RESOLUTION NO. 3121

A RESOLUTION OF THE CITY OF WILSONVILLE ADOPTING THE FROG POND EAST AND SOUTH INFRASTRUCTURE FUNDING PLAN.

WHEREAS, The City adopted the Frog Pond Area Plan "Area Plan" in 2015 setting a vision for urban growth on the East side of Wilsonville; and

WHEREAS, the Area Plan included Appendix H, an Infrastructure Funding Plan "Area Plan IFP"; and

WHEREAS, at the time of adoption a portion of the land covered by the Area Plan was within the Urban Growth Boundary (UGB) and a portion was designated as Urban Reserve; and

WHEREAS, in 2017 the City adopted the Frog Pond West Master Plan, "West Master Plan", for the area within the UGB which included more detail about transportation and other infrastructure for the subject area; and

WHEREAS, the Frog Pond West Master Plan included Appendix D, an Infrastructure Funding Plan "West IFP" further refining the Area Plan IFP for the area covered by the West Master Plan; and

WHEREAS, both the Area Plan and West Master Plan set a foundation for future master planning of and infrastructure funding planning for the Urban Reserve land not yet in the UGB; and

WHEREAS, in 2018 Metro, through Ordinance 18-1427, expanded the UGB to include the Urban Reserve area covered by the Area Plan; and

WHEREAS, the area added to the UGB in 2018 became known as Frog Pond East and South; and

WHEREAS, on December 19, 2022, the City Council adopted a Master Plan for Frog Pond East and South "East and South Master Plan" in Ordinance No. 870; and

WHEREAS, the East and South Master Plan provides for, among other things, the provision of necessary infrastructure; and

WHEREAS, on April 17, 2023, the City Council adopted an amendment to the Transportation System Plan in Ordinance No. 877 integrating transportation infrastructure from the East and South Master Plan; and

WHEREAS, the City desires, building on the Area Plan IFP and West IFP, to create a Infrastructure Funding Plan specific to infrastructure as shown in the East and South Master Plan and Transportation System Plan "East and South Infrastructure"; and

WHEREAS, both the Area Plan IFP and West IFP rely on and reflect the general citywide policies and practices regarding provision of infrastructure improvements as part of development; and

WHEREAS, these previously adopted City policies will continue to establish the baseline assumptions for the East and South IFP; and

WHEREAS, the East and South IFP intends to provide an overarching strategy for future financing tools or strategies that may be used to support specific development projects and related infrastructure; and

WHEREAS, the East and South IFP is not intended to limit or to define the specific financial package that may be needed to support particular developments and projects; and

WHEREAS, the East and South Infrastructure has been grouped into three different categories: off-site infrastructure, on-site infrastructure, "Framework" or "Master Plan" infrastructure; and

WHEREAS, the Framework or Master Plan infrastructure projects are the primary focus of the East and South IFP; and

WHEREAS, in accordance with existing City policies and practices, there will be sufficient SDC revenue generated from development within the East and South Master Plan area to account for both City SDC infrastructure funding responsibilities and SDC credits issued to developers for the "oversized" portion of developer-constructed infrastructure, based on the anticipated development phasing as documented in Attachment 1to Exhibit A; and

WHERAS, the City finds it prudent to focus on the well-established methodology of a developer constructing the required infrastructure and the City issuing SDC credits for the "oversized" portion as well as a menu of alternative infrastructure financing strategies for potential use on a case-by-case basis; and

WHEREAS, the City Council held a public hearing on November 18, 2024 regarding the East and South IFP; and

WHEREAS, the City Council, at the November 18, 2024, public hearing, afforded all interested parties an opportunity to be heard, duly considered the subject, including the staff recommendations and all the exhibits and testimony introduced and offered by all interested parties.

NOW, THEREFORE, THE CITY OF WILSONVILLE RESOLVES AS FOLLOWS:

Section 2. The City Council does hereby adopt the Frog Pond East and South Infrastructure Funding Plan and its Attachments as presented in Exhibit A to the Resolution.

Section 2. The City Council does hereby adopt the findings as presented in Exhibit B to the Resolution.

Section 3. Effective Date. This Resolution shall take effect upon adoption.

ADOPTED by the City Council of the City of Wilsonville at a regular meeting thereof this 18th day of November, 2024, and filed with the Wilsonville City Recorder on this date.

Signed by:
Julie Fitzgerald
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Julie Fitzgerald, Mayor

ATTEST:

DocuSigned by:
Kimberly Veliz
E781DE10276B498...

Kimberly Veliz, City Recorder

SUMMARY OF VOTES:

Mayor Fitzgerald	Yes
Council President Akervall	Yes
Councilor Linville	Yes
Councilor Berry	Yes
Councilor Dunwell	Yes

EXHIBITS:

A. Frog Pond East and South Master Plan Infrastructure Funding Plan (November 1, 2024)

   Attachment 1. Technical Attachment (November 1, 2024)

   Attachment 2. Supporting Documentation for Technical Attachment (November 1, 2024)

B. Compliance Findings Report (November 5, 2024)

EAST & SOUTH MASTER PLAN

FROG POND EAST AND SOUTH INFRASTRUCTURE FUNDING PLAN

On November 15, 2015, the Wilsonville City Council (Council) adopted the Frog Pond Area Plan, which includes an Infrastructure Funding Plan (Appendix H of the Frog Pond Area Plan). The funding plan evaluates the infrastructure needs for the entire 500-acre Frog Pond area and offers strategies of how to fund those infrastructure improvements. As part of the Frog Pond West Master Plan, adopted by Council in July 2017, the Infrastructure Funding Plan was updated with revised infrastructure projects, associated costs, and more detailed and refined funding mechanisms necessary to implement the Frog Pond West Master Plan. In December 2022, Council approved the Frog Pond East and South ("FPE/S") Master Plan ("Master Plan"). However, the FPE/S update to the Infrastructure Funding Plan was deferred, allowing staff, consultants, and stakeholders additional time to work through the necessary details to ensure efficient, cost effective, and equitable implementation of the infrastructure necessary to realize the FPE/S Master Plan vision.

This FPE/S Infrastructure Funding Plan ("Funding Plan") memorializes the analysis done for the FPE/S infrastructure identified in the Master Plan and how this Funding Plan relates to, refines or changes the information available and assumptions made as part of the Frog Pond Area Plan, Appendix H: Infrastructure Funding Plan and Frog Pond West Infrastructure Funding Plan update. Both infrastructure funding plans in the Area Plan and Frog Pond West Master Plan rely on and reflect general citywide policy and practice regarding provision of infrastructure improvements as part of development. These previously adopted City policies and practices will continue to establish the baseline assumptions for the FPE/S Funding Plan.

In addition, review of the previous Frog Pond funding plan assumptions is intended to provide the foundation for developing the FPE/S Funding Plan, helping to inform and to establish funding needs and assess potential funding mechanisms needed to support implementation of the FPE/S Master Plan. This analysis is based on work by City staff from the Community Development Department, including Engineering and Planning, the Community Development Director, City Attorney, and Finance Director. City staff was supported by experts on municipal finance from FCS Group. Infrastructure costs were prepared as part of the FPE/S Master Plan by DKS Associates and Consor. Together this group is referred to in the memo as the "Project Team." This Funding Plan is intended to provide an overarching strategy for future financing tools that may be used to support specific development projects and related infrastructure needs but is not intended to limit the specific financial package that may be needed to support those particular developments and projects.

Summary of Frog Pond East and South

The Frog Pond East and South planning area, as shown in Figure 1 below is approximately 300 acres in size with approximately 176 acres gross development area, which excludes known development constraints including natural resource and the extensive Bonneville Power Administration (BPA) easement areas. The Master Plan area includes the following general attributes, which influence the

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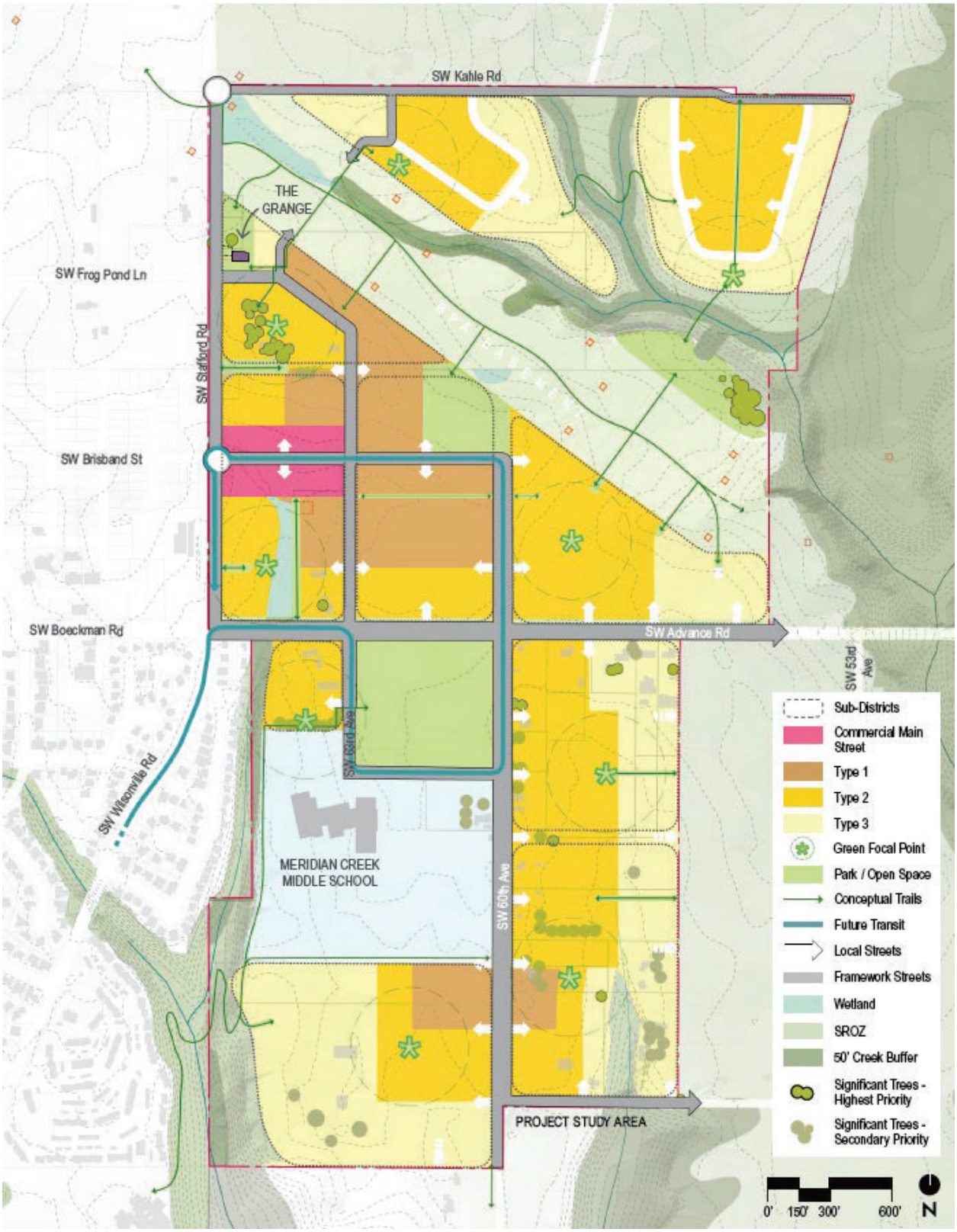
Funding Plan. More information about development assumptions can be found in Section 1 of Attachment 1. Here are some highlights of the Master Plan area:

- A minimum of 1325 housing units are required to be built under the Master Plan pursuant to a Condition of Approval in Metro Ordinance No. 18-1427. The assumed split is 926 within the Frog Pond East area and 399 within the Frog Pond South area.
- The housing units are anticipated to include a wide variety of types including apartments, middle-housing, detached homes, cottages and accessory dwelling units (ADUs), resulting in more housing variety than Frog Pond West.
- A vertical mixed-use development is planned on Brisband Street at the intersection with Stafford Road, estimated to have up to 22,000 square feet of ground floor commercial space with up to four floors of residential above. This is identified in Figure 1 as "commercial main street."
- There are 8 different property owners (as of 2024) in Frog Pond East and 31 property owners in Frog Pond South. Parcels range in size from just over an acre to 94 acres.
- The West-Linn Wilsonville School District owns a 27-acre site within Frog Pond South, which is home to Meridian Creek Middle School and a 2-acre land banked parcel e adjacent to the middle school site.
- The City owns a 10-acre site in Frog Pond South at the corner of Boeckman Road and 65th Avenue, which is planned as a future park site.
- Most of the Frog Pond East and South area is currently outside the city limits, with the exception of the middle school site.
- The entirety of the Frog Pond East and South area is within the Urban Growth Boundary.
- Property owners, particularly in the Frog Pond East area, have expressed an interest in development of their properties in the near term.

This information provides the basis for the development phasing schedule included in the FPE/S Funding Plan, informing the location and pace of development and helping determine when and where infrastructure will be needed first.

Figure 1. Frog Pond East and South Land Use Plan



Frog Pond East and South Infrastructure Summary

Consistent with the approach in the Frog Pond West Funding Plan, the infrastructure needed to serve the Frog Pond East/South area has been grouped into three different categories, as described below. "Off-site" and "Framework" or "Master Plan" infrastructure projects have been previously identified and adopted in the City's infrastructure master plan documents for Transportation, Water, Sanitary Sewer, and Stormwater.

- **Off-site Infrastructure** includes large projects that serve the broader Wilsonville community, are funded through System Development Charges (SDCs) generated by development throughout the City and through other City resources, and are generally located outside of the Frog Pond East/South area. While these projects serve a broader area than Frog Pond East/South, development within Frog Pond East/South will utilize this infrastructure as well and does have a responsibility to contribute to this infrastructure. Examples include:
    - Water line crossing Boeckman Creek at the west end of Frog Pond Lane
    - Water line crossing of Meridian Creek south of Meridian Creek Middle School
    - Boeckman Creek sanitary sewer trunk line
    - West side water reservoir
    - Boeckman "Dip" Bridge
    - Stafford-65th-Elligsen Roundabout
    - Advance Road Community Park
- **On-site Infrastructure** includes local projects which serve development of individual properties. Individual developers are responsible for construction and costs of construction of these projects. Examples include:
    - Local streets and sidewalks
    - Sanitary sewer mains
    - Water mains
    - Stormwater management
    - Neighborhood parks
- **"Framework" or "Master Plan" Infrastructure** is the primary focus of this FPE/S Funding Plan. These are called "Framework Projects" in the Area Plan Funding Strategy and "Master Plan Infrastructure" in the Frog Pond West Funding Plan. For this memo and the FPE/S Funding Plan the term "framework projects" or "framework infrastructure" will be used. These projects differ from off-site and on-site infrastructure due to the following factors:
    - Serves the Frog Pond East/South development and includes an "oversize" component that provides capacity beyond the City's minimum standard to serve future development in FPE/S or other offsite areas.
    - Crosses multiple property ownerships
    - May be too large and expensive for any single developer to complete
    - May have geographically concentrated costs (sanitary lift station), but benefits all of Frog Pond East, South, or both.

The emphasis of the FPE/S Funding Plan is to identify strategies and tools appropriate to fund Framework Infrastructure. While discussed briefly below, Section 1 of Attachment 1 includes a list of needed FPE/S

Framework Infrastructure projects and estimated costs. Funding for off-site and on-site infrastructure is addressed through the City's existing policies.

Frog Pond East and South Framework Infrastructure Projects

The FPE/S Funding Plan focuses on funding options for the following key framework infrastructure projects. Infrastructure Funding Strategy framework projects within the FPE/S area:

1. Stafford Road, including sanitary sewer and water
2. Advance Road, including sanitary sewer and water
3. Frog Pond East Neighborhood Park
4. Frog Pond East BPA Easement Trail
5. Frog Pond South Neighborhood Trail

Additional framework infrastructure projects not part of the Frog Pond Area Plan added as part of the FPE/S Master Plan include:

6. 60th Avenue, including water and storm
7. Frog Pond East - Kahle East sanitary lift stations and force main
8. Frog Pond East - Advance East sanitary lift station and force main
9. Frog Pond South sanitary lift station and force main

Citywide Policies and Practices Related to Infrastructure Funding

Consistent with the Frog Pond Area Plan Infrastructure Funding Strategy and Frog Pond West Funding Plan, the Frog Pond East/South Funding Plan uses the City's existing policies and practices as a basis for planning, as summarized below:

- Developers pay for and construct the "local portion" of infrastructure required to serve their developments, as explained in adopted City policies (Wilsonville Code, Transportation System Plan, and Public Works Standards).
- Developers also initially pay for and construct the "oversize portion" (infrastructure that exceeds the minimum required), and then receive credits against System Development Charges (SDC) due at the time of each building permit ("SDC credits").
- When necessary, the City may pay for infrastructure elements that are:
    - Identified by existing adopted citywide infrastructure master plans (e.g. Water Distribution Master Plan or the Transportation System Plan) and included in the City's five-year Capital Improvement Program (CIP); or
    - Abutting already-developed areas, city-owned land, or land not expected to develop/redevelop by 2045.
- The City may implement a variety of tools to facilitate and coordinate infrastructure delivery, including SDCs and SDC credits, a supplemental fee, reimbursement districts/agreements, Local Improvement Districts (LID), and development agreements.

Frog Pond East and South Framework Infrastructure Cost Allocation – Current City Policy

The total cost of the nine FPE/S framework infrastructure projects is allocated to different parties under current City policy. The FPE/S Infrastructure Funding Plan Technical Attachment (Attachment 1) details estimated costs, allocates those costs, and includes a revenue analysis based on anticipated development to inform the FPE/S infrastructure funding plan. Each FPE/S framework infrastructure project is described below with relevant cost allocation information. The following funding allocation, per current City policy, does not preclude the City from considering additional funding strategies to assist developers with construction of needed framework infrastructure as detailed in "Additional Funding Sources for Consideration" section of this Plan.

1. Stafford Road (including sanitary sewer and water). Stafford Road includes a local portion attributable to Frog Pond East and a local portion attributable to Frog Pond West. In addition, there is an oversized portion in excess of the local portion for both East and West. Stafford Road improvements also include two roundabouts at SW Kahle Road and SW Brisband Street, as well as intersection improvements at SW Frog Pond Lane.
    a. West Portion of Stafford Road
        i. The Frog Pond West Infrastructure Funding Plan implemented a supplemental fee assessed for each equivalent dwelling unit built within the Frog Pond West neighborhood. This supplemental fee will pay for the construction of the western "local portion" of Stafford Road, including a water and sewer pipeline from Kahle Rd. to Boeckman Rd.
        ii. City will provide an SDC contribution for the west portion of Stafford Road that exceeds the "local portion" of the road and any oversized portion of the water and sewer pipeline.
        iii. The west portion of Stafford Road, including the water and sewer pipeline, could be built by the City as a standalone phase of the planned Stafford Road improvements or funded by the City and constructed with the east portion of Stafford Road and/or intersection improvements as part of an agreement with FPE/S local development.
    b. East Portion of Stafford Road
        i. Current City policy states developers along Stafford Road are responsible to develop their "local portion" of Stafford Road. Since the relevant Stafford Road frontage serves Frog Pond East, developing the "local portion" of the east side of Stafford Road is the responsibility of the adjacent developers.
        ii. Also, under current City policy, developers may receive SDC credits for constructing the remainder of the east side of Stafford Road, which exceeds the "local portion" of the road.
        iii. Establishment of a Frog Pond East per door infrastructure fee to pay for the east portion of Stafford Road, like was implemented in Frog Pond West to pay for the west portion of Stafford Road, is <u>not</u> recommended for the following reasons:

a) Frog Pond West consisted of many smaller development lots, many internal to the area without direct frontage on the higher classified roadways, such as Boeckman Road and Stafford Road, but such internal developments utilize the facilities and should be responsible for contributing to the "local portion" cost of the western portion of Stafford Road. The Frog Pond West supplemental infrastructure fee allowed for roadway improvements to occur in less phases and an equitable distribution of costs across the entire area. Frog Pond East is dominated by two large development properties with no internal lots without major roadway frontage. As a result, the phasing and equitable distribution of costs issues of Frog Pond West are not present in Frog Pond East and do not necessitate creation of a supplemental infrastructure fee.

b) A supplemental infrastructure fee results in major roadway improvements being constructed after development has already occurred. As experienced with Frog Pond West, the City receives numerous complaints from the new residents regarding vehicle speeding, poor neighborhood access, lack of safe pedestrian and bike facilities, and impacts of major road construction when roadway improvements are made after development has occurred. Construction of major roadway improvements as part of development is desirable in order to prevent these types of post-development safety, level of service (LOS), and livability issues.

c) As experienced with Frog Pond West, construction cost inflation that occurs between the time the supplemental infrastructure fee is collected and the time the infrastructure improvement is constructed creates a significant funding gap that must be backfilled with other City funds in order to complete the infrastructure project. This results in current City residents and businesses subsidizing the cost responsibilities of private development, which is not in line with City policy that "growth pays for growth."

d) Analysis shown and documented in Attachment 1 finds that there is sufficient SDC revenue generated through development within Frog Pond East and South to pay for both City SDC infrastructure funding responsibilities and SDC credits issued to developers for the "oversized" portion of developer-constructed infrastructure. As a result, a supplemental infrastructure fee is not necessary to assist with funding FPE/S framework projects, including the east portion of Stafford Road.

c. Stafford/Kahle Roundabout

i. Current City policy states development along Stafford Road are responsible to ensure the City Level of Service (LOS) standard of LOS D is met for all intersections impacted by the development.

ii. Also, under current City policy, developments are responsible for providing mitigation for intersections not meeting LOS D proportional to the impact of the development.

iii. According to the FPE/S Master Plan, any development in Frog Pond East taking access from Kahle Road will cause the intersection of Stafford Road and Kahle Road to fall below LOS D.

iv. The mitigation needed at the Stafford Road and Kahle Road intersection is due to development within Frog Pond West and Frog Pond East, not due to existing or future traffic conditions on Stafford Road. If not for the Frog Pond development, mitigation at this intersection would not be needed and is therefore the responsibility of development within Frog Pond to provide mitigation.

v. LOS mitigation at the Stafford Road and Kahle Road intersection is a single-lane roundabout per the FPE/S Master Plan and Wilsonville Transportation System Plan.

vi. Based on traffic impacts at this intersection documented in the FPE/S Master Plan, Frog Pond West is responsible for 40% of the project cost and Frog Pond East is responsible for 60% of the project cost.

vii. Frog Pond West share of mitigation costs may be provided as SDC credits issued to Frog Pond East developer(s) that build the roundabout project as part of the adjacent development.

viii. The roundabout could instead be built by the City pursuant to City CIP prioritization and fund availability. However, in this scenario, development failing to meet LOS standards at the intersection could not occur unless the roundabout is scheduled for completion within two years of certificates of occupancy for homes in the development. In such a scenario, Frog Pond East development will be responsible for contributing to Frog Pond East development's financial responsibility for this roundabout.

d. Stafford/Brisband Roundabout

i. According to the FPE/S Master Plan, any development taking access from Brisband Street will cause the intersection of Stafford Road and Brisband Street to fall below LOS D.

ii. As with the Stafford/Kahle Roundabout, the mitigation needed at the Stafford Road and Brisband Street intersection is due to development within Frog Pond West and Frog Pond East, not due to existing or future traffic conditions on Stafford Road.

iii. LOS mitigation at the Stafford Road and Brisband intersection is a single-lane roundabout per the FPE/S Master Plan and Wilsonville Transportation System Plan.

iv. Based on traffic impacts at this intersection documented in the FPE/S Master Plan, Frog Pond West is responsible for 35% of the project cost and Frog Pond East is responsible for 65% of the project cost.

v. As with the Stafford/Kahle Roundabout, the Frog Pond West share of mitigation costs may be provided as SDC credits issued to the Frog Pond East developer(s) that build the roundabout project as part of the adjacent development.

vi. Also similar to the Stafford/Kahle Roundabout instead of developer(s) building the roundabout, it could be built by the City pursuant to City CIP prioritization and fund availability. However, in this scenario, development failing to meet LOS standards at the intersection could not occur unless the roundabout is scheduled for completion within two years of certificates of occupancy for homes in the development. In such a scenario, Frog Pond East development will be responsible

for contributing to Frog Pond East development's financial responsibility for this roundabout.

2. Advance Road (including sanitary sewer and water). Advance Road includes a local portion attributable to Frog Pond East and a local portion attributable to Frog Pond South. In addition, there is an oversized portion in excess of the local portion for both East and South. Advance Road improvements also include a roundabout at 60th Avenue.
    a. North Portion of Advance Road
        i. As with the eastern portion of Stafford Road, developers in Frog Pond East developing adjacent to Advance Road are responsible for the "local portion" of Advance Road, including sanitary sewer and water.
        ii. Developers may receive SDC credits for constructing the remainder ("oversize portion") of the north side of Advance Road, which exceeds the "local portion" of the road.
        iii. Any oversizing of sanitary sewer and water installed by the developers along Advance Road may also be subject to SDC credits.
    b. South Portion of Advance Road
        i. The south portion of Advance Road between Wilsonville Road and 63rd Avenue was constructed with development of Meridian Creek Middle School. Since that time, the Advance Road roadway cross-section has been modified as part of the FPE/S Master Plan to better match the Boeckman Road roadway cross-section to the west of Stafford Road.
        ii. Developers in Frog Pond South developing adjacent to Advance Road between Wilsonville Road and 63rd Avenue may be required to make improvements to Advance Road consistent with the Advance Road cross-section requirements per the FPE/S Master Plan. Any oversizing would be compensated through SDC credits.
        iii. The south portion of Advance Road between 63rd Avenue and 60th Avenue is adjacent to City-owned property planned for a community park. The City, as owner and developer of the property adjacent to Advance Road, is responsible for this section of the south portion of Advance Road as part of the park development.
        iv. It is preferable to build the south portion of Advance Road between 63rd Avenue and 60th Avenue concurrent with the developer-funded and constructed north portion of Advance Road. An agreement between the developer and City outlining compensation through City contribution (using available SDC funds) or issuance of SDC credits may be necessary for developer construction of this south portion of Advance Road. Should the City and developer not reach agreement regarding joint construction of both the north and south portions of Advance Road, the south portion can be constructed as a separate, standalone project.
        v. The properties fronting the south portion of Advance Road between 60th Avenue and the east limits of Frog Pond South are largely built out with little opportunity to redevelop in the near future. However, should redevelopment of these properties occur, developers) in Frog Pond South are responsible for the "local portion" of Advance Road. Any oversizing can be compensated through SDC credits. If redevelopment does not occur over time, the City could construct this south

portion of Advance Road utilizing Transportation SDC funds as budget and demand allows.

c. Advance/60th Roundabout
    i. The FPE/S Master Plan and Wilsonville Transportation System Plan identify a single-lane roundabout at the intersection of Advance Road and 60th Avenue, necessary to provide slower speed and improved neighborhood access and visibility.
    ii. Local development in Frog Pond East or South are responsible for providing the roundabout at the Advance Road and 60th Avenue intersection as part of any development that accesses 60th Avenue.
    iii. According to the FPE/S Master Plan, the intersection of Advance Road and 60th Avenue is not anticipated to fall below LOS D at full build out.
    iv. The Advance Road and 60th Avenue roundabout is not needed to address level of service performance standards and therefore does not solely address impacts related to development within Frog Pond East and Frog Pond South. As a result, developers may receive SDC credits for constructing the roundabout based on the volume of traffic moving through the intersection not associated with development within Frog Pond East and Frog Pond South.
    v. Based on traffic impacts at this intersection documented in the FPE/S Master Plan, Frog Pond East is responsible for 27.5% of the project cost, Frog Pond South is responsible for 27.5% of the project cost, and 45% eligible for SDC credit.
    vi. An agreement between the City and the developer that constructs the roundabout may be necessary to compensate for the proportional project costs from the remaining FPE/S development areas. Formation of a reimbursement district or supplemental infrastructure fee, as discussed later, are potential tools to recoup these costs from future Frog Pond developments accessing 60th Avenue.

3. Frog Pond East Neighborhood Park
    a. In accordance with the City's Comprehensive Plan, Parks and Recreation Master Plan, and Parks SDC methodology, neighborhood parks are provided by local development to serve the immediate neighboring area and are most often owned and maintained by a nearby neighborhood homeowner's association. Community and regional parks that serve the Wilsonville community as a whole are built/funded and maintained by the City.
    b. The FPE/S Master Plan identifies a neighborhood park near the intersection of 60th Avenue and Brisband Street in Frog Pond East.
    c. The developer of the large parcel south of the BPA easement and north of Advance Road, referred to as the "Azar Property", is responsible for providing the planned neighborhood park.
    d. As with the east portion of Stafford Road, establishment of a Frog Pond East per door infrastructure fee to pay for the neighborhood park like was implemented in Frog Pond West is not recommended for the same reasons as stated previously, including less parcelized development area, avoiding delayed infrastructure construction, and reducing construction inflation factors.

4. Frog Pond East BPA Easement Trail

a. The Frog Pond East BPA Easement Trail is included in the Parks SDC methodology at 100% funding and is included in the FPE/S Master Plan. As a result, the trail does not require any contribution from developers beyond the standard Park SDC.
b. Under current City policy, developers may receive SDC credits for constructing portions of the BPA Easement Trail adjacent to the development. Local development is responsible for funding and building the trail connections between the development and the BPA Easement Trail in accordance with the FPE/S Master Plan.

5. Frog Pond South Neighborhood Trail
    a. As with the Frog Pond East BPA Easement Trail, the Frog Pond South Neighborhood Trail (Meridian Creek crossing) is included in the Parks SDC methodology at 100% funding and is included in the FPE/S Master Plan. As a result, the trail does not require any contribution from developers beyond the standard Park SDC.
    b. Developers may receive SDC credits for constructing portions of the South Neighborhood Trail crossing of Meridian Creek adjacent to the development.

6. 60th Avenue (including water and storm drainage). 60th Avenue includes a local portion attributable to Frog Pond East and a local portion attributable to Frog Pond South. In addition, there is an oversized portion in excess of the local portion for both East and South.

    a. Portion of 60th Avenue, North of Advance Road
        i. As with the eastern portion of Stafford Road, developments in Frog Pond East constructed adjacent to 60th Avenue are responsible for the "local portion" of 60th Avenue, including water.
        ii. Developers may receive SDC credits for constructing the remainder ("oversize portion") of 60th Avenue, which exceeds the "local portion" of the road.
        iii. Any oversizing of water installed by the developers along 60th Avenue may also be subject to SDC credits.

    b. Portion of 60th Avenue, South of Advance Road.
        i. The west portion of 60th Avenue between Advance Road and Hazel Street is adjacent to City-owned property for a planned community park. The City is responsible for this section of the west portion of 60th Avenue as part of the park development.
        ii. The west portion of 60th Avenue from Hazel Street to the south property boundary, approximately 960 feet south of Hazel Street, fronts property owned by the West Linn-Wilsonville School District (School District). The School District is responsible for the "local portion" of 60th Avenue, including water, with any future development on the school-owned property adjacent to 60th Avenue.
        iii. The School District may receive SDC credits for constructing the remainder ("oversize portion") of the west side of 60th Avenue, which exceeds the "local portion" of the road.
        iv. Currently, the School District does not have plans to further develop the property adjacent to 60th Avenue. The City may construct this portion of 60th Avenue utilizing Transportation SDCs as funding is available and demand for the project is

met. Formation of a reimbursement district or supplemental infrastructure fee, as discussed later, are potential tools to recoup the "local portion" of 60th Avenue costs from future Frog Pond South developments accessing 60th Avenue.

v. The west portion of 60th Avenue, south of the School District property boundary does not exceed the "local portion" of roadway and is the responsibility of adjacent developer(s) to fund and build.

vi. As with the north portion of 60th Avenue, developments in Frog Pond South constructed adjacent to the east portion of 60th Avenue, south of Advance Road, are responsible for the "local portion" of 60th Avenue.

vii. The properties fronting the east portion of 60th Avenue between Advance Road and Hazel Street are largely built out with little opportunity to redevelopment within the near future. However, should redevelopment of these properties occur, developments in Frog Pond South are responsible for the "local portion" of 60th Avenue. If redevelopment does not occur over time, the City could construct this east portion of 60th Avenue utilizing Transportation SDC funds as budget and demand allows. Formation of a reimbursement district or supplemental infrastructure fee, as discussed later, are potential tools to recoup the "local portion" of 60th Avenue costs from future Frog Pond South developments accessing 60th Avenue.

viii. Developers may receive SDC credits for constructing the remainder ("oversize portion") of 60th Avenue, which exceeds the "local portion" of the road.

ix. Any oversizing of water installed by the developers along 60th Avenue may also be subject to SDC credits.

c. 60th Avenue Stormwater Pipeline

i. Under current City policy, stormwater infrastructure within a development area, such as Frog Pond East and South, that serves the development is the responsibility of the local development and is not considered "oversized" unless the infrastructure provides a basin-wide benefit outside the development area, such as a regional stormwater facility.

ii. The Kruse Creek drainage basin (Basin K1 in Figure 3 below) south of Advance Road encompasses 60th Avenue and areas to east, incorporating only the City-owned property planned for a future community park, west of 60th Avenue. The Kruse Creek drainage basin extends north of Advance Road, encompassing a small area centered on 60th Avenue. A storm drainage pipeline is envisioned along 60th Avenue, serving development within the Kruse Creek drainage basin.

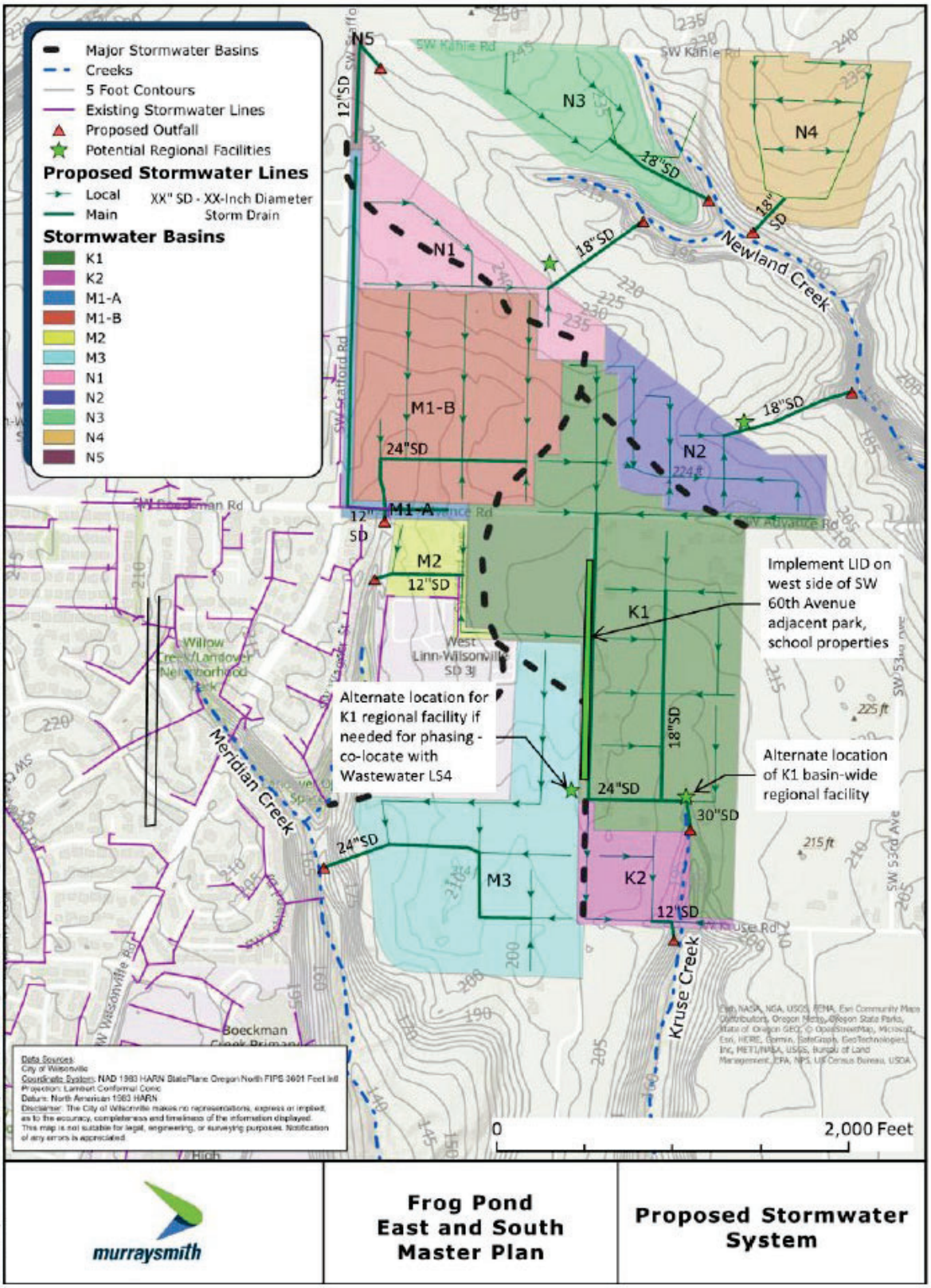
iii. The 60th Avenue storm drainage pipeline only serves development within Frog Pond East and South and is therefore not considered "oversized". As a result, a developer is not eligible to receive Storm SDC credits for construction of the 60th Avenue storm drainage pipeline.

iv. Per the anticipated construction phasing outlined in the FPE/S Infrastructure Funding Plan Technical Appendix (Appendix C), it is likely development will occur within the upper Kruse Creek basin (Basin K1 in Figure 3) in Frog Pond East (north of Advance Road) before Frog Pond South, requiring the developer to construct the offsite portion of the 60th Avenue storm drainage pipeline between Advance Road

and the Kruse Creek outfall. Formation of a reimbursement district by the developer or creation of a supplemental infrastructure fee for Frog Pond South by the City, as discussed later, are potential tools to reimburse a developer (reimbursement fee) or City (supplemental infrastructure fee) for offsite construction of the 60th Avenue storm drainage pipeline should the Kruse Creek basin (Basin K1 in Figure 3) in Frog Pond East develop before Frog Pond South.

v. The 60th Avenue Stormwater Pipeline project is identified as a needed project in the Stormwater Master Plan and is eligible to be added to the Stormwater SDC project list and methodology. If the project is incorporated into the Stormwater SDC project list and methodology prior to installation, the City may construct the stormwater pipeline utilizing Stormwater SDC funds as budget and demand allows, enter into a development agreement to compensate a developer with SDC funds for the portion of the project serving an area larger than the development site, or issue SDC credits to the developer for construction of the oversized portion of the stormwater pipeline as part of a development project.

Figure 3. Proposed Stormwater System, Figure 35 of the Master Plan

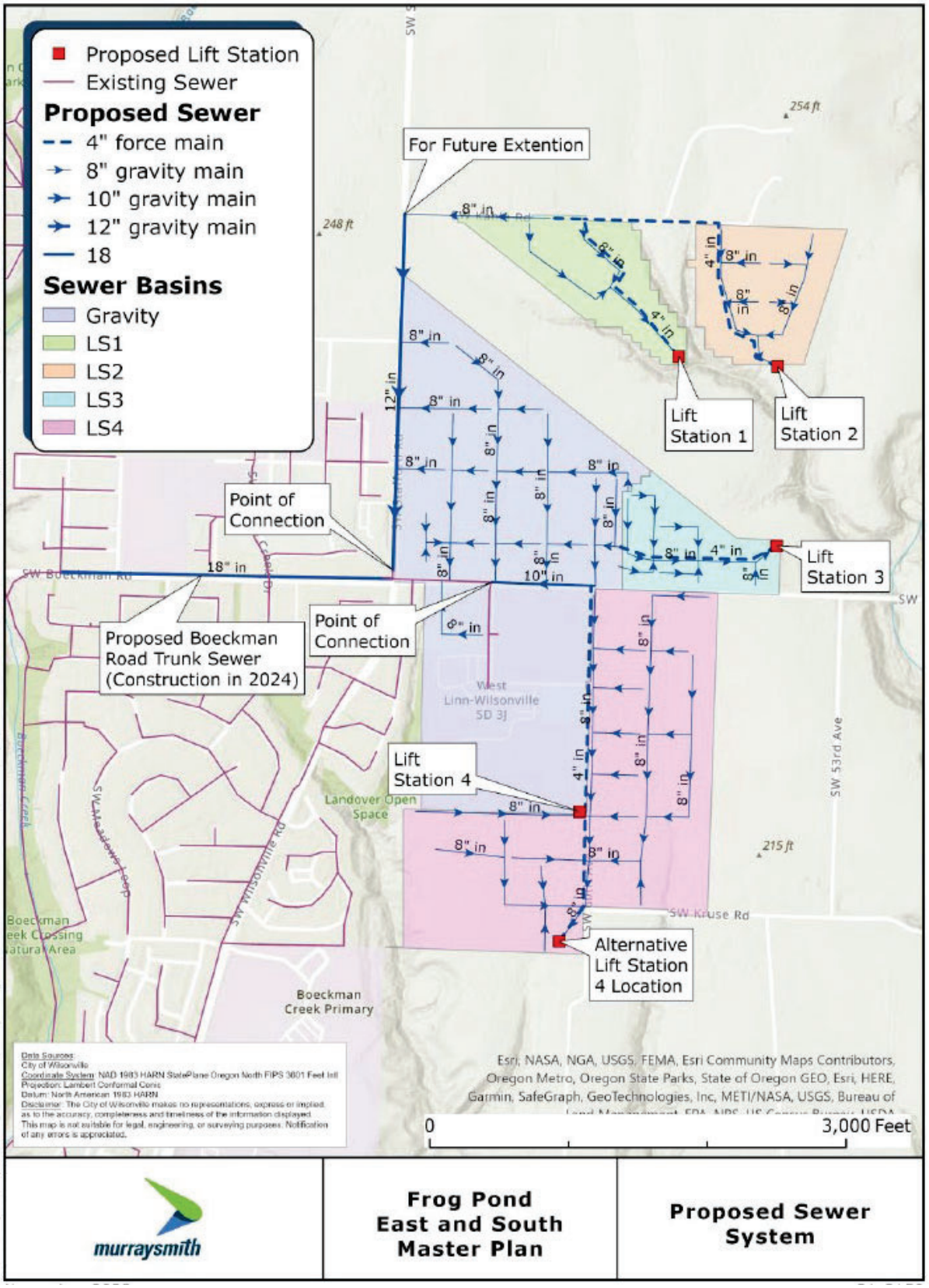


7. Frog Pond East - Kahle East Sanitary Lift Stations (Lift Stations 1 and 2 in Figure 4 below) and Force Main
    a. The FPE/S Master Plan identifies the need for two sanitary lift stations (Lift Stations 1 and 2 in Figure 4) and 4-inch force main to serve development within Frog Pond East, north of Newland Creek.
    b. The two sanitary lift stations and force main serve a single, developable property with no potential for an expanded service area in the future. As a result, Frog Pond East development is responsible for providing the two sanitary lift stations and force main and is not eligible to receive Wastewater SDC credits for its construction.

8. Frog Pond East - Advance East Sanitary Lift Station (Lift Station 3 in Figure 4 below) and Force Main
    a. The FPE/S Master Plan identifies the need for a sanitary lift station (Lift Station 3 in Figure 4) and 4-inch force main to serve development at the east end of Frog Pond East, between Newland Creek and Advance Road.
    b. As with the Kahle East Sanitary Lift Stations (Lift Stations 1 and 2), the Advance East Sanitary Lift Station (Lift Station 3) and force main serve a single, developable property with no potential for an expanded service area in the future and is therefore the Frog Pond East development responsibility and is not eligible to receive Wastewater SDC credits.

9. Frog Pond South Sanitary Lift Station (Lift Station 4 in Figure 4 below) and Force Main
    a. The FPE/S Master Plan identifies the need for a sanitary lift station (Lift Station 4 in Figure 4) and 4-inch force main to serve all development within Frog Pond South, east of 60th Avenue and south of the West Linn-Wilsonville School District property.
    b. The Frog Pond South Sanitary Lift Station (Lift Station 4) and Force Main only serves development within Frog Pond South and is fully the responsibility of development within Frog Pond South to fund the necessary sanitary lift station and force main.
    c. Any development within Frog Pond South, with the exception of the property west of 63rd Avenue, will require the sanitary lift station to provide wastewater service to the area.
    d. Current City policy would allow the Frog Pond South Sanitary Lift Station (Lift Station 4) and Force Main to be included on the Wastewater SDC project list. If included, the City may construct the lift station and force main utilizing Wastewater SDC funds as budget and demand allows, enter into a development agreement to compensate a developer for the portion of the project serving an area larger than the development site, or issue SDC credits to the developer that constructs the lift station as part of a development project.
    e. Alternatively, the Frog Pond South sanitary lift station (Lift Station 4) could be omitted from the Wastewater SDC project list. Under this scenario, formation of a reimbursement district by the developer or creation of a supplemental infrastructure fee for Frog Pond South by the City, as discussed later, are potential tools to reimburse a developer (reimbursement district) or City (supplemental infrastructure fee) for construction of the lift station and force main beyond the developer's responsibility for capacity needs to serve their development.

Figure 4. Frog Pond East and South Proposed Sewer System, Figure 34 of the Master Plan



Recommended Funding Strategy

As documented in the FPE/S Infrastructure Funding Plan Technical Attachment (Attachment 1), there is sufficient SDC revenue generated through development within Frog Pond East and South to account for both City SDC infrastructure funding responsibilities and SDC credits issued to developers for the "oversized" portion of developer-constructed infrastructure, in accordance with existing City policies and practices for development. Having no other identified funding sources, the City recommends an infrastructure funding strategy for Frog Pond East and South utilizing the traditional methodology whereby the developer constructs the required infrastructure and is issued SDC credits for the "oversized" portion consistent with current City policy. The City further recommends utilizing development agreements to fund developer construction of the City's identified infrastructure responsibilities where efficiencies, minimized neighborhood impacts, and cost savings can be realized through such an agreement.

It should be noted that if the Frog Pond East & South development and/or infrastructure phasing assumptions change, the City's required SDC cash flow may be affected and should be reassessed to ensure City SDC commitments can be met as development occurs over time. Consideration of additional funding strategies may be necessary to finance specific projects and ensure adequate funding.

Additional Funding Sources for Consideration

Although the FPE/S Infrastructure Funding Plan Technical Attachment (Attachment 1) determined there is sufficient SDC revenue generated in Frog Pond East and South to fund the required infrastructure projects, additional funding strategies may be further considered by the City to assist developers. Use of these strategies would be most relevant with large capital costs early in the Frog Pond East and South development phases, when additional infrastructure funding support is desired by the City, or if there are changes to infrastructure phasing assumptions that affect SDC cash flow as development occurs over time. The following are a number of infrastructure funding strategies that have been assessed as part of this analysis and can be re-examined in the future for implementation within the Frog Pond East and South area as necessary.

1. Supplemental Infrastructure Fee

   This funding tool was utilized in Frog Pond West and included assessment of a supplemental fee per equivalent dwelling unit (EDU), collected by the City with each building permit and used to build City-led framework infrastructure projects including Boeckman Road, a neighborhood park, and the west side of Stafford Road. This supplemental fee was in lieu of the Frog Pond West developments constructing the "local portion" of these infrastructure improvements as otherwise required.

   Frog Pond West consisted of many small parcel ownerships making "framework project" construction by a private developer infeasible and necessitating an alternative to the traditional developer build/SDC credit methodology to provide the needed infrastructure. Also, the City determined that the "framework projects" were not essential to support initial development of Frog Pond West and could be deferred, allowing time for a supplemental fee to accrue until a sufficient fund balance was accumulated to construct the needed infrastructure at a later date.

   In practice, construction of deferred "framework projects" through collection of a supplemental fee has not been successful, resulting in a substantial increase in the permit fee package for each new housing unit, rising infrastructure costs over time due to inflation, and under collection of the

supplemental fee leading to City subsidy of the Frog Pond West developments' "local portion" responsibility. As a result, a supplemental infrastructure fee, as implemented in Frog Pond West, is not recommended as a primary tool to assist in construction of infrastructure needed for Frog Pond East and South.

However, should the City be able to identify a sufficient source of funds and there is enough demand for a specific infrastructure project(s), a supplemental infrastructure fee could be established to help reimburse the City's infrastructure expenditures. Once the infrastructure project is constructed, the supplemental infrastructure fee could be established based on the actual project costs and applied over the area that would benefit or be served by the infrastructure. As development occurs within the designated area, the City's infrastructure costs could be reimbursed through collection of the fee with each building permit.

This practice would resolve the delayed infrastructure construction, inflation pressures, and revenue under-collection associated with the supplemental fee as implemented in Frog Pond West. However, the City would have to identify a sufficient source of funds to construct the initial infrastructure project to establish the supplemental fee. Consideration of the timing of development and the potential payback period is recommended prior to implementing such a strategy.

Examples where this funding tool could be implemented include:

- Stafford and Brisband Roundabout – Frog Pond East Fee
- Frog Pond South share of Advance/65th Roundabout – Frog Pond South Fee
- 60th Ave. Roadway (Advance Rd. – South WLWSD Prop. Boundary) – Frog Pond South Fee
- 60th Ave. Storm Pipe (Advance Rd. – Kruse Creek Outfall) – Frog Pond South Fee
- Frog Pond South Sanitary Lift Station & Force Main – Frog Pond South Fee

Notably all these examples are primarily in Frog Pond South. Frog Pond South has some similar conditions as Frog Pond West that make supplemental infrastructure fees a potential option. A primary one is that, unlike Frog Pond East that is mostly in two ownerships, Frog Pond South how many smaller ownerships leading to anticipated incremental development similar to Frog Pond West. This makes the ability for an individual developer to pay for a large infrastructure project that serves a larger area difficult. In addition, some of the Frog Pond South projects, particularly the lift station and force main, need to occur prior to most development, and the likelihood that a single developer would tie up sufficient land for it to make financial sense for the developer to pay for the entire lift station prior to development is low.

2. Reimbursement District

A reimbursement district is an area where one party, typically a developer or a City, fronts capital improvements/investment within a designated Zone of Benefit District (ZBD). The party that establishes the reimbursement district, the developer or City, is then partially reimbursed as new land use development approvals are granted within the ZBD over a period that extends up to 10 years from the date of construction of the improvement (see Wilsonville Code 3.116). While ZBDs have been successfully utilized in Wilsonville in the past, the developer or City would want to assess timing of development within the ZBD and the potential payback period within the reimbursement district period, as there is no guarantee that future revenues will be steady and

reliable. For this reason, establishment of a supplemental infrastructure fee would be preferable to a City initiated reimbursement district.

Examples where a developer-initiated reimbursement district could be implemented include:

- Frog Pond South share of Advance/65th Roundabout – Frog Pond South ZBD
- 60th Ave. Roadway (Advance Rd. – South WLWSD Prop. Boundary) – Frog Pond South ZBD
- 60th Ave. Storm Pipe (Advance Rd. – Kruse Creek Outfall) – Frog Pond South ZBD
- Frog Pond South Sanitary Lift Station & Force Main – Frog Pond South ZBD

3. Local Improvement District (LID)

Cities in Oregon have the statutory authority to establish local improvement districts within city limits and levy special assessments on the benefited property to pay for improvements. These are payable in annual installments for up to 30 years. LIDs are generally used for capital improvement projects that involve numerous large tenants and/or private property owners.

The advantage of LIDs is the ability to attain a consistent level of revenue generation early in the development process. Financial intermediaries, such as banks, now view LIDs as a more reliable funding source than some funding sources (such as SDCs) and therefore are more apt to provide loans based on future LID revenue streams. LIDs also allow a developer to spread the infrastructure cost over the development period with the ability to pay the balance at the time the profits are realized from the development, avoiding high upfront capital expenditures at the start of a development project.

LID assessments become a lien on real property until they are paid in full at the time of property transaction, development, or final installation payment. LIDs cannot be established outside jurisdictional boundaries, so annexation and developer agreements may be necessary to implement LIDs in expansion areas. Additionally, Oregon law (ORS 223) and Wilsonville Code require several procedural steps, including notice and public hearing, prior to establishing a LID. Thus, developer and property owner support is key for successful LID implementation. Furthermore, any lending obtained for City projects within a LID will likely require full faith and credit of the City, and so City liabilities have to be evaluated before obtaining financing backed by a LID.

While not a necessary tool to implement in Frog Pond East and South, local improvement districts could be utilized to build the framework infrastructure for larger construction projects instead of a phased approach with each development. This would result in potentially more efficient, less costly infrastructure construction, with reduced impacts to traffic and neighboring residents. These projects include:

- Stafford Road
- Advance Road (including sanitary sewer and water)
- 60th Avenue (including water and storm drainage)
- Frog Pond South Sanitary Lift Station & Force Main

4. Direct CIP Investment Using Citywide SDCs

Under this scenario, the City constructs “framework projects” utilizing SDCs collected from development across the City. Many of the framework projects are included within the City’s Capital Improvement Program and are eligible to be funded with SDCs. While the City does utilize SDC

funds on eligible projects as the funds accrue over time, the SDC funds cannot typically supplant infrastructure funding that is the responsibility of the developer. Because SDCs are used to fund needed capacity improvement projects across the City, the Frog Pond infrastructure projects need to be prioritized and balanced with other infrastructure needs throughout the City. SDC funds collected from development in Frog Pond East and South will not necessarily go to fund area-specific projects, just as not all SDC funds that will pay for Frog Pond East and South projects will come from development within Frog Pond East and South.

This tool is challenging to implement in Frog Pond East and South as many of the "framework projects" are needed to be in place prior to or as development occurs. This means the City would need to have enough SDC funds on hand to construct the needed infrastructure with development. SDC fees are typically collected at the time of building permit, after infrastructure is already in place, meaning the SDCs needed to construct the "framework projects" would be solely limited to fees collected from development in other parts of the City. In addition, the Frog Pond "framework projects" may not have a higher priority than needed infrastructure in other parts of the City, placing further demand on available SDC funds.

5. Localized Supplemental SDCs

   In addition to citywide SDCs specific to each infrastructure system, a special district or overlay supplemental SDC for each relevant infrastructure system may be considered in the area. Like citywide SDCs, the supplemental SDC can only be used to fund the "oversize" portion of the constructed infrastructure. Typically, a supplemental SDC is considered for implementation when there is not enough SDC revenue within a district to fund the needed infrastructure to serve the development area. Per the analysis in Appendix C, FPE/S generates sufficient SDC revenue and a supplemental SDC is not necessary to fund the needed infrastructure.

6. Localized Utility Rate Surcharge

   Though not previously used in Wilsonville, area-specific supplemental utility rates for water, sewer, storm, parks and/or transportation facilities are a way to raise local revenues to pay for infrastructure capital costs or operations within a defined district. Rate surcharges require approval and adoption by the City Council and must meet state and local regulations.

   There is a heightened administrative cost to collect the surcharge over time and the higher rates increase monthly costs for residents of the defined district over an extended period. Any added monthly costs for future rate payers in the area would need to not be unreasonably high and burdensome, otherwise default rates and costs for collections would increase beyond the relative reduction of housing affordability for residents.

   While not a necessary tool to implement in Frog Pond East and South, a utility rate surcharge could be utilized to reimburse the cost of framework infrastructure projects. Careful consideration prior to implementation is needed as the utility rate surcharge cannot be assessed outside of jurisdictional boundaries and shifts the infrastructure funding responsibility from the developer to the future homeowner. However, a utility rate surcharge does provide a more stable, predictable source of revenue than other infrastructure funding tools, such as a reimbursement district. Examples where a localized utility rate surcharge could be used are:

   - 60th Ave. Water line – Frog Pond South
   - Frog Pond South Sanitary Lift Station & Force Main – Frog Pond South

7. Urban Renewal District
   There may be opportunities to utilize funding from the creation of a new Frog Pond Area Urban Renewal District (URD). A key advantage of URD funding is that it is less restrictive than SDCs with respect to the uses of funds. As such, URDs can be used to fund almost any form of capital investment that is authorized by the adopted URD plan. City of Wilsonville urban renewal funding for Frog Pond is not likely, due to the City's urban renewal task force identifying investments elsewhere in the City as higher priority. This tool should be re-evaluated for use in FPE/S if the other infrastructure funding tools are not resulting in the development envisioned for this area or is not generating sufficient infrastructure funding.

8. Grants and Investments by Other Governments
   To the extent available, grants should be continuously evaluated and where applicable, aggressively pursued for use within FPE/S. There is a great need for infrastructure funding across the region, resulting in grant opportunities that are highly competitive and currently, have a low chance of award. As a result, the FPE/S infrastructure funding does not include any grant funding as part of the financial analysis. However, the City will continue to partner with the development community to pursue grants or other funding opportunities in the coming years to help offset the infrastructure costs needed to support development within FPE/S.

Conclusion and Next Steps

With exact timing and costs of infrastructure development still unknown, the FPE/S Funding Plan to be adopted by Council will rely primarily on existing policies and provide a menu of options for use, in partnership with developers, to fund framework infrastructure over time. As land use entitlements are pursued the City will partner with developer(s) to establish specific financing plans and agreements for the subject development(s) using the framework established in this Funding Plan.

Attachments:

Attachment 1: Technical Attachment

Attachment 2: Supporting Documentation for Technical Attachment

FROG POND EAST AND SOUTH INFRASTRUCTURE FUNDING PLAN TECHNICAL ATTACHMENT

This document details the Frog Pond East and South infrastructure estimated costs, assesses the amount of revenue generated by anticipated development, and includes the technical analysis necessary to inform the Frog Pond East and South Funding Plan. This analysis is representative of the City's existing policies and practices for development where developers construct the improvements and pay for the "local portion" of infrastructure required to serve their development and receive credits against future system development charges (SDCs) for the "oversized" portion of the constructed infrastructure. Care was taken by consultants and staff to be as accurate as reasonable in developing the assumptions and calculations used to inform this technical analysis. However, these assumptions are based on the most accurate information available at the time of this analysis and may not reflect the actual magnitude of development, cost of infrastructure, or timing of construction. Calculations and analysis were performed by FCS Group with input from City staff and are summarized as follows.

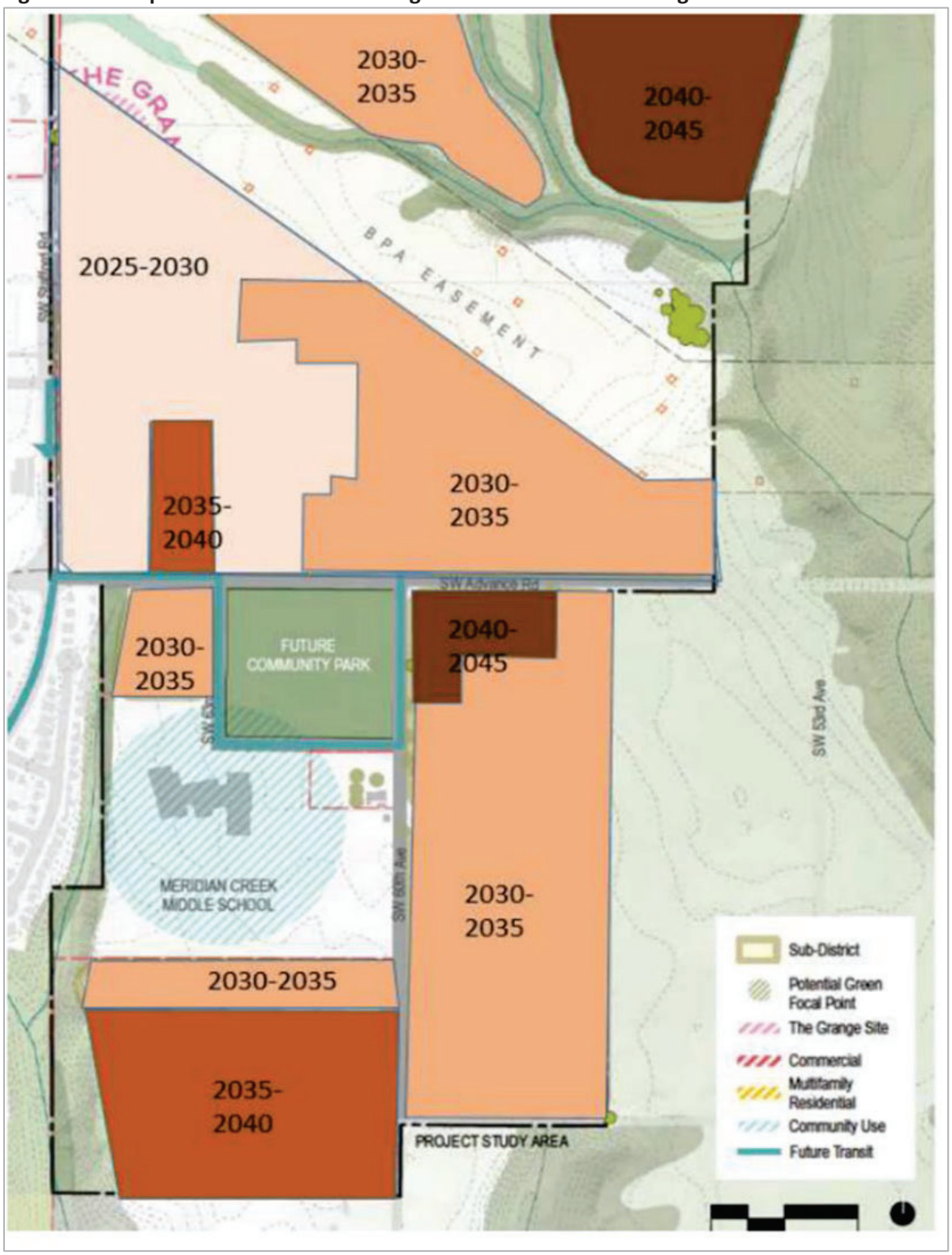
Section 1 Assumptions and Inputs

The Frog Pond East and South Infrastructure Funding Plan include assumptions, such as timing of development and type of private development, that are based on a "reasonable worst case" development scenario. The analysis assumes that the least amount of development will occur over the longest timeframe. However, it is likely that a greater amount of development will occur over a shorter period of time, resulting in greater revenue generation to support infrastructure construction on an earlier timeframe.

Timing of Development

The Project Team assigned each area of development a five-year time increment representing when development is most likely to occur between 2025 and 2045 (see **Figure 1: Anticipated Construction Phasing for Infrastructure Planning**). This development timing is based upon the availability of infrastructure necessary to serve the development area, as well as discussions with developers and property owners regarding the level of interest in property development and where interest exists, the desired timeframe for development to occur.

Figure 1. Anticipated Construction Phasing for Infrastructure Planning



Amount and Type of Development

The Frog Pond East and South Master Plan (Master Plan) adopted by Wilsonville City Council in December 2022 contemplates the addition of at least 1,325 housing units and 22,000 square feet of commercial development at ultimate buildout. While development of Frog Pond East and South will likely result in a greater number of housing units (1800 units) and commercial floor area (44,000 square feet), these minimum values provide the basis for the infrastructure funding plan technical analysis, representing the most conservative revenue generation to construct needed infrastructure projects.

The 1325 housing units represent the minimum number of units required by Metro as a condition of approval for the addition of the Frog Pond East and South area to the Urban Growth Boundary in 2018. The 22,000 square feet of commercial area represents half of the 44,000 square feet of retail estimated in the Master Plan.

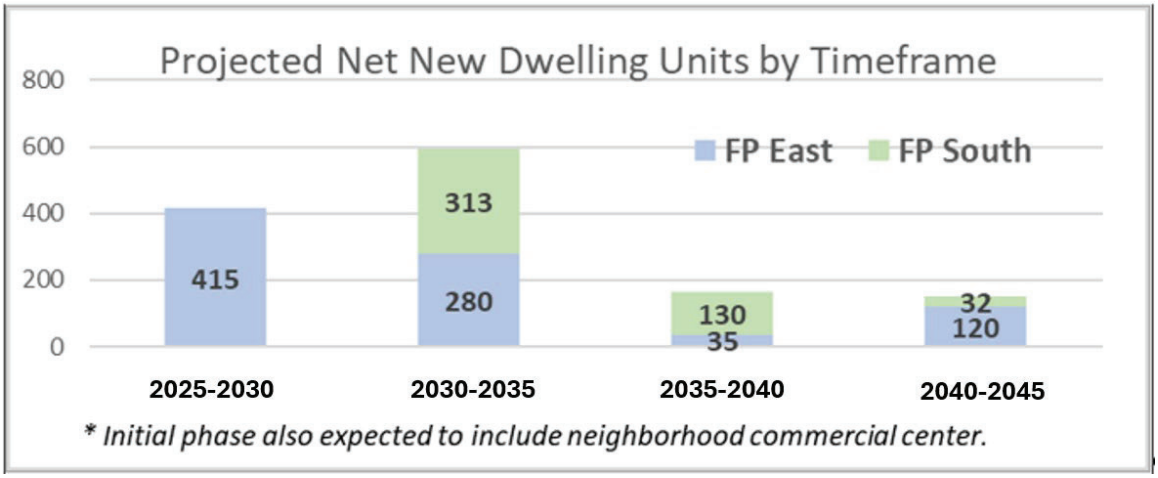
Table 1 below further refines the anticipated development by mix of residential unit types per the Master Plan. Each development is then categorized into the 5-year phasing timeline sub-areas as shown in Figure 1. The total number of housing units for each 5-year increment is provided in Table 2. The assumption for the minimum build-out scenario is developers would prefer to construct detached single-family and this unit type would be maximized (at 60% net area development). The analysis assumes that the developer's second preferred housing type to build in this area is townhouses and that other unit types (including multi-family, ADUs, cottage clusters, and plexes) would be added as required or where site geometry, site access, or utility constraints (i.e. the need for a private sewer pump station) makes sense for their development.

Table 1: Projected Minimum Net New Development by Timeframe

Timing	Single Family Homes	Townhomes	Apartments	Small Lot (Cottages)	Subtotal (for SDCs)	ADUs	Total Housing	Commercial
Phase 2025-2030								
Frog Pond East	137 DUs	92 DUs	181 DUs	1 DUs	411 DUs	4 DUs	415 DUs	22,000 SF
Frog Pond South	0 DUs	0 DUs	0 DUs	0 DUs	0 DUs	0 DUs	0 DUs	
Phase 2030-2035								
Frog Pond East	122 DUs	104 DUs	23 DUs	6 DUs	255 DUs	25 DUs	280 DUs	
Frog Pond South	130 DUs	121 DUs	22 DUs	8 DUs	281 DUs	32 DUs	313 DUs	
Phase 2035-2040								
Frog Pond East	16 DUs	11 DUs	7 DUs	0 DUs	34 DUs	1 DUs	35 DUs	
Frog Pond South	55 DUs	43 DUs	0 DUs	6 DUs	104 DUs	26 DUs	130 DUs	
Phase 2040 - 2045								
Frog Pond East	50 DUs	47 DUs	2 DUs	4 DUs	103 DUs	17 DUs	120 DUs	
Frog Pond South	12 DUs	12 DUs	4 DUs	1 DUs	29 DUs	3 DUs	32 DUs	
Total								
Frog Pond East	325 DUs	254 DUs	213 DUs	11 DUs	803 DUs	47 DUs	850 DUs	22,000 SF
Frog Pond South	197 DUs	176 DUs	26 DUs	15 DUs	414 DUs	61 DUs	475 DUs	
GRAND TOTAL	**522 DUs**	**430 DUs**	**239 DUs**	**26 DUs**	**1,217 DUs**	**108 DUs**	**1,325 DUs**	**22,000 SF**

* Source: Wilsonville planning staff, November 20, 2023. ADUs = accessory dwelling units. DU = dwelling units.

Figure 2. Bar Chart of Projected New Dwellings



Planned Infrastructure

The Master Plan identifies all public infrastructure that is necessary to support development of the Frog Pond East and South area. The following figures document these needs by infrastructure type, including transportation, parks and trails, sewer, water, and stormwater. Each figure is followed by a table summarizing the assumed year of construction, estimated infrastructure costs prepared by DKS Associates and Consor Engineers, LLC, and the responsible share of infrastructure costs between the City and the developer.

The assumed year of infrastructure construction is based on the construction of infrastructure necessary to serve the development sub-areas at the anticipated development timeframe identified in Figure 1. Detailed infrastructure cost estimates and cost share calculations and assumptions are provided in the Supporting Documents section below.

Transportation

Figure 3. Transportation Layout from Frog Pond East and South Master Plan

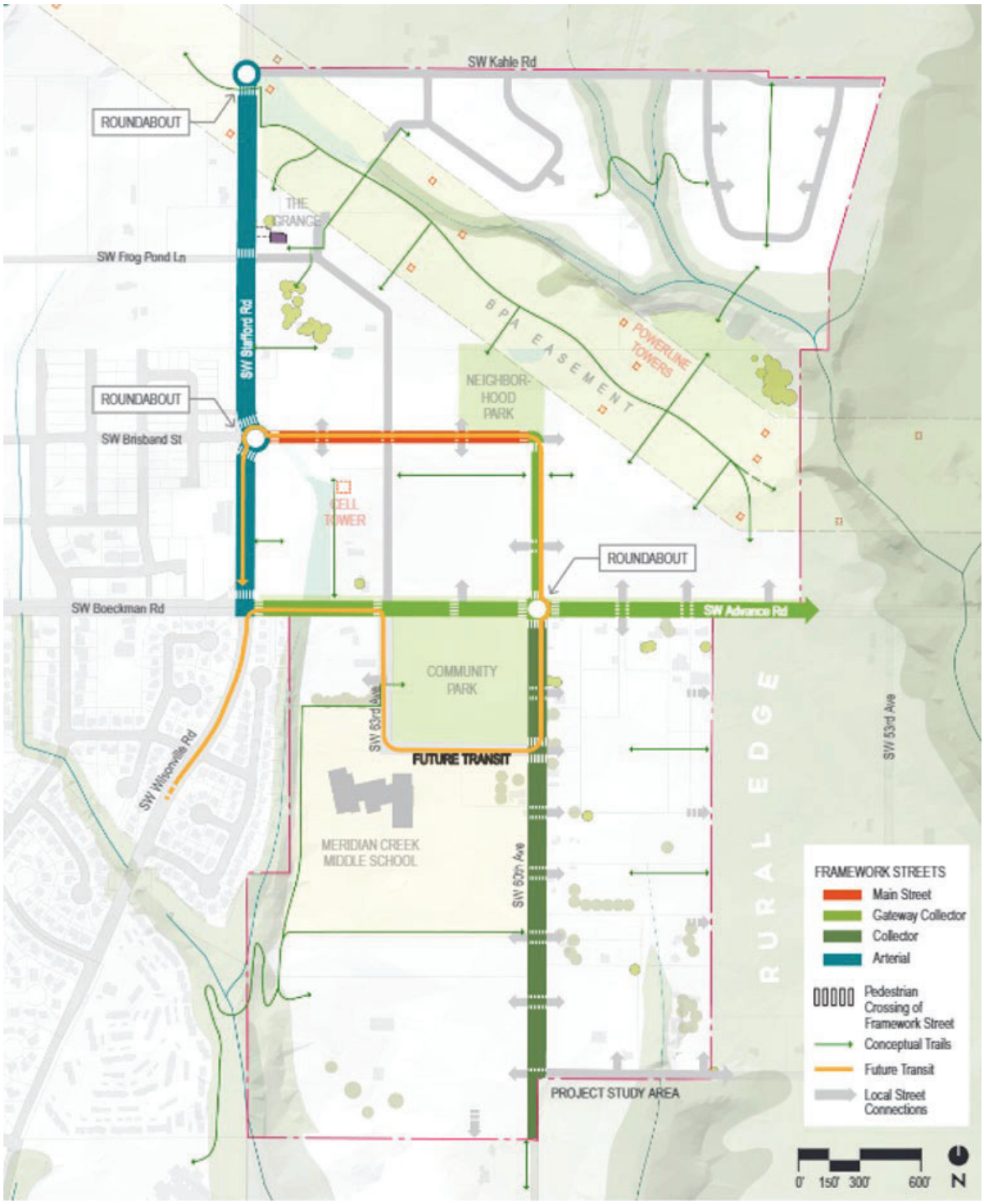


Table 2. Frog Pond East and South Transportation Project List with Timing and Costs

Timing	Project Name	Project Type	Builder	Total Cost Estimate	City Costs		Developer Costs		Notes
					CIP or Other Funds	SDC Credits	FP East	FP South	
2025-2030	Stafford Road	Urban Upgrade	Developer	$ 3,421,575	$ -	$ 585,089	$ 2,836,486	$ -	
2030-2035	Stafford Road / Kahle	Roundabout	Developer	$ 4,500,000	$ -	$ 1,800,000	$ 2,700,000	$ -	
2025-2030	Stafford Road / Brisband	Roundabout	Developer	$ 4,500,000	$ -	$ 1,575,000	$ 2,925,000	$ -	
2025-2030	Advance Road (North Side - 800 ft)	Urban Upgrade	Developer	$ 1,252,695	$ -	$ 261,813	$ 990,882	$ -	
2030-2035	Advance road (North Side - 1700 ft)	Urban Upgrade	Developer	$ 2,661,978	$ -	$ 556,353	$ 2,105,625	$ -	
2035-2040	Advance road (North Side - 250 ft)	Urban Upgrade	Developer	$ 391,467	$ -	$ 81,817	$ 309,650	$ -	
2030-2035	Advance road (South Side - 850 ft)	Urban Upgrade	Developer	$ 1,534,651	$ -	$ 425,098	$ -	$ 1,109,553	
2030-2035	Advance road (South Side - 750 ft)	Urban Upgrade	City	$ 1,354,103	$ 1,354,103	$ -	$ -	$ -	1
2040-2045	Advance road (South Side - 500 ft)	Urban Upgrade	Developer	$ 902,735	$ -	$ -	$ -	$ 902,735	
2030-2035	Advance Road/60th Avenue	Roundabout	Developer	$ 2,900,000	$ -	$ 1,305,000	$ 797,500	$ 797,500	2
2030-2035	60th Avenue (South of Advance)	Neighborhood Collector	City	$ 6,839,040	$ 3,419,520	$ 382,986	$ -	$ 3,036,534	3
2030-2035	60th Avenue (North of Advance)	Neighborhood Collector	Developer	$ 2,235,840	$ -	$ 382,329	$ 1,853,511	$ -	
Totals				**$ 32,494,084**	**$ 4,773,623**	**$ 7,355,486**	**$ 14,518,654**	**$ 5,846,321**	

Notes:

1. ROW adjacent to City Park Property

2. Developer constructs roundabout with Frog Pond East.

3. ROW adjacent to City Park and School District Property

Source: City of Wilsonville Engineering Division.

Parks/Trails

Figure 4. Park Layout from Frog Pond East and South Master Plan

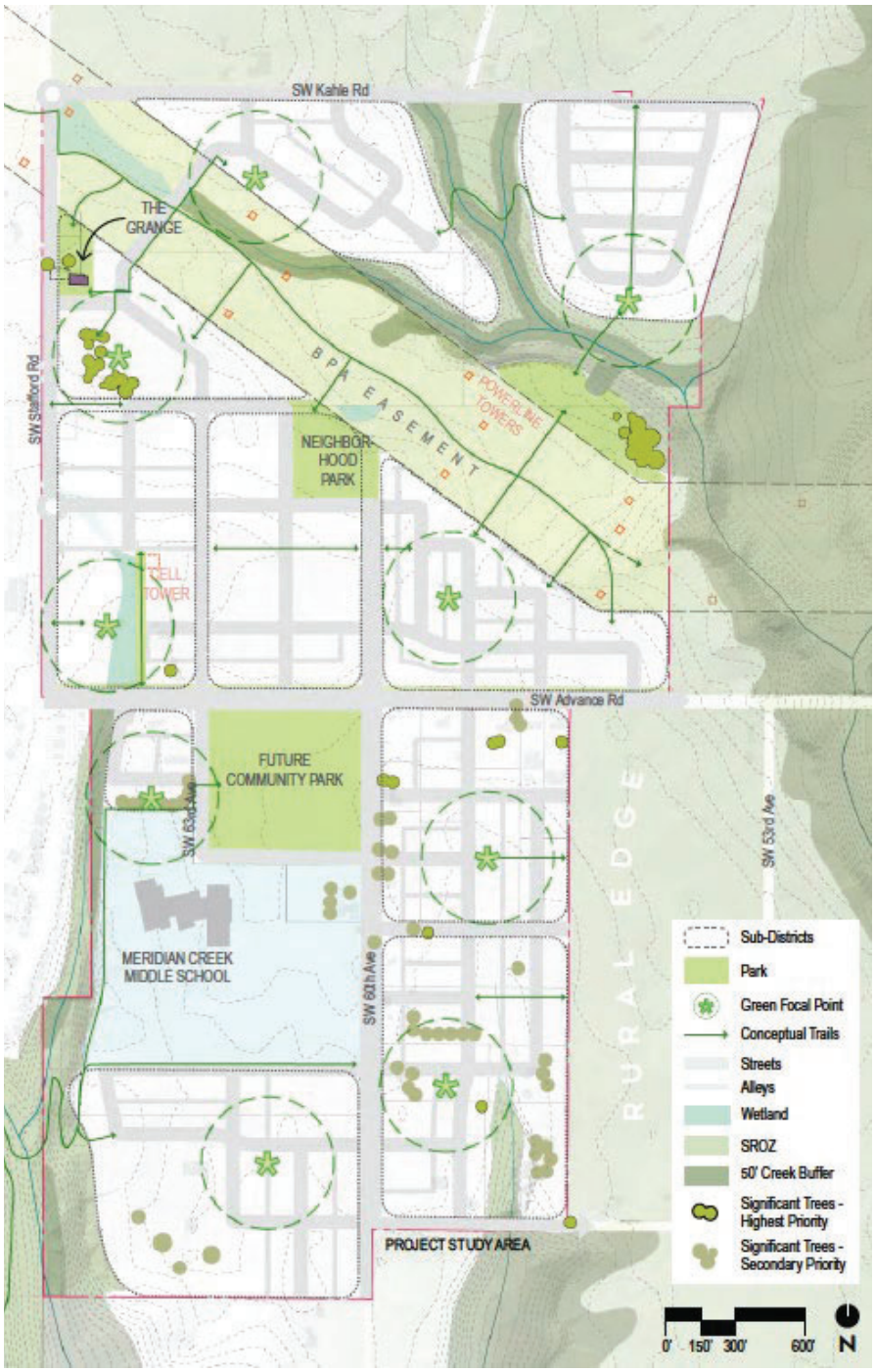


Table 3. Frog Pond East and South Trails Project List with Timing and Costs

Timing	Project Name	Project Type	Builder	Total Cost Estimate	City Costs		Developer Costs		Notes
					CIP or Other Funds	SDC Credits	FP East	FP South	
2030-2035	Frog Pond East	Trails	Developer	$ 2,373,525	$ -	$ 2,373,525	$ -	$ -	1
2030-2035	Frog Pond South	Trails	Developer	$ 2,244,060	$ -	$ 2,244,060	$ -	$ -	1
Totals				**$ 4,617,585**	**$ -**	**$ 4,617,585**	**$ -**	**$ -**	

Notes:

1. Trail neighborhood connection costs not included and are responsibility of developer to fund and construct.

Source: City of Wilsonville Engineering Division.

Sanitary Sewer

Figure 5. Sanitary Sewer Layout from Frog Pond East and South Master Plan

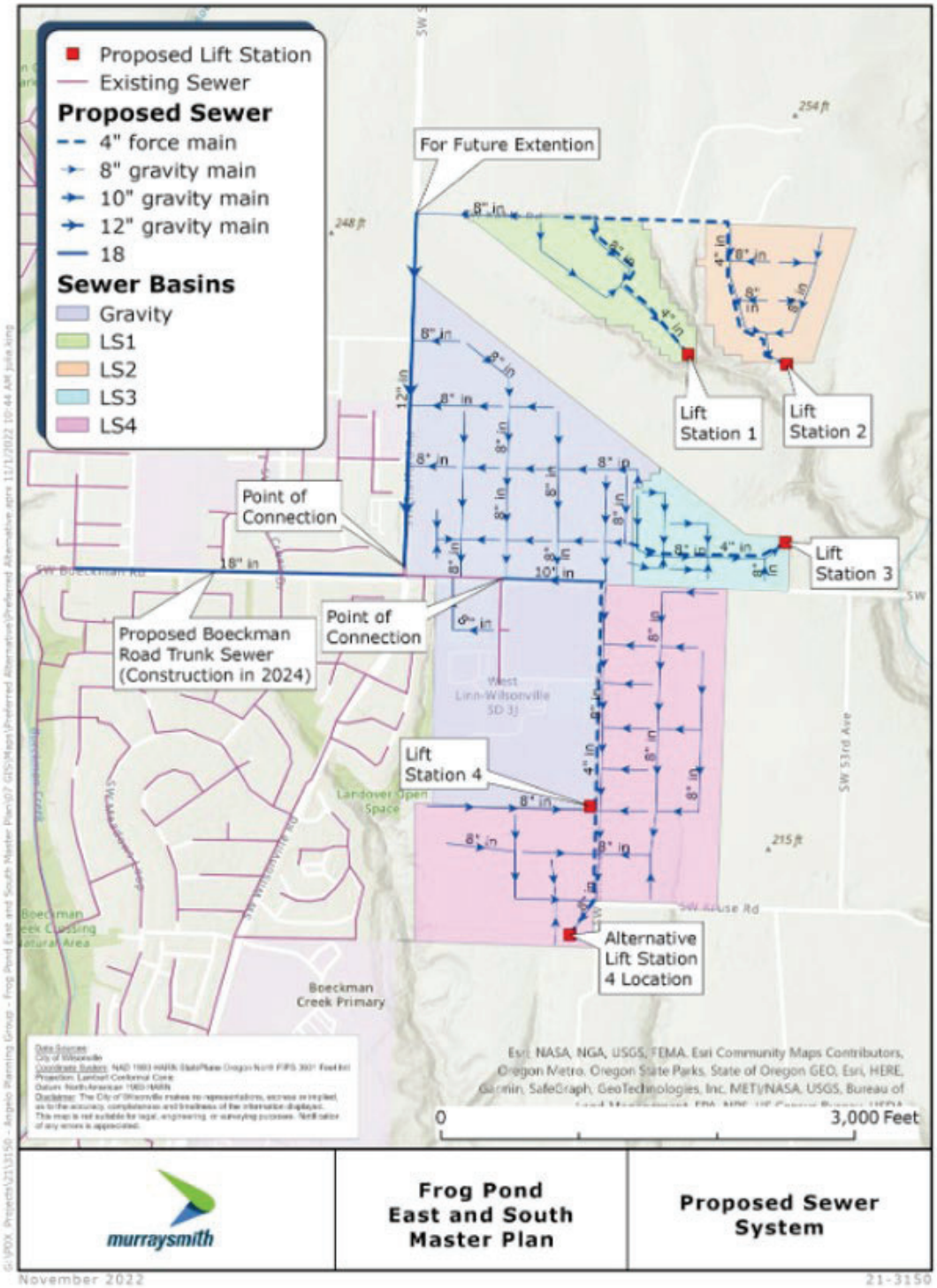


Table 4. Frog Pond East and South Sanitary Sewer Project List with Timing and Costs

Timing	Project Name	Project Type	Builder	Total Cost Estimate	City Costs		Developer Costs		Notes
					CIP or Other Funds	SDC Credits	FP East	FP South	
2025-2030	Advance Road	10" Sewer Main	Developer	$ 492,230	$ -	$ 46,171	$ 446,059	$ -	
2025-2030	Stafford Road	12" Sewer Main	Developer	$ 1,447,380	$ -	$ 212,910	$ 1,234,470	$ -	
2030-2035	Kahle West Neighborhood	Lift Station & Force Main	Developer	$ 3,178,660	$ -	$ -	$ 3,178,660	$ -	
2040-2045	Kahle East Neighborhood	Lift Station & Force Main	Developer	$ 2,485,400	$ -	$ -	$ 2,485,400	$ -	
2030-2035	Advance East Neighborhood	Lift Station & Force Main	Developer	$ 2,485,400	$ -	$ -	$ 2,485,400	$ -	
2030-2035	South Neighborhood	Lift Station & Force Main	City	$ 2,764,064	$ -	$ -	$ -	$ 2,764,064	1
Totals				**$ 12,853,134**	**$ -**	**$ 259,081**	**$ 9,829,989**	**$ 2,764,064**	

Notes:

1. Project needed in advance to serve entirety of Frog Pond South development area

Source: City of Wilsonville Engineering Division.

Water

Figure 6. Water Layout from Frog Pond East and South Master Plan

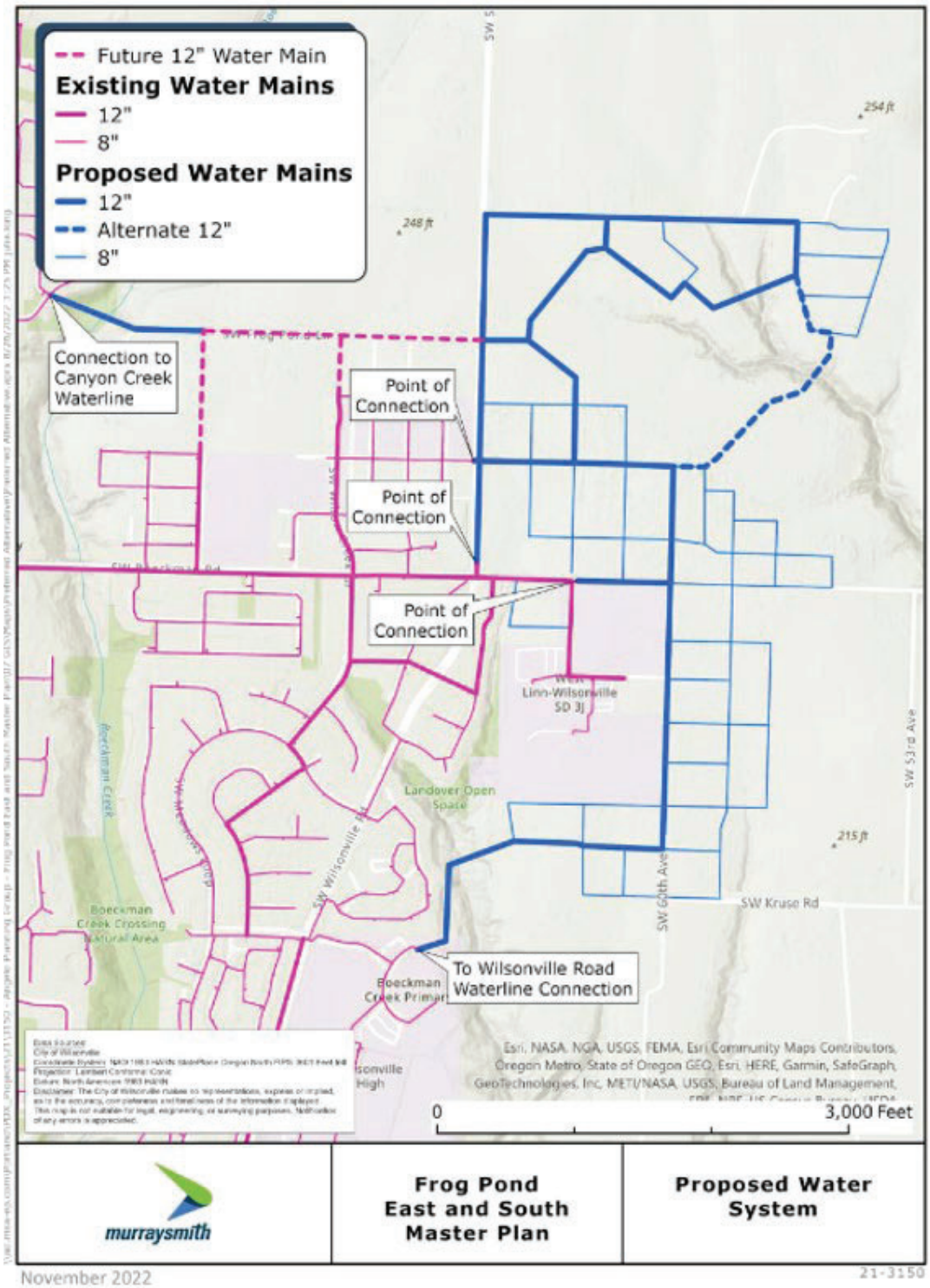


Table 5. Frog Pond East and South Water Project List with Timing and Costs

					City Costs		Developer Costs		
Timing	Project Name	Project Type	Builder	Total Cost Estimate	CIP or Other Funds	SDC Credits	FP East	FP South	Notes
2025-2030	Stafford Road	12" main	Developer	$ 1,170,620	$ -	$ 386,305	$ 784,315	$ -	
2030-2035	Advance Road	12" main	Developer	$ 425,680	$ -	$ 140,474	$ 285,206	$ -	
2030-2035	Kahle West Neighborhood	12" main - Kahle Road	Developer	$ 585,310	$ -	$ 193,152	$ 392,158	$ -	
2030-2035	Kahle West Neighborhood	12" main - Interior	Developer	$ 601,800	$ -	$ 198,594	$ 403,206	$ -	
2040-2045	Kahle East Neighborhood	12" main	Developer	$ 1,311,720	$ -	$ 432,868	$ 878,852	$ -	
2030-2035	SW 60th Avenue, Brisband	12" main	Developer	$ 1,504,500	$ -	$ 496,485	$ 1,008,015	$ -	
2030-2035	Frog Pond West Extension	12" main	Developer	$ 372,470	$ -	$ 122,915	$ 249,555	$ -	
2030-2035	Boeckman Creek X-ing (Frog Pond Lane)	12" main	City	$ 1,360,000	$ 1,360,000	$ -	$ -	$ -	
2030-2035	60th Avenue (South of Advance)	12" main	City	$ 1,755,250	$ -	$ 579,233	$ -	$ 1,176,018	1
2030-2035	Meridian Creek X-ing	12" main	City	$ 340,000	$ -	$ 112,200	$ -	$ 227,800	1
Totals				**$ 9,427,350**	**$ 1,360,000**	**$ 2,662,226**	**$ 4,001,307**	**$ 1,403,818**	

Notes:

1. Project needed in advance to serve entirety of Frog Pond South development area

Source: City of Wilsonville Engineering Division.

Stormwater

Figure 7. Stormwater Layout from Frog Pond East and South Master Plan

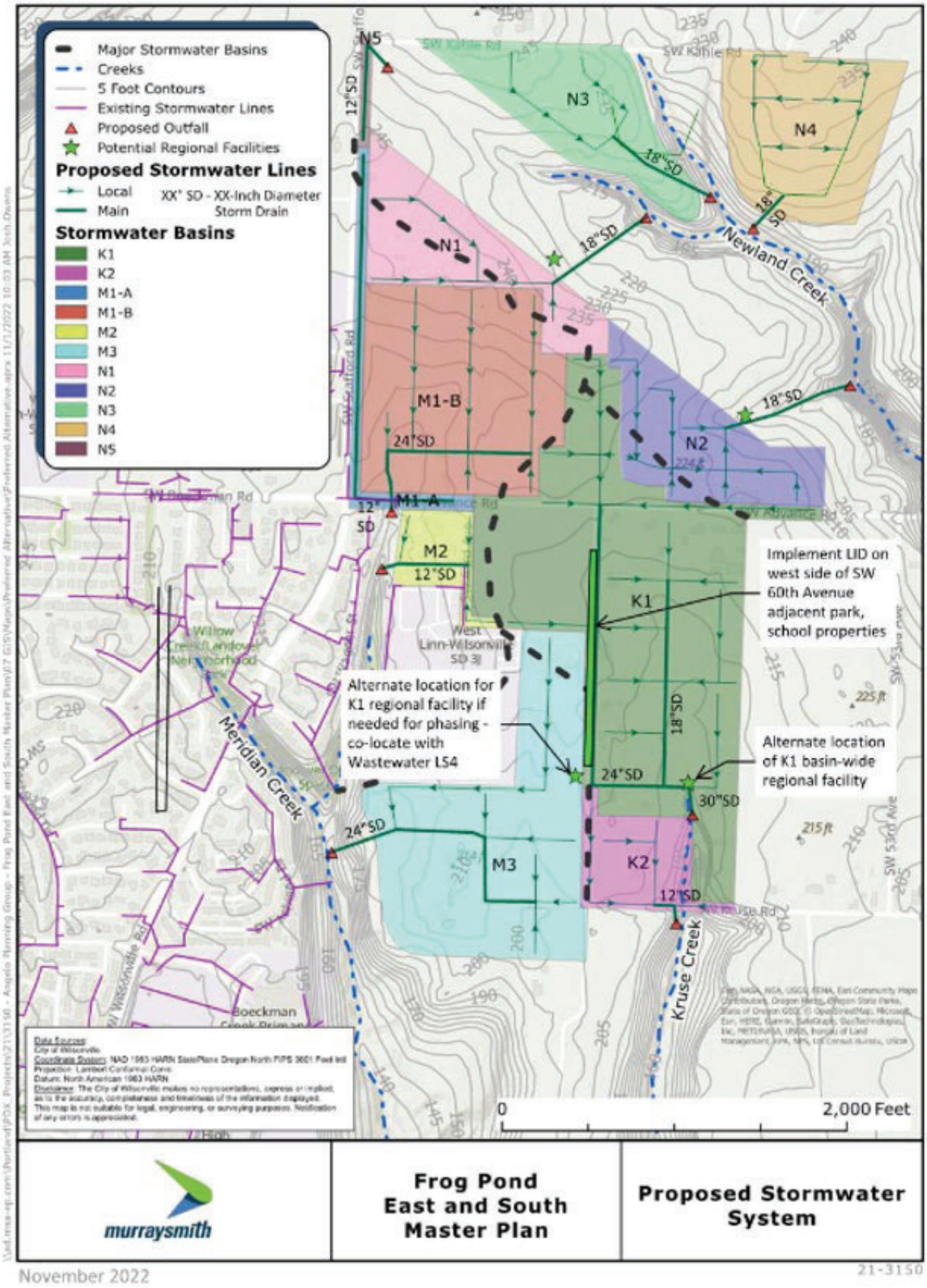


Table 6. Frog Pond East and South Stormwater Project List with Timing and Costs

Timing	Basin / Project Name	Project Type	Builder	Total Cost Estimate	City Costs		Developer Costs		Notes
					CIP or Other Funds	SDC Credits	FP East	FP South	
2025-2030	K1 / Advance/60th	30" Storm Main	City	$ 249,008	$ -	$ -	$ 62,252	$ 186,756	1
2025-2030	K1 / Advance/60th	24" Storm Main	City	$ 1,359,925	$ -	$ -	$ 339,981	$ 1,019,944	1
2030-2035	K1 / Advance/60th	18" Storm Main	Developer	$ 837,795	$ -	$ -	$ -	$ 837,795	
2025-2030	K1 / East of 60th, South of Advance	24" Storm Main	City	$ 796,670	$ -	$ -	$ 199,168	$ 597,503	1
2025-2030	K1 / East of 60th, South of Advance	18" Storm Main	Developer	$ 2,903,600	$ -	$ -	$ -	$ 2,903,600	
2030-2035	K1 / East of 60th, South of Advance	Regional Facility	City	$ 475,125	$ -	$ -	$ -	$ 475,125	
2025-2030	K1	30" Outfall	City	$ 131,250	$ -	$ -	$ 32,813	$ 98,438	1
2030-2035	K2	Storm Mains	Developer	$ 1,304,256	$ -	$ -	$ -	$ 1,304,256	
2025-2030	M1	Storm Mains, Outfall	Developer	$ 4,021,918	$ -	$ -	$ 4,021,918	$ -	
2030-2035	M2	Storm Mains, Outfall	Developer	$ 767,575	$ -	$ -	$ -	$ 767,575	
2035-2040	M3	24" Storm Main	Developer	$ 609,140	$ -	$ -	$ -	$ 609,140	
2035-2040	M3	18" Storm Main	Developer	$ 369,600	$ -	$ -	$ -	$ 369,600	
2030-2035	M3	18" Storm Main	Developer	$ 1,924,808	$ -	$ -	$ -	$ 1,924,808	
2025-2030	M3	24" Outfall	Developer	$ 131,250	$ -	$ -	$ -	$ 131,250	
2025-2030	N1	Storm Mains, Regional Facility, Outfall	Developer	$ 659,225	$ -	$ -	$ 659,225	$ -	
2025-2030	N1	18" Storm Main	Developer	$ 1,924,808	$ -	$ -	$ 1,924,808	$ -	
2030-2035	N2	Storm Mains, Regional Facility, Outfall	Developer	$ 2,485,196	$ -	$ -	$ 2,485,196	$ -	
2030-2035	N3	Storm Mains, Outfall	Developer	$ 2,279,571	$ -	$ -	$ 2,279,571	$ -	
2040-2045	N4	Storm Mains, Outfall	Developer	$ 2,127,148	$ -	$ -	$ 2,127,148	$ -	
2030-2035	N5	Storm Mains, Outfall	Developer	$ 350,259	$ -	$ -	$ 350,259	$ -	
Totals				**$ 25,708,127**	**$ -**	**$ -**	**$ 14,482,338**	**$ 11,225,789**	

Notes:

1. Project needed in advance to serve a portion of Frog Pond East development area

Source: City of Wilsonville Engineering Division.

Table 7 summarizes the previously detailed transportation, parks and trails, sewer, water, and storm water infrastructure timing and cost estimate tables, and totals the complete infrastructure costs to serve Frog Pond East and South for both the City and developer responsibilities by 5-year increment of development phasing.

Table 7: Summary of Estimated Infrastructure Cost by 5-Year Phase and Type

		City Costs		Developer Costs	
Timing	Total Cost Estimate	CIP or Other Funds	SDC Credits	FP East	FP South
Phase 2025-2030	**$ 24,462,154**	**$ -**	**$ 3,067,288**	**$ 16,457,376**	**$ 4,937,490**
Transportation	$ 9,174,270	$ -	$ 2,421,903	$ 6,752,367	$ -
Trails	$ -	$ -	$ -	$ -	$ -
Sanitary Sewer	$ 1,939,610	$ -	$ 259,081	$ 1,680,529	$ -
Water	$ 1,170,620	$ -	$ 386,305	$ 784,315	$ -
Stormwater	$ 12,177,654	$ -	$ -	$ 7,240,164	$ 4,937,490
Phase 2030-2035	**$ 52,440,916**	**$ 6,133,623**	**$ 11,312,405**	**$ 20,573,861**	**$ 14,421,027**
Transportation	$ 22,025,612	$ 4,773,623	$ 4,851,767	$ 7,456,636	$ 4,943,586
Trails	$ 4,617,585	$ -	$ 4,617,585	$ -	$ -
Sanitary Sewer	$ 8,428,124	$ -	$ -	$ 5,664,060	$ 2,764,064
Water	$ 6,945,010	$ 1,360,000	$ 1,843,053	$ 2,338,139	$ 1,403,818
Stormwater	$ 10,424,585	$ -	$ -	$ 5,115,026	$ 5,309,559
Phase 2035-2040	**$ 1,370,207**	**$ -**	**$ 81,817**	**$ 309,650**	**$ 978,740**
Transportation	$ 391,467	$ -	$ 81,817	$ 309,650	$ -
Trails	$ -	$ -	$ -	$ -	$ -
Sanitary Sewer	$ -	$ -	$ -	$ -	$ -
Water	$ -	$ -	$ -	$ -	$ -
Stormwater	$ 978,740	$ -	$ -	$ -	$ 978,740
Phase 2040-2045	**$ 6,827,003**	**$ -**	**$ 432,868**	**$ 5,491,400**	**$ 902,735**
Transportation	$ 902,735	$ -	$ -	$ -	$ 902,735
Trails	$ -	$ -	$ -	$ -	$ -
Sanitary Sewer	$ 2,485,400	$ -	$ -	$ 2,485,400	$ -
Water	$ 1,311,720	$ -	$ 432,868	$ 878,852	$ -
Stormwater	$ 2,127,148	$ -	$ -	$ 2,127,148	$ -
Totals	**$ 85,100,280**	**$ 6,133,623**	**$ 14,894,377**	**$ 42,832,288**	**$ 21,239,992**

Source: City of Wilsonville Engineering Division.

Section 2 System Development Charge Revenue Analysis

Development within the Frog Pond East and South area will generate revenue in the form of System Development Charges (SDC) to fund citywide infrastructure capacity improvements across all of the City's public infrastructure systems, including transportation, parks, water, sewer, and storm water. Table 8 below summarizes the anticipated SDC revenue to be generated by each residential unit type and commercial floor area within Frog Pond East and South. These revenues are based on current SDC methodology and rates structure in place at the time of this analysis and do not reflect potential SDC fee updates in the future, including annual inflation corrections. Actual SDC revenue generated within Frog Pond East and South will be based on the SDC methodology and rates in place at the time building permits for approved development projects are issued. The purpose of this analysis is to compare anticipated SDC revenue at current rates against the present day cost of planned infrastructure.

Table 8 Current System Development Charges by Development Type

Public Facility Type	Single Family Detached	Townhome or Small Lot	Apartment Unit	Commerical (1000 SF)*	Notes
Transportation	$16,099	$9,630	$11,076	$36,484	1
Parks	$14,000	$14,000	$9,404	$583.96	2
Sanitary Sewer	$6,631	$6,631	$4,975	$19,235	3
Water	$11,492	$11,492	$7,309	$8,358	4
Stormwater	$2,227	$1,485	$742	$1,245	5
ISA per unit	1,500 SF	1,000 SF	500 SF	1,500 SF	
Acornyms: kSF = 1,000 square feet of building floor area, ISA = impervious surface area					
Notes:	**commerical based on 1,000 SF of retail commerical.*				
	1 Charge per EDU for non res. And per dwelling unit for res.				
	2 Charge per 1000 SF for non res. And per dwelling unit for res.				
	3 Single family charge assumes 5/8" x 3/4" meter size				
	4 Water SDC for SFD with 5/8" x 3/4" meter, assumes 2" meter for Apt. & Com. Bldgs.				
	5 Charge per SF of impervious surface area (ISA)				
Source: Adopted Wilsonvilled Charges.					

Based on the number and type of residential dwelling units and anticipated commercial floor space within Frog Pond East and South as identified in Table 1, the total estimated SDC revenue for each type of infrastructure on 5-year increments of development phasing is provided in Table 9.

Table 9. Estimated Frog Pond East and South SDC Revenue

	Single Family Homes	Town- homes	Apartments	Small Lot (Cottages)	Total Residential	Commerical	Total
Phase 2025-2030							
Transportation	$ 2,205,563	$ 885,960	$ 2,004,756	$ 9,630	$ 5,105,909	$ 802,648	$ 5,908,557
Parks	$ 1,918,000	$ 1,288,000	$ 1,702,124	$ 14,000	$ 4,922,124	$ 12,847	$ 4,934,971
Santiary Sewer	$ 908,447	$ 610,052	$ 900,475	$ 6,631	$ 2,425,605	$ 423,170	$ 2,848,775
Water	$ 1,574,404	$ 1,057,264	$ 1,322,929	$ 11,492	$ 3,966,089	$ 183,876	$ 4,149,965
Stormwater	$ 305,099	$ 136,620	$ 134,302	$ 1,485	$ 577,506	$ 27,390	$ 604,896
Phase 2030-2035							
Transportation	$ 4,056,948	$ 2,166,750	$ 498,420	$ 134,820	$ 6,856,938	$ -	$ 6,856,938
Parks	$ 3,528,000	$ 3,150,000	$ 423,180	$ 196,000	$ 7,297,180	$ -	$ 7,297,180
Santiary Sewer	$ 1,671,012	$ 1,491,975	$ 223,875	$ 92,834	$ 3,479,696	$ -	$ 3,479,696
Water	$ 2,895,984	$ 2,585,700	$ 328,905	$ 160,888	$ 5,971,477	$ -	$ 5,971,477
Stormwater	$ 561,204	$ 334,125	$ 33,390	$ 20,790	$ 949,509	$ -	$ 949,509
Phase 2035-2040							
Transportation	$ 1,143,029	$ 520,020	$ 77,532	$ 57,780	$ 1,798,361	$ -	$ 1,798,361
Parks	$ 994,000	$ 756,000	$ 65,828	$ 84,000	$ 1,899,828	$ -	$ 1,899,828
Santiary Sewer	$ 470,801	$ 358,074	$ 34,825	$ 39,786	$ 903,486	$ -	$ 903,486
Water	$ 815,932	$ 620,568	$ 51,163	$ 68,952	$ 1,556,615	$ -	$ 1,556,615
Stormwater	$ 158,117	$ 80,190	$ 5,194	$ 8,910	$ 252,411	$ -	$ 252,411
Phase 2040 - 2045							
Transportation	$ 998,138	$ 568,170	$ 66,456	$ 48,150	$ 1,680,914	$ -	$ 1,680,914
Parks	$ 868,000	$ 826,000	$ 56,424	$ 70,000	$ 1,820,424	$ -	$ 1,820,424
Santiary Sewer	$ 411,122	$ 391,229	$ 29,850	$ 33,155	$ 865,356	$ -	$ 865,356
Water	$ 712,504	$ 678,028	$ 43,854	$ 57,460	$ 1,491,846	$ -	$ 1,491,846
Stormwater	$ 138,074	$ 87,615	$ 4,452	$ 7,425	$ 237,566	$ -	$ 237,566
Total							
Transportation	$ 8,403,678	$ 4,140,900	$ 2,647,164	$ 250,380	$ 15,442,122	$ 802,648	$16,244,770
Parks	$ 7,308,000	$ 6,020,000	$ 2,247,556	$ 364,000	$ 15,939,556	$ 12,847	$15,952,403
Santiary Sewer	$ 3,461,382	$ 2,851,330	$ 1,189,025	$ 172,406	$ 7,674,143	$ 423,170	$ 8,097,313
Water	$ 5,998,824	$ 4,941,560	$ 1,746,851	$ 298,792	$ 12,986,027	$ 183,876	$13,169,903
Stormwater	$ 1,162,494	$ 638,550	$ 177,338	$ 38,610	$ 2,016,992	$ 27,390	$ 2,044,382
GRAND TOTAL	**$ 26,334,378**	**$ 18,592,340**	**$ 8,007,934**	**$ 1,124,188**	**$ 54,058,840**	**$ 1,449,931**	**$55,508,771**

Source: City of Wilsonville SDC rates as of 12/1/2023.

Table 10 below compares the SDC revenue generated over the estimated construction timeframe for Frog Pond East and South against the SDC credits due to the developer for infrastructure "oversizing" as shown in Table 7. The analysis indicates that sufficient SDC revenue is generated within Frog Pond East and South to cover the SDC credits due to the developer for each 5 year increment of development phasing.

Table 10 Summary of SDC Revenue and Credits by 5-year Phasing and Infrastructure Type

	Gross SDC Revenue	Less Developer SDC Credits	Net SDC Revenue
Phase 2025-2030			
Transportation	$5,908,557	($2,421,903)	$3,486,654
Parks	$4,934,971	$0	$4,934,971
Santiary Sewer	$2,848,775	($259,081)	$2,589,694
Water	$4,149,965	($386,305)	$3,763,660
Stormwater	$604,896	$0	$604,896
Phase 2030-2035			
Transportation	$6,856,938	($4,851,767)	$2,005,171
Parks	$7,297,180	($4,617,585)	$2,679,595
Santiary Sewer	$3,479,696	$0	$3,479,696
Water	$5,971,477	($1,843,053)	$4,128,424
Stormwater	$949,509	$0	$949,509
Phase 2035-2040			
Transportation	$1,798,361	($81,817)	$1,716,544
Parks	$1,899,828	$0	$1,899,828
Santiary Sewer	$903,486	$0	$903,486
Water	$1,556,615	$0	$1,556,615
Stormwater	$252,411	$0	$252,411
Phase 2040 - 2045			
Transportation	$1,680,914	$0	$1,680,914
Parks	$1,820,424	$0	$1,820,424
Santiary Sewer	$865,356	$0	$865,356
Water	$1,491,846	($432,868)	$1,058,978
Stormwater	$237,566	$0	$237,566
Total			
Transportation	$16,244,770	($7,355,486)	$8,889,284
Parks	$15,952,403	($4,617,585)	$11,334,818
Santiary Sewer	$8,097,313	($259,081)	$7,838,232
Water	$13,169,903	($2,662,226)	$10,507,678
Stormwater	$2,044,382	$0	$2,044,382
GRAND TOTAL	**$55,508,771**	**($14,894,377)**	**$40,614,394**

Table 11 below compares the net SDC revenue generated in Frog Pond East and South after developer credits are issued against the City's SDC contribution to Frog Pond East and South infrastructure projects as provided in Table 7. Generally, the SDC revenue collected within Frog Pond East and South is adequate to cover the City's responsibility for capital outlay of all infrastructure types and all 5-year increments of development phasing with the exception of Transportation improvements between the 2030-35 timeframe. During this development phase, the City's SDC funding responsibility for transportation infrastructure projects exceeds the estimated SDC revenue to be collected. However, the prior development phase timeframe, 2025-30, generates sufficient SDC revenue to account for City infrastructure responsibilities during this earlier timeframe and the projected shortage in the 2030-35 timeframe.

Table 11 Summary of SDC Revenue by Frog Pond East & South Capital Outlay

	Net SDC Revenue	Less Frog Pond Capital Outlay	SDC Revenue for Citywide CIP
Phase 2025-2030			
Transportation	$3,486,654	$0	$3,486,654
Parks	$4,934,971	$0	$4,934,971
Santiary Sewer	$2,589,694	$0	$2,589,694
Water	$3,763,660	$0	$3,763,660
Stormwater	$604,896	$0	$604,896
Phase 2030-2035			
Transportation	$2,005,171	($4,773,623)	($2,768,452)
Parks	$2,679,595	$0	$2,679,595
Santiary Sewer	$3,479,696	$0	$3,479,696
Water	$4,128,424	($1,360,000)	$2,768,424
Stormwater	$949,509	$0	$949,509
Phase 2035-2040			
Transportation	$1,716,544	$0	$1,716,544
Parks	$1,899,828	$0	$1,899,828
Santiary Sewer	$903,486	$0	$903,486
Water	$1,556,615	$0	$1,556,615
Stormwater	$252,411	$0	$252,411
Phase 2040 - 2045			
Transportation	$1,680,914	$0	$1,680,914
Parks	$1,820,424	$0	$1,820,424
Santiary Sewer	$865,356	$0	$865,356
Water	$1,058,978	$0	$1,058,978
Stormwater	$237,566	$0	$237,566
Total			
Transportation	$8,889,284	($4,773,623)	$4,115,661
Parks	$11,334,818	$0	$11,334,818
Santiary Sewer	$7,838,232	$0	$7,838,232
Water	$10,507,678	($1,360,000)	$9,147,678
Stormwater	$2,044,382	$0	$2,044,382
GRAND TOTAL	**$40,614,394**	**($6,133,623)**	**$34,480,771**

Section 3 Summary of Findings

Under the City's existing policies and practices for development, there is sufficient SDC revenue generated through development within Frog Pond East and South to account for both City SDC infrastructure funding responsibilities and SDC credits issued to developers for the "oversized" portion of developer constructed infrastructure. As a result, consideration of additional infrastructure funding options is not required under current City policy and practice, but may be further considered by the City to assist developers with potentially large capital costs early in the Frog Pond East and South development phases and when additional support is desired by the City. It should be noted that if the Frog Pond East & South development and/or infrastructure phasing assumption made as part of this analysis change, the City's required SDC cash flow may be affected and should be reassessed to ensure City SDC commitments can be met as development occurs overtime.

FROG POND EAST AND SOUTH INFRASTRUCTURE FUNDING PLAN SUPPORTING DOCUMENTATION FOR TECHNICAL ATTACHMENT

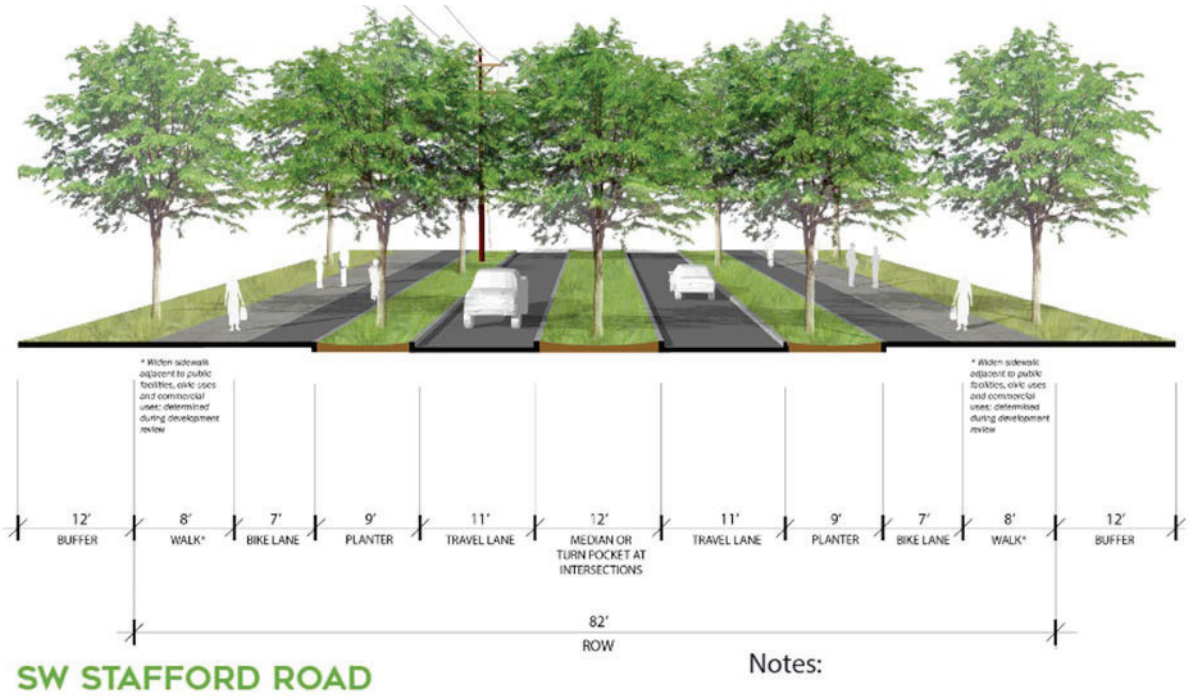
Transportation

Transportation Improvements Funding

Facility Name	Project	Total Capital Cost (2023$)	Local Elements (non creditable) %	TSDC Credit %	CIP Funds %	Developer Cost $	TSDC Credit $	City Cost $	Total Cost $
STAFFORD ROAD (East Side)	Urban Upgrade	$ 3,421,575	82.9%	17.1%	0.0%	$ 2,836,486	$ 585,089	$ -	**$ 3,421,575**
STAFFORD ROAD/ KAHLE ROAD	Roundabout	$ 4,500,000	60.0%	40.0%	0.0%	$ 2,700,000	$ 1,800,000	$ -	**$ 4,500,000**
STAFFORD ROAD/ BRISBAND STREET	Roundabout	$ 4,500,000	65.0%	35.0%	0.0%	$ 2,925,000	$ 1,575,000	$ -	**$ 4,500,000**
ADVANCE ROAD/60TH AVENUE	Roundabout	$ 2,900,000	55.0%	45.0%	0.0%	$ 1,595,000	$ 1,305,000	$ -	**$ 2,900,000**
ADVANCE ROAD (North Side)	Urban Upgrade	$ 4,306,140	79.1%	20.9%	0.0%	$ 3,406,157	$ 899,983	$ -	**$ 4,306,140**
ADVANCE ROAD (South Side)	Urban Upgrade	$ 3,791,489	53.1%	11.2%	35.7%	$ 2,012,287	$ 425,098	$ 1,354,104	**$ 3,791,489**
60th AVENUE (North Side)	Neighborhood Collec	$ 2,235,840	82.9%	17.1%	0.0%	$ 1,853,511	$ 382,329	$ -	**$ 2,235,840**
60th AVENUE (South Side)	Neighborhood Collec	$ 6,839,040	44.4%	5.6%	50.0%	$ 3,036,534	$ 382,986	$ 3,419,520	**$ 6,839,040**
TOTAL COST		**$32,494,084**				**$20,364,975**	**$ 7,355,485**	**$ 4,773,624**	**$32,494,084**

Transportation Improvements Funding Assumptions:

STAFFORD ROAD (EAST SIDE)



Total Right of Way Width (East Side) = 41 feet

Developer Responsibility (Local Portion)	Oversized Portion (SDC Credit Eligible)
20 feet of Pavement	4 feet of Median
Travel Lane = 11 feet	3 feet of Sidewalk
Bike Lane = 7 feet	
Median = 2 feet	
9 feet of Planter	
5 feet of Sidewalk	
Total = 34 feet (82.9%)	Total = 7 feet (17.1%)

STAFFORD/KAHLE ROUNDABOUT

Kahle West Traffic = 65 trips
Kahle East Traffic = 95 trips
Total Traffic = 160

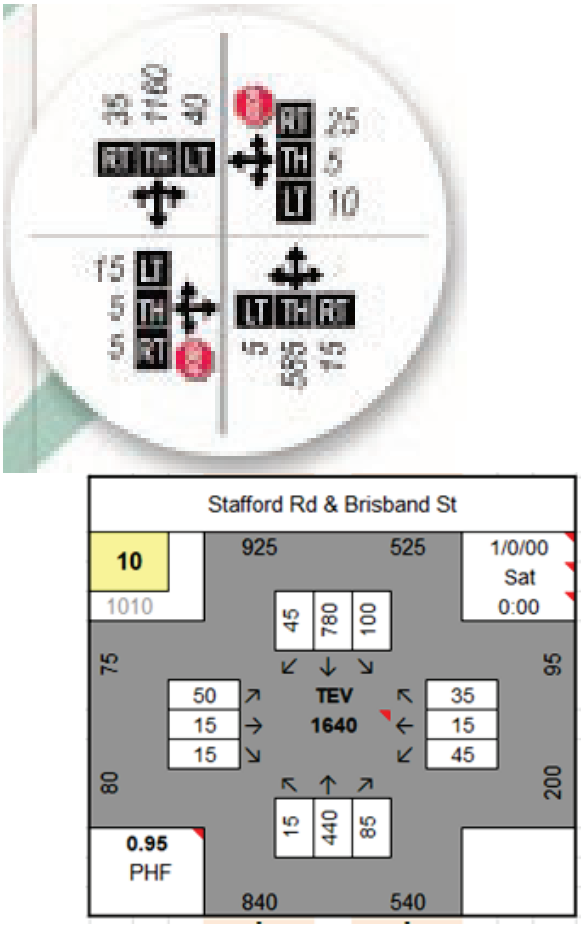
Frog Pond East Developer Responsibility = 95/160 (60%)

Frog Pond West Responsibility = 65/160 (40%)
Note: Not included in Frog Pond West Infrastructure Fee, so eligible for TSDC Credit.

STAFFORD/BRISBAND ROUNDABOUT

STAFFORD RD/BRISBAND ST	LOS D	0.85	>120	A/F

STAFFORD RD/KAHLE RD	LOS D	0.65	>120	B/F



Brisband West Traffic = 140 trips

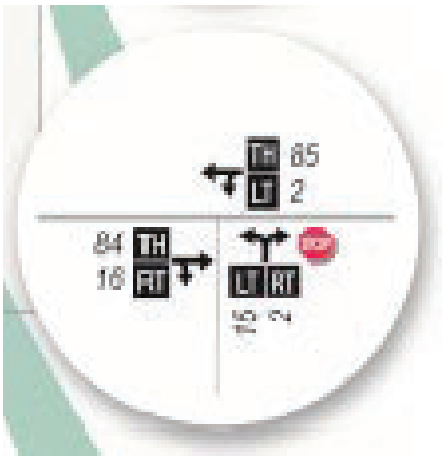
Brisband East Traffic = 260 trips
Total Traffic = 400 trips

Frog Pond East Developer Responsibility 260/400 (65%)

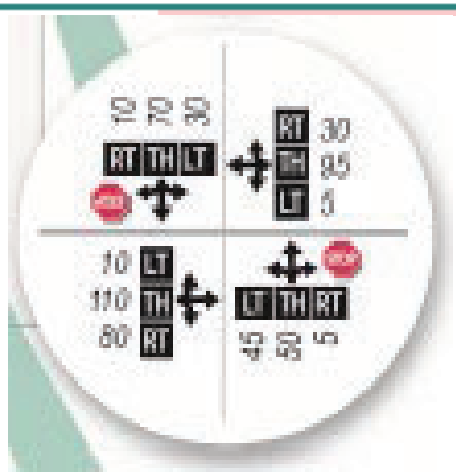
Frog Pond West Responsibility 140/400 (35%)
Note: Not included in Frog Pond West Infrastructure Fee, so eligible for TSDC Credit.

ADVANCE/60TH ROUNDABOUT

ADVANCE RD/60TH AVE	LOS D	0.20	13.2	A/B



Current



2040 Build

Frog Pond East New Development Traffic = 150 trips
Frog Pond South New Development Traffic = 150 trips
Frog Pond South Existing Traffic = 35 trips
Advance Road Through Traffic = 205 trips

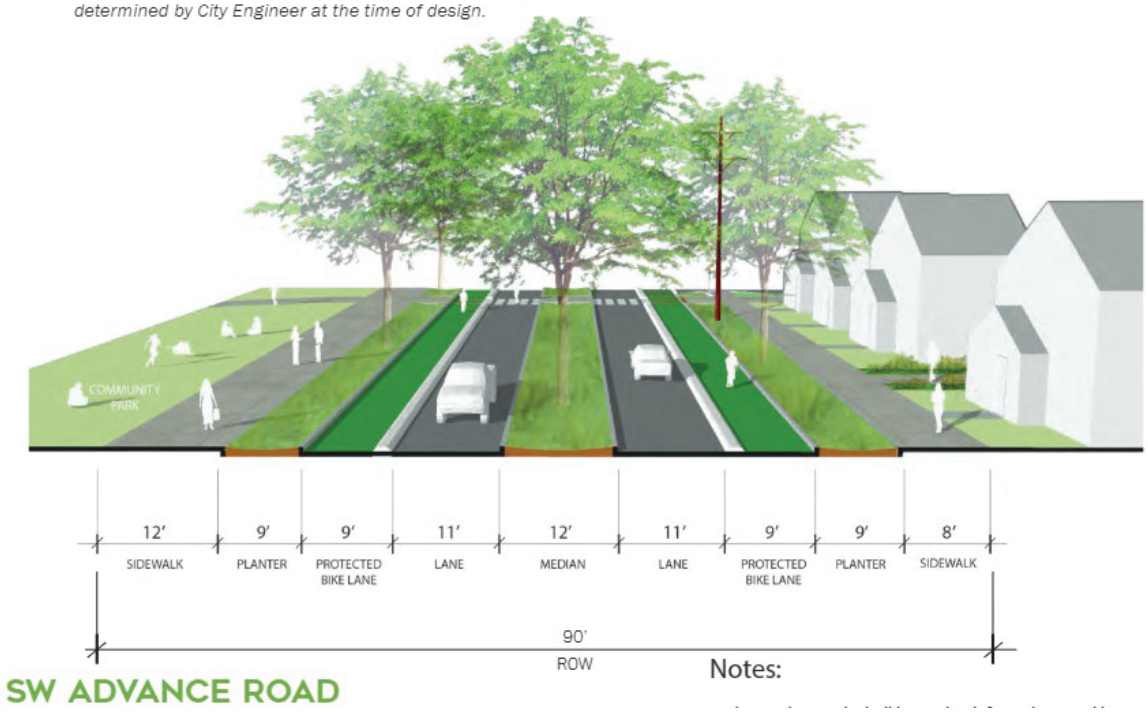
Roundabout is for safety and circulation, not for capacity. As a result, the portion of the roundabout serving existing traffic unrelated to development can be elgible for TSDC Credit.
Frog Pond East Developer Responsibility 150/540 (27.5%)
Frog Pond South Developer Responsibility 150/540 (27.5%)
Frog Pond Developer Responsibility Total 300/540 (55.0%)

TSDC Credit Eligible 240/540 (45.0%)

ADVANCE ROAD (NORTH SIDE)

Figure 22. Cross Section of SW Advance Road

**A protected bike lane adjacent to the sidewalk is an option to be determined by City Engineer at the time of design.*



SW ADVANCE ROAD

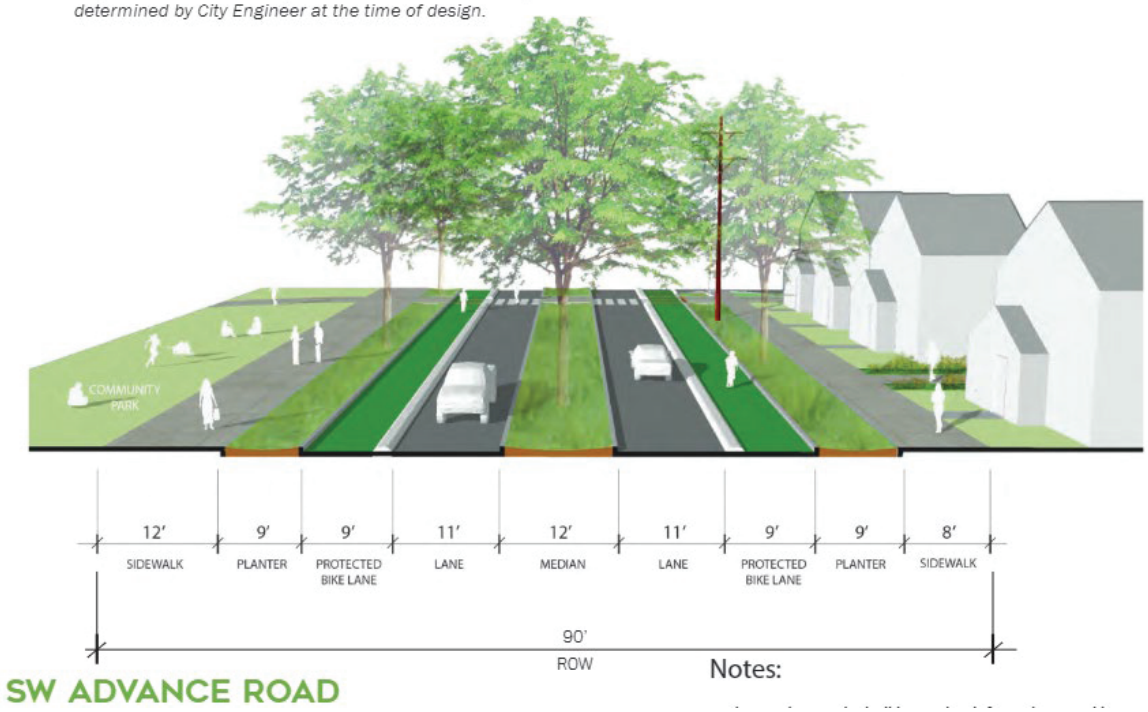
Total Right of Way Width (North Side) = 43 feet

Developer Responsibility (Local Portion)	Oversized Portion (SDC Credit Eligible)
20 feet of Pavement Travel Lane = 11 feet Bike Lane = 9 feet 9 feet of Planter 5 feet of Sidewalk	6 feet of Median 3 feet of Sidewalk
Total = 34 feet (79.1%)	Total = 9 feet (20.9%)

ADVANCE ROAD (SOUTH SIDE)

Figure 22. Cross Section of SW Advance Road

**A protected bike lane adjacent to the sidewalk is an option to be determined by City Engineer at the time of design.*



Total Right of Way Width (South Side) = 47 feet

Developer Responsibility (Local Portion)	Oversized Portion (SDC Credit Eligible)
20 feet of Pavement	6 feet of Median
Travel Lane = 11 feet	7 feet of Sidewalk
Bike Lane = 9 feet	
9 feet of Planter	
5 feet of Sidewalk	
Total = 34 feet (72.3%)	Total = 13 feet (27.7%)

Undeveloped Property West of 63rd Avenue – Advance Road Frontage = 500 feet
- Frontage already improved with Meridian Creek Middle School Construction
- However, Advance Road Crosssection Modified with Frog Pond East and South Master Plan
- Advance Road Frontage Modifications are Anticipated with Development, but not oversized.
- Developer responsible for 100% of Advance Road Frontage

Planned Frog Pond Park – Advance Road Frontage = 750 feet
- City responsible for 100% of Advance Road Frontage

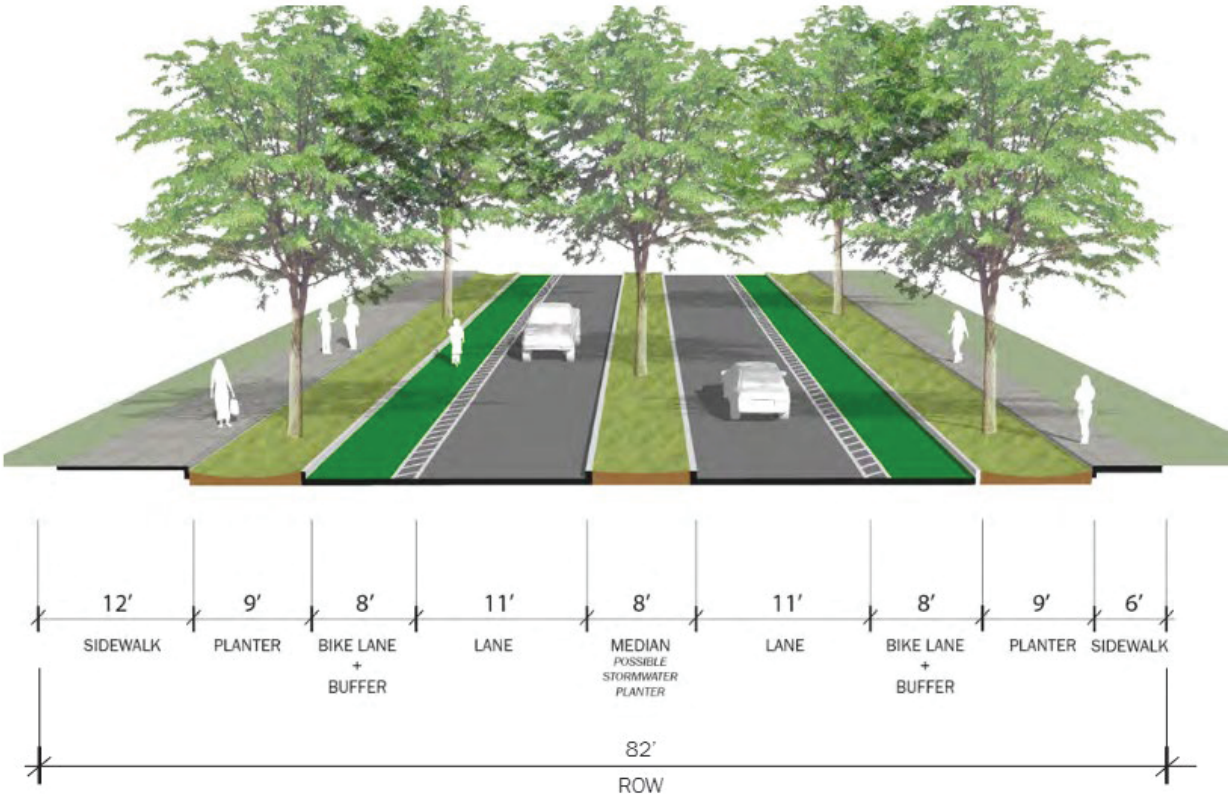
Remainder of Advance Road Frontage = 850 feet
- Developer responsible for Local Portion, with Oversized Portion Eligible for SDC Credit

City Transportation CIP = 750/2100 (35.7143%)

Developer Responsibility = (500/2100)*100% + (850/2100)*72.3% = (53.07381%)
Oversized Portion (SDC Credit Eligible = (850/2100)*27.7% = (11.2119%)

60TH AVENUE (NORTH OF ADVANCE ROAD)

Figure 23. Cross Section of SW 60th Avenue North of SW Advance Road



SW 60TH AVENUE

Total Right of Way Width (West Side) = 44 feet

Developer Responsibility (Local Portion)

20 feet of Pavement
- Travel Lane = 11 feet
- Bike Lane = 8 feet
- Median = 1 feet

9 feet of Planter
5 feet of Sidewalk

Total = 34 feet (77.3%)

Oversized Portion (SDC Credit Eligible)

3 feet of Median
7 feet of Sidewalk

Total = 10 feet (22.7%)

Total Right of Way Width (East Side) = 38 feet

Developer Responsibility (Local Portion)

20 feet of Pavement
- Travel Lane = 11 feet
- Bike Lane = 8 feet
- Median = 1 feet

9 feet of Planter
5 feet of Sidewalk

Total = 34 feet (89.5%)

Oversized Portion (SDC Credit Eligible)

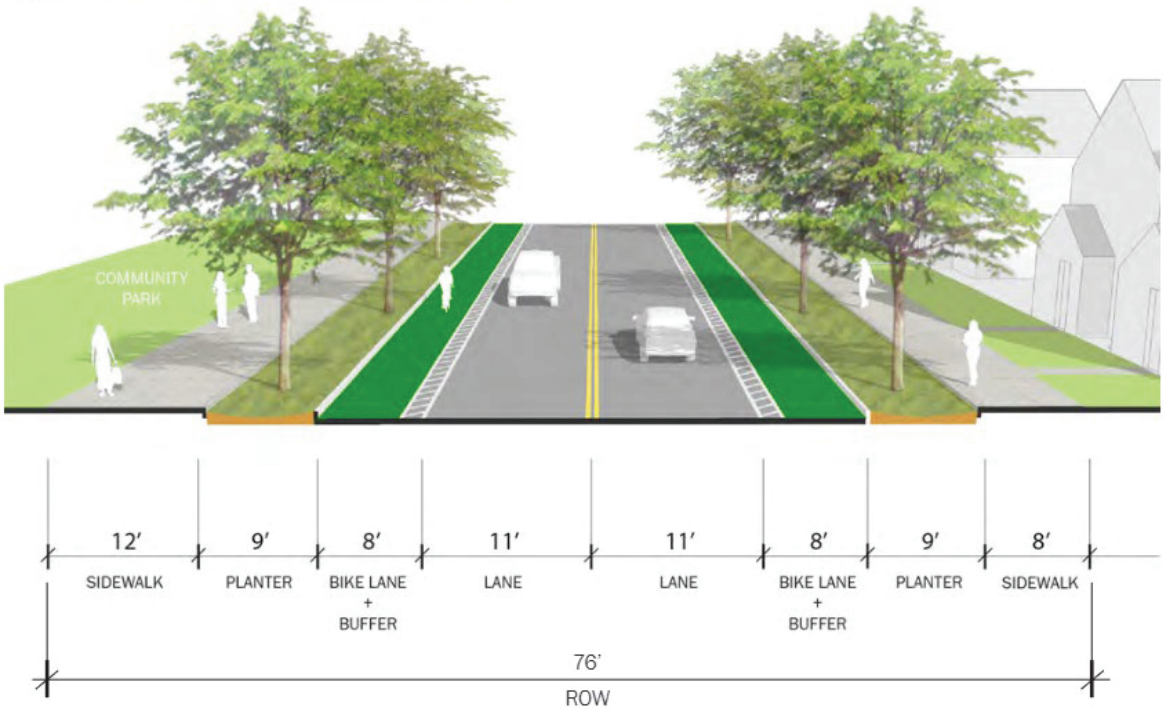
3 feet of Median
1 feet of Sidewalk

Total = 4 feet (10.5%)

Total Developer Responsibility (Local Portion) = 68/82 (82.9%)
Total Oversized Portion (SDC Credit Eligible) = 14/82 (17.1%)

60TH AVENUE (SOUTH OF ADVANCE ROAD)

Figure 24. Cross Section of SW 60th Avenue Collector



SW 60TH AVENUE COLLECTOR

The entirety of the west half of the 60th Avenue fronts the Planned Frog Pond Park owned by the City of Wilsonville and the already developed Meridian Creek Middle School property owned by the

West Linn-Wilsonville School District. For the purposes of this analysis, it is assumed that the City will be 100% responsible of the 60th Avenue Road Frontage.

Total Right of Way Width (East Side) = 36 feet

Developer Responsibility (Local Portion)	Oversized Portion (SDC Credit Eligible)
20 feet of Pavement	2 feet of Sidewalk
Travel Lane = 11 feet	
Bike Lane = 8 feet	
Sidewalk = 1 feet	
9 feet of Planter	
5 feet of Sidewalk	
Total = 34 feet (94.4%)	Total = 2 feet (5.6%)

Total
City Transportation CIP = 50%
Developer Responsibility = 44.4%
Oversized Portion (SDC Credit Eligible = 5.6%

Parks

Parks Improvements Funding

Facility Name	Project	Total Capital Cost (2023$)	Local Elements (non creditable) %	Parks SDC Credit %	CIP Funds %	Developer Cost $	Parks SDC Credit $	City Cost $	Total Cost $
FROG POND EAST NEIGHBORHOOD	Trails	$ 2,373,525	0.0%	100.0%	0.0%	$ -	$ 2,373,525	$ -	**$ 2,373,525**
FROG POND SOUTH NEIGHBORHOOD	Trails	$ 2,244,060	0.0%	100.0%	0.0%	$ -	$ 2,244,060	$ -	**$ 2,244,060**
TOTAL COST		**$ 4,617,585**				**$ -**	**$ 4,617,585**	**$ -**	**$ 4,617,585**

Parks Improvements Funding Assumptions:

FROG POND EAST NEIGHBORHOOD TRAILS
BPA Trail is 100% Parks SDC Credit Elgible.
Connections between the BPA Trail and neighborhood is 100% developer responsibility.

FROG POND SOUTH NEIGHBORHOOD TRAILS
Main Trail is 100% Parks SDC Credit Eligible.
Connections between the Main Trail and neighborhood is 100% developer responsibility.

Sanitary Sewer

Sanitary Sewer Improvements Funding

Facility Name	Project	Total Capital Cost (2023$)	Local Elements (non creditable) %	Sewer SDC Credit %	CIP Funds %	Developer Cost $	Sewer SDC Credit $	City Cost $	Total Cost $
ADVANCE ROAD	10" Sewer Main	$ 492,230	90.62%	9.38%	0.00%	$ 446,059	$ 46,171	$ -	**$ 492,230**
STAFFORD ROAD	12" Sewer Main	$ 1,447,380	85.29%	14.71%	0.00%	$ 1,234,470	$ 212,910	$ -	**$ 1,447,380**
KAHLE WEST NEIGHBORHOOD	Lift Station & Force M	$ 3,178,660	100.00%	0.00%	0.00%	$ 3,178,660	$ -	$ -	**$ 3,178,660**
KAHLE EAST NEIGHBORHOOD	Lift Station & Force M	$ 2,485,400	100.00%	0.00%	0.00%	$ 2,485,400	$ -	$ -	**$ 2,485,400**
ADVANCE EAST NEIGHBORHOOD	Lift Station & Force M	$ 2,485,400	100.00%	0.00%	0.00%	$ 2,485,400	$ -	$ -	**$ 2,485,400**
SOUTH NEIGHBORHOOD	Lift Station & Force M	$ 2,764,064	100.00%	0.00%	0.00%	$ 2,764,064	$ -	$ -	**$ 2,764,064**
TOTAL COST		**$12,853,134**				**$12,594,053**	**$ 259,081**	**$ -**	**$12,853,134**

Sanitary Sewer Improvements Funding Assumptions:

The oversize portion of a pipeline that is eligible for Sewer SDC Credit for the purposes of this analysis is based on the linear foot cost difference for different sizes of sewer pipe according 2022 Oregon Department of Transportation average construction bid pricing as follows. Sewer SDC Credits will be based on actual oversize costs at the time of construction.

8” Sanitary Sewer Pipe - $145.00 per linear foot (Developer Responsibility – Local Portion)
10” Sanitary Sewer Pipe - $160.00 per linear foot (9.38% Oversize)
12” Sanitary Sewer Pipe - $170.00 per linear foot (14.71% Oversize)

Water

Water Improvements Funding

Facility Name	Project	Total Capital Cost (2023$)	Local Elements (non creditable) %	Water SDC Credit %	CIP Funds %	Developer Cost $	Water SDC Credit $	City Cost $	Total Cost $
STAFFORD ROAD	12" main	$ 1,170,620	67.0%	33.0%	0.0%	$ 784,315	$ 386,305	$ -	**$ 1,170,620**
ADVANCE ROAD	12" main	$ 425,680	67.0%	33.0%	0.0%	$ 285,206	$ 140,474	$ -	**$ 425,680**
KAHLE WEST NEIGHBORHOOD	12" main - Kahle Roa	$ 585,310	67.0%	33.0%	0.0%	$ 392,158	$ 193,152	$ -	**$ 585,310**
KAHLE WEST NEIGHBORHOOD	12" main - Interior	$ 601,800	67.0%	33.0%	0.0%	$ 403,206	$ 198,594	$ -	**$ 601,800**
KAHLE EAST NEIGHBORHOOD	12" main	$ 1,311,720	67.0%	33.0%	0.0%	$ 878,852	$ 432,868	$ -	**$ 1,311,720**
60th AVENUE, BRISBAND	12" main	$ 1,504,500	67.0%	33.0%	0.0%	$ 1,008,015	$ 496,485	$ -	**$ 1,504,500**
FROG POND WEST EXTENSION	12" main	$ 372,470	67.0%	33.0%	0.0%	$ 249,555	$ 122,915	$ -	**$ 372,470**
BOECKMAN CREEK X-ING (Frog Pond Ln)	12" main	$ 1,360,000	0.0%	0.0%	100.0%	$ -	$ -	$ 1,360,000	**$ 1,360,000**
60th AVENUE (South of Advance)	12" main	$ 1,755,250	67.0%	33.0%	0.0%	$ 1,176,018	$ 579,233	$ -	**$ 1,755,250**
MERIDIAN CREEK X-ING	12" main	$ 340,000	67.0%	33.0%	0.0%	$ 227,800	$ 112,200	$ -	**$ 340,000**
TOTAL COST		**$ 9,427,350**				**$ 5,405,125**	**$ 2,662,226**	**$ 1,360,000**	**$ 9,427,350**

Water Improvements Funding Assumptions:

The oversize portion of a pipeline that is eligible for Water SDC Credit for the purposes of this analysis is based on the linear foot cost difference for different sizes of water pipe according 2022 Oregon Department of Transportation average construction bid pricing as follows. Water SDC Credits will be based on actual oversize costs at the time of construction.

8” Water Pipe - $146.41 per linear foot (Developer Responsibility – Local Portion)

12" Water Pipe - $218.52 per linear foot (67% Oversize)

Storm Drainage

Storm Drainage Improvements Funding

Facility Name	Project	Total Capital Cost (2023$)	Local Elements (non creditable) %	Storm SDC Credit %	CIP Funds %	Developer Cost $	Storm SDC Credit $	City Cost $	Total Cost $
K1 / Advance/60th	30" Storm Main	$ 249,008	100.0%	0.0%	0.0%	$ 249,008	$ -	$ -	**$ 249,008**
K1 / Advance/60th	24" Storm Main	$ 1,359,925	100.0%	0.0%	0.0%	$ 1,359,925	$ -	$ -	**$ 1,359,925**
K1 / Advance/60th	18" Storm Main	$ 837,795	100.0%	0.0%	0.0%	$ 837,795	$ -	$ -	**$ 837,795**
K1 / East of 60th, South of Advance	24" Storm Main	$ 796,670	100.0%	0.0%	0.0%	$ 796,670	$ -	$ -	**$ 796,670**
K1 / East of 60th, South of Advance	18" Storm Main	$ 2,903,600	100.0%	0.0%	0.0%	$ 2,903,600	$ -	$ -	**$ 2,903,600**
K1 / East of 60th, South of Advance	Regional Facility	$ 475,125	100.0%	0.0%	0.0%	$ 475,125	$ -	$ -	**$ 475,125**
K1	30" Outfall	$ 131,250	100.0%	0.0%	0.0%	$ 131,250	$ -	$ -	**$ 131,250**
K2	Storm Mains	$ 1,304,256	100.0%	0.0%	0.0%	$ 1,304,256	$ -	$ -	**$ 1,304,256**
M1	Storm Mains, Outfall	$ 4,021,918	100.0%	0.0%	0.0%	$ 4,021,918	$ -	$ -	**$ 4,021,918**
M2	Storm Mains, Outfall	$ 767,575	100.0%	0.0%	0.0%	$ 767,575	$ -	$ -	**$ 767,575**
M3	24" Storm Main	$ 609,140	100.0%	0.0%	0.0%	$ 609,140	$ -	$ -	**$ 609,140**
M3	18" Storm Main	$ 369,600	100.0%	0.0%	0.0%	$ 369,600	$ -	$ -	**$ 369,600**
M3	18" Storm Main	$ 1,924,808	100.0%	0.0%	0.0%	$ 1,924,808	$ -	$ -	**$ 1,924,808**
M3	24" Outfall	$ 131,250	100.0%	0.0%	0.0%	$ 131,250	$ -	$ -	**$ 131,250**
N1	St. Mains, Reg. Facili	$ 659,225	100.0%	0.0%	0.0%	$ 659,225	$ -	$ -	**$ 659,225**
N1	18" Storm Main	$ 1,924,808	100.0%	0.0%	0.0%	$ 1,924,808	$ -	$ -	**$ 1,924,808**
N2	St. Mains, Reg. Facili	$ 2,485,196	100.0%	0.0%	0.0%	$ 2,485,196	$ -	$ -	**$ 2,485,196**
N3	Storm Mains, Outfall	$ 2,279,571	100.0%	0.0%	0.0%	$ 2,279,571	$ -	$ -	**$ 2,279,571**
N4	Storm Mains, Outfall	$ 2,127,148	100.0%	0.0%	0.0%	$ 2,127,148	$ -	$ -	**$ 2,127,148**
N5	Storm Mains, Outfall	$ 350,259	100.0%	0.0%	0.0%	$ 350,259	$ -	$ -	**$ 350,259**
TOTAL COST		**$25,708,127**				**$25,708,127**	**$ -**	**$ -**	**$25,708,127**

Storm Drainage Improvements Funding Assumptions:

All identified storm drainage facilities do not provide additional capacity and only serve the Frog Pond East and South development areas. As a result, the identified storm drainage facilities are 100% developer responsibility.

EAST & SOUTH MASTER PLAN

FROG POND EAST AND SOUTH INFRASTRUCTURE FUNDING PLAN: COMPLIANCE FINDINGS REPORT

FOR MINIMUM INTERSECTION IMPROVEMENTS

These findings address particular public improvements required by the City of Wilsonville ('City") as part of planned future development in Frog Pond East and South, which are more particularly described in Appendix I of the Frog Pond East and South Master Plan ("Master Plan").

Wilsonville Code (WC) requires that, when development occurs, the applicant must construct roads fronting the site to meet current, applicable City standards, which are established through the City's Transportation System Plan ("TSP"). The TSP provides the required improvements and necessary steps for development (*See* Figure 2). Further, the Master Plan Transportation Analysis[1] ("Transportation Analysis") provides data and standards to ensure the City meets its goals of providing a safe and efficient transportation system to the Wilsonville community. These standards are clearly supported and necessary for safe, functioning streets in the community.

Among other improvements, the Master Plan identifies three (3) intersection improvements that are needed to develop Frog Pond East and South:

- Roundabout Construction at SW Kahle Road/SW Stafford Road
- Roundabout Construction at SW Brisband Street/SW Stafford Road
- Roundabout Construction at SW 60th Avenue/SW Advance Road

When, as is the case here, the City TSP requires construction of roundabouts, it is the developer responsibility to meet city standards for safety and neighborhood cohesion in all construction projects. These Findings establish the "essential nexus" between the city's governmental interests and these three (3) intersection improvements.

As will be explained more fully below, federal and state case law explain that, when a government requires a property owner to dedicate property or construct off-site public improvements as a condition of development, those requirements must have an "essential nexus" to a legitimate government interest for the government to then impose certain requirements on development. This concept is referred to as *Nollan* findings based on the US Supreme Court case from which it is derived. *See Nollan v. California Coastal Commission*, 483 US 825 (1987).

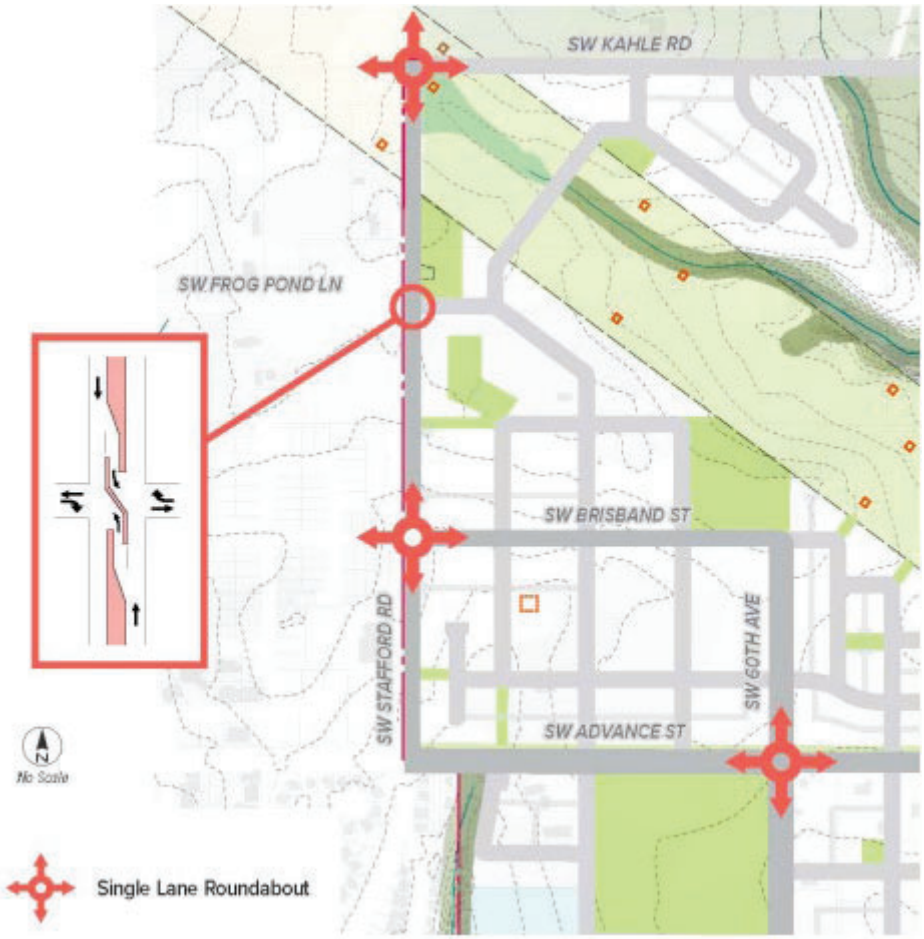
[1] *See* Appendix I to the Frog Pond East & South Master Plan, "Transportation Analysis: Existing and Future Conditions" (December 2022).

To demonstrate essential nexus between legitimate government interests and the intersection improvements, these Findings are laid out as follows: (1) existing conditions of SW Stafford Road and SW Advance Road and adjacent land uses; (2) safety and effectiveness of roundabouts; and (3) the essential nexus between the City's legitimate governmental interests and the three proposed roundabouts in Frog Pond East and South.

Section 1 Existing Conditions

For the Frog Pond East and South development to occur, roadways and intersections must be constructed or reconstructed to connect the neighborhood to the larger Wilsonville transportation network. Figure 1 below provides the required intersection improvements in Frog Pond East and South.

Figure 1: Frog Pond East and South Intersection Improvements, *Transportation Analysis*, p. 2.



A. Existing Traffic and Transportation System

SW Stafford Road and SW Advance Road were previously under the jurisdiction of Clackamas County and built to county standards; that is, they each have two travel lanes,

no dedicated bicycle lanes, and no sidewalks for pedestrians. They currently have a speed designation of 45 mph. Anyone turning off of or onto these streets faces vehicle traffic traveling at high rates of speed with no intersection enhancements to reduce speed or potential vehicle crashes.

SW Stafford Road is designated a Major Arterial in the TSP (p. 3-5). Major arterials represent the City's largest roadway cross-section of the four road classifications. They generally have four or more travel lanes, bicycle lanes, and limited direct access. As identified below and in the Transportation Analysis, the significant multimodal traffic concerns regarding SW Stafford Road are expected and understandable because it is a Major Arterial that transitions traffic from a rural to urban setting and is currently built to rural county standards.

The City has received direct resident complaints about the intersections at both Stafford Road and Frog Pond Lane and Stafford Road and Brisband Street becoming more difficult and dangerous. Residents note long delays when turning onto Stafford Road and have further emailed the City about "near misses," almost resulting in collisions. Questions about traffic flow have been brought to the City Council, and residents have demanded improved safety along Stafford Road.

Residents' concerns are supported by the data – the Transportation Analysis examined existing road conditions and traffic flow during peak roadway conditions. The Transportation Analysis predicts increased traffic delays by 2040.[2] With planned development in Frog Pond East and South, two-way stop controlled intersections along the length of SW Stafford Road at SW Kahle Road, SW Frog Pond Lane, and SW Brisband Street will fall below Level of Service D if no improvements are made.[3] Thus, enhanced intersection treatments are needed to meet the minimum level of service (LOS D) required in the City.[4]

SW Advance Road is designated a Collector in the TSP (p. 3-5). Collectors provide traffic circulation within residential, commercial, and industrial areas and serve to funnel traffic from neighborhoods to the arterial street network. They have two or three travel lanes, bicycle lanes, and consolidated access to larger developed areas and neighborhoods. Like SW Stafford Road, SW Advance Road is currently built to county standards, which do not provide multimodal safety enhancements that are appropriate for an urban setting, particularly considering the surrounding land uses, such as two nearby schools.

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[2] The Transportation Analysis compares Metro's regional travel demand forecast that is based on current Metro land use assumptions through 2040 (the "2040 Baseline scenario") to the anticipated additional build in Frog Pond East and South being added to the transportation system by 2040 (the "2040 Build scenario"). *See* Transportation Analysis, pp. 9-15.

[3] Transportation Analysis, p. 15.

[4] TSP Policy 5, p. 2-4; *see also* WC 4.140(.09) J. 2.

These two roads are at the rural/urban edge and represent a higher likelihood of vehicle and pedestrian crashes at high speeds due to this transition. In just the last month (October 12, 2024), a fatal crash occurred on SW Advance Road near the SW 60th Avenue and SW Advance Road intersection.[5] The City's only other known fatality on one of its roads between 2017 and 2022 occurred on SW Wilsonville Road right at the city limits when a vehicle traveling from outside the city limits struck and killed a pedestrian crossing at a crosswalk to go to an adjacent park.

B. Schools

The Frog Pond area (inclusive of Frog Pond West, East, and South) includes two schools that impact decisions regarding transportation infrastructure. A middle school is located in Frog Pond South adjacent to SW Advance Road and a new primary school in Frog Pond West adjacent to SW Boeckman Road will open in Fall 2025. Thus, students commute by bicycle and walking across a busy and underdeveloped Major Arterial (SW Stafford Road) and Collector (SW Advance Road).

C. BPA Easement

An additional existing condition that impacts intersection treatment at SW Stafford Road and SW Kahle Road is the presence of a Bonneville Power Administration (BPA) easement that contains towers and high-voltage powerlines. The easement restricts the type and height of improvements within the easement area.

As explained in detail below, the anticipated development in Frog Pond East and South will only exacerbate traffic delays and increase risk of crashes given vehicles' rate of speed, the transition from rural to urban, and significant intersections for the new Frog Pond East and South neighborhoods, as the Transportation Analysis predicts that the 2040 Build scenario will see the number households in Frog Pond East and South increase by 130 percent. Transportation Analysis, p. 13. Utilizing roundabouts to address traffic delays and safety concerns is not only prudent, it is supported by data both from existing city roundabouts and national studies.

Section 2 Effectiveness of Roundabouts

Roundabouts have proven effective at addressing travel delays at failing intersections and providing safe multimodal transportation opportunities. This section examines studies on the efficacy of roundabouts and roundabouts currently existing in the city.

A. Studies Demonstrate Roundabouts Are Effective Tools for Safe, Efficient Multimodal Transportation

Several transportation agencies have studied the effectiveness of roundabouts and found that roundabouts are safer intersection enhancements than traffic signals or stop signs. Roundabouts naturally slow and calm traffic, as opposed to stoplights, which cause traffic

[5] https://www.clackamas.us/sheriff/2024-10-14-Case-24-021407

to speed up. The Federal Highway Administration (FHWA), the Oregon Department of Transportation (ODOT), and several other state departments of transportation provide the following data regarding the effectiveness of roundabouts:

- FHWA reported a study by Insurance Institute for Highway Safety and other organizations analyzing 24 intersections from states across the US and found a 39 percent decrease in crashes, 76 percent decrease in injury crashes, and 90 percent reduction in crashes involving fatal or incapacitating injuries. A second study the FHWA noted examined 15 roundabouts in Maryland and discovered a 60 percent decrease in crashes, 82 percent decrease in injury crashes, and 100 decrease in fatal crashes.[6]
- FHWA further reported that roundabouts reduce severe crashes (those resulting in injury or loss of life) by 78-82%.[7]
- The FHWA explains that roundabouts have fewer conflict points, making them safer for multimodal transportation. A single lane roundabout (like the three identified for Frog Pond East and South) has 50% fewer pedestrian-vehicle conflict points than a comparable stop or signal controlled intersection. Conflicts between bicycles and vehicles are reduced as well.[8] Roundabouts require vehicles to travel at lower speeds, which is associated with better yielding rates, reduced vehicle stopping distance, and lower risk of collision injury or fatality.[9]
- Roundabouts also provide shorter crossing distances for pedestrians that other types of intersection enhancements between there is only one direction of traffic.[10]
- The FHWA also notes that roundabouts are a very efficient type of intersection enhancement because they do not require the same stop-and-go conditions as traditional intersections.[11]
- Roundabouts are particularly impactful along rural roads, like SW Stafford Road and SW Advance Road, where the roads are transitioning from rural to urban settings. The FHWA reviewed a previous stop-controlled intersection in Wisconsin that was reconstructed to a roundabout. Thirty crashes occurred in the five years before the improvement (17 injuries and one fatality), and only 11 total crashes

[6] US Department of Transportation, Federal Highway Administration Priority, Market Ready Technologies and Innovations, Roundabouts, (2006), available at https://highways.dot.gov/media/9206#:~:text=demonstrating%20success%20in%20reducing%20crashes&text=The%20study%20revealed%20a%2039,involving%20fatal%20or%20incapacitating%20injuries

[7] FHWA, "Roundabouts with Pedestrians and Bicycles," available at https://highways.dot.gov/sites/fhwa.dot.gov/files/2022-06/fhwasa15016.pdf

[8] *Id*.

[9] *Id*.

[10] *Id*.

[11] FHWA, "Roundabouts and First Responders," available at https://highways.dot.gov/sites/fhwa.dot.gov/files/2022-06/fhwasa14098.pdf

(1 injury and zero fatalities) occurred in the following six years after the improvement.[12]

- The FHWA has further identified the following real-world results of roundabouts[13]:
  - Roundabouts constructed at intersections along high-speed, two-lane rural highways reduced overall crashes by up to 68% and reduced injury crashes by up to 88%.
  - Roundabouts constructed at intersections along high-speed, two-lane rural highways eliminated 83% of angle-type crashes.
  - There were 11 fatal crashes in the 5 year "before" period and zero fatal crashes in the 5 year "after" period at 19 roundabouts constructed along highspeed, two-lane rural highways in six different states (KS, MD, MN, OR, WI, and WA).
  - Researchers compared traffic speeds of approaches to roundabouts and stop-controlled intersections. At one hundred feet before the yield or stop lines, the speed of traffic at the roundabouts was 2.5 mph lower than at the stop-controlled locations.
  - Roundabouts are designed for slower speeds, require entering traffic to yield to vehicles already in the circular roadway, and to eliminate the need to weave or change lanes to exit.
  - Since the late 1990s, an ever-growing number of State DOTs and local road agencies are finding that roundabouts work in their jurisdictions. Their potential for saving lives is too significant to ignore.
- The FHWA also reported on twenty-six roundabouts installed in Wisconsin due to concerns of traffic conflicts with adjacent schools and the presence of school children. A follow-up study showed that at one of the roundabout locations, the number of vehicles entering the intersection increased from 5,600 per day in 1998 before the roundabout construction to 10,800 per day in 2001, and yet crashes and injuries decreased significantly, from an average of three crashes and five injuries per year during the 1996-1998 period to no reported crashes between August 1999 and October 2001.[14] Importantly, from the installation of roundabouts, a prior policy prohibiting students to walk and bike to school was reversed.[15]
- The FHWA published a report in 2015 reviewing fatal and serious injury crashes at roundabouts.[16] It made the following findings:

[12] FHWA, "Roundabouts and Rural Highways," available at https://highways.dot.gov/sites/fhwa.dot.gov/files/2022-06/fhwasa14097.pdf
[13] *Id*.
[14] FHWA, "Wisconsin Roundabouts Calm Traffic, Improve School Zone Safety," available at https://highways.dot.gov/sites/fhwa.dot.gov/files/2022-06/fhwasa11031.pdf
[15] *Id*.
[16] FHWA, "A Review of Fatal and Severe Injury Crashes at Roundabouts," (Sept 2015), available at https://highways.dot.gov/sites/fhwa.dot.gov/files/2022-06/fhwasa15072.pdf

  - Fatal roundabout crashes are less likely to involve pedestrians or bicyclists when compared to fatal intersection crashes.[17]
- The FHWA's website contains many additional case studies of the effectiveness of roundabouts for safe and effective multimodal transportation.[18]
- The Minnesota Department of Transportation published a report in 2017 reviewing roundabouts throughout Minnesota.[19] Not only did Minnesota see over an 80 percent reduction in fatal and serious injury crashes, at the time of the report, there still had not been a multi-vehicle fatality in a roundabout in Minnesota. Other key findings included:
  - An 86% reduction in the fatal crash rate at intersections where roundabouts have been installed. This includes all roundabout types (Single Lane, Unbalanced, and full Dual Lane Roundabouts).
  - An 83% reduction in the serious injury crash rate at intersections where roundabouts have been installed.
  - A 69% reduction in the Right Angle crash rate at intersections where Single Lane Roundabout have been installed.
  - An 83% reduction in the Left Turning crash rate at intersections where Single Lane Roundabout have been installed.
  - A 61% reduction in the injury crash rate at intersections where Single Lane Roundabout have been installed.
  - A 42% reduction in the injury crash rate at intersections where Single Lane Roundabout have been installed.[20]

ODOT has also reported why roundabouts are more effective than signalized intersections[21]:

- In rural areas, new traffic signals are associated with a 77 percent reduction in angle crashes, but also a 58 percent increase in rear-end crashes, which can be severe and fatal in high-speed areas.
- Traffic signals do not address speeds at an intersection - roundabouts do reduce speeds. Often drivers accelerate through an intersection to try to make it through before the signal turns red, which is dangerous.

The U.S. Department of Transportation has also studied the effects of speed on roadway fatalities, particularly involving pedestrians.[22] The US DOT found that speeding is a

[17] *Id*. at p. 12.
[18] *See* FHWA webpage on Roundabouts, https://highways.dot.gov/safety/intersection-safety/intersection-types/roundabouts
[19] Derek Leuer, "A Study of the Traffic Safety at Roundabouts in Minnesota" Office of Traffic, Safety, and Technology, Minnesota Department of Transportation (Oct 30, 2017), available at https://rosap.ntl.bts.gov/view/dot/35084
[20] *Id*. at p. 2.
[21] ODOT, "All about roundabouts," (Summer 2021), available at https://www.bendoregon.gov/home/showpublisheddocument/53080/637885692091270000
[22] U.S. DOT, "Safer Speeds," available at https://www.transportation.gov/NRSS/SaferSpeeds

significant contributor to roadway fatalities and is especially hazardous to pedestrians.[23] To counteract speeding and promote safer speeds, US DOT undertook key actions. One of these action items was to: "Promote safer speeds through improvements to Proven Safety Countermeasures and the Manual on Uniform Traffic Control Devices."[24] One of the "proven safety countermeasures" identified by US DOT is utilizing roundabouts.[25]

To the extent reports discuss some concerns regarding roundabouts and conflicts with pedestrian or bicycle traffic, those concerns are generally limited to multilane roundabouts. None of the three roundabouts discussed here are planned to be multilane. Rather they are all planned to be single-lane roundabouts. National studies have consistently shown that single-lane roundabouts are safe for multimodal transportation.

B. Roundabouts Are Present Throughout the City

The City of Wilsonville has historically required installing roundabouts throughout the city as the minimum requirement when necessary to ensure multimodal transportation conditions. Roundabouts have been part of a cohesive plan to create safe travel conditions for all travelers in Wilsonville. In other words, requiring roundabouts as the minimum standard for intersection improvements is not new to the City. Currently, the City has six (6) roundabouts located throughout the city, with a seventh under construction at SW Canyon Creek Road and SW Boeckman Road. Five (5) additional roundabouts are planned in the TSP. These findings provide two examples of current roundabouts and their effectiveness.

1. Roundabout at Lowrie Primary School

One of the six current roundabouts in Wilsonville is located near Lowrie Primary School. The City chose to have the developer install a single-lane roundabout at that location particularly because of the school's presence and safety concerns for students. From the most recent five-year data from ODOT, from 2017 to 2022, the roundabout near Lowrie has only experienced two (2) vehicle crashes[26]. These crashes were property damage only, meaning no injuries or fatalities occurred. Compared to the overall number of

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[23] *Id*.

[24] *See* National Roadway Safety Strategy dashboard, available at https://explore.dot.gov/views/NRSSDashboard/Dashboard/404b2e9e-1546-438d-bc5c-6187adf13880/d0d14747-2b89-4bba-ba1b-7ae9470069f8?%3Aembed=y&%3AisGuestRedirectFromVizportal=y%3AshowAppBanner&%3Adisplay_count=n&%3AshowVizHome=n&%3Aorigin=viz_share_link&%3Atoolbar=no&%3A%3Aembed=yes

[25] FHWA, "Roundabouts," available at https://highways.dot.gov/safety/intersection-safety/intersection-types/roundabouts

[26] ODOT crash data, available at https://tvc.odot.state.or.us/tvc/

crashes within the Wilsonville city limits, which totaled 1320 during the same time period, the roundabout at Lowrie represents 0.15% of all crashes in Wilsonville.

To ensure student safety, the City worked with the West Linn-Wilsonville School District on an education campaign with students, teachers, and parents on the safe use of roundabouts.

2. Roundabout at SW Canyon Creek Road and SW Boeckman Road

The latest roundabout being constructed in Wilsonville is a single-lane roundabout at the intersection of SW Canyon Creek Road and SW Boeckman Road. This intersection is one of the worst in the city for crashes; in the last 5 years of data (2017-2022), there have been over 16 crashes, including five minor injury crashes and one serious injury crash.[27] Prior to constructing the roundabout, the intersection was a four-way stop intersection. The City undertook an alternatives analysis to examine whether to construct an intersection with traffic signals or as a single-lane roundabout.[28] Ultimately, the alternatives analysis found that a roundabout was the preferred alternative because a traffic signal was found to be more dangerous than a four-way stop or a roundabout: "More than twice as many fatal and injury crashes are expected with a traffic signal compared to an all-way stop-controlled intersection or roundabout."[29] To reiterate, the alternatives analysis for this intersection found that a signalized intersection would be more dangerous than current conditions.

The alternatives analysis also found that, while initial construction costs would likely be somewhat higher for a roundabout than traffic signals, the overall life-cycle costs, inclusive of construction are lower, with an expectant savings of over $600,000. *Id*. at 13. Importantly, the analysis estimated that approximately $14,000 would be spent annually to maintain the traffic signals (lighting and signal maintenance) and $10,000 would be spent every three years on signal retiming. These expenses are not incurred for roundabouts.

Based on the improved safety and the lower life-cycle cost, the City elected to construct a roundabout at SW Canyon Creek Road and SW Boeckman Road.

3. Roundabouts Compared to Overall Transportation System

In examining the most recent ODOT crash data (2017-2022), the evidence demonstrates that roundabouts are safe intersection enhancements. As noted above, in the five-year reporting period, the City saw 1,320 crashes within the Wilsonville city limits. Only seven (7) of those crashes occurred in an intersection with a roundabout. Of those seven (7)

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[27] *Id*.

[28] Attachment 1 to Staff Report, Canyon Creek/Boeckman Intersection Design Update (Dec. 19, 2022), available at: https://mccmeetings.blob.core.usgovcloudapi.net/wlsnvlleor-pubu/MEET-Packet-86924897ee0f44a9a0683b5a34327a6a.pdf.

[29] *Id*. at p. 9 of Attachment 1.

crashes, none resulted in significant injuries or fatalities. Only three (3) of the seven (7) included minor injuries.

Section 3 Roundabouts Needed for Frog Pond East and South

The City's standards requiring roundabouts are located within the TSP and the Master Plan. Wilsonville Code Section 4.236 requires conformity with the TSP. All development within the City must meet the minimum requirements for street improvements in accordance with the TSP. Moreover, the Master Plan emphasizes Principles for the community.[30] "Convenient, Safe and Low-Stress Transportation Options" are a guiding principle of the Master Plan, which identifies:

> "A connected network of streets and trails prioritizes the safety and comfort of the most vulnerable road users. Streets will be designed to encourage and prioritize walking, biking, rolling, transit, and other low-carbon modes of travel. Street and block layout make it easy for residents to access schools, parks, and neighborhood services without a car."

These goals can only be attained with the addition of roundabouts. Roundabouts will create safter neighborhood speeds, and better crosswalk access for all residents. Roundabouts slow the speed of traffic with certainty. These established policies demonstrate the essential nexus between the intersection improvements and the City's interest in providing safe, reliable, well-constructed streets, bicycle lanes, and sidewalks.

A. Safety

The City has a legitimate governmental interest in providing a safe and efficient multimodal transportation system.

1. Vehicle Safety

The numerous studies cited above conclude that roundabouts are safe intersection enhancements that see the number of crashes significantly decrease. In particular, they are safer than traffic signals. The City's own analysis of one of its most dangerous intersections found that a signalized intersection would likely increase the number of vehicle crashes, as opposed to installing a roundabout. When approaching traffic signals, drivers often speed up to make it through the timing of the signal.[31] While drivers are required by law to stop at a stop sign or stoplight, there is no barrier to keep them from running through a red light or stop sign. Roundabouts force traffic to slow down to continue on the roadway. Drivers must reduce speed when entering a roundabout to

[30] Master Plan, p. 6.9

[31] US Department of Transportation, Federal Highway Administration Priority, Market Ready Technologies and Innovations, Roundabouts (2006), available at https://highways.dot.gov/media/9206#:~:text=demonstrating%20success%20in%20reducing%20crashes&text=The%20study%20revealed%20a%2039,involving%20fatal%20or%20incapacitating%20injuries.

navigate the roundabout. Signalized intersections create points of tension between oncoming traffic, such as left turns. Roundabouts do not have the same points of tension because instead traffic flows in a one-directional path. The studies reiterate these safety markers of roundabouts. Typical circulating speeds for a roundabout are 15 – 20 mph, which would help to calm traffic in the vicinity of the Frog Pond development area.[32]

2. Bicycle and Pedestrian Safety and Nearby Schools

Slower speeds mean safter conditions for drivers, bicyclists, and pedestrians, particularly as vehicles transition between the urban and rural settings around Frog Pond. Frog Pond East and South are at the rural/urban edge. Vehicles will be transitioning from 45 mph into urban residential neighborhoods with a middle school and primary school in close proximity. Not only are vehicle crashes of significant concern, pedestrian and bicycle safety are also concerns given the presence of nearby schools. As previously noted, roundabouts reduce the number of conflict points between vehicles and between vehicles and pedestrians or bicycles. Roundabouts also have shorter crossings for pedestrians than signalized intersections.

B. Cost and Resiliency

Currently, the City of Wilsonville spends $200,000 per year updating and performing maintenance on signalized intersections. Roundabouts do not require the same maintenance costs. The alternatives analysis for SW Canyon Creek Road and SW Boeckman Road bear out this cost differential. While initially more expensive to build, roundabouts have lower overall life-cycle costs than traffic signals.

Furthermore, a stoplight requires electricity, which means increased maintenance, cost, and the possibility of power outages. Power outages do not stop roundabouts from working.[33] Roundabouts are resilient to weather conditions in ways traffic signals are not. They are not vulnerable to high winds, fires, or other natural disasters that can prevent traffic signals from working. In most natural disasters, roundabouts are still operational and navigable. Again, given the rural/urban transition, having reliable and resilient intersection enhancements are necessary for a safe and effective transportation system.

C. Particularities for Roundabout at SW Kahle Road and SW Stafford Road

Not only must the intersection at SW Kahle Road and SW Stafford Road manage the rural/urban transition, but it is also encumbered by the BPA easement. The BPA easement does not allow for the construction of metal poles or other structures within the easement area. Even the top of vegetation must have a 25-foot clearance to the lowest point of any BPA wires. Thus, a signalized intersection is not allowed at SW Kahle Road and SW Stafford Road due to the BPA easement.

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[32] Transportation Analysis, p. 18.

[33] US Department of Transportation, Federal Highway Administration Priority, Market Ready Technologies and Innovations, Roundabouts (2006), available at https://highways.dot.gov/media/9206#:~:text=demonstrating%20success%20in%20reducing%20crashes&text=The%20study%20revealed%20a%2039,involving%20fatal%20or%20incapacitating%20injuries.

Section 4 Conclusion

The City has analyzed whether roundabouts represent an appropriate intersection enhancement for SW Kahle Road/SW Stafford Road, SW Brisband Street/SW Stafford Road, and SW 60th Avenue/SW Advance Road due to the intersections along SW Stafford Road falling below LOS D when development in Frog Pond East and South occurs and due to significant safety concerns related to the rural-to-urban transition. The City finds that the roundabouts further the City's legitimate governmental interests by meeting the City's required minimum level of service for the three intersections; increasing vehicle, bicycle, and pedestrian safety; decreasing overall intersection life-cycle costs; ensuring resiliency in the City's transportation system in the event of power outages and weather-related incidents; and complying with the terms of the BPA easement.

Appendix H. Infrastructure Funding Plan

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Memorandum

Date	3 June 2015
To	Chris Neamtzu, City of Wilsonville
From	Brian Vanneman, Leland Consulting Group
CC	Joe Dills, Angelo Planning Group
Subject	**Frog Pond Area Plan: Infrastructure Funding Strategy**
Project	5462 Frog Pond

INTRODUCTION AND EXECUTIVE SUMMARY

The Frog Pond Area Plan, led by the City of Wilsonville, will establish a vision for the 500-acre Frog Pond area and define expectations for the type of community it will be in the future. This memorandum is a part of the Frog Pond Area Plan and summarizes Leland Consulting Group's (LCG) infrastructure funding analysis and proposed strategy, which has been developed in collaboration with City of Wilsonville Community Development, Public Works, and Economic Development staff, and the Angelo Planning Group (APG) team. The types of infrastructure evaluated in this memorandum are transportation, sanitary sewer, water, stormwater, and parks.

Key findings and recommendations of this funding strategy include:

- **Funding strategies vary depending on the category and scale of infrastructure.** *"Local"* infrastructure will be paid for by developers, *"framework"* infrastructure such as Frog Pond arterial roads will be shared between developers and the City when oversizing is involved, and *"major off-site"* infrastructure will be built and paid for by the City through the Capital Improvement Projects (CIP) program. Descriptions of these three infrastructure categories and who pays for what infrastructure begins on page 4.
- **There are more than 40 different infrastructure projects proposed for the 500-acre Frog Pond Area.** The costs of these facilities have been estimated by DKS Associates (DKS), Murray, Smith & Associates, Inc. (MSA), and the City. Each of these facilities falls into one of the three categories listed above. A complete list of the infrastructure facilities and the recommended funding strategy for each begins on page 10.
- **This funding strategy defines two "reimbursement areas"—one for the West ("RA-W") and East and South ("RA-E") Neighborhoods—along with several infrastructure funding strategies that could be used in these areas.** In each reimbursement area, a number of framework infrastructure projects will benefit properties throughout the area. Therefore, the costs of these projects should be equitably distributed among multiple property owners, since there is currently no major, well-capitalized master developer capable of undertaking major infrastructure improvements within Frog Pond. For example, upgrades to Boeckman and Stafford Roads, and two new Neighborhood Parks, will benefit the entire West Neighborhood (and the City as a whole), and their cost cannot be carried by any single property owner.
- **The primary tools by which framework projects in the RA are likely to be funded are developer-initiated reimbursement districts, local improvement districts (LID), and city-initiated reimbursement districts.** These options can also be mixed and matched—both reimbursement districts and LIDs could be implemented to fund different projects in RA-W and –E. Both reimbursement districts and LIDs are tools whereby infrastructure is built upfront by a developer or the City, and the developer is then reimbursed for cost via fees or assessments from property

owners over time. A description of framework infrastructure and potential funding strategies begins on page 5.

- **The total cost of framework projects proposed to be paid for through reimbursement districts or LIDs is estimated to be $10.6 and $11.0 million respectively in the RA-W and RA–E, so these projects will therefore be a significant funding obligation for the developer or City.** However, these investments will be phased; while the RA-W improvements could be needed within the next few years, the RA-E may not be needed for some time.
- **Development in the Frog Pond area will generate significant SDC revenues, ranging from $46.8 to $55.4 million depending on which land use option is selected.** Several different variations of CIP-related revenues and costs are evaluated beginning on page 14. In this context, "revenues" are Systems Development Charges (SDCs, fees paid by developers when applying for building permits) and "costs" are infrastructure paid for by the CIP fund. (Costs associated with reimbursement districts or LIDs are not considered in this calculation since they will be financed and reimbursed separately.) If projected revenues from all three Frog Pond neighborhoods (West, East, and South) are taken into account, SDC revenues should exceed allocated CIP costs. If only the West Neighborhood is considered, then there is a funding gap for transportation, of $1 million for Option D and $1.95 million for Option E, due to CIP contributions to the Boeckman Road Bridge, and Boeckman and Stafford Road Urban Upgrade projects. There is a small sanitary sewer surplus (just under $160,000 for Option E). Water, Stormwater, and Parks SDCs show a surplus.
- **The proposed reimbursement areas will likely pass on most of the framework infrastructure costs to the developers and homebuilders who invest in Frog Pond via a cost allocation (fee or assessment) for each unit of housing.** Because different costs will be passed on to the West and East/South Neighborhoods, and there are different land use options (D and E), this per-unit cost allocation can vary. In the West Neighborhood, this reimbursement district fee is likely to be between $14,100 (Option D) and $17,000 (Option E), for the East and South Neighborhoods, it is likely to be between ($7,500 and $9,100), since more homes and commercial development are planned East of Stafford Road, but comparatively less infrastructure costs. This calculation is shown on page 18. It should be noted that there are different approaches (i.e., per acre) to calculating proportionate shares for reimbursement districts. For purposes of this memo, a per-door cost has been used.

TYPES OF INFRASTRUCTURE

This memorandum proposes a funding strategy for the following five types of infrastructure: transportation, sanitary sewer, water, stormwater, and parks. These are the types of infrastructure that are essential to new residential communities, and the City will play some role in the provision of this infrastructure. Collectively, this infrastructure includes arterial and collector roads, sanitary sewer pipes and pump stations, water pipes and reservoirs, stormwater detention ponds and detention basins, and trails and parks. Other types of infrastructure—particularly utilities such as power and cable—will be needed for Frog Pond, but are not paid for in whole or part by the City of Wilsonville and are therefore not considered here.

Infrastructure cost estimates for Frog Pond were completed by DKS Associates (transportation), Murray, Smith & Associates, Inc. (sanitary sewer, water, and stormwater), and the City of Wilsonville (parks). The City of Wilsonville's Engineering Division provided actual costs (engineering estimates or contractor bids) for more than 20 completed residential subdivision projects that were built in the city between 2005 and 2014. The primary sources for the cost estimates used here are listed below. Additional supplementary sources used can be found in the Appendices.

- *Frog Pond Area Plan – Future Transportation Analysis*, September 24, 2014, DKS Associates, and subsequent refinements to cost estimates (received May 27, 2015).
- *Frog Pond Area Plan – Concept Plan Infrastructure Analysis*, Murray, Smith & Associates, Inc., March 18, 2015.

Figures 1 and 2 below are representative images from the analysis prepared by DKS and MSA that show the location and types of infrastructure planned for Frog Pond. They are intended to be illustrative rather than a complete catalog of infrastructure. Figure 1 shows transportation infrastructure such as streets and trails. Figure 2 shows the sanitary sewer, water, and stormwater infrastructure proposed for the Frog Pond West Neighborhood (as red, blue, and green lines, respectively).

This memorandum does not contain detailed descriptions or specifications about the infrastructure to be funded. For example, DKS' recommendation is that the Advance Road Urban Upgrade project would upgrade "the existing road to a 3-lane cross section with sidewalks and bike lanes, which would be similar for either a Collector or Minor Arterial…" For such detailed descriptions of Frog Pond infrastructure, please consult the work prepared by DKS, MSA, and Angelo Planning Group (APG).

Figure 1. Auto, Bicycle and Pedestrian Transportation Infrastructure Diagram (DKS)

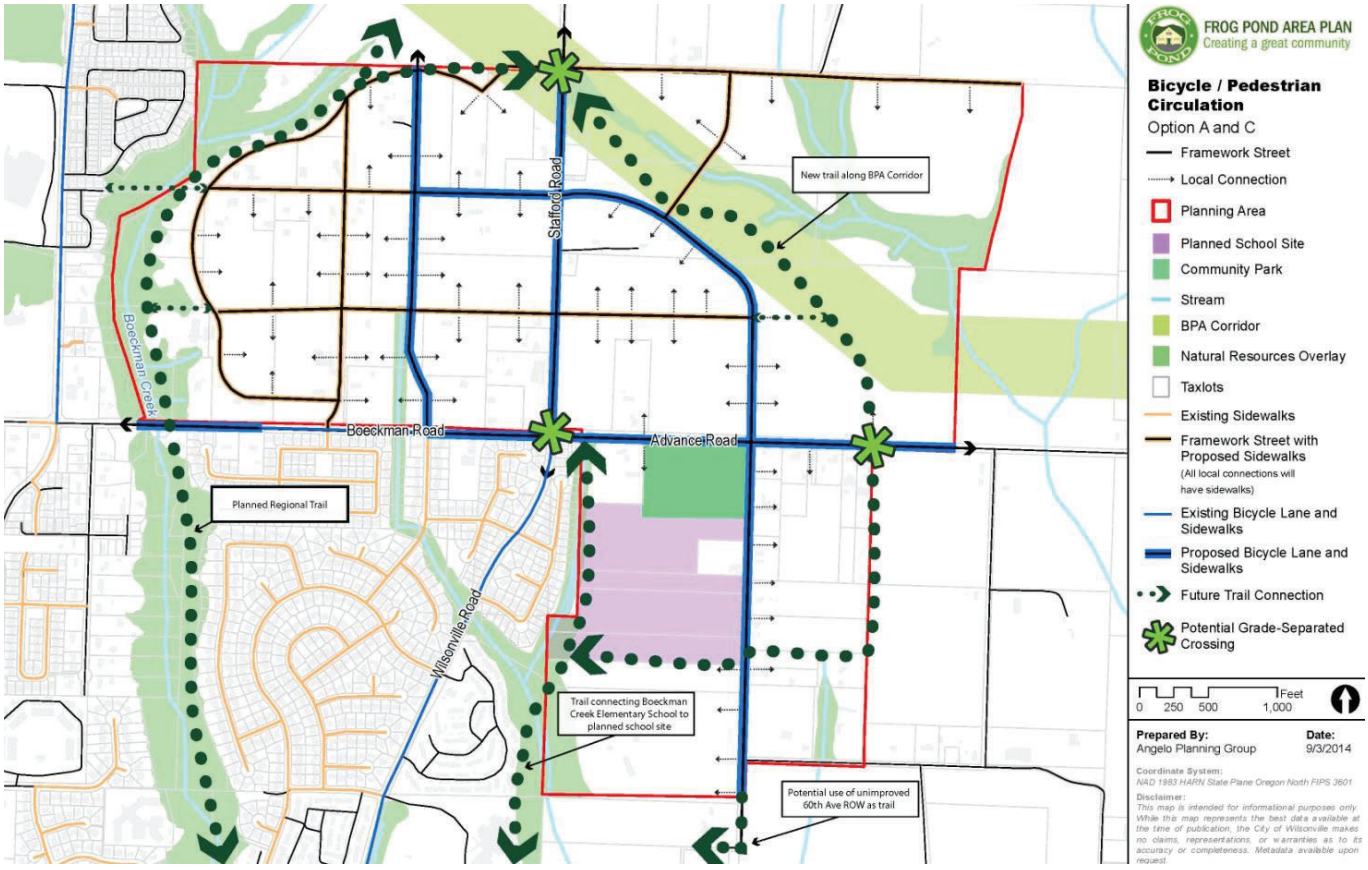
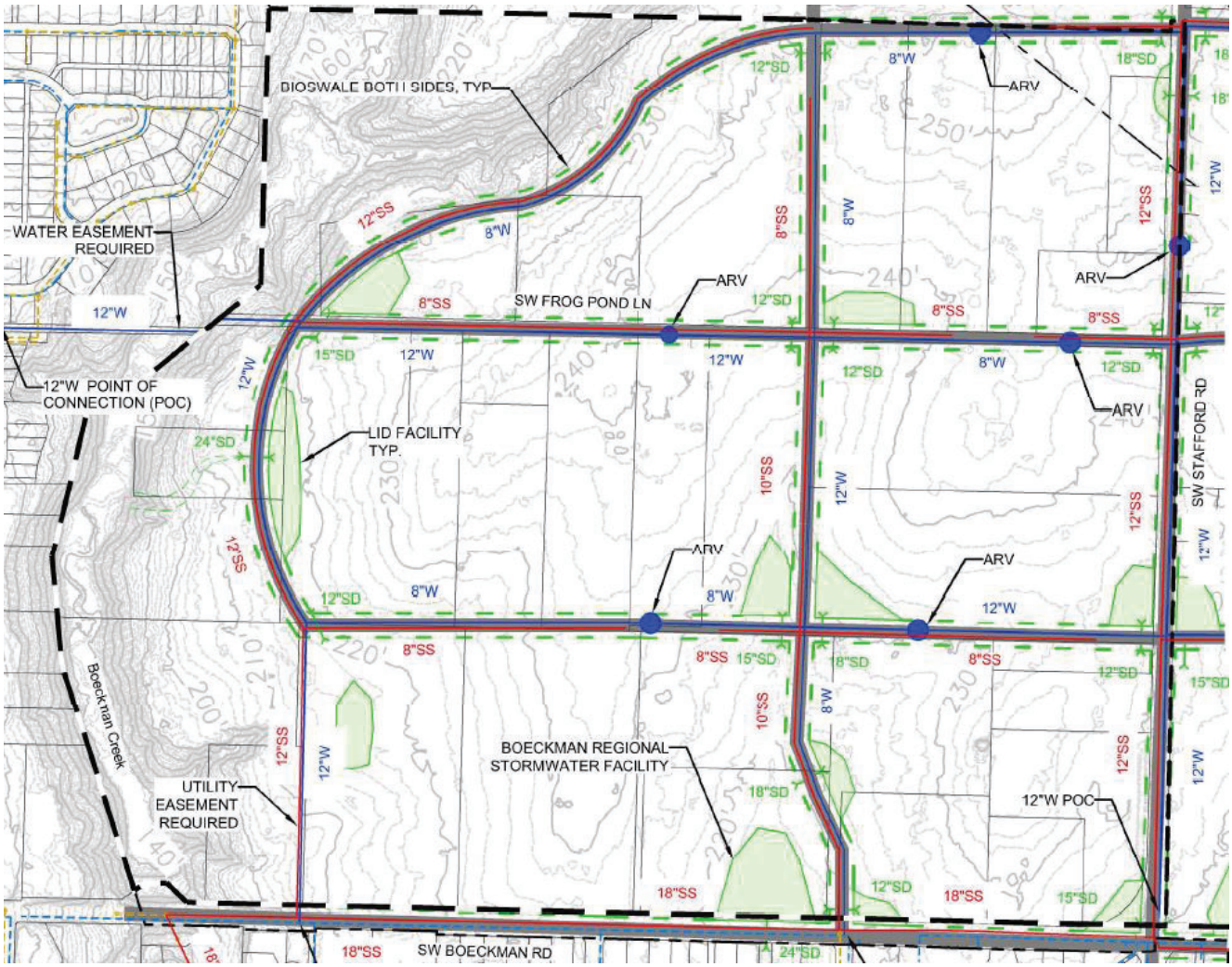


Figure 2. Frog Pond Composite Utility Plan – West Neighborhood (MSA)



INFRASTRUCTURE CATEGORIES AND FUNDING APPROACHES

There are three different categories or scales of infrastructure, which are listed below. It is important to distinguish between each of these infrastructure categories because different approaches to and sources of funding (e.g., City or developer) are typically used for each of the different categories. This funding strategy also recommends different approaches for each of these infrastructure categories.

- "Local" or "on-site" infrastructure;
- "Major off-site" infrastructure; and
- "Framework" or "major framework" infrastructure.

Local or On-Site Infrastructure

- "Local" or "on-site" infrastructure is located on or adjacent to a development property and largely serves the development (residential or commercial) that is on the site. This infrastructure may be of any type—transportation, sanitary sewer, water, stormwater, or parks.

- The City's policy is that this infrastructure is built and largely paid for by developers. The City may participate via SDC credits for oversized components (explained in the Framework Infrastructure section below).
- An example of local infrastructure is a local street 8-inch water line or sewer line that will serve a development site.
- The costs of the most local level of on-site infrastructure (with no oversized component) are not considered in this funding strategy since these are the responsibility of individual developers. These developer costs, are however, considered separately, in the Land Development Financial Analysis memorandum.
- This funding strategy recommends that developers continue to pay for local infrastructure up front, while receiving SDC credits for oversized components, in keeping with the City's policies.

Major Off-Site Infrastructure

- Major off-site infrastructure is infrastructure that is located outside of the 500-acre Frog Pond concept plan boundary.
- Examples include the West Side (water) Reservoir, Boeckman Trunk Sewer Line, Memorial Park Pump Station (MPPS), Boeckman Road Bridge, and Stafford Road—65th Ave Intersection Improvements.
- One reason this infrastructure is different from framework infrastructure is that a greater share of its capacity is needed to serve other parts of the City. Put another way, these are projects of citywide importance. For example, MSA has estimated that 25 percent of the capacity of the West Side Reservoir is needed for Frog Pond; the other 75 percent is needed to support growth in other parts of the City.
- For this reason, major off-site infrastructure is built and paid for by the City of Wilsonville through the CIP. SDCs are the primary source of funding for CIP facilities intended to provide capacity for growth; additional funding may come from utility rate funds, general fund reserves, transfers from other government agencies, and urban renewal funds (within urban renewal areas).
- Information on the City's capital projects program can be found at: http://www.ci.wilsonville.or.us/DocumentCenter/View/7317

Framework Infrastructure

- "Framework" or "major framework" infrastructure is larger than local infrastructure, serves many properties within Frog Pond, and is located within or adjacent to the Frog Pond boundary.
- Examples include upgrades to Boeckman and Stafford Roads, which will serve all of the homes planned for Frog Pond, as well as (to some degree) residents and businesses elsewhere in the City. Another example is the "oversized" water line in Stafford Road.
- In terms of scale and location, framework infrastructure is between local and major off-site infrastructure. However, there are likely to be more policy and logistical choices associated with framework than local or major off-site infrastructure.
- There is a developer and City share of most framework infrastructure, meaning that some part of the costs is paid for by both parties. This is in recognition that this larger infrastructure serves both the immediately surrounding development, as well as current and future residents and businesses. The developer share is the minimum size of the facility that is required by the City to serve the proposed development. For roads, the minimum required size is 24 feet from face of curb, or 48 feet if developers control both sides of the road. For sewer and water pipes, the minimum required pipe size

is 8 inches. The size of the facility beyond this minimum required size is the "oversize" amount, which is the City's responsibility.

- These facilities may be built and paid for by developers, or by the City. If developers build the facility, they typically pay directly for the entire facility; the City contributes its (oversize) share via SDC credits, which developers can count against the SDC fees they owe at the time of building permit issuance. Several additional framework infrastructure funding strategies are described in the section below.
- This funding strategy recommends that the City consider taking an assertive and creative approach to coordinate the building of framework infrastructure and consider the tools described below, such as developer- and City-initiated reimbursement districts, and local improvement districts (LIDs). This is in part because there is at present no master developer at Frog Pond, and thus no known, well-capitalized party capable of financing major framework infrastructure.

FRAMEWORK INFRASTRUCTURE FUNDING STRATEGIES

While the appropriate funding strategy for local and major off-site improvements is relatively straightforward (developer and CIP funding, respectively), funding for framework infrastructure requires more careful consideration for several reasons:

- Framework infrastructure costs are significant—greater than local infrastructure—and must be paid for early in the development process, while the revenues that offset those costs (such as fees, lot or home sales) come later and may take place over many years, inferring that a financing mechanism or other approach is needed.
- The infrastructure will benefit multiple properties. The costs and benefits of infrastructure are not necessarily evenly divided among parties. For example, a 2.5-acre neighborhood park could theoretically be sited on a 5-acre property. While the land and construction cost for this park would typically fall to the developer, property owners and future residents throughout the West Neighborhood will benefit from the park. Thus, the cost would be concentrated and the benefit widespread. A mechanism that can distribute the costs among multiple parties is therefore needed.
- At this time, the City cannot rely on a "master developer" who would fund major projects as part of developing a significant part of Frog Pond West. As stated above, there is as yet no master developer or major land owners in the Frog Pond Area and thus no known, well-capitalized party capable of financing such major framework infrastructure. Currently, property is divided amongst many land owners. There are 26 property owners in the West Neighborhood, and the average property size is 5 acres. The largest ownership is 25 acres and the smallest is 0.9 acres.
- City action that helps to implement framework infrastructure will show momentum and public commitment to moving Frog Pond forward in a phased and logical manner. Cities often use their ability to invest in infrastructure to strategically advance the development of employment, residential, and mixed use areas.
- Without a larger funding strategy, small early developers in Frog Pond could struggle to make the infrastructure improvements necessary to develop their sites.

Reimbursement Areas

Given this context for framework infrastructure, an important component of this funding strategy is two "reimbursement areas"—one that encompasses infrastructure related to the West Neighborhood (RA-W), and one that encompasses infrastructure related to the East and South Neighborhoods (RA-E).

These reimbursement areas could incorporate some or all of the following specific funding tools, several of which are described in greater detail below:

- Reimbursement districts (RD), either developer or city initiated. Within each reimbursement *area* (West and East), numerous individual reimbursement *districts* could exist.
- LID, either developer or city initiated; or Advance Finance Districts (AFD), a variation on LID.
- Supplemental SDC.
- Expansion of the types of facilities that are considered SDC creditable by the City.
- Direct CIP investments.

The basic principles behind RD, LID, and supplemental SDCs are relatively similar: infrastructure is built and paid for in advance, and fees paid by property owners or developers over time serve to pay the principal, interest, and administrative costs associated with funding the original infrastructure.

There are approximately $10.6 million of major framework project costs within the RA-W, associated with the projects listed below. A detailed list of all projects, and the portion that RA-W would pay, is included in Tables 1 through 3, which begin on page 11.

- Two Neighborhood Parks in the West Neighborhood;
- Boeckman Road Urban Upgrade, including associated sewer and water lines in the right of way;
- Stafford Road Urban Upgrade, including associated sewer and water lines in the right of way; and
- Boeckman/Stafford Traffic Signal.

There are approximately $11.0 million of major framework project costs within the RA-E, as shown in Tables 1 through 3.

Improvements and funding mechanisms for the RA-W are likely to be needed before RA-E. Improvements and funding mechanisms for RA-W could be initiated following the adoption of the Frog Pond Area Plan and subsequent West Neighborhood Master Plan (Phase 2 of this project). The RA-E would only be initiated when the East and South Neighborhoods are brought into the Urban Growth Boundary and ready for development, which could be many years.

Reimbursement Districts

A reimbursement district is an area within which one party (a developer or the City) builds infrastructure that benefits multiple property owners. The other benefiting property owners pay a reimbursement fee—a pro rata share of the infrastructure costs (determined on a per-unit, lineal foot, or per-acre basis)—to the original developer or City, typically at the time when property owners seek public works permits for development. A single reimbursement district could cover all of the infrastructure in RA-W, or there could be numerous districts to cover different pieces of road, park, sewer, and water infrastructure. Reimbursement district fees are in addition to SDCs.

The City has used reimbursement districts in the past, for example, the City formed the Coffee Lake Drive Sewer Improvements Reimbursement District in 2012. The City's Reimbursement District policies are set forth in section 3.116 of the City Code.

LCG recommends that the following approaches and mechanisms be included in reimbursement districts, which should help to mitigate the costs and risk to the City:

- Developers should be encouraged to form and provide funding for reimbursement district improvements.
- RA-W improvements can be phased. For example, Boeckman Road might be improved before Stafford Road, which would enable developers or the City to stagger or phase its investments and take on smaller amounts of debt at any one time.

- Include an inflationary factor in the calculation of the reimbursement fee, which can help cover the developers or the City's interest carrying costs over time.
- Be prepared to extend the "sunset" time period for the reimbursement district, so that developers or the City can recapture all costs. The sunset time period is pre-set at ten years currently, and can be extended by the City Council for "good cause."

In a developer-initiated reimbursement district, a developer pays directly for the entire facility; the City contributes its (oversize) share via Systems Development Charge (SDC) credits, which developers can count against the SDC fees they owe at the time of building permit issuance.

In a city-initiated reimbursement district, the City would build and pay for the entire facility upfront. The developer (non-oversized) portion would then be charged back to developers via a reimbursement district.

In either case, the upfront capital that pays for reimbursement district improvements must be advanced by developers (from private sources) or the City (from the CIP fund, general fund, or other source), without a secure form of repayment. Therefore, there is financial risk to the party that initiates the district and developers may avoid initiating large-scale reimbursement districts. If development is slower than expected, the developer or City will have to carry the cost of debt service payments for a longer period of time. Fee revenue will also be lower if the amount of development is less than expected (for example, if a property owner is permitted to build 100 homes but only chooses to build 50). However, this particular issue could be addressed by different methodologies, including calculating costs on a per acre basis.

Local Improvement Districts

An LID is similar to a reimbursement district in that the cost of infrastructure that benefits multiple property owners is divided among those property owners in an equitable manner, and paid by an assessment. Like reimbursement districts, LIDs may be initiated by property owners or the City. One or more LIDs could be used in RA-W and RA–E, in conjunction with or in place of reimbursement districts.

LIDs differ from reimbursement districts in the following important ways:

- Typically, a majority (50% plus one) of property owners (weighted by the amount of area they own) must sign a petition in support of initiating the district. (The establishment of a reimbursement district is a discretionary decision made by the city council.) Naturally, this requires the support of property owners, and outreach and discussion among property owners may require considerable time.
- Assessments may be paid in a lump sum or financed over time at the property owner's discretion. Assessments are due upon allocation of costs. As noted above, fees are typically due later in a reimbursement district, when property owners seek public works permits.
- The LID creates a lien against each individual's property until all assessments are paid in full. This is seen as a negative by lenders, whose strong preference is that there be no other claims on the property on which they are making a loan, and often by property owners. This is a positive since the lien creates a secure income stream against which the City can issue bond debt. Whether an LID is initiated by property owners or the City, LID debt is always issued by a government agency, and thus takes advantage of low interest rates.

Thus, LIDs are a financing mechanism that can create capital for construction. By contrast, the capital for a reimbursement district must be advanced by the City (from the City's various infrastructure-related funds and may or may not include issuance of City debt) or developers (from private sources).

Additional details regarding LIDs can be found in Oregon Revised Statutes (ORS) Chapter 223: Local Improvements and Works.

Other Approaches to Framework Infrastructure

In addition to the reimbursement district and LID funding tools described above, the following tools help with the funding of framework infrastructure in the two reimbursement areas:

- *Supplemental SDC.* The City could establish an additional, supplemental SDC specific to Frog Pond. Functionally, this would be similar to a reimbursement district that covered all of the major framework costs associated with the entire RA-W or RA-E—a new fee would be put in place to help pay for these costs.
- *Expansion of the types of facilities that are considered SDC creditable by the City.* For example, certain park improvements could be considered SDC creditable, which would provide an extra incentive for developers to make those improvements. Such an approach was taken in Villebois, where certain park improvements were creditable. This could reduce SDC receipts which would be used to help fund CIP projects elsewhere.
- *Direct CIP investments.* As described elsewhere, the City could potentially fund additional projects or portions of projects, such as the Boeckman or Stafford Road upgrades, through the CIP. An analysis of each infrastructure component may be appropriate to determine if doing so would require deferring or reprioritizing other projects already on the list.

OTHER FUNDING SOURCES

In a small number of cases, there are additional funding sources that are expected to supplement those described above. These additional funding sources are:

- West Linn - Wilsonville School District. Two schools will be built within Frog Pond, and the school district is anticipated to pay for some infrastructure needed to serve these schools, such as improvements to Advance Road, Boeckman-Stafford traffic signal, South Neighborhood Collector roads, 12” water main extension, and a pump station and force main. It is important to note that what infrastructure the District will build is subject to the school project’s plans and phasing, and the City’s review of impacts—all of which are in the pre-application stages. All citations of costs and revenues related to the schools are preliminary and subject to change.
- Clackamas County. The County has identified the Stafford Road—65th Avenue Improvements in the agency’s transportation system plan. While this project is not likely to be built in the short or medium term (before 10 years), it is included in the list of relevant (off-site) projects in this strategy, and this strategy assumes that the County will take a major role in funding and building the project, with some participation from the City. The cost estimate used in this plan was developed by the County.
- Urban Renewal. No City of Wilsonville urban renewal funding for Frog Pond has been assumed as a part of this funding strategy. Conversations with City staff indicate that the City’s urban renewal task force has identified investments elsewhere in the City that are likely to be higher priorities.
- Grants and investments by other government agencies. Grants are a potential funding source. However, no specific grants have yet been identified that the planning team believes will provide significant infrastructure funding for Frog Pond. Metro’s Metropolitan Transportation Improvement Program (MTIP) is one such grant program, which guides how a range of federal and local transportation funds are invested in the region. MTIP funds could be used for major projects associated with Frog Pond, such as the Boeckman Road Bridge, but the collective judgment of City staff and the planning team is that it will be difficult to secure such funds since demand for MTIP funds typically outstrips availability. Nonetheless, it may be worthwhile for project stakeholders to continue to pursue grants and investments by other government agencies.

LIST OF FROG POND INFRASTRUCTURE PROJECTS

Tables 1 through 3 below contain a list of all the infrastructure projects associated with Frog Pond. Projects are grouped by type—transportation, sanitary sewer, water, stormwater, and parks—and then by category—local, framework, and major off-sites.

The “Funding Approach and Notes” column describes LCG’s recommended approach to funding each project, which has been developed in collaboration with the City’s Community Development and Public Works staff and APG team. Much of the information in this column is a recap of the Infrastructure Categories section above. An important premise is that the funding strategy for area within the UGB (the West Neighborhood, Schools, and community park) must stand on its own. The timing of development of the urban reserve areas is too uncertain to rely on for funding of projects that are needed for development of the area within the UGB.

The “Estimates” column shows who produced the cost estimate; in some cases, two cost estimates were completed. The costs columns show what entity or fund is expected to pay for the project.

Total estimated developer costs for RA-W and RA-E are highlighted in yellow at the bottom of Table 3.

Table 1. Frog Pond Infrastructure Cost Summary - Transportation

Project Category and Name		Who Builds?	Timing Facility Built with:	Funding Approach and Notes	Estimates by Est. 1	Est. 2	Total Cost Est	City Costs CIP or Other Fund	SDC Credits	Developer Costs Collectors Locals	RA West (RA-W)	RA East (RA-E)	Other Costs Amount	Source	City Cost Attributable to FP
Transportation															
Local	West Neighborhood Collectors	Developer	West	Developers build and receive SDC credits for oversize '(generally, roadway > 24' or 48', and bike lanes).	DKS	City	$9,510,000		$1,585,000	$7,925,000					$0
	East Neighborhood Collectors	Developer	East		DKS	City	$8,160,000		$1,360,000	$6,800,000					$0
	South Neighborhood Collectors	Developer	South	As above; school also pays for proportionate share.	DKS	City	$3,900,000		$450,000	$2,650,000			$800,000	School D.	$0
	Local roads	Developer	Varies	Developers build. No city costs, so costs are not included here.		City	-								-
Framework	Boeckman Road Urban Upgrade UU-02 (Part 1)	City	West	City builds. South side is city responsibility, north side is developers responsibility and is charged to RDW.	DKS		$3,700,000	$1,850,000			$1,850,000				$1,850,000
	Boeckman/Stafford Traffic Signal UU-02 (Part 2)	City	West	City builds, charges proportionate shares to RDW, RDE, and school district; city pays for remainder of project via CIP. This could be a gateway treatment than a roundabout.	DKS		$500,000				$70,000	$305,000	$125,000	School D.	$0
	Stafford Road Urban Upgrade UU-06 Phase 1	City	West	City builds with West Neighborhood; places reimbursement district on RDW, City (CIP) pays for 14' of 38'.	DKS		$3,000,000	$1,000,000			$2,000,000				$1,000,000
	Advance Road Urban Upgrade UU-P1 Phase 1A and 1B	City	School	Phase 1A and 1B is the facilities on the south side of Advance that are west of 60th. City builds, school district pays pro rata share.	DKS		$1,087,500	$543,750					$543,750	School D.	$0
	Stafford Road Urban Upgrade UU-06 Phase 2	City	East	City builds with East Neighborhood, places reimbursement district on RDE, developers pays for all additional roadway.	DKS	City	$2,000,000					$2,000,000			$0
	Potential Single-Lane Roundabout or Gateway Treatment on Stafford Road	City	East	Project is only built when E neighborhood develops. City builds, charges proportionate share to RDE. This could be more of a gateway treatment than a roundabout.	DKS		$600,000	$600,000							$0
	Advance Road Urban Upgrade UU-P1 Phase 2	City	East	Phase 2 is the facilities on the north side of Advance, and all facilities (north and south) east of 60th. City builds, pays for portion outside of FP (south side), charges developer costs to RDE.	DKS		$3,262,500	$543,750				$2,718,750			$0
Major Off Site	Boeckman Road Bridge Improvements UU-01	City	TBD	City builds via CIP. This project is of citywide importance and addresses safety issues.	OBEC		$12,200,000	$12,200,000							$4,270,000
	Stafford Rd./65th Ave Improvements SI-03	County	TBD	Future project; not directly associated with FP. 10% attributable to FP.	County		$5,500,000	$1,000,000		$0			$4,500,000	County	$100,000
	Subtotal						**$53,420,000**	**$17,737,500**	**$3,395,000**	**$17,375,000**	**$3,920,000**	**$5,023,750**	**$5,968,750**		**$8,907,500**

Source for all subsequent tables and figures: Leland Consulting Group, based on cost estimates provided by DKS, MSA, and City of Wilsonville.

All figures and funding strategies are preliminary and subject to change.

Table 2. Frog Pond Infrastructure Cost Summary – Sanitary Sewer and Water

Project Category and Name		Who Builds?	Timing Facility Built with:	Funding Approach and Notes	Estimates by Est. 1	Est. 2	Total Cost Est	City Costs CIP or Other Fund	SDC Credits	Developer Costs Collectors Locals	RA West (RA-W)	RA East (RA-E)	Other Costs Amount	Source	City Cost Attributable to FP
Sanitary Sewer															$0
Local	Major Sanitary Lines: West	Developer	West	Developers build, receive SDC credits for oversized components (>8")	MSA	City	$1,370,000		$80,000	$1,290,000					$0
	Major Sanitary Lines: East	Developer	East	"	MSA	City	$630,000		$40,000	$590,000					$0
	Major Sanitary Lines: South	Developer	South	"	MSA	City	$660,000		$35,000	$625,000					$0
	Local SS (8" and smaller)	Developer	Varies	Developers build. No city costs, so costs are not included here.	MSA	City	-								-
Framework	Boeckman Road SS	City	West	City builds as part of road rebuild, charges developer (non-oversize) portion to RDW.	MSA		$680,000	$120,000			$560,000				$120,000
	Stafford Road SS	City	West	City builds with Stafford Road Phase 1, charges developer (non-oversize) costs to RDW and RDE. Rough proportionality of 1/3 demand in West, and 2/3 in East assumed here.	MSA		$640,000	$50,000			$196,667	$393,333			$50,000
	Advance Road SS	City	School	City builds, charges developer (non-oversize) portion to RDE. This project only extends to 60th Ave; SS to the east is not oversized.	MSA		$780,000	$40,000				$740,000			$40,000
	Pump station and force main	School	School	School builds, serves school properties.	MSA		$1,290,000						$1,290,000	School D.	$0
Major Off Site	Boeckman Trunk Sewer	City	East	Major off site project, paid by City via CIP. 52% attributable to FP. Likely does not need to be built for the West Neighborhood, Schools, and Parks alone; can be built with East and South Neighborhoods.	MSA		$8,000,000	$8,000,000		$0					$4,160,000
	Memorial Park Pump Station	City	West	Major off site project, paid by City via CIP. 48% attributable to FP; however project is not growth related per se; it is in the flood plain and should be upgraded. Does not need to be in place until 40% of West Neighborhood and School is in place.	MSA		$5,200,000	$5,200,000		$0					$2,496,000
	Subtotal						**$19,250,000**	**$13,410,000**	**$155,000**	**$2,505,000**	**$756,667**	**$1,133,333**	**$1,290,000**		**$6,866,000**
Water															$0
Local	Major Water Lines: West	Developer	West	Developers build, receive SDC credits for oversized components (>8" pipe size).	MSA	City	$2,580,000		$460,000	$2,120,000					$0
	Major Water Lines: East	Developer	East		MSA	City	$2,580,000		$470,000	$2,110,000					$0
	Major Water Lines: South	Developer	South		MSA	City	$1,860,000		$330,000	$1,530,000					$0
	Local Water (8" and smaller)	Developer	Varies	Developers build. No city costs, so not included here.	MSA	City	$0								$0
Framework	Boeckman Road W	City	NA	NA. Water line in Boeckman already exists.	MSA		$0								$0
	Stafford Road W	City	West	Same as Stafford SS. 'City builds with Stafford Road Phase 1, charges developer (non-oversize) costs to RDW and RDE. Rough proportionality of 1/3 demand in West, and 2/3 in East assumed here.	MSA		$1,080,000	$200,000			$293,333	$586,667			$200,000
	Advance Road W	Shared	School	City builds, charges developer (non-oversize) portion to RDE.	MSA		$890,000	$160,000				$730,000			$160,000
Major Off Site	West Side Reservoir	City	West	Major off site project, paid by City via CIP. 25% attibutable to FP.	MSA		$5,800,000	$5,800,000							$1,450,000
	Subtotal						**$14,790,000**	**$6,160,000**	**$1,260,000**	**$5,760,000**	**$293,333**	**$1,316,667**	**$0**		**$1,810,000**

Source for all subsequent tables and figures: Leland Consulting Group, based on cost estimates provided by DKS, MSA, and City of Wilsonville. All figures and funding strategies are preliminary and subject to change.

Table 3. Frog Pond Infrastructure Cost Summary – Stormwater and Parks

Project Category and Name		Who Builds?	Timing Facility Built with:	Funding Approach and Notes	Estimates by Est. 1	Est. 2	Total Cost Est	City Costs CIP or Other Fund	SDC Credits	Developer Costs Collectors Locals	RA West (RA-W)	RA East (RA-E)	Other Costs Amount	Source	City Cost Attributable to FP
Stormwater															$0
Local	Local storm detention, on development sites.	Developer	Varies	Developers build. No city costs, so not included here.	MSA	City	$0			$0					$0
Major Framework	Boeckman Road regional stormwater facility	NA	NA	Included in DKS' roadway cost estimates	MSA	DKS	$0								$0
	Stafford Road regional stormwater facility	NA	NA	"	MSA	DKS	$0								$0
	Subtotal						**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**		**$0**
Parks															$0
Local	Frog Pond Neighborhood Park, P16, West	City	West	City acquires land, pays for construction, charges cost to RDW. Cost estimates include land and construction costs.	City		$3,375,900				$3,375,900				$0
	Frog Pond Neighborhood Park, P17, West	City	West	As above. Linear park with fewer built amenities, adjacent or connected to the Boeckman Creek Trail.	City		$2,286,900				$2,286,900				$0
	Frog Pond East Neighborhood Park	City	East	As above, city charges cost to RDE.	City		$3,375,900					$3,375,900			$0
	Boeckman Creek Trail, RT-01A	City	West	Developer builds, receives City share (2/3) from either SDC credits (assumed here) or CIP.	DKS		$850,000		$570,000	$280,000					$0
	South Neighborhood Trail	City	East		DKS		$700,000		$460,000	$240,000					$0
	BPA Easement Trail	City	East	City builds since trail is in BPA right of way, charges developer portion (1/3) to RDE.	DKS		$670,000	$450,000				$220,000			$450,000
	LT-P5 New School Site Trail	City	School	School builds and pays for this trail.	DKS		$700,000						$700,000	School D.	$0
Framework	Advance Rd. School Community Park, P18	City	West	Major project, paid via City CIP. 25% attributable to FP.	City		$5,410,000	$5,410,000							$1,352,500
	Subtotal						**$17,368,700**	**$5,860,000**	**$1,030,000**	**$520,000**	**$5,662,800**	**$3,595,900**	**$700,000**		**$1,802,500**
Total Costs							**$104,828,700**	**$43,167,500**	**$5,840,000**	**$26,160,000**	**$10,632,800**	**$11,069,650**	**$7,958,750**		**$19,386,000**

Source for all subsequent tables and figures: Leland Consulting Group, based on cost estimates provided by DKS, MSA, and City of Wilsonville.

All figures and funding strategies are preliminary and subject to change.

CIP COSTS AND REVENUES

This section compares estimates of the System Development Charge (SDC) revenues that would be generated by development in Frog Pond, with the Capital Improvement Projects (CIP) costs associated with Frog Pond, in order to estimate a funding surplus or gap for the City.

Since the primary revenue source for Capital Improvements Projects is SDCs—paid when building permits are obtained—these estimates depend in part on the land use density option selected. The estimates also depend on whether we consider the entire Frog Pond Area, or just the West Neighborhood. Note that in cases where current SDCs do not meet CIP needs, SDCs can be increased, or supplemental SDCs or reimbursement fees can be assigned to particular areas.

Table 4 below shows the two most recent land use options prepared by Angelo Planning Group, Options D and E. Option D is the working draft Concept Plan that was shared at the recent Open House. Option E is a lower density option that has been prepared for Planning Commission review. The primary difference in the two options, from an infrastructure funding point of view, is the amount of single family housing—Option D has approximately 21 percent more dwelling units, and therefore, significantly more SDC revenue.

Table 4. Land Use Options D and E

	D	E	
Frog Pond - All Neighborhoods			
Single Family (units)	**2,078**	**1,716**	**dus**
Multifamily (units)	-	-	dus
Commercial Area (sf)	69,150	69,150	SF
Elementary School (sf)	67,000	67,000	SF
Middle School (sf)	92,500	92,500	SF
Community Parks	10.0	10.0	acres
Neighborhood Parks	7.5	7.5	acres
West Neighborhood	754	625	dus
South and East Neighborhoods	1,324	1,091	dus

Source: Angelo Planning Group, Leland Consulting Group

Table 5 shows the current SDC fees paid by one single family home in Wilsonville, as well as the SDC revenues projected for Frog Pond under both land use options. Total SDC revenues are $56.0 and $47.3 million for Options D and E respectively.

Table 5. SDC Revenues - Options D and E

Plan and Area	Transp.	Sewer	Water	Storm	Parks	Total
Single Family Home	$7,381	$4,647	$5,300	$1,458	$5,150	$23,936
Option D						
West Neighborhood	$5,568,594	$3,503,838	$4,079,178	$1,129,280	$3,883,100	$18,163,990
East & South Neighborhoods	$13,766,649	$6,701,320	$7,542,193	$2,357,992	$6,910,522	$37,278,676
Total	**$19,335,243**	**$10,205,158**	**$11,621,371**	**$3,487,272**	**$10,793,622**	**$55,442,665**
Option E						
West Neighborhood	$4,616,445	$2,904,375	$3,395,478	$941,198	$3,218,750	$15,076,246
East & South Neighborhoods	$12,046,876	$5,618,569	$6,307,293	$2,018,278	$5,710,572	$31,701,588
Total	**$16,663,321**	**$8,522,944**	**$9,702,771**	**$2,959,476**	**$8,929,322**	**$46,777,833**

Source: City of Wilsonville, Leland Consulting Group

Note that not all SDC revenue comes from single family home development. About 10 percent of the total revenue comes from other types of development, including commercial and schools.

Tables 6 through 9 below compare SDC revenue (from Table 5) to the City's CIP costs (see "City Cost Attributable to FP" column at far right of infrastructure cost summary tables).

Note that not all City costs are considered to be attributable to Frog Pond. Rather, a percentage of the demand for *major off site* projects has been allocated to Frog Pond; notes are shown in the Funding Approach and Notes column of the infrastructure cost summary tables. For example, as mentioned above, only 25 percent of the West Side Reservoir is estimated to be attributable to new demand from Frog Pond, and thus, only 25 percent of the cost has been attributed to Frog Pond. Other examples include: 52 percent of the flow managed by the Boeckman Trunk Sewer, and 48 percent of the flow managed by the Memorial Park Pump Station, is attributable to Frog Pond, per MSA's analysis. The City has estimated that 35 percent of the PM peak hour traffic on the Boeckman Road Bridge is attributable to Frog Pond.

100 percent of the City's CIP costs associated with Framework and local infrastructure is considered to be attributable to Frog Pond, since this infrastructure likely would not be built if the area were not developed.

Tables 6 and 7 show that, when the entire Frog Pond area (all three neighborhoods) is taken into account, there is a funding surplus in each of the infrastructure types. Note that this funding surplus will be directed to the CIP, and thereby to other projects of citywide importance from which Frog Pond residents and businesses will benefit.

Table 6. Revenues and Costs – Option D, All Neighborhoods

	Transportation	Sewer	Water	Stormwater	Parks	**Total**
Sources						
SDCs Generated within FP Area	$19,335,243	$10,205,158	$11,621,371	$3,487,272	$10,793,622	$55,442,665
- SDCs credited to developers	$3,395,000	$155,000	$1,260,000	$0	$1,030,000	$5,840,000
Net Sources	$15,940,243	$10,050,158	$10,361,371	$3,487,272	$9,763,622	$49,602,665
Uses (CIP Costs Attributable to Frog Pond)	$8,907,500	$6,866,000	$1,810,000	$0	$1,802,500	$19,386,000
Funding Surplus or (Gap)	**$7,032,743**	**$3,184,158**	**$8,551,371**	**$3,487,272**	**$7,961,122**	**$30,216,665**

Source: City of Wilsonville, Leland Consulting Group

Table 7. Revenues and Costs – Option E, All Neighborhoods

	Transportation	Sewer	Water	Stormwater	Parks	**Total**
Sources						
SDCs Generated within FP Area	$16,663,321	$8,522,944	$9,702,771	$2,959,476	$8,929,322	$46,777,833
- SDCs credited to developers	$3,395,000	$155,000	$1,260,000	$0	$1,030,000	$5,840,000
Net Sources	$13,268,321	$8,367,944	$8,442,771	$2,959,476	$7,899,322	$40,937,833
Uses (CIP Costs Attributable to Frog Pond)	$8,907,500	$6,866,000	$1,810,000	$0	$1,802,500	$19,386,000
Funding Surplus or (Gap)	**$4,360,821**	**$1,501,944**	**$6,632,771**	**$2,959,476**	**$6,096,822**	**$21,551,833**

Source: City of Wilsonville, Leland Consulting Group

Tables 8 and 9 show that, when just the West Neighborhood is considered, there is a funding surplus in most of the infrastructure types. The exception is transportation, in which there is a $1 million gap for Option D, and a $1.95 million gap for Option E due to CIP contributions to the Boeckman Road Bridge, and Boeckman and Stafford Road Urban Upgrade projects ($4.95 million in Frog Pond West attributable costs). There are funding surpluses, sometimes slight, in the other infrastructure categories.

The sanitary sewer infrastructure surplus is very small—just under $160,000 for Option E. This is because the Memorial Park Pump Station and framework sewer lines in Boeckman and Stafford Roads ($2.66 million in Frog Pond West attributable costs) would need to be built along with the West Neighborhood.

Table 8. Revenues and Costs – Option D, West Neighborhood

	Transportation	Sewer	Water	Stormwater	Parks	**Total**
Sources						
SDCs Generated within FP Area	$5,568,594	$3,503,838	$4,079,178	$1,129,280	$3,883,100	$18,163,990
- SDCs credited to developers	$1,585,000	$80,000	$460,000	$0	$570,000	$2,695,000
Net Sources	$3,983,594	$3,423,838	$3,619,178	$1,129,280	$3,313,100	$15,468,990
Uses (CIP Costs Attributable to Frog Pond)	$4,985,000	$2,666,000	$1,650,000	$0	$1,352,500	$10,653,500
Funding Surplus or (Gap)	**($1,001,406)**	**$757,838**	**$1,969,178**	**$1,129,280**	**$1,960,600**	**$4,815,490**

Table 9. Revenues and Costs – Option E, West Neighborhood

	Transportation	Sewer	Water	Stormwater	Parks	**Total**
Sources						
SDCs Generated within FP Area	$4,616,445	$2,904,375	$3,395,478	$941,198	$3,218,750	$15,076,246
- SDCs credited to developers	$1,585,000	$80,000	$460,000	$0	$570,000	$2,695,000
Net Sources	$3,031,445	$2,824,375	$2,935,478	$941,198	$2,648,750	$12,381,246
Uses (CIP Costs Attributable to Frog Pond)	$4,985,000	$2,666,000	$1,650,000	$0	$1,352,500	$10,653,500
Funding Surplus or (Gap)	**($1,953,555)**	**$158,375**	**$1,285,478**	**$941,198**	**$1,296,250**	**$1,727,746**

REIMBURSEMENT DISTRICT COST ALLOCATION

An important issue for developers considering building in Frog Pond is the allocated cost of the reimbursement districts that they will need to pay in addition to SDCs and the other costs associated with land development. Developers must pay for infrastructure costs somehow, and developers' likely responses to higher-than-typical infrastructure costs will be to try to negotiate a lower cost for land, pass higher costs on through a higher home sale price (if possible), or look for other places where they can find buildable residential land. The impact of infrastructure costs on development feasibility is further explored in the Frog Pond Land Development Financial Analysis memorandum.

Table 10 shows the total cost of projects proposed to be paid for by RA-W and RA-E, and the "residential allocation." These figures come from the last row in Table 3. For RA-W, all costs paid for by the district are allocated to residential development. In RA-E, some costs (about 10 percent) are paid by commercial development, schools, and parks. The cost per unit is significantly higher in the West than East, since a smaller residential cost allocation is divided among many more units.

The reimbursement district cost per dwelling unit varies depending on the land use option. Because there are more housing units in Option D, the cost of all infrastructure projects is divided among more units, and the "cost allocation per unit" is lower. This allocation is the approximate reimbursement fee that a developer would have to pay for each housing unit.

Table 10. Reimbursement District Costs

	RA West	RA East
Cost of Projects Paid for by RD	$10,632,800	$11,069,650
- Commercial and School Allocation	$0	$1,138,789
= Residential Allocation	$10,632,800	$9,930,861
Option D		
Dwelling Units	754	1,324
RD Cost Allocation per Unit	$14,102	$7,501
Option E		
Dwelling Units	625	1,091
RD Cost Allocation per Unit	$17,012	$9,103

APPENDICES AND INFORMATION SOURCES

The following source documents were used in the preparation of this memorandum and are cited throughout when appropriate:

- Frog Pond Area Plan web site: http://www.ci.wilsonville.or.us/628/Frog-Pond-Area-Plan
- City of Wilsonville Capital Improvement Projects program, http://www.ci.wilsonville.or.us/150/Capital-Projects
- City of Wilsonville City Code, Section 3.116 Reimbursement for Extensions of Streets, Water, Storm Drainage and Sewer Lines or Other Utility Services. http://www.ci.wilsonville.or.us/DocumentCenter/View/34
- Adopted Budget, FY 2013-14, Capital Improvement Projects (CIP) section, pages 165 – 218.
- *Transportation Infrastructure – Street Credits/Reimbursements,* Steve R. Adams, P.E., Development Engineering Manager, City of Wilsonville, September 5, 2014.
- *Frog Pond Area Plan – Concept Plan Infrastructure Analysis*, Murray, Smith & Associates, Inc., March 18, 2015.
- *Wilsonville Transportation System Plan* (TSP), adopted June 17, 2013.
- *Wilsonville Parks & Recreation Master Plan*, adopted September 17, 2007.
- *Market Analysis*, Frog Pond Area Plan, Leland Consulting Group, August 2014.
- Land use plans, Angelo Planning Group.
- Discussions with City staff and Frog Pond consultant team members regarding required infrastructure and associated costs.

APPENDIX D - INFRASTRUCTURE FUNDING PLAN

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Frog Pond West: Infrastructure Funding Plan

Date July 19, 2017
To Chris Neamtzu, City of Wilsonville
From Andy Parks, GEL Oregon
Brian Vanneman, Leland Consulting Group
Joe Dills, Angelo Planning Group

Introduction

The City of Wilsonville has engaged GEL Oregon, Leland Consulting Group, and Angelo Planning Group to prepare an infrastructure funding plan for the Frog Pond West Master Plan ("Master Plan"). The purposes of the Frog Pond West Infrastructure Funding Plan ("Funding Plan") are to:

- Describe strategies and options that provide adequate funding to complete infrastructure (transportation, water, sewer, parks, and storm water) requirements identified in the Master Plan in a timely manner;
- Increase confidence for all parties regarding the projects, costs, resources, and timing required to make Frog Pond West a success;
- Provide flexibility by identifying both primary strategies and tools for funding, as well as additional alternatives, tools, and approaches that could be implemented over time; and
- Provide an equitable distribution throughout Frog Pond West of the costs and benefits of Master Plan infrastructure.

This plan is based on analysis of funding options and discussions with developers and property owners, and is intended to be adopted as part of the final Frog Pond West Master Plan.

Project Summary

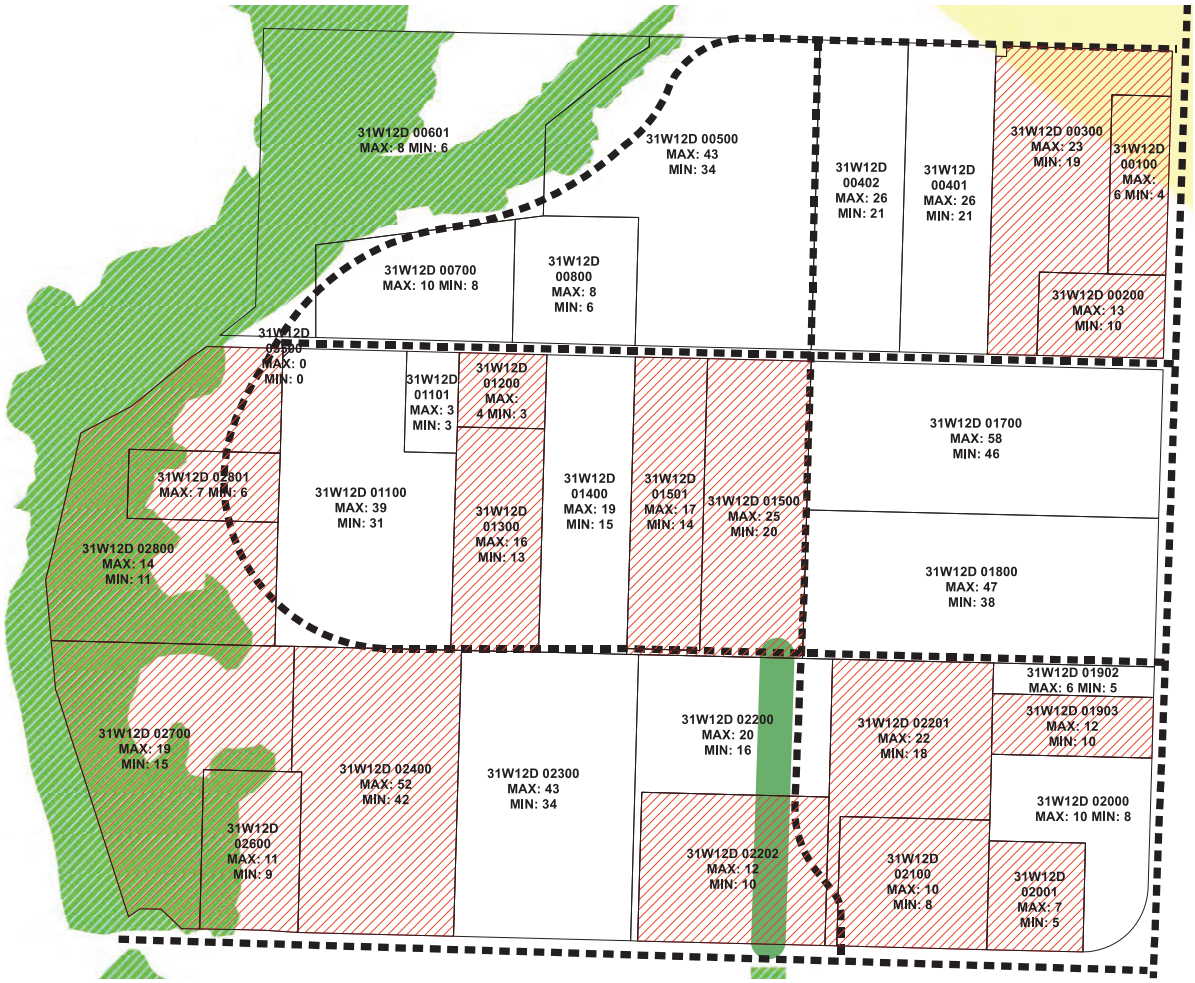
The Frog Pond West planning area, shown in Figure 1 below, is approximately 180 acres in total, with approximately 150 acres outside of the natural resource areas shown in green. The Master Plan area includes the following general attributes, which influence this funding plan:

- 571 housing lots would be allowed to be built under the Master Plan.
- The site is currently outside the city limits, but within the Urban Growth Boundary.
- 26 different property owners (as of 2015) control properties that vary widely in size. The largest single ownership is 25 acres (school district) and the smallest is 0.9 acres.
- The School District owns 25 acres, including a 10-acre future school site adjacent to Boeckman Road, a 5-acre land banked site adjacent to the future school site, and a 10-acre land banked site adjacent to Stafford Road.[1]
- Owners of the parcels highlighted in Figure 1 have shown an interest in development. Property owner intent to develop has been taken into account in this Funding Plan since it is likely to drive the location and pace of development and the locations where infrastructure will be needed first.

[1] In this Funding Plan, a portion of the 5-acre land banked site is assumed to be used for a future neighborhood park and the 10-acre land banked site is assumed for future residential development. These assumptions are subject to change based on future decisions by the West Linn-Wilsonville School District and the City of Wilsonville.

Figure 1. Frog Pond West

This map shows the maximum and minimum number of housing units that can be built on each property, pursuant to the Frog Pond West Master Plan. Properties shaded in orange indicate that owners have contacted the City to express an interest in development.



Infrastructure Summary

For purposes of this Funding Plan, the infrastructure necessary to serve Frog Pond West has been put into three different categories, shown below. The emphasis of this Funding Plan is to identify strategies and tools appropriate to fund "Master Plan" infrastructure (the third bullet point below); the strategies and tools necessary to fund the other infrastructure categories are adequately addressed through the City's existing methods.

- **Off-site Infrastructure** includes large projects that serve the broader community, are funded through Systems Development Charges (SDCs) generated by development throughout the City and through other City resources, and are generally located outside of the 180-acre boundary of Frog Pond West. Examples include:
    - Memorial Park pump station
    - Boeckman Creek sanitary sewer trunk line
    - West side water reservoir (funding pending)
    - Boeckman Bridge (the potential Frog Pond West contribution is summarized below)

- **On-site Infrastructure** includes local projects which serve individual properties. The costs of these projects are funded by individual developers. Examples include:
    - Local streets and sidewalks
    - Sanitary sewer lines
    - Water lines
    - Stormwater management
- **Master Plan Infrastructure** is the focus of this Funding Plan. Master Plan infrastructure differs from the above because it typically:
    - Crosses multiple property ownerships
    - May be too large and expensive for any single developer to complete
    - May have geographically concentrated costs (e.g. a park on a single property), but benefits all of Frog Pond West
    - May be adjacent to or within Frog Pond West development parcels

As stated, the focus of this Funding Plan is to identify the Master Plan infrastructure projects and to provide strategies and options for funding those Master Plan infrastructure projects that currently do not have any identified funding source or are not fully funded.

Master Plan Projects

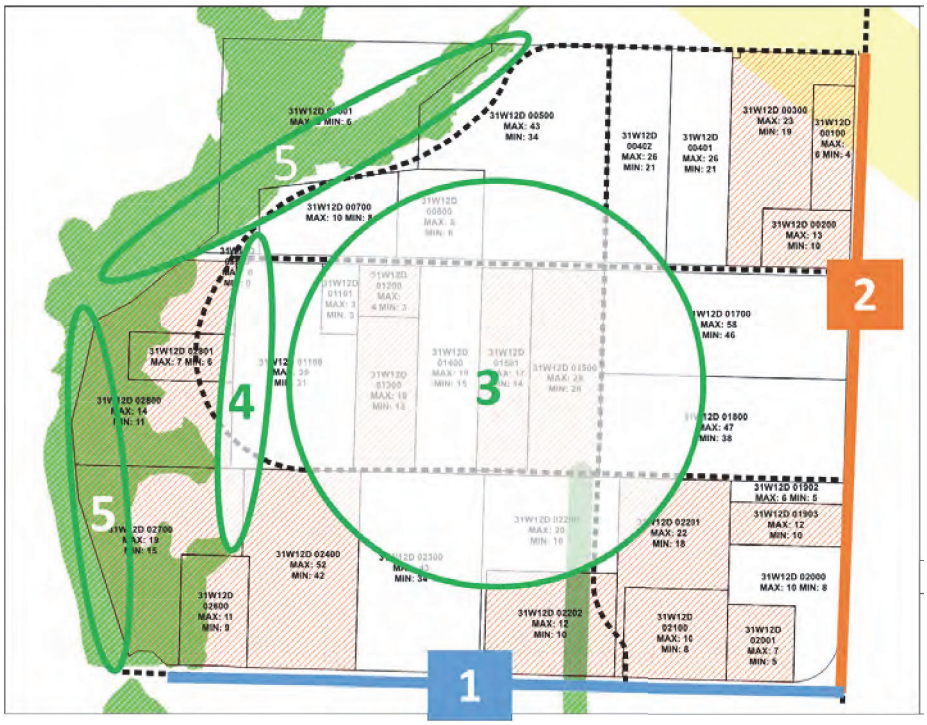
This Funding Plan focuses on funding strategies for the following five key Master Plan projects, which are conceptually represented in the adjacent figure:

1. Boeckman Road, including sanitary sewer
2. Stafford Road, including sanitary sewer and water
3. Neighborhood Park
4. Trailhead Park
5. Boeckman Trail

In addition, this Funding Plan specifically addresses one off-site infrastructure facility, due to its location adjacent to Frog Pond West:

- Boeckman Bridge

Figure 2. Map of Master Plan Projects



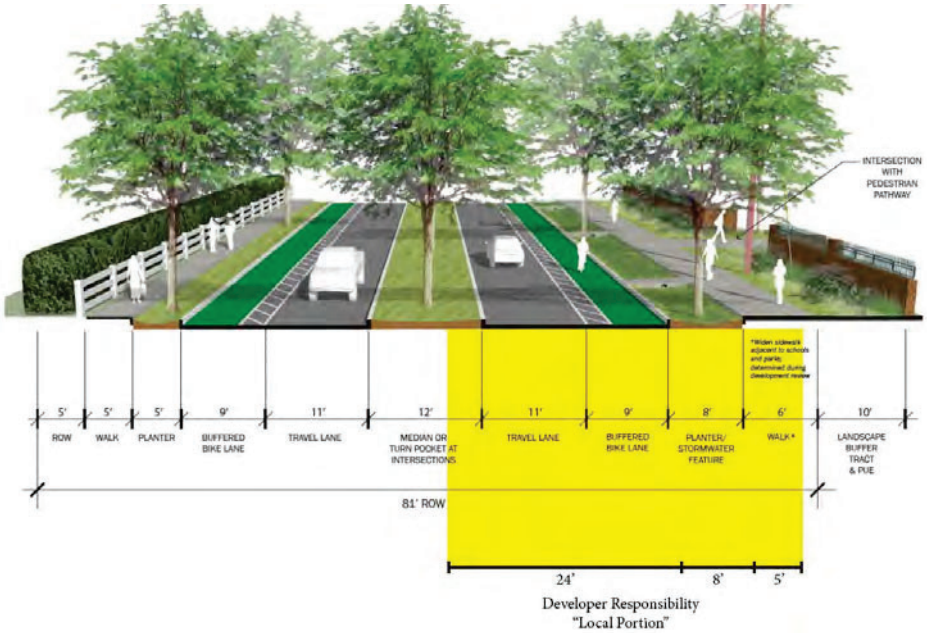
Current City Policy

This Funding Plan uses the City's existing policy and practices as a starting point, summarized below:

- Developers pay for the "local portion" of infrastructure required to serve their developments. For example, the local portion of Boeckman Road is shown below in Figure 3 as the yellow highlighted portion of the road. Typically, this is the first 24 feet of roadway from face of curb, plus planter strips and sidewalks, and including the pavement and road base associated with the local street standard, and water and sewer lines up to 8" in size.
- Developers also pay for the "oversize portion" (infrastructure that exceeds the minimum required), and then receive credits against SDCs due ("SDC credits").
- Where necessary, the City may pay for infrastructure elements that are:
    - Identified by existing adopted citywide infrastructure master plans (e.g. the Transportation System Plan or Parks and Recreation Master Plan) and included in the City's five-year Capital Improvement Program (CIP); and
    - Abutting already-developed areas (e.g. the component of Boeckman Road that fronts the Arbor Crossing neighborhood to the south) and therefore not the responsibility of Frog Pond developers.
- The City may implement a variety of tools to facilitate and coordinate infrastructure delivery including SDCs and SDC credits, a supplemental fee, reimbursement districts/agreements, Local Improvement Districts (LIDs), development agreements, etc.

In addition to SDCs and SDC credits, a supplemental fee is the primary funding tool recommended for Frog Pond West and is described further below.

Figure 3. Boeckman Road, including developer responsibility/local portion



Note: Roadway may include other "oversize" elements that are not shown (e.g. additional structural section).

Infrastructure Cost Allocation-Current City Policy

The total cost of the five Master Plan infrastructure projects and the Boeckman Bridge is allocated to different parties under *current* City policy as follows. Recommendations for how these current policies should be adjusted to fit specific conditions in Frog Pond begin on page 6.

1. Boeckman Road (including sanitary sewer)
    a. Southern Portion of Boeckman Road
        i. The City will pay for the construction of the southern portion of Boeckman Road, which is identified in the City's Transportation System Plan (TSP) as a "higher priority project."
    b. Northern Portion of Boeckman Road
        i. Current City policy states developers along Boeckman Road are responsible to develop their "local portion" of Boeckman Road (see Figure 3 above). Since most of the relevant Boeckman Road frontage and in-street utilities serve Frog Pond West, developing the "local portion" of the north side of Boeckman Road is the responsibility of the adjacent developers.
        ii. Also under current City policy, developers may receive SDC credits for constructing the remainder of the north side of Boeckman Road, which exceeds the "local portion" of the road.
        iii. Any oversizing of sanitary sewers installed by the developers along the northern portion of Boeckman Road is also subject to SDC credits.
    c. Alternative strategies for funding Boeckman Road are outlined on page 6.
2. Stafford Road (including sanitary sewer and water)
    a. Western Portion of Stafford Road
        i. As with the northern portion of Boeckman Road, developers in Frog Pond West developing adjacent to Stafford Road are responsible for the "local portion" of Stafford Road, including sanitary sewer and water. Any oversizing can be compensated through SDC credits.
    b. Eastern Portion of Stafford Road
        i. Under current City policy, the "local portion" of the east side of Stafford Road will be the responsibility of the developers of Frog Pond East adjacent to Stafford Road.
    c. Alternative strategies for funding Stafford Road are outlined on page 10.
3. Neighborhood Park
    a. The cost of the Neighborhood Park is the responsibility of developers within Frog Pond West because the City's Comprehensive Plan, the Parks and Recreation Master Plan, and the Parks SDC methodology require the cost of neighborhood parks to be the responsibility of the local neighborhood, and not borne by the entire City. Strategies for funding the Neighborhood Park Road are outlined on page 11.
4. Trailhead Park
    a. The cost of the Trailhead Park is accounted for in the Parks SDC and is included in the Parks and Recreation Master Plan, and so does not require any contribution from developers beyond the standard Parks SDC.

5. Boeckman Trail
    a. Along with the Trailhead Park, the Boeckman Trail is accounted for in the Parks SDC and is included in the Parks and Recreation Master Plan, and so does not require any contribution from developers beyond the standard Parks SDC.
6. Boeckman Bridge
    a. Frog Pond West's costs for Boeckman Bridge are allocated based on the neighborhood's traffic demand (average daily trips or ADT). Strategies for funding Boeckman Bridge are outlined on page 12.

Master Plan Infrastructure Funding Strategies

Master Plan infrastructure such as Boeckman and Stafford Roads will need to be improved across many properties, and are likely too large and expensive for any single developer to complete alone. Therefore, in order to realize the goals of the Frog Pond Area Plan and the Master Plan, the City has a role to play in coordinating the provision and funding of that infrastructure. The sections below describe strategies for funding the four projects that either exceed the ability of an individual developer to fund, do not have any identified funding source, or would be only partially funded by known sources. Those four projects are: (1) the northern portion of Boeckman Road; (2) the western portion of Stafford Road; (3) the Neighborhood Park; and (4) Boeckman Bridge.

Overall Preferred Strategy: Establish a Supplemental Fee to Distribute Costs Equitably

As described above, existing City policy would require funding for Master Plan infrastructure to generally be borne by developers. This Funding Plan proposes a variation on that policy in which the funding for specified projects would be: (1) borne by all new development in Frog Pond West through an equitable distribution of the costs on an equivalent dwelling unit (EDU) basis; and (2) collected through a supplemental fee that applies to new development. The supplemental fee will generate funds for three projects: Boeckman Road (including sanitary sewer improvements); Stafford Road (including water and sanitary sewer improvements); and the Neighborhood Park. (The funding for Boeckman Bridge is described further below, and includes a separate, dedicated supplemental fee for the bridge.)

The supplemental fee will create revenue that is fungible for use across different Master Plan infrastructure projects so that the timing of project construction would be as flexible as possible. The supplemental fee is a different funding instrument than a supplemental SDC or reimbursement district fee; however, the City retains the option of using those tools if desired.

Figure 4 below summarizes the Frog Pond West supplemental fee, including associated projects, preliminary cost estimates, and allocation per equivalent dwelling unit (EDU). The City reserves the right to complete additional infrastructure design and engineering analysis, which may result in changes to the cost estimates below.

Figure 4. Frog Pond West Estimated Supplemental Fee: Preliminary Cost Estimates and Allocation

All costs shown assume that projects will be built by the City, and therefore public-sector construction cost estimates are used. Additional notes regarding EDUs and costs are below.

Projects	Total Project Cost Public Sector Construction	Oversize Components (City CIP)	City Share	Net Project Cost to Recover (rounded)	Number of EDUs	Allocation per EDU	Admin Overhead 12.0%	Total Allocation per EDU
Boeckman Rd	3,747,161	122,986	2,026,941	1,597,000	538	2,970	356	3,326
Boeckman Rd sanitary sewer	690,625	265,756	-	425,000	490	870	104	974
Stafford Rd	2,585,548	439,544	-	2,146,000	538	3,990	479	4,469
Stafford Rd sanitary sewer	213,281	20,312	-	193,000	490	390	47	437
Stafford Rd water	365,625	71,094	-	295,000	472	630	76	706
Neighborhood parks	2,407,221	-	-	2,407,000	457	5,270	632	5,902
Total	10,009,461	919,692	2,026,941	7,063,000		14,120	1,694	15,814

EDUs. An EDU is an approximation of the infrastructure demand generated by one dwelling unit, and is useful since EDUs can also be estimated for non-residential (e.g. school, commercial, or industrial) development. In the case of the Neighborhood Park, costs are allocated across 457 EDUs in Frog Pond West, which is 80 percent of the 571 total homes allowed in the Master Plan, and accounts for a potential 20 percent "underbuild." Assuming that 80 percent or more of the allowed homes in Frog Pond West are built, they will generate adequate supplemental fees for the Neighborhood Park, along with the other Master Plan infrastructure projects. In the case of other infrastructure elements (roads, sewer, water), the proposed school will generate infrastructure demand in addition to demand from residential development. For that infrastructure, the City and project team have estimated school demand (in EDUs) based on comparable past projects, and added this to the housing demand. Therefore, the road, sanitary sewer, and water projects are allocated across a greater number of EDUs.

Notes regarding costs. The cost estimates in Figure 4 assume that projects will be funded via the supplemental fee and built by the City, in the year 2019. These fees may adjust for the time cost of money or other inflationary factors if the projects are built beyond that time horizon. Based on input from third-party engineers and City staff, public-sector construction costs are assumed to be approximately 25 percent higher than private-sector construction costs, and therefore, if any components were to be built by the private sector, it is possible that the costs and the associated fees could be reduced. Cost estimates in Figure 4 include hard (construction) costs, plus external engineering (25 percent of hard costs), contingency (30 percent of hard costs), and city overhead (12 percent of all costs, to account for internal City engineering, finance, and related services). The City's review indicates that total Frog Pond West development fees (the above supplemental fees plus base City SDCs) are comparable to the total fees that developers are paying in comparable master-planned development areas such as South Cooper Mountain

in Beaverton, and River Terrace in Tigard. The City's current SDCs are $25,388[2] for a single-family home (EDU), including streets, sanitary sewer, water, stormwater, and parks, and adjust each year to account for inflation.

Boeckman Road Preferred Funding Strategy

The following strategies were prepared after analysis of various options and coordination meetings with the three major property owners/developers on the north side of Boeckman Road. During these meetings, the City explored multiple options and strategies for funding Boeckman Road, working from the foundation of existing City policy and applying the principle of equitable distribution of costs. The Boeckman Road strategies are:

- The City will lead the construction of the Boeckman Road improvements. This strategy evolved out of meetings with property owners/developers during which they stated the following concerns and challenges about the private sector leading construction of Boeckman Road: (1) existing properties are small, so infrastructure costs (even if reimbursed over time) cannot be easily carried or offset against revenues; (2) borrowing money without certainty of repayment is not possible; and (3) they do not have experience working jointly with adjacent developers, which makes coordination difficult. The property owners/developers stated a preference to pay a higher fee and have the City build the improvements, as opposed to a lower fee and private sector construction.

  From the City's perspective, a benefit of City-led construction is that the phasing and timing of the improvements can be determined by the City and is flexible. The City would also retain more control over the project to ensure it complies with the Frog Pond West Master Plan and City standards. In addition, City-led construction translates into greater risk for the City. If development does not take place at the pace expected and therefore revenue from the supplemental fee is less than the amount necessary to construct the projects, the City will carry the cost of construction and financing.

  In summary, the preferred strategy is for the City to lead the Boeckman Road improvements. The City retains the option for a private sector lead if circumstances are conducive to it in the future. The additional strategies listed below reflect the City's consideration of the trade-offs described above and the crafting of an approach that will, on balance, work for all parties.

- A preference for fewer phases; the preferred approach is two phases; with options for how phasing occurs. The City prefers that Boeckman Road be built in as few phases as possible. This will minimize disruption and reduce costs. The City's specific preference is for a two-phase approach where two of the three major frontages are built simultaneously. The City realizes that individual projects may need to move ahead, and is open to proposals to improve a single frontage. The City will work with the School District to try to coordinate its frontage improvement with either of the adjacent frontages. The City will also work with the owner/developer of the western-most frontage to coordinate its improvements with the Boeckman Bridge replacement.

[2] Reflects adopted SDCs as of June 4, 2017. On June 5, 2017, the City Council adopted an updated Transportation SDC of $11,772 per Single Family home (an increase of $4077 above the previous SDC).

- City funding for the southern part of Boeckman Road. The City will contribute funds for completion of the southern portion of Boeckman Road, which abuts the Arbor Crossing neighborhood and, under current City policy, would not be the responsibility of Frog Pond West developers. An estimate of this cost is shown as the "City share" of Boeckman Road in Figure 4.

- Equitable distribution and reimbursement of costs. Boeckman Road costs will be distributed equitably to all development in Frog Pond West, as described above.

- Coordination of the western portion of Boeckman Road with the Boeckman Bridge replacement. When the Boeckman Bridge is replaced, the project will extend east to include part of the western-most frontage. The City will strive to coordinate the design for the bridge and the road improvement by whichever project is designed first.

- Funds may be sourced from all applicable fees. For City (or private sector) construction of Boeckman Road, funding will be available from supplemental fee revenue, plus applicable SDCs collected or credited. This will help reduce or eliminate carrying costs associated with the construction of Boeckman Road and sanitary sewer facilities.

- Phase 1 construction may be deferred to a time-certain date. At the discretion of the City, the construction of Boeckman Road may be deferred to a time-certain date or number of completed lots in order to accumulate supplemental fees needed to build the project. For the purposes of this Funding Plan, construction is preliminarily set for 2019. Developers will be required to construct interim improvements necessary to support safe pedestrian, bicycle, and motor vehicle movement prior to the full improvements being completed.

- Development agreements will be the implementing instruments and will be established at the time of annexation. The City plans to create an infrastructure supplemental fee, which will require developers to enter into development agreements as a condition of annexation. These development agreements will require developers to pay the supplemental fee at the time of issuance of a building permit. The development agreement template and infrastructure supplemental fee resolution should be approved by the City Council prior to processing any annexation applications.

- Options for Council Consideration. Based on discussions with the three major property owners on the north side of Boeckman Road and analysis by the City team, the strategies listed above are recommended. The key issues for which there are options are:
    - Option A – City leads construction, with improvements deferred to 2019 or a defined number of lots in order to build up funds. The project team estimates that an issuance of permits of 142 EDUs will be required in order to receive sufficient supplemental fees to cover the City's costs associated with the north side of Boeckman Road.
    - Option B – City leads construction, with improvements not deferred; Boeckman Road would be constructed early and concurrent with development. This option is not recommended due to the risk of delayed pay-back to the City.

- Option C – Private sector leads construction, with improvements deferred to 2019 or a defined number of lots in order to build up funds. This option is not recommended, but is available to the Council for consideration.

Stafford Road Preferred Funding Strategy

There are several challenges associated with the construction of Stafford Road. There is no certainty that Frog Pond East will develop in the near future, and the road is currently under county jurisdiction. Frog Pond East is outside the Urban Growth Boundary and is designated "urban reserve," defined by Metro as land that is suitable for development in the next 50 years. The developer's portion of Stafford Road infrastructure on the east side would not be required until annexation and development. Likewise, Frog Pond West developers/property owners along Stafford Road are not as advanced in their planning for development as those along Boeckman Road; therefore, this funding strategy cannot be as specific in its recommendations for Stafford Road.

This Funding Plan recommends that Stafford Road be built and funded via a strategy similar to Boeckman Road:

- Preference for the fewest number of phases that are practicable, with interim improvements to be considered at the discretion of the City. Phasing may be tailored to improve the west side of the road prior to the east side. The specific timing of improvements and phasing is to be determined. The City generally intends to build up funds through the collection of the supplemental fee prior to making improvements to Stafford Road.
- Equitable distribution of costs: Stafford Road improvement costs will be included in the Frog Pond West supplemental fee, and supplemental fee revenues will be used to pay for Stafford Road improvements (roadway, sanitary sewer, water).
- Options for the construction of Stafford Road improvements by either the private sector or the City. Private developers who build segments of the road will be reimbursed via the supplemental fee and SDC credits.
- Development agreements will be the implementing instruments and executed at the time of annexation.

Timing of Stafford Road Improvements

Given that the east side of Stafford Road is not within the Urban Growth Boundary (UGB) it is challenging to provide a time certain, or even a target "threshold" of the number of equivalent dwelling units (EDUs) for required permanent improvements to Stafford Road. Decisions by the City that will impact the timing of Stafford Road improvements include but are not limited to the following:

- Completing Boeckman Road in its entirety prior to Stafford Road improvements.
- Acquiring park land for the Neighborhood Park prior to Stafford Road improvements.
- The timing of improvements to the Neighborhood Park.
- Completing Stafford Road improvements in one or possibly two phases.
- The availability of Transportation System Development Charges for the "oversize" portion of Stafford Road.

Decisions by others that will impact the timing and availability of funding for Stafford Road improvements include but are not limited to the following:

- School District siting and timing decision for a school, including the size and equivalent dwelling units determined.
- Location of and timing of development by property owners.
- Pace of development.
- Inclusion of Stafford Road along with the East and South Neighborhoods into the UGB.

Per the estimated development pace shown below, which reflects feedback received from property owners and developers, development of eighty percent (457 EDUs) of Frog Pond West's homes plus development of a primary school (43 EDUs) is anticipated by year fifteen. The number of EDUs estimated to fully fund the west side of Stafford Road is 186, or 93 EDUs for two separate phases.

Figure 5. Projected number of Equivalent Dwelling Units to Fund Projects and Project Timing

	Estimated Total Project Cost (000s)	Less: City Portion (000s)	Net Project Cost paid with Supplemental Fee (000s)	Number of EDUs to Fully Fund	Cumulative EDUs to Fully Fund	Estimated Year to Construct
Boeckman Road/sewer	4,438	2,416	2,022	143	143	2-5
Neighborhood Park - land	980	-	980	69	212	2-5
Neighborhood Park – improvements	1,427	-	1,427	101	313	6-10
Stafford Road/water/sewer-phase I	1,582	265	1,317	93	406	11-15
Stafford Road/water/sewer-phase II	1,582	265	1,317	93	499	11-15
	10,009	2,946	7,063	499		

Figure 6. Estimated Development Pace

Years	Boeckman Rd frontage	Other	Total	Cumulative
0-5	138	36	174	174
6-10	43	150	193	367
11-15	0	135	135	502
16-20	0	0	0	502*

* *Total lots on the two tables above vary due to rounding.*

The City could choose to move forward sooner with Stafford Road improvements (west side) under various scenarios, for example: the project is funded from sources other than the infrastructure supplemental fee; the east side is brought within the UGB before year 15; the project is split into more than one phase; or, the Neighborhood Park improvements are deferred or phased.

Neighborhood Park Preferred Funding Strategies

As stated above, both the Trailhead Park and Boeckman Trail are eligible to use Park SDC funding, including SDC credits, because they are considered to be "regional" park facilities pursuant to the City's

Parks & Recreation Master Plan and SDC methodology. However, the Neighborhood Park is not eligible to use Park SDCs or Park SDC credits as a funding resource.

It is very unlikely that any single developer or group of developers/property owners will have the financial wherewithal to complete the Neighborhood Park project. Moreover, without a funding strategy, the costs of this park—which would be located on one or several properties—would be concentrated, while the benefits would be throughout Frog Pond West. Therefore, as shown in Figure 4, this Funding Plan recommends including the Neighborhood Park acquisition and improvement costs in the Frog Pond West supplemental fee. This will enable the project to move forward while minimizing the impact on funding for parks projects elsewhere in the City. The priorities of acquisition and construction would be as follows:

- Acquire needed land first. Work proactively with the School District (and/or property owners as necessary) to acquire the land. This may require negotiations with the School District to secure the site via a memorandum of understanding (MOU), intergovernmental agreement (IGA), or other agreement.
- Design and complete park improvements next. Consider building the Neighborhood Park when residential build-out reaches a target, such as 50 percent. Work proactively with the School District, developers, and property owners willing and able to make park improvements in exchange for supplemental fee credits.

Development agreements addressing the supplemental fee (including a Neighborhood Park component) would be signed with each property owner at the time of annexation, as described above. Additional development agreements may be necessary in the event that property owners deed land for or make improvements to the Neighborhood Park that would be creditable against supplemental fee payments, or make other contributions to the Neighborhood Park.

Boeckman Bridge Preferred Funding Options

The proposed Boeckman Bridge is a major piece of transportation infrastructure—significantly greater in cost than the other elements discussed above. Frog Pond West should contribute a modest share of funding for the bridge, consistent with the fact that it is expected to generate a small percentage (less than 15 percent) of the transportation demand for the bridge, with the remainder of the demand generated by existing and new development elsewhere in the City. The majority of funding will be generated by citywide sources, possibly urban renewal funds or other sources.

This Frog Pond West share should be generated by a supplemental fee that would be similar to the fee described above, but likely separate and dedicated to the Boeckman Bridge only. The fee associated with Boeckman Bridge is recommended to be separate from the Frog Pond West supplemental fee (for Boeckman and Stafford Roads, and Neighborhood Park) because a funding strategy for Boeckman Bridge has not been finalized. The selected funding for Boeckman Bridge (e.g. Urban Renewal or CIP) may be comingled in ways that are different from the other Master Plan infrastructure, causing potential accounting challenges if there is just one supplemental fee. Citywide and local (Frog Pond West) funding recommendations are described below.

Citywide Funding Share

While the City's funding strategy for Boeckman Bridge is still being refined, the City is currently considering funding a significant share of Boeckman Bridge via urban renewal funds (tax increment financing), that

would be generated by substantially amending the Year 2000 urban renewal area plan (Year 2000 URA) to include the cost of Boeckman Bridge. The City estimates that the Year 2000 URA could generate enough funds to pay for either the entire cost of Boeckman Bridge, or that cost less the cost associated with Frog Pond West. Other funding mechanisms—primarily SDCs/CIP—could be used to supplement URA funds. The City recently updated the Transportation SDC (TSDC) methodology and rate and elected to exclude Boeckman Bridge from the TSDC project list at this time. While the City is pursuing the citywide component of Boeckman Bridge funds through the Year 2000 URA, the funding specifics will continue to be refined for this major piece of transportation infrastructure. This Funding Plan estimates a supplemental fee based on the portion of the cost to construct Boeckman Bridge that is not funded through other revenue sources (the "Unfunded Portion").

Frog Pond West Share of Unfunded Portion: Boeckman Bridge Supplemental Fee Estimate
Traffic generated by Frog Pond West is expected to make up a modest portion of the total traffic carried by Boeckman Bridge. The average daily trips (ADT) forecast for Boeckman Bridge in 2035 is 12,750. Frog Pond West's 571 housing units are expected to generate 1,170 ADT over Boeckman Bridge, or 9.2 percent of the total forecast ADT. At 80 percent development, or 457 units, the ADT is expected to amount to 7.3 percent of the total. The school is estimated to generate 645 ADT, or 5.0 percent of the total. In all, the estimated ADT generated by Frog Pond West, at full build out, is 1,815, or 14.3 percent of total forecasted trips.

The current cost estimate for Boeckman Bridge is $14.0 million. If the City captures a proportional share of bridge funding from Frog Pond West, a separate supplemental fee appears to be the most appropriate tool. The amount to be raised by housing development in Frog Pond West would be 9.2 percent of the total Unfunded Portion, divided equally between 571 units.[3] For each $1 million of "net unfunded" bridge cost (not covered by URA or other citywide sources), the fee would be $161 (9.2 percent times $1,000,000 divided by 571 housing units). The actual fee will depend on the Unfunded Portion of Boeckman Bridge, for example:

- If $2 million unfunded, the fee per EDU would be $322
- If $10 million unfunded, the fee per EDU would be $1,610
- If $14 million unfunded, the fee per EDU would be $2,254

The estimated contribution by the School District is approximately five percent of the Unfunded Portion; however, details regarding the District's precise share have yet to be worked out.

Summary of Strategies and Recommendations

As described above, this Funding Plan provides the following findings and recommendations:

- Frog Pond West will require that a variety of infrastructure--including transportation, sanitary sewer, water, and parks—be built at the local, Master Plan, and off-site levels. Master Plan improvements are the primary focus of this Funding Plan, as they affect multiple property ownerships, are costly, and require a coordinated plan. Such a coordinated strategy will increase all parties' confidence that the

[3] These calculations, including supplemental fee amount, are the same if both development and ADT are reduced to 80 percent of the full build-out values (i.e., 457 units and 7.3 percent of ADT) since a smaller share of traffic impact would be divided among a proportionately smaller number of units. Since transportation analysis was completed assuming full build out, the figure 571 housing units is used here.

Master Plan will be implemented in a timely manner, and equitably allocate major costs across numerous different development sites.

- The primary funding tool recommended for three key Master Plan infrastructure elements—Boeckman Road (including sanitary sewer improvements), Stafford Road (including sanitary sewer and water improvements), and the Neighborhood Park—is a supplemental fee. This fee would be equitably distributed across all residential and school development in Frog Pond West, commensurate with each development's demand for the infrastructure. The total costs are allocated on the basis of equivalent dwelling units (EDUs) and summarized in Figure 4 above.
- This Funding Plan recommends and assumes that the City will collect supplemental fees and lead the construction of the Boeckman Road and Stafford Road projects. However, it is also possible that developers could build those projects in exchange for credits against supplemental fees and City SDCs; this would also likely result in lower construction costs.
- Boeckman Bridge is considered to be an "off-site" infrastructure element. Frog Pond West will generate a modest share of demand (15 percent or less) for Boeckman Bridge, with other demand coming from elsewhere in the City, and it is costlier than the Master Plan transportation infrastructure described above. The City is continuing to refine the design and funding strategy for Boeckman Bridge, with most of the funding expected to come from a substantial amendment to the Year 2000 URA. The City is also considering other funding mechanisms (primarily SDCs/CIP). This Funding Plan recommends that an additional and separate supplemental fee be charged to Frog Pond West development for the Boeckman Bridge. This supplemental fee amount will depend on the final design and cost of the bridge, and the amount generated by the URA and/or other sources. Based on Frog Pond West's transportation demand, the estimated supplemental fee is approximately $161 per $1 million of cost that is not provided by the URA and/or other sources.