Xeriscaping in Commerce City

October 9, 2023

Purpose

- Review current xeriscaping status.

- Discuss proposed changes to code and the formation of an incentive program.

- Solicit feedback from Council on numerous areas.

Commerce
CITY

Background

- On July 10, staff debriefed Council on the Growing Water Smart Workshop and held a preliminary xeriscaping discussion with Council
  - Council approved a motion seeking to pause review and approval of all landscaping permits that pertain to xeriscaping for a period of 90-days until regulations could be established.

Commerce
CITY

Xeriscaping: Current State

- Rear yards: no restrictions
- Front and side yard requirements:
  - Two trees
  - 12 shrubs
  - 75% live plants
  - Turf limit <50%
  - One mulch type
- Tree lawn requirements:
  - Sod
  - Trees

Commerce
CITY

Xeriscaping: Current State

- Xeriscape design principles may be incorporated whenever appropriate in accordance with the requirements identified in the Planting Standards. Tree lawn planting designs in industrial areas may propose planting designs other than turf grass.

- Xeriscape is encouraged but does not include or allow artificial turf, plants, or mulched beds without landscape plant material

Commerce
CITY

Xeriscaping: Current State

- Landscape areas may include the following elements:(a)Turf grass. High-use areas should be planted with irrigated turf grass. Non-irrigated. shortgrass prairie grasses or other adapted grasses that have been certified as Xeriscape landscaping, may be established in remote, low-use, low-visibility areas.

Commerce
CITY

Xeriscaping: Suggested Changes

- Suggested changes have been modeled after surrounding municipalities.

- Landscape Areas:

  a) Standards

     i.   Allow alternatives to turf:

        a) Rock

        b) Mulches

        c) Native grasses and other approved plants

  b) Xeric designs can be used for the following:

     i.   Detention Landscaping

     ii. Parking lot landscaping

     iii. Other primary landscape areas

Commerce CITY

Xeriscaping: Suggested Changes

- Applicability
  - Residential
  - Non-residential
  - ROW landscaping (tree lawn)
- Required Review
  - Landscape Plan
  - Exceptions
  - Inspections

Commerce
CITY

Xeriscaping: Suggested Changes

- Standards/Approval Criteria
    - Live plant area requirement
    - Plant materials and rock/mulch types
    - Temporary irrigation
    - Artificial turf?

Commerce
CITY

Xeriscaping: Suggested Changes

- Plants must be appropriate to the C3 climate and must be selected from the Approved Plant List.
- Plants with similar water requirements must be grouped together.
- Hardscaping is okay if water can pass through.
- Front yard must contain 50% plant coverage at maturity.

Commerce CITY

Xeriscaping: Suggested Changes

- Automatic irrigation zones must be retrofitted to water remaining grass adequately and irrigate the new landscape efficiently.
  - Drip irrigation is preferred. If overhead sprays are used, high-efficiency nozzles are required. Hand watering and semi-automatic irrigation is permissible.
- Trees must have dedicated irrigation.
- Soil amendment is required in areas that are cleared and set to hold plant material.
  - This includes plant-based compost, manure-based compost, organic and inorganic materials.

Commerce
CITY

Xeriscaping: Suggested Changes

- All xeriscaping applications would require the applicant to submit a plan that addresses drainage impact.

- Inspections:
  - Initial inspections provide an opportunity to ask questions and address any installation issues.
  - Inspections would be scheduled after plants, irrigation, soil amendments, and hardscapes have been installed, but before the mulch goes down.

Commerce
CITY

Xeriscaping: Suggested Changes

- The following would be inspected:
  - Plant type/size matches the plant list, and plant locations match the landscape design.
  - Plant holes have appropriate backfill of soil.
  - Use of approved soil.
  - Irrigation system including backflow prevention device and rain sensor are installed, in compliance with SACWSD watering schedules, if applicable.
  - Site is free of weeds and hazards.
  - Edging is present to separate beds from turf sections.
  - Erosion control BMPs in place where needed and public ROWs are clean.
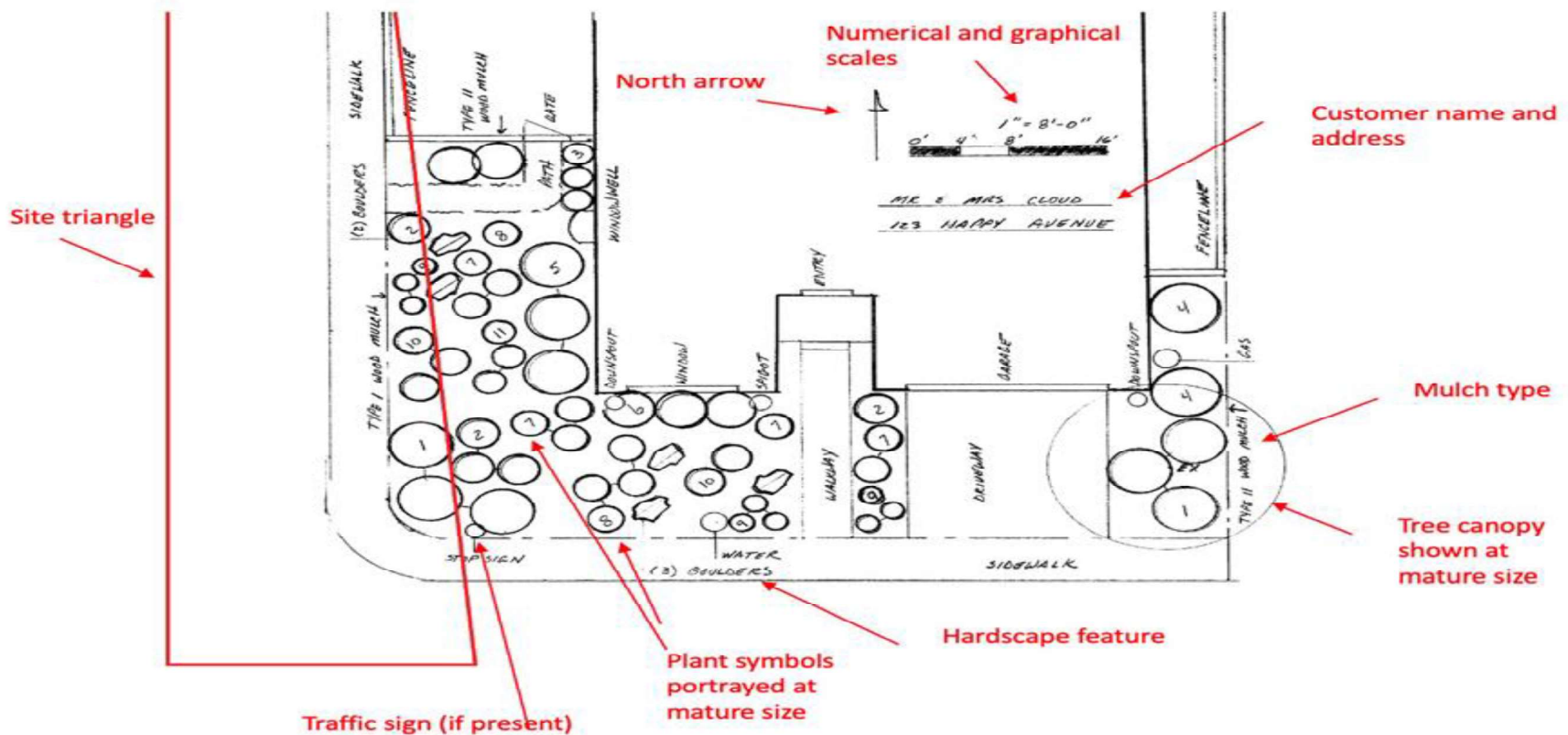
commerce CITY

Xeriscaping Best Practices

- All participants must have a landscape design approved prior to beginning installation or demolition.

Design Example

This design includes all requirements listed in the previous section. Important elements have been identified in red.

Xeriscaping Best Practices

- If Council is supportive of improving xeriscaping requirements, staff recommends that at least one xeriscape demonstration garden be built in the City.
  - Many cities have at least one example garden.
  - Growing Water Smart technical assistance grant available for design of a demonstration garden on City-owned property.
    - Actual garden would need to be budgeted for; staff would also seek grant opportunities.
- Staff can also explore grant opportunities for non-functional turf conversion.

Commerce
CITY

Artificial Turf

- The Land Development Code states "<u>partial or entirely synthetic material designed and manufactured to simulate living turf grass shall be prohibited</u>, with the exception of public or private recreation fields."

    - Many areas of the City currently have artificial turf, and installation has not required a permit.

Commerce CITY

Artificial Turf

- If Council desires to allow artificial turf, then the City should add artificial turf best practices to the Code:

  - Inclusion of living plant requirements
  - Permissible locations and buffers
  - PFAS requirements
  - List of allowable types and materials to require use of higher quality artificial turf
  - Limited square footage

Commerce
CITY

Artificial Turf: Pros

- Decreases water usage since no live plants are present.

- Eliminates the need for fertilizers and other gardening chemicals.

- Low maintenance for property owners.

*Source: Western Resource Advocates

Commerce CITY

Artificial Turf: Cons

- Can reach temperatures up to 80º higher than ambient air temperature, exacerbating heat island effect.
- Crumb rubber fill contains approximately 200 harmful chemicals, including PFAS.
- Contributes to microplastic pollution.
- Does not provide natural drainage during storms.
- Can become moldy and does not naturally disinfect from pet or wildlife waste.
- Does not provide carbon removal or other environmental benefits of live plants.
- Impacts landfill after useful life.
- Negative impacts on soil health.

*Source: Western Resource Advocates and Growing Water Smart Managers

Commerce CITY

Artificial Turf BMP Examples, If Allowed

- Allowed on lots developed with a single-family detached or single-family attached dwelling.
  - Prohibited on all other lots unless approved by City.
- Artificial turf may extend to the front property line if a minimum three-foot buffer is installed between the artificial turf and the sidewalk along a street.
- Buffers shall be permeable, consisting of wood mulch, gravel, or small rock.
- Living plant materials are required when artificial turf is installed on the lot outside of the rear landscape area.

Commerce
CITY

Artificial Turf BMP Examples, If Allowed

- Required Tree Equivalents in Front Artificial Turf:
  - Requires existing or new plant materials located in the front / publicly visible side area.
  - First 750 square feet of artificial turf: 1 Tree Equivalent; each additional 250 square feet of artificial turf: ½ Tree Equivalent.
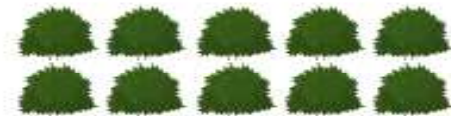
One Tree Equivalent
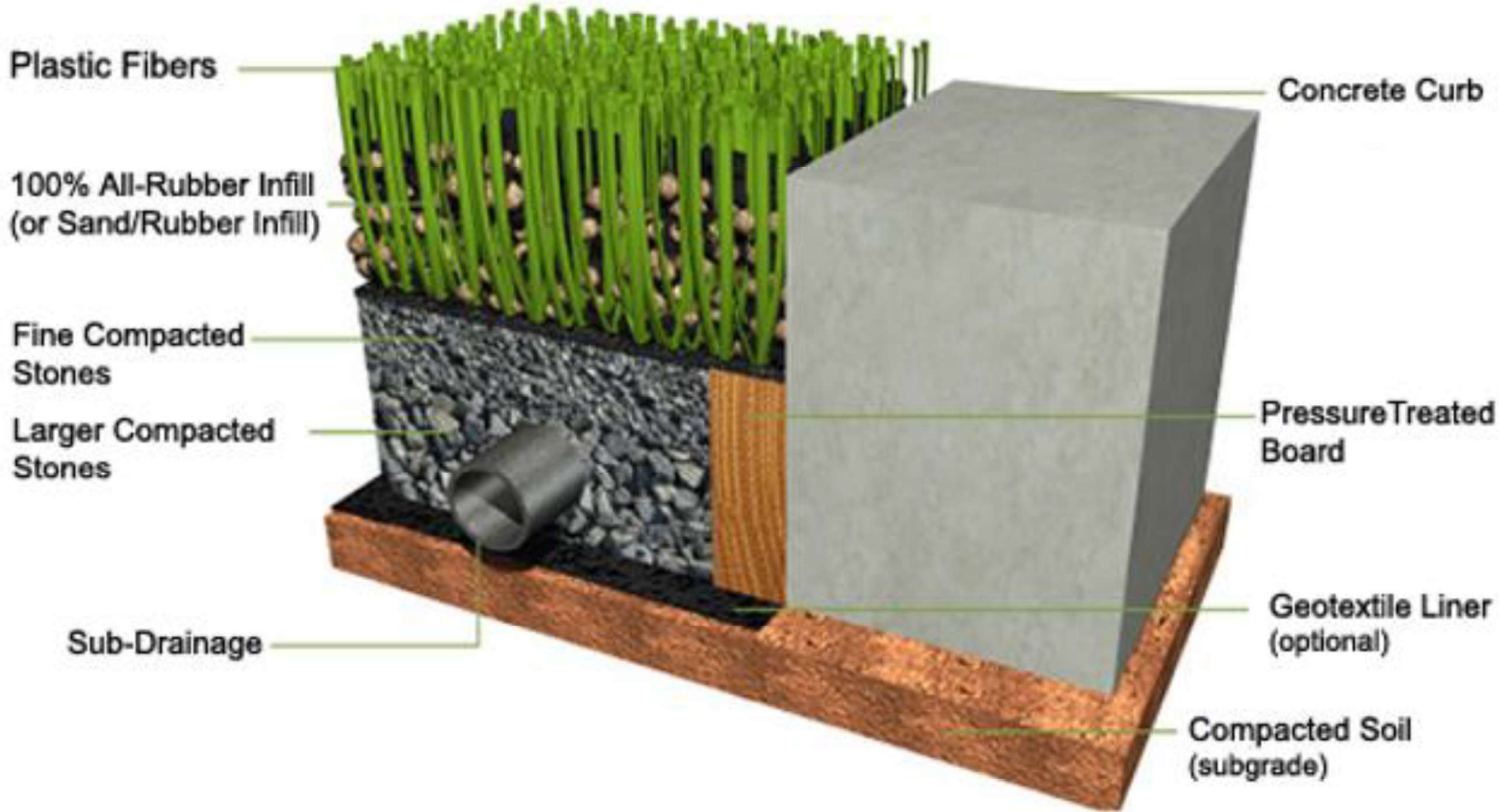
2-inch caliper deciduous

6-foot evergreen

OR

10 shrubs

OR

20 ground covers or ornamental grasses

Artificial Turf BMP Design Example

Plastic Fibers

100% All-Rubber Infill (or Sand/Rubber Infill)

Fine Compacted Stones

Larger Compacted Stones

Sub-Drainage

Concrete Curb

PressureTreated Board

Geotextile Liner (optional)

Compacted Soil (subgrade)

Commerce CITY

Proposed Turf Replacement Program

- The City would provide a rebate for residents to install a xeric garden in public facing front yards.

- Applicants must receive approval from a City inspector prior to demolition and installation.

- Residents must comply with design standards and an approved plant list to be eligible to receive a rebate.

  - Plant list included in packet.

- Areas not eligible for incentives include artificial turf, water features, veggie beds, trees, and concrete.

*Aurora and Fort Collins have similar programs.

Commerce CITY

Turf Replacement Program Funding

- Option 1: Budget for this program in budget year 2025 to launch program in 2025.

- Option 2: Seek grant funding and launch program in 2024.

- Staff has proposed a $100,000 fund for this program. This would allow for up to 50 single-family homes to participate in this program.

Commerce
CITY

Council Direction

- Does Council support code allowing the conversion of front yards and tree lawns to xeriscape?

- Does Council support a Code requirement for new development to include a certain percentage of xeriscaping?
  - Multi-family and commercial inclusion?

- Does Council wish to allow artificial turf for residential use?
  - If yes, should standards be set?

Commerce
CITY

Council Direction Continued

- Is Council supportive of the approved plant list?
- Does Council support a residential xeriscape incentive program?
- Is Council supportive of using grant money for a sample xeriscape design garden?
- Does Council support non-functional turf conversion of City-owned land utilizing grant funds until this can be budgeted for?

Commerce
CITY

Discussion