ATTACHMENT G:

Infrastructure Preliminary Opinion of Cost

Technical Memorandum

WOOD RODGERS
BUILDING RELATIONSHIPS ONE PROJECT AT A TIME

To:	City of Sacramento		
From:	Adam Fischlin, PE AJF Mike Motroni, PE	**CC:**	Vance Jones, Wood Rodgers Tom Martens, EPS
Date:	October 16, 2023		
Subject:	Meadowview 102 – Infrastructure Preliminary Opinion of Cost		

Introduction

Wood Rodgers has prepared an infrastructure needs assessment review of the Meadowview 102 site based on four land use alternatives identified by the City of Sacramento. The focus of this analysis is to identify offsite infrastructure improvements and onsite backbone utility needs to serve the site development in each of the land use scenarios. In conjunction with the Infrastructure Needs Assessment, we have also prepared this Infrastructure Preliminary Opinion of Cost memorandum to define preliminary costs associated with the offsite and onsite infrastructure requirements for site development.

Background

In January of 2022, the City of Sacramento purchased 102 acres of surplus federal land in the Meadowview area of south Sacramento. With input from City staff and the community, Wood Rodgers prepared four preliminary land use scenarios for the City's consideration with the goal of exploring site development alternatives and feasibility of site development. Each of these land use alternatives have been evaluated as part of the infrastructure needs assessment effort to identify offsite and onsite backbone infrastructure needs for each land use. This memo will outline the costs associated with infrastructure needs for Meadowview 102 site development.

Land Use Alternatives

In this section, we will introduce each of the conceptual land use plan alternatives that will be evaluated as part of this technical memorandum.

- City Alternative #1: Regional Sports Complex (Appendix A)
  This land use plan highlights a Regional Sports Complex for the entire 102-acre site.

- City Alternative #2A: Sports Complex, Housing, and Open Space Preservation (Appendix B)
  This land use plan provides a 60.5-acre sports complex along with some medium-density and high-density residential uses. Additionally, this land use plan highlights ±15.3 acres of wetland preserve open space.

- City Alternative #2B: Sports Complex and Housing (Appendix C)
  This land use alternative provides a 60-acre sports complex along with medium-density and high-density residential uses without the wetland preserve.

- City Alternative #3: Residential Housing (Appendix D)
  Land use alternative #3 highlights a more housing centered focus offering medium, medium-high, and high-density residential uses around a 10-acre neighborhood park and 7.8-acre storm drain facility open space.

Preliminary Opinion of Cost Assumptions

Each of the estimates summarized below assume unit prices based on recent construction bids in the Sacramento region. Due to the volatility of material pricing due to the ongoing supply chain and labor issues and escalation of construction costs, a thirty percent contingency has been included for each of the estimates. Additionally, we have assumed a twenty percent soft costs allowance which is intended to cover the costs associated with engineering, mapping, plan checking, construction staking, and inspection.

For each of the roadway quantities (24th Street, A Street and Onsite Backbone Roadway), we have assumed a per linear foot cost based on the separate roadway estimates that are included as Appendix F. Additional assumptions are footnoted within each of the preliminary opinions of cost included in the appendices of this memorandum.

Offsite Infrastructure Needs Estimate

Included in Appendix A is the preliminary opinion of cost for the Meadowview 102 offsite infrastructure needs (roadway, sewer, water, and storm drain). This effort includes roadway access to the Meadowview 102 Project site and required utility extensions to serve the proposed Project as described in the "Infrastructure Needs Assessment" memo. The preliminary infrastructure opinion of cost for the offsite infrastructure totals $26,391,000. For the offsite infrastructure costs, it was assumed that neither Delta Shores Phase 3 or the Stone Beetland development would be constructed. Should both projects move forward prior to the development of Meadowview 102, it can be assumed that the offsite infrastructure will be in place, and this cost no longer applies.

Onsite Backbone Infrastructure Needs Estimate – City Alternative #1

The proposed onsite backbone infrastructure needs and mass grading estimate for City Land Use Alternative #1 is included as Appendix B. This effort includes the backbone roadway, water, sewer, and storm drain needs to serve the 102-acre Regional Sports Complex as described in the "Infrastructure Needs Assessment" memo. The preliminary backbone infrastructure opinion of cost for the onsite needs of City Alternative #1 totals $9,797,000.

Onsite Backbone Infrastructure Needs Estimate – City Alternative #2A

The proposed onsite backbone infrastructure needs and mass grading estimate for City Land Use Alternative #2A is included as Appendix C. This effort includes the backbone roadway, water, sewer, and storm drain needs to serve the 60.5-acre Regional Sports Complex, medium-density residential and high-density residential land uses as described in the "Infrastructure Needs Assessment" memo. The preliminary backbone infrastructure opinion of cost for the onsite needs of City Alternative #2A totals $7,744,000.

Onsite Backbone Infrastructure Needs Estimate – City Alternative #2B

The proposed onsite backbone infrastructure needs and mass grading estimate for City Land Use Alternative #2B is included as Appendix D. This effort includes the backbone roadway, water, sewer, and storm drain needs to serve the 60-acre Regional Sports Complex, medium-density residential and high-density residential land uses as described in the "Infrastructure Needs Assessment" memo. The preliminary backbone infrastructure opinion of cost for the onsite needs of City Alternative #2B totals $9,097,000.

Onsite Backbone Infrastructure Needs Estimate – City Alternative #3

The proposed onsite backbone infrastructure needs and mass grading estimate for City Land Use Alternative #3 is included as Appendix E. This effort includes the backbone roadway, water, sewer, and storm drain needs to serve the housing centric land use plan as described in the "Infrastructure Needs Assessment" memo. The preliminary backbone infrastructure opinion of cost for the onsite needs of City Alternative #3 totals $12,612,000.

Tiny Home Community Preliminary Opinion of Cost

The City of Sacramento has identified a 3.5-acre Tiny Home Community as an interim land use. For this interim use to be implemented in the southwest corner of the Project site, much of the offsite infrastructure would need to be completed as outlined in the "Infrastructure Needs Assessment" memo. The costs associated with mass grading and erosion control for the interim Tiny Home Community land use are minimal when compared to the offsite infrastructure preliminary opinions of costs. Further cost estimate analysis for the Tiny Home Community development can be evaluated during the planning and design phases of the project.

Preliminary Opinion of Cost Exclusions

As discussed in the "Preliminary Storm Drainage Assessment Memorandum" dated September 8, 2023, it is unknown whether the SUMP 89 Drainage Pump Station adjacent to Morrison Creek has the capacity to accept additional flow and volume to serve any of the proposed Meadowview 102 land use alternatives. Design level drainage study to confirm pump station capacity. SUMP 89 Pump Station upgrades have been excluded from this effort.

Summary

The Meadowview 102 project will require both onsite and offsite infrastructure in each of the four land use alternatives for the Project to move forward. Those needs have been identified within the "Meadowview 102 Infrastructure Needs Assessment" memorandum and as noted, additional analysis will be required in the design phase with the completion of water, sewer, and drainage studies. This "Meadowview 102 Infrastructure Preliminary Opinion of Cost" memorandum further defines the anticipated costs required to develop each of the land use scenarios. The City of Sacramento may use this information to aid in the decision making process for how to move forward with the 102-acre Meadowview Project site.

Sources

Meadowview 102 – Infrastructure Needs Assessment Memo

Appendices

Appendix A – Offsite Infrastructure Needs Estimate

Appendix B – Onsite Backbone Infrastructure Needs Estimate – City Alternative #1

Appendix C – Onsite Backbone Infrastructure Needs Estimate – City Alternative #2A

Appendix D – Onsite Backbone Infrastructure Needs Estimate – City Alternative #2B

Appendix E – Onsite Backbone Infrastructure Needs Estimate – City Alternative #3

Appendix F – Roadway Estimates (Cost per Linear Foot)

Appendix A – Offsite Infrastructure Needs Estimate

Wood Rodgers, Inc.
A. Fischlin/R. Skots
10/11/2023

INFRASTRUCTURE PRELIMINARY OPINION OF COST

Meadowview 102 - Offsite

City of Sacramento

#	QUANTITY	UNIT	DESCRIPTION		UNIT PRICE		AMOUNT
A. ROADWAY							
1.	2,500	LF	A Street (see appendix F)	$	950.00	$	2,375,000
2.	2,400	LF	24th Street (see appendix F)	$	1,448.00	$	3,475,200
3.	700	LF	Western Entrance Roadway (see appendix F)	$	834.00	$	583,800
4.	1,000	LF	Emergency Vehicle Access Road	$	60.00	$	60,000
			TOTAL ROADWAY			**$**	**6,494,000**
B. SANITARY SEWER							
5.	1	LS	Relocation Sewer Pump Station 53	$	4,000,000.00	$	4,000,000
6.	10,000	LF	18" Force Main Pipe	$	350.00	$	3,500,000
7.	700	LF	24" Trunk Sewer Main Pipe	$	325.00	$	227,500
8.	12	EA	48" Sewer Manhole	$	10,500.00	$	126,000
9.	4	EA	60" Sewer Manhole	$	15,000.00	$	60,000
10.	65	LF	8" Sewer Main Pipe	$	75.00	$	4,875
11.	1,555	LF	10" Sewer Main Pipe	$	137.50	$	213,813
12.	1,030	LF	12" Sewer Main Pipe	$	200.00	$	206,000
13.	1,700	LF	15" Sewer Main Pipe	$	245.00	$	416,500
			TOTAL SANITARY SEWER			**$**	**8,754,688**
C. STORM DRAINAGE							
14.	1,900	LF	30" Storm Drain Pipe	$	145.00	$	275,500
15.	9	EA	48" Manhole	$	9,500.00	$	85,500
			TOTAL STORM DRAINAGE			**$**	**361,000**
D. WATER SYSTEM							
16.	2,400	LF	24" Water Transmission Main Pipe	$	320.00	$	768,000
17.	2,500	LF	12" Domestic Water Main Pipe	$	170.00	$	425,000
18.	5,650	LF	8" Domestic Water Main Pipe	$	140.00	$	791,000
			TOTAL WATER SYSTEM			**$**	**1,984,000**
			A. ROADWAY			$	6,494,000
			B. SANITARY SEWER			$	8,754,688
			C. STORM DRAINAGE			$	361,000
			D. WATER SYSTEM			$	1,984,000
			SUBTOTAL PRELIMINARY INFRASTRUCTURE COST ESTIMATE			**$**	**17,593,688**
			CONTINGENCY		30%	$	5,278,106
			SOFT COSTS		20%	$	3,518,738
TOTAL PRELIMINARY INFRASTRUCTURE COST ESTIMATE						**$**	**26,391,000**

NOTES:

1. Based on preliminary nature of the studies, 30% contingency is applied.
2. Estimate inlcudes a 20% soft cost allowance. Assumed to be engineering (8%), mapping (1%), plan check (2%), inspection (3%), geotech (3%), and staking (3%).
3. Pavement and concrete strucutral sections are assumed and not based on site specific geotechnical analysis.
4. Water main pipe costs include all required appurtenances (blow offs, hydrants, air release valves, etc.)
5. All costs shown are full improvement costs, not fair share contributions.

Appendix B – Onsite Backbone Infrastructure Needs Estimate – City Alternative #1

Wood Rodgers, Inc.
A. Fischlin/R. Skots
10/11/2023

INFRASTRUCTURE PRELIMINARY OPINION OF COST

Meadowview 102 - Onsite Backbone Infrastructure - City Alternative #1

City of Sacramento

#	QUANTITY	UNIT	DESCRIPTION	UNIT PRICE	AMOUNT
A. GRADING					
1.	250,000	CY	Site Grading (Cut to Fill)	$ 3.50	$ 875,000
2.	102	AC	Erosion Control	$ 3,000.00	$ 306,000
3.	48,800	CY	Detention Basin Excavation	$ 4.00	$ 195,200
			TOTALGRADING		**$ 1,376,200**
B. ROADWAY					
4.	1	LS	Roundabout	$ 500,000.00	$ 500,000
5.	3,800	LF	Onsite Backbone Roadway (see appendix F)	$ 834.00	$ 3,169,200
			TOTAL ROADWAY		**$ 3,669,200**
C. SANITARY SEWER					
6.	2,150	LF	8" Backbone Sewer Main Pipe	$ 75.00	$ 161,250
7.	5	EA	48" Manhole	$ 10,500.00	$ 52,500
			TOTAL SANITARY SEWER		**$ 213,750**
D. STORM DRAINAGE					
8.	950	LF	30" Backbone Storm Drain Pipe	$ 145.00	$ 137,750
9.	3	EA	48" Manhole	$ 9,500.00	$ 28,500
10.	4	AC	Detention Basin Improvements	$ 130,000.00	$ 494,000
11.	2	EA	Basin Headwalls	$ 40,000.00	$ 80,000
			TOTAL STORM DRAINAGE		**$ 740,250**
E. WATER SYSTEM					
12.	3,800	LF	8" Backbone Domestic Water Main Pipe	$ 140.00	$ 532,000
			TOTAL WATER SYSTEM		**$ 532,000**
			A. GRADING		$ 1,376,200
			B. ROADWAY		$ 3,669,200
			C. SANITARY SEWER		$ 213,750
			D. STORM DRAINAGE		$ 740,250
			E. WATER SYSTEM		$ 532,000
			SUBTOTAL PRELIMINARY INFRASTRUCTURE COST ESTIMATE		**$ 6,531,400**
			CONTINGENCY	30%	$ 1,959,420
			SOFT COSTS	20%	$ 1,306,280
TOTAL PRELIMINARY INFRASTRUCTURE/GRADING COST ESTIMATE					**$ 9,797,000**

NOTES:

1. Based on preliminary nature of the studies, 30% contingency is applied.
2. Estimate inlcudes a 20% soft cost allowance. Assumed to be engineering (8%), mapping (1%), plan check (2%), inspection
3. Pavement and concrete strucutral sections are assumed and not based on site specific geotechnical analysis.
4. Detention basin excavation cost is based upon assumed available volume within designated footprint of detention basin and not based uopn project required storage needs (which may be more or less than tabulated).
5. Detention basin improvements include vehicle access road, landscaping, fencing and other basin related features.
6. Site grading assumes an earthwork volume of cut to fill for the project site. Exact earthwork quantites will vary depending on land use and further grading design efforts.
7. Water main pipe costs include all required appurtenances (blow offs, hydrants, air release valves, etc.)

Appendix C – Onsite Backbone Infrastructure Needs Estimate – City Alternative #2A

Wood Rodgers, Inc.
A. Fischlin/R. Skots
10/11/2023

INFRASTRUCTURE PRELIMINARY OPINION OF COST

Meadowview 102 - Onsite Backbone Infrastructure - City Alternative #2A

City of Sacramento

#	QUANTITY	UNIT	DESCRIPTION	UNIT PRICE	AMOUNT
A. GRADING					
1.	250,000	CY	Site Grading (Cut to Fill)	$ 3.50	$ 875,000
2.	102	AC	Erosion Control	$ 3,000.00	$ 306,000
3.	52,700	CY	Detention Basin Excavation	$ 4.00	$ 210,800
			TOTAL GRADING		**$ 1,391,800**
B. ROADWAY					
4.	1	LS	Roundabout	$ 500,000.00	$ 500,000
5.	2,250	LF	Onsite Backbone Roadway (see appendix F)	$ 834.00	$ 1,876,500
			TOTAL ROADWAY		**$ 2,376,500**
C. SANITARY SEWER					
6.	1,650	LF	8" Backbone Sewer Main Pipe	$ 75.00	$ 123,750
7.	6	EA	48" Manhole	$ 10,500.00	$ 63,000
			TOTAL SANITARY SEWER		**$ 186,750**
D. STORM DRAINAGE					
8.	1,750	LF	24" Backbone Storm Drain Pipe	$ 105.00	$ 183,750
9.	3	EA	48" Manhole	$ 9,500.00	$ 28,500
10.	4	AC	Detention Basin Improvements	$ 130,000.00	$ 533,000
11.	2	EA	Basin Headwalls	$ 40,000.00	$ 80,000
			TOTAL STORM DRAINAGE		**$ 825,250**
E. WATER SYSTEM					
12.	2,250	LF	12" Backbone Domestic Water Main Pipe	$ 170.00	$ 382,500
			TOTAL WATER SYSTEM		**$ 382,500**
			A. GRADING		$ 1,391,800
			B. ROADWAY		$ 2,376,500
			C. SANITARY SEWER		$ 186,750
			D. STORM DRAINAGE		$ 825,250
			E. WATER SYSTEM		$ 382,500
			SUBTOTAL PRELIMINARY INFRASTRUCTURE COST ESTIMATE		**$ 5,162,800**
			CONTINGENCY	30%	$ 1,548,840
			SOFT COSTS	20%	$ 1,032,560
TOTAL PRELIMINARY INFRASTRUCTURE/GRADING COST ESTIMATE					**$ 7,744,000**

NOTES:

1. Based on preliminary nature of the studies, 30% contingency is applied.
2. Estimate inlcudes a 20% soft cost allowance. Assumed to be engineering (8%), mapping (1%), plan check (2%), inspection
3. Pavement and concrete strucutral sections are assumed and not based on site specific geotechnical analysis.
4. Detention basin excavation cost is based upon assumed available volume within designated footprint of detention basin and not based uopn project required storage needs (which may be more or less than tabulated).
5. Detention basin improvements include vehicle access road, landscaping, fencing and other basin related features.
6. Site grading assumes an earthwork volume of cut to fill for the project site. Exact earthwork quantites will vary depending on land use and further grading design efforts.
7. Water main pipe costs include all required appurtenances (blow offs, hydrants, air release valves, etc.)

Appendix D – Onsite Backbone Infrastructure Needs Estimate – City Alternative #2B

Wood Rodgers, Inc.
A. Fischlin/R. Skots
10/11/2023

INFRASTRUCTURE PRELIMINARY OPINION OF COST

Meadowview 102 - Onsite Backbone Infrastructure - City Alternative #2B

City of Sacramento

#	QUANTITY	UNIT	DESCRIPTION	UNIT PRICE	AMOUNT
A. GRADING					
1.	250,000	CY	Site Grading (Cut to Fill)	$ 3.50	$ 875,000
2.	102	AC	Erosion Control	$ 3,000.00	$ 306,000
3.	62,200	CY	Detention Basin Excavation	$ 4.00	$ 248,800
			TOTAL GRADING		**$ 1,429,800**
B. ROADWAY					
4.	3,300	LF	Onsite Backbone Roadway (see appendix F)	$ 834.00	$ 2,752,200
			TOTAL ROADWAY		**$ 2,752,200**
C. SANITARY SEWER					
5.	1,500	LF	8" Backbone Sewer Main Pipe	$ 75.00	$ 112,500
6.	5	EA	48" Manhole	$ 10,500.00	$ 52,500
			TOTAL SANITARY SEWER		**$ 165,000**
D. STORM DRAINAGE					
7.	2,150	LF	24" Backbone Storm Drain Pipe	$ 105.00	$ 225,750
8.	6	EA	48" Manhole	$ 9,500.00	$ 57,000
9.	6	AC	Detention Basin Improvements	$ 130,000.00	$ 754,000
10.	3	EA	Basin Headwalls	$ 40,000.00	$ 120,000
			TOTAL STORM DRAINAGE		**$ 1,156,750**
E. WATER SYSTEM					
11.	3,300	LF	12" Backbone Domestic Water Main Pipe	$ 170.00	$ 561,000
			TOTAL WATER SYSTEM		**$ 561,000**
			A. GRADING		$ 1,429,800
			B. ROADWAY		$ 2,752,200
			C. SANITARY SEWER		$ 165,000
			D. STORM DRAINAGE		$ 1,156,750
			E. WATER SYSTEM		$ 561,000
			SUBTOTAL PRELIMINARY INFRASTRUCTURE COST ESTIMATE		**$ 6,064,750**
			CONTINGENCY	30%	$ 1,819,425
			SOFT COSTS	20%	$ 1,212,950
TOTAL PRELIMINARY INFRASTRUCTURE/GRADING COST ESTIMATE					**$ 9,097,000**

NOTES:

1. Based on preliminary nature of the studies, 30% contingency is applied.
2. Estimate inlcudes a 20% soft cost allowance. Assumed to be engineering (8%), mapping (1%), plan check (2%), inspection
3. Pavement and concrete strucutral sections are assumed and not based on site specific geotechnical analysis.
4. Detention basin excavation cost is based upon assumed available volume within designated footprint of detention basin and not based uopn project required storage needs (which may be more or less than tabulated).
5. Detention basin improvements include vehicle access road, landscaping, fencing and other basin related features.
6. Site grading assumes an earthwork volume of cut to fill for the project site. Exact earthwork quantites will vary depending on land use and further grading design efforts.
7. Water main pipe costs include all required appurtenances (blow offs, hydrants, air release valves, etc.)

Appendix E – Onsite Backbone Infrastructure Needs Estimate – City Alternative #3

Wood Rodgers, Inc.
A. Fischlin/R. Skots
10/11/2023

INFRASTRUCTURE PRELIMINARY OPINION OF COST

Meadowview 102 - Onsite Backbone Infrastructure - City Alternative #3

City of Sacramento

#	QUANTITY	UNIT	DESCRIPTION	UNIT PRICE	AMOUNT
A. GRADING					
1.	250,000	CY	Site Grading (Cut to Fill)	$ 3.50	$ 875,000
2.	102	AC	Erosion Control	$ 3,000.00	$ 306,000
3.	94,000	CY	Detention Basin Excavation	$ 4.00	$ 376,000
			TOTAL GRADING		**$ 1,557,000**
B. ROADWAY					
4.	4,100	LF	Onsite Backbone Roadway (see appendix F)	$ 834.00	$ 3,419,400
			TOTAL ROADWAY		**$ 3,419,400**
C. SANITARY SEWER					
5.	3,500	LF	15" Backbone Sewer Main Pipe	$ 245.00	$ 857,500
6.	12	EA	48" Manhole	$ 10,500.00	$ 126,000
			TOTAL SANITARY SEWER		**$ 983,500**
D. STORM DRAINAGE					
7.	2,800	LF	36" Backbone Storm Drain Pipe	$ 200.00	$ 560,000
8.	6	EA	48" Manhole	$ 9,500.00	$ 57,000
9.	8	AC	Detention Basin Improvements	$ 130,000.00	$ 1,014,000
10.	3	EA	Basin Headwalls	$ 40,000.00	$ 120,000
			TOTAL STORM DRAINAGE		**$ 1,751,000**
E. WATER SYSTEM					
11.	4,100	LF	12" Backbone Domestic Water Main Pipe	$ 170.00	$ 697,000
			TOTAL WATER SYSTEM		**$ 697,000**
			A. GRADING		$ 1,557,000
			B. ROADWAY		$ 3,419,400
			C. SANITARY SEWER		$ 983,500
			D. STORM DRAINAGE		$ 1,751,000
			E. WATER SYSTEM		$ 697,000
			SUBTOTAL PRELIMINARY INFRASTRUCTURE COST ESTIMATE		**$ 8,407,900**
			CONTINGENCY	30%	$ 2,522,370
			SOFT COSTS	20%	$ 1,681,580
TOTAL PRELIMINARY INFRASTRUCTURE/GRADING COST ESTIMATE					**$ 12,612,000**

NOTES:

1. Based on preliminary nature of the studies, 30% contingency is applied.
2. Estimate inlcudes a 20% soft cost allowance. Assumed to be engineering (8%), mapping (1%), plan check (2%), inspection (3%),
3. Pavement and concrete strucutral sections are assumed and not based on site specific geotechnical analysis.
4. Detention basin excavation cost is based upon assumed available volume within designated footprint of detention basin and not based uopn project required storage needs (which may be more or less than tabulated).
5. Detention basin improvements include vehicle access road, landscaping, fencing and other basin related features.
6. Site grading assumes an earthwork volume of cut to fill for the project site. Exact earthwork quantites will vary depending on land use and further grading design efforts.
7. Water main pipe costs include all required appurtenances (blow offs, hydrants, air release valves, etc.)

Appendix F – Roadway Estimates (Cost per Linear Foot)

Wood Rodgers, Inc.
A. Fischlin/R. Skots
10/11/2023

COST PER LINEAR FOOT

Meadowview 102 - A Street, 24th Street, Western Entrance Roadway and Onsite Backbone Roadway

City of Sacramento

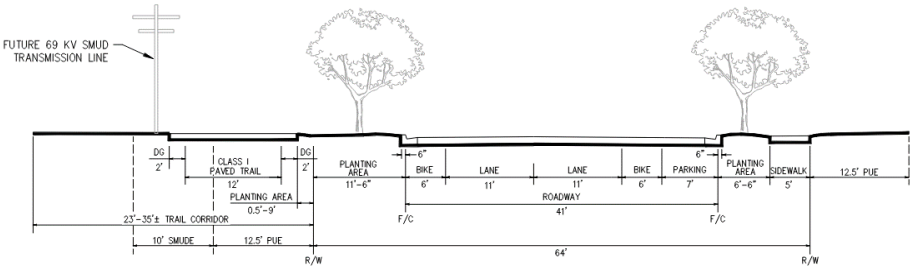
#	QUANTITY	UNIT	DESCRIPTION	UNIT PRICE	AMOUNT
A. A STREET (64-FOOT R.O.W.)					
1.	42	SF	Subgrade Preparation	$ 0.25	$ 10.50
2.	5	CY	Excavation (3')	$ 4.00	$ 18.80
3.	36	SF	3.5" Asphaltic Concrete Paving	$ 3.20	$ 115.20
4.	36	SF	8" Aggregate Base	$ 3.60	$ 129.60
5.	5	SF	Sidewalk	$ 7.50	$ 37.50
6.	17	SF	Landscape Corridor - Frontage	$ 10.00	$ 170.00
7.	2	LF	Type 2 Curb & Gutter (Vertical Curb)	$ 30.00	$ 60.00
8.	1	LF	12' Class I Trail	$ 60.00	$ 60.00
9.	4	LF	Signage & Striping	$ 5.00	$ 20.00
10.	59	SF	Erosion Control	$ 0.15	$ 8.85
11.	1	LF	Local Drainage for Minor Collector (Leads & DI's)	$ 40.00	$ 40.00
12.	1	LF	Street Lights (170' estiamted spacing)	$ 80.00	$ 80.00
13.	1	LF	Joint Trench	$ 200.00	$ 200.00
			TOTAL COST PER LINEAR FOOT		**$ 950.00**
B. 24TH STREET (99-FOOT R.O.W.)					
14.	59	SF	Subgrade Preparation	$ 0.25	$ 14.75
15.	7	CY	Excavation (3')	$ 4.00	$ 26.68
16.	53	SF	5.5" Asphaltic Concrete Paving	$ 4.80	$ 254.40
17.	53	SF	10" Aggregate Base	$ 4.00	$ 212.00
18.	12	SF	Sidewalk	$ 7.50	$ 90.00
19.	16	SF	Landscape Corridor - Frontage	$ 10.00	$ 160.00
20.	2	LF	Type 2 Curb & Gutter (Vertical Curb)	$ 30.00	$ 60.00
21.	2	LF	Type 5 Median Curb	$ 35.00	$ 70.00
22.	11	SF	Median Landscaping & Irrigation	$ 8.00	$ 88.00
23.	1	CY	Median Top Soil Import (18")	$ 10.00	$ 6.00
24.	1	LF	12' Class I Trail	$ 60.00	$ 60.00
25.	6	LF	Signage & Striping	$ 5.00	$ 30.00
26.	87	SF	Erosion Control	$ 0.15	$ 13.05
27.	1	LF	Local Drainage for Major Arterial (Leads & DI's)	$ 55.00	$ 55.00
28.	1	LF	Street Lights (170' estiamted spacing)	$ 88.00	$ 88.00
29.	1	LF	Traffic Signal Interconnect	$ 20.00	$ 20.00
30.	1	SF	Joint Trench	$ 200.00	$ 200.00
			TOTAL COST PER LINEAR FOOT		**$ 1,448.00**
C. WESTERN ENTRANCE & ONSITE BACKBONE ROADWAY (59-FOOT R.O.W.)					
31.	37	SF	Subgrade Preparation	$ 0.25	$ 9.25
32.	4	CY	Excavation (3')	$ 4.00	$ 16.44
33.	31	SF	3.5" Asphaltic Concrete Paving	$ 3.20	$ 99.20
34.	31	SF	8" Aggregate Base	$ 3.60	$ 111.60
35.	10	SF	Sidewalk	$ 7.50	$ 75.00
36.	12	SF	Landscape Corridor - Frontage	$ 10.00	$ 120.00
37.	2	LF	Type 2 Curb & Gutter (Vertical Curb)	$ 30.00	$ 60.00
38.	3	LF	Signage & Striping	$ 5.00	$ 15.00
39.	49	SF	Erosion Control	$ 0.15	$ 7.35
40.	1	LF	Local Drainage for Local Commerical (Leads & DI's)	$ 40.00	$ 40.00
41.	1	LF	Street Lights (170' estiamted spacing)	$ 80.00	$ 80.00
42.	1	LF	Joint Trench	$ 200.00	$ 200.00
			TOTAL COST PER LINEAR FOOT		**$ 834.00**

#	QUANTITY	UNIT	DESCRIPTION	UNIT PRICE	AMOUNT

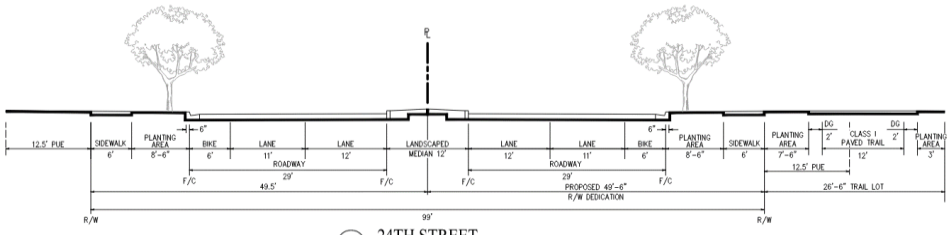
NOTES:

1. AC/AB Street Sections are assumed and may vary based upon recommendations from a complete geotechnical report.

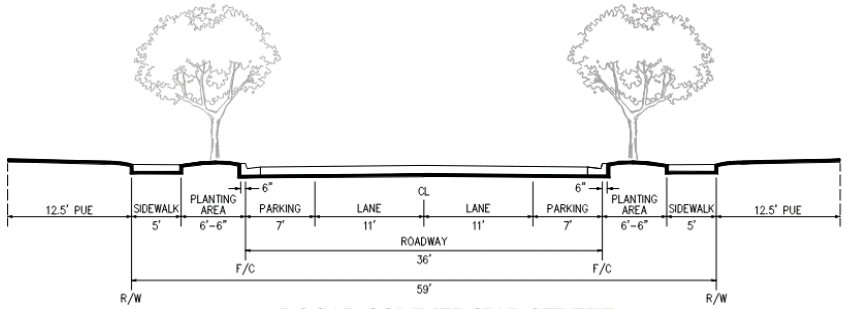
2. The onsite backbone roadway was based on Section D Local Commericial Street from Stone Beetland Small Lot Tentative Map.



A MINOR COLLECTOR (PARKING 1 SIDE) 1
NOT TO SCALE



G 24TH STREET
NOT TO SCALE



D LOCAL COMMERCIAL STREET
NOT TO SCALE