

LEGISLATIVE

120380B

PROJECTED ANNUAL MAINTENANCE COSTS

PURPOSE

The SW 9th Street and SW 3rd Avenue Streetscapes, including the proposed SW 9th Street Park, are intended to be the backbone of the Greenway element of the Innovation Square at the heart of the Innovation District. As the primary gateway to the heart of the iSquare it is not only important that the proposed designs create a dynamic public greenspace, but also one that can be properly maintained at a responsible cost. In order to ensure that the proposed streetscapes can be preserved as unique community resources and functional district corridors, specific consideration has been given to the sustainability and life-cycle aspects of the materials to be utilized in the creation of these landmark roadways.

Projected Annual Maintenance Costs have been estimated for each of the principal components of the iSquare streetscapes including the **SW 9th Street Right-of-Way (R/W)**, **SW 9th Street Park**, and **SW 3rd Avenue**. Annual maintenance cost projections have been provided for **Year-1** after construction is completed, along with the **Average Annual** maintenance costs following the first year after construction completion. This is intended to demonstrate the anticipated increase in maintenance costs as the finished streetscapes progress through their life-cycle. The Year-1 figure also provides a benchmark amount for the probable initial funding needs for the maintenance of the completed roadways and park area. Alternately, the Average Annual cost projection is an example of the maintenance funding requirement that would be borne by a proposed Business Investment District (BID).

METHODOLOGY

For the purpose of the consistency of the cost estimations associated with the individual maintenance aspects of the streetscapes the *Projected Annual Maintenance Costs* have been formulated based on the assumption that all maintenance activities will be orchestrated by a single source. It should be noted that maintenance conducted directly by the City of Gainesville (i.e. street sweeping) or Gainesville Regional Utilities (i.e. street lights) has not been directly quantified at this state of design, and that municipal maintenance activities that are typically handled by these entities may cause the reported figures to fluctuate.

The figures reported have been formulated on the basis of “third party” maintenance administered at market rates applied in one of two methods: 1) directly from local maintenance cost resources, or 2) through a new construction unit cost multiplied by a life-cycle cost multiplier). The outcome of the methodology utilized should provide for conservative projected maintenance costs that should decrease in consideration of the proposed sustainable materials—offering increased durability, lower maintenance, and longer life-cycles. Additionally, it should be acknowledged that the proposed roadways will encumber limited traffic and vehicular loading, therefore increasing their life-cycle further. This is even more prevalent with the primary greenstreet (SW 9th Street), where underground utility infrastructure is not permitted.

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The following Maintenance Evaluation Notes outline the specific methodology utilized in calculating each itemized maintenance cost and recurrence. Maintenance activity **Occurrences** originate from published best management practices, fractional life-cycle replacement cost multipliers converted to an annual occurrence, and professional recommendations provided from the project design teams.

MAINTENANCE EVALUATION NOTES

- 01 **Street Sweeping** – cost calculated based on per mile rate including \$15.00/HR, equipment price converted to hours, and fuel expended
- 02 **Crack Repair/Section Replacement** – cost calculated based on a 50-year life-cycle multiplier at a 50% probability of complete replacement
- 03 **Pressure Washing** – cost based on an hourly rate of \$15.00/HR plus water consumption
- 04 **Vehicle Damage Repair (Curb)** – cost calculated based on a 50-year life-cycle multiplier at a 50% probability of complete replacement
- 05 **Restriping** – cost calculated on industry standard reapplication of thermoplastic paint, at market rates, applied to STOP bars only
- 06 **Weed Control (Joints)** – cost calculated on an hourly rate for weed removal and/or control by spray treatment using an applied labor rate of \$15.00/HR plus chemical costs
- 07 **Remove Debris (Stone Mulch)** – cost calculated for removal of garbage and debris on an hourly rate basis of \$15.00/HR
- 08 **Restore Displaced Stone (Stone Mulch)** – cost calculated on an hourly rate basis to sweep stone back into planter beds and/or tree wells
- 09 **Monitoring (Irrigation Controller)** – cost calculated on an hourly rate basis for periodic review of programming and zone response
- 10 **Reprogramming (Irrigation Controller)** – cost calculated on an hourly rate basis for periodic reprogramming in consideration of seasonal changes and potential power outages
- 11 **Adjustment/Replace Damaged (Irrigation Heads)** – cost calculated with an inclusive cost per irrigation head installed at an hourly rate
- 12 **Repair Damage/Fix Leaks (Irrigation)** – cost calculated at a cost per linear foot of pipe replaced and/or fittings replaced with an hourly labor rate
- 13 **Consumption (Water)** – cost estimated based upon minimal to moderate watering of trees at off-peak hours
- 14 **Trim, etc. (Trees)** – cost provided by landscape design consultant for inclusive cost to include trimming, mulching, fertilizing, and debris removal provided once per year as necessitated by species
- 15 **Debris & Sedimentation Removal (Storm Structures)** – calculated on an hourly rate basis for manual removal of trash, sedimentation and debris
- 16 **Sedimentation Removal/Flush (Storm Pipe)** – estimated as a linear foot cost to water blast and/or water vacuum storm piping in order to remove debris
- 17 **Crack Remediation (Retaining Walls)** – cost calculated based on a 50-year life-cycle multiplier at a 50% probability of complete replacement
- 18 **Weed Control & Removal (Groundcover)** – cost calculated as an hourly rate figure to remove trash and debris from groundcover based on estimated duration
- 19 **Pruning (Groundcover)** – cost calculated as an hourly rate figure for pruning of specific ground cover based on duration, one time per year based on species

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- 20 **Slat Repair/Replacement (Fixed Benches)** – cost calculated as a fraction of the square foot cost of new bench slatting cost, multiplied by an estimated life cycle fraction
- 21 **Ballast Replacement (Lights)** – estimated based on published life-cycle replacement timeline
- 22 **Stain Removal/Cleaning (Lights)** – calculated on an hourly rate basis for cleaning poles and ornamental glass
- 23 **Repair/Cleaning (Prefab. Benches)** – cost calculated as a fraction of the unit cost of new bench multiplied by an estimated life cycle fraction
- 24 **Waste Removal (Receptacles)** – cost calculated on an estimated hourly rate basis for trash recovery plus truck fuel expense and estimated disposal fee applied to standard residential waste pickup, per unit
- 25 **Cleaning/Replacement (Bike Racks)** – cost calculated as a fraction of the cost of replacement multiplied by a life cycle fraction
- 26 **Repair/Plank Replacement (Boardwalk)** – cost calculated as a square foot cost of the walk surface planking multiplied by a life cycle fraction
- 27 **Patch/Repair (Asphalt)** – cost calculated on an area cost per square yard back-figured new cost with demo/mill for replacement, multiplied by a 25-year life-cycle fraction with a 25% chance of complete replacement
- 28 **Reapplication (Pine Straw Mulch)** – cost calculated for yearly reapplication of surficial cover layer in tree planters based on cost per cubic yard (derived from bales) with hourly rate figure for spreading in place

Gainesville Community Redevelopment Agency (CRA)
 Innovation Square Streetscapes: SW 9th Street SW 3rd Avenue - 60% CD Design

PROJECTED ANNUAL MAINTENANCE COSTS

Streetscape Element	Description	Maintenance Activity	Maint. Quantity (QU)	Unit Measure (UM)	Unit Maint. Cost (UMC = \$/UM)	Cost Per Occurrence (CPO = MQ x UMC)	Occurrences (Annually)	Item Year-1 Maint. Cost	Item Avg. Annual Maint. Cost.
SW 9TH STREET - R/W									
Roadway									
1	Concrete Pavement (Vehicular)	Street Sweeping (Mechanized)	0.25	MI	\$ 22.50	\$ 5.63	12.00	\$ 67.50	\$ 67.50
2		Crack Repair/Section Replacement	17200.00	SF	\$ 10.50	\$ 180,600.00	0.01	\$ -	\$ 1,806.00
3		Pressure Washing (Stop Area Stains)	1200.00	SF	\$ 0.20	\$ 240.00	1.00	\$ 240.00	\$ 240.00
4	Type "I" Curb & Gutter	Vehicle Damage Repair	150.00	LF	\$ 18.00	\$ 2,700.00	0.01	\$ -	\$ 27.00
5	Striping	Restriping	66.00	LF	\$ 18.50	\$ 1,221.00	0.10	\$ -	\$ 122.10
Hardscape									
6	Concrete Sidewalk	Pressure Washing (Heavy Stains)	22750.00	SF	\$ 0.20	\$ 4,550.00	0.20	\$ -	\$ 910.00
7		Crack Repair/Section Replacement	22750.00	SF	\$ 7.50	\$ 170,625.00	0.01	\$ -	\$ 1,706.25
8		Weed Control (Joints)	2.00	HR	\$ 25.00	\$ 50.00	12.00	\$ 600.00	\$ 600.00
9	Curb Cut (ADA) Ramps	Pressure Washing (Heavy Stains)	13.00	EA	\$ 5.00	\$ 65.00	1.00	\$ 65.00	\$ 65.00
10		Crack Repair/Section Replacement	13.00	EA	\$ 1,000.00	\$ 13,000.00	0.02	\$ -	\$ 260.00
Landscape									
11	Stone Mulch	Remove Debris	2.00	HR	\$ 15.00	\$ 30.00	12.00	\$ 360.00	\$ 360.00
12		Restore Displaced Stone	2.00	HR	\$ 15.00	\$ 30.00	12.00	\$ 360.00	\$ 360.00
Irrigation									
13	Controller	Monitoring	0.50	HR	\$ 15.00	\$ 7.50	4.00	\$ 30.00	\$ 30.00
14		Reprogramming	0.50	HR	\$ 15.00	\$ 7.50	4.00	\$ 30.00	\$ 30.00
15	Heads	Adjustment/Replace Damaged	40.00	EA	\$ 11.25	\$ 450.00	0.10	\$ 45.00	\$ 45.00
16	Pipe/Tubing	Repair Damage/Fix Leaks	1400.00	LF	\$ 13.75	\$ 19,250.00	0.01	\$ 192.50	\$ 192.50
17	Water	Consumption	1.00	LS	\$ 25.00	\$ 25.00	12.00	\$ 300.00	\$ 300.00
Trees									
18	Bald Cypress	Trim/Shed Leaf Cleanup, Mulching	16.00	EA	\$ 80.00	\$ 1,280.00	1.00	\$ 1,280.00	\$ 1,280.00
19	Live Oak	Trim/Shed Leaf Cleanup, Mulching	15.00	EA	\$ 80.00	\$ 1,200.00	1.00	\$ 1,200.00	\$ 1,200.00
20	Black Gum	Trim/Shed Leaf Cleanup, Mulching	3.00	EA	\$ 80.00	\$ 240.00	1.00	\$ 240.00	\$ 240.00
21	Winged Elm	Trim/Shed Leaf Cleanup, Mulching	6.00	EA	\$ 80.00	\$ 480.00	1.00	\$ 480.00	\$ 480.00
Drainage									
22	Manhole Inlet Structures	Debris & Sedimentation Removal	3.00	EA	\$ 40.00	\$ 120.00	0.20	\$ -	\$ 24.00
23	DBI Structures	Debris & Sedimentation Removal	4.00	EA	\$ 20.00	\$ 80.00	1.00	\$ 80.00	\$ 80.00
24	12" CPE	Sedimentation Removal/Flush	32.00	LF	\$ 1.00	\$ 32.00	0.20	\$ -	\$ 6.40
25	15" RCP	Sedimentation Removal/Flush	21.00	LF	\$ 1.00	\$ 21.00	0.20	\$ -	\$ 4.20
26	18" RCP	Sedimentation Removal/Flush	100.00	LF	\$ 1.00	\$ 100.00	0.20	\$ -	\$ 20.00
27	72" RCP	Sedimentation Removal/Flush	700.00	LF	\$ 1.00	\$ 700.00	0.10	\$ -	\$ 70.00
Bioswale									
28	Concrete Retaining Walls	Crack Remediation	1172.00	LF	\$ 260.00	\$ 304,720.00	0.01	\$ -	\$ 1,523.60
29		Weed Control & Removal	586.00	LF	\$ 0.10	\$ 58.60	12.00	\$ 703.20	\$ 703.20
30	Concrete Weirs	Impediment Removal	70.00	EA	\$ 0.25	\$ 17.50	1.00	\$ 17.50	\$ 17.50
31	Groundcover Plantings	Pruning	480.00	EA	\$ 0.25	\$ 120.00	1.00	\$ 120.00	\$ 120.00
32	Groundcover Stone	Debris/Trash Removal	4.00	HR	\$ 20.00	\$ 80.00	2.00	\$ 160.00	\$ 160.00
33	Concrete & Wood Benches (Fixed)	Slat Repair/Replacement	8.00	EA	\$ 75.00	\$ 600.00	0.20	\$ 120.00	\$ 120.00
34		Stain Removal/Cleaning	8.00	EA	\$ 8.00	\$ 64.00	1.00	\$ 64.00	\$ 64.00
Lighting									
35	Street Lights	Ballast Replacement	4.00	EA	\$ 300.00	\$ 1,200.00	0.10	\$ -	\$ 120.00
36	Pedestrian Lights	Ballast Replacement	19.00	EA	\$ 300.00	\$ 5,700.00	0.06	\$ -	\$ 342.00
37		General Cleaning	19.00	EA	\$ 15.00	\$ 285.00	0.20	\$ -	\$ 57.00
Furnishings									
38	Benches (Prefabricated)	Repair/Cleaning	8.00	EA	\$ 7.50	\$ 60.00	1.00	\$ 60.00	\$ 60.00
39	Receptacles (On-Street Only)	Waste Removal	2.00	EA	\$ 16.00	\$ 32.00	52.00	\$ 1,664.00	\$ 1,664.00
40	Back Racks (Fixed)	Cleaning/Replacement	12.00	EA	\$ 730.00	\$ 8,760.00	0.02	\$ -	\$ 175.20
SW 9TH STREET - R/W TOTALS								\$ 8,478.70	\$ 15,652.45

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Streetscape Element	Description	Maintenance Activity	Maint. Quantity (QU)	Unit Measure (UM)	Unit Maint. Cost (UMC = \$/UM)	Cost Per Occurrence (CPO = MQ x UMC)	Occurrences (Annually)	Item Year-1 Maint. Cost	Item Avg. Annual Maint. Cost.
SW 9TH STREET - PARK									
Hardscape									
1	Concrete Sidewalk	Pressure Washing (Heavy Stains)	5250.00	SF	\$ 0.20	\$ 1,050.00	0.20	\$ 210.00	\$ 210.00
2		Crack Repair/Section Replacement	5250.00	SF	\$ 7.50	\$ 39,375.00	0.02	\$ -	\$ 787.50
3		Weed Control (Joints)	0.25	HR	\$ 25.00	\$ 6.25	12.00	\$ 75.00	\$ 75.00
4	Concrete Header Curb	Crack Repair/Section Replacement	370.00	LF	\$ 10.00	\$ 3,700.00	0.02	\$ 74.00	\$ 74.00
Landscape									
5	Stone Mulch	Remove Debris	1.00	HR	\$ 15.00	\$ 15.00	12.00	\$ 180.00	\$ 180.00
6		Restore Displaced Stone	1.00	HR	\$ 15.00	\$ 15.00	12.00	\$ 180.00	\$ 180.00
Irrigation									
7	Controller	Monitoring	0.25	HR	\$ 15.00	\$ 3.75	4.00	\$ 15.00	\$ 15.00
8		Reprogramming	0.25	HR	\$ 15.00	\$ 3.75	4.00	\$ 15.00	\$ 15.00
9	Heads	Adjustment/Replace Damaged	24.00	EA	\$ 11.25	\$ 270.00	0.10	\$ 27.00	\$ 27.00
10	Pipe/Tubing	Repair Damage/Fix Leaks	250.00	LF	\$ 13.75	\$ 3,437.50	0.02	\$ 68.75	\$ 68.75
11	Water	Consumption	1.00	LS	\$ 25.00	\$ 25.00	12.00	\$ 300.00	\$ 300.00
Trees									
12	Live Oak	Trim/Sheed Leaf Cleanup	12.00	EA	\$ 80.00	\$ 960.00	1.00	\$ 960.00	\$ 960.00
13	Black Gum	Trim/Sheed Leaf Cleanup	3.00	EA	\$ 80.00	\$ 240.00	1.00	\$ 240.00	\$ 240.00
Drainage									
14	DBI Structures	Debris & Sedimentation Removal	1.00	EA	\$ 20.00	\$ 20.00	2.00	\$ 40.00	\$ 40.00
Bioretention Area									
15	Groundcover Plantings	Weed Control & Removal	4.00	HR	\$ 15.00	\$ 60.00	12.00	\$ 720.00	\$ 720.00
16	Boardwalk	Repair/Plank Replacement	900.00	SF	\$ 25.00	\$ 22,500.00	0.02	\$ 450.00	\$ 450.00
Lighting									
17	Park Lights	Ballast Replacement	8.00	EA	\$ 300.00	\$ 2,400.00	0.10	\$ -	\$ 240.00
18		General Cleaning	8.00	EA	\$ 15.00	\$ 120.00	0.20	\$ -	\$ 24.00
Furnishings									
19	Concrete & Wood Benches (Fixed)	Slat Repair/Replacement	10.00	EA	\$ 75.00	\$ 750.00	0.20	\$ 150.00	\$ 150.00
20		Stain Removal/Cleaning	10.00	EA	\$ 8.00	\$ 80.00	1.00	\$ 80.00	\$ 80.00
SW 9TH STREET - PARK TOTALS								\$ 3,784.75	\$ 4,836.25

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Streetscape Element	Description	Maintenance Activity	Maint. Quantity (QU)	Unit Measure (UM)	Unit Maint. Cost (UMC = \$/UM)	Cost Per Occurrence (CPO = MQ x UMC)	Occurrences (Annually)	Item Year-1 Maint. Cost	Item Avg. Annual Maint. Cost.
SW 3RD AVENUE									
Roadway									
1	Asphalt Pavement	Street Sweeping (Mechanized)	0.25	MI	\$ 22.50	\$ 5.63	12.00	\$ 67.50	\$ 67.50
2		Patch/Repair	1350.00	SY	\$ 30.00	\$ 40,500.00	0.02	\$ -	\$ 810.00
3	Mod. Type "F" Curb & Gutter	Vehicle Damage Repair	1510.00	LF	\$ 12.00	\$ 18,120.00	0.01	\$ -	\$ 181.20
4	Striping	Restriping	22.00	LF	\$ 18.50	\$ 407.00	0.10	\$ -	\$ 40.70
Hardscape									
5	Concrete Sidewalk	Pressure Washing (Heavy Stains)	1700.00	SF	\$ 0.20	\$ 340.00	1.00	\$ 340.00	\$ 340.00
6		Crack Repair/Section Replacement	1700.00	SF	\$ 5.00	\$ 8,500.00	0.01	\$ -	\$ 85.00
7		Weed Control (Joints)	2.00	HR	\$ 15.00	\$ 30.00	12.00	\$ 360.00	\$ 360.00
8	Curb Cut (ADA) Ramps	Pressure Washing (Heavy Stains)	6.00	EA	\$ 5.00	\$ 30.00	1.00	\$ 30.00	\$ 30.00
9		Crack Repair/Section Replacement	6.00	EA	\$ 1,000.00	\$ 6,000.00	0.02	\$ -	\$ 120.00
Landscape									
10	Groundcover Plantings	Weed Control & Removal	2.00	HR	\$ 15.00	\$ 30.00	12.00	\$ 360.00	\$ 360.00
11	Pine Straw Mulch	Debris Removal	2.00	HR	\$ 15.00	\$ 30.00	12.00	\$ 360.00	\$ 360.00
12		Reapplication	10.00	CY	\$ 20.00	\$ 200.00	1.00	\$ 200.00	\$ 200.00
Irrigation									
13	Controller	Monitoring	0.25	LS	\$ 15.00	\$ 3.75	4.00	\$ 15.00	\$ 15.00
14		Reprogramming	0.25	LS	\$ 15.00	\$ 3.75	4.00	\$ 15.00	\$ 15.00
15	Heads	Adjustment/Replace Damaged	32.00	EA	\$ 11.25	\$ 360.00	0.10	\$ 36.00	\$ 36.00
16	Pipe/Tubing	Repair Damage/Fix Leaks	1400.00	LF	\$ 13.75	\$ 19,250.00	0.01	\$ 192.50	\$ 192.50
17	Water	Consumption	1.00	LS	\$ 25.00	\$ 25.00	12.00	\$ 300.00	\$ 300.00
Trees									
18	Winged Elm	Trim/Sheed Leaf Cleanup, Mulching	32.00	EA	\$ 80.00	\$ 2,560.00	1.00	\$ 2,560.00	\$ 2,560.00
Drainage									
19	Manhole Inlet Structures	Debris & Sedimentation Removal	8.00	EA	\$ 40.00	\$ 320.00	0.20	\$ 64.00	\$ 64.00
20	18" RCP	Sedimentation Removal/Flush	168.00	LF	\$ 1.00	\$ 168.00	0.20	\$ -	\$ 33.60
21	24" RCP	Sedimentation Removal/Flush	445.00	LF	\$ 1.00	\$ 445.00	0.20	\$ -	\$ 89.00
22	30" Exfiltration Storm Pipe	Sedimentation Removal/Flush	780.00	LF	\$ 2.00	\$ 1,560.00	0.20	\$ -	\$ 312.00
Lighting									
23	Pedestrian Lights	Ballast Replacement	14.00	EA	\$ 300.00	\$ 4,200.00	0.20	\$ -	\$ 840.00
24		General Cleaning	14.00	EA	\$ 15.00	\$ 210.00	0.20	\$ -	\$ 42.00
SW 3RD AVENUE TOTALS								\$ 4,900.00	\$ 7,453.50

SUMMARY OF TOTAL MAINTENANCE COSTS

SW 9TH STREET - R/W TOTALS	\$ 8,478.70	\$ 15,652.45
SW 9TH STREET - PARK TOTALS	\$ 3,784.75	\$ 4,836.25
SW 3RD AVENUE TOTALS	\$ 4,900.00	\$ 7,453.50
TOTAL PROJECTED MAINTENANCE COSTS	\$ 17,163.45	\$ 27,942.20