall be indicated. The landscape treatment of all adjacent right-of-way areas, as well as the owner/ developer's property, shall be identified.	x	
15	Phasing, if applicable, shall be noted on the landscape plan or provided as supplemental information. All future development phases within a site shall have all disturbed soil surfaces reseeded to prevent erosion. All requests for phasing of landscaping shall be espressly approved by the PCD Director prior to submittal of the associated application.	na	
16	If the application includes a request for approval of an alternative landscape plan, the landscape plan shall include a statement requesting approval of the alternative design and justification for the request unless otherwise provided for in the letter of intent.	na	

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LANDSCAPE PLAN CHECKLIST

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17	Landscape planting summary table to include a summary of required and proposed landscaping based upon adjacent or internal roadways, adjacent land use(s), parking area(s), buffer and screen area(s), and compliance with all internal landscaping requirements.	x	
18	Legend with plant species, quantity, maturity height, ball and burlap size, caliper, symbol and name	x	
19	Any other additional items as required by the PCD Director deemed necessary to address the applicable review criteria:	na	

LANDSCAPE SHEET LEGEND

EPC PCD Calculations

SITE SIZE	INTERNAL LANDSCAPE AREA		TREE REQUIREMENTS*		PERCENTAGE LIVE MATERIAL	
disturbed area	5% min of lot		1 tree per 500sf internal landscape max 50% trees replaced with 10 shrub/tree		75% of require landscape area live material	
	required	provided	required	provided	required	provided
138,887 sf	6,944 sf	53,323 sf	14	128	75%	100%

*** All plant material is at or larger than required sizes.**
No screening from adjacent uses required.

TREE PROTECTION NOTES

Protective Fencing: All trees to be preserved in Tree Preservation Areas shall be protected by 6 foot chain link fencing supported by metal stakes. The fence shall be located as shown on the plan. The fence shall be firmly anchored into the ground and shall remain upright and intact until all construction activity is complete. Construction activities or storage shall not occur within these protected areas. The contractor shall stake the protective fencing location. The Owner's Representative or Landscape Architect shall approve the location of the protective fencing on site prior to the start of any site work.

Tree Preservation Area Access: In Tree Preservation Areas where construction traffic is unavoidable as concurred by the Landscape Architect and Owner's Representative a 12" layer of wood chips shall be laid over the existing grade under the canopies of preserved trees to allay rutting and slightly reduce soil compaction. In areas where construction crosses Tree Preservation Areas, protective fencing shall be installed to delineate the construction corridor. The location of this temporary protective fencing shall be approved on site by the Owners representative or Landscape Architect prior to the start of construction. This temporary fencing and the wood chips shall be removed upon completion of construction in these areas.

Root Pruning: Root pruning shall be performed with a trencher such as a telephone cable puller or a "ditch witch" prior to adjacent excavation. The trenching shall be to the depth of proposed excavation or soil disturbance. The contractor shall stake the limit of root pruning where needed in construction areas within 10' of a tree canopy. Limits of trenching shall be approved by the Owners Representative or Landscape Architect prior to any trenching in the field. All roots over one inch (1") in diameter shall be clean cut with a bow saw or similar cutting device to provide a clean cut on the root.

Silt Damage: Silt from run-off settling over the root system of a tree also effectively suffocates the roots by filling and clogging the vital air spaces in the soil. A silt fence attached to the Tree Protection Fencing shall provide siltation control at Tree Preservation Areas. On slopes, the silt fence can be limited to the uphill side of the Tree Preservation Area. Silt control shall be staked, approved and installed before construction begins.

Contractor's Penalty for Negligence: The Owner's Representative primarily and the Landscape Architect secondarily shall monitor the construction site. If, in their opinion, the general contractor, his agents, employees, sub-contractors or licensees are exercising procedures that are determined to be detrimental to the vitality of the trees that are to be preserved, the Owner's Representative or Landscape Architect shall advise the client to issue a "STOP WORK ORDER". If, in the opinion of the landscape architect, County-appointed Forester or licensed arborist, the general contractor has damaged a tree beyond its ability to heal, the general contractor shall be required to reimburse the owner at a rate of $800.00 per caliper inch for each tree that is damaged or destroyed due to the general contractor's negligent operations. The general contractor shall be responsible for the cost of remedial maintenance of or removal of any damaged tree.

Overhead Construction Clearance Pruning: When overhead equipment will impact tree canopies a licensed arborist shall prune the canopies to prevent canopy damage and branch breakage. All canopy pruning shall be approved by the County-appointed Forester and Landscape Architect prior to pruning. A licensed arborist shall perform all pruning. All trees shall be pruned in accordance with the N.A.A. Class I Fine Pruning Standard for shade trees.

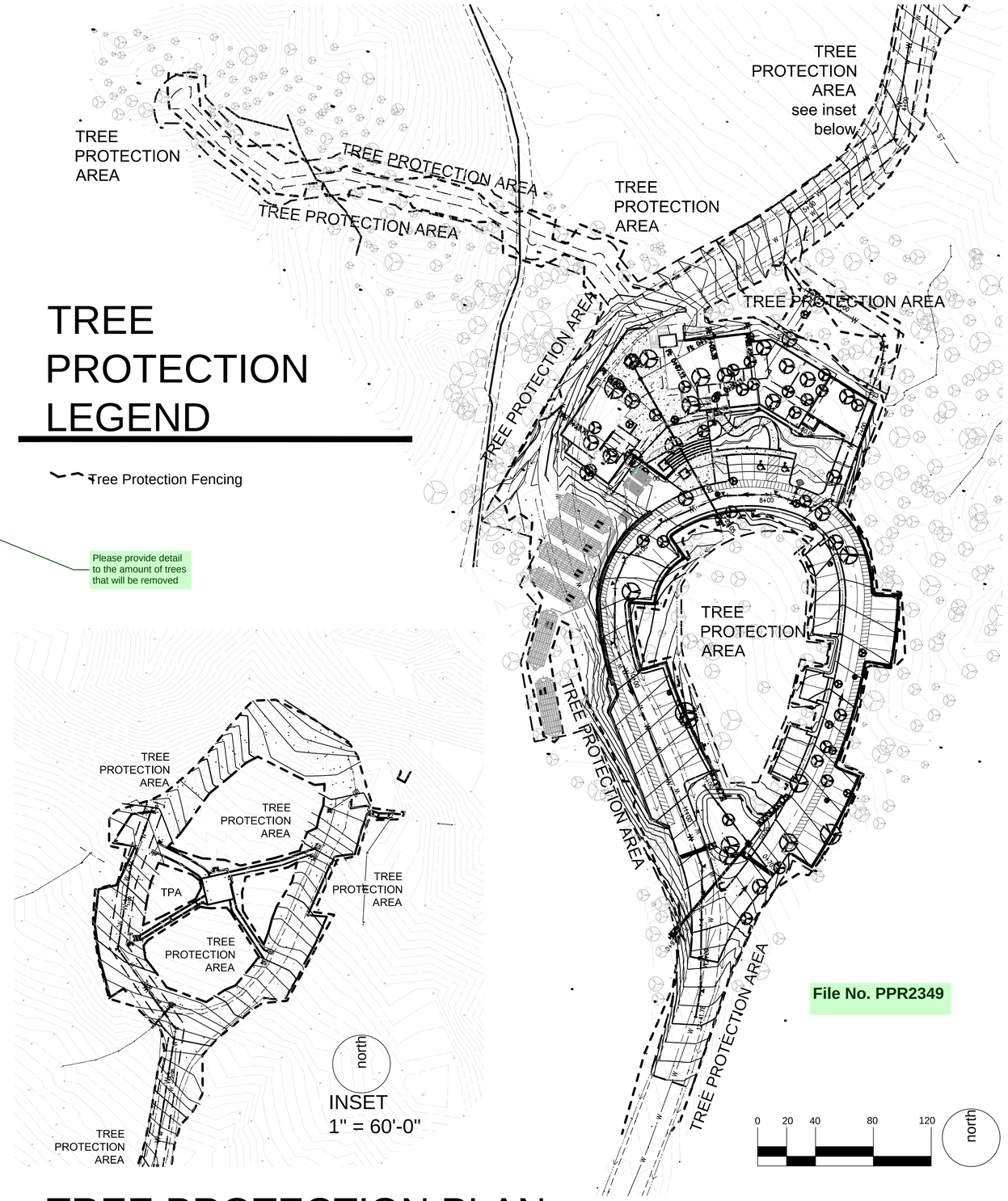
Deep Root Fertilization and Watering: Watering is required for trees which required root pruning or have suffered from construction damage. Trees to remain shall be watered every fourteen (14) days to a depth of twelve (12) inches during the construction period or as recommended by the County-appointed Forester or the Landscape Architect.

Finish Pruning: At the conclusion of Construction, all existing trees to remain shall be pruned in accordance with the N.A.A. Class I Fine Pruning Standard for shade trees as directed by teh Owners Representative. A licensed arborist shall perform all pruning.

TREE PROTECTION LEGEND

Tree Protection Fencing

Please provide detail to the amount of trees that will be removed



TREE PROTECTION PLAN

1" = 40'-0"

File No. PPR2349

REVISIONS

	DATE	FOR

NOT FOR CONSTRUCTION

TDG Architecture
Colorado Springs, CO 80903
719.623.5641 (Phone)
719.623.5643 (Fax)

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Colorado Springs, CO 80919
719.359.2813
p@tapisassociates.com

Fox Run Nature Center
Fox Run Regional Park
2110 Stella Drive
Colorado Springs, CO 80921

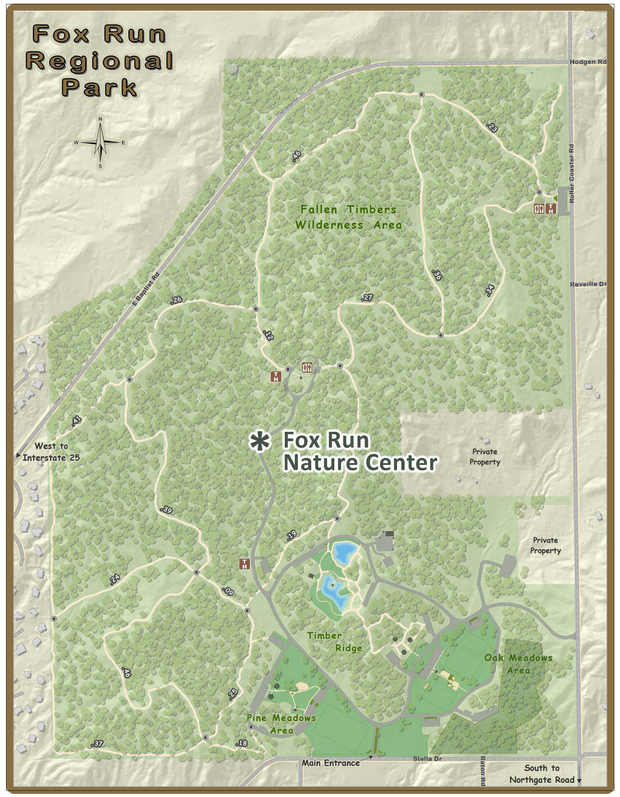
Landscape Cover Sheet and Tree Protection Plan

DATE:
DRAWN BY:
CHECKED BY:
PROJECT NO.:

SHEET:
L1.0

FOX RUN NATURE CENTER

FOX RUN REGIONAL PARK, EL PASO COUNTY, COLORADO

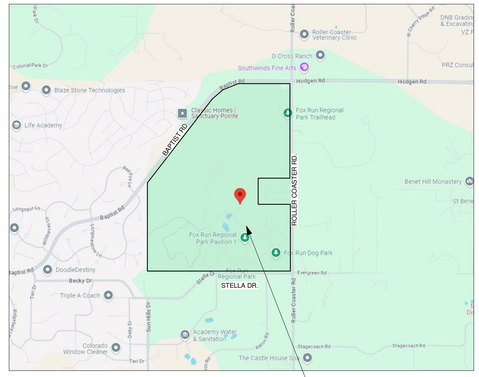


PARK MAP

SCALE: NTS

0' 5' 10' 20' 40'

NORTH



VICINITY MAP

SCALE: NTS

PROJECT DATA

OWNER:
EL PASO COUNTY
200 S CASCADE AVE STE 150
COLORADO SPRINGS CO, 80903
719-520-7529
JASON MEYER
TODD MARTS

APPLICANT:
BASELINE CORPORATION
1046 ELKTON DRIVE
COLORADO SPRINGS, CO 80907
719 531-6200
STEVE BAGGS

PROJECT ADDRESS:
2110 STELLA DR.
COLORADO SPRINGS, COLORADO
809021

TAX SCHEDULE NUMBER:
6100000297

LEGAL DESCRIPTION:
NW4 & SW4, EX NE4SW4 OF SEC 28-11-66 E2SE4, S2SE4NE4, THAT PART OF N2SE4NE4 OF SEC 29 LY SELY OF A STRAIGHT LN CONNECTING SW4 AND NE COR OF SD N2 SEC 29-11-66

LOT SIZE:
398.5 ACRES

ZONING:
RR-5

PROJECT DESCRIPTION:
NEW SINGLE STORY, TWO BUILDING NATURE CENTER WITH A VIEWING TOWER AND CANOPY WALK. THE NON-COMBUSTIBLE CONSTRUCTION BUILDING WITHA MULTI-PURPOSE ROOM, EXHIBIT SPACE, OUTDOOR DECK, OFFICES, STORAGE AND RESTROOMS

TOTAL BUILDING AREA:
8,245 SQFT WITH A 4,565 SQFT OUTDOOR PATIO

NUMBER OF LEVELS:
1 STORY WITH CANOPY WALK AND VIEWING PLATFORM

BUILDING HEIGHT:
75-0"

PARKING CALCULATIONS:

PARKING SPACES	39 SPACES
ACCESSIBLE PARKING SPACES	2 SPACES
TOTAL SPACES	41 SPACES
BUS PARKING	3 SPACES

NOTE:
THE OWNER AGREES ON BEHALF OF HIM/HERSELF AND ANY DEVELOPER OR BUILDING SUCCESSORS AND ASSIGNEES THAT SUBDIVIDER AND/OR SUCCESSORS AND ASSIGNEES SHALL BE REQUIRED TO PAY TRAFFIC IMPACT FEES IN ACCORDANCE WITH THE EL PASO COUNTY ROAD IMPACT FEE PROGRAM RESOLUTION (RESOLUTION NO. 19-471), OR ANY AMENDMENTS THERETO, AT OR PRIOR TO THE TIME OF BUILDING PERMIT SUBMITTALS. THE FEE OBLIGATION, IF NOT PAID AT FINAL PLAT RECORDING, SHALL BE DOCUMENTED ON ALL SALES DOCUMENTS AND ON PLAT NOTES TO ENSURE THAT A TITLE SEARCH WOULD FIND THE FEE OBLIGATION BEFORE SALE OF THE PROPERTY.

PROJECT TEAM

OWNER:

El Paso County
200 S Cascade Ave Ste 150
Colorado Springs CO, 80903
719-520-7529
Jason Meyer
Todd Marts

ARCHITECT:

TDG Architecture
201 E. Las Animas Street, Ste. 113
Colorado Springs, CO 80903
719-623-5641
Sharon Allen
Mark Tremmel

LANDSCAPE ARCHITECT:

Tapis Associates
540 Buckeye, Terrace Level
Colorado Springs, CO 80919
719 593-1540
Priscilla Marbaker

EXHIBIT DESIGNER:

Studio Tectonic
400 Marine Street, Carriage House
Boulder, CO 80302
720 398-3030
Seth Frankel
Zach Mosely

CIVIL ENGINEER:

Baseline Engineering Corporation
112 N. Rubey Drive, #210
Golden, CO 80403
303 940-9966
Steven G. Baggs, PE
Alan Lunsford

STRUCTURAL ENGINEER:

RMG Engineers
2910 Austin Bluffs Parkway
Colorado Springs, CO 80918
719 548-0600
Mike Thompson

GREEN INITIATIVES, MECHANICAL, ELECTRICAL, ENGINEER:

PCD Engineering, Inc.
4303 E. Brighton Boulevard, Suite #3
Denver, CO 80216
303 733-3078
Jacob Goodman, LEEDap, BEMP
Alex Pontasch
Walter Shoup

GEOTECHNICAL ENGINEERING:

RMG Engineers
2910 Austin Bluffs Parkway
Colorado Springs, CO 80918
719 548-0600
Kelli Zigler, PE

TRAFFIC ENGINEER:

SM Rocha, LLC
8703 Yates Drive, Suite 210
Westminster, CO 80031
719 203-6639
Mike Rocha, TOPS, TSOS
Brandon Wilson

COST ESTIMATOR:

Colarelli Construction
111 S. Tejon St., Suite 112
Colorado Springs, CO 80903
719 475-7997
Mike Senger

REVISIONS

	DATE	FOR

NOT FOR CONSTRUCTION

TDG Architecture
201 East Las Animas, Suite 113
Colorado Springs, CO 80903
719.623.5641 (Phone)
719.623.5643 (Fax)

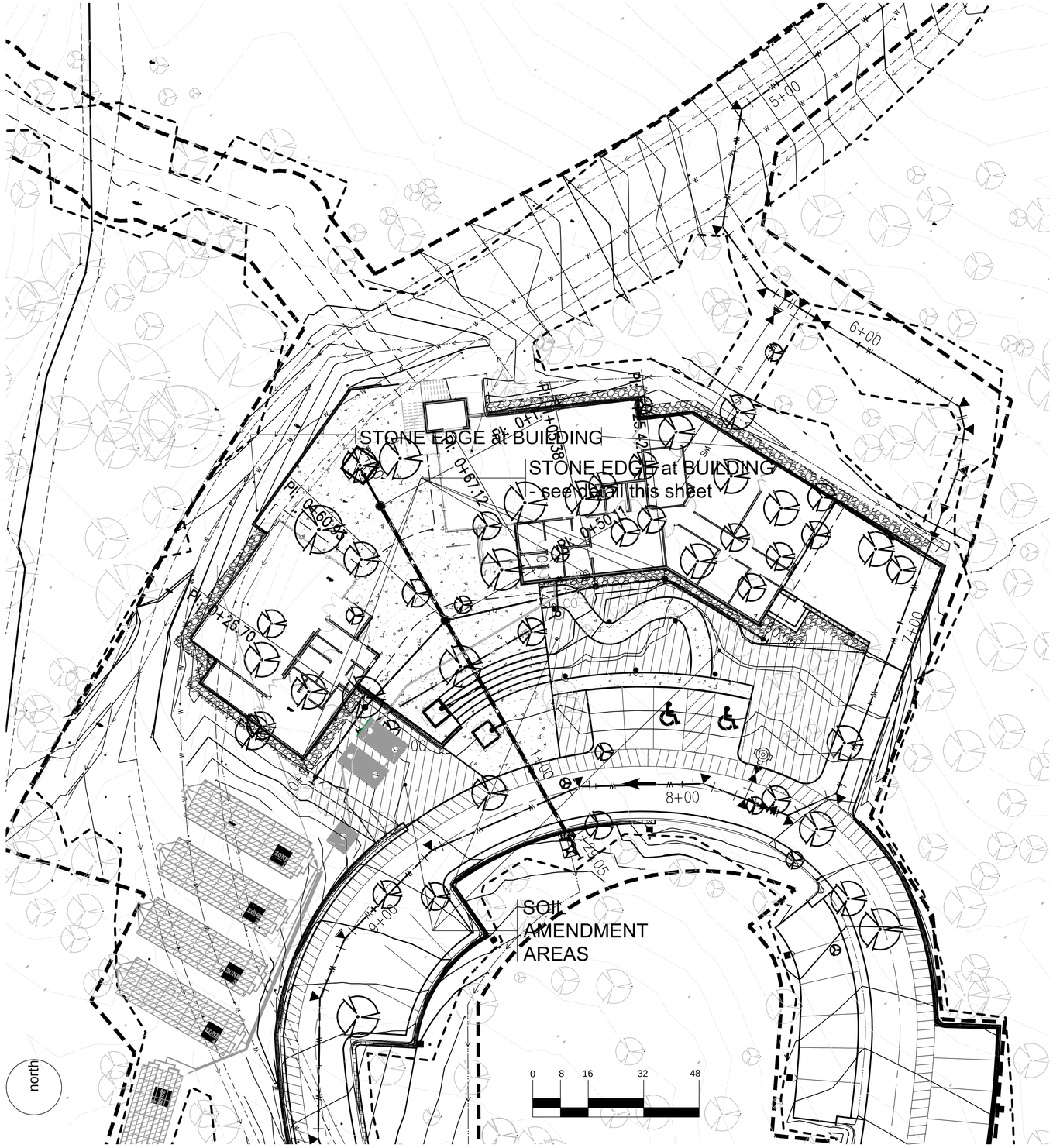
FOX RUN NATURE CENTER
Fox RUN REGIONAL PARK
2110 STELLA DRIVE
COLORADO SPRINGS, CO 80921

DEVELOPMENT PLAN - COVER SHEET

DATE: 10/24/24
DRAWN BY: tdg
CHECKED BY: TDG
PROJECT NO.: 22164

SHEET:
DP-CS
1 OF XX

10/27/2024 5:26:01 PM C:\Users\shann.INTERNAL\Documents\Fox Run - CD_ShannAllen9.17.rvt



SOIL AMENDMENT AND STONE BUILDING EDGE PLAN

1/16" = 1'-0"

LANDSCAPE GRADING AND SOIL AMENDMENT NOTES

GENERAL

1. Contractor and Owner's Representative shall verify the correct location of **all** underground utilities in the field prior to commencing work.
2. Grade topsoil to eliminate rough, low, or soft areas and to insure positive drainage.
3. Contractor to verify positive drainage in all areas to be planted, or seeded.
4. Irrigation sleeves shall be 4" PVC extending 6-8" beyond the pavement edge and placed 18" deep. Refer to Irrigation Plan for location.
5. Contractor shall not willfully proceed with construction as designed when it is obvious that unknown obstructions and/or grade differences exist that may not have been known during design. Such conditions shall be immediately brought to the attention of the Owner's Representative for a decision. The Contractor shall assume full responsibility for all necessary revision due to failure to give such notification.
6. Refer to details and notes for staking method, soil preparation, plant pit dimensions and backfill requirements.

SOIL AMENDMENT in Indicated Areas

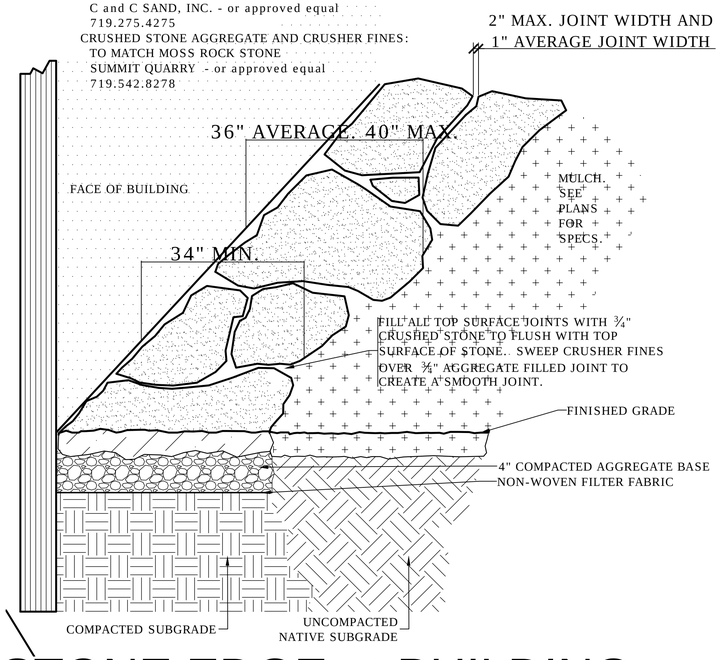
7. Topsoil shall be fertile, agricultural soil free of subsoil, clay, impurities, plants, weeds, and roots. The minimum pH value of 5.4 and a maximum of 7.0.
8. Topsoil to be placed to a minimum depth of 6" and evenly spread over all other areas to be planted.
9. Till areas to be planted, or seeded o a depth of 8".
10. Existing soil in all proposed planting beds are to be amended with 3 cu. Yds. /1000s.f. of tri-mix 1 (2 parts topsoil, 2 parts peat moss, 1 part compost) tilled into top 4" of soil. Following tri-mx incorporation, planting beds to receive 2" depth of premium compost tilled to a 4" depth.

MOSS ROCK BUILDING AND PAVING STONE - RANGE SIZES LENGTH 1.5-3', WIDTH 1.5-3', THICKNESS 2.5-4". FIELD FIT (CHISELING WHERE NECESSARY) TO MAXIMUM 2" JOINT OPENING AND AVERAGE 1" OPENING ALONG EACH JOINT. ALL VISIBLE FACES TO BE NATURAL FINISH, SHOWING NO VISIBLE SAWCUTS, CHISEL MARKS OR OBVIOUS MACHINING MARKS.

ALL STONE SURFACE TO BE MAX 1" ABOVE AND EXTEND MIN 2" BELOW LEVEL FINISHED GRADE. OUTSLOPE STONE SURFACE 2% FROM BASE OF BUILDING.

CONSTRUCT ONE MOCK-UP PAIR ON SITE FOR APPROVAL BY THE LANDSCAPE ARCHITECT PRIOR TO PROCEEDING WITH THE WORK.

STONE SOURCE:
C and C SAND, INC. - or approved equal
719.275.4275
CRUSHED STONE AGGREGATE AND CRUSHER FINES:
TO MATCH MOSS ROCK STONE
SUMMIT QUARRY - or approved equal
719.542.8278



STONE EDGE at BUILDING

1" = 1'-0"

REVISIONS		
	DATE	FOR

NOT FOR CONSTRUCTION

TDG Architecture
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719.623.5641 (Phone)
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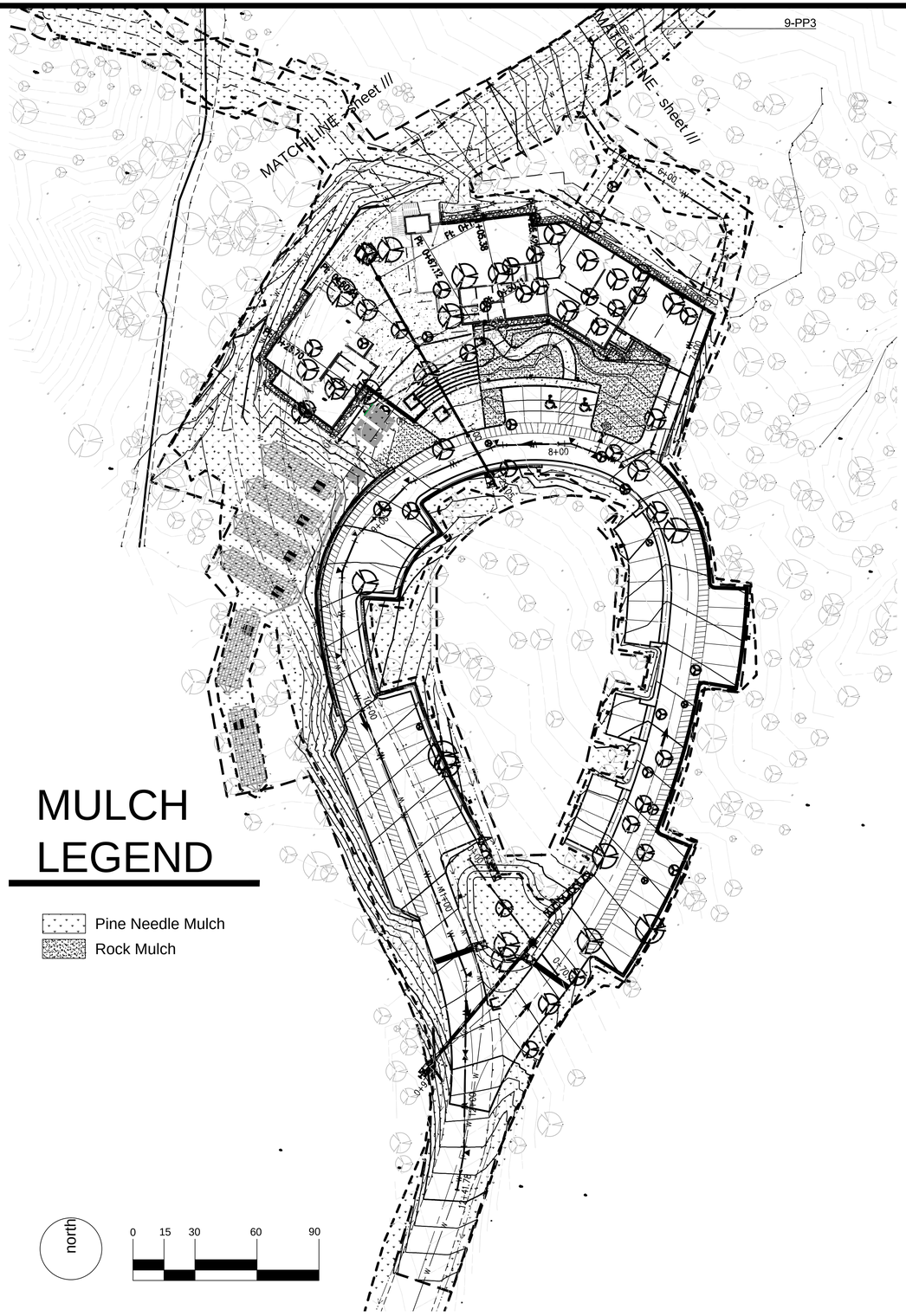
719.359.2813
p@tapisassociates.com

Fox Run Nature Center
Fox Run Regional Park
2110 Stella Drive
Colorado Springs, CO 80921

Landscape Soil Amendment Plan

DATE:
DRAWN BY:
CHECKED BY:
PROJECT NO.:

SHEET:
L2.0



MULCH LEGEND

- Pine Needle Mulch
- Rock Mulch

north

0 15 30 60 90

LANDSCAPE MULCH PLAN

1" = 30'-0"

PLANTING and MULCH NOTES

GENERAL PLANTING NOTES

a. Irrigation methods for the Site includes pop-up spray heads, and drip irrigation.
b. All plant material shall conform to the sizes given in the plant list and shall be nursery grown in accordance with the "American Standard for Nursery Stock", latest edition. www.anla.org
c. All planting shall be in accordance with standard American Association of Nurserymen procedures and specifications.
d. Contractor and Owner's Representative shall verify the correct location of all underground utilities in the field prior to installation of any plant materials.
e. Contractor shall be responsible for the safety of those associated with the work, pedestrians and the general public throughout the duration of the contract.
f. Obtain approval from Landscape Architect or Owner's Representative before making any substitutions or changes.
g. Quantities shown on plant list are for the Contractor's convenience only and are not guaranteed to be accurate. In the event of a discrepancy between quantities shown on the plan and quantities shown on the plant list, the quantities on the plan shall apply.
h. Contractor shall not willfully proceed with construction as designed when it is obvious that unknown obstructions and/or grade differences exist that may not have been known during design. Such conditions shall be immediately brought to the attention of the Owner's Representative for decision. The Contractor shall assume full responsibility for all necessary revision due to failure to give such notification.
i. Contactor is responsible for installing all landscape shown on this plan. Any changes from the approved plans may require approval from El Paso County Parks & Community Services.
j. Contractor shall refer to the note specifications provided for this project.
k. Contractor is responsible for contacting the landscape architect for all required inspections. Provide at least 48 hours notice to schedule inspections. Required inspections include planting bed layout, landscape layout, plant material verification and placement inspection, irrigation mainline inspection, landscape and irrigation punch list inspection, and a landscape and irrigation final inspection.
l. Contactor shall provide a one year warranty on all plant material, seeding, irrigation components and workmanship. Winter watering by hand shall be included for the warranty period. Replacement plant material shall be of the same species and size as the decayed or dead plant material.

EXISTING LANDSCAPING AND PLANTING

m. Areas of "existing trees to remain" shall be protected in accordance with the Tree Preservation Notes until final landscape grading and seeding.

PLANTING

n. Plant material location to be staked in the field and approved by the Landscape Architect prior to planting.
o. All shrubs and groundcovers shall be triangularly spaced, with spacing as shown in the planting legend, unless otherwise noted in the planting legend.
p. Place plants for best appearance for review and final orientation by landscape architect. Planting shall not be started until final subgrade has been established and approved by the civil engineer and landscape architect. Under no condition shall work be done if the weather or soil conditions are not satisfactory.
q. Refer to details and notes for staking method, soil preparation, plant pit dimensions and backfill requirements.

MULCH and EDGING

r. Prior to any site work, rake all pine needle debris from site disturbance area. Only rake areas within the construction area and outside the Tree Preservation Fencing. Stockpile and protect pine needle mulch on the abandoned roadway uphill of the building footprint.
s. All plant beds and planting areas to be mulched with pine needle mulch stockpiled from the construction area to a depth of 3" unless otherwise noted on drawings. All seeded areas to be mulched with pine needles to a depth of 1".
t. All mulched beds are to be sprayed with water after installation to help pine needle mulch mat down.
u. All areas labeled as 'Rock Mulch' are to receive 1.5" diameter 'Saddleback Swirl,' 4" depth over landscape fabric (350 polyspun or equal).
v. All plant beds shall be contained with a spaded edge unless otherwise noted on drawings.

FINISHING

w. All disturbed areas shall be fine graded and finished as noted on the civil and landscape plans.
x. The Property Owner and any future Owners are responsible for the proper landscape and irrigation maintenance of this site and any rights-of-way. Maintenance of this site includes, but is not limited to: irrigation inspections and adjustments, irrigation system shut down and start up, irrigation leak repair, landscape weeding, mowing, seeding, fertilization, wood mulch, and rock mulch replacement, pruning, and plant material replacement (including annual beds).
y. All maintenance should be in accordance with standards specified in the "ALCC Specifications Handbook" - latest edition.

REVISIONS

	DATE	FOR

NOT FOR CONSTRUCTION

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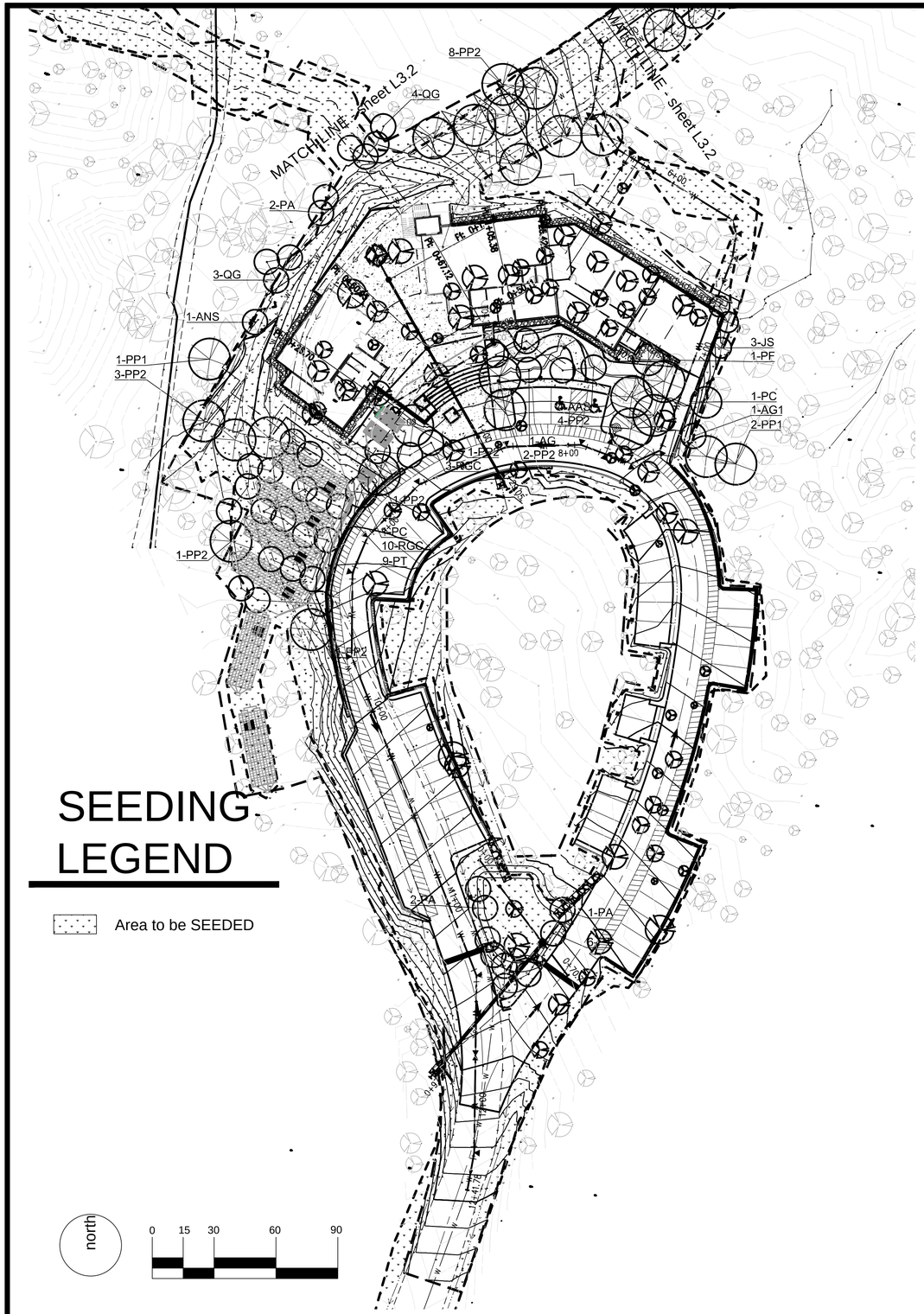
p@tapisassociates.com

Fox Run Nature Center
Fox Run Regional Park
2110 Stella Drive
Colorado Springs, CO 80921

Planting Notes and Mulch Plan & Notes

DATE:
DRAWN BY:
CHECKED BY:
PROJECT NO.:
SHEET:
L3.0



SEEDING LEGEND

Area to be SEEDED

north

0 15 30 60 90

SITE and TREE PLANTING PLAN

1" = 30'-0"

TREE and SEEDING PLANT LIST

SYM	QTY	BOTANICAL/COMMON NAME	SIZE	NOTES	EMITTERS
TREES					
AG1	1	Acer glabrum Rocky Mountain Maple	6' hgt.	Full Clump; B&B 4-5 min. 1 1/2" cal. stems	4 x 1 gal
AG	1	Acer grandidentatum Native Bigtooth Maple	2" cal.	Full; B&B	4 x 1 gal
ANS	1	Acer negundo 'Sensation' Sensation Boxelder	2.0" cal. clump	only male selections Full; B&B	4 x 1 gal
AAS	4	Amelanchier alnifolia Saskatoon Serviceberry	6' hgt.	Full; B&B 7-9 min. 1 1/2" cal. stems	4 x 1 gal
JS	3	Juniperus scopulorum 'Cologreen' Cologreen Rocky Mountain Juniper	6' hgt	Full; no fall planing	4 x ½ gal
PC	2	Pinus cembroides edulis Pinon Pine	6' hgt.	Full; B&B	4 x ½gal
PF	1	Pinus flexilis Limber Pine	6' hgt.	Full; B&B	4 x ½gal
PP1	11	Pinus ponderosa Ponderosa Pine	6' hgt.	Full; B&B 1-2.5' clear trunk	4 x ½gal
PP2	13	Pinus ponderosa Ponderosa Pine	9' hgt.	Full; B&B; 3-4' clear trunk	4 x ½gal
PP3	33	Pinus ponderosa Ponderosa Pine	4' hgt.	Full; B&B;	4 x ½gal
PT	15	Populus tremuloides Quaking Aspen	2.0" cal. tree or clump	Nursery grown; Full; B&B	4 x 1 gal
PT2	18	Populus tremuloides Quaking Aspen	1.5" cal. tree or clump	Nursery grown; Full; B&B	4 x 1 gal
PA	5	Prunus americana Native American Plum	6' hgt.	Full; B&B; clump 7-9 min. 1 1/2" cal. stems	4 x 1 gal
QG	7	Quercus gambelii Gambel Scrub Oak	6' min hgt.	Full; B&B; clump 1 1/2" cal. stems	4 x ½gal
RGC	13	Rhus glabra cismontana Rocky Mountain Sumac	5 gal. 2' hgt.	Full; multi stemmed 3-5 min. stems	4 x 1 gal

GRASS SEEDING MIX - area to be SEEDED 50,490 sf

Black Forest Fire Seed Mix per El Paso County Parks request available at Pawnee Buttes Seed Company. Percentages by weight. Drill seed to apply at 25 pounds per acre (0.0052 lbs.sy). Hydroseeding is not permitted.

5%	Indian Ricegrass	10%	Mountain Brome	5%	Green Needlegrass
5%	Little Bluestem	10%	Western Wheatgrass	5%	Prairie Junegrass
10%	Blue Grama	10%	Slender Wheatgrass		
10%	Switchgrass	10%	Sideoats Grama		
10%	Big Bluestem	10%	Sandberg Bluegrass		

REVISIONS

	DATE	FOR

NOT FOR CONSTRUCTION

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T A P I S associates
Colorado Springs, CO 80919
719.359.2813
p@tapisassociates.com

Fox Run Nature Center
Fox Run Regional Park
2110 Stella Drive
Colorado Springs, CO 80921

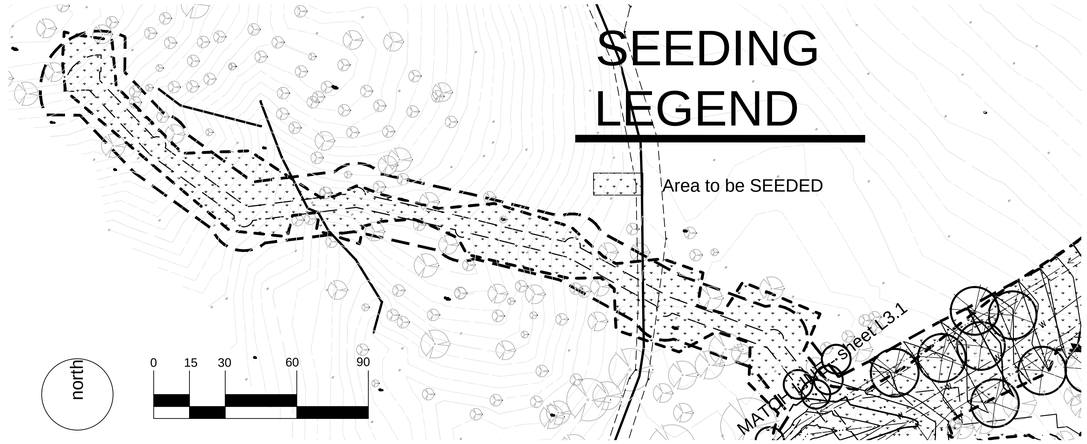
Tree and Seeding Planting Plan and List

DATE:
DRAWN BY:
CHECKED BY:
PROJECT NO.:

SHEET:
L3.1

SEEDING LEGEND

Area to be SEEDED

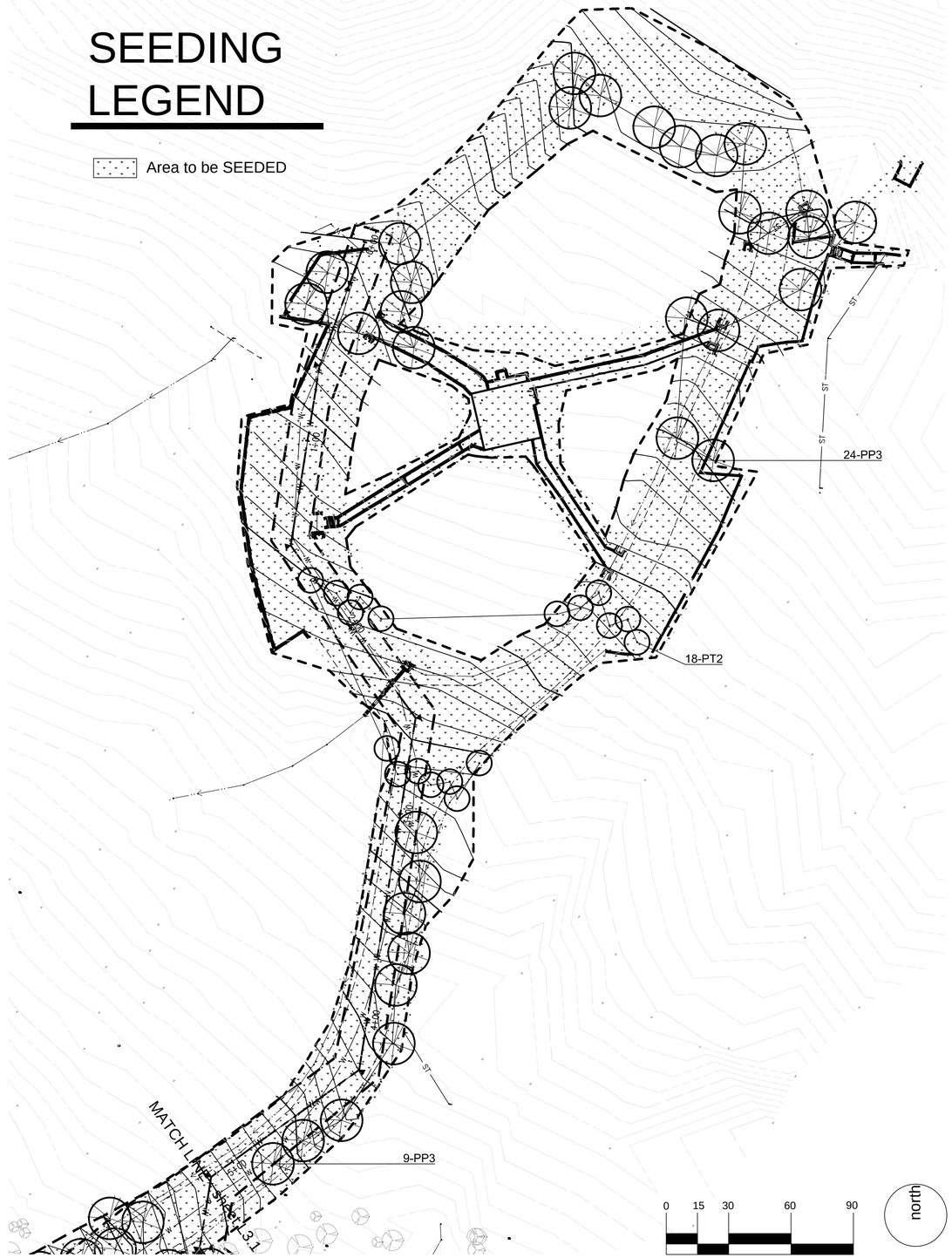


CANOPY WALK PLANTING PLAN

1" = 30'-0"

SEEDING LEGEND

Area to be SEEDED



FALLING TIMBERS RESTORATION & TRAILS

1" = 30'-0"

REVISIONS

	DATE	FOR

NOT FOR CONSTRUCTION

TDG Architecture

Colorado Springs, CO 80903
719.623.5641 (Phone)
719.623.5643 (Fax)

TAPS associates

Colorado Springs, CO 80919
719.359.2813
p@tapisassociates.com

Fox Run Nature Center

Fox Run Regional Park
2110 Stella Drive
Colorado Springs, CO 80921

Canopy Walk and Falling Timbers Restoration and Trails

DATE:

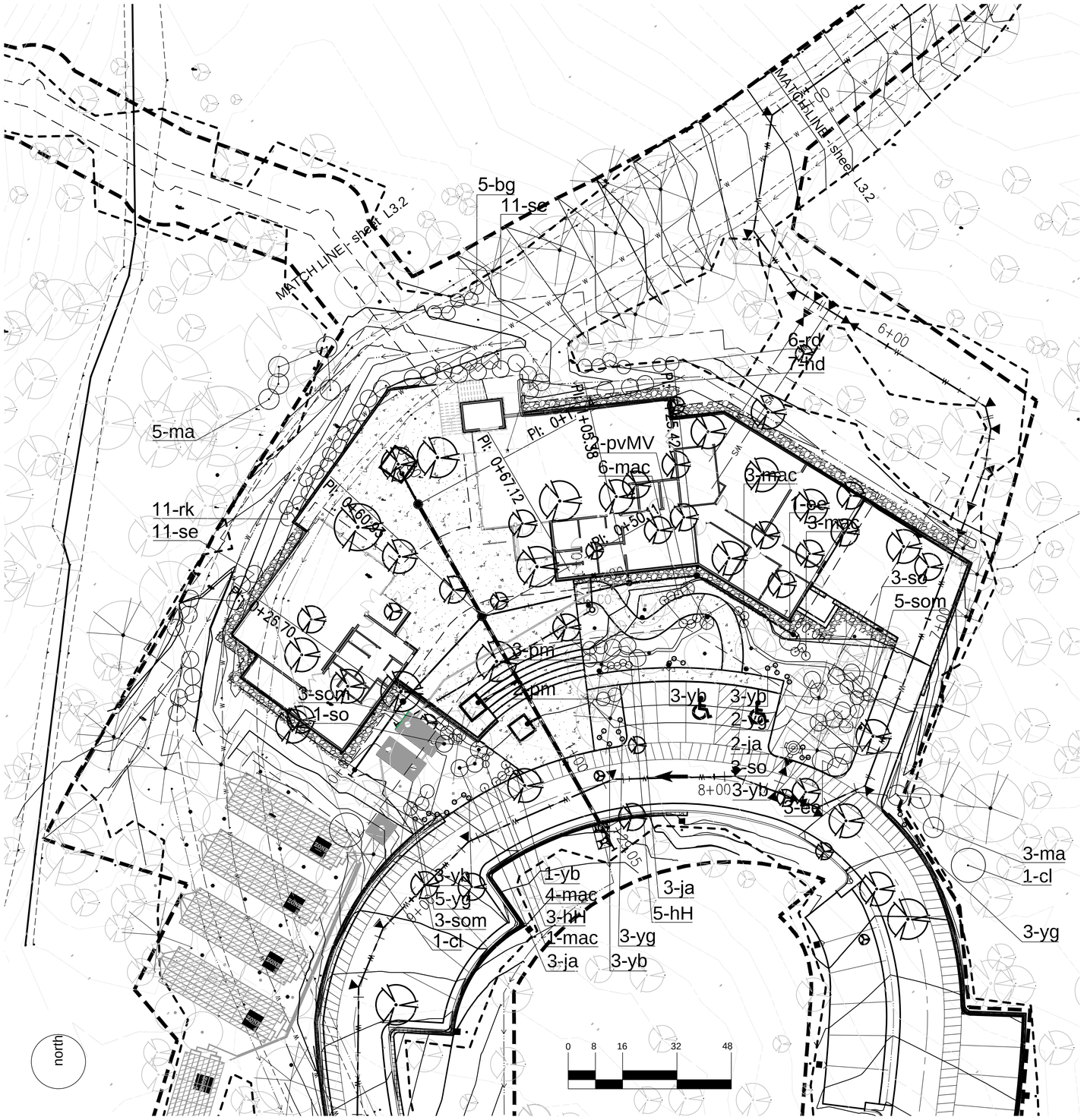
DRAWN BY:

CHECKED BY:

PROJECT NO.:

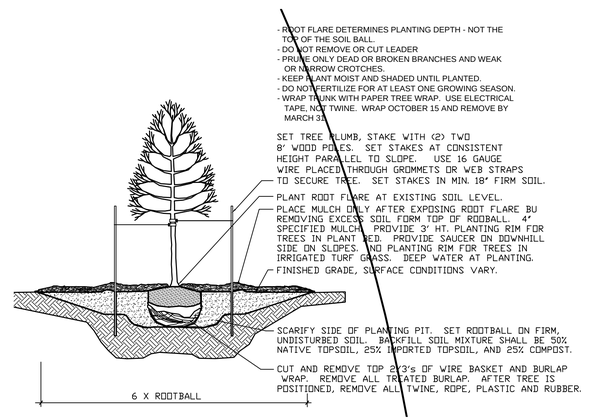
SHEET:

L3.2



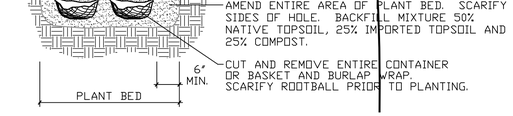
NATURE CENTER PLANTING PLAN

1/16" = 1'-0"



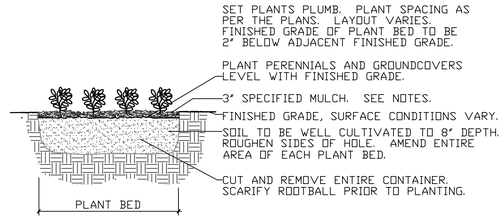
TREE PLANTING DETAIL

NO SCALE



SHRUB PLANTING DETAIL

NO SCALE



PERENNIAL AND GRASS PLANTING DETAIL

NO SCALE

REVISIONS		
	DATE	FOR
1		
2		
3		
4		

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Fox Run Nature Center
Fox Run Regional Park
2110 Stella Drive
Colorado Springs, CO 80921

Planting Details

DATE:
DRAWN BY:
CHECKED BY:
PROJECT NO.:

SHEET:
L3.3

SHRUB PLANT LIST

SYM	QTY	BOTANICAL/COMMON NAME	SIZE	NOTES	EMITTERS
EVERGREEN SHRUBS					
cl	2	Cerocarpus ledifolius Curl leaf Mahogany	5 gal. 18-24" hgt. & spd.	Full; Container	3 x ½ gal
ee	4	Ephedra equisetnaBunge Bluestem Momon Tea	5 gal. 18-24" hgt. & spd.	Full; Container	3 x ½ gal
ma	10	Mahonia aquifolium Oregon Grape Holly	20-24" hgt. 20-24" spd.	Full; Container Container or B&B	3 x ½ gal
mac	17	Mahonia aquifolium compacta Compact Oregon Grape Holly	20-24" hgt. 20-24" spd.	Full; Container	3 x ½ gal
ppMV	2	Picea pungens 'Mesa Verde' Mesa Verde Spruce	6 gal Full	Full; Container Container or B&B	3 x 1 gal
yb	16	Yucca baccata Banana Yucca	5 gal. 24-30" hgt.	Full; Container	2 x ½gal
yg	13	Yucca glauca Narrow-leaf Yucca	5 gal. 24-30" hgt.	Full; Container	2 x ½gal
DECIDUOUS SHRUBS					
bg	5	Betula gladulosa Bog Birch	5 gal. 18-24" hgt. & spd.	Full; Container	3 x 1 gal
hd	7	Holodiscus dumosus Mountain Rock Spirea	5 gal. 18-24" spd.	Full; Container	3 x 1 gal
hH	8	Hypericum 'Hidcote' St.John's Wort 'Hidcote'	5 gal. 12-18" spd.	Full; Container	3 x 1 gal
ja	8	Jamesia americana Waxflower or Five-leaf Cliffbush	5 gal. 18-24" spd.	Full; Container	3 x ½ gal
pm	5	Physocarpus monogynus Native Ninebark	5 gal. 18-24" spd.	Full; Container	
rd	6	Rubus deliciosus Boulder Raspberry	5 gal. 18-24" spd.	Full; Container	3 x ½ gal
rk	11	Rubus idaeus spp. And cvs. Native Raspberry	5 gal. 18-24" spd.	Full; Container	3 x 1 gal
se	22	Salix exigua Coyote Willow	5 gal. 18-24" spd.	Full; Container	3 x 1 gal
so	7	Symphoricarpos occidentalis Western Snowberry	5 gal. 18-24" spd.	Full; Container	3 x 1 gal
som	11	Symphoricarpos oreophilus Mountain Snowberry	5 gal. 18-24" spd.	Full; Container	3 x 1 gal

PERENNIAL PLANT LIST

To be located in the field by the project landscape architect

SYM	QTY	BOTANICAL/COMMON NAME	SIZE	NOTES	EMITTERS
GROUNDCOVERS and PERENNIALS with FULL YEAR INTEREST					
am	3	Achillea 'Moonshine' Moonshine Yarrow	4" pots	Container; Plant 18" o.c.	2 x ½ gal
au	9	Arctostaphyllos uva-ursi Kinnikinnick	1 gal	Container; Plant 18" o.c.	2 x ½ gal
euKC	3	Erioganum umbellatum 'Kannah Creek' Kannah Creek Sulfur Flower	4" pots	Container; Plant 15" o.c.	2 x ½ gal
mr	6	Mahonia repens Creeping Colorado Holly	1 gal.	Container; Plant 15" o.c.	2 x ½ gal
npp	3	Penstemon pinifolius Pineleaf penstemon	4" pots	Container; Plant 12" o.c.	2 x ½ gal
ps	3	Penstemon strictus Rocky Mountain Penstemon	4"pots	Container, Plant 12" o.c.	1 x ½ gal
pRR	3	Penstimon x mexicale 'Red Rocks' Red Rocks Penstemon	4"pots	Container, Plant 12" o.c.	2 x ½ gal
Gag	6	Andropogon gerardii Big Bluestem	1 gal	Container; Plant 24" o.c.	2 x ½gal
GgBA	9	Bouteloua gracilis 'Blonde Ambition' Blond Ambition Gramma	1 gal	Container; Plant 24" o.c.	2 x ½gal
GmlAG	3	Muhlenbergia lindheimeri Autumn Glow Autumn Glow Mountain Muhly	1 gal	Container; Plant 24" o.c.	2 x ½gal
GpvPS	3	Panicum virgatum 'Prairie Sky' Prairie Sky Switch Grass	1 gal	Container; Plant 24" o.c	.2 x ½gal
GpvS	6	Panicum virgatum 'Shenandoah' Shenandoah Switch Grass	1 gal	Container; . Plant 24" o.c	2 x ½gal
HERBACIOUS GROUNDCOVERS and PERENNIALS					
aYQ	3	Aquilegia chrysantha 'Yellow Queen' Yellow Queen Cloumbine	4" pot	Container; Plant 18" o.c.	3 x ½ gal
aCVW	3	Aquilegia x hybrida 'Colorado Violet & White' Colorado Violet & White' Columbine	4" pot	Container; Plant 18" o.c.	3 x ½ gal
af	3	Artemisia frigida Fringed Silver Sagebrush	4" pot	Container; Plant 18" o.c.	2 x ½ gal
gt	3	Geum triflorum Praire Smoke	4" pot	Container, Plant 12" o.c.	2 x ½ gal
ga	3	Gilia aggreata (syn: Ipomopsis) Scarlet Gilia	4" pot	Container, Plant 12" o.c.	2 x ½ gal
pb	3	Penstemon barbatus Scarlet Bugler Penstemon	4" pot	Container, Plant 18" o.c.	2 x ½ gal
rc	3	Ratibida columnefera Mexican Hat or Prairie Coneflower	4" pot	Container, Plant 12" o.c.	2 x ½ gal

REVISIONS

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Fox Run Nature Center
Fox Run Regional Park
2110 Stella Drive
Colorado Springs, CO 80921

Shrub Plant List

DATE:
DRAWN BY:
CHECKED BY:
PROJECT NO.:
SHEET:
L3.4

Irrigation System Description

This irrigation system is designed to support the agronomic needs of the plants in this landscape. Design considerations include installation cost, plant material, soils, slopes, climate, and the current Donala Water & Sanitation District Watering Restrictions. This automatic sprinkler system is designed to comply with local codes and provide efficient irrigation for a quality landscape.

This irrigation design has the capacity to water this landscape within a 48 hour- per-week water window. Spray and drip zones group planting areas with similar solar and wind exposure. Within zones, emitter quantities and sizes are varied to meet needs of the proposed plant species. Adjust emitter size and quantity for any plant substitutions.

Spray zones use matched-precipitation rate nozzles and pressure-regulated spray bodies to efficiently and completely irrigate turf with flowing borders and varying shapes. These nozzles maximize coverage and efficiency with a high degree of adjustability. Nozzles will need to be adjusted for arc and radius to fit the plan. Any variations in layout may require nozzles to be adjusted up or down one size.

Native seed areas have spray irrigation for establishment and survival during drought periods. This design reduces installation cost and complexity and enhances maintainability. The precipitation rates between both rotors and spray bodies with rotary nozzles are matched when connected to the same zone. Care must be taken to insure that the Hunter MPR Rotors have the specified nozzles for the arc needed in the landscape. Nozzles of the appropriate color are marked with Q, H, T, or F to indicate quarter arc (90º), half arc (180º), third arc (120º) and full circle (360º) respectively.

All trees and plantings have separately-zoned drip-coverage to maintain tree health and growth after native grasses are established and receive only supplemental irrigation. This drip coverage can be operated separately from the rotor zones.

Irrigation Controller
This system is controlled by a two-wire Rainbird controller offering flexible programming, and advanced diagnostic troubleshooting capabilities. The controller monitors water flow during irrigation cycles and alerts operators to changes in flow characteristics which indicate physical problems in the irrigation system. The controller's internet connectivity supports remote monitoring, programming and alerts when issues occur. Comply with all manufacturer specifications for wire manufacturer, wire type, grounding, routing, and connections. Grounding equipment locations and cable branch information shall be noted on as-built plans.

Sensors
Watering efficiency and waste/loss prevention are aided by a **flow sensor, rain sensor and master valve** . Sensors must be properly connected to the controller and operational for the final system verification.

Irrigation contractor is responsible for purchase and installation of backflow enclosure, controller and final electrical power to controller. Allelectrical wiring must be installed in accordance with local codes in approved conduit by a licensed electrician. Coordinate with owner's representative for in-building connections and wiring.

Flow meter to be mounted inside utility room near the point-of-connection within the utility closet. Use no bends, joints, or pipe size changes within 20" upstream and 10" downstream from the meter. Plan for appropriate low-voltage wiring to connect sensor to controller.

Water supply

Primary Irrigation System Connected at building
Irrigation to be connected to the building's potable water meter supply located in the water supply closet on the north edge of the building. Design is based on a 1.5" tap shared with the building and pressure regulated to 80 psi immediately prior to the meter. Design flow does not exceed 22 GPM . Donala water requires a pressure-reducing valve (PRV) upstream of the utility's meter to regulate inlet pressure of the meter to psi. Irrigation will be connected in parallel with the building backflow protector offering the available irrigation pressure to approximately 65 psi.

The building water quality will be protected by an approved RP-Principal backflow located inside the water supply room with other point-of-connection equipment which includes a smart controller, rain sensor and master valve. Flow sensor may be located in the equipment room (low-voltage wiring needed to controller) or near the master valve and controller. The RP-Principal backflow must be installed in accordance with local plumbing codes and with a sufficient drain. Adjustments to pressure may be required depending on installation.

Falling Timbers Restoration System
Falling Timbers water source is to be the existing tap installed for the restrooms. (Restrooms to be removed.) This system is designed with a master valve (see detail for reasons) and a Controller which can operate from a 110V or battery source.

Verify Pressure and Flow Before Installation
Verify static pressure >=65 psi and dynamic pressure >50 psi immediately upstream of irrigation backflow at 25 GPM flow. Contact irrigation designer prior to beginning construction if these pressures and flows are not available. Irrigation contractor is responsible for selection ordering and coordination with general contractor for installation and final commissioning of irrigation booster pump.

Winterizing
The system **must be properly winterized** to prevent freeze damage.

Protection of Equipment - as needed
Irrigation contractor to provide and install locking metal enclosures and/or valve boxes as-needed for backflow, controller, master valve, isolation valves. Contractor is responsible for locating all irrigation equipment supply equipment as specified by and coordinated with owner's representative.

Controller, master valve and flow meter for the nature center system should be located in the equipment garage. Coordinate with owner's representative for precise location.

Layout
These drawings show **Irrigation heads positioned in scale. Mainline and lateral layout are shown diagrammatically** ; locate pipe away from utility vaults, tree roots and hardscape as possible. Locate heads 4" from curbs and sidewalks where adjacent. Precise placement of equipment may not be possible as indicated. Consult Owner's Representative prior to making field changes. Adjust heads where necessary for utility vaults, large trees and hardscape.

Isolation valves are shown at key locations to facilitate maintenance. Use line-sized ball valves located in a box.

Install drains with 5 cu. ft. sump at low points of mainline. Suggested locations shown on plan. Final drain locations to be shown on as-built plans. To assist with hand watering winterizing, quick-connect valves are placed at the end of each mainline segment.

Final Adjustment
Minor adjustments may be necessary to optimize coverage and manage overspray onto hardscape. Adjustments include adjusting nozzle throw and arc and may require moving heads and nozzle changes. All changes must be reflected on the as-built plans provided by contractor.

Verify that all meter connections, and backflow prevention devices are fully functional and in compliance with current state and local codes and ordinances. Correct as necessary. Contractor to meet or exceed all applicable code specifications for water connections, electrical connections and for irrigation systems. Install all equipment in compliance with manufacturer's specifications.

Irrigation Sheets

number	title
L-4.0	Irrigation Cover Sheet
L-4.1	Mainline & Spray Layouts
L-4.2	Drip Layout & Falling Timbers Restoration
L-4.3	Irrigation Details and Warranty & Canopy Walk Restoration

IRRIGATION COVER SHEET

Scope of Work

Contractor is responsible for a complete and operational irrigation system which meets all local and national codes and includes but is not limited to:

A. Procure and install all equipment required per the drawings, equipment schedule, and specifications, including any incidental equipment--whether indicated or not--which is necessary to provide a complete and operational irrigation system from the water source. This includes but is not limited to: controllers, cabinets, pedestal mountings, concrete pads, and any controller-related equipment as may be required
B. Contractor is responsible for making all low-voltage wiring connections from controller(s) to remote control valves and for correct sequencing of all valve operation as indicated in the irrigation schedule.
C. Install wire specified by manufacturer of the irrigation controller between controller and electric valves. Tape to mainline every 5'. Ground per manufacturer's instructions.
D. Coordinate and/or install all subsurface sleeves as indicated on the drawing. Install irrigation sleeves and stamp location into concrete as per plans and specifications.
E. **Concrete shall be stamped with "S" above each end of each sleeve.**
F. Test for static water pressure and adequate flows at the point of connection and prior to beginning work downstream of the point of connection (POC).Inadequate pressure or flow shall be brought to the attention of the owner's representative and deficiencies shall be corrected prior to beginning of work downstream of the POC. The contractor is required to provide optimum coverage of irrigated areas as intended by the design--any additional equipment and labor necessitated by a failure to test and verify adequate pressure and flow is the responsibility of the contractor.
G. Coordinate with owner's representative to schedule all inspections. Contractor shall be responsible for scheduling and coordination of all system inspections with Owner's Representative, utilities provider and local inspectors. Provide a minimum of 7 days notice to schedule the following inspections. Provide visibility to valves, joints and equipment for required city affidavits. Flag laterals and head locations. Final acceptance inspection as detailed below.
H. Demonstrate operation of system in an automatic mode in the presence of the Owner's Representative. Acceptance for substantial completion may be given by the Owner's Representative on a "per tap" or "per controller" basis. Final acceptance for work and commencement of warranties shall be given upon completion, inspection, and acceptance of all work required per the drawings, specifications, and contract documents.
I. As-built reproducible record drawings, written warranties, seasonal maintenance instructions, and spare equipment shall be provided by the Contractor at inspection for final acceptance. Submittals shall be made in accordance with the specifications. Failure to make all project close-out submittals at the required time in the required format may result in the delay of final acceptance and release of applicable retainages by the Owner.
J. Provide warranty and seasonal maintenance as specified. See Maintenance and Warranty section.
K. Contractor to coordinate all work with general contractors, other subcontractors, site work and site conditions. Contractor to notify the Owner's Representative of any conflicts and resolve conflicts prior to proceeding with work.

PLANS and DRAWINGS

A. **Plans for mainline and laterals are diagrammatic**; precise placement of equipment may not be possible as indicated. **Head positions are shown in scale**. Consult Owner's Representative prior to making field changes. Position spray heads 4"-6" from sidewalks and edges.
B. All installations shall be made in strict accordance with the drawings, specifications and documents, as well as, applicable building codes, ordinances and manufacturers' specifications. In the event of conflict between requirements, the most stringent requirements must be met.

WIRING

A. For two-wire control systems, use the controller manufacturer's specified wire, wire connectors, and grounding systems. Lightning arrestors will be installed in a valve box. Location of the arrestor and it's associated grounding installation will be shown on the as-built plans.
B. Each earth-ground will be installed in a 10" round box; located a minimum of 10' from the wiring loop. Locations of grounding rods/plates shall be shown on the as-built drawings.
C. Earth-grounds shall be tested after installation and measurement results (resistance in Ω) shall be clearly noted on the as-built plans.
D. For conventionally wired controllers, install two extra wires from the controller along the mainline in each direction from the controller for troubleshooting or future additions; ground per manufacturer's specifications.

PIPE and SLEEVES

A. Wiring and piping shall be routed through separate sleeves. Each pipe shall be sleeved separately to facilitate maintenance.
B. Use joint restraint devices or adequate thrust blocks for 3" and larger vertical bends, reducers, vertical and horizontal offsets, horizontal bends, isolation valves, and fittings, bulkheads, plugs, and changes in direction greater than 22º.
C. Sleeves must extend 6" to 8" beyond the edge of concrete or asphalt. **Concrete shall be stamped with "S" above each end of each sleeve**
D. Bury sleeves at least 24" below paving.
E. Minimize joints in sleeves.
F. Contractor is responsible for verifying all sleeve locations prior to construction and installing any missing sleeves as necessary.
G. PIPE DEPTH
Depth is measured from the top of the pipe to finish grade.
1. Mainline piping in planting areas shall be installed at a depth of 24 inches and not within 12 inches of other utilities or irrigation pipes.
2. Lateral pipes in planting areas must be buried at a minimum depth of 14 inches
3. Drip Laterals and distribution pipe must be buried at a minimum depth of 12 inches in turf areas.
4. Place all drip tubing and inline emitter tubing under mulch. Stake per manufacturer's recommendation.
5. Route drip distribution pipe, inline emitter pipe, and 1/4" distribution tubing under mulch; stake down at intervals of 3' or less. Stake all drip emitter tubing within 6" of outlet.

ADJUSTMENTS

A. Contractor shall be responsible for final adjustments of irrigation system and coverage. This includes adjusting the arc and radius of each spray outlet to minimize overspray.
B. Contractor shall move heads and adjust nozzle sizes to accommodate final landscape layout and site improvements.
C. Contractor shall adjust pressure in individual zones as necessary for coverage. In the rare event that the system is over-pressurized by the water source, contractor is responsible for reducing pressure by installing a PRS-Dial, Accu-Sync or similar regulator on the master valve.
D. Overspray onto pavement must be minimized. Contractor is responsible for all adjustment to nozzles, risers, flow controls, etc. prior to request for inspection.
E. All zones shall be programmed and operated automatically via controllers for a period of not less than a complete weekly cycle prior to inspection by the Owner's Representative.

WORK SITE

Contractor shall be responsible for the safety of those associated with the work, pedestrians and the general public throughout the duration of the contract.

A. **Locate all existing underground utilities prior to trenching or excavating**. (Call 811)
B. Contractor will maintain a safe jobsite at all times. Trash and debris is to be removed daily. Complete cleanup of all dirt, unused materials, and other debris shall be performed by the Contractor prior to Owner's inspection for final acceptance.
C. Pavement within the work areas shall be thoroughly swept and power-washed as necessary to remove dirt and debris. All road patches shall be complete, flags removed, and fine-tuning adjustments made prior to inspection for final acceptance.
D. Upon entering into agreement for this work, progress towards final acceptance will be steady and without unreasonable delay or interruption.
E. Under no conditions will Tapis Associates, Inc. control or be responsible for construction techniques, methods, schedules, means, procedures or site safety during the construction process. Tapis Associates, Inc is not responsible for the errors or omissions of any other party, nor for any other party's failure to complete their work or services in a timely manner.

FINISHING
All disturbed areas shall be fine graded and finished as noted on the Plans.

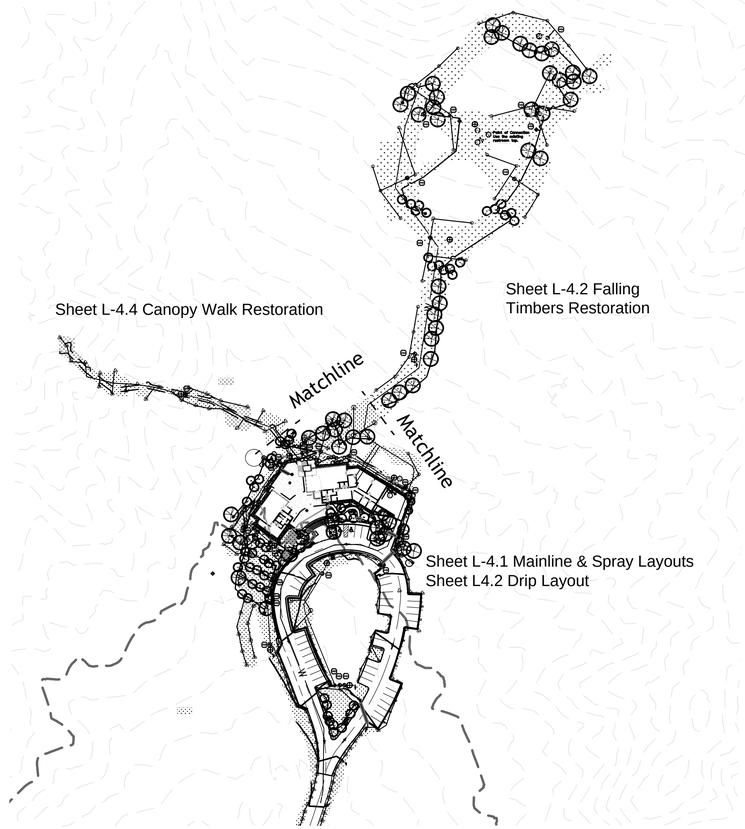
The Property Owner and any future Owners are responsible for the proper landscape and irrigation maintenance of this site and any rights-of-way between the curb and property lines of the site. Maintenance of this site includes, but is not limited to: irrigation inspections and adjustments, seasonal irrigation system shut down and start up, irrigation leak repair, irrigation head replacement, rain sensor adjustment, irrigation controller adjustments, drip irrigation maintenance and verification that all landscape areas are not over-watered or under-watered. All maintenance should be in accordance with standards specified within the ALCC Specifications Handbook, latest edition.

Proper Irrigation system operation also requires appropriate landscape maintenance including but not limited to landscape weeding, mowing, seeding, fertilization, wood mulch, and rock cover replacement, pruning, and plant material replacement (including annual beds). All maintenance should be in accordance with standards specified in the ALCC Specifications Handbook, latest edition.

Owner should contact the Landscape Maintenance Contractor, Landscape Construction Contractor, or Landscape Architect regarding any questions relation to the landscape or irrigation maintenance of this site.

Disclaimer. Due to varying weather conditions, operation and maintenance techniques, Tapis Associates, Inc. shall not be held responsible for the quality, quantity or survival of any and all landscape plantings. Schedules provided are based on general guidelines for the plant stock. Run times must be adjusted for plant establishment, seasonality, zone exposures and current weather conditions.

will there be phasing for this project/the landscaping portion of it?



Irrigation Equipment Schedule

Backflow Prevention Device	Zurn 375XL Reduced Pressure Principle Assembly. 1"	Sized for flow requirements; may not match mainline size. Locate along with controller and flow sensor in water equipment room.
Irrigation Controller	Rainbird ESP-2WIRE with LNK2 WiFi Module, Rain Sensor and Flow sensor.	Two-wire Controller. Remote programming and operation controlled via cell-based communications module. Requires 120V AC.
Master Valve	Rainbird 100PEB. 1" Valve fitted with PRS-Dial pressure regulator.	Pressure regulator is only required if the systems mists during operation.
Spray Zone Valves	Rainbird 100PGA. 1" Valve with flow control	
Drip Zone Control Kit - 1"	Rainbird XCZ-100-PRB-LC Wide Flow Commercial Control Zone Kit with 40 psi pressure-regulating filter (or approved equivalent.)	
Rotors	Rainbird 5006+eCSAM Rotors equipped with Red, Green and Beige MPR Nozzles per plan.	MPR Nozzles work properly ONLY when the nozzle marking (Q, H or F) matches the rotor arc (90º, 180º, or 360º respectively.)
Spray Bodies	Rainbird 1812-SAM-P4S	Pressure regulated to 45 psi.
Flow Sensor	Rainbird FG100	Locate in water utility room where irrigation water is tapped from building water supply. Provide specified low-voltage wiring from flow sensor to controller. Sized for flow requirements; may not match mainline size.
Rain Sensor	Rainbird WR2-RFC	Rain/Freeze Sensor
Quick-Connect Valves	Rainbird F33-DRC 3/4"	
Zone Control Wiring	14 g	This system runs on standard direct-burial wire. Run 3 strands of wire to each valve
Control Wire Grounding	Rainbird IVMSD ground kit.	Ground each segment at the end.
Drip Emitters	Rainbird XB-xx-PC Xeri-bug Emitters	Quantity and volume of emitters (05, 10, or 20) determined by plant material. See Plant Emitter Schedule.

Falling Timbers Equipment Schedule

Backflow Prevention Device	Zurn 375XL Reduced Pressure Principle Assembly. 1"	Sized for flow requirements; may not match mainline size. If available, use existing backflow/pit. Coordinate location with owner's representative.
Irrigation Controller	Hunter XCH-1200 Twelve station Controller.	Power by either 110VAC, if available, or battery. Coordinate with owner's representative for power availability.
Master Valve	Rainbird 100PEB. 1" Valve fitted with PRS-Dial pressure regulator.	Pressure regulator will permit precise pressure adjustment to optimize operation over the entire elevation range.
Spray Zone Valves	Rainbird 100PGA. 1" Valve with flow control	Equip each valve with DC Latching Solenoid
Drip Zone Control Kit - 1"	Rainbird XCZ-100-PRB-LC Wide Flow Commercial Control Zone Kit with 40 psi pressure-regulating filter (or	Equip each valve with DC Latching Solenoid
Rotors	Rainbird 5006+eCSAM Rotors equipped with Red, Green and Beige MPR Nozzles per plan.	MPR Nozzles work properly ONLY when the nozzle marking (Q, H or F) matches the rotor arc (90º, 180º, or 360º respectively.)
Rain Sensor	Hunter Wired Rain-Clik Sensor	
Zone Control Wiring	14 g	Conventionally wired system. Run one extra strand of wire to each valve

811 Know what's below. Call 811 before you dig.

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	DATE	FOR

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FOX RUN NATURE CENTER
2110 Stella Dr.
Colorado Springs, CO 80921

Sheet Name

DATE: 18 Oct 2024
DRAWN BY: TAPIS
CHECKED BY: Tapis
PROJECT NO.: 22009

SHEET:
L4.0

File Path:
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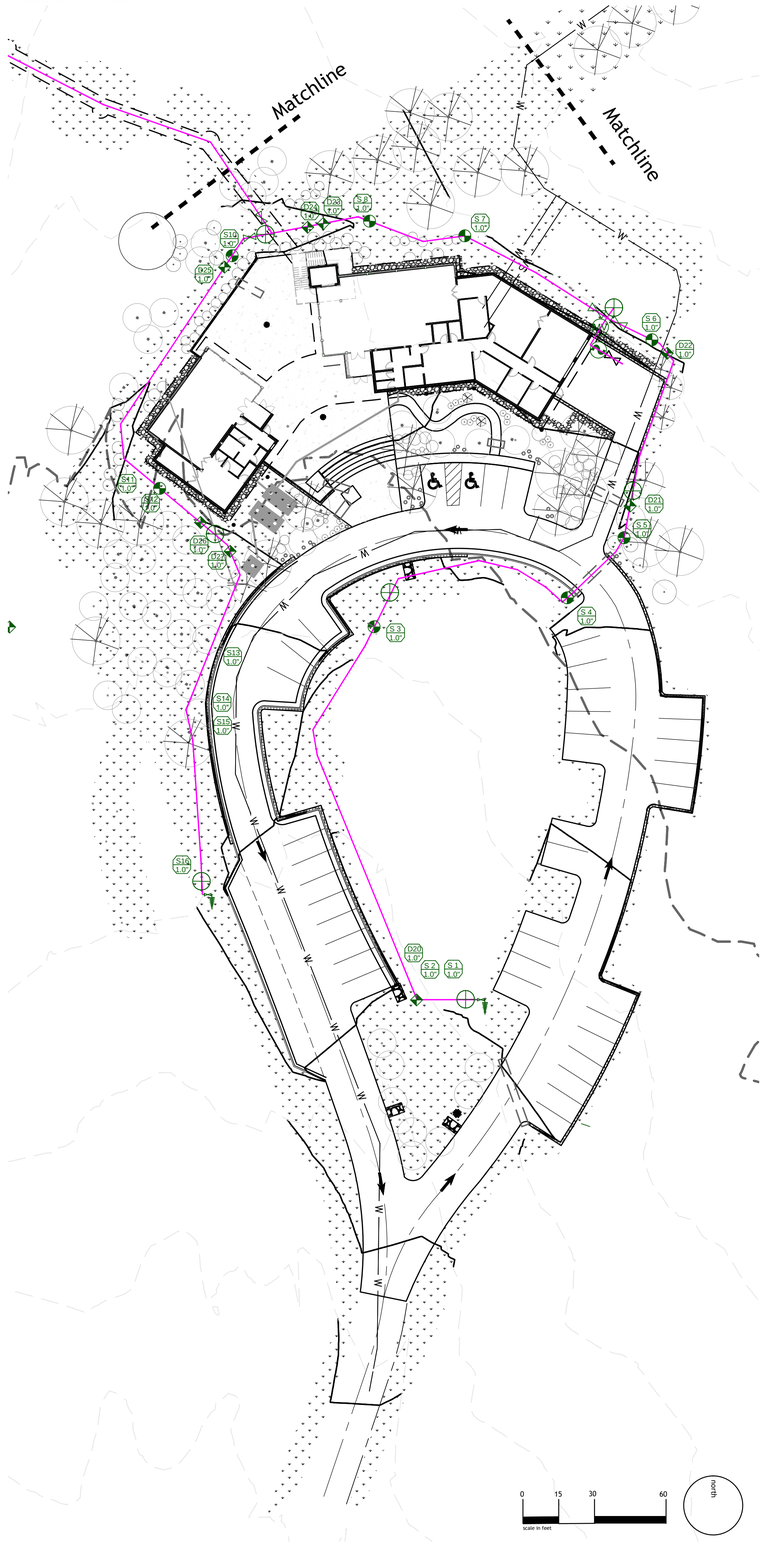
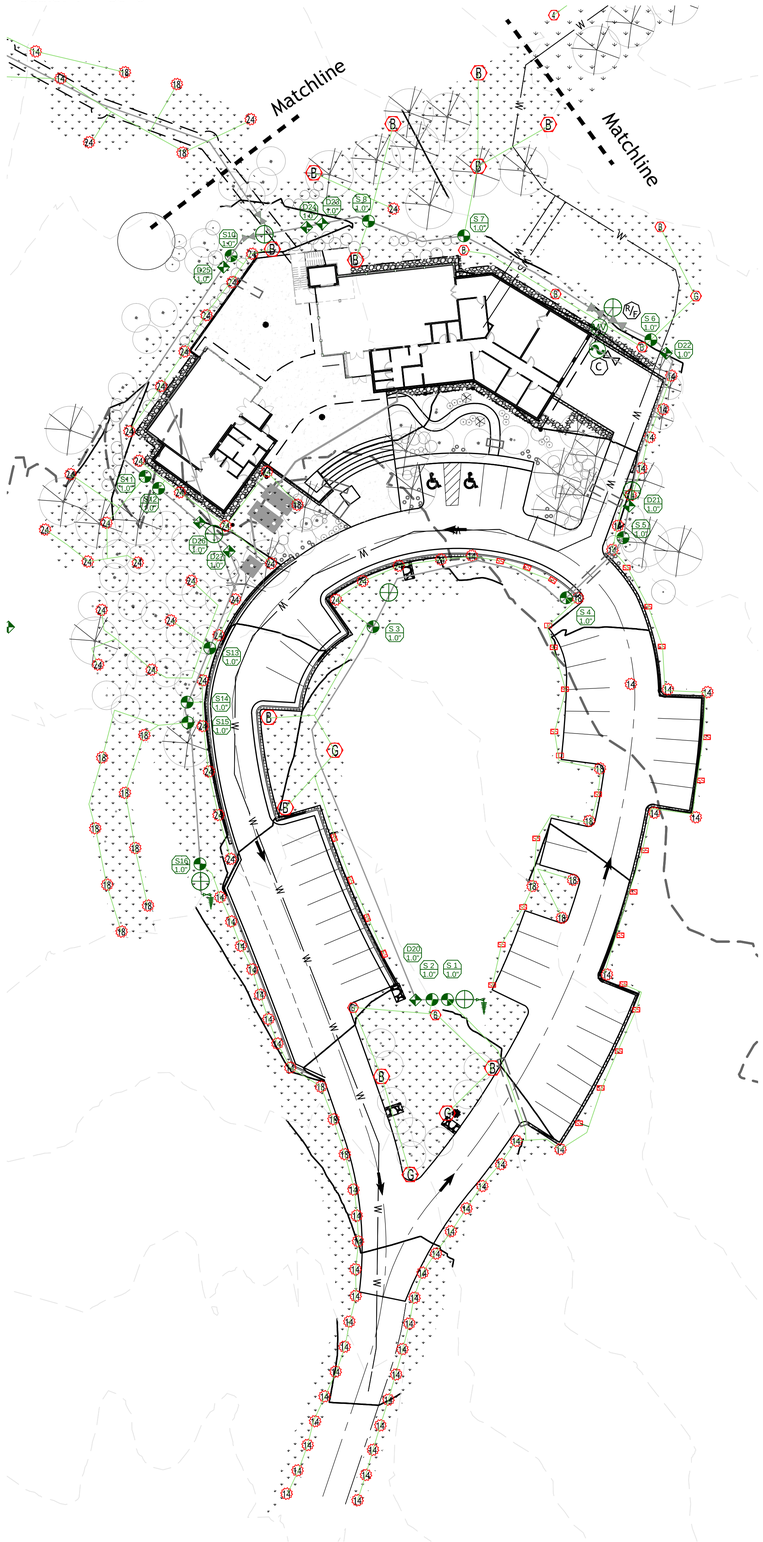
MAINLINE LAYOUT

Scale: 1" = 30'-0"



SPRAY LAYOUT

Scale: 1" = 30'-0"



IRRIGATION LEGEND

Mainline. PVC pipe. See pipe size schedule. See Construction Notes for depth.

Lateral pipe. PVC pipe. See pipe size schedule. See Construction Notes for depth.

Drip Lateral pipe. See pipe size schedule. Use for long runs to start of drip zones under turf and/or through sleeves.

Polyethylene distribution pipe terminated with a flush cap. See pipe size schedule. Route according to plant material. Bury under turf and rock cobble, stake under mulch. See Scope of Work Note F for depth. Use XB-xxPC Xeri-bug drip emitters of the size and quantity (two or more) per plant as shown on the Emitter Schedule in this drawing set. Terminate every drip pipe with a flush cap. (700-CF-21 or approved equivalent)

Sleeving. See pipe size schedule. Sleeve electric wire and each water pipe separately for maintenance. Avoid joints under concrete. See Construction Notes for depth.

S13 1.5" Zone ID/ Valve size. See table for zone flow and irrigation schedule.

Rainbird Electric Valve with flow-control.

Rainbird Wide Flow Commercial Control Zone Kit with 30 psi pressure-regulating filter (or approved equivalent.)

Rainbird 5012-+-xC-SAM 12" pop up spray body. Install nozzles of specified type with arc appropriate to plan: partial-circle through full circle. These bodies have seals to prevent low-head drainage.

Use nozzles as shown:

14 Rainbird R-VAN14 Nozzle
Radius 8-14' 45-360° arc; 0.63 GPM (180° arc)

18 Rainbird R-VAN18 Nozzle
Radius 13-18' 45-360° arc; 1.01 GPM (180° arc)

24 Rainbird R-VAN24 Nozzle
Radius 17-24' 45-360° arc; 1.68 GPM (180° arc)

Rainbird R-VAN-LCS Nozzle
5' x 15' Strip; 0.24 GPM

Rainbird R-VAN-RCS Nozzle
5' x 15' Strip; 0.24 GPM

SS Rainbird R-VAN-SST Nozzle
5' x 30' Strip; 0.48 GPM

Rainbird 5006+xCSAM 6" Rotors with Rainbird MPR nozzles as follows
(Note: the MPR rotor/nozzle combinations have matched precipitation rates with each other and with the spray nozzles specified above.)

R 5000-MPR-25 (Red) Nozzle.
Radius 25'. Flow 1.98 GPM (180° arc)

G 5000-MPR-30 (Green) Nozzle.
Radius 30'. Flow 2.96 GPM (180° arc)

B 5000-MPR-35 (Beige) Nozzle.
Radius 35'. Flow 3.81 GPM (180° arc)

4 4.0 Std Angle Curtain Nozzle
Radius 42'. Flow 4.01 GPM

RP-Principle backflow prevention Device. . Mount in water equipment room. Size and options specified in Equipment Schedule on page I-1.

C Irrigation Controller. Size and options specified in Equipment Schedule on page I-1. Use manufacturer's recommended wire to connect valves and sensors. Install proper grounding per manufacturer's specification.

RV/P Rain sensor, wireless. Mount in line of sight.

Quickconnect size 3/4"

Isolation Ball Valve. line size.

MV Master Valve, normally closed

Flow Sensor. Size and options specified in Equipment Schedule on page I-1.

Low point drain. Install at low points and maintenance+blowout locations. Indicate precise position on as-built plans.

SITE-SPECIFIC DESIGN NOTES

Irrigation backflow, controller, flow meter, and associated equipment to be located inside building in utilities closet or garage. Coordinate precise location with owner's representative.

Backflow Device, Master Valve and Flowmeter are sized by flow, not mainline size. Use specified sizes.

Interior irrigation connection will require pressure regulation separate from the building pressure regulator. Interior connection must be plumbed with pipe meeting local codes. Size internal piping for less than 2 psi pressure loss over the entire run between connection near the meter and the irrigation backflow apparatus. Consult friction tables or irrigation designer for sizing questions.

PIPE SIZE SCHEDULE

Wire all mainline and lateral pipes outside the dripline of mature trees.

Mainline: Supply to loops (noted on plan): 1.5" Schedule 40 PVC
Note upsizing where indicated on plan.
Mainline connections inside building: 1.5" Type L Cu or equivalent HDPE.

Lateral sizing:
1.25" Schedule 40 PVC until first split; 1" After first split.

Drip Distribution Tubing: 3/4" PE Drip Tubing-Rainbird XBS940 or equivalent
Drip Lateral: 1" Schedule 40 PVC to connect valve to drip distribution pipe.

SLEEVE SIZES

Mainline: 3" Schedule 40 PVC
Drip Lateral: 2" Schedule 40
Drip: 2" Schedule 40 PVC
Electrical: 1.5" Schedule 40 PVC

Sleeve electric and each water pipe separately for maintenance.

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REVISIONS		
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NOT FOR CONSTRUCTION

TDG Architecture
Colorado Springs, CO 80903
719.623.5641 (Phone)
719.623.5643 (Fax)

TAPS associates
Colorado Springs, CO 80919
719.359.2813

FOX RUN NATURE CENTER
2110 Stella Dr.
Colorado Springs, CO 80921

Sheet Name

DATE: 18 Oct 2024
DRAWN BY: TAPIS
CHECKED BY: Tapis
PROJECT NO.: 22009

SHEET:
L4.1

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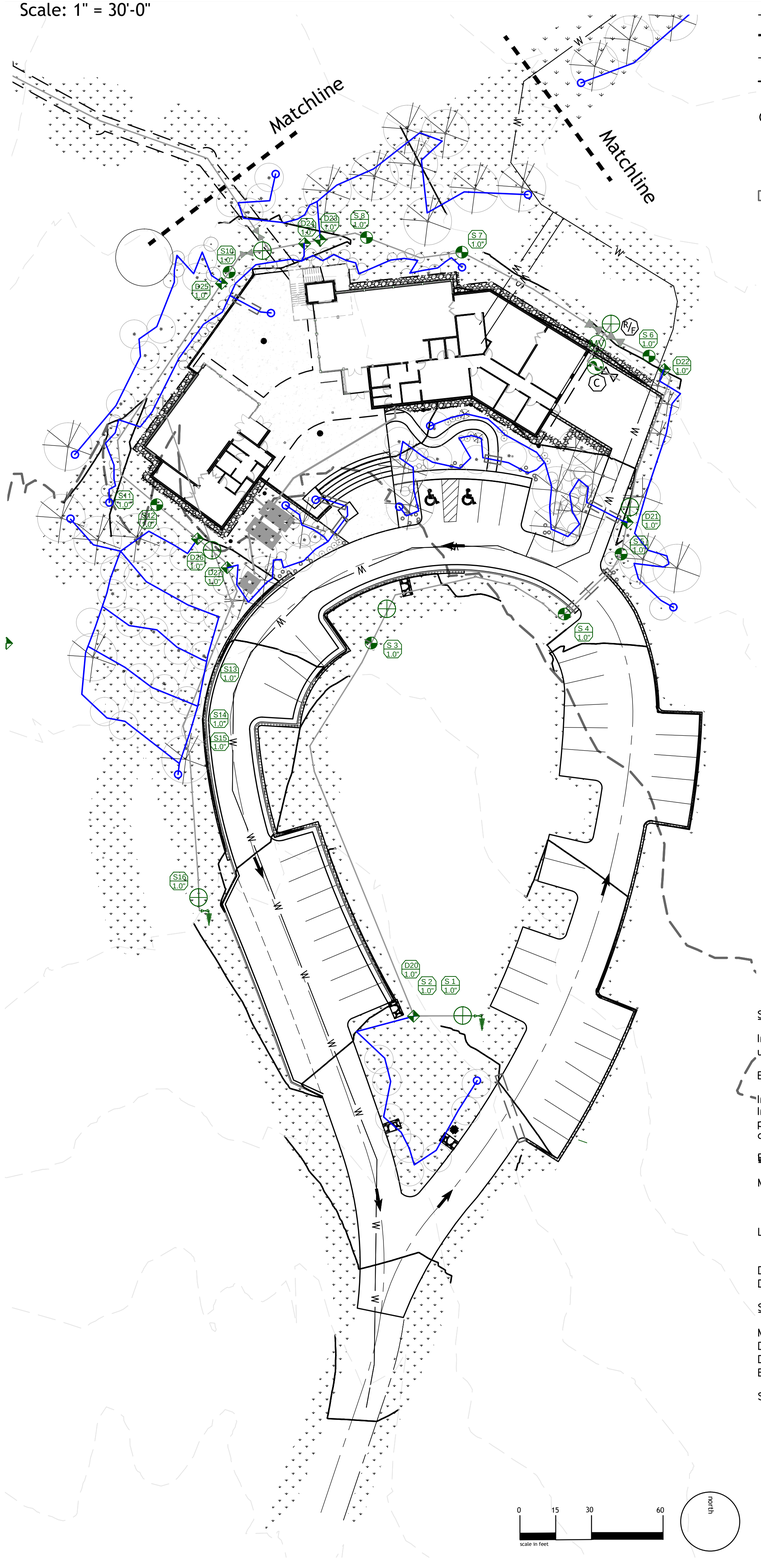
DRIP LAYOUT

Scale: 1" = 30'-0"



IRRIGATION LEGEND

Mainline. PVC pipe. See pipe size schedule. See Construction Notes for depth.

Lateral pipe. PVC pipe. See pipe size schedule. See Construction Notes for depth.

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Polyethylene distribution pipe terminated with a flush cap. See pipe size schedule. Route according to plant material. Bury under turf and rock cobble, stake under mulch. See Scope of Work Note F for depth. Use XB–xxPC Xeri–bug drip emitters of the size and quantity (two or more) per plant as shown on the Emitter Schedule in this drawing set. Terminate every drip pipe with a flush cap. (700–CF–21 or approved equivalent)

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Rainbird Electric Valve with flow–control.

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Rainbird 5012–+–xC–SAM 12" pop up spray body. Install nozzles of specified type with arc appropriate to plan: partial–circle through full circle. These bodies have seals to prevent low–head drainage.

Use nozzles as shown:

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Radius 8–14' 45–360° arc; 0.63 GPM (180° arc)

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(Note: the MPR rotor/nozzle combinations have matched precipitation rates with each other and with the spray nozzles specified above.)

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Radius 25'. Flow 1.98 GPM (180° arc)

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C Irrigation Controller. Size and options specified in Equipment Schedule on page I–1. Use manufacturer's recommended wire to connect valves and sensors. Install proper grounding per manufacturer's specification.

RS Rain sensor, wireless. Mount in line of sight.

Quickconnect size 3/4"

Isolation Ball Valve. line size.

MV Master Valve, normally closed

Flow Sensor. Size and options specified in Equipment Schedule on page I–1.

Low point drain. Install at low points and maintenance+blowout locations. Indicate precise position on as–built plans.

SITE–SPECIFIC DESIGN NOTES

Irrigation backflow, controller, flow meter, and associated equipment to be located inside building in utilities closet or garage. Coordinate precise location with owner's representative.

Backflow Device, Master Valve and Flowmeter are sized by flow, not mainline size. Use specified sizes.

Interior irrigation connection will require pressure regulation separate from the building pressure regulator. Interior connection must be plumbed with pipe meeting local codes. Size internal piping for less than 2 psi pressure loss over the entire run between connection near the meter and the irrigation backflow apparatus. Consult friction tables or irrigation designer for sizing questions.

PIPE SIZE SCHEDULE: mainline and lateral pipes outside the dripline of mature trees.

Mainline: Supply to loops (noted on plan): 1.5" Schedule 40 PVC
Note upsizing where indicated on plan.
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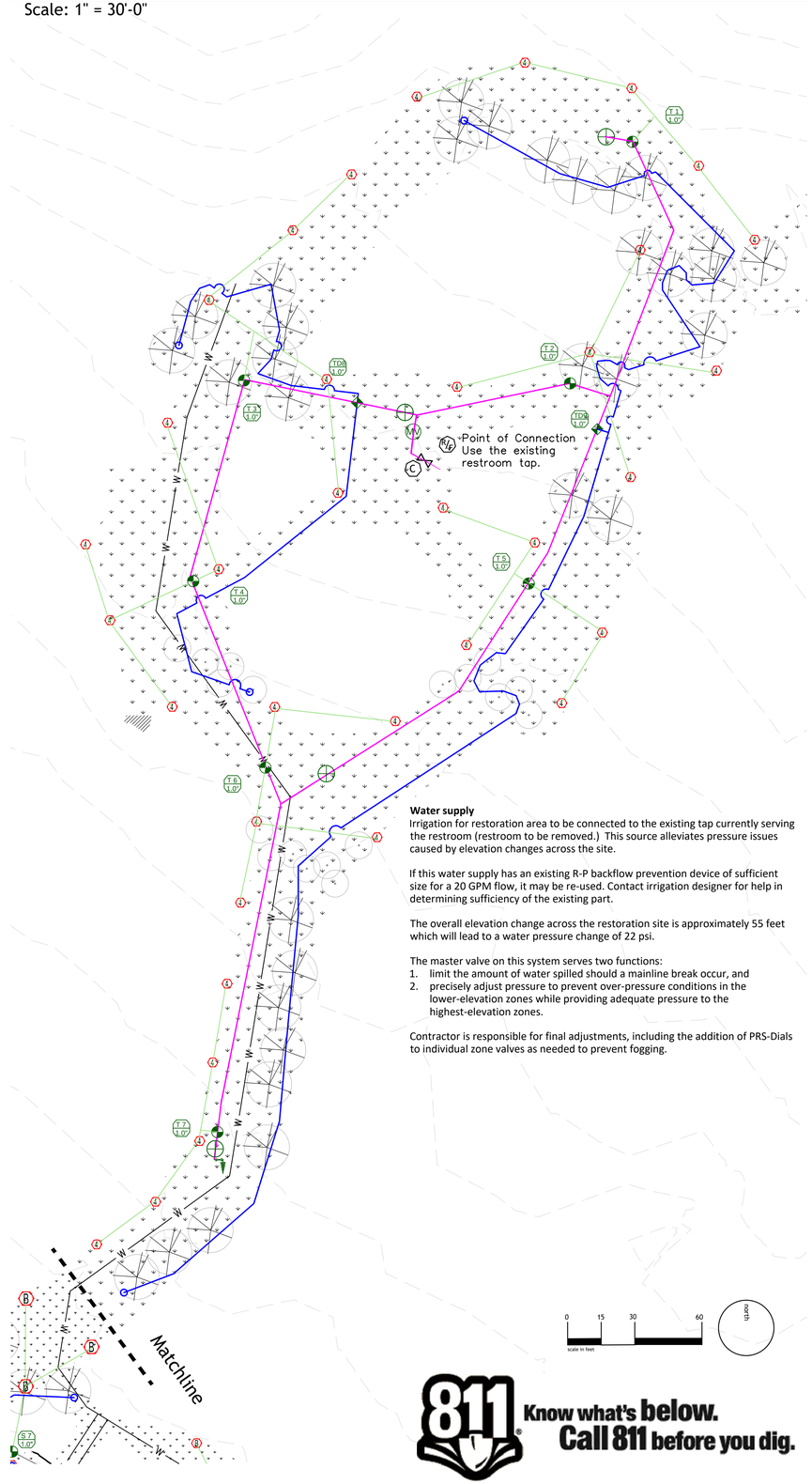
SLEEVE SIZES

Mainline: 3" Schedule 40 PVC
Drip Lateral: 2" Schedule 40
Drip: 2" Schedule 40 PVC
Electrical: 1.5" Schedule 40 PVC

Sleeve electric and each water pipe separately for maintenance.

FALLING TIMBERS RESTORATION

Scale: 1" = 30'-0"



Water supply
Irrigation for restoration area to be connected to the existing tap currently serving the restroom (restroom to be removed.) This source alleviates pressure issues caused by elevation changes across the site.

If this water supply has an existing R-P backflow prevention device of sufficient size for a 20 GPM flow, it may be re-used. Contact irrigation designer for help in determining sufficiency of the existing part.

The overall elevation change across the restoration site is approximately 55 feet which will lead to a water pressure change of 22 psi.

The master valve on this system serves two functions:
1. limit the amount of water spilled should a mainline break occur, and
2. precisely adjust pressure to prevent over-pressure conditions in the lower-elevation zones while providing adequate pressure to the highest-elevation zones.

Contractor is responsible for final adjustments, including the addition of PRS-Dials to individual zone valves as needed to prevent fogging.

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Colorado Springs, CO 80903
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719.623.5643 (Fax)

TAPS associates
Colorado Springs, CO 80919
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FOX RUN NATURE CENTER
2110 Stella Dr.
Colorado Springs, CO 80921

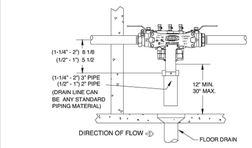
Sheet Name

DATE: 18 Oct 2024
DRAWN BY: TAPIS
CHECKED BY: Tapis
PROJECT NO.: 22009

SHEET:
L4.2

Irrigation Details and Warranty

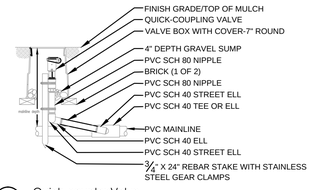
NTS



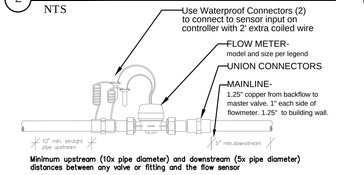
Backflow mounted in water entry closet.

Locate upstream of booster pump and master valve.

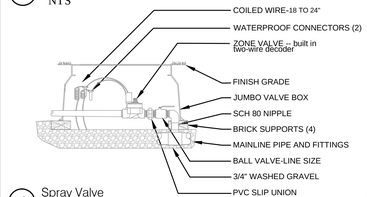
1 R-P Principle Backflow Preventer
NTS



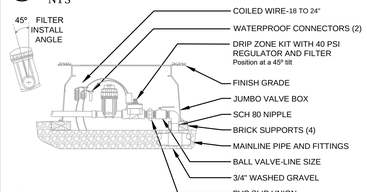
2 Quick-coupler Valve
NTS



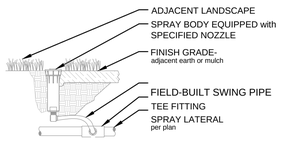
3 Flowmeter - inside installation
NTS



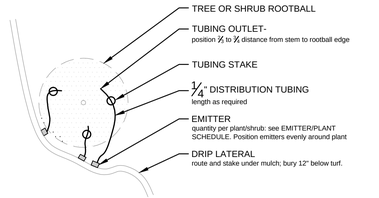
4 Spray Valve
NTS



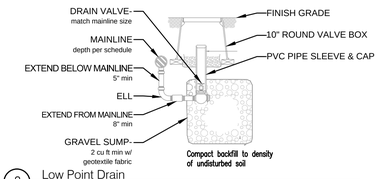
5 Drip Zone Control Kit
NTS



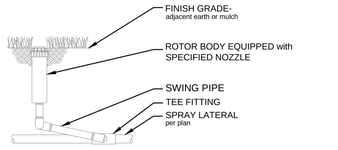
6 Pop-up Spray Head
NTS



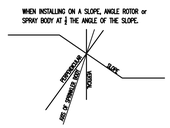
7 Drip Emitter Placement on Trees and Shrubs
NTS



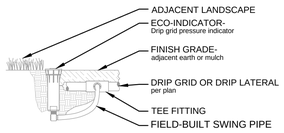
8 Low Point Drain
NTS



9 Pop-up Rotor Sprinkler
NTS



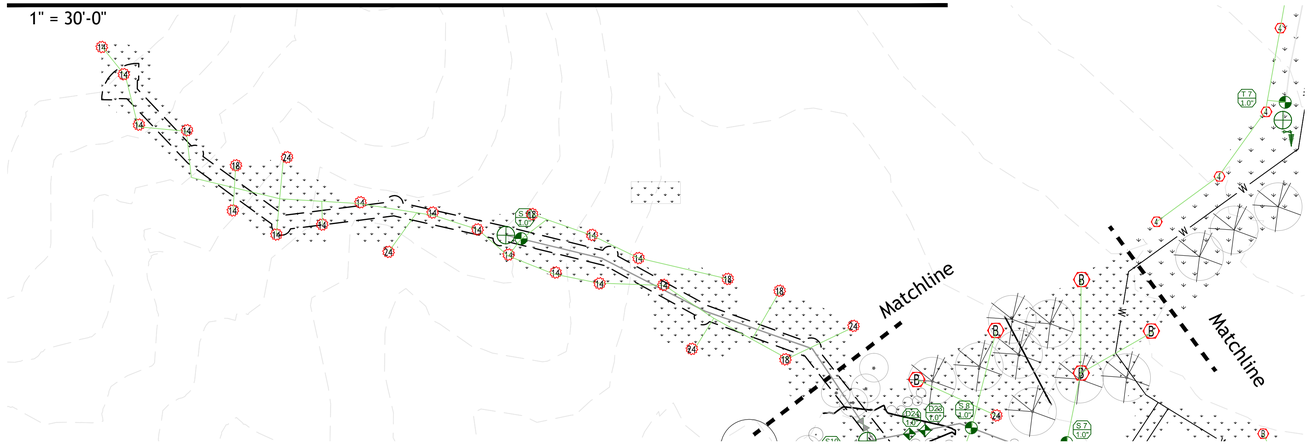
10 Angle of Rotor or Spray Body on a Slope
NTS



12 Drip Grid Operating Indicator - Optional
NTS

CANOPY WALK IRRIGATION PLAN

1" = 30'-0"



MAINTENANCE AND WARRANTY

A. Contractor shall be responsible for providing an on-site maintenance program through substantial completion and for 12 months following, to include—but are not limited to—fine tuning of nozzles, flow controls and other equipment installed under the contract to maintain optimum operation of all systems at all times. Controller programming shall be coordinated with the Owner to establish and promote growth of plantings made under the contract, and to sustain optimum plant appearance at all times as seasonally appropriate.

B. Contractor shall be responsible for performance of seasonal maintenance to include but not limited to deactivation and activation of all irrigation systems to prevent freeze damage to all equipment. Contractor shall be responsible for coordination and performance of all seasonal maintenance procedures required to deactivate systems on or by October 15th of the first year following date of acceptance, and activation on or by April 1st of the year following deactivation. If final acceptance occurs between October 15th and April 1st, required seasonal maintenance schedule shall be extended to occur the year following final acceptance of all work.

C. A conditional warranty shall be extended by the Contractor for 12 months following substantial completion. This warranty covers all material and workmanship provide under the contract. During the warranty period any installation which becomes inoperable, or which does not operate as originally intended (as observed and accepted at inspection for final acceptance) shall be repaired and/or replaced by the at no extra cost to the Owner. Deficiencies may include but are not limited to leaks, settlement of trenches greater than ½ inch, freeze damage, and equipment defects. Contractor is also to repair or replace plant materials per the landscape specification and conditions damaged by the deficiency. Contractor is not responsible for deficiencies caused by vandalism or improper use and maintenance of systems by Owner; any deficiencies due to these causes may be repaired or replaced at a mutually-agreed extra cost to the Owner.

Air pressure used for winter blowout must NEVER EXCEED 60 PSI.

DRAWINGS SPECIFICATIONS and DOCUMENTS

A. Quantities which may be stated or implied in schedules, general notes, plans, etc. are provided for reference only. In the event of conflict, that quantity which is represented graphically per the drawings shall prevail.

B. All irrigation work shall be coordinated with other site work. Do not complete any installation which may interfere with irrigation system operation and coverage as intended by design. Notify the Owner's Representative of any such conflicts and resolve conflicts prior to proceeding with work.

C. Alternate equipment from that indicated on the drawings and specifications, which when installed will result in equal or improved performance and significant cost savings may be considered by Owner. All proposed alternate equipment must be submitted to and approved by the Owner prior to submittal of bid proposal. Provision or installation of alternate equipment without prior written approval by the Owner may result in delay and/or rejection of final acceptance of all work.

D. Upon entering into an agreement to provide labor and material to complete all work required under this document, the Contractor hereby guarantees to the Owner that work will be executed to the best of the Contractor's ability and to at least the minimum industry standards and manufacturers' recommendations. The Contractor will not qualify any term, condition, or requirement stated in design or bid documents at any time during or after completion of agreement to provide work under this section. The Contractor may have certain rights pertaining to this guarantee as may be described in the general conditions of the agreement between the Owner and Contractor.

IRRIGATION SCHEDULE

Irrigation Schedule for Established Landscape

Zone #	Description	Operating Pressure	Flow Rate	Valve Size	Precipitation Rate	Application 1-3X per Month	Application 1-3x per Week	Application Daily	Spring	Fall
		(PSI)	(GPM)		(Inches/Hour)	(Minutes)	(Minutes)		(Min/App)	(Min/App)
S1	Native	45	13.1	1"	0.55	55			46	41
S2	Native	45	19.7	1"	0.61	49			42	37
S3	Native	45	13.1	1"	0.40	75			64	56
S4	Native	45	7.9	1"	0.57	53			45	39
S5	Native	45	11.7	1"	0.51	59			50	44
S6	Native	45	18.2	1"	0.40	75			64	56
S7	Native	45	15.2	1"	0.46	65			55	49
S8	Native	45	11.2	1"	0.41	73			62	55
S9	Native	45	22.5	1"	0.26	115			98	87
S10	Native	45	14.7	1"	0.66	45			39	34
S11	Native	45	11.8	1"	0.60	50			43	38
S12	Native	45	9.4	1"	0.49	61			52	46
S13	Native	45	10.1	1"	0.47	64			54	48
S14	Native	45	11.8	1"	0.51	59			50	44
S15	Native	45	8.1	1"	0.40	75			64	56
S16	Native	45	16.3	1"	0.49	61			52	46
D20	Entry flower bed	20	<15	1"			30		26	23
D21	N revegetate trees	20	<15	1"			30		26	23
D22	N Triangle plantings	20	<15	1"			30		26	23
D23	NE Edge plantings	20	<15	1"			30		26	23
D24	NW center buffer	20	<15	1"			30		26	23
D25	NW Corner	20	<15	1"			30		26	23
D26	SW Building plantings	20	<15	1"			30		26	23
D27	SE Stormwater area	20	<15	1"			30		26	23
	Falling Timbers Restoration Controller									
T1		45	20.1	1"	0.26	115			98	87
T2		45	20.1	1"	0.26	115			98	87
T3		45	20.1	1"	0.26	115			98	87
T4		45	20.1	1"	0.26	115			98	87
T5		45	20.1	1"	0.26	115			98	87
T6		45	20.1	1"	0.26	115			98	87
T7		45	20.1	1"	0.26	115			98	87
TD8		20	<15	1"			30		26	23
TD9		20	<15	1"			30		26	23

E.T. inches 1" monthly Native turf Seasonal Adjustment 100% 85% 75%
Efficiency 85%

Notes: Water daily to germinate seed and establish plantings.
For established native grass, apply 0.5" water 1-3x per month and run drip zones 3x per week.
Adjust frequency of applications for seasonal changes and zone exposure.

Monitor all zones for surface runoff. Use cycle-and-soak scheduling as necessary to eliminate surface runoff.

Total Irrigated Area	53,323	sq ft
Falling Timber Temporary Restoration	50,490	sq ft
Canopy Walk (zone 9) Temporary	7100	sq ft

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TDG Architecture
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719.623.5641 (Phone)
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FOX RUN NATURE CENTER
2110 Stella Dr.
Colorado Springs, CO 80921

Sheet Name

DATE: 18 Oct 2024
DRAWN BY: TAPIS
CHECKED BY: Tapis
PROJECT NO.: 22009
SHEET: L4.4

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