SOUTH JORDAN CITY
CITY COUNCIL ELECTRONIC STUDY MEETING

January 17, 2023

Present: Mayor Dawn Ramsey, Council Member Tamara Zander, Council Member Patrick Harris, Council Member Don Shelton, Council Member Brad Marlor, Council Member Jason McGuire, Deputy City Manager Dustin Lewis, CFO Sunil Naidu, Director of Strategy & Budget Don Tingey, Director of Commerce Brian Preece, Director of Public Works Jason Rasmussen, Director of Administrative Services Melinda Seager, City Attorney Ryan Loose, City Recorder Anna Crookston, IT Director Jon Day, GIS Coordinator Matt Jarman, Senior IS Tech Phill Brown, IS Systems Administrator Ken Roberts, Director of Planning Steven Schaefermeyer, City Engineer Brad Klavano, Battalion Chief Michael Richards, Police Chief Jeff Carr, Communications Manager Rachael Van Cleave, Associate Director of Parks Colby Hill, Director of Recreation Janell Payne, Meeting Transcriptionist Diana Baun, Strategy & Budget Analyst Abagail Patonai

Absent:

Others: Sam Bishop, Mark Morris, Bryan Flamm, bfarnsworth

4:41 PM
STUDY MEETING

A. Welcome, Roll Call, and Introduction: *By Mayor Dawn R. Ramsey*

Mayor Dawn Ramsey welcomed everyone present and introduced the electronic meeting.

B. Invocation: *By Director of City Commerce Brian Preece*

Director Preece offered the invocation.

C. Mayor and Council Coordination

Mayor Ramsey discussed Local Officials Day tomorrow at the Capitol for the Youth Council and City Council.

D. Discussion/Review of Regular Council Meeting

Presentations:
- Proclamation Herriman High Cross Country Team
- Herriman High School Chinese New Year Celebration
- UTA Microtransit on demand service

Action Item:

Resolution R2023-02, Adopting Comprehensive Emergency Management Plan (CEMP)

Public Hearing Items:

- Resolution R2023-03, Moderate Income Housing Plan Amendment
- Resolution R2023-04, Mid-Year Amended Budget

Rise Development Land Use Items:

- Presentation on Resolution R2023-06, Resolution R2023-07, and Zoning Ordinance 2023-01-Z
- Resolution R2023-07 Public Hearing
- Zoning Ordinance 2023-01-Z Public Hearing
- Resolution R2023-06, Development Agreement
- Resolution R2023-07, Amending the Future Land Use Plan Map
- Zoning Ordinance 2023-01-Z, Rezoning property located at 10657 South 1055 West

CFO Sunil Naidu noted he received the questions on the amended budget from Council Member Shelton and they will be addressed during the regular council meeting.

Council Member Zander asked if there will be a presentation for the public during the council meeting regarding the traffic study related to the Rise Development.

Director Klavano said the presentation at the last meeting was the only presentation planned. The information on the traffic study is also in tonight's packet for the public to see.

Council Member Zander would like to see at least part of that study shared during the council meeting with the public in attendance, so they can get the information as well.

Director Schaefermeyer discussed with the council when they would like that information shared and that will be done during the regular meeting.

Mayor Ramsey noted that there was a video posted by the city about an hour ago regarding the announcement of the Bees' Stadium moving to South Jordan.

Council Member Harris said he has heard some comments, he thinks many people like the idea of the ballpark but there have been a lot of questions about the streets and how much the state will be involved in it.

Mayor Ramsey said she wants everyone to know that traffic was very seriously discussed leading up to the ballpark announcement, and that is something everyone is mindful of.

The council and staff discussed the incident with the snow plow driver who recognized there was a child in a snow cave where he was headed to plow, and that he was able to get the child out of the snow cave before anyone was hurt. That driver also took a picture of the cave to share with city staff and leadership to help with training in the future.

E. Discussion Item:

E.1. Discussion of Streetscape Master Plan *(By Associate Director of Parks, Colby Hill & VODA Landscape & Planning, Mark Morris).*

Associate Director of Parks Colby Hill gave a brief introduction and explained a little bit about the Streetscape Plan. He also noted that this plan today only applies to park strips and other areas that the city owns and maintains, it does not apply to anything residential.

Mark Morris introduced himself and began reviewing his prepared presentation (Attachment A).

Council Member Zander said that she and her husband used to own a landscaping business, but she has never seen any watering system like this and she loves it. She asked if any other cities have adopted a system like this.

Mr. Morris gave some examples of other places, including Research Park with the University of Utah.

Associate Director Hill added that the city already has this system in some of the newer parks, and it's in our Engineering Standards and Specifications for any new builds.

Council Member Shelton asked if this watering system for the trees has any impact on keeping the roots from damaging the adjacent sidewalks.

Mr. Morris responded no, that usually has more to do with the type of tree in the park strip. He continued reviewing his prepared presentation (Attachment A).

Mayor Ramsey asked if this plan goes further west than 4000 West, specifically whether it includes any portion of Daybreak as the map seems to stop around that area.

Mr. Morris said this is only a screen shot of the map, the full map is included in the plan and it does go further west than 4000 West. The plan itself goes to the city limit on the west side, but there isn't much maintained by the city out in that area.

Associate Director Hill said there are very few park strips or streetscapes the city maintains in Daybreak.

Mr. Morris continued reviewing his prepared presentation (Attachment A).

Council Member Zander asked about the city maintaining park strips in front of homes in the red areas on the map in Attachment A, and whether the homeowners' sprinklers are going to those areas.

Associate Director Hill said most of those cases are places where the city has purchased right of way and has agreed to maintain the area with the city's irrigation system.

Mr. Morris said that on the last map the red areas are where, per city code, it is implied that the property owner should be maintaining the park strip. Some of those areas the city may continue to maintain, this was just to help staff identify where the code indicates the property owner should be doing the maintenance and start that conversation.

Director Klavano said some of those areas were set up that way because the property owners didn't have irrigation systems, and city maintenance was the only way to maintain those park strips.

Mr. Morris said the intent of this project was to analyze and decide whether or not they should be approaching the property owners in those red areas to pass off maintenance to them.

Associate Director Hill said they don't anticipate going to the property owners and telling them they are now in charge of the park strip maintenance, this was done to allow staff to review everything as a part of the process and have a good understanding of what it all means.

Council Member Marlor wanted to make sure that this department is coordinating with Director Klavano's team, ensuring they don't complete a re-landscaping project and then have a road widened or have another project that requires them to undo all that work. He asked about possible changes on 10600 South and Redwood.

Director Klavano said they will be coordinating that as UDOT does have it in their plan at some point to widen Redwood to Bangerter.

Director of Public Works Jason Rasmussen noted that Deputy City Engineer Jeremy Nielson has been a part of the working group, and before any changes are made they will be working together on a schedule for future projects.

Council Member Marlor also brought up 2200 West where there are areas with nothing but rock and asked for more information on the plans for those spaces.

Director Rasmussen said they have bid jobs to remove that rock, add plants and irrigation, then replace that rock. However, in that process there were a lot of residents complaining that they shouldn't be planting new plants because of the drought. City Manager Whatcott directed them to put the irrigation pipes in but to change the contract and not plant the plants.

Associate Director Hill said their intent is to re-landscape those areas, but they did not plant some of the plants. They had already taken possession of the trees and those were moved to other locations throughout the city, knowing that at some future point they would put trees back in at those locations on the plans. They will still continue to move forward with 2200 West, but they don't know when that will happen.

Council Member Shelton noted that he actually only like's one out of 10 of these conversions. Even if the conversion is to just rocks, there are still weeds that break through and they won't be able to just use a lawn mower, someone will have to go along and pull those weeds out.

Mr. Morris said the hopes are for minimal weeds with plans for weed barrier and rock mulch.

Council Member Harris added that trimming the bushes is an enormous task even for homeowners, and they do look great when they are trimmed. From a maintenance perspective, what will the shrubbery look like.

Associate Director Hill said from his many years of experience, there is no such thing as a zero maintenance landscape. Currently, park strip maintenance is contracted out to a third party who does a great job, and he anticipates continuing with that, just with changes to the scope of work. They will still be required weekly, but they will pull weeds rather than mowing, and that will be accounted for in the agreement. Park strips are a harsh environment for any type of landscape, as they are generally next to a road that gets very hot with radiant heat and salt is not kind to any plants, along with watering being very difficult on a park strip. This design puts the water where it needs to be and introduces more salt tolerant plants. South Jordan is known for their park strips being an identifying feature, and they don't want to lose that.

Mr. Morris added that the plants that were pulled from all the plant lists were focused on ones that would require someone out there once a week to maintain, rather than requiring once a year maintenance.

Council Member Harris said that's the thing with bushes and shrubs, they only look good when they are well maintained, otherwise they start to look messy.

Council Member Zander noted that she has some of the plants from slide 14 on Attachment A in her yard, and the one that she has only requires her to trim it once every 3-5 years.

Mr. Morris said they tried to choose plants that would look great, regardless of how much time was being devoted to them.

Council Member Zander noted that these also grow at a very low rate because of the lack of water, and they don't require much attention.

Mr. Morris noted that with Xeriscape, the first two years are considered establishment years and require a significant amount of water to get things established. Once the plant has a larger root system, the water can be turned down significantly and still have the lush look they are after.

Mayor Ramsey likes this plan and agreed that they want to maintain the look and feel that people expect in the city.

Mr. Morris added that if you can tell its Xeriscape, it's usually not done right. A lot has to do with the density while planting and with the modular system discussed they are planting it densely enough that someone won't drive by and say it looks like the city is just putting in gravel.

Council Member Zander asked if there are any city ordinances that state the ground cover needs to be rock or bark.

Director Rasmussen said that what is being proposed here complies with the city code, which allows for either rock or bark.

Associate Director Hill said the process from here will include staff going back for a final draft based on tonight's discussion, and that will be taken to the planning commission. After that, they will come back during a regular council meeting for adoption. Once adopted they will start putting budget numbers together, and they already have some money in the water conservation funds to start doing things now.

Mayor Ramsey asked about a timeline.

Director Rasmussen said he thinks it will be about 5-7 years, but there are grants available that they will be going after to try and help accelerate that.

Mr. Morris added that many of the goals for this plan were pulled from the city's existing general plan, where there were some pretty specific things said about streetscape and how that lines up with the community's expectation. This will be a very visible project, so as the city continues to encourage people to use water more efficiently, this can be used to share what the city is using in the city maintained park strip and recommending those plants to residents and business owners.

Council Member Zander asked about updates on the Annual Report.

Communications Manager Rachael Van Cleave said final edits are going in, they will be sent over to a printer Friday. At that point it will be about a week or two before they hit homes and businesses. These have to be sent out based on zip codes, so if someone lives in another city but happens to be in the same zip code they will get a copy as well.

ADJOURNMENT

Council Member Shelton motioned to adjourn the January 17, 2023 City Council Study Meeting. Council Member Marlor seconded the motion; vote was unanimous in favor.

The January 17, 2023 City Council Study meeting adjourned at 5:43 p.m.

This is a true and correct copy of the January 17, 2023 City Council Study Meeting Minutes, which were approved on February 7, 2023.

Anna Crookston

South Jordan City Recorder

SOUTH JORDAN
STREETSCAPE MASTER PLAN

JANUARY 2023

VODA landscape + planning

SOUTH JORDAN STAFF

Colby Hill, Public Works, Associate Director of Parks

Geoffrey Burlew, Park Strip Supervisor

Greg Schindler, City Planner

Jeremy Nielson, Deputy City Engineer

Jason Rasmussen, Public Works Director

Matt Jarman, GIS Coordinator

Kevin Ball, Urban Forester

Jason Miller, Parks Foreman

GOALS & OBJECTIVES

Goal 1: Reduce water use in park strips and medians maintained by South Jordan City.

Objective 1: Install new low water use, drought tolerant plants in all park strips and medians which are maintained by the city.

Objective 2: Install new, more efficient irrigation systems that can be adjusted to current conditions.

Goal 2: Reduce maintenance resources required for park strips and medians maintained by South Jordan City.

Objective 1: Explore feasibility of transfering park strip maintenance to adjacent property owners where city is not required to maintain the park strip.

Objective 2: Minimize plant and irrigation system maintenance tasks to seasonal and/or annual maintenance requirements.

Objective 3: Eliminate turf grass from all park strips and medians which are maintained by the city.

Goal 3: Create attractive landscaped park strips along South Jordan's key travel corridors.

Objective 1: Use only low-water and low-maintenance plants that will thrive in the city's climate.

Objective 2: Use plants that will beautify and improve the experience and perception of the city.

HOW MUCH WATER DOES XERISCAPE SAVE?

Most agree that effective xeriscape design can reduce anywhere from **50-75%** of water needs over conventional landscapes.

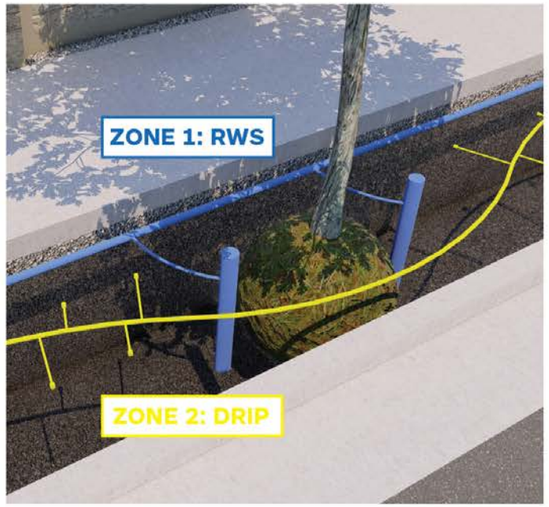


Figure 4.03 - Separate tree and plant irrigation zones

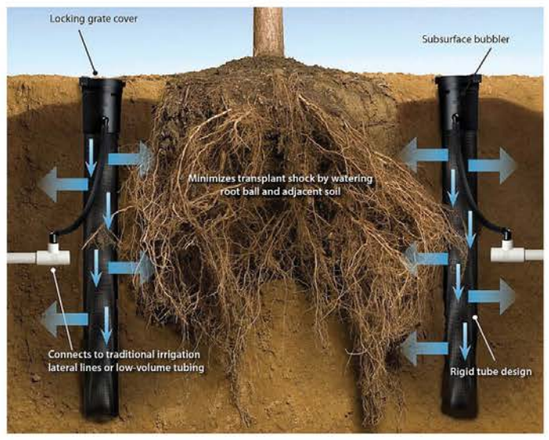


Figure 4.04 - Root watering system diagram

1. **Two irrigation zones** allow plants and trees to be irrigated independently. This feature is used to customize the amount of water provided for the plants vs the trees. It is useful in establishing new plants and prevents overwatering when the plants and trees have different water demands. It is also useful in drought conditions where trees, the larger investment of time and money, might need to be prioritized over plants.
   - **(a)** The **tree irrigation zone** will use a **Root Watering System (RWS)** to provide water directly to the tree's root system and minimizes surface runoff and evaporation loss. The RWS will be supplied by valves and lateral lines separate from the plant irrigation zones. See Figures 4.03 and 4.04
     - **(i)** Each tree shall have a minimum of 2 RWS fixtures evenly spaced around the rootball.
     - **(ii)** Each RWS fixture shall be fitted with a cloth sock around its exterior to prevent fine sediments from penetrating and clogging the canister.
     - **(iii)** Each RWS canister shall be filled with 0.5" gravel to improve top to bottom water dispersion and prevent canister collapse from side pressure.
   - **(b)** The **plant irrigation zone** will use a drip emitter system. Individual emitters will be placed at each plant and connected to the plant irrigation zone later lines and valves. See Figure 4.03
2. **Smart controllers** will be installed on both existing and new irrigation systems. These controllers reduce maintenance time and costs because adjustments to watering schedules can be made remotely. This convenience can help reduce water use and increase plant survival by making real-time adjustments based on changing conditions.
   - **(a) Rain Bird brand smart controllers** will be installed on all new irrigation systems and retrofitted to existing systems as they are refurbished.
3. **Consolidated control systems** will minimize the number of controllers and valve boxes. The quantity and location of controllers and valve boxes shall be determined on a project basis with the goal of reducing the number of controllers overall.

Planting Design

Planting design is governed by an algorithm, or decision making structure. Figure 4.05 shows an overview of the process.

The full algorithm and planting design process are described in the next chapter.

STEP 3: SITE PREPARATION

Site preparation includes all site work that needs to be completed before irrigation systems and plants can be installed. This includes the removal or modification of any site features as identified in the site analysis and site design drawings.

Figure 4.02 - Park strip refurbishment process

4.2 PROCESS

The park strip refurbishment process has 7 steps:

1. Site Analysis
2. Site Design
3. Site Preparation
4. Install Irrigation
5. Install Plants
6. Establish Plants
7. Maintenance

See Figure 4.02

The steps are listed in their chronological order but the duration of each step will vary. Steps 1 and 2 can be completed well in advance of step 3. Some tasks in steps 3, 4, and 5 will overlap and can be performed at the same time. Step 6 should take 1-2 years, and step 7 continues indefinitely.

This process should be used individually for each street corridor/section.

STEP 1: SITE ANALYSIS

The site analysis both records existing conditions and determines which conditions are to be changed and which are to remain. The site analysis shall be documented on site drawings.

Conditions that might be removed include existing turf, pavement, mulch, dead trees, weeds, irrigation systems, etc.

The following principles shall guide the site analysis:

1. Always consider the specific goals for the given street/corridor.
2. Identify which existing irrigation systems are to be preserved and adapted to the new irrigation scheme.
3. Evaluate any of the previously permitted 15'-0" long paved areas and identify which to keep or remove on a case-by-case basis.
4. Identify which trees are to remain and where trees need to be added or replaced. Preserve existing trees if they are healthy.
5. Identify existing utility poles, lamp posts, street signs, utility vaults, electrical boxes, and other features that will remain in the park strip.

STEP 2: SITE DESIGN

The site design step uses the site analysis drawings to generate site plans. This includes the irrigation system and planting design drawings. The site design should meet the specific goals for the given street/corridor.

The following principles shall guide the site design:

Irrigation Systems

Updated irrigation systems will reduce water use and maintenance while improving plant health. The new irrigation system will have two irrigation zones in each park strip, use smart controllers, and use a consolidated valve box/controller configuration.

Irrigation system plan drawings should be developed on a project basis and meet the following criteria:

LARGE TREES VISUAL LIST

Corylus colurna

TURKISH FILBERT

(Z4) Full sun.

Pyramidal, deciduous tree. Broad, semi-glossy bright green leaves, with corky, tan to gray bark may flake to reveal orange-brown inner bark. Tolerant of drought once established.

H 50' W 30'

Gymnocladus dioicus 'Espresso'

KENTUCKY COFFEE TREE

(Z4) Full sun. Shade tree, Waterwise

Oval to vase shaped tall deciduous tree with rough, scaly gray-brown bark and large bipinnate compound leaves on arching branches. Bluish green leaves with yellow fall color. Seedless selection. Tolerates heat, drought and cold conditions.

H 50' W 35'

Quercus shumardii

SHUMARD OAK

(Z5) Full sun. Shade tree.

Larger leaves and abundant shade producing abilities. Grows more pyramidal in it's younger stages then it will branch out creating a more vase like look. Shiny dark green leaves can reach 8" long. Late fall color turns the tree a vibrant red.

H 40-60' W 30-60'

Tilia tomentosa

SILVER LINDEN

(Z4) Full sun, shade tree, street tree, fall color.

A broadly pyramidal tree. Glossy leaves have dark green tops and are silvery-white underneath. The early summer blooms are fragrant. Tolerant of heat, drought and urban conditions. Green/Yellow fall foliage.

H 60' W 30'

Ulmus x 'Morton' Accolade'

(Z4)

Vas
gre

H 50

(Z5)

The
sha
col

H 40

SMALL TREES VISUAL LIST

Acer ginnala 'Flame'

FLAME AMUR MAPLE

(Z2) A small rounded tree or large shrub. Green summer foliage turns bright red in the fall. Flowers are very fragrant, appearing in the early spring. Adapts well to a wide range of soils. Grown in a tree or multi-stem form.

Height 20' Spread 20'

Malus 'Spring Snow'

SPRING SNOW CRABAPPLE

(Z4) Full sun.

Profuse white flowers in spring are followed by medium green foliage. Yellow fall color. Fruitless.

H 25' W 22'

Syringa reticulata

JAPANESE TREE LILAC

(Z3) Full sun, waterwise, deer resistant, high elevation.

Small tree with stiff spreading branches developing an oval-rounded to vase shaped crown. Large showy creamy white flowers turn to winter light tan to brown clusters of capsules.

H 20-25' W 15-25'

Zelkova serrata 'Wireless®'

WIRELESS ZELKOVA

(Z5) Full sun, water-wise.

Broadly spreading vase is medium green foliage turns red in fall. Excellent choice for planting under utility lines.

H 24' W 36'

MEDIUM TREES VISUAL LIST

Carpinus betulus 'Fastigiata'

COLUMNAR HORNBEAM

(Z4) Full sun to part shade. Deciduous. Columnar. Low maintenance. Yellow fall color.

This deciduous, upright symmetrical specimen. The foliage is bright green and dense during the summer, and turns yellow in the fall. Great for a tall screen, hedge, or street tree.

H 30-40' W 20-30'

Celtis occidentalis

COMMON HACKBERRY

(Z2) Full sun. Shade tree. Drought tolerant. Low maintenance.

A broad tree with ascending branches, arching with age. Fall color is yellow. Elm-like foliage; upright arching branches. Thick, knobby bark. Tolerates urban air pollution. Good for parking islands.

H 40-50' W 30-40'

Gleditsia triacanthos var. inermis

HONEYLOCUST

(Z3) Full sun.

Deciduous, upright tree with a spreading crown and ascending branches. Compound foliage is dark green, turning to yellow in the fall. Great shade tree for filtered shade requirements. Very salt tolerant .

H 45' W 35'

Koelreuteria paniculata

GOLDEN RAINTREE

(Z5) Full sun. Street tree. Waterwise. Attracts pollinators.

A dense, rounded tree with a spreading habit. Bright yellow flowers in mid-summer are followed by interesting papery seed capsules. Compound foliage is green, then turns to a golden-orange color in the fall.

H 25' W 25'

SOUTH JORDAN UTAH

SMALL PLANTS VISUAL LIST

Delosperma cooperi

HARDY ICE PLANT

(Z5-9)

Medium to dark green leaves form a low, dense carpet of soft, fleshy foliage, covered with neon, pinkish purple daisy-like flowers from summer to fall. Great for rock gardens.

H 3-6" W 12-36"

Leucanthemum x superbum 'Snow Lady'

SNOW LADY SHASTA DAISY

(Z4) Full sun, deer resistant.

A compact, dwarf form of Shasta Daisy. An ideal choice for the front of any border where a long season of bloom is desired.

H 12" W 12"

Leucanthemum superbum 'PP23181'

BANANA CREAM SHASTA DAISY

(Z5) Full Sun. Perennial.

This shasta daisy's flowers are 4-5" when they open in the summer. Flowers are lemon yellow at time of opening, and become light butter yellow, then creamy white as they mature. An extra row of ray petals gives the flowers a fuller appearance than single-ray variets. These are award winning as cut flowers, as they last 2-3 weeks once cut.

H 15-18" W 18-24"

Sphaeralcea munroana

MUNRO'S GLOBEMALLOW

(Z4) Full Sun. Waterwise, Native, Summer Blooming

This Globemallow brings a blast of bright orange to the mid-summer garden. A xeric perennial native to the Great Basin of the Western US, this rugged plant thrives in the most challenging hot, sunny dry garden conditions. Drought resistant/drought tolerant plant

H 3.5' W 2'

Schizachyrium scoparium 'Blaze'

BLAZE LITTLE BLUESTEM GRASS

(Z4) Full Sun. Deer Resistant. Drought tolerant.

'Blaze' is a selection of Little Bluestem grass grown for its exceptional fall color. A tall upright warm season grass, 'Blaze' mixes in nicely with flowering perennials and its grass blades turn deep red in the fall maaturing to a pink winter

SOUTH JORDAN UTAH

LARGE PLANTS VISUAL LIST

Mirabilis multiflora

WILD FOUR O'CLOCK

(Z4) Full Sun to part shade. Deer & rabbit resistant.

Wild Four O'clock is a magnificent native wildflower that blooms all summer with magenta-pink flowers that open in the afternoon. A perennial with huge, deep roots, it needs no extra water once established. Spreads widely,

H 1.5' W 4-6'

Potentilla fruticosa

SHRUBBY CINQUEFOIL

(Z2) Full sun, waterwise, deer resistant.

Small fine-textured deciduous flowering shrub.Blooms late spring through fall. White, yellow, pink, orange, and red flowering varieties.

H 1-4' W 2-4'

Mahonia aquifolium 'compacta'

DWARF OREGON GRAPE

(Z4) Part shade, and water-wise.

Compact broadleaved evergreen. Holly-like glossy dark green leaves turn red to bronze in the winter. Clusters of bright yellow flowers bloom in the spring followed by blue to black berries. Tolerates drought best in the shade.

H 2-3' W 3- 4'

Mahonia repens

CREEPING OREGON GRAPE

(Z2) Full sun to full shade, deer and rabbit resistant, attracts butterflies, native. Utah native.

Small broadleaf evergreen. Multi-colored holly-like leaves turn reddish-purple in fall. Yellow blooms in late spring. Winter interest.

H 12-36" W 36-60"

Rhus aromatica 'Gro-Low'

GROW LOW SUMAC

(Z3) Full sun to part shade, water-wise, deer and rabbit resistant.

Compact habit with glossy green leaves. Excellent for erosion control. Small yellow flowers followed by red berries. Scarlet-orange fall color.

H 2-3' W 6-8'

Plant Selection Criteria

1. Low water

2. Simple/annual maintenance

3. Wide spread/lush look

4. Salt tolerance

5.0 PLANTING DESIGN PROCESS

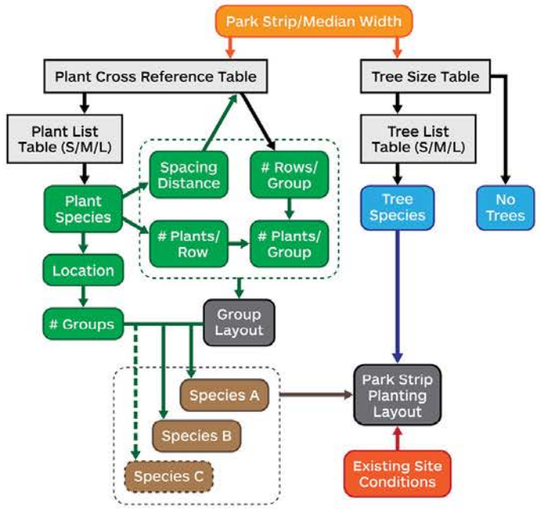


Figure 5.01 - Planting design process flow chart

The planting design process is a tool to enable South Jordan City personnel the flexibility to design their own streetscape planting plans that are customized to the goals for each street/corridor. The species selection and planting layouts generated by the algorithm will develop a planted streetscape that maximizes plant health and resource efficiency.

The planting layouts are designed to achieve 50% coverage of the planted areas at plant maturity. This coverage is concentrated along the center line of the park strips and medians, leaving the side edges less covered. This creates a longer linear layout that accentuates the length of the ornamental planting as it is experienced by people in passing cars.

See Figure 5.01 for a flow chart of the planting design process.

5.1 PLANTING LAYOUT DESIGN

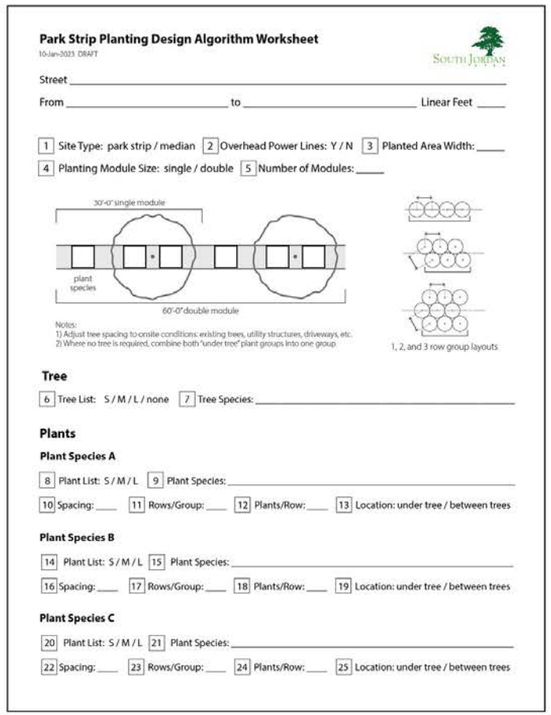
ALGORITHM

The planting layout design process is governed by a simple **algorithm that uses tables and a worksheet**. An example diagram for how to use the algorithm is shown in Appendix C.

Inputs

The algorithm process has **three inputs**: the street, site type, and planted area width. These inputs are written on the top of each worksheet.

1. The **Street** indicates the section of a street to which the planting layout of the given worksheet is applied. The length of this section is used to determine the number of planting modules.
2. **Site type** is either a park strip or median. The presence of overhead power lines is indicated in the site type.
3. **Planted area width** refers to the planted areas in both park strips and medians. It is defined as the actual width of the soil area (measured perpendicular to the street) and does not include the width of any adjacent curbs, gutters, or pavement.
   - **(a)** The planted area width of 9'-0" for medians is used in reference to South Jordan Engineering Standards Drawing S-1 where the standard 14"-0" median has a planted area width of 9'-0".
   - **(b) Park strip and median widths will vary.** Common widths are included in the tables. When a planted area width is between two listed widths, use the smaller width.



Park Strip Planting Design Algorithm Worksheet

10-Jan-2023 DRAFT

Street _____

From _____ to _____ Linear Feet ____

[1] Site Type: park strip / median [2] Overhead Power Lines: Y / N [3] Planted Area Width: ____

[4] Planting Module Size: single / double [5] Number of Modules: ____

30'-0" single module

plant species

60'-0" double module

Notes:
1) Adjust tree spacing to onsite conditions: existing trees, utility structures, driveways, etc.
2) Where no tree is required, combine both "under tree" plant groups into one group

1, 2, and 3 row group layouts

Tree

[6] Tree List: S / M / L / none [7] Tree Species: _____

Plants

Plant Species A

[8] Plant List: S / M / L [9] Plant Species: _____

[10] Spacing: ___ [11] Rows/Group: ___ [12] Plants/Row: ___ [13] Location: under tree / between trees

Plant Species B

[14] Plant List: S / M / L [15] Plant Species: _____

[16] Spacing: ___ [17] Rows/Group: ___ [18] Plants/Row: ___ [19] Location: under tree / between trees

Plant Species C

[20] Plant List: S / M / L [21] Plant Species: _____

[22] Spacing: ___ [23] Rows/Group: ___ [24] Plants/Row: ___ [25] Location: under tree / between trees

Figure 5.02 - Planting design algorithm worksheet. See Appendix A for the full size printable version

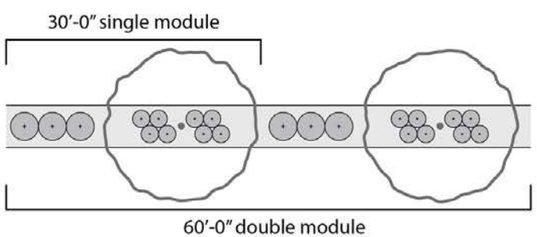


Figure 5.03 - Single and double module sizes

Output

The **output** of the algorithm is a **worksheet** that identifies the species, quantity, and location of each plant and tree for one planting module. See Figure 5.02

PLANTING LAYOUT

The configuration of tree and plant locations within the park strip or median is organized into planting modules. Each module consists of plant groups and tree(s).

Planting Modules

Each worksheet describes one **planting module**. A planting module is the plant layout unit that is repeated along both sides of a street. This repetition unifies the character of the street and reinforces the consistent identity of a corridor.

Planting modules are based on tree spacing and two module sizes are possible. See Figure 5.03

1. **Single modules** are 30'-0" long with 1 tree and 3 groups of 2 plant species.
2. **Double modules** are 60'-0" long with 2 trees and 6 groups of 3 plant species.

Single modules are better suited to shorter sections of streetscape and street frontages that are frequently interrupted by driveways or other non-planted uses of the park strip. Double modules are better suited to longer sections of streetscape and less interrupted street frontages.

After the module size is chosen, the number of modules can be calculated based on the length of the street indicated on the worksheet. This can be roughly calculated based on linear feet of the street but a finer calculation that includes park strip interruptions, like driveways, will need to be made.

Plant groups

Each plant group within a module contains a single plant species. The species, size, and location of each plant group is determined by the planting design algorithm.

5.2 PLANTING DESIGN ALGORITHM STEPS

The steps of the algorithm are designed to provide the information to fill in the planting design worksheet.

STREET/CORRIDOR INFORMATION

Street name, range, and linear footage

SITE DESCRIPTION

1. Site type
2. Overhead power lines (Y or N)
3. Planted area width
4. Planting module size
5. Number of planting modules

TREE SPECIES SELECTION

Step 1: Tree List Selection

Tree list selection begins with Table 5.01 - Tree List by Planted Area Width. Using the planted area width,

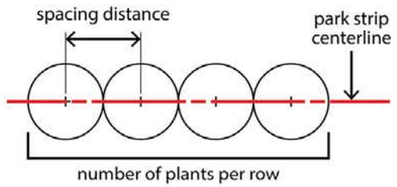


Figure 5.04 - One row plant group layout

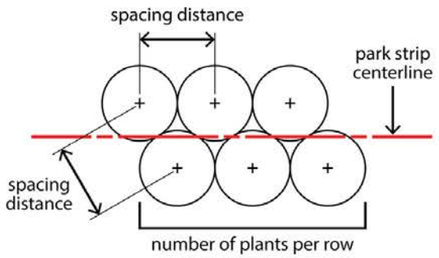


Figure 5.05 - Two row plant group layout

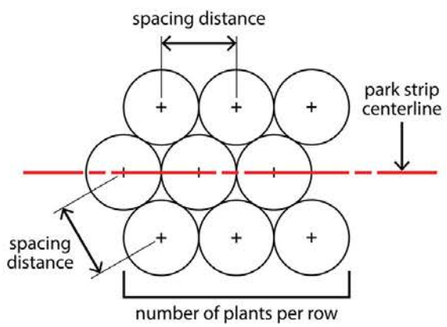


Figure 5.06 - Three row plant group layout

determine which tree list to use. Tree lists are found in Tables 5.03, 5.04, and 5.05

For all planted areas with overhead power lines, and all medians, use the small trees list. Park strips that are less than 4'-0" wide shall not include any trees.

Circle the tree list or no trees option in line 6 on the worksheet.

Step 2: Tree Species Selection

Using the tree list identified in step 1, select one tree species. Choose a species that will help define the character of the given street. Write this tree species on line 7 of the worksheet.

Note: Tree species selection can be made or adjusted alongside plant species selection in order to achieve a coordinated aesthetic.

PLANT SPECIES SELECTION

Single planting modules require 2 plant species. Double planting modules require 3 plant species. Repeat the plant species selection steps for each species in the planting module.

Step 1: Plant List Selection

Plant list selection begins with Table 5.02 - Plant Cross Reference by Planted Area Width. This table contains 3 variables for each plant species and needs to be cross referenced with each selected plant list table to fill in the worksheet. Plant lists are found in Tables 5.06, 5.07, and 5.08

Using the planted area width, determine which plant list Table(s) to use:

A. Locate the column with the correct planted area width.

B. In cells where the Number of Rows per Plant Group has a numeric value, the corresponding plant list Table(s) in the far left column may be used in the planting module.

Note: Plant list(s) corresponding to cells with an n/a value shall not be used.

Circle the plant list on line 8 in the worksheet.

Step 2: Plant Species Selection

This step requires multiple cross references between Table 5.02 and the plant list table for each species.

A. Using the plant list Table(s) identified in step 1, select 1 plant species. Identify the plant spacing for that species and cross reference that spacing value back to the plant spacing value in Table 5.02. Only use plant species that correspond to the spacing values in both the plant species table and Table 5.02. Write the plant species name on line 9 of the worksheet.

B. Write the plant spacing value on line 10.

C. From Table 5.02, write the number of rows per group on line 11.

D. From the selected plant list table, write the number of plants per row on line 12.

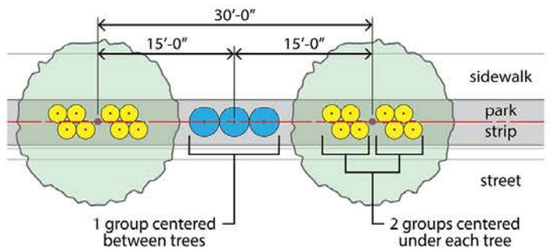


Figure 5.07 - Plant group locations

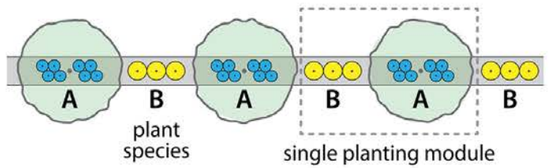


Figure 5.08 - Single planting module has 2 plant species

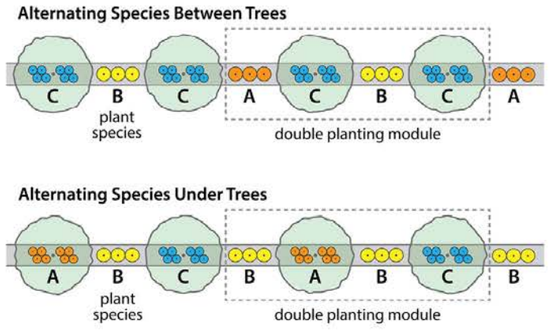


Figure 5.09 - Double planting modules have 3 plant species and 2 alternating species layout options

E. From the selected plant list table, circle the location for the plant species group on line 13. Make sure that the selected location matches each species.

Once each plant species is selected, fill in the boxes in the planting module diagram with the letter of each species.

Double modules will have alternating species. There are two options for alternating species layouts in double modules. See Figure 5.09

5.3 PLANTING DESIGN WORKSHEET

When the planting design worksheet is complete it is combined with the site analysis information to create the planting plan. This will take into account all existing structures in the planting area of each park strip or median. The final number of modules is used to calculate the number of each plant and tree species needed for the given street/corridor length.

The planting design algorithm process can be repeated in order to change plant species, module size, etc. A new worksheet will be prepared each time the process is updated.

5.4 PLANTING DESIGN TABLES, LISTS, AND EXAMPLES

The remainder of this section includes all of the tables for completing the planting design algorithm. Visual plant lists are included and examples of how different park strip and medians can look after the new landscaping is installed.

Figure 5.15 - Refurbished park strip example: 4′-0″ planting width

Figure 5.16 - Refurbished park strip example: 5′-0″ planting width

Figure 5.17 - Refurbished park strip example: 8′-0″ planting width

Figure 5.18 - Refurbished median example: 9′-0″ planting width of standard 14′-0″ median

6.0 PRIORITIZATION

A prioritization of corridors and key streetscape updates is necessary to give guidance to future investments in city infrastructure. The intent of a phased approach is to work through a pilot project using this streetscape update process and refine the process before larger projects are tackled.

At each phase of the project, city staff should reach out to property owners along the corridor and determine which segments of the parkstrip project should be turned over to private maintenance once the updates are complete.

6.1 CORRIDOR PRIORITIZATION

During development of this master plan, it was determined that highly visible corridors in South Jordan would be a higher priority than other corridors.

The map on the following page outlines first, second, and third priority corridors. Some of these corridors are quite lengthy, and should be split into smaller, phased projects within themselves:

1. First Priority Corridors
   - **(a)** 10600 South
   - **(b)** 11400 South
   - **(c)** 1300 West
   - **(d)** 2700 West (north segment) as pilot project
2. Second Priority Corridors
   - **(a)** 4800 West
   - **(b)** 10200 South
   - **(c)** 2200 West
3. Third Priority Corridors
   - **(a)** Redwood Road (coordinate with Google Fiber updates)
   - **(b)** 10000/Shields Lane
   - **(c)** 2700 West (south segment)
   - **(d)** 3200 West
   - **(e)** 4000 West

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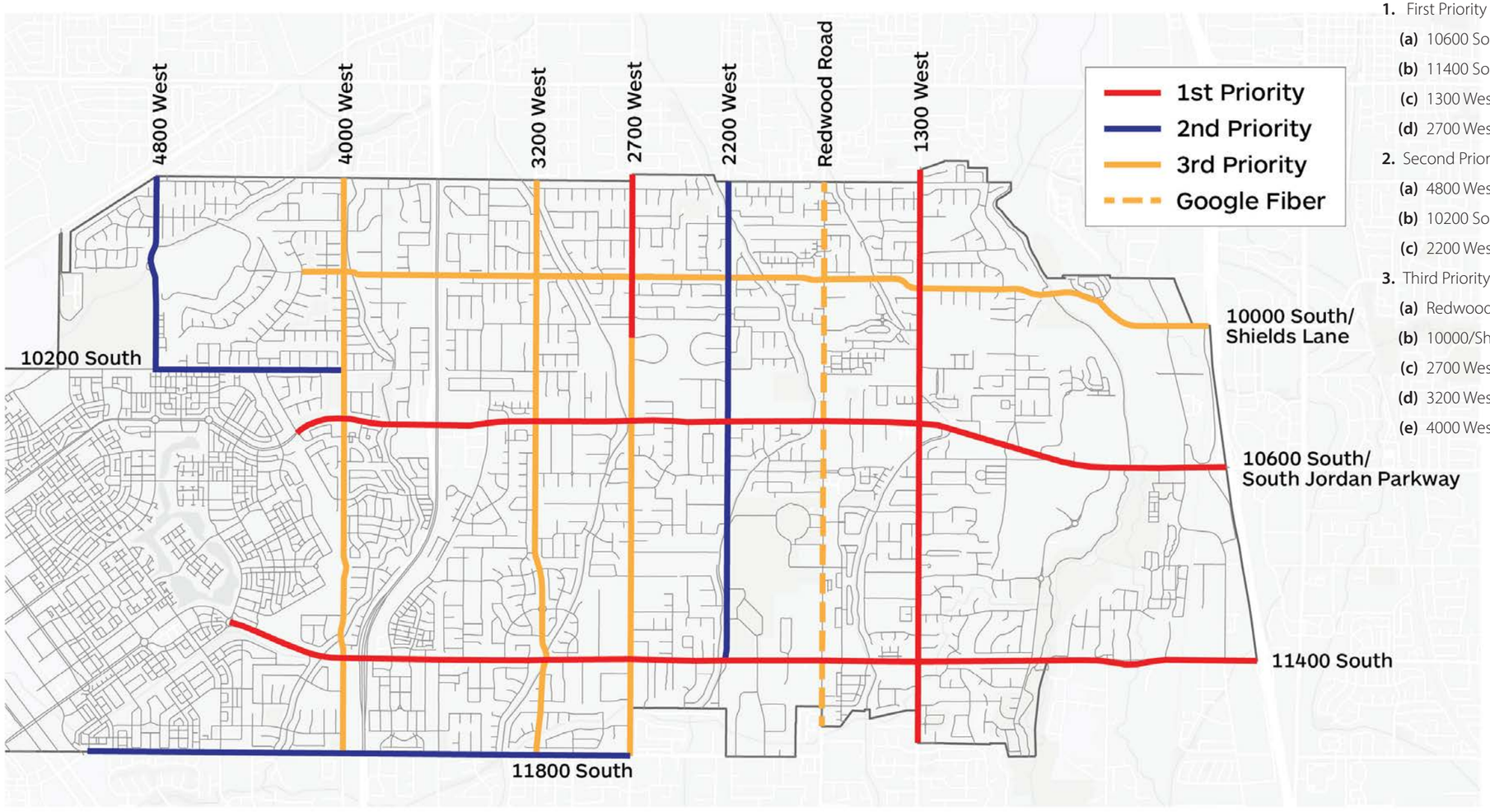

Figure 6.01 - Corridor prioritization map for updates to landscaped park strips currently maintained by South Jordan City

3.0 MAINTENANCE RESPONSIBILITY

The city currently maintains park strips and medians that should be maintained by another entity. One way to reduce use of the city's maintenance resources is to transfer maintenance activities to the responsible party. This plan investigates the feasibility of turning over maintenance to private property owners for specific park strips.

3.1 IDENTIFY CURRENT PARK STRIP & MEDIAN MAINTENANCE

The city's GIS database includes park strip and median shape files and a maintenance attribute for each shape. It is assumed that this data is accurate.

GIS data on all park strip and medians was obtained from the city and analyzed to identify a superset of park strips and medians that the city is currently maintaining or should be maintaining. This superset consists of all park strip and median shapes with maintenance attribute values of "SJC" and "unknown." No other maintenance attribute values were included in the superset.

3.2 DETERMINE MAINTENANCE RESPONSIBILITY

Several criteria were applied to the superset in order to differentiate between park strips and medians that are to be maintained by the city and those that are not.

MAINTENANCE CRITERIA

City Code

Two portions of the city code define park strip and median maintenance responsibilities. The city code language is paraphrased here.

1. **12.04.090: Maintenance of Park Strips**

   Park strip planting and maintenance is the responsibility of the abutting property owner.

2. **16.04.190 E.4: Landscaping and Maintenance**

   (a) The city will assume maintenance responsibility for park strips that meet all of the following criteria:

   (i) have fully installed landscaping

   (ii) have 100% release of the improvement guarantee for the installed landscaping

   (iii) have required fencing installed

   (iv) are along rear or side property lines which are along a collector or arterial street

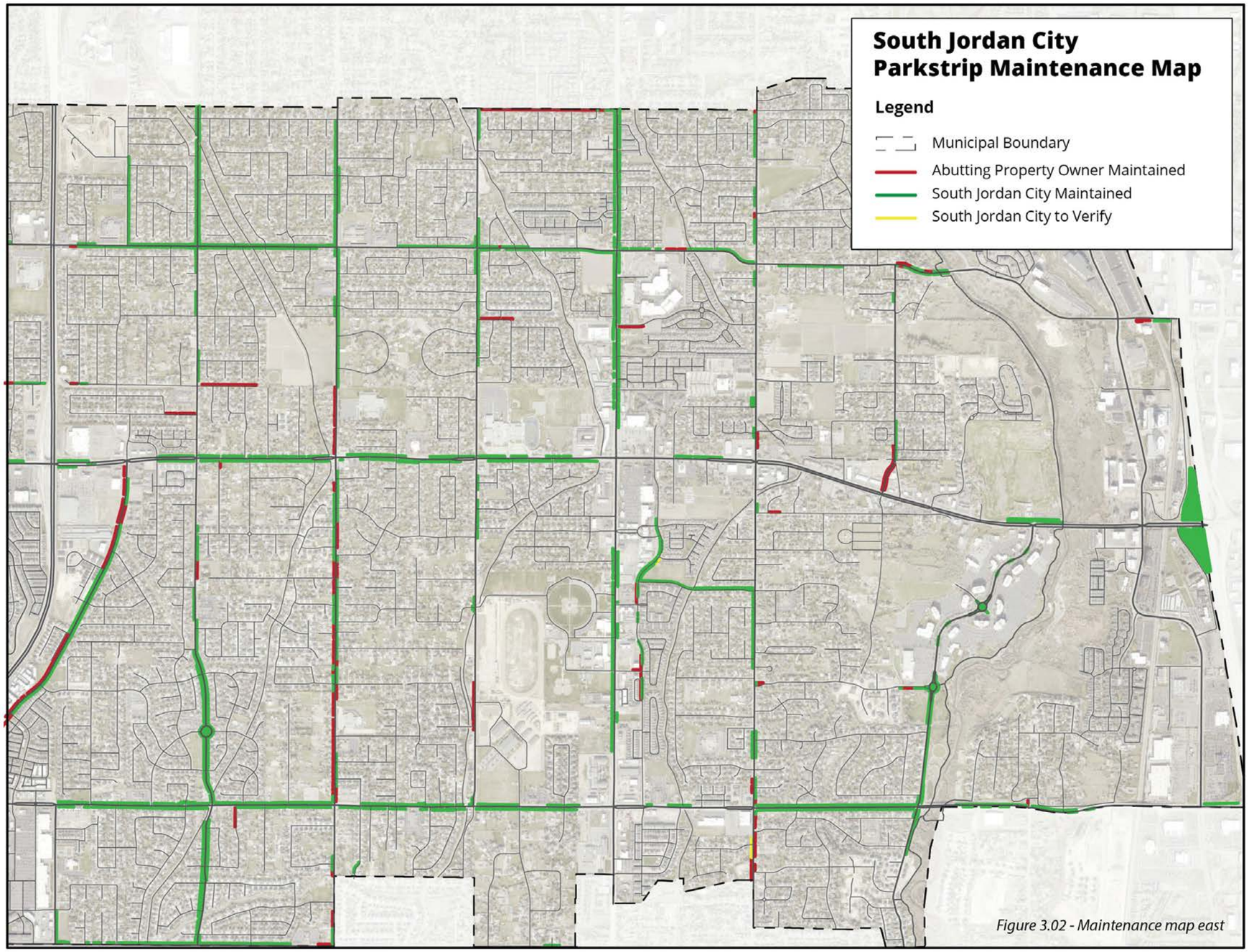

Figure 3.02 - Maintenance map east

Thank you

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